MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN

ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2014

MANISTEE CRC (5103)

Spring, 2015

Manistee CRC

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, 2014. The report includes the determination of liabilities and contribution rates resulting from the participation of Manistee CRC (5103) in the Municipal Employees' Retirement System of Michigan ("MERS"). MERS is a nonprofit organization, independent from the State, that has provided retirement plans for municipal employees for more than 65 years. Manistee CRC 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, 2014 annual actuarial valuation is to:

- Measure funding progress
- Establish contribution requirements for the fiscal year beginning October 1, 2016
- Provide actuarial information in connection with applicable Governmental Accounting Standards Board (GASB) 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, 2014 furnished by MERS. 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. CBIZ Retirement Plan Services 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 MERS Retirement Board, and are reviewed every five years in an Experience Study, which will be completed in 2015. 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-2014AnnualActuarialValuation-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).

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 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). CBIZ Retirement Plan Services 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 your Regional Manager at 1.800.767.MERS(6377).

Sincerely,

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

TABLE OF CONTENTS

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:

	12/31/2014	12/31/2013
Funded Ratio	62%	59%

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.

How quickly a plan attains the 100% funding goal depends on many factors such as:

- The current funded ratio
- The future experience of the plan
- 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 in the following table. Employee contributions, if any, are in addition to the required employer contributions.

	Percentage of Payroll		Monthly $ Based on Valuation Payroll	
Valuation Date:	**12/31/2014**	**12/31/2013**	**12/31/2014**	**12/31/2013**
Fiscal Year Beginning:	**October 1, 2016**	**October 1, 2015**	**October 1, 2016**	**October 1, 2015**
Division				
01 - General	-	-	$ 21,136	$ 20,862
10 - NonUnEmp	-	-	1,065	1,039
11 - Sr Adm Emp	-	-	12,521	50,207
12 - General hired after 7/	11.35%	10.12%	657	451
13 - Non Union hired after	13.90%	13.61%	848	377
Municipality Total			**$ 36,227**	**$ 72,936**

Employee contribution rates reflected in the valuations are shown below:

	Employee Contribution Rate	
Valuation Date:	**12/31/2014**	**12/31/2013**
Division		
01 - General	0.00%	0.00%
10 - NonUnEmp	0.00%	0.00%
11 - Sr Adm Emp	0.00%	0.00%
12 - General hired after 7/	5.00%	5.00%
13 - Non Union hired after	5.00%	5.00%

For employee contribution rates that are not flat percentages, the rate shown is a weighted average flat employee contribution rate.

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 employer contributions for the entire employer would be $ 60,563, instead of $ 36,227.
- To accelerate to a 100% funding ratio in 20 years, estimated monthly employer contributions for the entire employer would be $ 48,580, instead of $ 36,227.

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)
- 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 on investments in the belief that over the long-term this is achievable. For example, MERS' 30 year return was 9.17% on December 31, 2014. The MERS portfolio returned 6.49% in 2014; the two year (10.54%), three year (10.73%), four year (8.48%), and five year (9.59%) returns all exceed the 8% annual return assumption. When comparing these actual returns to the 8% net return assumption, deduct roughly .25% from these actual returns to reflect administrative expenses. It has now been seven 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 (seven-tenths, for 2008 through 2014) 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. The smoothed actuarial rate of return for 2014 was 5.90%.

As of December 31, 2014 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, 2014 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 59% (instead of 62%); and ii) your total employer contribution requirement for the fiscal year starting October 1, 2016 would be $ 466,668 (instead of $ 434,724).

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).**

Risk Characteristics of Defined Benefit Plans

It is important to understand that retirement plans, by their nature, are exposed to certain risks. While risks cannot be eliminated entirely, they can be mitigated through various strategies. Below are a few examples of risk (this is not an all-inclusive list):

- Economic - investment return, wage inflation, etc.
- Demographic - longevity, disability, retirement, etc.
- Plan Sponsor and Employees - contribution volatility, attract/retain employees, etc.

