



**MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN**  
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2012  
MANISTEE CO (5101)

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Spring, 2013

Manistee 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, 2012. The report includes the determination of liabilities and contribution rates resulting from the participation of Manistee Co (5101) 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. Manistee 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, 2012 annual actuarial valuation is to (i) measure funding progress, (ii) establish contribution requirements for the fiscal year beginning January 1, 2014, and (iii) provide actuarial information in connection with applicable Governmental Accounting Standards Board statements. This valuation report should not be relied upon for any other purpose.

The valuation uses financial data, plan provision data, and participant data as of December 31, 2012 furnished by MERS' administrative staff. The data was checked for internal and year to year consistency as well as general reasonableness, but was not otherwise audited. The MERS of Michigan Actuarial Services Department 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. For this annual valuation, the Retirement Board adopted some revised actuarial assumptions. 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-2012AnnualActuarialValuation-Appendix.pdf](http://www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2012AnnualActuarialValuation-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 employees of MERS, 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).

**Please review the Comments on the Investment Markets.**

**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).**

Please contact MERS at <http://www.mersofmich.com/MERS/About-MERS/Contact-Us> if you have any questions.

Sincerely,

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

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## Executive Summary

### Required Employer Contributions

The computed minimum required employer contributions to the retirement system for the fiscal years beginning January 1, 2014 (2012 Valuation) and January 1, 2013 (2011 Valuation) are as follows:

Division	Percentage of Payroll		Monthly \$ Based on Valuation Payroll	
	2012 Valuation	2011 Valuation	2012 Valuation	2011 Valuation
01 - General	0.00%	0.00%	\$ 0	\$ 0
02 - Sheriff/POAM	-	12.00%	13,782	11,731
04 - MCF	10.54%	9.95%	44,326	45,707
10 - 911 Employees	6.73%	7.05%	2,604	2,721
11 - Exec Employees	-	17.03%	12,324	11,450
12 - Elected Officials	-	20.20%	3,038	2,669
13 - GEA & TPOAM	-	-	9,031	9,516
14 - Court Employees	-	16.34%	19,955	20,752
20 - Sheriff/Adm	25.05%	23.32%	4,955	4,582
41 - Medical Facility Adm	35.22%	33.02%	3,511	2,981
HB - Sheriff POAM (POLC)	5.80%		153	
<b>Municipality Total</b>			<b>\$ 113,679</b>	<b>\$ 112,109</b>

The above employer contribution requirements are in addition to the member contributions, if any, shown in Table 2.

It is important to note that the contribution rates shown above are not expected to remain at present levels indefinitely. If future experience were to match the valuation assumptions exactly, the computed employer rates for divisions that are open to new hires would trend over time toward the long-term cost of system benefits, known as the Normal Cost (see Table 1). For underfunded divisions that are closed to new hires and are not linked to an open division, the computed employer dollar contribution would increase 5%-9% annually for 15 years under the Option B amortization policy (for divisions first reflected as closed in the 2012 valuation). Under the Option A amortization policy, the annual increases would be larger but would only continue for 10 years.

Contribution rates will change from one year to the next as a result of changes in benefit provisions, changes in the actuarial assumptions, and experience of the plan (investment experience and demographic experience).

The 2012 valuation reflects changes in actuarial assumptions and/or methods (see the [Appendix](#)). For benefit provision changes see Table 2.

### 2012 System Experience

Based on the smoothed Actuarial Value of Assets (Valuation Assets), the recognized rate of investment return for MERS overall was 5.4% (less than the 8% actuarial assumption). On average this will result in increases in computed employer contributions.

Demographic experience varied by division. This reflects what actually happened to participants (active members, retirees, and vested former members) compared to what was projected by the actuarial assumptions.

### **2012 Funded Position**

The ratio of the Valuation Assets to the Actuarial Accrued Liability for Manistee Co in aggregate is 76%; last year's ratio was 77%.

## Comments on the Investment Markets

The dramatic price declines across the world financial markets in 2008 led to increased volatility unlike any experienced in decades. From 2009 to 2012, financial markets experienced price appreciation driven largely by government monetary policy and a rebound in economic activities; although at a slower pace than historic past recession recoveries. MERS' portfolio recovered with average annual investment returns of over 10%. While investors world-wide continue to focus on economic concerns and market volatility, equity markets have rebounded, particularly in the United States. The S&P has rebounded 109% from the March 9, 2009 bottom to December 31, 2012.

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 9.3% on December 31, 2012. MERS regularly monitors the investment return assumption to make sure it is reasonable compared to long term expectations.

