



Municipal Employees' Retirement System of Michigan

Annual Actuarial Valuation Report
December 31, 2023 - Chippewa Co (1703)





Spring 2024

Chippewa Co

In care of:
Municipal Employees' Retirement System of Michigan
1134 Municipal Way
Lansing, Michigan 48917

This report presents the results of the Annual Actuarial Valuation, prepared for Chippewa Co (1703) as of December 31, 2023. The report includes the determination of liabilities and contribution rates resulting from the participation in the Municipal Employees' Retirement System of Michigan ("MERS"). This report contains the minimum actuarially determined contribution requirement, in alignment with the MERS Plan Document, Actuarial Policy, the Michigan Constitution, and governing statutes. Chippewa Co is responsible for the employer contributions needed to provide MERS benefits for its employees and former employees.

The purposes of this valuation are to:

- Measure funding progress as of December 31, 2023,
- Establish contribution requirements for the fiscal year beginning January 1, 2025,
- Provide information regarding the identification and assessment of risk,
- Provide actuarial information in connection with applicable Governmental Accounting Standards Board (GASB) statements, and
- Provide information to assist the local unit of government with State reporting requirements.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data and other information through December 31, 2023. The valuation was based upon information furnished by MERS concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by MERS.

The Municipal Employees' Retirement Act, PA 427 of 1984 and the MERS' Plan Document Article VI Sec. 71 (1)(d), provides the MERS Board with the authority to set actuarial assumptions and methods after consultation with the actuary. As the fiduciary of the plan, the MERS Retirement Board sets certain assumptions for funding and GASB purposes. These assumptions are reviewed regularly through a comprehensive study, most recently in the fall of 2021. The MERS Retirement Board adopted a Dedicated Gains Policy at the February 17, 2022 Board meeting. The Dedicated Gains Policy automatically reduces the assumed rate of investment return in conjunction with recognizing excess investment gains to mitigate the impact on employer contributions the first year. The policy was effective with the December 31, 2021 annual actuarial valuation.

The Michigan Department of Treasury provides required assumptions to be used for purposes of Public Act 202 reporting. These assumptions are for reporting purposes only and do not impact required contributions. Please refer to the State Reporting page found at the end of this report for information for this filing.

For a full list of all the assumptions used, please refer to the division-specific assumptions described in table(s) in this report, and to the Appendix on the MERS website at:

<https://www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2023AnnualActuarialValuation-Appendix.pdf>

The actuarial assumptions used for this valuation, including the assumed rate of investment return, are reasonable for purposes of the measurement. The combined effect of the assumptions is expected to have no significant bias (i.e., not significantly optimistic or pessimistic).

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to the Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. Beginning with the December 31, 2023 annual actuarial valuation, the revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the "Low-Default-Risk Obligation Measure" (LDROM). The LDROM calculation is provided in aggregate, along with aggregate employer results, in a separate report titled "Summary Report of the 78th Annual Actuarial Valuations," and will be available on the MERS website during the fall of 2024.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of Chippewa Co as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Rebecca L. Stouffer, Mark Buis, Kurt Dosson, and Shana M. Neeson are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor. GRS maintains independent consulting agreements with certain local units of government for services unrelated to the actuarial consulting services provided in this report.



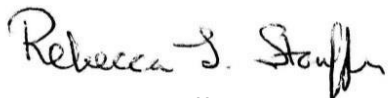
The Retirement Board of the Municipal Employees' Retirement System of Michigan confirms that the System provides for payment of the required employer contribution as described in Section 20m of Act No. 314 of 1965 (MCL 38.1140m).

This information is purely actuarial in nature. It is not intended to serve as a substitute for legal, accounting, or investment advice.

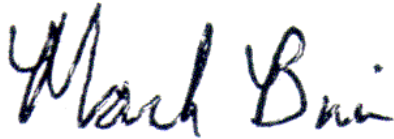
This report was prepared at the request of the MERS Retirement Board and may be provided only in its entirety by the municipality to other interested parties (MERS customarily provides the full report on request to associated third parties such as the auditor for the municipality). GRS is not responsible for the consequences of any unauthorized use. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

If you have reason to believe that the plan provisions are incorrectly described, that important plan provisions relevant to this valuation are not described, that conditions have changed since the calculations were made, that the information provided in this report is inaccurate or is in anyway incomplete, or if you need further information in order to make an informed decision on the subject matter in this report, please contact your Regional Manager at 1.800.767.MERS (6377).

Sincerely,
Gabriel, Roeder, Smith & Company



Rebecca L. Stouffer, ASA, FCA, MAAA



Mark Buis, FSA, FCA, EA, MAAA



Kurt Dosson, ASA, FCA, MAAA



Shana M. Neeson, ASA, FCA, MAAA



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Executive Summary

Funded Ratio

The funded ratio of a plan is the percentage of the dollar value of the actuarial accrued liability that is covered by the actuarial value of assets. While the funded ratio may be a useful plan measurement, understanding a plan's funding trend may be more important than a particular point in time. Refer to Table 7 to find a history of this information.

	12/31/2023	12/31/2022
Funded Ratio*	68%	68%

* Reflects assets from Surplus divisions, if any.

Throughout this report are references to valuation results generated prior to the 2018 valuation date. Results prior to 2018 were received directly from the prior actuary or extracted from the previous valuation system by MERS's technology service provider.

Required Employer Contributions

Your required employer contributions are shown in the following table. Employee contributions, if any, are in addition to the employer contributions.

Effective with the December 31, 2021 valuation, the MERS Retirement Board adopted a Dedicated Gains Policy which allows for recognition of asset gains in excess of a set threshold in combination with lowering the assumed rate of investment return. Effective with the 2020 and 2019 valuations respectively, the MERS Retirement Board adopted updated demographic and economic assumptions. **The combined impact of the prior 2020 and 2019 demographic and economic assumption changes is fully reflected in the 2023 annual actuarial valuation, evidenced with the Phase-in and No Phase-in contribution requirements being equal.** There is no phase-in of dedicated gains.

By default, MERS will invoice you based on the amount in the “No Phase-in” columns. This amount will be considered the minimum required contribution unless you request to be billed the “Phase-in” rates. If you wish to be billed using the phased-in rates, please contact MERS, at which point the alternate minimum required contribution will be the amount in the “Phase-in” columns.

	Percentage of Payroll				Monthly \$ Based on Projected Payroll			
	Phase-in	No Phase-in	Phase-in	No Phase-in	Phase-in	No Phase-in	Phase-in	No Phase-in
Valuation Date:	12/31/2023	12/31/2023	12/31/2022	12/31/2022	12/31/2023	12/31/2023	12/31/2022	12/31/2022
Fiscal Year Beginning:	January 1, 2025	January 1, 2025	January 1, 2024	January 1, 2024	January 1, 2025	January 1, 2025	January 1, 2024	January 1, 2024
Division								
01 - County TPOAM - closed	-	-	-	-	\$ 37,995	\$ 37,995	\$ 36,533	\$ 37,972
02 - County Corrections - closed	-	-	-	-	17,288	17,288	16,208	16,924
11 - Hlth Dept - closed	-	-	-	-	22,821	22,821	21,895	22,476
13 - EDC General - closed	-	-	-	-	8,097	8,097	7,098	7,349
15 - Health Dept Non-Union - Close	-	-	-	-	34,811	34,811	30,378	31,856
16 - Gnrl, N-Un&Dsptch bf 5/1/10	-	-	-	-	40,128	40,128	37,327	38,768
17 - EDC General after 12/01/13	6.43%	6.43%	6.54%	6.64%	2,946	2,946	2,402	2,439
20 - County Sheriff Road - closed	-	-	-	-	13,450	13,450	11,997	12,495
HA - County Sheriff Rd after 5/1/1	0.00%	0.00%	0.00%	0.00%	0	0	0	0
HB - County Corrections after 5/1/	3.82%	3.82%	3.88%	3.88%	2,379	2,379	2,573	2,574
HC - County, N-Un & Disp af 5/1/10	5.18%	5.18%	5.10%	5.16%	8,786	8,786	7,409	7,495
HD - Hlth Dpt Teamstrs after 4/1/1	0.00%	0.00%	0.00%	0.00%	0	0	0	0
HE - Hlth Dpt Non-Union aft 4/1/11	2.44%	2.44%	1.83%	1.88%	3,008	3,008	1,937	1,991
HF - County TPOAM after 4/1/12	6.19%	6.19%	5.98%	6.06%	4,661	4,661	4,140	4,198
Total Municipality -								
Estimated Monthly Contribution					\$ 196,370	\$ 196,370	\$ 179,897	\$ 186,537
Total Municipality -								
Estimated Annual Contribution					\$ 2,356,440	\$ 2,356,440	\$ 2,158,764	\$ 2,238,444

Employee contribution rates:

Valuation Date:	Employee Contribution Rate	
	12/31/2023	12/31/2022
Division		
01 - County TPOAM - closed	2.00%	2.00%
02 - County Corrections - closed	3.00%	3.00%
11 - Hlth Dept - closed	2.00%	2.00%
13 - EDC General - closed	2.00%	2.00%
15 - Health Dept Non-Union - Close	2.00%	2.00%
16 - Gnrl, N-Un&Dsptch bf 5/1/10	2.00%	2.00%
17 - EDC General after 12/01/13	3.00%	3.00%
20 - County Sheriff Road - closed	3.00%	3.00%
HA - County Sheriff Rd after 5/1/1	0.00%	0.00%
HB - County Corrections after 5/1/	0.00%	0.00%
HC - County, N-Un & Disp af 5/1/10	0.00%	0.00%
HD - Hlth Dpt Teamstrs after 4/1/1	0.00%	0.00%
HE - Hlth Dpt Non-Union aft 4/1/11	0.00%	0.00%
HF - County TPOAM after 4/1/12	0.00%	0.00%



The employer may contribute more than the minimum required contributions, as these additional contributions will earn investment income and may result in lower future contribution requirements. Employers making contributions in excess of the minimum requirements may elect to apply the excess contribution immediately to a particular division, or segregate the excess into one or more “Surplus” divisions. An election in the first case would immediately reduce any unfunded accrued liability and lower the amortization payments throughout the remaining amortization period. An election to set up one or more Surplus divisions would not immediately lower future contributions, however the assets from the Surplus division(s) could be transferred to an unfunded division in the future to reduce the unfunded liability in future years, or to be used to pay all or a portion of the minimum required contribution in a future year. For purposes of this report, the assets in any Surplus division have been included in the municipality’s total assets, unfunded accrued liability, and funded status; however, these assets are not used in calculating the minimum required contribution.

MERS strongly encourages employers to contribute more than the minimum contribution shown above. With the implemented dedicated gains policy, market gains and losses will continue to be smoothed over five years; however, since excess returns are used to lower the investment assumption, there will be fewer gains to smooth in down markets. Having additional funds in Surplus divisions will assist plans with navigating any market volatility.

Assuming that experience of the plan meets actuarial assumptions:

- To accelerate to a 100% funding ratio in 10 years, estimated monthly employer contributions for the fiscal year beginning in 2025 for the entire employer would be \$252,334, instead of \$196,370.

The required employer contribution rates, or dollars if the division is closed, determined in this report are reasonable under Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, based on:

- The use of reasonable actuarial assumptions and cost methods,
- The use of reasonable amortization and asset valuation methods; and
- Application of the MERS funding policy which will accumulate sufficient assets to make benefit payments when due, assuming all assumptions will be realized, and the required employer contributions are made when due.

How and Why Do These Numbers Change?

In a defined benefit plan, contributions vary from one annual actuarial valuation to the next as a result of the following:

- Changes in benefit provisions (see Table 2),
- Changes in actuarial assumptions and methods (see the Appendix); and
- Experience of the plan (investment experience and demographic experience); this is the difference between actual experience of the plan and the actuarial assumptions.

These impacts are reflected in various tables in the report. For more information, please contact your Regional Manager.

Comments on Investment Rate of Return Assumption



A defined benefit plan is funded by employer contributions, participant contributions, and investment earnings. Investment earnings have historically provided a significant portion of the funding. The larger the share of benefits being provided from investment returns, the smaller the required contributions, and vice versa. Determining the contributions required to prefund the promised retirement benefits requires an assumption of what investment earnings are expected to add to the fund over a long period of time. This is called the **Investment Return Assumption**.

The MERS Investment Return Assumption is **6.93%** per year. This, along with all of our other actuarial assumptions, is reviewed at least every five years in an Experience Study that compares the assumptions used against actual experience and recommends adjustments if necessary. If your municipality would like to explore contributions at lower assumed investment return assumptions, please review the “What If” projection scenarios later in this report.

