



MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2013
LAPEER CO (4403)

Spring, 2014

Lapeer 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 as of December 31, 2013. The report includes the determination of liabilities and contribution rates resulting from the participation of Lapeer Co (4403) in the Municipal Employees' Retirement System of Michigan ("MERS"). MERS is an independent public nonprofit organization that has partnered with Michigan municipalities for more than 65 years, helping them provide safe, secure retirement plans for their employees. Lapeer Co is responsible for the employer contributions needed to provide MERS benefits for its employees and former employees under the Michigan Constitution and the MERS Plan Document.

The purpose of the December 31, 2013 annual actuarial valuation is to:

- measure funding progress,
- establish contribution requirements for the fiscal year beginning January 1, 2015, and
- provide actuarial information in connection with applicable Governmental Accounting Standards Board statements.

This valuation report should not be relied upon for any other purpose. Reliance on information contained in this report by anyone for anything other than the intended purpose could be misleading.

The valuation uses financial data, plan provision data, and participant data as of December 31, 2013 furnished by MERS' administrative staff. In accordance with Actuarial Standards of Practice No. 23, the data was checked for internal and year to year consistency as well as general reasonableness, but was not otherwise audited. Tegrit Group does not assume responsibility for the accuracy or completeness of the data used in this valuation.

The actuarial assumptions and methods are adopted by the Retirement Board. Please refer to the division-specific assumptions described in table(s) in this report, and to the Appendix on the MERS website at:

www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2013AnnualActuarialValuation-Appendix.pdf.

The actuarial assumptions used for this valuation produce results that we believe are reasonable.

To the best of our knowledge, this report is complete and accurate, was prepared in conformity with generally recognized actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and is in compliance with Act No. 220 of the Public Acts of 1996, as amended, and the MERS Plan Document as revised. All of the undersigned are members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. 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).

Our advice 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 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 related third parties such as the auditor for the municipality). Tegrit Group is not responsible for the consequences of any unauthorized use.

You should notify MERS if you disagree with anything contained in the report or are aware of any information that would affect the results of the report that have not been communicated to us. 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 MERS at: <http://www.mersofmich.com/MERS/About-MERS/Contact-Us>

Sincerely,

Alan Sonnanstine, MAAA, ASA
Cathy Nagy, MAAA, FSA
Jim Koss, MAAA, ASA
Rebecca Stouffer, MAAA, ASA

TABLE OF CONTENTS

	Page
Executive Summary	5
Employer Contribution Details	9
Table 1	
Benefit Provisions	11
Table 2	
Membership Summary	14
Table 3	
Reported Assets (Market Value)	16
Table 4	
Flow of Valuation Assets	17
Table 5	
Actuarial Accrued Liabilities and Valuation Assets	18
Table 6	
Actuarial Accrued Liabilities - Comparative Schedule	20
Table 7	
GASB 25 and GASB 27 Information	21
Benefit Provision History	23
Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method	26

Executive Summary

Funded Ratio and Required Employer Contributions

The MERS Defined Benefit Plan is an agent multiple-employer plan, meaning that assets are pooled for investment purposes but separate trusts are maintained for each individual employer. Each municipality is responsible for their own plan liabilities; MERS does not borrow from one municipality's account to pay for another.

The funded ratio of a plan is the percentage of the dollar value of the accrued benefits that is covered by the actuarial value of assets.

Your Funded Ratio:

	12/31/2013	12/31/2012
Funded Ratio	89%	91%

Michigan Law requires that pension plans be pre-funded, meaning money is set aside now to pay for future benefits. Pension plans are usually funded by employer and employee contributions, and investment income.

As a result of the plan's funding policy, the funded ratio is expected to approach 100% over time. How quickly a plan attains the 100% goal depends on many factors such as:

- The current funded ratio,
- The future experience of the plan, and
- The amortization period.

It is more important to look at the trend in the funded ratio over a period of time than at a particular point in time.

Your Required Employer Contributions:

Your minimum required employer contributions are shown on the following page. Employee contributions, if any, are shown in Table 2, and are in addition to the required employer contribution on the next page.