The actuarial value of assets (funding value), used to determine both your funded status and your required employer contribution, is based on a 10-year smoothed value of assets. Only a portion (five-tenths, for 2008 - 2012) 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 actuarial funded percentage.

As of December 31, 2012 the actuarial value of assets is 114% of market value (down from 121% in 2011). 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, 2012 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 67% (instead of 76%); and ii) your total employer contribution requirement for the fiscal year starting January 1, 2014 would be \$ 1,601,748 (instead of \$ 1,364,148). If the investment markets do not fully make up for the 2008 losses, employer contribution requirements may rise. MERS' investment strategy employs diversification using various asset categories (stocks, bonds, and to a smaller extent real estate, commodities and private equity) to capture as much of the upside return as possible while managing acceptable risk. If contribution increases do become necessary, MERS would attempt to implement them incrementally.

Remember that only five-tenths of the 2008 market losses are reflected in this actuarial valuation report. As was true for past market downturns, MERS expects the markets to continue to rebound. By the time the 2008 market losses would be fully recognized (over the following 5 years), future market gains are expected to partly or fully offset 2008 market losses. This smoothing method is a powerful tool for reducing the volatility of your required employer contributions. However, if the financial markets do not rebound, the result would be gradual increases in your employer contribution requirement over the next 5 years (as described above).

## Employer Contribution Details For the Fiscal Year Beginning January 1, 2014

Table 1

Division	Amort. Period for Unfund. Liab. <sup>4,5</sup>	Employer Contributions <sup>1</sup>			Blended Employer Contribut. <sup>7</sup>	GASB ARC <sup>6</sup>	Member Contribut. Conversion Factor <sup>2</sup>
		Normal Cost	Unfunded Accrued Liability	Total Required Employer Contribut.			
<b>Percentage of Payroll</b>							
01 - General	26	9.83%	-822.68%	0.00%	13.79%		
02 - Sheriff/POAM	26	-	-	-			
04 - MCF	26	6.91%	3.63%	10.54%			
10 - 911 Employees	26	6.99%	-0.26%	6.73%			
11 - Exec Employees	26	-	-	-			
12 - Elected Officials	26	-	-	-			
13 - GEA & TPOAM	26	-	-	-			
14 - Court Employees	26	-	-	-			
20 - Sheriff/Adm	26	8.25%	16.80%	25.05%			
41 - Medical Facility A	26	9.78%	25.44%	35.22%			
HB - Sheriff POAM (POLC	26	5.65%	0.15%	5.80%	13.79%		
<b>Estimated Monthly Contribution<sup>3</sup></b>							
01 - General	26	\$ 92	\$ (7,669)	\$ 0			0.72%
02 - Sheriff/POAM	26	6,244	7,538	13,782			
04 - MCF	26	29,060	15,266	44,326			0.89%
10 - 911 Employees	26	2,705	(101)	2,604			0.88%
11 - Exec Employees	26	5,680	6,644	12,324			
12 - Elected Officials	26	540	2,498	3,038			
13 - GEA & TPOAM	26	4,351	4,680	9,031			
14 - Court Employees	26	10,342	9,613	19,955			
20 - Sheriff/Adm	26	1,632	3,323	4,955			0.80%
41 - Medical Facility A	26	975	2,536	3,511			0.78%
HB - Sheriff POAM (POLC	26	149	4	153			0.89%
<b>Total Municipality</b>		<b>\$ 61,770</b>	<b>\$ 44,332</b>	<b>\$ 113,679</b>			
<b>Estimated Annual Contribution<sup>3</sup></b>		<b>\$ 741,240</b>	<b>\$ 531,984</b>	<b>\$ 1,364,148</b>			

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

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

<sup>3</sup> 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](#).

<sup>4</sup> If projected assets exceed projected liabilities as of the beginning of the January 1, 2014 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.

<sup>5</sup> 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

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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.

- <sup>6</sup> 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.
- <sup>7</sup> 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: Open Division

	2012 Valuation	2011 Valuation
<b>Benefit Multiplier:</b>	2.00% Multiplier (no max)	Benefit B-2
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	8 years	8 years
<b>Early Retirement (Unreduced):</b>	-	-
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Member Contributions:</b>	0%	0%
<b>Act 88:</b>	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

#### 02 - Sheriff/POAM: Closed to new hires, linked to Division HB

	2012 Valuation	2011 Valuation
<b>Benefit Multiplier:</b>	2.50% Multiplier (80% max)	Benefit B-4 (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	8 years	8 years
<b>Early Retirement (Unreduced):</b>	50/25	50/25
<b>Early Retirement (Reduced):</b>	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>COLA for Future Retirees:</b>	2.50% (Non-Compound)	2.50% (Non-Compound)
<b>Member Contributions:</b>	7.54%	7.84%
<b>Act 88:</b>	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