The MERS Retirement Board adopts certain assumptions and methods to mitigate the economic and demographic risks, and the contribution volatility risks. For example, the investment risk is the largest economic risk and is mitigated by having a balanced portfolio and a clearly defined investment strategy. Demographic risks vary based on the age of the workforce and are mitigated by preparing special studies called experience studies on a regular basis to determine if the assumptions used are reasonable compared to the experience. Risk may be mitigated through a plan design that provides benefits that are sustainable in the long run. An Experience Study is completed every five years to review the assumptions and methods. The next Experience Study will be completed in 2015.

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.

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.

Many assumptions are important in determining the required employer contributions.

For example:

- Lower investment returns would result in higher required employer contributions, and vice-versa.
- 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 (the now lower) 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.

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.

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, 2014 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**
12/31/2014 Valuation Results	**6%**	**7%**	**8%**	**9%**
Accrued Liability	$ 14,270,424	$ 12,899,529	$ 11,722,837	$ 10,707,357
Valuation Assets	$ 7,318,694	$ 7,318,694	$ 7,318,694	$ 7,318,694
Unfunded Accrued Liability	$ 6,951,730	$ 5,580,835	$ 4,404,143	$ 3,388,663
Funded Ratio	51%	57%	62%	68%
Monthly Normal Cost	$ 14,660	$ 11,479	$ 8,996	$ 7,063
Monthly Amortization Payment	$ 38,908	$ 33,144	$ 27,231	$ 21,065
Total Employer Contribution[1]	$ 53,568	$ 44,623	$ 36,227	$ 28,128

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.

Five Year Projection Scenarios

The following table illustrates the plan's projected liabilities and required employer contributions for the next five fiscal years, under three actuarial assumptions and future economic scenarios. All three scenarios take into account the 2008 financial losses that will continue to affect the smoothed rate of return for the next three years.

Valuation Year Ending 12/31	Fiscal Year Beginning 10/1	Actuarial Accrued Liability	Valuation Assets	Funded Percentage	Required Annual Employer Contribution[1]
8% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
2014	2016	$ 11,722,837	$ 7,318,694	62%	$ 460,488
2015	2017	12,008,300	7,864,500	66%	472,572
2016	2018	12,275,100	8,334,400	68%	506,052
2017	2019	12,525,500	8,423,800	67%	550,812
2018	2020	12,767,900	8,750,600	69%	565,464
7% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
2014	2016	$ 12,899,529	$ 7,318,694	57%	$ 572,076
2015	2017	13,187,500	7,855,500	60%	578,700
2016	2018	13,454,800	8,349,000	62%	606,796
2017	2019	13,718,000	8,560,700	62%	644,004
2018	2020	13,956,300	8,945,500	64%	660,008
6% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
2014	2016	$ 14,270,424	$ 7,318,694	51%	$ 691,848
2015	2017	14,560,100	7,855,600	54%	693,500
2016	2018	14,827,400	8,365,500	56%	719,352
2017	2019	15,083,500	8,679,900	58%	752,888
2018	2020	15,319,000	9,168,500	60%	765,332

[1] For an employer with any open divisions, this column will include the impact of projected increases in total payroll from 2014 to the applicable fiscal year. This will cause the projected contribution for the fiscal year beginning in 2016 to be higher than the Estimated Annual Contribution shown in Table 1.

The first scenario provides an estimate of required employer contributions based on current actuarial assumptions, and a projected 8% market return. The other scenarios may be useful if the municipality chooses to budget more conservatively, and make contributions in addition to the minimum requirements. The 7% and 6% projections provide an indication of the potential required employer contribution if MERS were to realize investment returns of 7% and 6% over the long-term.