Assumption and Method Changes in 2023

Effective February 17, 2022, the MERS Retirement Board adopted a dedicated gains policy that automatically lowers the assumed rate of investment return by using excess asset gains to mitigate large increases in required contributions to the Plan. Full details of this dedicated gains policy are available in the Actuarial Policy found on the MERS [website](#). Some goals of the dedicated gains policy are to:

- Provide a systematic approach to lower the assumed rate of investment return between experience studies; and
- Use excess gains to cover both the increase in normal cost and any increase in UAL payment the first contribution year after application (i.e., minimize the first-year impact (i.e., increase) in employer contributions).

The dedicated gains policy was implemented with the December 31, 2021 annual actuarial valuation and was reflected in the computed employer contribution amounts beginning in fiscal year 2023.

Investment performance measured for the one-year period ending December 31, 2023 resulted in current year excess gains for use in lowering the assumed rate of investment return. As a result, the assumed rate of investment return was lowered from 7.00% to 6.93%. The December 31, 2023 valuation liabilities were developed using this new, lower assumption. Additionally, as a result of recognizing excess market gains, the valuation assets used to fund these liabilities are 1.4% higher than if there were no dedicated gains policy. The combined impact of these changes will minimize the first-year impact on employer contributions and may result in an increase or a decrease in employer contributions.

There were no other assumption or method changes in 2023.

Future Assumption and Method Changes

As the fiduciary of the plan, the MERS Retirement Board sets certain assumptions for funding and GASB purposes. These assumptions are reviewed periodically through a comprehensive study, called an Experience Study. The next Experience Study will commence during the fall of 2024.

Protecting MI Pension Grant Program

On July 1, 2022, Michigan lawmakers passed the State budget for the 2022-23 fiscal year. As a part of the budget, \$750 million was earmarked for underfunded municipal pension plans in counties, cities, townships,



villages and road commissions across the State. Known as the ***Protecting MI Pension Grant Program***, the legislation is designed to support municipal plans that are under 60% funded.

Funds received by municipalities were deposited into the MERS trust during August 2023 and are reflected in this valuation.

Comments on Asset Smoothing

To avoid dramatic spikes and dips in annual contribution requirements due to short-term fluctuations in asset markets, MERS applies a technique called **asset smoothing**. This spreads out each year's investment gains or losses over the prior year and the following four years. After initial application of asset smoothing, remaining excess market gains are used to buy down the assumed rate of investment return and increase the level of valuation assets, to the extent allowed by the dedicated gains policy. This smoothing method is used to determine your actuarial value of assets (valuation assets), which is then used to determine both your funded ratio and your required contributions. **The (smoothed) actuarial rate of return for 2023 was 5.54%, while the actual market rate of return was 10.94%.** The actuarial rate of return is below the assumed rate of return, which will put upward pressure on the employer contribution requirements determined in this valuation. To see historical details of the market rate of return compared to the smoothed actuarial rate of return, refer to this report's Appendix or view the "[How Smoothing Works](#)" video on the [Defined Benefit resource page](#) of the MERS website.

As of December 31, 2023, the actuarial value of assets is 110% of market value due to asset smoothing. This means that there are deferred investment losses, which will put upward pressure on contributions in the short term.

If the December 31, 2023 valuation results were based on market value instead of actuarial value:

- The funded percent of your entire municipality would be 62% (instead of 68%); and
- Your total employer contribution requirement for the fiscal year starting January 1, 2025 would be \$2,695,344 (instead of \$2,356,440).

Alternate Scenarios to Estimate the Potential Volatility of Results ("What If Scenarios")

The calculations in this report are based on assumptions about long-term economic and demographic behavior. These assumptions will never materialize in a given year, except by coincidence. Therefore, the results will vary from one year to the next. The volatility of the results depends upon the characteristics of the plan. For example:

- Open divisions that have substantial assets compared to their active employee payroll will have more volatile employer contribution rates due to investment return fluctuations.
- Open divisions that have substantial accrued liability compared to their active employee payroll will have more volatile employer contribution rates due to demographic experience fluctuations.
- Small divisions will have more volatile contribution patterns than larger divisions because statistical fluctuations are relatively larger among small populations.
- Shorter amortization periods result in more volatile contribution patterns.

Many assumptions are important in determining the required employer contributions. In the following table, we show the impact of varying the Investment Return assumption. Lower investment returns would generally result in higher required employer contributions, and vice versa. The three economic scenarios below provide a quantitative risk assessment for the impact of investment returns on the plan's projected financial condition



for funding purposes.

The relative impact of the economic scenarios below will vary from year to year, as the participant demographics change. The impact of each scenario should be analyzed for a given year, not from year to year. The results in the table are based on the December 31, 2023 valuation and are for the municipality in total, not by division.

It is important to note that calculations in this report are mathematical estimates based upon assumptions regarding future events, which may or may not materialize. Actuarial calculations can and do vary from one valuation to the next, sometimes significantly depending on the group's size. Projections are not predictions. Future valuations will be based on actual future experience.

12/31/2023 Valuation Results	Lower Future Annual Returns	Lower Future Annual Returns	Valuation Assumptions
Investment Return Assumption	4.93%	5.93%	6.93%
Accrued Liability	\$ 75,967,648	\$ 67,401,384	\$ 60,312,321
Valuation Assets ¹	\$ 41,003,598	\$ 41,003,598	\$ 41,003,598
Unfunded Accrued Liability	\$ 34,964,050	\$ 26,397,786	\$ 19,308,723
Funded Ratio	54%	61%	68%
Monthly Normal Cost	\$ 93,612	\$ 70,727	\$ 53,653
Monthly Amortization Payment	\$ 223,317	\$ 178,833	\$ 137,011
Total Employer Contribution²	\$ 320,778	\$ 254,087	\$ 196,370

¹ The Valuation Assets include assets from Surplus divisions, if any.

² If assets exceed accrued liabilities for a division, the division may have an overfunding credit to reduce the division's employer contribution requirement. If the overfunding credit is larger than the normal cost, the division's full credit is included in the municipality's amortization payment above but the division's total contribution requirement is zero. This can cause the displayed normal cost and amortization payment to not add up to the displayed total employer contribution.

Projection Scenarios

The next two pages show projections of the plan's funded ratio and computed employer contributions under the actuarial assumptions used in the valuation and alternate economic assumption scenarios. All three projections account for the past investment experience that will continue to affect the actuarial rate of return in the short term.

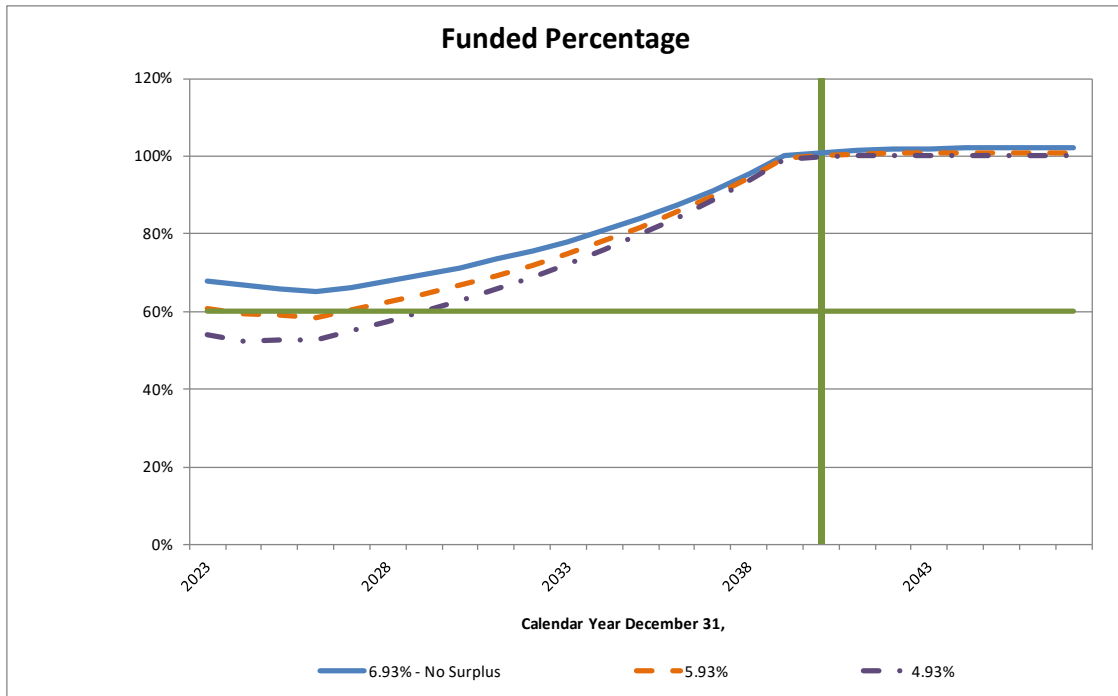
The 6.93% scenario provides an estimate of computed employer contributions based on current actuarial assumptions, and a projected 6.93% market return. The other two scenarios may be useful if the municipality chooses to budget more conservatively and make contributions in addition to the minimum requirements. The 5.93% and 4.93% projection scenarios provide an indication of the potential required employer contribution if these assumptions were met over the long term.



Valuation Year Ending 12/31	Fiscal Year Beginning 1/1	Actuarial Accrued Liability	Valuation Assets ²	Funded Percentage	Estimated Annual Employer Contribution
6.93%¹					
2023	2025	\$ 60,312,321	\$ 41,003,598	68%	\$ 2,356,440
2024	2026	\$ 61,400,000	\$ 41,100,000	67%	\$ 2,530,000
2025	2027	\$ 62,500,000	\$ 41,200,000	66%	\$ 2,710,000
2026	2028	\$ 63,500,000	\$ 41,300,000	65%	\$ 2,890,000
2027	2029	\$ 64,300,000	\$ 42,500,000	66%	\$ 2,980,000
2028	2030	\$ 65,100,000	\$ 44,100,000	68%	\$ 3,050,000
5.93%¹					
2023	2025	\$ 67,401,384	\$ 41,003,598	61%	\$ 3,049,044
2024	2026	\$ 68,500,000	\$ 40,700,000	59%	\$ 3,250,000
2025	2027	\$ 69,600,000	\$ 41,100,000	59%	\$ 3,430,000
2026	2028	\$ 70,700,000	\$ 41,400,000	59%	\$ 3,640,000
2027	2029	\$ 71,600,000	\$ 43,200,000	60%	\$ 3,720,000
2028	2030	\$ 72,300,000	\$ 45,100,000	62%	\$ 3,800,000
4.93%¹					
2023	2025	\$ 75,967,648	\$ 41,003,598	54%	\$ 3,849,336
2024	2026	\$ 77,200,000	\$ 40,300,000	52%	\$ 4,080,000
2025	2027	\$ 78,300,000	\$ 41,200,000	53%	\$ 4,260,000
2026	2028	\$ 79,300,000	\$ 41,900,000	53%	\$ 4,490,000
2027	2029	\$ 80,200,000	\$ 44,100,000	55%	\$ 4,590,000
2028	2030	\$ 81,000,000	\$ 46,600,000	58%	\$ 4,690,000

¹ Represents both the interest rate for discounting liabilities and the future investment return assumption on the Market Value of assets.

² Valuation Assets do not include assets from Surplus divisions, if any.



Notes:

The green indicator lines have been added at 60% funded and 17 years following the valuation date for PA 202 purposes.