#### 04 - MCF: Open Division

	2012 Valuation	2011 Valuation
<b>Benefit Multiplier:</b>	2.00% Multiplier (no max)	Benefit B-2
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	6 years	6 years
<b>Early Retirement (Unreduced):</b>	30 and Out	30 and Out
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Member Contributions:</b>	2.07%	1.79%
<b>Act 88:</b>	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

**Table 2 (continued)****10 - 911 Employees: Open Division**

	2012 Valuation	2011 Valuation
<b>Benefit Multiplier:</b>	2.50% Multiplier (80% max)	Benefit B-4 (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	8 years	8 years
<b>Early Retirement (Unreduced):</b>	-	-
<b>Early Retirement (Reduced):</b>	50/25 55/15	50/25 55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Member Contributions:</b>	2.52%	2.52%
<b>Act 88:</b>	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

**11 - Exec Employees: Closed to new hires, linked to Division HC**

	2012 Valuation	2011 Valuation
<b>Benefit Multiplier:</b>	2.50% Multiplier (80% max)	Benefit B-4 (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	8 years	8 years
<b>Early Retirement (Unreduced):</b>	55/20	55/20
<b>Early Retirement (Reduced):</b>	50/25 55/15	50/25 55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Member Contributions:</b>	2.44%	2.44%
<b>Act 88:</b>	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

**12 - Elected Officials: Closed to new hires, linked to Division HD**

	2012 Valuation	2011 Valuation
<b>Benefit Multiplier:</b>	2.50% Multiplier (80% max)	Benefit B-4 (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	8 years	8 years
<b>Early Retirement (Unreduced):</b>	55/20	55/20
<b>Early Retirement (Reduced):</b>	50/25 55/15	50/25 55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Member Contributions:</b>	4.53%	4.53%
<b>Act 88:</b>	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

**13 - GEA & TPOAM: Closed to new hires, linked to Division HA**

	2012 Valuation	2011 Valuation
<b>Benefit Multiplier:</b>	2.50% Multiplier (80% max)	Benefit B-4 (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	8 years	8 years
<b>Early Retirement (Unreduced):</b>	55/20	55/20
<b>Early Retirement (Reduced):</b>	50/25 55/15	50/25 55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Member Contributions:</b>	4.71%	3.56%
<b>Act 88:</b>	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

**Table 2 (continued)****14 - Court Employees: Closed to new hires, linked to Division HE**

	2012 Valuation	2011 Valuation
<b>Benefit Multiplier:</b>	2.50% Multiplier (80% max)	Benefit B-4 (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	8 years	8 years
<b>Early Retirement (Unreduced):</b>	55/20	55/20
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Member Contributions:</b>	3.28%	3.28%
<b>Act 88:</b>	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

**20 - Sheriff/Adm: Open Division**

	2012 Valuation	2011 Valuation
<b>Benefit Multiplier:</b>	2.50% Multiplier (80% max)	Benefit B-4 (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	8 years	8 years
<b>Early Retirement (Unreduced):</b>	50/25	50/25
<b>Early Retirement (Reduced):</b>	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Member Contributions:</b>	2.88%	2.88%
<b>Act 88:</b>	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

**41 - Medical Facility Administrator: Open Division**

	2012 Valuation	2011 Valuation
<b>Benefit Multiplier:</b>	2.00% Multiplier (no max)	Benefit B-2
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	6 years	6 years
<b>Early Retirement (Unreduced):</b>	50/30	50/30
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	3 years	3 years
<b>Member Contributions:</b>	0%	0%
<b>Act 88:</b>	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

**HB - Sheriff POAM (POLC) af 10/1/12: Open Division, linked to Division 02**

	2012 Valuation	2011 Valuation
<b>Benefit Multiplier:</b>	Hybrid Plan - 1.50% Multiplier	-
<b>Normal Retirement Age:</b>	60	-
<b>Vesting:</b>	6 years	-
<b>Early Retirement (Unreduced):</b>	55/25	-
<b>Early Retirement (Reduced):</b>	-	-
<b>Final Average Compensation:</b>	3 years	-
<b>Member Contributions:</b>	0%	-
<b>Act 88:</b>	Yes (Adopted 12/8/1970)	-