Valuation Date:	Percentage of Payroll		Monthly \$ Based on Valuation Payroll	
	12/31/2013	12/31/2012	12/31/2013	12/31/2012
Fiscal Year Beginning:	January 1, 2015	January 1, 2014	January 1, 2015	January 1, 2014
Division				
02 - POLC Sheriff	13.43%	12.73%	\$ 40,553	\$ 38,423
04 - S.T.A.R.S.	7.89%	7.78%	47,105	47,267
06 - CMH Union	8.72%	8.71%	17,166	17,414
10 - AFSCME	10.44%	9.73%	10,475	10,026
11 - Gnrl Non Union	7.19%	7.22%	12,493	14,044
12 - Gnrl Teamsters	9.15%	8.64%	18,462	17,068
13 - Elected & Appt. Dept H	7.20%	6.40%	6,356	5,510
20 - COAM/POAM Disp	11.84%	11.55%	7,045	6,822
40 - MCF Non Union	14.46%	13.98%	54,928	50,812
60 - CMH Non Union	9.12%	8.85%	4,856	4,030
Municipality Total			\$ 219,439	\$ 211,416

You may contribute more than the minimum required contributions, as these additional contributions will earn investment income, and later you may have to contribute less than otherwise. MERS strongly encourages employers to contribute more than the minimum contribution shown above.

Assuming that experience of the plan meets actuarial assumptions:

- To accelerate to a 100% funding ratio in 10 years, estimated monthly contributions for the entire employer would be \$ 270,657, instead of \$ 219,439.
- To accelerate to a 100% funding ratio in 20 years, estimated monthly contributions for the entire employer would be \$ 227,799, instead of \$ 219,439.

If you are interested in making additional contributions, please contact MERS and they can assist you with evaluating your options.

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.

Actuarial valuations do not affect the ultimate cost of the plan; the benefit payments (current and future) determine the cost of the plan. Actuarial valuations only affect the timing of the contributions

into the plan. Because assumptions are for the long term, plan experience will not match the actuarial assumptions in any given year (except by coincidence). Each annual actuarial valuation will adjust the required employer contributions up or down based on the prior year's actual experience.

Comments on the Investment Markets

At this time, MERS maintains the 8% annual return assumption in the belief that over the long-term this is achievable. For example, MERS' 30 year return was 9.3% on December 31, 2013. The MERS portfolio returned 14.8% in 2013; the two year (12.9%), three year (9.2%), four year (10.4%), and five year (11.7%) returns all exceed the 8% annual return assumption. It has now been five years since the peak of the financial crisis and the stock market decline still weighs down MERS' medium term returns. This was a one in fifty year event comparable only to the Stock Market Crash of 1929 during the Great Depression. The stock market and economy have stabilized since 2008 and are on the long road to recovery. MERS regularly monitors the investment return assumption to make sure it is reasonable compared to long term expectations.

The actuarial value of assets, used to determine both your funded ratio and your required employer contribution, is based on a 10-year smoothed value of assets. Only a portion (six-tenths, for 2008 - 2013) of the 2008 investment market losses was recognized in this actuarial valuation report. This reduces the volatility of the valuation results, which affects your required employer contribution and funded ratio.

As of December 31, 2013 the actuarial value of assets is 106% of market value. This means that meeting the actuarial assumption in the next few years will require average annual market returns that exceed the 8% investment return assumption.

If the December 31, 2013 valuation results were based on market value on that date instead of 10-year smoothed funding value: i) the funded percent of your entire municipality would be 84% (instead of 89%); and ii) your total employer contribution requirement for the fiscal year starting January 1, 2015 would be \$ 2,958,636 (instead of \$ 2,633,268).

The asset smoothing method is a powerful tool for reducing the volatility of your required employer contributions. **However, if the current 6% difference between the smoothed value and the market value of assets is not made up, the result would be gradual increases in your employer contribution requirement over the next few years (to around the levels described above).**

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

The analysis in this section is intended to review the potential volatility of the actuarial valuation results. 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.

In the table below, we show the impact of varying one actuarial assumption: the future annual rate of investment return. Lower investment returns would result in higher required employer contributions, and vice-versa.

Other assumptions are also important in determining the required employer contributions.

For example:

- Smaller than projected pay increases would lower required employer contributions.
- Reductions in the number of active employees would lower required contribution dollars, but would usually increase the contribution rate expressed as a percentage of payroll.
- Retirements at earlier ages than projected would usually increase required employer contributions.
- More non-vested terminations of employment than projected would decrease required contributions.
- More disabilities or survivor (death) benefits than projected would increase required contributions.
- Longer lifetimes after retirement than projected would increase required employer contributions.

The relative impact of each investment return scenario 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, 2013 valuation, and are for the municipality in total, not by division.