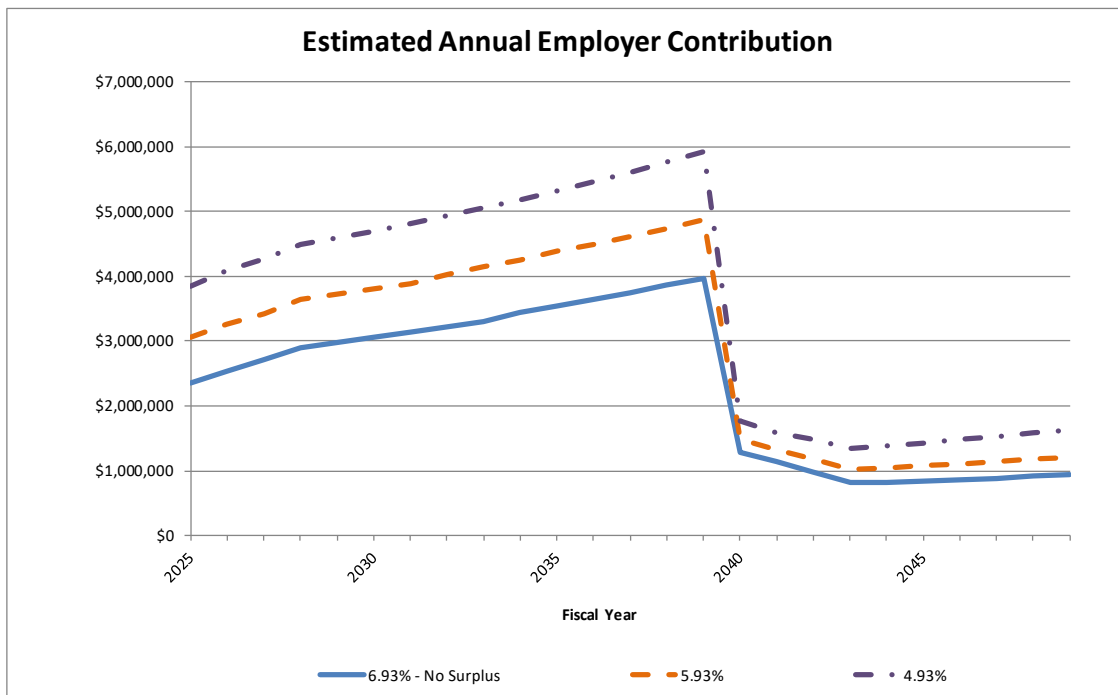


Table 1: Employer Contribution Details for the Fiscal Year Beginning January 1, 2025

Division	Total Normal Cost	Employee Contribution Rate	Employer Contributions ¹			Computed Employer Contribution With Phase-In	Blended ER Rate No Phase-In ⁵	Blended ER Rate With Phase-In ⁵	Employee Contribution Conversion Factor ²
			Employer Normal Cost ⁶	Payment of the Unfunded Accrued Liability ⁴	Computed Employer Contribution No Phase-In				
Percentage of Payroll									
01 - County TPOAM - closed	10.53%	2.00%	-	-	-	-	37.53%	37.53%	
02 - County Corrections - closed	19.48%	3.00%	-	-	-	-	23.47%	23.47%	
11 - Hlth Dept - closed	11.96%	2.00%	-	-	-	-	52.78%	52.78%	
13 - EDC General - closed	11.68%	2.00%	-	-	-	-	15.92%	15.92%	
15 - Health Dept Non-Union - Close	12.75%	2.00%	-	-	-	-	24.67%	24.67%	
16 - Gnrl, N-Un&Dsptch bf 5/1/10	11.18%	2.00%	-	-	-	-	19.38%	19.38%	
17 - EDC General after 12/01/13	8.47%	3.00%	5.47%	0.96%	6.43%	6.43%	15.92%	15.92%	0.85%
20 - County Sheriff Road - closed	19.07%	3.00%	-	-	-	-	17.33%	17.33%	
HA - County Sheriff Rd after 5/1/1	4.29%	0.00%	4.29%	-5.34%	0.00%	0.00%	17.33%	17.33%	
HB - County Corrections after 5/1/	4.56%	0.00%	4.56%	-0.74%	3.82%	3.82%	23.47%	23.47%	
HC - County, N-Un & Disp af 5/1/10	5.18%	0.00%	5.18%	0.00%	5.18%	5.18%	19.38%	19.38%	
HD - Hlth Dpt Teamstrs after 4/1/1	4.31%	0.00%	4.31%	-51.25%	0.00%	0.00%	52.78%	52.78%	
HE - Hlth Dpt Non-Union aft 4/1/11	5.64%	0.00%	5.64%	-3.20%	2.44%	2.44%	24.67%	24.67%	
HF - County TPOAM after 4/1/12	5.82%	0.00%	5.82%	0.37%	6.19%	6.19%	37.53%	37.53%	
Estimated Monthly Contribution ³									
01 - County TPOAM - closed			\$ 3,270	\$ 34,725	\$ 37,995	\$ 37,995			
02 - County Corrections - closed			3,558	13,730	17,288	17,288			
11 - Hlth Dept - closed			2,249	20,572	22,821	22,821			
13 - EDC General - closed			2,276	5,821	8,097	8,097			
15 - Health Dept Non-Union - Close			3,257	31,554	34,811	34,811			
16 - Gnrl, N-Un&Dsptch bf 5/1/10			7,594	32,534	40,128	40,128			
17 - EDC General after 12/01/13			2,508	438	2,946	2,946			
20 - County Sheriff Road - closed			3,188	10,262	13,450	13,450			
HA - County Sheriff Rd after 5/1/1			2,337	(2,910)	0	0			
HB - County Corrections after 5/1/			2,837	(458)	2,379	2,379			
HC - County, N-Un & Disp af 5/1/10			8,786	0	8,786	8,786			
HD - Hlth Dpt Teamstrs after 4/1/1			471	(5,604)	0	0			
HE - Hlth Dpt Non-Union aft 4/1/11			6,939	(3,931)	3,008	3,008			
HF - County TPOAM after 4/1/12			4,383	278	4,661	4,661			
Total Municipality			\$ 53,653	\$ 137,011	\$ 196,370	\$ 196,370			
Estimated Annual Contribution ³			\$ 643,836	\$ 1,644,132	\$ 2,356,440	\$ 2,356,440			

¹ The above employer contribution requirements are in addition to the employee contributions, if any.

- ² If employee contributions are increased/decreased by 1.00% of pay, the employer contribution requirement will decrease/increase by the Employee Contribution Conversion Factor. The conversion factor is usually under 1% because employee contributions may be refunded at termination of employment and not used to fund retirement pensions. Employer contributions will all be used to fund pensions.
- ³ For divisions that are open to new hires, estimated contributions are based on projected fiscal year payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts. For divisions that will have no new hires (i.e., closed divisions), invoices will be based on the above dollar amounts which are based on projected fiscal year payroll. See description of Open Divisions and Closed Divisions in the Appendix.
- ⁴ Note that if the overfunding credit is larger than the normal cost, the full credit is shown above but the total contribution requirement is zero. This will cause the displayed normal cost and unfunded accrued liability contributions not to add across.
- ⁵ For linked divisions, the employer will be invoiced the Computed Employer Contribution No Phase-in rate shown above for each linked division (a contribution rate for the open division; a contribution dollar for the closed-but-linked division), unless the employer elects to contribute the Blended Employer Contribution rate shown above, by contacting MERS at 800-767-MERS (6377).
- ⁶ For divisions with a negative employer normal cost, employee contributions cover the normal cost and a portion of the payment of any unfunded accrued liability.

Please see the Comments on Asset Smoothing in the Executive Summary of this report.

Table 2: Benefit Provisions

01 - County TPOAM - closed: Closed to new hires, linked to Division HF

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/20	55/20
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	3 years	3 years
COLA for Current Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	2.00%	2.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

02 - County Corrections - closed: Closed to new hires, linked to Division HB

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	50/25 55/20	50/25 55/20
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
COLA for Current Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	3.00%	3.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

11 - Hlth Dept - closed: Closed to new hires, linked to Division HD

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/20	55/20
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	3 years	3 years
COLA for Current Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	2.00%	2.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

13 - EDC General - closed: Closed to new hires, linked to Division 17

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/20	55/20
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
COLA for Current Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	2.00%	2.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

15 - Health Dept Non-Union - Close: Closed to new hires, linked to Division HE

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/20	55/20
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	2.00%	2.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

16 - Gnrl, N-Un&Dsptch bf 5/1/10: Closed to new hires, linked to Division HC

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/20	55/20
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	2.00%	2.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

17 - EDC General after 12/01/13: Open Division, linked to Division 13

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.50% Multiplier (80% max)	1.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	3.00%	3.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)



20 - County Sheriff Road - closed: Closed to new hires, linked to Division HA

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	50/25	50/25
	55/20	55/20
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	3.00%	3.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

HA - County Sheriff Rd after 5/1/1: Open Division, linked to Division 20

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.00% Multiplier (no max)	1.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

HB - County Corrections after 5/1/: Open Division, linked to Division 02

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.00% Multiplier (no max)	1.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

HC - County, N-Un & Disp af 5/1/10: Open Division, linked to Division 16

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.00% Multiplier (no max)	1.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)



HD - Hlth Dpt Teamstrs after 4/1/1: Open Division, linked to Division 11

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.00% Multiplier (no max)	1.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

HE - Hlth Dpt Non-Union aft 4/1/11: Open Division, linked to Division 15

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.00% Multiplier (no max)	1.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

HF - County TPOAM after 4/1/12: Open Division, linked to Division 01

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.00% Multiplier (no max)	1.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 3/15/1974)	Yes (Adopted 3/15/1974)

Table 3: Participant Summary

Division	2023 Valuation		2022 Valuation		2023 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
01 - County TPOAM - closed							
Active Employees	10	\$ 505,723	11	\$ 537,672	54.4	26.7	26.7
Vested Former Employees	6	62,696	6	62,696	52.6	10.5	14.6
Retirees and Beneficiaries	71	971,189	72	983,300	74.0		
Pending Refunds	8		9				
02 - County Corrections - closed							
Active Employees	5	\$ 267,497	5	\$ 275,738	44.9	17.7	18.6
Vested Former Employees	1	17,160	1	17,160	53.4	12.5	12.5
Retirees and Beneficiaries	22	342,315	22	335,896	73.4		
Pending Refunds	2		2				
11 - Hlth Dept - closed							
Active Employees	3	\$ 296,478	3	\$ 304,514	58.9	18.8	18.8
Vested Former Employees	0	0	1	3,213	0.0	0.0	0.0
Retirees and Beneficiaries	29	351,307	29	353,641	74.0		
Pending Refunds	15		19				
13 - EDC General - closed							
Active Employees	5	\$ 325,481	5	\$ 308,050	53.9	19.8	19.8
Vested Former Employees	2	12,454	2	12,454	51.9	8.7	11.8
Retirees and Beneficiaries	5	102,993	5	102,993	72.1		
Pending Refunds	0		0				
15 - Health Dept Non-Union - Close							
Active Employees	8	\$ 404,470	9	\$ 425,279	52.6	19.1	20.8
Vested Former Employees	5	68,417	7	78,331	52.5	14.3	14.3
Retirees and Beneficiaries	33	748,766	30	718,782	65.7		
Pending Refunds	10		10				
16 - Gnrl, N-Un&Dsptch bf 5/1/10							
Active Employees	17	\$ 1,048,011	19	\$ 1,145,979	50.4	21.2	21.2
Vested Former Employees	7	112,089	6	83,394	51.9	14.9	14.9
Retirees and Beneficiaries	36	925,174	35	893,800	67.1		
Pending Refunds	2		2				
17 - EDC General after 12/01/13							
Active Employees	8	\$ 459,104	6	\$ 358,669	42.7	4.8	4.8
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
Pending Refunds	0		0				

Table 3 (continued)

	2023 Valuation		2022 Valuation		2023 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
20 - County Sheriff Road - closed							
Active Employees	4	\$ 247,885	4	\$ 240,801	47.9	19.9	19.9
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	7	185,019	7	181,007	62.0		
Pending Refunds	0		0				
HA - County Sheriff Rd after 5/1/1							
Active Employees	10	\$ 592,808	9	\$ 537,829	33.2	5.2	5.7
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
Pending Refunds	0		0				
HB - County Corrections after 5/1/							
Active Employees	13	\$ 680,470	13	\$ 726,192	33.1	2.5	3.1
Vested Former Employees	3	4,949	3	4,949	42.0	3.4	8.3
Retirees and Beneficiaries	0	0	0	0	0.0		
Pending Refunds	0		0				
HC - County, N-Un & Disp af 5/1/10							
Active Employees	30	\$ 1,806,318	26	\$ 1,528,172	40.1	4.4	4.7
Vested Former Employees	5	21,158	5	21,158	44.2	7.6	10.0
Retirees and Beneficiaries	1	4,203	1	3,446	75.0		
Pending Refunds	0		0				
HD - Hlth Dpt Teamstrs after 4/1/1							
Active Employees	1	\$ 82,596	3	\$ 176,362	31.0	1.8	1.8
Vested Former Employees	4	13,291	4	13,291	43.6	5.2	11.1
Retirees and Beneficiaries	0	0	0	0	0.0		
Pending Refunds	0		0				
HE - Hlth Dpt Non-Union aft 4/1/11							
Active Employees	31	\$ 1,329,754	27	\$ 1,130,341	41.4	2.4	2.8
Vested Former Employees	5	9,524	5	9,524	43.6	4.5	9.1
Retirees and Beneficiaries	2	8,614	0	0	66.5		
Pending Refunds	0		0				
HF - County TPOAM after 4/1/12							
Active Employees	18	\$ 779,732	17	\$ 714,058	45.5	3.4	3.8
Vested Former Employees	2	4,205	1	266	49.9	4.9	16.5
Retirees and Beneficiaries	1	1,891	1	1,891	65.3		
Pending Refunds	0		0				
Total Municipality							
Active Employees	163	\$ 8,826,327	157	\$ 8,409,656	43.7	9.2	9.5
Vested Former Employees	40	325,943	41	306,436	48.4	9.3	12.4
Retirees and Beneficiaries	207	3,641,471	202	3,574,756	70.9		
Pending Refunds	37		42				
Total Participants	447		442				

¹ Annual payroll for active employees; annual deferred benefits payable for vested former employees; annual benefits being paid for retirees and beneficiaries.