Employer Contribution Details
For the Fiscal Year Beginning October 1, 2016

Table 1

Division	Amort. Period for Unfund. Liab.[4,5]	Employer Contributions[1] Normal Cost	Unfunded Accrued Liability	Total Required Employer Contribut.	Blended Employer Contribut.[7]	Employee Contribution Rate[6]	Employee Contribut. Conversion Factor[2]
Percentage of Payroll							
01 - General	24	-	-	-	23.60%	0.00%	
10 - NonUnEmp	24	-	-	-	14.90%	0.00%	
11 - Sr Adm Emp	6	-	-	-		0.00%	
12 - General hired afte	24	6.10%	5.25%	11.35%	23.60%	5.00%	0.84%
13 - Non Union hired af	24	12.89%	1.01%	13.90%	14.90%	5.00%	0.92%
Estimated Monthly Contribution[3]							
01 - General	24	$ 7,221	$ 13,915	$ 21,136			
10 - NonUnEmp	24	636	429	1,065			
11 - Sr Adm Emp	6	0	12,521	12,521			
12 - General hired afte	24	353	304	657			
13 - Non Union hired af	24	786	62	848			
Total Municipality		**$ 8,996**	**$ 27,231**	**$ 36,227**			
Estimated Annual Contribution[3]		**$ 107,952**	**$ 326,772**	**$ 434,724**			

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 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 October 1, 2016 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 it reaches 6 or 5 years. Then it decreases by 1 year each valuation year until the UAL is paid off. Under Amortization Option B, the period will decrease by 2 years each valuation year, until it reaches 16 or 15 years. Thereafter, the period will reduce by 1 year each valuation year, until the UAL is paid off. 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 employee contribution rates that are not flat percentages, the rate shown is a weighted average flat employee contribution rate.

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

01 - General: Closed to new hires, linked to Division 12	2014 Valuation	2013 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):	55/30	55/30
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	0%	0%
Act 88:	No	No

10 - NonUnEmp: Closed to new hires, linked to Division 13	2014 Valuation	2013 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):	55/30	55/30
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	0%	0%
Act 88:	No	No

11 - Sr Adm Emp: Closed to new hires	2014 Valuation	2013 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):	55/30	55/30
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	5.90%	5.90%
RS50% Percentage:	50%	50%
Act 88:	No	No

Table 2 (continued)

12 - General hired after 7/1/09: Open Division, linked to Division 01

	2014 Valuation	2013 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):	55/30	55/30
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	5%	5%
Act 88:	No	No

13 - Non Union hired after 7/1/09: Open Division, linked to Division 10

	2014 Valuation	2013 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):	55/30	55/30
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	5%	5%
Act 88:	No	No

Participant Summary

Table 3

Division	2014 Valuation Number	2014 Valuation Annual Payroll[1]	2013 Valuation Number	2013 Valuation Annual Payroll[1]	2014 Valuation Average Age	2014 Valuation Average Benefit Service[2]	2014 Valuation Average Eligibility Service[2]
01 - General							
Active Employees	24	$ 1,005,564	27	$ 1,087,126	52.4	19.3	19.3
Vested Former Employees	2	52,978	1	25,040	53.3	23.3	23.6
Retirees and Beneficiaries	31	506,867	30	475,776	72.9		
10 - NonUnEmp							
Active Employees	2	$ 79,095	2	$ 77,784	54.5	24.3	24.3
Vested Former Employees	3	46,959	3	46,959	54.1	10.6	13.5
Retirees and Beneficiaries	2	19,519	2	19,519	67.0		
11 - Sr Adm Emp							
Active Employees	0	$ 0	0	$ 0	0.0	0.0	0.0
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	5	198,558	5	194,827	72.9		
12 - General hired after							
Active Employees	2	$ 69,486	2	$ 53,453	45.7	10.4	10.4
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
13 - Non Union hired afte							
Active Employees	1	$ 73,194	1	$ 33,235	57.4	1.1	7.8
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
Total Municipality							
Active Employees	**29**	**$ 1,227,339**	**32**	**$ 1,251,598**	**52.3**	**18.4**	**18.6**
Vested Former Employees	**5**	**99,937**	**4**	**71,999**	**53.8**	**15.7**	**17.5**
Retirees and Beneficiaries	**38**	**724,944**	**37**	**690,122**	**72.6**		
Total Participants	**72**		**73**				