	Assumed Future Annual Smoothed Rate of Investment Return			
	Lower Future Annual Returns		Valuation Assumption	Higher Returns
	6%	7%	8%	9%
12/31/2013 Valuation Results				
Accrued Liability	\$ 120,244,313	\$ 106,467,845	\$ 94,903,895	\$ 85,140,882
Valuation Assets	\$ 84,858,437	\$ 84,858,437	\$ 84,858,437	\$ 84,858,437
Unfunded Accrued Liability	\$ 35,385,876	\$ 21,609,408	\$ 10,045,458	\$ 282,445
Funded Ratio	71%	80%	89%	100%
Monthly Normal Cost	\$ 289,228	\$ 221,851	\$ 170,524	\$ 131,089
Monthly Amortization Payment	\$ 151,225	\$ 101,826	\$ 48,915	\$ (21,969)
Total Employer Contribution¹	\$ 440,453	\$ 323,677	\$ 219,439	\$ 112,966

¹ If assets exceed accrued liabilities for a division, the division's amortization payment is negative and is used 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.

Employer Contribution Details For the Fiscal Year Beginning January 1, 2015

Table 1

Division	Amort. Period for Unfund. Liab. ^{4,5}	Employer Contributions ¹			Blended Employer Contribut. ⁷	GASB ARC ⁶	Member Contribut. Conversion Factor ²
		Normal Cost	Unfunded Accrued Liability	Total Required Employer Contribut.			
Percentage of Payroll							
02 - POLC Sheriff	25	7.95%	5.48%	13.43%			
04 - S.T.A.R.S.	25	6.64%	1.25%	7.89%			
06 - CMH Union	25	8.17%	0.55%	8.72%			
10 - AFSCME	25	8.30%	2.14%	10.44%			
11 - Gnrl Non Union	25	8.17%	-0.98%	7.19%			
12 - Gnrl Teamsters	25	7.84%	1.31%	9.15%			
13 - Elected & Appt. De	25	7.96%	-0.76%	7.20%			
20 - COAM/POAM Disp	25	9.02%	2.82%	11.84%			
40 - MCF Non Union	25	9.46%	5.00%	14.46%			
60 - CMH Non Union	25	7.74%	1.38%	9.12%			
Estimated Monthly Contribution³							
02 - POLC Sheriff	25	\$ 24,006	\$ 16,547	\$ 40,553			0.77%
04 - S.T.A.R.S.	25	39,642	7,463	47,105			0.83%
06 - CMH Union	25	16,083	1,083	17,166			0.83%
10 - AFSCME	25	8,328	2,147	10,475			0.80%
11 - Gnrl Non Union	25	14,196	(1,703)	12,493			0.83%
12 - Gnrl Teamsters	25	15,819	2,643	18,462			0.80%
13 - Elected & Appt. De	25	7,027	(671)	6,356			0.76%
20 - COAM/POAM Disp	25	5,367	1,678	7,045			0.84%
40 - MCF Non Union	25	35,935	18,993	54,928			0.79%
60 - CMH Non Union	25	4,121	735	4,856			0.74%
Total Municipality		\$ 170,524	\$ 48,915	\$ 219,439			
Estimated Annual Contribution³		\$ 2,046,288	\$ 586,980	\$ 2,633,268			

¹ The above Employer contribution requirements are in addition to the Member contributions, if any, shown in Table 2.

² If Member contributions are increased/decreased by 1.00% of pay, the Employer contribution requirement will decrease/increase by the Member Contribution Conversion Factor.

³ For divisions that are open to new hires, estimated contributions are based on valuation payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher). For divisions that will have no new hires, 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 If projected assets exceed projected liabilities as of the beginning of the January 1, 2015 fiscal year, the negative unfunded accrued liability is amortized (spread) over 10 years. This amortization is used to reduce the employer contribution rate. 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 to not add across.

⁵ If the division is closed to new hires, with new hires not covered by MERS Defined Benefit Plan or Hybrid Plan provisions, the amortization period will decrease as follows: Under Amortization Option A, the period will decrease by 2 years each valuation year, until a minimum 5-year amortization is attained. Under Amortization Option B, the period will decrease by 2 years each valuation year, until reaching 15 years. Thereafter, the period will reduce by 1 year each valuation year, until a minimum 5-year amortization is attained. This will result in amortization payments that increase faster

than the usual 4.5% each year. If the division is closed to new hires, with new hires (and transfers) covered by MERS Defined Benefit Plan or Hybrid Plan provisions, the standard open division amortization period will apply.

⁶ For reporting and disclosure purposes under Statement Nos. 25 and 27 of the Governmental Accounting Standards Board, the annual required contribution (ARC) for this division is based on a 30 year level dollar amortization.

⁷ For linked divisions, the employer will be invoiced the Total Required Employer Contribution 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 800-767-2308.

Please see the Comments on the Investment Markets.