² Descriptions can be found under Miscellaneous and Technical Assumptions in the Appendix.

Table 4: Reported Assets (Market Value)

Division	2023 Valuation		2022 Valuation	
	Employer and Retiree ¹	Employee ²	Employer and Retiree ¹	Employee ²
01 - County TPOAM - closed	\$ 7,113,972	\$ 309,960	\$ 6,694,935	\$ 308,201
02 - County Corrections - closed	3,304,787	167,237	3,005,908	151,935
11 - Hlth Dept - closed	1,490,470	107,450	1,448,451	105,480
13 - EDC General - closed	1,567,595	108,507	1,434,350	97,336
15 - Health Dept Non-Union - Close	5,712,740	239,136	5,451,190	243,747
16 - Gnrl, N-Un&Dsptch bf 5/1/10	10,705,872	529,321	9,854,960	509,358
17 - EDC General after 12/01/13	151,180	69,363	108,818	54,634
20 - County Sheriff Road - closed	2,482,721	146,553	2,236,916	132,757
HA - County Sheriff Rd after 5/1/1	485,651	0	377,470	0
HB - County Corrections after 5/1/	168,267	0	125,526	0
HC - County, N-Un & Disp af 5/1/10	859,047	(577)	674,103	(577)
HD - Hlth Dpt Teamstrs after 4/1/1	579,565	0	517,562	0
HE - Hlth Dpt Non-Union aft 4/1/11	734,168	0	590,928	0
HF - County TPOAM after 4/1/12	258,098	0	214,985	0
Municipality Total³	\$ 35,614,131	\$ 1,676,952	\$ 32,736,101	\$ 1,602,870
Combined Assets³	\$37,291,083		\$34,338,971	

¹ Reserve for Employer Contributions and Benefit Payments.

² Reserve for Employee Contributions.

³ Totals may not add due to rounding.

The December 31, 2023 valuation assets (actuarial value of assets) are equal to 1.099555 times the reported market value of assets (compared to 1.157665 as of December 31, 2022). Refer to the Appendix for a description of the valuation asset derivation and a detailed calculation of valuation assets.

Table 5: Flow of Valuation Assets

Year Ended 12/31	Employer Contributions		Employee Contributions	Investment Income (Valuation Assets)	Benefit Payments	Employee Contribution Refunds	Net Transfers	Valuation Asset Balance
	Required	Additional						
2013	\$ 1,147,528	\$ 1,429	\$ 144,929	\$ 1,748,559	\$ (1,975,628)	\$ (28,244)	\$ 0	\$ 30,490,775
2014	1,178,937	0	135,488	1,734,732	(2,137,284)	(25,654)	0	31,376,994
2015	1,231,566	0	138,698	1,534,854	(2,287,729)	(27,118)	0	31,967,265
2016	1,211,265	0	166,483	1,618,889	(2,454,733)	(17,990)	1	32,491,180
2017	1,355,674	968,938	116,160	1,883,259	(2,696,044)	(6,297)	(2,089,310)	32,023,560
2018	1,458,593	200,001	109,936	1,164,371	(2,762,091)	(7,572)	0	32,186,798
2019	1,479,605	350,000	110,433	1,516,348	(2,874,255)	(269)	0	32,768,660
2020	1,641,954	0	107,172	2,554,413	(3,114,904)	0	0	33,957,295
2021	1,897,610	499,999	98,271	5,721,454	(3,219,059)	(35,226)	(1)	38,920,343
2022	2,335,655	500,000	87,150	1,365,064	(3,448,352)	(6,838)	1	39,753,023
2023	2,223,742	500,000	82,708	1,985,144	(3,537,912)	(3,107)	0	41,003,598

Notes:

Transfers in and out are usually related to the transfer of participants between municipalities, and to employer and employee payments for service credit purchases (if any) that the governing body has approved.

The investment income column reflects the recognized investment income based on Valuation Assets. It does not reflect the market value investment return in any given year.

The Valuation Asset balance includes assets from Surplus divisions, if any.

Years where historical information is not available will be displayed with zero values.

**Table 6: Actuarial Accrued Liabilities and Valuation Assets
as of December 31, 2023**

Division	Actuarial Accrued Liability					Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
	Active Employees	Vested Former Employees	Retirees and Beneficiaries	Pending Refunds	Total			
01 - County TPOAM - closed	\$ 3,063,274	\$ 438,626	\$ 9,451,043	\$ 14,262	\$ 12,967,205	\$ 8,163,022	63.0%	\$ 4,804,183
02 - County Corrections - closed	1,643,278	151,537	3,912,493	7,873	5,715,181	3,817,682	66.8%	1,897,499
11 - Hlth Dept - closed	1,361,801	0	3,216,863	22,037	4,600,701	1,757,001	38.2%	2,843,700
13 - EDC General - closed	1,418,426	81,526	1,142,510	0	2,642,462	1,842,967	69.7%	799,495
15 - Health Dept Non-Union - Close	1,964,474	593,153	8,298,970	23,491	10,880,088	6,544,415	60.2%	4,335,673
16 - Gnrl, N-Un&Dsptch bf 5/1/10	5,485,049	800,995	10,528,137	23,536	16,837,717	12,353,713	73.4%	4,484,004
17 - EDC General after 12/01/13	297,749	0	0	0	297,749	242,499	81.4%	55,250
20 - County Sheriff Road - closed	1,711,728	0	2,591,506	0	4,303,234	2,891,031	67.2%	1,412,203
HA - County Sheriff Rd after 5/1/1	216,901	0	0	0	216,901	534,000	246.2%	(317,099)
HB - County Corrections after 5/1/	104,957	23,219	0	0	128,176	185,018	144.3%	(56,842)
HC - County, N-Un & Disp af 5/1/10	791,799	96,737	33,676	0	922,212	943,935	102.4%	(21,723)
HD - Hlth Dpt Teamstrs after 4/1/1	9,222	69,438	0	0	78,660	637,264	810.2%	(558,604)
HE - Hlth Dpt Non-Union aft 4/1/11	271,843	39,233	94,939	0	406,015	807,258	198.8%	(401,243)
HF - County TPOAM after 4/1/12	258,710	33,216	24,094	0	316,020	283,793	89.8%	32,227
Total	\$ 18,599,211	\$ 2,327,680	\$ 39,294,231	\$ 91,199	\$ 60,312,321	\$ 41,003,598	68.0%	\$ 19,308,723

The following results show the combined accrued liabilities and assets for each set of linked divisions. These results are already shown in the table on the prior page(s).

Table 6 (continued)

Division	Actuarial Accrued Liability					Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
	Active Employees	Vested Former Employees	Retirees and Beneficiaries	Pending Refunds	Total			
Linked Divisions 17, 13	\$ 1,716,175	\$ 81,526	\$ 1,142,510	\$ 0	\$ 2,940,211	\$ 2,085,466	70.9%	\$ 854,745
Linked Divisions HA, 20	1,928,629	0	2,591,506	0	4,520,135	3,425,031	75.8%	1,095,104
Linked Divisions HB, 02	1,748,235	174,756	3,912,493	7,873	5,843,357	4,002,700	68.5%	1,840,657
Linked Divisions HC, 16	6,276,848	897,732	10,561,813	23,536	17,759,929	13,297,648	74.9%	4,462,281
Linked Divisions HD, 11	1,371,023	69,438	3,216,863	22,037	4,679,361	2,394,265	51.2%	2,285,096
Linked Divisions HE, 15	2,236,317	632,386	8,393,909	23,491	11,286,103	7,351,673	65.1%	3,934,430
Linked Divisions HF, 01	3,321,984	471,842	9,475,137	14,262	13,283,225	8,446,815	63.6%	4,836,410

Please see the Comments on Asset Smoothing in the Executive Summary of this report.

The December 31, 2023 valuation assets (actuarial value of assets) are equal to 1.099555 times the reported market value of assets. Refer to the Appendix for a description of the valuation asset derivation and a detailed calculation of valuation assets.

Table 7: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2009	\$ 32,521,364	\$ 26,418,432	81%	\$ 6,102,932
2010	34,793,371	27,576,324	79%	7,217,047
2011	36,543,151	28,641,084	78%	7,902,067
2012	38,144,006	29,452,202	77%	8,691,804
2013	39,646,045	30,490,775	77%	9,155,270
2014	41,555,130	31,376,994	76%	10,178,136
2015	45,128,410	31,967,265	71%	13,161,145
2016	46,797,040	32,491,180	69%	14,305,860
2017	46,270,543	32,023,560	69%	14,246,983
2018	47,466,307	32,186,798	68%	15,279,509
2019	50,559,247	32,768,660	65%	17,790,587
2020	55,245,199	33,957,295	61%	21,287,904
2021	57,978,045	38,920,343	67%	19,057,702
2022	58,777,374	39,753,023	68%	19,024,351
2023	60,312,321	41,003,598	68%	19,308,723

Notes: Actuarial assumptions were revised for the 2009, 2010, 2011, 2012, 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The Valuation Assets include assets from Surplus divisions, if any.

Years where historical information is not available will be displayed with zero values.

Throughout this report are references to valuation results generated prior to the 2018 valuation date. Results prior to 2018 were received directly from the prior actuary or extracted from the previous valuation system by MERS's technology service provider.

Tables 8 and 9: Division-Based Comparative Schedules

Division 01 - County TPOAM - closed

Table 8-01: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 10,792,999	\$ 7,474,204	69%	\$ 3,318,795
2014	10,852,210	7,469,386	69%	3,382,824
2015	11,576,004	7,426,523	64%	4,149,481
2016	11,745,027	7,158,837	61%	4,586,190
2017	11,615,577	7,252,260	62%	4,363,317
2018	11,526,826	7,151,025	62%	4,375,801
2019	11,891,751	7,097,014	60%	4,794,737
2020	12,546,713	7,111,008	57%	5,435,705
2021	12,789,596	7,986,935	62%	4,802,661
2022	13,003,473	8,107,285	62%	4,896,188
2023	12,967,205	8,163,022	63%	4,804,183

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-01: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	32	\$ 1,327,365	\$ 25,910	2.00%
2014	29	1,223,459	\$ 25,840	2.00%
2015	28	1,208,592	\$ 31,443	2.00%
2016	22	958,239	\$ 32,825	2.00%
2017	21	928,644	\$ 31,752	2.00%
2018	21	930,403	\$ 32,705	2.00%
2019	18	782,124	\$ 36,200	2.00%
2020	15	712,244	\$ 40,886	2.00%
2021	14	657,238	\$ 36,272	2.00%
2022	11	537,672	\$ 37,972	2.00%
2023	10	505,723	\$ 37,995	2.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 02 - County Corrections - closed

Table 8-02: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 3,387,128	\$ 2,514,630	74%	\$ 872,498
2014	3,508,156	2,604,345	74%	903,811
2015	3,943,616	2,677,008	68%	1,266,608
2016	4,094,814	2,809,545	69%	1,285,269
2017	4,195,604	2,888,447	69%	1,307,157
2018	4,468,350	2,911,985	65%	1,556,365
2019	4,751,161	2,969,365	62%	1,781,796
2020	5,166,229	3,071,853	59%	2,094,376
2021	5,585,578	3,544,791	63%	2,040,787
2022	5,578,847	3,655,724	66%	1,923,123
2023	5,715,181	3,817,682	67%	1,897,499

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-02: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	9	\$ 398,683	\$ 8,193	3.00%
2014	9	394,275	\$ 8,686	3.00%
2015	8	365,433	\$ 11,024	3.00%
2016	9	419,544	\$ 11,863	3.00%
2017	9	413,970	\$ 12,080	3.00%
2018	8	397,428	\$ 13,733	3.00%
2019	7	338,416	\$ 15,290	3.00%
2020	7	371,253	\$ 18,680	3.00%
2021	7	387,015	\$ 18,812	3.00%
2022	5	275,738	\$ 16,924	3.00%
2023	5	267,497	\$ 17,288	3.00%