1 Annual payroll for active employees; annual deferred benefits payable for vested former employees; 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	2014 Valuation		2013 Valuation	
	Employer and Retiree[1]	Employee[2]	Employer and Retiree[1]	Employee[2]
01 - General	$ 5,818,006	$ 0	$ 5,705,619	$ 0
10 - NonUnEmp	702,133	0	656,654	0
11 - Sr Adm Emp	320,541	0	(18,006)	0
12 - General hired after 7/1/09	45,819	10,208	36,202	6,719
13 - Non Union hired after 7/1/09	4,334	3,798	152	138
Municipality Total	**$ 6,890,833**	**$ 14,006**	**$ 6,380,621**	**$ 6,857**
Combined Reserves	**$ 6,904,839**		**$ 6,387,478**	

1 Reserve for Employer Contributions and Benefit Payments

2 Reserve for Employee Contributions

The December 31, 2014 valuation assets are equal to 1.059937 times the reported market value of assets (compared to 1.061840 as of December 31, 2013). 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	Employer Contributions Required	Employer Contributions Additional	Employee Contributions	Investment Income	Benefit Payments	Employee Contribution Refunds	Net Transfers	Valuation Asset Balance
2004	$ 327,600		$ 0	$ 240,643	$ (433,990)	$ 0	$ 0	$ 3,855,814
2005	414,607		0	247,447	(461,850)	0	0	4,056,018
2006	413,598		0	324,218	(475,312)	0	0	4,318,522
2007	397,589		0	348,435	(489,606)	0	(2,040)	4,572,900
2008	557,186		0	240,919	(533,641)	0	0	4,837,364
2009	666,812		0	284,493	(585,294)	0	0	5,203,375
2010	706,644		159	339,508	(589,763)	0	0	5,659,923
2011	463,451	$ 240,000	1,566	337,527	(597,574)	0	(160)	6,104,733
2012	481,109	140,000	2,473	300,351	(637,577)	0	0	6,391,089
2013	568,099	100,000	2,811	400,307	(679,827)	0	0	6,782,479
2014	807,629	0	7,134	409,487	(688,035)	0	0	7,318,694

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.

Additional employer contributions, if any, are shown separately starting in 2011. Prior to 2011, additional contributions are combined with the required employer contributions.

In the actuarial valuation additional employer contributions are combined with required contributions and used to reduce computed future required employer contributions.

Actuarial Accrued Liabilities and Valuation Assets
As of December 31, 2014

Table 6

Division	Actuarial Accrued Liability	Valuation Assets[1]	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
01 - General				
Active Employees	$ 3,831,884	$ 1,218,784	31.8%	$ 2,613,100
Vested Former Employees	319,757	319,757	100.0%	0
Retirees And Beneficiaries	4,628,179	4,628,179	100.0%	0
Pending Refunds	0	0	0.0%	0
Total	**$ 8,779,820**	**$ 6,166,720**	**70.2%**	**$ 2,613,100**
10 - NonUnEmp				
Active Employees	$ 385,389	$ 295,550	76.7%	$ 89,839
Vested Former Employees	246,183	246,183	100.0%	0
Retirees And Beneficiaries	202,484	202,484	100.0%	0
Pending Refunds	0	0	0.0%	0
Total	**$ 834,056**	**$ 744,217**	**89.2%**	**$ 89,839**
11 - Sr Adm Emp				
Active Employees	$ 0	$ 0	0.0%	$ 0
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	1,975,333	339,753	17.2%	1,635,580
Pending Refunds	0	0	0.0%	0
Total	**$ 1,975,333**	**$ 339,753**	**17.2%**	**$ 1,635,580**
12 - General hired after 7/1/09				
Active Employees	$ 120,111	$ 59,385	49.4%	$ 60,726
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	0	0	0.0%	0
Total	**$ 120,111**	**$ 59,385**	**49.4%**	**$ 60,726**
13 - Non Union hired after 7/1/09				
Active Employees	$ 13,517	$ 8,619	63.8%	$ 4,898
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	0	0	0.0%	0
Total	**$ 13,517**	**$ 8,619**	**63.8%**	**$ 4,898**
Total Municipality				
Active Employees	**$ 4,350,901**	**$ 1,582,338**	**36.4%**	**$ 2,768,563**
Vested Former Employees	**565,940**	**565,940**	**100.0%**	**0**
Retirees and Beneficiaries	**6,805,996**	**5,170,416**	**76.0%**	**1,635,580**
Pending Refunds	**0**	**0**	**0.0%**	**0**
Total Participants	**$ 11,722,837**	**$ 7,318,694**	**62.4%**	**$ 4,404,143**

The following results show the combined accrued liabilities and assets for each set of linked divisions. These results are already included in the table above.