Benefit Provisions

Table 2

02 - POLC Sheriff: Open Division

	2013 Valuation	2012 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
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	2.49%	2.49%
Act 88:	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)

04 - S.T.A.R.S.: Open Division

	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.00% Multiplier (no max)	2.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	-
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	1.27%	0%
Act 88:	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)

06 - CMH Union: Open Division

	2013 Valuation	2012 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):	-	-
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	0%	0%
Act 88:	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)

Table 2 (continued)

10 - AFSCME: Open Division		
	2013 Valuation	2012 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):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	0%	0%
Act 88:	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)
11 - Gnrl Non Union: Open Division		
	2013 Valuation	2012 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):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	0%	0%
Act 88:	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)
12 - Gnrl Teamsters: Open Division		
	2013 Valuation	2012 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):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	0%	0%
Act 88:	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)
13 - Elected & Appt. Dept Heads: Open Division		
	2013 Valuation	2012 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):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	2.53%	2.53%
Act 88:	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)

Table 2 (continued)

20 - COAM/POAM Disp: Open Division		
	2013 Valuation	2012 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):	50/25	50/25
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	0%	0%
Act 88:	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)
40 - MCF Non Union: Open Division		
	2013 Valuation	2012 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):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	0%	0%
Act 88:	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)
60 - CMH Non Union: Open Division		
	2013 Valuation	2012 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):	-	-
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	0%	0%
Act 88:	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)

Membership Summary

Table 3

Division	2013 Valuation		2012 Valuation		2013 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
02 - POLC Sheriff							
Active Members	73	\$ 3,623,507	73	\$ 3,622,005	44.8	14.3	14.4
Vested Former Members	14	80,250	13	64,169	41.6	5.7	14.9
Retirees and Beneficiaries	46	1,048,266	44	969,960	64.8		
04 - S.T.A.R.S.							
Active Members	301	\$ 7,164,177	306	\$ 7,290,485	36.8	5.7	5.8
Vested Former Members	29	155,400	23	109,883	49.2	12.7	13.8
Retirees and Beneficiaries	68	455,773	63	379,204	71.4		
06 - CMH Union							
Active Members	60	\$ 2,362,295	63	\$ 2,399,198	45.9	10.9	11.2
Vested Former Members	10	63,085	9	54,907	53.0	8.9	12.9
Retirees and Beneficiaries	14	187,348	14	187,347	65.6		
10 - AFSCME							
Active Members	35	\$ 1,204,007	35	\$ 1,236,547	50.0	13.0	13.0
Vested Former Members	22	164,654	21	167,411	52.0	10.9	13.1
Retirees and Beneficiaries	39	371,989	37	347,584	68.8		
11 - Gnrl Non Union							
Active Members	45	\$ 2,085,028	52	\$ 2,334,269	47.6	14.3	14.5
Vested Former Members	11	157,559	8	109,253	51.1	13.8	15.0
Retirees and Beneficiaries	26	360,693	23	292,380	72.3		
12 - Gnrl Teamsters							
Active Members	67	\$ 2,421,245	66	\$ 2,370,512	48.0	15.3	15.3
Vested Former Members	12	127,416	11	109,569	47.7	13.3	14.3
Retirees and Beneficiaries	39	414,024	39	406,309	74.6		
13 - Elected & Appt. Dept							
Active Members	23	\$ 1,059,325	23	\$ 1,033,001	59.1	18.0	20.1
Vested Former Members	5	88,414	4	28,878	52.1	10.9	18.4
Retirees and Beneficiaries	20	343,337	20	337,640	74.1		
20 - COAM/POAM Disp							
Active Members	16	\$ 714,011	16	\$ 708,848	46.2	13.1	13.6
Vested Former Members	1	2,857	1	2,857	31.4	3.4	11.2
Retirees and Beneficiaries	2	48,957	2	48,957	60.2		
40 - MCF Non Union							
Active Members	97	\$ 4,558,300	93	\$ 4,361,594	44.4	10.1	10.3
Vested Former Members	14	155,697	12	124,497	50.7	10.6	11.7
Retirees and Beneficiaries	46	696,369	43	623,695	68.8		

Table 3 (continued)

Division	2013 Valuation		2012 Valuation		2013 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
60 - CMH Non Union							
Active Members	11	\$ 638,867	9	\$ 546,357	50.0	15.5	15.5
Vested Former Members	5	66,020	4	42,830	52.3	12.8	17.5
Retirees and Beneficiaries	5	130,401	5	130,400	71.5		
Total Municipality							
Active Members	728	\$ 25,830,762	736	\$ 25,902,816	42.8	10.0	10.2
Vested Former Members	123	1,061,352	106	814,254	49.4	11.1	14.0
Retirees and Beneficiaries	305	4,057,157	290	3,723,476	70.0		
Total Participants	1156		1132				

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

² Description can be found under Miscellaneous and Technical Assumptions in the [Appendix](#).