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 11 - Hlth Dept - closed

Table 8-11: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 3,456,846	\$ 2,664,325	77%	\$ 792,521
2014	3,488,120	2,608,742	75%	879,378
2015	3,683,667	2,538,523	69%	1,145,144
2016	3,835,829	2,473,502	65%	1,362,327
2017	3,834,146	2,340,331	61%	1,493,815
2018	3,758,253	2,105,228	56%	1,653,025
2019	3,934,716	1,878,869	48%	2,055,847
2020	4,137,705	1,690,419	41%	2,447,286
2021	4,535,788	1,859,077	41%	2,676,711
2022	4,662,834	1,798,931	39%	2,863,903
2023	4,600,701	1,757,001	38%	2,843,700

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-11: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	5	\$ 342,953	\$ 6,681	2.00%
2014	5	332,288	\$ 6,992	2.00%
2015	5	322,132	\$ 8,719	2.00%
2016	4	269,100	\$ 9,766	2.00%
2017	3	209,627	\$ 10,361	2.00%
2018	3	208,157	\$ 11,520	2.00%
2019	2	139,715	\$ 14,312	2.00%
2020	2	163,686	\$ 17,468	2.00%
2021	3	269,478	\$ 20,114	2.00%
2022	3	304,514	\$ 22,476	2.00%
2023	3	296,478	\$ 22,821	2.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 13 - EDC General - closed

Table 8-13: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 1,430,321	\$ 1,391,971	97%	\$ 38,350
2014	1,655,758	1,417,787	86%	237,971
2015	1,781,271	1,414,127	79%	367,144
2016	1,812,075	1,421,702	79%	390,373
2017	1,850,985	1,426,203	77%	424,782
2018	1,913,772	1,423,470	74%	490,302
2019	2,046,152	1,435,952	70%	610,200
2020	2,227,428	1,505,424	68%	722,004
2021	2,376,307	1,730,153	73%	646,154
2022	2,515,523	1,773,178	70%	742,345
2023	2,642,462	1,842,967	70%	799,495

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-13: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	8	\$ 345,073	\$ 2,278	2.00%
2014	6	240,278	\$ 2,910	2.00%
2015	6	246,190	\$ 3,800	2.00%
2016	5	225,623	\$ 3,770	2.00%
2017	5	233,561	\$ 4,066	2.00%
2018	5	242,401	\$ 4,553	2.00%
2019	5	252,712	\$ 5,549	2.00%
2020	5	275,625	\$ 6,572	2.00%
2021	5	280,086	\$ 6,190	2.00%
2022	5	308,050	\$ 7,349	2.00%
2023	5	325,481	\$ 8,097	2.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 15 - Health Dept Non-Union - Close

Table 8-15: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 7,666,380	\$ 6,315,881	82%	\$ 1,350,499
2014	8,137,065	6,525,139	80%	1,611,926
2015	8,786,897	6,634,486	76%	2,152,411
2016	9,052,169	6,711,942	74%	2,340,227
2017	9,414,489	6,703,023	71%	2,711,466
2018	9,418,320	6,455,292	69%	2,963,028
2019	9,827,486	6,248,942	64%	3,578,544
2020	10,740,118	6,311,529	59%	4,428,589
2021	11,047,801	6,889,622	62%	4,158,179
2022	10,685,597	6,592,829	62%	4,092,768
2023	10,880,088	6,544,415	60%	4,335,673

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-15: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	33	\$ 1,391,107	\$ 16,593	2.00%
2014	31	1,323,487	\$ 17,923	2.00%
2015	29	1,270,275	\$ 21,045	2.00%
2016	25	1,033,110	\$ 20,186	2.00%
2017	22	936,060	\$ 22,483	2.00%
2018	18	779,637	\$ 23,933	2.00%
2019	18	787,241	\$ 28,959	2.00%
2020	17	863,205	\$ 36,111	2.00%
2021	13	637,602	\$ 32,733	2.00%
2022	9	425,279	\$ 31,856	2.00%
2023	8	404,470	\$ 34,811	2.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Table 8-16: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 9,241,616	\$ 7,052,913	76%	\$ 2,188,703
2014	9,822,327	7,355,701	75%	2,466,626
2015	10,784,612	7,586,369	70%	3,198,243
2016	11,755,154	8,188,857	70%	3,566,297
2017	12,207,250	8,613,167	71%	3,594,083
2018	12,624,339	8,887,919	70%	3,736,420
2019	13,707,314	9,324,549	68%	4,382,765
2020	15,087,593	9,881,392	65%	5,206,201
2021	15,850,937	11,534,397	73%	4,316,540
2022	16,372,999	11,998,407	73%	4,374,592
2023	16,837,717	12,353,713	73%	4,484,004

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-16: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	36	\$ 1,703,545	\$ 23,026	2.00%
2014	34	1,748,115	\$ 25,326	2.00%
2015	33	1,722,193	\$ 30,402	2.00%
2016	38	1,924,155	\$ 34,095	2.00%
2017	32	1,685,017	\$ 32,648	2.00%
2018	31	1,684,923	\$ 33,991	2.00%
2019	28	1,567,054	\$ 38,934	2.00%
2020	28	1,713,005	\$ 46,232	2.00%
2021	22	1,268,312	\$ 37,268	2.00%
2022	19	1,145,979	\$ 38,768	2.00%
2023	17	1,048,011	\$ 40,128	2.00%

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 17 - EDC General after 12/01/13

Table 8-17: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 0	\$ 0	0%	\$ 0
2014	7,043	8,117	115%	(1,074)
2015	19,641	20,203	103%	(562)
2016	34,236	32,795	96%	1,441
2017	36,912	47,623	129%	(10,711)
2018	52,777	58,688	111%	(5,911)
2019	78,557	78,805	100%	(248)
2020	122,191	106,195	87%	15,996
2021	169,387	148,926	88%	20,461
2022	230,730	189,223	82%	41,507
2023	297,749	242,499	81%	55,250

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-17: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	0	\$ 0	\$ 0	0.00%
2014	3	141,452	3.76%	3.00%
2015	3	143,776	3.95%	3.00%
2016	3	148,881	4.05%	3.00%
2017	4	189,583	4.06%	3.00%
2018	4	221,849	4.35%	3.00%
2019	4	228,676	4.60%	3.00%
2020	4	255,373	5.45%	3.00%
2021	6	332,018	6.20%	3.00%
2022	6	358,669	6.64%	3.00%
2023	8	459,104	6.43%	3.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 20 - County Sheriff Road - closed

Table 8-20: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 1,985,725	\$ 1,394,605	70%	\$ 591,120
2014	2,222,461	1,544,392	70%	678,069
2015	2,532,226	1,689,444	67%	842,782
2016	2,422,504	1,672,248	69%	750,256
2017	2,595,106	1,833,999	71%	761,107
2018	2,978,641	1,949,148	65%	1,029,493
2019	3,411,402	2,112,307	62%	1,299,095
2020	4,035,941	2,313,620	57%	1,722,321
2021	4,189,838	2,730,734	65%	1,459,104
2022	4,107,843	2,743,288	67%	1,364,555
2023	4,303,234	2,891,031	67%	1,412,203

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-20: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	9	\$ 473,852	\$ 7,843	3.00%
2014	9	482,768	\$ 8,665	3.00%
2015	9	490,218	\$ 10,034	3.00%
2016	8	429,701	\$ 8,799	3.00%
2017	8	436,625	\$ 8,984	3.00%
2018	8	426,069	\$ 10,609	3.00%
2019	7	410,321	\$ 12,598	3.00%
2020	6	400,600	\$ 16,284	3.00%
2021	5	299,764	\$ 13,697	3.00%
2022	4	240,801	\$ 12,495	3.00%
2023	4	247,885	\$ 13,450	3.00%

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HA - County Sheriff Rd after 5/1/1

Table 8-HA: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 4,764	\$ 29,299	615%	\$ (24,535)
2014	10,067	49,590	493%	(39,523)
2015	17,719	71,807	405%	(54,088)
2016	34,539	98,269	285%	(63,730)
2017	47,461	141,552	298%	(94,091)
2018	64,997	185,373	285%	(120,376)
2019	66,990	234,342	350%	(167,352)
2020	106,532	271,902	255%	(165,370)
2021	133,108	371,207	279%	(238,099)
2022	166,902	436,984	262%	(270,082)
2023	216,901	534,000	246%	(317,099)

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HA: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	2	\$ 94,420	1.22%	0.00%
2014	2	96,678	0.00%	0.00%
2015	2	105,007	0.00%	0.00%
2016	3	153,796	0.00%	0.00%
2017	4	210,119	0.00%	0.00%
2018	4	227,983	0.00%	0.00%
2019	5	274,573	0.00%	0.00%
2020	5	306,826	0.00%	0.00%
2021	7	390,949	0.00%	0.00%
2022	9	537,829	0.00%	0.00%
2023	10	592,808	0.00%	0.00%

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HB - County Corrections after 5/1/

Table 8-HB: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 22,051	\$ 33,269	151%	\$ (11,218)
2014	36,098	46,458	129%	(10,360)
2015	55,763	62,826	113%	(7,063)
2016	22,566	10,350	46%	12,216
2017	35,371	26,700	76%	8,671
2018	61,983	47,547	77%	14,436
2019	72,474	72,335	100%	139
2020	81,964	104,579	128%	(22,615)
2021	112,872	145,446	129%	(32,574)
2022	98,126	145,317	148%	(47,191)
2023	128,176	185,018	144%	(56,842)

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HB: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	7	\$ 302,657	3.65%	0.00%
2014	7	300,457	3.62%	0.00%
2015	8	354,376	3.73%	0.00%
2016	5	218,423	4.42%	0.00%
2017	7	317,049	4.32%	0.00%
2018	11	519,640	4.41%	0.00%
2019	11	527,691	4.18%	0.00%
2020	12	606,485	3.96%	0.00%
2021	12	621,668	4.25%	0.00%
2022	13	726,192	3.88%	0.00%
2023	13	680,470	3.82%	0.00%

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HC - County, N-Un & Disp af 5/1/10

Table 8-HC: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 56,688	\$ 56,194	99%	\$ 494
2014	100,739	91,770	91%	8,969
2015	163,192	138,793	85%	24,399
2016	171,476	123,758	72%	47,718
2017	248,603	178,722	72%	69,881
2018	330,006	241,189	73%	88,817
2019	437,120	321,192	73%	115,928
2020	528,040	424,693	80%	103,347
2021	638,583	568,416	89%	70,167
2022	743,163	779,717	105%	(36,554)
2023	922,212	943,935	102%	(21,723)

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HC: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	13	\$ 512,062	4.72%	0.00%
2014	15	659,247	4.87%	0.00%
2015	18	824,349	4.82%	0.00%
2016	14	716,183	4.97%	0.00%
2017	17	919,196	5.18%	0.00%
2018	21	1,093,122	5.28%	0.00%
2019	25	1,261,485	5.24%	0.00%
2020	22	1,194,203	5.31%	0.00%
2021	25	1,377,990	5.38%	0.00%
2022	26	1,528,172	5.16%	0.00%
2023	30	1,806,318	5.18%	0.00%

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HD - Hlth Dpt Teamstrs after 4/1/1

Table 8-HD: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 15,294	\$ 48,919	320%	\$ (33,625)
2014	23,660	93,290	394%	(69,630)
2015	15,636	138,937	889%	(123,301)
2016	47,101	197,150	419%	(150,049)
2017	49,222	264,349	537%	(215,127)
2018	58,347	318,406	546%	(260,059)
2019	62,158	378,396	609%	(316,238)
2020	64,213	414,878	646%	(350,665)
2021	61,816	488,705	791%	(426,889)
2022	70,140	599,163	854%	(529,023)
2023	78,660	637,264	810%	(558,604)

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HD: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	3	\$ 195,243	3.09%	0.00%
2014	5	285,737	2.25%	0.00%
2015	4	198,850	0.00%	0.00%
2016	5	303,802	0.60%	0.00%
2017	6	340,713	0.00%	0.00%
2018	4	219,467	0.00%	0.00%
2019	3	178,403	0.00%	0.00%
2020	1	61,764	0.00%	0.00%
2021	1	54,809	0.00%	0.00%
2022	3	176,362	0.00%	0.00%
2023	1	82,596	0.00%	0.00%

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HE - Hlth Dpt Non-Union aft 4/1/11

Table 8-HE: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 7,403	\$ 18,296	247%	\$ (10,893)
2014	17,580	47,503	270%	(29,923)
2015	26,335	92,489	351%	(66,154)
2016	52,562	157,561	300%	(104,999)
2017	83,507	255,629	306%	(172,122)
2018	126,043	375,411	298%	(249,368)
2019	159,902	511,985	320%	(352,083)
2020	231,449	606,195	262%	(374,746)
2021	250,398	723,154	289%	(472,756)
2022	247,901	684,097	276%	(436,196)
2023	406,015	807,258	199%	(401,243)