## Membership Summary

**Table 3**

Division	2012 Valuation		2011 Valuation		2012 Valuation		
	Number	Annual Payroll <sup>1</sup>	Number	Annual Payroll <sup>1</sup>	Average Age	Average Benefit Service <sup>2</sup>	Average Eligibility Service <sup>2</sup>
<b>01 - General</b>							
Active Members	1	\$ 11,187	1	\$ 8,520	54.2	0.3	0.3
Vested Former Members	4	26,335	4	26,335	57.3	11.7	14.0
Retirees and Beneficiaries	20	58,922	20	56,363	80.5		
<b>02 - Sheriff/POAM</b>							
Active Members	24	\$ 1,195,594	25	\$ 1,173,102	40.6	10.9	10.9
Vested Former Members	6	38,890	7	44,479	47.0	8.2	14.5
Retirees and Beneficiaries	16	198,277	15	191,313	69.7		
<b>04 - MCF</b>							
Active Members	150	\$ 5,046,655	164	\$ 5,512,443	45.1	10.0	10.1
Vested Former Members	33	146,035	31	147,259	48.3	9.0	11.0
Retirees and Beneficiaries	82	724,203	86	734,913	70.4		
<b>10 - 911 Employees</b>							
Active Members	11	\$ 464,434	11	\$ 463,095	46.2	14.7	14.9
Vested Former Members	3	9,510	3	9,510	53.7	5.1	11.9
Retirees and Beneficiaries	0	0	0	0	0.0		
<b>11 - Exec Employees</b>							
Active Members	17	\$ 795,876	18	\$ 806,819	45.3	9.3	11.4
Vested Former Members	3	44,414	2	11,963	43.3	11.5	13.5
Retirees and Beneficiaries	8	197,390	7	179,282	64.1		
<b>12 - Elected Officials</b>							
Active Members	1	\$ 101,700	2	\$ 158,524	51.8	21.0	21.0
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	3	100,829	2	63,281	63.0		
<b>13 - GEA &amp; TPOAM</b>							
Active Members	28	\$ 828,770	29	\$ 822,796	52.2	13.1	13.4
Vested Former Members	2	8,766	3	16,288	58.5	8.3	14.0
Retirees and Beneficiaries	11	140,432	10	138,940	68.6		
<b>14 - Court Employees</b>							
Active Members	36	\$ 1,526,060	36	\$ 1,524,043	50.7	10.9	14.4
Vested Former Members	4	68,991	5	77,810	52.8	14.7	15.5
Retirees and Beneficiaries	17	281,079	15	252,104	63.1		
<b>20 - Sheriff/Adm</b>							
Active Members	4	\$ 237,370	4	\$ 235,776	48.6	25.9	25.9
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	3	94,303	3	94,303	59.3		

**Table 3 (continued)**

Division	2012 Valuation		2011 Valuation		2012 Valuation		
	Number	Annual Payroll <sup>1</sup>	Number	Annual Payroll <sup>1</sup>	Average Age	Average Benefit Service <sup>2</sup>	Average Eligibility Service <sup>2</sup>
<b>41 - Medical Facility Adm</b>							
Active Members	1	\$ 119,622	1	\$ 108,352	63.8	7.4	7.4
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	1	88,963	1	88,963	69.0		
<b>HB - Sheriff POAM (POLC)</b>							
Active Members	1	\$ 31,595		\$	24.7	0.3	0.3
Vested Former Members	0	0			0.0	0.0	0.0
Retirees and Beneficiaries	0	0			0.0		
<b>Total Municipality</b>							
<b>Active Members</b>	<b>274</b>	<b>\$ 10,358,863</b>	<b>291</b>	<b>\$ 10,813,470</b>	<b>46.3</b>	<b>10.9</b>	<b>11.5</b>
<b>Vested Former Members</b>	<b>55</b>	<b>342,941</b>	<b>55</b>	<b>333,644</b>	<b>49.5</b>	<b>9.4</b>	<b>12.2</b>
<b>Retirees and Beneficiaries</b>	<b>161</b>	<b>1,884,398</b>	<b>159</b>	<b>1,799,462</b>	<b>70.0</b>		
<b>Total Participants</b>	<b>490</b>		<b>505</b>				