Reported Assets (Market Value)

Table 4

Division	2013 Valuation		2012 Valuation	
	Employer and Retiree ¹	Employee ²	Employer and Retiree ¹	Employee ²
02 - POLC Sheriff	\$ 15,555,644	\$ 1,235,280	\$ 13,821,000	\$ 1,198,799
04 - S.T.A.R.S.	8,694,533	303,611	7,508,865	265,071
06 - CMH Union	5,899,620	57,516	5,186,554	65,483
10 - AFSCME	6,271,282	61,616	5,714,949	61,549
11 - Gnrl Non Union	8,605,263	37,265	7,762,719	37,224
12 - Gnrl Teamsters	8,910,905	53,439	7,954,232	53,381
13 - Elected & Appt. Dept Heads	6,978,541	337,780	6,259,776	328,230
20 - COAM/POAM Disp	1,755,031	0	1,491,992	0
40 - MCF Non Union	12,132,835	85,377	10,528,956	87,716
60 - CMH Non Union	2,927,328	13,542	2,548,846	13,527
Municipality Total	\$ 77,730,982	\$ 2,185,426	\$ 68,777,889	\$ 2,110,980
Combined Reserves	\$ 79,916,408		\$ 70,888,869	

¹ Reserve for Employer Contributions and Benefit Payments

² Reserve for Employee Contributions

The December 31, 2013 valuation assets are equal to 1.061840 times the reported market value of assets (compared to 1.143563 as of December 31, 2012). The derivation of valuation assets is described, and detailed calculations of valuation assets are shown, in the [Appendix](#).

Flow of Valuation Assets

Table 5

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Net Transfers	Valuation Asset Balance
	Employer	Member					
2003	\$ 2,040,153	\$ 83,626	\$ 2,917,071	\$ (1,200,532)	\$ (7,607)	\$ (787,268)	\$ 40,320,750
2004	2,931,706	83,750	2,915,459	(1,358,297)	(10,950)	(276,600)	44,605,818
2005	2,351,688	139,535	2,965,938	(1,635,943)	(1,110)	58,595	48,484,521
2006	4,689,470	233,928	4,031,129	(1,879,765)	(11,276)	0	55,548,007
2007	3,268,463	153,907	4,504,185	(2,144,291)	(8,522)	0	61,321,749
2008	2,820,446	121,929	2,983,475	(2,357,504)	(5,875)	0	64,884,220
2009	3,356,569	127,565	3,719,493	(2,592,458)	(7,466)	0	69,487,923
2010	2,701,704	120,400	4,108,154	(2,887,422)	(3,985)	0	73,526,774
2011	3,669,334	118,290	4,243,170	(3,227,971)	(18,286)	0	78,311,311
2012	2,482,412	118,808	3,720,946	(3,576,831)	(2,462)	11,703	81,065,887
2013	2,532,923	201,995	4,942,034	(3,871,478)	(12,924)	0	84,858,437

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

Actuarial Accrued Liabilities and Valuation Assets As of December 31, 2013

Table 6

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
02 - POLC Sheriff				
Active Members	\$ 10,099,634	\$ 6,773,054	67.1%	\$ 3,326,580
Vested Former Members	243,348	243,348	100.0%	0
Retirees And Beneficiaries	10,768,610	10,768,610	100.0%	0
Pending Refunds	<u>44,263</u>	<u>44,263</u>	100.0%	<u>0</u>
Total	\$ 21,155,855	\$ 17,829,275	84.3%	\$ 3,326,580
04 - S.T.A.R.S.				
Active Members	\$ 6,118,690	\$ 4,618,121	75.5%	\$ 1,500,569
Vested Former Members	952,507	952,507	100.0%	0
Retirees And Beneficiaries	3,936,954	3,936,954	100.0%	0
Pending Refunds	<u>47,007</u>	<u>47,007</u>	100.0%	<u>0</u>
Total	\$ 11,055,158	\$ 9,554,589	86.4%	\$ 1,500,569
06 - CMH Union				
Active Members	\$ 4,295,668	\$ 4,075,926	94.9%	\$ 219,742
Vested Former Members	419,590	419,590	100.0%	0
Retirees And Beneficiaries	1,823,443	1,823,443	100.0%	0
Pending Refunds	<u>6,566</u>	<u>6,566</u>	100.0%	<u>0</u>
Total	\$ 6,545,267	\$ 6,325,525	96.6%	\$ 219,742
10 - AFSCME				
Active Members	\$ 2,853,479	\$ 2,427,971	85.1%	\$ 425,508
Vested Former Members	972,969	972,969	100.0%	0
Retirees And Beneficiaries	3,315,556	3,315,556	100.0%	0
Pending Refunds	<u>8,028</u>	<u>8,028</u>	100.0%	<u>0</u>
Total	\$ 7,150,032	\$ 6,724,524	94.0%	\$ 425,508
11 - Gnrl Non Union				
Active Members	\$ 4,716,036	\$ 4,897,450	103.8%	\$ (181,414)
Vested Former Members	928,637	928,637	100.0%	0
Retirees And Beneficiaries	3,350,182	3,350,182	100.0%	0
Pending Refunds	<u>713</u>	<u>713</u>	100.0%	<u>0</u>
Total	\$ 8,995,568	\$ 9,176,982	102.0%	\$ (181,414)
12 - Gnrl Teamsters				
Active Members	\$ 6,036,493	\$ 5,513,169	91.3%	\$ 523,324
Vested Former Members	602,857	602,857	100.0%	0
Retirees And Beneficiaries	3,402,673	3,402,673	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 10,042,023	\$ 9,518,699	94.8%	\$ 523,324