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HE: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	4	\$ 132,735	4.46%	0.00%
2014	6	231,226	3.62%	0.00%
2015	9	287,137	3.87%	0.00%
2016	11	421,586	3.52%	0.00%
2017	14	581,172	2.93%	0.00%
2018	15	672,953	1.80%	0.00%
2019	13	654,348	0.34%	0.00%
2020	16	804,628	1.42%	0.00%
2021	18	799,907	0.36%	0.00%
2022	27	1,130,341	1.88%	0.00%
2023	31	1,329,754	2.44%	0.00%

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HF - County TPOAM after 4/1/12

Table 8-HF: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 3,638	\$ 3,363	92%	\$ 275
2014	10,290	8,683	84%	1,607
2015	21,051	16,284	77%	4,767
2016	30,771	31,761	103%	(990)
2017	56,310	51,555	92%	4,755
2018	83,653	76,117	91%	7,536
2019	112,064	104,607	93%	7,457
2020	169,083	143,608	85%	25,475
2021	236,036	198,780	84%	37,256
2022	293,296	248,880	85%	44,416
2023	316,020	283,793	90%	32,227

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HF: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	3	\$ 94,575	3.77%	0.00%
2014	5	162,850	4.57%	0.00%
2015	5	171,020	4.50%	0.00%
2016	10	353,196	4.99%	0.00%
2017	10	382,212	4.95%	0.00%
2018	11	419,771	4.98%	0.00%
2019	13	491,938	5.04%	0.00%
2020	15	583,800	5.73%	0.00%
2021	15	596,731	5.90%	0.00%
2022	17	714,058	6.06%	0.00%
2023	18	779,732	6.19%	0.00%

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Table 10: Division-Based Layered Amortization Schedule

Division 01 - County TPOAM - closed

Table 10-01: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 4,149,481	23	\$ 4,148,331	15	\$ 366,792
(Gain)/Loss	12/31/2016	329,831	22	343,395	15	30,360
(Gain)/Loss	12/31/2017	(285,176)	21	(294,926)	15	(26,076)
(Gain)/Loss	12/31/2018	3,542	20	3,654	15	324
(Gain)/Loss	12/31/2019	64,544	19	66,059	15	5,844
Assumption	12/31/2019	334,548	19	326,016	15	28,824
Experience	12/31/2020	619,253	18	637,947	15	56,412
Experience	12/31/2021	(664,775)	17	(689,051)	15	(60,924)
Experience	12/31/2022	208,122	16	218,763	15	19,344
Experience	12/31/2023	(44,452)	15	(47,532)	15	(4,200)
Total				\$ 4,712,656		\$ 416,700

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division 02 - County Corrections - closed

Table 10-02: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 1,266,608	23	\$ 1,272,680	15	\$ 112,524
(Gain)/Loss	12/31/2016	(20,556)	22	(21,399)	15	(1,896)
(Gain)/Loss	12/31/2017	12,201	21	12,610	15	1,116
(Gain)/Loss	12/31/2018	239,612	20	246,683	15	21,816
(Gain)/Loss	12/31/2019	49,121	19	50,277	15	4,440
Assumption	12/31/2019	151,963	19	149,538	15	13,224
Experience	12/31/2020	300,556	18	309,621	15	27,372
Experience	12/31/2021	(70,769)	17	(73,351)	15	(6,492)
Experience	12/31/2022	(86,411)	16	(90,825)	15	(8,028)
Experience	12/31/2023	7,179	15	7,677	15	684
Total				\$ 1,863,511		\$ 164,760

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division 11 - Hlth Dept - closed

Table 10-11: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 1,145,144	23	\$ 1,147,438	15	\$ 101,460
(Gain)/Loss	12/31/2016	184,997	22	192,621	15	17,028
(Gain)/Loss	12/31/2017	106,992	21	110,653	15	9,780
(Gain)/Loss	12/31/2018	141,653	20	145,844	15	12,900
(Gain)/Loss	12/31/2019	279,030	19	285,614	15	25,260
Assumption	12/31/2019	107,009	19	102,322	15	9,048
Experience	12/31/2020	366,028	18	377,074	15	33,336
Experience	12/31/2021	208,156	17	215,764	15	19,080
Experience	12/31/2022	203,373	16	213,772	15	18,900
Experience	12/31/2023	767	15	820	15	72
Total				\$ 2,791,922		\$ 246,864

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division 13 - EDC General - closed

Table 10-13: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 367,144	23	\$ 371,795	15	\$ 32,880
(Gain)/Loss	12/31/2016	8,876	22	9,253	15	816
(Gain)/Loss	12/31/2017	30,432	21	31,469	15	2,784
(Gain)/Loss	12/31/2018	60,527	20	62,298	15	5,508
(Gain)/Loss	12/31/2019	49,243	19	50,396	15	4,452
Assumption	12/31/2019	64,201	19	63,707	15	5,628
Experience	12/31/2020	104,351	18	107,497	15	9,504
Experience	12/31/2021	(81,842)	17	(84,822)	15	(7,500)
Experience	12/31/2022	110,985	16	116,663	15	10,320
Experience	12/31/2023	57,710	15	61,709	15	5,460
Total				\$ 789,965		\$ 69,852

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division 15 - Health Dept Non-Union - Close

Table 10-15: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 2,152,411	23	\$ 2,158,712	15	\$ 190,872
(Gain)/Loss	12/31/2016	125,296	22	130,461	15	11,532
(Gain)/Loss	12/31/2017	342,406	21	354,118	15	31,308
(Gain)/Loss	12/31/2018	209,205	20	215,378	15	19,044
(Gain)/Loss	12/31/2019	287,927	19	294,716	15	26,064
Assumption	12/31/2019	299,978	19	294,935	15	26,076
Experience	12/31/2020	812,094	18	836,605	15	73,968
Experience	12/31/2021	(320,907)	17	(332,620)	15	(29,412)
Experience	12/31/2022	12,823	16	13,477	15	1,188
Experience	12/31/2023	296,199	15	316,726	15	28,008
Total				\$ 4,282,508		\$ 378,648

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Table 10-16: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 3,198,243	23	\$ 3,208,810	15	\$ 283,716
(Gain)/Loss	12/31/2016	273,927	22	285,207	15	25,224
(Gain)/Loss	12/31/2017	(21,864)	21	(22,610)	15	(2,004)
(Gain)/Loss	12/31/2018	119,877	20	123,422	15	10,908
(Gain)/Loss	12/31/2019	237,046	19	242,635	15	21,456
Assumption	12/31/2019	384,516	19	378,837	15	33,492
Experience	12/31/2020	784,326	18	808,003	15	71,448
Experience	12/31/2021	(935,383)	17	(969,532)	15	(85,728)
Experience	12/31/2022	188,906	16	198,561	15	17,556
Experience	12/31/2023	151,664	15	162,174	15	14,340
Total				\$ 4,415,507		\$ 390,408

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division 17 - EDC General after 12/01/13

Table 10-17: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
(Gain)/Loss	12/31/2019	\$ 262	15	\$ 260	11	\$ 24
Experience	12/31/2020	15,715	15	15,547	12	1,632
Experience	12/31/2021	3,262	15	3,316	13	324
Experience	12/31/2022	21,227	15	22,217	14	2,064
Experience	12/31/2023	12,760	15	13,644	15	1,212
Total				\$ 54,984		\$ 5,256

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division 20 - County Sheriff Road - closed

Table 10-20: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 842,782	23	\$ 843,114	15	\$ 74,544
(Gain)/Loss	12/31/2016	(114,787)	22	(119,490)	15	(10,560)
(Gain)/Loss	12/31/2017	12,277	21	12,687	15	1,128
(Gain)/Loss	12/31/2018	262,426	20	270,180	15	23,892
(Gain)/Loss	12/31/2019	132,211	19	135,341	15	11,964
Assumption	12/31/2019	114,080	19	112,383	15	9,936
Experience	12/31/2020	406,975	18	419,247	15	37,068
Experience	12/31/2021	(290,167)	17	(300,767)	15	(26,592)
Experience	12/31/2022	(52,464)	16	(55,150)	15	(4,872)
Experience	12/31/2023	70,185	15	75,049	15	6,636
Total				\$ 1,392,594		\$ 123,144

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division HA - County Sheriff Rd after 5/1/1

Table 10-HA: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ (54,088)	10	\$ (34,305)	7	\$ (5,652)
(Gain)/Loss	12/31/2016	(10,134)	15	(8,294)	8	(1,212)
(Gain)/Loss	12/31/2017	(30,882)	15	(26,957)	9	(3,576)
(Gain)/Loss	12/31/2018	(26,646)	15	(24,460)	10	(2,976)
(Gain)/Loss	12/31/2019	(49,615)	15	(47,275)	11	(5,316)
Assumption	12/31/2019	488	15	1,038	11	120
Experience	12/31/2020	(2,096)	15	(2,074)	12	(216)
Experience	12/31/2021	(76,686)	15	(78,108)	13	(7,704)
Experience	12/31/2022	(37,436)	15	(39,174)	14	(3,648)
Experience	12/31/2023	(50,096)	15	(53,568)	15	(4,740)
Total				\$ (313,177)		\$ (34,920)

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division HB - County Corrections after 5/1/

Table 10-HB: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
(Gain)/Loss	12/31/2019	\$ (1,239)	15	\$ (1,176)	11	\$ (132)
Experience	12/31/2020	(21,286)	15	(21,074)	12	(2,208)
Experience	12/31/2021	(8,347)	15	(8,504)	13	(840)
Experience	12/31/2022	(14,608)	15	(15,285)	14	(1,428)
Experience	12/31/2023	(9,435)	15	(10,089)	15	(888)
Total				\$ (56,128)		\$ (5,496)

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Table 10-HC: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Experience	12/31/2022	\$ (41,786)	15	\$ (43,731)	14	\$ (4,068)
Experience	12/31/2023	19,174	15	20,503	15	1,812
Total				\$ (23,228)		\$ (2,256)

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division HD - Hlth Dpt Teamstrs after 4/1/1

Table 10-HD: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ (123,301)	10	\$ (79,761)	7	\$ (13,140)
(Gain)/Loss	12/31/2016	(23,760)	15	(19,471)	8	(2,856)
(Gain)/Loss	12/31/2017	(67,958)	15	(59,303)	9	(7,872)
(Gain)/Loss	12/31/2018	(46,068)	15	(42,294)	10	(5,148)
(Gain)/Loss	12/31/2019	(75,387)	15	(71,832)	11	(8,088)
Assumption	12/31/2019	1,961	15	2,990	11	336
Experience	12/31/2020	(47,218)	15	(46,748)	12	(4,908)
Experience	12/31/2021	(93,014)	15	(94,733)	13	(9,336)
Experience	12/31/2022	(122,067)	15	(127,749)	14	(11,904)
Experience	12/31/2023	(45,750)	15	(48,921)	15	(4,332)
Total				\$ (587,822)		\$ (67,248)

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Table 10-HE: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ (66,154)	10	\$ (40,360)	7	\$ (6,648)
(Gain)/Loss	12/31/2016	(40,288)	15	(33,016)	8	(4,848)
(Gain)/Loss	12/31/2017	(67,188)	15	(58,623)	9	(7,788)
(Gain)/Loss	12/31/2018	(75,735)	15	(69,525)	10	(8,460)
(Gain)/Loss	12/31/2019	(104,382)	15	(99,450)	11	(11,196)
Assumption	12/31/2019	2,327	15	3,437	11	384
Experience	12/31/2020	(22,591)	15	(22,356)	12	(2,352)
Experience	12/31/2021	(106,116)	15	(108,086)	13	(10,656)
Experience	12/31/2022	30,121	15	31,519	14	2,940
Experience	12/31/2023	15,327	15	16,389	15	1,452
Total				\$ (380,071)		\$ (47,172)

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division HF - County TPOAM after 4/1/12

Table 10-HF: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 1/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
(Gain)/Loss	12/31/2017	\$ 4,871	15	\$ 4,251	9	\$ 564
(Gain)/Loss	12/31/2018	2,288	15	2,107	10	252
(Gain)/Loss	12/31/2019	(1,188)	15	(1,130)	11	(132)
Assumption	12/31/2019	1,006	15	939	11	108
Experience	12/31/2020	18,191	15	18,003	12	1,896
Experience	12/31/2021	10,571	15	10,766	13	1,056
Experience	12/31/2022	7,160	15	7,490	14	696
Experience	12/31/2023	(11,662)	15	(12,470)	15	(1,104)
Total				\$ 29,956		\$ 3,336

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

GASB Statement No. 68 Information

The following information has been prepared to provide some of the information necessary to complete GASB Statement No. 68 disclosures. GASB Statement No. 68 is effective for fiscal years beginning after June 15, 2014. Additional resources, including an Implementation Guide, are available at <http://www.mersofmich.com/>.