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

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

## Reported Assets (Market Value)

**Table 4**

Division	2012 Valuation		2011 Valuation	
	Employer and Retiree <sup>1</sup>	Employee <sup>2</sup>	Employer and Retiree <sup>1</sup>	Employee <sup>2</sup>
01 - General	\$ 1,137,035	\$ 30,601	\$ 1,074,425	\$ 30,357
02 - Sheriff/POAM	2,601,501	543,269	2,351,612	393,383
04 - MCF	10,500,889	499,069	9,691,377	397,698
10 - 911 Employees	879,776	155,648	755,206	144,356
11 - Exec Employees	1,940,944	198,531	1,772,066	188,518
12 - Elected Officials	751,858	56,666	697,280	83,513
13 - GEA & TPOAM	1,991,439	307,233	1,794,120	279,671
14 - Court Employees	3,749,802	443,002	3,360,100	403,735
20 - Sheriff/Adm	1,329,270	96,006	1,231,478	89,045
41 - Medical Facility Administrator	337,360	0	354,266	0
HB - Sheriff POAM (POLC) af 10/1/12	517	474		
<b>Municipality Total</b>	<b>\$ 25,220,391</b>	<b>\$ 2,330,499</b>	<b>\$ 23,081,930</b>	<b>\$ 2,010,276</b>
<b>Combined Reserves</b>	<b>\$ 27,550,890</b>		<b>\$ 25,092,206</b>	

<sup>1</sup> Reserve for Employer Contributions and Benefit Payments

<sup>2</sup> Reserve for Employee Contributions

The December 31, 2012 valuation assets are equal to 1.143563 times the reported market value of assets (compared to 1.205815 as of December 31, 2011). 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					
2002	\$ 699,799	\$ 102,180	\$ 586,711	\$ (496,492)	\$ (4,858)	\$ 0	\$ 15,068,096
2003	799,940	109,985	1,292,220	(555,136)	(4,791)	0	16,710,314
2004	873,549	115,684	1,172,511	(600,645)	(4,504)	0	18,266,909
2005	929,721	124,285	1,209,641	(678,110)	(342)	0	19,852,104
2006	1,068,561	189,730	1,620,885	(851,189)	(7,341)	0	21,872,750
2007	1,123,584	224,450	1,771,002	(1,045,981)	(19,857)	9,097	23,935,045
2008	1,178,188	230,119	1,182,754	(1,182,275)	(6,298)	23,222	25,360,755
2009	1,256,070	247,418	1,402,588	(1,339,391)	(9,407)	52,425	26,970,458
2010	1,536,237	276,547	1,639,656	(1,561,388)	(25,378)	0	28,836,132
2011	1,329,259	298,496	1,572,288	(1,763,005)	(16,612)	0	30,256,558
2012	1,253,282	339,894	1,458,482	(1,835,042)	(23,342)	56,346	31,506,178

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, 2012

Table 6

Division	Actuarial Accrued Liability	Valuation Assets <sup>1</sup>	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
<b>01 - General</b>				
Active Members	\$ 26	\$ 725,741	2,791,311.5%	\$ (725,715)
Vested Former Members	235,512	235,512	100.0%	0
Retirees And Beneficiaries	374,012	374,012	100.0%	0
Pending Refunds	0	0	0.0%	0
<b>Total</b>	<b>\$ 609,550</b>	<b>\$ 1,335,265</b>	<b>219.1%</b>	<b>\$ (725,715)</b>
<b>02 - Sheriff/POAM</b>				
Active Members	\$ 2,821,590	\$ 1,330,772	47.2%	\$ 1,490,818
Vested Former Members	302,425	302,425	100.0%	0
Retirees And Beneficiaries	1,951,734	1,951,734	100.0%	0
Pending Refunds	11,312	11,312	100.0%	0
<b>Total</b>	<b>\$ 5,087,061</b>	<b>\$ 3,596,243</b>	<b>70.7%</b>	<b>\$ 1,490,818</b>
<b>04 - MCF</b>				
Active Members	\$ 8,525,471	\$ 5,420,546	63.6%	\$ 3,104,925
Vested Former Members	711,353	711,353	100.0%	0
Retirees And Beneficiaries	6,419,216	6,419,216	100.0%	0
Pending Refunds	28,030	28,030	100.0%	0
<b>Total</b>	<b>\$ 15,684,070</b>	<b>\$ 12,579,145</b>	<b>80.2%</b>	<b>\$ 3,104,925</b>
<b>10 - 911 Employees</b>				
Active Members	\$ 1,090,535	\$ 1,099,837	100.9%	\$ (9,302)
Vested Former Members	83,953	83,953	100.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	283	283	100.0%	0
<b>Total</b>	<b>\$ 1,174,771</b>	<b>\$ 1,184,073</b>	<b>100.8%</b>	<b>\$ (9,302)</b>
<b>11 - Exec Employees</b>				
Active Members	\$ 1,563,489	\$ 240,749	15.4%	\$ 1,322,740
Vested Former Members	238,973	238,973	100.0%	0
Retirees And Beneficiaries	1,951,604	1,951,604	100.0%	0
Pending Refunds	15,298	15,298	100.0%	0
<b>Total</b>	<b>\$ 3,769,364</b>	<b>\$ 2,446,624</b>	<b>64.9%</b>	<b>\$ 1,322,740</b>
<b>12 - Elected Officials</b>				
Active Members	\$ 442,018	\$ 56,666	12.8%	\$ 385,352
Vested Former Members	0	0	0.0%	0
Retirees And Beneficiaries	981,326	867,932	88.4%	113,394
Pending Refunds	0	0	0.0%	0
<b>Total</b>	<b>\$ 1,423,344</b>	<b>\$ 924,598</b>	<b>65.0%</b>	<b>\$ 498,746</b>