Table 6 (continued)

Division	Actuarial Accrued Liability	Valuation Assets¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
13 - Elected & Appt. Dept Heads				
Active Members	\$ 3,998,185	\$ 4,078,075	102.0%	\$ (79,890)
Vested Former Members	545,941	545,941	100.0%	0
Retirees And Beneficiaries	3,142,871	3,142,871	100.0%	0
Pending Refunds	<u>1,875</u>	<u>1,875</u>	100.0%	<u>0</u>
Total	\$ 7,688,872	\$ 7,768,762	101.0%	\$ (79,890)
20 - COAM/POAM Disp				
Active Members	\$ 1,649,057	\$ 1,311,501	79.5%	\$ 337,556
Vested Former Members	3,116	3,116	100.0%	0
Retirees And Beneficiaries	548,945	548,945	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 2,201,118	\$ 1,863,562	84.7%	\$ 337,556
40 - MCF Non Union				
Active Members	\$ 9,476,178	\$ 5,649,625	59.6%	\$ 3,826,553
Vested Former Members	933,066	933,066	100.0%	0
Retirees And Beneficiaries	6,389,987	6,389,987	100.0%	0
Pending Refunds	<u>1,108</u>	<u>1,108</u>	100.0%	<u>0</u>
Total	\$ 16,800,339	\$ 12,973,786	77.2%	\$ 3,826,553
60 - CMH Non Union				
Active Members	\$ 1,694,571	\$ 1,547,641	91.3%	\$ 146,930
Vested Former Members	437,807	437,807	100.0%	0
Retirees And Beneficiaries	1,137,285	1,137,285	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 3,269,663	\$ 3,122,733	95.5%	\$ 146,930
Total Municipality				
Active Members	\$ 50,937,991	\$ 40,892,533	80.3%	\$ 10,045,458
Vested Former Members	6,039,838	6,039,838	100.0%	0
Retirees and Beneficiaries	37,816,506	37,816,506	100.0%	0
Pending Refunds	<u>109,560</u>	<u>109,560</u>	100.0%	<u>0</u>
Total Participants	\$ 94,903,895	\$ 84,858,437	89.4%	\$ 10,045,458

¹ Includes both employer and member assets.

Please see the Comments on the Investment Markets.

See the MERS Fiscal Responsibility Policy on the MERS website at:

http://www.mersofmich.com/Portals/0/Assets/PageResources/MERS/PlanDocument/Pension/sec_43c.pdf.

Actuarial Accrued Liabilities - Comparative Schedule

Table 7

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities	UAL as Percent of Annual Payroll
1999	\$ 30,235,070	\$ 28,451,502	94%	\$ 1,783,568	11%
2000	35,717,216	31,832,139	89%	3,885,077	22%
2001	43,599,768	35,020,726	80%	8,579,042	42%
2002	47,793,702	37,275,307	78%	10,518,395	48%
2003	49,842,139	40,320,750	81%	9,521,389	43%
2004	53,364,956	44,605,818	84%	8,759,138	40%
2005	57,449,535	48,484,521	84%	8,965,014	41%
2006	62,191,494	55,548,007	89%	6,643,487	29%
2007	67,484,457	61,321,749	91%	6,162,708	26%
2008	72,924,490	64,884,220	89%	8,040,270	33%
2009	75,451,001	69,487,923	92%	5,963,078	23%
2010	79,860,857	73,526,774	92%	6,334,083	26%
2011	85,385,423	78,311,311	92%	7,074,112	27%
2012	89,282,225	81,065,887	91%	8,216,338	32%
2013	94,903,895	84,858,437	89%	10,045,458	39%

Notes: Actuarial assumptions were revised for the 2000, 2004, 2008, 2009, 2010, 2011, and 2012 actuarial valuations.