Table 6 (continued)

Division	Actuarial Accrued Liability	Valuation Assets[1]	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
Linked Divisions 12, 01				
Active Employees	$ 3,951,995	$ 1,278,169	32.3%	$ 2,673,826
Vested Former Employees	319,757	319,757	100.0%	0
Retirees and Beneficiaries	4,628,179	4,628,179	100.0%	0
Pending Refunds	0	0	0.0%	0
Total	**$ 8,899,931**	**$ 6,226,105**	**70.0%**	**$ 2,673,826**
Linked Divisions 13, 10				
Active Employees	$ 398,906	$ 304,169	76.3%	$ 94,737
Vested Former Employees	246,183	246,183	100.0%	0
Retirees and Beneficiaries	202,484	202,484	100.0%	0
Pending Refunds	0	0	0.0%	0
Total	**$ 847,573**	**$ 752,836**	**88.8%**	**$ 94,737**

1 Includes both employer and employee 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
2000	$ 5,910,253	$ 3,180,274	54%	$ 2,729,979
2001	6,953,429	3,465,264	50%	3,488,165
2002	7,396,448	3,454,256	47%	3,942,192
2003	7,989,189	3,721,561	47%	4,267,628
2004	8,915,083	3,855,814	43%	5,059,269
2005	9,037,120	4,056,018	45%	4,981,102
2006	9,449,572	4,318,522	46%	5,131,050
2007	9,621,291	4,572,900	48%	5,048,391
2008	10,052,447	4,837,364	48%	5,215,083
2009	10,154,214	5,203,375	51%	4,950,839
2010	10,570,991	5,659,923	54%	4,911,068
2011	10,954,938	6,104,733	56%	4,850,205
2012	11,349,113	6,391,089	56%	4,958,024
2013	11,427,592	6,782,479	59%	4,645,113
2014	11,722,837	7,318,694	62%	4,404,143

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

Division 01 - General

Table 8-01: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2004	$ 5,925,347	$ 3,326,859	56%	$ 2,598,488
2005	5,965,680	3,495,186	59%	2,470,494
2006	6,113,928	3,543,665	58%	2,570,263
2007	6,122,155	3,756,936	61%	2,365,219
2008	7,129,234	4,379,933	61%	2,749,301
2009	7,184,666	4,743,460	66%	2,441,206
2010	7,536,694	5,189,328	69%	2,347,366
2011	7,827,364	5,581,060	71%	2,246,304
2012	8,157,745	5,817,627	71%	2,340,118
2013	8,558,058	6,058,454	71%	2,499,604
2014	8,779,820	6,166,720	70%	2,613,100

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

Table 9-01: Required Employer Contributions - Comparative Schedule

Valuation Date	Active Employees		Required Employer	Employee Contribution
December 31	Number	Annual Payroll	Contribution[1]	Rate[2]
2004	38	$ 1,341,968	19.12%	0.00%
2005	37	1,266,279	19.15%	0.00%
2006	33	1,232,545	20.22%	0.00%
2007	31	1,069,294	21.08%	0.00%
2008	29	1,089,410	22.86%	0.00%
2009	31	1,146,705	20.74%	0.00%
2010	31	1,183,010	20.23%	0.00%
2011	30	1,185,644	$ 19,882	0.00%
2012	28	1,108,625	$ 19,843	0.00%
2013	27	1,087,126	$ 20,862	0.00%
2014	24	1,005,564	$ 21,136	0.00%

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

2 For employee contribution rates that are not flat percentages, the rate shown is a weighted average flat employee contribution rate. For each valuation year, the required employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the required employer contribution will be adjusted.