**Table 6 (continued)**

<b>Division</b>	<b>Actuarial Accrued Liability</b>	<b>Valuation Assets<sup>1</sup></b>	<b>Percent Funded</b>	<b>Unfunded (Overfunded) Accrued Liabilities</b>
<b>13 - GEA &amp; TPOAM</b>				
Active Members	\$ 2,215,677	\$ 1,272,898	57.4%	\$ 942,779
Vested Former Members	86,970	86,970	100.0%	0
Retirees And Beneficiaries	1,255,279	1,255,279	100.0%	0
Pending Refunds	<u>13,529</u>	<u>13,529</u>	100.0%	<u>0</u>
<b>Total</b>	<b>\$ 3,571,455</b>	<b>\$ 2,628,676</b>	<b>73.6%</b>	<b>\$ 942,779</b>
<b>14 - Court Employees</b>				
Active Members	\$ 3,368,589	\$ 1,438,846	42.7%	\$ 1,929,743
Vested Former Members	591,727	591,727	100.0%	0
Retirees And Beneficiaries	2,758,253	2,758,253	100.0%	0
Pending Refunds	<u>5,910</u>	<u>5,910</u>	100.0%	<u>0</u>
<b>Total</b>	<b>\$ 6,724,479</b>	<b>\$ 4,794,736</b>	<b>71.3%</b>	<b>\$ 1,929,743</b>
<b>20 - Sheriff/Adm</b>				
Active Members	\$ 1,286,925	\$ 608,626	47.3%	\$ 678,299
Vested Former Members	0	0	0.0%	0
Retirees And Beneficiaries	1,021,267	1,021,267	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
<b>Total</b>	<b>\$ 2,308,192</b>	<b>\$ 1,629,893</b>	<b>70.6%</b>	<b>\$ 678,299</b>
<b>41 - Medical Facility Administrator</b>				
Active Members	\$ 144,126	\$ 0	0.0%	\$ 144,126
Vested Former Members	0	0	0.0%	0
Retirees And Beneficiaries	759,957	385,792	50.8%	374,165
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
<b>Total</b>	<b>\$ 904,083</b>	<b>\$ 385,792</b>	<b>42.7%</b>	<b>\$ 518,291</b>
<b>HB - Sheriff POAM (POLC) af 10/1/12</b>				
Active Members	\$ 1,951	\$ 1,133	58.1%	\$ 818
Vested Former Members	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
<b>Total</b>	<b>\$ 1,951</b>	<b>\$ 1,133</b>	<b>58.1%</b>	<b>\$ 818</b>
<b>Total Municipality</b>				
Active Members	\$ 21,460,397	\$ 12,195,814	56.8%	\$ 9,264,583
Vested Former Members	2,250,913	2,250,913	100.0%	0
Retirees and Beneficiaries	17,472,648	16,985,089	97.2%	487,559
Pending Refunds	<u>74,362</u>	<u>74,362</u>	100.0%	<u>0</u>
<b>Total Participants</b>	<b>\$ 41,258,320</b>	<b>\$ 31,506,178</b>	<b>76.4%</b>	<b>\$ 9,752,142</b>
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)**

<b>Division</b>	<b>Actuarial Accrued Liability</b>	<b>Valuation Assets<sup>1</sup></b>	<b>Percent Funded</b>	<b>Unfunded (Overfunded) Accrued Liabilities</b>
Linked Divisions HB, 02				
Active Members	\$ 2,823,541	\$ 1,331,905	47.2%	\$ 1,491,636
Vested Former Members	302,425	302,425	100.0%	0
Retirees and Beneficiaries	1,951,734	1,951,734	100.0%	0
Pending Refunds	<u>11,312</u>	<u>11,312</u>	100.0%	<u>0</u>
Total	<b>\$ 5,089,012</b>	<b>\$ 3,597,376</b>	<b>70.7%</b>	<b>\$ 1,491,636</b>