Actuarial Valuation Date:	12/31/2023
Measurement Date of the Total Pension Liability (TPL):	12/31/2023
At 12/31/2023, the following employees were covered by the benefit terms:	
Inactive employees or beneficiaries currently receiving benefits:	207
Inactive employees entitled to but not yet receiving benefits (including refunds):	77
Active employees:	<u>163</u>
	447
Total Pension Liability as of 12/31/2022 measurement date:	\$ 57,232,347
Total Pension Liability as of 12/31/2023 measurement date:	\$ 58,732,416
Service Cost for the year ending on the 12/31/2023 measurement date:	\$ 661,580
Change in the Total Pension Liability due to:	
- Benefit changes ¹ :	\$ 0
- Differences between expected and actual experience ² :	\$ (95,411)
- Changes in assumptions ² :	\$ 429,953
Average expected remaining service lives of all employees (active and inactive):	3

¹ A change in liability due to benefit changes is immediately recognized when calculating pension expense for the year.

² Changes in liability due to differences between actual and expected experience, and changes in assumptions, are recognized in pension expense over the average remaining service lives of all employees.

Covered employee payroll (Needed for Required Supplementary Information):	\$ 8,826,327
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Note: Covered employee payroll may differ from the GASB Statement No. 68 definition.

Sensitivity of the Net Pension Liability to changes in the discount rate:

	1% Decrease (6.18%)	Current Discount Rate (7.18%)	1% Increase (8.18%)
Change in Net Pension Liability as of 12/31/2023:	\$ 6,771,948	\$ 0	\$ (5,672,508)

Note: The current discount rate shown for GASB Statement No. 68 purposes is higher than the MERS assumed rate of return. This is because for GASB Statement No. 68 purposes, the discount rate must be gross of administrative expenses, whereas for funding purposes it is net of administrative expenses.



GASB Statement No. 68 Information

This page is for those municipalities who need to “roll forward” their total pension liability due to the timing of completion of the actuarial valuation in relation to their fiscal year-end.

The following information has been prepared to provide some of the information necessary to complete GASB Statement No. 68 disclosures. GASB Statement No. 68 is effective for fiscal years beginning after June 15, 2014. Additional resources, including an Implementation Guide, are available at www.mersofmich.com.

Actuarial Valuation Date:	12/31/2023
Measurement Date of the Total Pension Liability (TPL):	12/31/2024
At 12/31/2023, the following employees were covered by the benefit terms:	
Inactive employees or beneficiaries currently receiving benefits:	207
Inactive employees entitled to but not yet receiving benefits (including refunds):	77
Active employees:	<u>163</u>
	447
Total Pension Liability as of 12/31/2023 measurement date:	\$ 58,289,997
Total Pension Liability as of 12/31/2024 measurement date:	\$ 59,819,536
Service Cost for the year ending on the 12/31/2024 measurement date:	\$ 666,359
Change in the Total Pension Liability due to:	
- Benefit changes ¹ :	\$ 0
- Differences between expected and actual experience ² :	\$ 13,370
- Changes in assumptions ² :	\$ 432,883
Average expected remaining service lives of all employees (active and inactive):	3

¹ A change in liability due to benefit changes is immediately recognized when calculating pension expense for the year.

² Changes in liability due to differences between actual and expected experience, and changes in assumptions, are recognized in pension expense over the average remaining service lives of all employees.

Covered employee payroll (Needed for Required Supplementary Information):	\$ 8,826,327
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Note: Covered employee payroll may differ from the GASB Statement No. 68 definition.

Sensitivity of the Net Pension Liability to changes in the discount rate:

	1% Decrease (6.18%)	Current Discount Rate (7.18%)	1% Increase (8.18%)
Change in Net Pension Liability as of 12/31/2024:	\$ 6,814,734	\$ 0	\$ (5,713,543)

Note: The current discount rate shown for GASB Statement No. 68 purposes is higher than the MERS assumed rate of return. This is because for GASB Statement No. 68 purposes, the discount rate must be gross of administrative expenses, whereas for funding purposes it is net of administrative expenses.



Benefit Provision History

The following benefit provision history is provided by MERS. Any corrections to this history or discrepancies between this information and information displayed elsewhere in the valuation report should be reported to MERS. All provisions are listed by date of adoption.

01 - County TPOAM - closed

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 160 hours
1/1/2021	Custom Wages
4/1/2017	Day of work defined as 160 Hours a Month for All employees.
1/1/2017	Service Credit Purchase Estimates - No
9/1/2009	Day of work defined as 140 Hours a Month for All employees.
9/1/2009	Exclude Temporary Employees requiring less than 12 months
1/1/2009	E 2% COLA Adopted (01/01/2009)
1/1/2008	E 2% COLA Adopted (01/01/2008)
1/1/2007	E 2% COLA Adopted (01/01/2007)
1/1/2006	E 2% COLA Adopted (01/01/2006)
1/1/2005	E 2% COLA Adopted (01/01/2005)
1/1/2004	E 2% COLA Adopted (01/01/2004)
1/1/2003	E 2% COLA Adopted (01/01/2003)
1/1/2002	E 2% COLA Adopted (01/01/2002)
1/1/2001	E 2% COLA Adopted (01/01/2001)
4/1/2000	2.25% Multiplier (Capped at 80% of FAC)
1/1/2000	E 2% COLA Adopted (01/01/2000)
1/1/1999	Flexible E 2% COLA Adopted (01/01/1999)
1/1/1998	E 2% COLA Adopted (01/01/1998)
1/1/1997	E 2% COLA Adopted (01/01/1997)
1/1/1995	E 2% COLA Adopted (01/01/1995)
1/1/1993	E 2% COLA Adopted (01/01/1993)
3/11/1991	Day of work defined as 6 Hours a Day for All employees.
1/1/1991	Flexible E 2% COLA Adopted (01/01/1991)
1/1/1991	E1 2.5% COLA for past retirees (01/01/1991)
7/1/1990	Benefit FAC-3 (3 Year Final Average Compensation)
7/1/1990	2.00% Multiplier
7/1/1990	Benefit F55 (With 20 Years of Service)
7/1/1990	Member Contribution Rate 2.00%
1/1/1990	E 2% COLA Adopted (01/01/1990)
1/1/1989	E 2% COLA Adopted (01/01/1989)
1/1/1976	Member Contribution Rate 0.00%
3/15/1974	Covered by Act 88
9/1/1972	1.20% Multiplier on FAC < \$4,200 and 1.70% Multiplier on FAC > \$4,200
8/1/1967	Benefit FAC-5 (5 Year Final Average Compensation)
8/1/1967	10 Year Vesting
8/1/1967	1.00% Multiplier on FAC < \$4,200 and 1.50% Multiplier on FAC > \$4,200
8/1/1967	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
8/1/1967	Fiscal Month - January
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

02 - County Corrections - closed

1/1/2021	Public Safety Employees - Yes
1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 160 hours
1/1/2021	Custom Wages
1/1/2017	Service Credit Purchase Estimates - No
9/1/2009	Day of work defined as 160 Hours a Month for All employees.
9/1/2009	Exclude Temporary Employees requiring less than 12 months
7/1/2008	Benefit F50 (With 25 Years of Service)
1/1/2008	E 2% COLA Adopted (01/01/2008)
1/1/2007	E 2% COLA Adopted (01/01/2007)
1/1/2006	E 2% COLA Adopted (01/01/2006)
1/1/2005	E 2% COLA Adopted (01/01/2005)
1/1/2004	E 2% COLA Adopted (01/01/2004)
7/1/2003	2.50% Multiplier (Capped at 80% of FAC)
7/1/2003	Member Contribution Rate 3.00%
1/1/2003	E 2% COLA Adopted (01/01/2003)
1/1/2002	E 2% COLA Adopted (01/01/2002)
1/1/2001	E 2% COLA Adopted (01/01/2001)
1/1/2000	Member Contribution Rate 2.00%
1/1/2000	E 2% COLA Adopted (01/01/2000)
1/1/1999	2.25% Multiplier (Capped at 80% of FAC)
1/1/1999	Member Contribution Rate 4.00%
1/1/1997	E 2% COLA Adopted (01/01/1997)
1/1/1995	E 2% COLA Adopted (01/01/1995)
1/1/1993	E 2% COLA Adopted (01/01/1993)
3/11/1991	Day of work defined as 6 Hours a Day for All employees.
1/1/1991	E1 2.5% COLA for past retirees (01/01/1991)
1/1/1991	E2 2.5% COLA for future retirees (01/01/1991)
1/1/1990	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/1990	2.00% Multiplier
1/1/1990	Benefit F55 (With 20 Years of Service)
1/1/1990	Member Contribution Rate 2.00%
1/1/1990	E 2% COLA Adopted (01/01/1990)
1/1/1989	E 2% COLA Adopted (01/01/1989)
1/1/1976	Member Contribution Rate 0.00%
3/15/1974	Covered by Act 88
9/1/1972	1.20% Multiplier on FAC < \$4,200 and 1.70% Multiplier on FAC > \$4,200
8/1/1967	Benefit FAC-5 (5 Year Final Average Compensation)
8/1/1967	10 Year Vesting
8/1/1967	1.00% Multiplier on FAC < \$4,200 and 1.50% Multiplier on FAC > \$4,200
8/1/1967	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
8/1/1967	Fiscal Month - January
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

11 - Hlth Dept - closed

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 160 hours
1/1/2021	Custom Wages



11 - Hlth Dept - closed

12/1/2016	Service Credit Purchase Estimates - No
3/1/2011	2.25% Multiplier (Capped at 80% of FAC)
1/1/2009	E 2% COLA Adopted (01/01/2009)
1/1/2008	E 2% COLA Adopted (01/01/2008)
1/1/2007	E 2% COLA Adopted (01/01/2007)
2/1/2006	Flexible E 2.18% COLA Adopted (02/01/2006)
1/1/2005	E 2% COLA Adopted (01/01/2005)
1/1/2003	E 2% COLA Adopted (01/01/2003)
1/1/2002	E 2% COLA Adopted (01/01/2002)
1/1/2001	E 2% COLA Adopted (01/01/2001)
1/1/2000	Day of work defined as 160 Hours a Month for All employees.
1/1/2000	E 2% COLA Adopted (01/01/2000)
1/1/1999	Flexible E 2% COLA Adopted (01/01/1999)
6/8/1998	Day of work defined as 7 Hours a Day for All employees.
1/1/1998	2.00% Multiplier
1/1/1998	E 2% COLA Adopted (01/01/1998)
1/1/1998	Fiscal Month - January
1/1/1997	E 2% COLA Adopted (01/01/1997)
1/1/1995	E 2% COLA Adopted (01/01/1995)
1/1/1993	E 2% COLA Adopted (01/01/1993)
3/11/1991	Day of work defined as 6 Hours a Day for All employees.
1/1/1991	E1 2.5% COLA for past retirees (01/01/1991)
7/1/1990	Benefit FAC-3 (3 Year Final Average Compensation)
7/1/1990	Benefit F55 (With 20 Years of Service)
7/1/1990	Member Contribution Rate 2.00%
1/1/1990	E 2% COLA Adopted (01/01/1990)
1/1/1989	E 2% COLA Adopted (01/01/1989)
1/1/1976	Participant Contribution Rate 0%
3/15/1974	Covered by Act 88
9/1/1972	1.20% Multiplier on FAC < \$4,200 and 1.70% Multiplier on FAC > \$4,200
8/1/1967	Benefit FAC-5 (5 Year Final Average Compensation)
8/1/1967	10 Year Vesting
8/1/1967	1.00% Multiplier on FAC < \$4,200 and 1.50% Multiplier on FAC > \$4,200
8/1/1967	Participant Contribution Rate 3% Under \$4,200.00 - Then 5%
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

13 - EDC General - closed

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 160 hours
1/1/2021	Custom Wages
6/1/2017	Day of work defined as 160 Hours a Month for All employees.
6/1/2017	Exclude Temporary Employees requiring less than 9 months
12/1/2016	Service Credit Purchase Estimates - Yes
5/1/2010	2.25% Multiplier (Capped at 80% of FAC)
1/1/2003	E 2% COLA Adopted (01/01/2003)
1/1/2002	E 2% COLA Adopted (01/01/2002)
1/1/2001	E 2% COLA Adopted (01/01/2001)
1/1/2000	E 2% COLA Adopted (01/01/2000)