Division 10 - NonUnEmp

Table 8-10: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2004	$ 587,312	$ 382,548	65%	$ 204,764
2005	663,490	444,465	67%	219,025
2006	1,048,790	712,400	68%	336,390
2007	1,211,368	800,739	66%	410,629
2008	637,268	447,048	70%	190,220
2009	688,307	501,960	73%	186,347
2010	740,212	553,461	75%	186,751
2011	796,180	604,119	76%	192,061
2012	837,459	650,364	78%	187,095
2013	794,365	697,261	88%	97,104
2014	834,056	744,217	89%	89,839

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

Table 9-10: Required Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Required Employer Contribution[1]	Employee Contribution Rate[2]
	Number	Annual Payroll		
2004	6	$ 253,511	13.72%	0.00%
2005	6	262,288	13.81%	0.00%
2006	5	234,485	16.15%	0.00%
2007	5	268,872	16.90%	0.00%
2008	3	139,924	16.31%	0.00%
2009	3	140,649	16.05%	0.00%
2010	3	144,434	16.18%	0.00%
2011	3	145,193	$ 2,055	0.00%
2012	3	147,175	$ 2,060	0.00%
2013	2	77,784	$ 1,039	0.00%
2014	2	79,095	$ 1,065	0.00%

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

[2] For employee contribution rates that are not flat percentages, the rate shown is a weighted average flat employee contribution rate. For each valuation year, the required employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the required employer contribution will be adjusted.

Division 11 - Sr Adm Emp

Table 8-11: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2004	$ 2,402,424	$ 146,407	6%	$ 2,256,017
2005	2,407,950	116,367	5%	2,291,583
2006	2,286,854	62,457	3%	2,224,397
2007	2,287,768	15,225	1%	2,272,543
2008	2,285,945	10,383	0%	2,275,562
2009	2,281,241	(42,045)	-2%	2,323,286
2010	2,294,085	(82,866)	-4%	2,376,951
2011	2,277,571	(106,554)	-5%	2,384,125
2012	2,287,389	(111,496)	-5%	2,398,885
2013	1,993,168	(19,119)	-1%	2,012,287
2014	1,975,333	339,753	17%	1,635,580

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

Table 9-11: Required Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Required Employer Contribution[1]	Employee Contribution Rate[2]
	Number	Annual Payroll		
2004	0	$ 0	$ 11,306	0.00%
2005	0	0	$ 11,983	0.00%
2006	0	0	$ 12,260	0.00%
2007	0	0	$ 13,381	0.00%
2008	0	0	$ 14,368	0.00%
2009	0	0	$ 15,957	0.00%
2010	0	0	$ 17,982	0.00%
2011	0	0	$ 24,971	0.00%
2012	0	0	$ 44,496	0.00%
2013	0	0	$ 50,207	0.00%
2014	0	0	$ 12,521	0.00%

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

2 For employee contribution rates that are not flat percentages, the rate shown is a weighted average flat employee contribution rate. For each valuation year, the required employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the required employer contribution will be adjusted.

Division 12 - General hired after 7/1/09

Table 8-12: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2011	$ 53,823	$ 26,108	49%	$ 27,715
2012	66,520	34,594	52%	31,926
2013	82,062	45,575	56%	36,487
2014	120,111	59,385	49%	60,726

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

Table 9-12: Required Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Required Employer Contribution[1]	Employee Contribution Rate[2]
	Number	Annual Payroll		
2011	2	$ 42,403	9.45%	5.00%
2012	2	49,457	9.82%	5.00%
2013	2	53,453	10.12%	5.00%
2014	2	69,486	11.35%	5.00%

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

2 For employee contribution rates that are not flat percentages, the rate shown is a weighted average flat employee contribution rate. For each valuation year, the required employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the required employer contribution will be adjusted.

Division 13 - Non Union hired after 7/1/09

Table 8-13: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	(61)	308	0%	(369)
2014	13,517	8,619	64%	4,898

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

Table 9-13: Required Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Required Employer Contribution[1]	Employee Contribution Rate[2]
	Number	Annual Payroll		
2011	0	$ 0	0.00%	0.00%
2013	1	33,235	13.61%	5.00%
2014	1	73,194	13.90%	5.00%

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

[2] For employee contribution rates that are not flat percentages, the rate shown is a weighted average flat employee contribution rate. For each valuation year, the required employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the required employer contribution will be adjusted.