<sup>1</sup> 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](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
1998	\$ 11,990,148	\$ 9,720,694	81%	\$ 2,269,454	41%
1999	13,140,093	11,423,376	87%	1,716,717	29%
2000	15,322,368	12,861,632	84%	2,460,736	40%
2001	17,304,572	14,180,756	82%	3,123,816	47%
2002	18,936,031	15,068,096	80%	3,867,935	54%
2003	20,679,808	16,710,314	81%	3,969,494	50%
2004	22,701,054	18,266,909	80%	4,434,145	53%
2005	24,390,467	19,852,104	81%	4,538,363	51%
2006	27,629,462	21,872,750	79%	5,756,712	63%
2007	31,065,279	23,935,045	77%	7,130,234	74%
2008	33,375,896	25,360,755	76%	8,015,141	79%
2009	34,479,961	26,970,458	78%	7,509,503	73%
2010	36,592,533	28,836,132	79%	7,756,401	72%
2011	39,228,060	30,256,558	77%	8,971,502	83%
2012	41,258,320	31,506,178	76%	9,752,142	94%

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, 2012 actuarial valuation. The entry age normal actuarial method was used to determine the disclosure entries.

### **GASB 25 Information (as of 12/31/2012)**

#### Actuarial Accrued Liability

Retirees and beneficiaries currently receiving benefits	\$ 17,472,648
Terminated employees (vested former members) not yet receiving benefits	2,250,913
Non-Vested terminated employees (pending refunds of accumulated member contributions)	74,362
Current employees -	
Accumulated employee contributions including allocated investment income	2,116,573
Employer financed	<u>19,343,824</u>
Total Actuarial Accrued Liability	\$ 41,258,320
Net Assets Available for Benefits at Actuarial Value	\$ <u>31,506,178</u>
(Market Value is 27,550,890)	
Unfunded (Overfunded) Actuarial Accrued Liability	\$ 9,752,142

### **GASB 27 Information (as of 12/31/2012)**

Fiscal Year Beginning	January 1, 2014
Annual Required Contribution (ARC)	\$ 1,364,148 <sup>1</sup>

<sup>1</sup> 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, 2014) 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 12/31/2012 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 - Underfunded or Overfunded Liabilities (26 years)	0.058519

### **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
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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.

### 01 - General

7/1/1996	Benefit B-2
9/1/1992	Temporary 6 Year Vesting (09/01/1992 - 11/03/1992)
1/1/1992	8 Year Vesting
4/15/1986	Day of work defined as 4 Hours a Day for all employees
1/1/1984	Member Contribution Rate 0.00%
12/8/1970	Covered by Act 88
12/1/1970	Benefit C-1 (Old)
12/1/1964	10 Year Vesting
12/1/1964	Benefit FAC-5 (5 Year Final Average Compensation)
12/1/1964	Benefit C (Old)
12/1/1964	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
12/1/1964	Fiscal Month - January

### 02 - Sheriff/POAM

1/1/2012	Member Contribution Rate 7.54%
1/1/2011	Member Contribution Rate 7.72%
1/1/2010	Member Contribution Rate 7.91%
1/1/2009	Member Contribution Rate 5.91%
1/1/2008	Member Contribution Rate 4.77%
1/1/2007	E2 2.5% COLA for future retirees (07/01/2006)
7/1/2006	Member Contribution Rate 4.82%
7/1/2001	Member Contribution Rate 1.33%
10/1/1999	Member Contribution Rate 1.24%
7/1/1999	Member Contribution Rate 0.00%
10/1/1998	Benefit B-4 (80% max)
10/1/1998	Member Contribution Rate 2.88%
1/1/1997	Temporary Benefit B-4 (80% max) (01/01/1997 - 04/03/1997)
1/1/1995	8 Year Vesting
1/1/1995	Benefit B-2
1/1/1990	Blanket Resolution (All Service)
1/1/1988	Benefit C-2/Base C-1 (Old)
1/1/1988	Benefit F50 (With 25 Years of Service)
4/15/1986	Day of work defined as 4 Hours a Day for all employees
1/1/1984	Member Contribution Rate 0.00%
12/8/1970	Covered by Act 88
12/1/1970	Benefit C-1 (Old)
12/1/1964	10 Year Vesting
12/1/1964	Benefit FAC-5 (5 Year Final Average Compensation)
12/1/1964	Benefit C (Old)
12/1/1964	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
12/1/1964	Fiscal Month - January