GASB 25 and GASB 27 Information

The following information has been prepared to provide the information necessary to comply with GASB Statements Number 25 and 27. Statement 25 is effective for fiscal years beginning after June 15, 1996 and Statement 27 is effective for fiscal years beginning after June 15, 1997.

All entries and the annual employer contribution amount were based on the actuarial methods and assumptions used in the December 31, 2013 actuarial valuation. The entry age normal actuarial method was used to determine the disclosure entries.

GASB 25 Information (as of 12/31/2013)

Actuarial Accrued Liability		
Retirees and beneficiaries currently receiving benefits	\$	37,816,506
Terminated employees (vested former members) not yet receiving benefits		6,039,838
Non-Vested terminated employees (pending refunds of accumulated member contributions)		109,560
Current employees -		
Accumulated employee contributions including allocated investment income		1,826,840
Employer financed		<u>49,111,151</u>
Total Actuarial Accrued Liability	\$	94,903,895
Net Assets Available for Benefits at Actuarial Value	\$	<u>84,858,437</u>
(Market Value is 79,916,408)		
Unfunded (Overfunded) Actuarial Accrued Liability	\$	10,045,458

GASB 27 Information (as of 12/31/2013)

Fiscal Year Beginning		January 1, 2015
Annual Required Contribution (ARC)	\$	2,633,268 ¹

¹ Based on valuation payroll (based on projected fiscal year payroll for divisions that will have no new hires). For divisions that are open to new hires the actual required contribution will be based on current monthly payroll (during the fiscal year beginning January 1, 2015) times the computed employer contribution rate(s) shown in Table 1. The ARC shown here is the sum of the ARC's calculated separately for each division.

GASB 27 Information (Used in the 12/31/2013 Annual Actuarial Valuation)

Amortization Factors Used to Compute Employer Contribution Requirements Used for Funding Calculations and Most ARC Calculations (see below) (Payments Increase 4.5% per Year)

Amortization Factor Used - Underfunded or Overfunded Liabilities (5 years)	0.221706
Amortization Factor Used - Underfunded or Overfunded Liabilities (6 years)	0.187731
Amortization Factor Used - Underfunded or Overfunded Liabilities (7 years)	0.163488
Amortization Factor Used - Underfunded or Overfunded Liabilities (8 years)	0.145330
Amortization Factor Used - Underfunded or Overfunded Liabilities (9 years)	0.131227
Amortization Factor Used - Underfunded or Overfunded Liabilities (10 years)	0.119963
Amortization Factor Used - Underfunded or Overfunded Liabilities (11 years)	0.110763
Amortization Factor Used - Underfunded or Overfunded Liabilities (12 years)	0.103112
Amortization Factor Used - Underfunded or Overfunded Liabilities (13 years)	0.096652
Amortization Factor Used - Underfunded or Overfunded Liabilities (14 years)	0.091128
Amortization Factor Used - Underfunded or Overfunded Liabilities (15 years)	0.086353
Amortization Factor Used - Underfunded or Overfunded Liabilities (16 years)	0.082185
Amortization Factor Used - Underfunded or Overfunded Liabilities (17 years)	0.078519
Amortization Factor Used - Underfunded or Overfunded Liabilities (18 years)	0.075270
Amortization Factor Used - Underfunded or Overfunded Liabilities (19 years)	0.072372
Amortization Factor Used - Underfunded or Overfunded Liabilities (20 years)	0.069773
Amortization Factor Used - Underfunded or Overfunded Liabilities (21 years)	0.067430
Amortization Factor Used - Underfunded or Overfunded Liabilities (22 years)	0.065308
Amortization Factor Used - Underfunded or Overfunded Liabilities (23 years)	0.063378
Amortization Factor Used - Underfunded or Overfunded Liabilities (24 years)	0.061616
Amortization Factor Used - Underfunded or Overfunded Liabilities (25 years)	0.060002

Amortization Factor Used to Compute the GASB Annual Required Contribution (ARC) For Divisions that are Closed to New Hires (and new hires are not covered by MERS DB or Hybrid provisions in a linked division) If Division is Less than 100% Funded, and Uses a Funding Period over 15 Years

Amortization Factor Used - Underfunded Liabilities (30 year level \$)	0.085453
---	----------

Assumptions: Continuous Payments; Interest at 8% Per Year

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.