GASB 68 Information

The following information has been prepared to provide some of the information necessary to complete GASB Statement No. 68 disclosures. Statement 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:		12/31/2014
Measurement Date of Total Pension Liability (TPL):		12/31/2014
At 12/31/2014, the following employees were covered by the benefit terms:		
Inactive employees or beneficiaries currently receiving benefits:		38
Inactive employees entitled to but not yet receiving benefits:		5
Active employees:		29
		72
Covered employee payroll: (Needed for Required Supplementary Information)	$	1,227,339
Total Pension Liability as of 12/31/2013 measurement date:	$	11,127,529
Total Pension Liability as of 12/31/2014 measurement date:	$	11,454,993
Service Cost for the year ending on the 12/31/2014 measurement date:	$	120,873
Change in the Total Pension Liability due to:		
- Benefit changes[1]:	$	0
- Differences between expected and actual experience[2]:	$	0
- Changes in assumptions[2]:	$	0
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.

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

	1% Decrease (7.25%)	Current Discount Rate (8.25%)	1% Increase (9.25%)
Change in Net Pension Liability as of 12/31/2014:	$ 1,133,556	-	$ (979,547)

Note: The current discount rate shown for GASB 68 purposes is higher than the MERS assumed rate of return. This is because for GASB 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 - General

12/1/2012	Exclude Temporary Employees requiring less than 6 months
7/1/1999	Benefit F55 (With 30 Years of Service)
7/1/1997	Benefit B-4 (80% max)
7/1/1995	Benefit B-2
1/1/1989	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1989	10 Year Vesting
1/1/1989	Benefit C-1 (New)
1/1/1989	Member Contribution Rate 0.00%
1/1/1989	Fiscal Month - January

10 - NonUnEmp

12/1/2012	Exclude Temporary Employees requiring less than 6 months
7/1/1999	Benefit F55 (With 30 Years of Service)
1/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1998	10 Year Vesting
1/1/1998	Benefit B-4 (80% max)
1/1/1998	Member Contribution Rate 0.00%
1/1/1989	Fiscal Month - January

11 - Sr Adm Emp

12/1/2012	Exclude Temporary Employees requiring less than 6 months
9/1/2000	Benefit RS 50 (50% Post-Ret. Spouse Benefits)
10/1/1999	Member Contribution Rate 5.90%
10/1/1999	E2 2.5% COLA for future retirees (10/01/1999)
7/1/1999	Benefit F55 (With 30 Years of Service)
3/1/1998	Benefit FAC-3 (3 Year Final Average Compensation)
3/1/1998	Member Contribution Rate 1.21%
1/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1998	10 Year Vesting
1/1/1998	Benefit B-4 (80% max)
1/1/1998	Member Contribution Rate 0.00%
1/1/1989	Fiscal Month - January

12 - General hired after 7/1/09

12/1/2012	Exclude Temporary Employees requiring less than 6 months
7/1/2009	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/2009	10 Year Vesting
7/1/2009	Day of work defined as 8 Hours a Day for All employees.
7/1/2009	Benefit B-4 (80% max)

12 - General hired after 7/1/09

7/1/2009	Benefit F55 (With 30 Years of Service)
7/1/2009	Member Contribution Rate 5.00%
1/1/1989	Fiscal Month - January

13 - Non Union hired after 7/1/09

12/1/2012	Exclude Temporary Employees requiring less than 6 months
7/1/2009	10 Year Vesting
7/1/2009	Day of work defined as 8 Hours a Day for All employees.
7/1/2009	Benefit B-4 (80% max)
7/1/2009	Benefit F55 (With 30 Years of Service)
7/1/2009	Member Contribution Rate 5.00%
7/1/2009	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1989	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	100%

Miscellaneous and Technical Assumptions

Loads – None.

Amortization Policy for Closed Divisions

Closed Division	Amortization Option
All Closed Divisions	Option A