13 - EDC General - closed

1/1/1999	Flexible E 2% COLA Adopted (01/01/1999)
1/1/1998	E 2% COLA Adopted (01/01/1998)
1/1/1997	E 2% COLA Adopted (01/01/1997)
1/1/1995	E 2% COLA Adopted (01/01/1995)
1/1/1993	E 2% COLA Adopted (01/01/1993)
1/1/1992	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/1992	10 Year Vesting
1/1/1992	2.00% Multiplier
1/1/1992	Fiscal Month - January
1/1/1992	Benefit F55 (With 20 Years of Service)
1/1/1992	Member Contribution Rate 2.00%
3/11/1991	Day of work defined as 6 Hours a Day for All employees.
1/1/1991	E1 2.5% COLA for past retirees (01/01/1991)
1/1/1990	E 2% COLA Adopted (01/01/1990)
1/1/1989	E 2% COLA Adopted (01/01/1989)
3/15/1974	Covered by Act 88
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

15 - Health Dept Non-Union - Close

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 140 hours
1/1/2021	Custom Wages
11/1/2019	Day of work defined as 160 Hours a Month for All employees.
12/1/2016	Service Credit Purchase Estimates - No
2/1/2011	Day of work defined as 140 Hours a Month for Full Time employees.
1/1/2009	E 2% COLA Adopted (01/01/2009)
1/1/2008	E 2% COLA Adopted (01/01/2008)
1/1/2007	E 2% COLA Adopted (01/01/2007)
2/1/2003	Benefit FAC-3 (3 Year Final Average Compensation)
2/1/2003	10 Year Vesting
2/1/2003	2.25% Multiplier (Capped at 80% of FAC)
2/1/2003	Benefit F55 (With 20 Years of Service)
2/1/2003	Member Contribution Rate 2.00%
6/8/1998	Day of work defined as 7 Hours a Day for All employees.
1/1/1998	Fiscal Month - January
3/11/1991	Day of work defined as 6 Hours a Day for All employees.
3/15/1974	Covered by Act 88
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

16 - Gnrl, N-Un&Dsptch bf 5/1/10

1/1/2021	Public Safety Employees - Yes
1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 160 hours
1/1/2021	Custom Wages
4/1/2017	Day of work defined as 160 Hours a Month for All employees.
1/1/2017	Service Credit Purchase Estimates - No
3/1/2010	Day of work defined as 6 Hours a Day for Group employees.



16 - Gnrl, N-Un&Dsptch bf 5/1/10

3/1/2010	Benefit FAC-3 (3 Year Final Average Compensation)
3/1/2010	10 Year Vesting
3/1/2010	2.25% Multiplier (Capped at 80% of FAC)
3/1/2010	Benefit F55 (With 20 Years of Service)
3/1/2010	Member Contribution Rate 2.00%
3/15/1974	Covered by Act 88
8/1/1967	Fiscal Month - January
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

17 - EDC General after 12/01/13

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 160 hours
1/1/2021	Custom Wages
6/1/2017	Day of work defined as 160 Hours a Month for All employees.
6/1/2017	Exclude Temporary Employees requiring less than 9 months
12/1/2016	Service Credit Purchase Estimates - Yes
12/1/2013	Day of work defined as 6 Days a Day for All employees.
12/1/2013	Benefit FAC-3 (3 Year Final Average Compensation)
12/1/2013	10 Year Vesting
12/1/2013	1.50% Multiplier (Capped at 80% of FAC)
12/1/2013	Member Contribution Rate 3.00%
1/1/1992	Fiscal Month - January
3/15/1974	Covered by Act 88
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

20 - County Sheriff Road - closed

1/1/2021	Public Safety Employees - Yes
1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 160 hours
1/1/2021	Custom Wages
1/1/2017	Service Credit Purchase Estimates - No
9/1/2009	Day of work defined as 160 Hours a Month for All employees.
1/1/2009	E2 2.5% COLA for future retirees (07/01/2008)
7/1/2008	Day of work defined as 6 Hours a Day for Group employees.
7/1/2008	Benefit FAC-3 (3 Year Final Average Compensation)
7/1/2008	10 Year Vesting
7/1/2008	2.50% Multiplier (Capped at 80% of FAC)
7/1/2008	Benefit F50 (With 25 Years of Service)
7/1/2008	Benefit F55 (With 20 Years of Service)
7/1/2008	Member Contribution Rate 3.00%
3/15/1974	Covered by Act 88
8/1/1967	Fiscal Month - January
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

HA - County Sheriff Rd after 5/1/1

1/1/2021	Workers Compensation - Service Granted
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HA - County Sheriff Rd after 5/1/1

1/1/2021	Custom Wages
1/1/2021	Public Safety Employees - Yes
1/1/2021	Service Credit Qualification - 160 hours
5/1/2010	Day of work defined as 160 Hours a Month for All employees.
5/1/2010	Benefit FAC-3 (3 Year Final Average Compensation)
5/1/2010	6 Year Vesting
5/1/2010	1.00% Multiplier
5/1/2010	Member Contribution Rate 0.00%
3/15/1974	Covered by ACT 88
8/1/1967	Fiscal Month - January
	Normal Retirement Age (DB) - 60
	No Early Reduced Conditions

HB - County Corrections after 5/1/

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Custom Wages
1/1/2021	Public Safety Employees - Yes
1/1/2021	Service Credit Qualification - 160 hours
5/1/2010	Day of work defined as 160 Hours a Month for All employees.
5/1/2010	Benefit FAC-3 (3 Year Final Average Compensation)
5/1/2010	6 Year Vesting
5/1/2010	1.00% Multiplier
5/1/2010	Member Contribution Rate 0.00%
3/15/1974	Covered by ACT 88
8/1/1967	Fiscal Month - January
	Normal Retirement Age (DB) - 60
	No Early Reduced Conditions

HC - County, N-Un & Disp af 5/1/10

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Custom Wages
1/1/2021	Public Safety Employees - Yes
1/1/2021	Service Credit Qualification - 160 hours
5/1/2010	Day of work defined as 160 Hours a Month for All employees.
5/1/2010	Benefit FAC-3 (3 Year Final Average Compensation)
5/1/2010	6 Year Vesting
5/1/2010	1.00% Multiplier
5/1/2010	Member Contribution Rate 0.00%
3/15/1974	Covered by ACT 88
8/1/1967	Fiscal Month - January
	Normal Retirement Age (DB) - 60
	No Early Reduced Conditions

HD - Hlth Dpt Teamstrs after 4/1/1

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Custom Wages
1/1/2021	Service Credit Qualification - 160 hours
4/1/2011	Day of work defined as 160 Hours a Month for Group employees.
4/1/2011	Benefit FAC-3 (3 Year Final Average Compensation)



HD - Hlth Dpt Teamstrs after 4/1/1

4/1/2011	6 Year Vesting
4/1/2011	1.00% Multiplier
1/1/1998	Fiscal Month - January
3/15/1974	Covered by ACT 88
	Normal Retirement Age (DB) - 60
	No Early Reduced Conditions

HE - Hlth Dpt Non-Union aft 4/1/11

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Custom Wages
1/1/2021	Service Credit Qualification - 160 hours
11/1/2019	Day of work defined as 160 Hours a Month for All employees.
4/1/2011	Day of work defined as 140 Hours a Month for All employees.
4/1/2011	Benefit FAC-3 (3 Year Final Average Compensation)
4/1/2011	6 Year Vesting
4/1/2011	1.00% Multiplier
1/1/1998	Fiscal Month - January
3/15/1974	Covered by ACT 88
	Normal Retirement Age (DB) - 60
	No Early Reduced Conditions

HF - County TPOAM after 4/1/12

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Custom Wages
1/1/2021	Public Safety Employees - Yes
1/1/2021	Service Credit Qualification - 160 hours
4/1/2017	Day of work defined as 160 Hours a Month for All employees.
4/1/2012	Day of work defined as 140 Hours a Month for All employees.
4/1/2012	Benefit FAC-3 (3 Year Final Average Compensation)
4/1/2012	6 Year Vesting
4/1/2012	1.00% Multiplier
3/15/1974	Covered by ACT 88
8/1/1967	Fiscal Month - January
	Normal Retirement Age (DB) - 60
	No Early Reduced Conditions

Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method

Details on MERS plan provisions, actuarial assumptions, and actuarial methodology can be found in the Appendix. Some actuarial assumptions are specific to this municipality and its divisions. These are listed below.

Increase in Final Average Compensation

Division	FAC Increase Assumption
All Divisions	2.00%

Miscellaneous and Technical Assumptions

Loads – None.

Amortization Policy for Closed Not Linked Divisions: The default funding policy for closed not linked divisions, including open divisions with zero active members, is to follow a non-accelerated amortization, where each closed period decreases by one year each year until the period is exhausted. In select instances, closed not linked division(s) may follow an accelerated amortization policy.

Risk Commentary

Determination of the accrued liability, the employer contribution, and the funded ratio requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability, the actuarially determined contribution and the funded ratio that result from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

- **Investment Risk** – actual investment returns may differ from the expected returns;
- **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
- **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
- **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
- **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

December 31,	Ratio of:				
	Market Value of Assets to Total Payroll	Actuarial Accrued Liability to Payroll	Actives to Retirees and Beneficiaries	Market Value of Assets to Benefit Payments	Net Cash Flow to Market Value of Assets (BOY)
2018	3.7	5.9	0.9	10.6	-3.2%
2019	4.1	6.4	0.9	11.3	-3.2%
2020	4.2	6.6	0.8	11.2	-4.2%
2021	4.9	7.3	0.8	12.0	-2.2%
2022	4.1	7.0	0.8	9.9	-1.4%
2023	4.2	6.8	0.8	10.5	-2.1%

Ratio of Market Value of Assets to Total Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Market Value of Assets to Benefit Payments

The MERS' Actuarial Policy requires a total minimum contribution equal to the excess (if any) of three times the expected annual benefit payments over the projected market value of assets as of the participating municipality or court's Fiscal Year for which the contribution applies. The ratio of market value of assets to benefit payments as of the valuation date provides an indication of whether the division is at risk for triggering the minimum contribution rule in the near term. If the division triggers this minimum contribution rule, the required employer contributions could increase dramatically relative to previous valuations.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

State Reporting

The following information has been prepared to provide some of the information necessary to complete the Public Act 202 pension reporting requirements for the State of Michigan's Local Government Retirement System Annual Report (Form No. 5572). Additional resources are available at www.mersofmich.com and on the State [website](#).

Form 5572		
Line Reference	Description	Result
10	Membership as of December 31, 2023	
11	Indicate number of active members	163
12	Indicate number of inactive members (excluding pending refunds)	40
13	Indicate number of retirees and beneficiaries	207
14	Investment Performance for Calendar Year Ending December 31, 2023¹	
15	Enter actual rate of return - prior 1-year period	11.60%
16	Enter actual rate of return - prior 5-year period	8.07%
17	Enter actual rate of return - prior 10-year period	6.49%
18	Actuarial Assumptions	
19	Actuarial assumed rate of investment return ²	6.93%
20	Amortization method utilized for funding the system's unfunded actuarial accrued liability, if any	Level Percent
21	Amortization period utilized for funding the system's unfunded actuarial accrued liability, if any ³	15
22	Is each division within the system closed to new employees? ⁴	No
23	Uniform Assumptions	
24	Enter retirement pension system's actuarial value of assets using uniform assumptions	\$38,855,592
25	Enter retirement pension system's actuarial accrued liabilities using uniform assumptions ⁵	\$60,506,693
27	Actuarially Determined Contribution (ADC) using uniform assumptions, Fiscal Year Ending December 31, 2024	\$2,597,184

- ¹. The Municipal Employees' Retirement System's investment performance has been provided to GRS from MERS Investment Staff and is included here for reporting purposes. The investment performance figures reported are net of investment expenses on a rolling calendar year basis for the previous 1-, 5-, and 10-year periods as required under PA 530.
- ². Net of administrative and investment expenses.
- ³. Populated with the longest amortization period remaining in the amortization schedule, across all divisions in the plan. This is when each division and the plan in total is expected to reach 100% funded if all assumptions are met.
- ⁴. If all divisions within the employer are closed, "yes." If at least one division is open (including shadow divisions), "no."
- ⁵. Line 25 actuarial accrued liability is determined under PA 202 uniform assumptions which differ from the valuation assumptions. In particular, the assumed rate of return for PA 202 purposes is 6.90%.