02 - POLC Sheriff

1/1/1999	Benefit B-4 (80% max)
1/1/1999	Member Contribution Rate 2.49%
1/1/1994	Benefit B-3 (80% max)
1/1/1991	Benefit B-2
1/1/1991	Benefit F50 (With 25 Years of Service)
1/1/1988	Benefit C-2/Base B-1
6/1/1985	Member Contribution Rate 0.00%
1/1/1981	Member Contribution Rate 5.00%
1/1/1981	Benefit F55 (With 25 Years of Service)
4/6/1978	Exclude Temporary Employees
1/1/1973	Benefit C-1 (Old)
10/30/1970	Covered by Act 88
6/1/1966	Benefit FAC-5 (5 Year Final Average Compensation)
6/1/1966	10 Year Vesting
6/1/1966	Benefit C (Old)
6/1/1966	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
	Fiscal Month - January

04 - S.T.A.R.S.

2/1/2013	Member Contribution Rate 1.27%
2/1/2013	Benefit F55 (With 25 Years of Service)
5/1/2007	Member Contribution Rate 0.00%
10/1/2005	Benefit B-2
10/1/2005	Member Contribution Rate 2.33%
1/1/1987	Member Contribution Rate 0.00%
1/1/1973	Benefit C-1 (Old)
10/30/1970	Covered by Act 88
6/1/1966	Benefit FAC-5 (5 Year Final Average Compensation)
6/1/1966	10 Year Vesting
6/1/1966	Benefit C (Old)
6/1/1966	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
6/1/1966	Fiscal Month - January

06 - CMH Union

4/1/2003	Benefit B-3 (80% max)
5/1/2001	Member Contribution Rate 0.00%
1/1/2001	Member Contribution Rate 4.14%
1/1/2000	Member Contribution Rate 4.41%
1/1/1999	Member Contribution Rate 0.23%
11/1/1998	10 Year Vesting

06 - CMH Union

11/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
11/1/1998	Benefit B-2
11/1/1998	Member Contribution Rate 0.00%
4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

10 - AFSCME

1/1/2000	Benefit B-3 (80% max)
3/1/1991	Benefit B-2
1/1/1986	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1986	10 Year Vesting
1/1/1986	Member Contribution Rate 0.00%
10/30/1970	Covered by Act 88
	Fiscal Month - January

11 - Gnrl Non Union

12/31/2000	Benefit B-3 (80% max)
12/1/1990	Benefit B-2
1/1/1986	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1986	10 Year Vesting
1/1/1986	Member Contribution Rate 0.00%
4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

12 - Gnrl Teamsters

1/1/2000	Benefit B-3 (80% max)
1/1/1991	Benefit B-2
1/1/1986	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1986	10 Year Vesting
1/1/1986	Member Contribution Rate 0.00%
4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

13 - Elected & Appt. Dept Heads

1/1/2005	Benefit B-4 (80% max)
1/1/2005	Member Contribution Rate 2.53%
1/1/2001	Benefit B-3 (80% max)
12/1/1990	Benefit B-2
6/1/1985	10 Year Vesting
6/1/1985	Benefit FAC-5 (5 Year Final Average Compensation)
6/1/1985	Member Contribution Rate 0.00%

13 - Elected & Appt. Dept Heads

4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

20 - COAM/POAM Disp

12/31/2000	10 Year Vesting
12/31/2000	Benefit FAC-5 (5 Year Final Average Compensation)
12/31/2000	Benefit B-3 (80% max)
12/31/2000	Member Contribution Rate 0.00%
12/31/2000	Benefit F50 (With 25 Years of Service)
4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

40 - MCF Non Union

1/1/2008	Benefit B-4 (80% max)
1/1/1999	Benefit B-3 (80% max)
1/1/1999	Benefit F55 (With 25 Years of Service)
1/1/1991	10 Year Vesting
1/1/1991	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1991	Benefit B-2
1/1/1991	Member Contribution Rate 0.00%
1/1/1991	Benefit F55 (With 30 Years of Service)
10/30/1970	Covered by Act 88
6/1/1966	Fiscal Month - January

60 - CMH Non Union

5/1/2001	Benefit B-3 (80% max)
11/1/1998	10 Year Vesting
11/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
11/1/1998	Benefit B-2
11/1/1998	Member Contribution Rate 0.00%
4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

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	3.00%

Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
All Divisions	120%

Miscellaneous and Technical Assumptions

Loads – None.