## Benefit Provision History

### 04 - MCF

1/1/2012	Member Contribution Rate 2.07%
6/1/2011	Member Contribution Rate 1.79%
4/1/2006	Member Contribution Rate 1.09%
2/1/2006	Benefit B-2
1/1/2001	30 Years & Out
1/1/2001	6 Year Vesting
1/1/2001	Benefit B-1
4/1/1986	Member Contribution Rate 0.00%
12/8/1970	Covered by Act 88
12/1/1970	Benefit C-1 (Old)
12/1/1964	10 Year Vesting
12/1/1964	Benefit FAC-5 (5 Year Final Average Compensation)
12/1/1964	Benefit C (Old)
12/1/1964	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
12/1/1964	Fiscal Month - January

### 10 - 911 Employees

7/1/2000	Benefit B-4 (80% max)
7/1/2000	Member Contribution Rate 2.52%
9/1/1997	Benefit B-2
1/1/1992	8 Year Vesting
4/15/1986	Day of work defined as 4 Hours a Day for all employees
1/1/1984	Member Contribution Rate 0.00%
12/8/1970	Covered by Act 88
12/1/1964	10 Year Vesting
12/1/1964	Benefit FAC-5 (5 Year Final Average Compensation)
12/1/1964	Benefit C-1 (Old)
12/1/1964	Fiscal Month - January

### 11 - Exec Employees

10/1/1998	8 Year Vesting
10/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
10/1/1998	Benefit B-4 (80% max)
10/1/1998	Member Contribution Rate 2.44%
10/1/1998	Benefit F55 (With 20 Years of Service)
12/8/1970	Covered by Act 88
12/1/1964	Fiscal Month - January

### 12 - Elected Officials

10/1/1998	8 Year Vesting
10/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
10/1/1998	Benefit B-4 (80% max)
10/1/1998	Member Contribution Rate 4.53%
10/1/1998	Benefit F55 (With 20 Years of Service)

## Benefit Provision History

### 12 - Elected Officials

12/8/1970 Covered by Act 88  
12/1/1964 Fiscal Month - January

### 13 - GEA & TPOAM

1/1/2012 Member Contribution Rate 4.71%  
7/1/1999 8 Year Vesting  
7/1/1999 Benefit FAC-5 (5 Year Final Average Compensation)  
7/1/1999 Benefit B-4 (80% max)  
7/1/1999 Member Contribution Rate 3.56%  
7/1/1999 Benefit F55 (With 20 Years of Service)  
12/8/1970 Covered by Act 88  
12/1/1964 Fiscal Month - January

### 14 - Court Employees

7/1/2000 Benefit B-4 (80% max)  
7/1/2000 Member Contribution Rate 3.28%  
7/1/2000 Benefit F55 (With 20 Years of Service)  
7/1/2000 8 Year Vesting  
7/1/2000 Benefit FAC-5 (5 Year Final Average Compensation)  
12/8/1970 Covered by Act 88  
12/1/1964 Fiscal Month - January

### 20 - Sheriff/Adm

1/1/1999 8 Year Vesting  
1/1/1999 Benefit FAC-5 (5 Year Final Average Compensation)  
1/1/1999 Benefit B-4 (80% max)  
1/1/1999 Member Contribution Rate 2.88%  
1/1/1999 Benefit F50 (With 25 Years of Service)  
12/8/1970 Covered by Act 88  
12/1/1964 Fiscal Month - January

### 41 - Medical Facility Administrator

1/1/1998 6 Year Vesting  
1/1/1998 Benefit FAC-3 (3 Year Final Average Compensation)  
1/1/1998 Benefit B-2  
1/1/1998 Member Contribution Rate 0.00%  
1/1/1998 Benefit F50 (With 30 Years of Service)  
12/8/1970 Covered by Act 88  
12/1/1964 Fiscal Month - January

### HB - Sheriff POAM (POLC) af 10/1/12

10/1/2012 6 Year Vesting  
10/1/2012 Benefit FAC-3 (3 Year Final Average Compensation)  
10/1/2012 Loans

**Benefit Provision History**

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**HB - Sheriff POAM (POLC) af 10/1/12**

10/1/2012	Pickup
10/1/2012	Rollovers
10/1/2012	1.5% Multiplier
10/1/2012	DOW is 10, 4-hour days in a calendar month
10/1/2012	Benefit F55 (With 25 Years of Service)
12/8/1970	Covered by ACT 88
12/1/1964	Fiscal Month - January

## Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method

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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	1.00%

### Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
All Divisions	110%

### Miscellaneous and Technical Assumptions

Loads – None.