



MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2012
PITTSFIELD CHTR TWP (8110)

Spring, 2013

Pittsfield Chtr Twp

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 Pittsfield Chtr Twp (8110) 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. Pittsfield Chtr Twp 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.

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 - AFSCME	4.17%	4.51%	\$ 1,838	\$ 2,266
02 - Pol Ptrl	11.59%	11.47%	18,434	17,779
05 - Fire Fght	7.96%	7.84%	10,713	10,316
10 - Elctd Ofc	19.87%	18.10%	3,883	3,538
11 - Dsptrchr	1.73%	2.54%	575	836
14 - Adm/NonUnion	5.52%	5.35%	8,778	8,660
15 - Utilities Dr	-	-	295	227
20 - Pol Cmnd	34.63%	33.90%	20,608	18,264
Municipality Total			\$ 65,124	\$ 61,886

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 Pittsfield Chtr Twp in aggregate is 77%; last year's ratio was 76%.

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 77%); and ii) your total employer contribution requirement for the fiscal year starting January 1, 2014 would be \$ 934,536 (instead of \$ 781,488). 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. ^{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							
01 - AFSCME	26	6.43%	-2.26%	4.17%			
02 - Pol Ptrl	26	7.57%	4.02%	11.59%			
05 - Fire Fght	26	6.26%	1.70%	7.96%			
10 - Elctd Ofc	26	8.15%	11.72%	19.87%			
11 - Dsptrchr	26	4.20%	-2.47%	1.73%			
14 - Adm/NonUnion	26	5.72%	-0.20%	5.52%			
15 - Utilities Dr	22	-	-	-			
20 - Pol Cmnd	26	7.28%	27.35%	34.63%			
Estimated Monthly Contribution³							
01 - AFSCME	26	\$ 2,834	\$ (996)	\$ 1,838			0.84%
02 - Pol Ptrl	26	12,040	6,394	18,434			0.86%
05 - Fire Fght	26	8,425	2,288	10,713			0.88%
10 - Elctd Ofc	26	1,593	2,290	3,883			0.86%
11 - Dsptrchr	26	1,396	(821)	575			0.89%
14 - Adm/NonUnion	26	9,096	(318)	8,778			0.84%
15 - Utilities Dr	22	0	295	295		4,632	
20 - Pol Cmnd	26	4,332	16,276	20,608			0.81%
Total Municipality		\$ 39,716	\$ 25,408	\$ 65,124			
Estimated Annual Contribution³							
		\$ 476,592	\$ 304,896	\$ 781,488			

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, 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.

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.

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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 - AFSCME: Open Division

	2012 Valuation	2011 Valuation
Benefit Multiplier:	2.00% Multiplier (no max)	Benefit B-2
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:	3 years	3 years
Member Contributions:	3%	4%
Act 88:	Yes (Adopted 11/10/2003)	Yes (Adopted 11/10/2003)

02 - Pol Ptrl: Open Division

	2012 Valuation	2011 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	Benefit B-3 (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:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	6.17%	6.17%
Act 88:	Yes (Adopted 11/10/2003)	Yes (Adopted 11/10/2003)

05 - Fire Fght: Open Division

	2012 Valuation	2011 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	Benefit B-3 (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/15	55/15
Early Retirement (Reduced):	50/25	50/25
Final Average Compensation:	3 years	3 years
Member Contributions:	5%	5%
Act 88:	Yes (Adopted 11/10/2003)	Yes (Adopted 11/10/2003)

Table 2 (continued)**10 - Elctd Ofc: Open Division**

	2012 Valuation	2011 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	Benefit B-3 (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	-	-
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)
Member Contributions:	6.93%	6.93%
Act 88:	Yes (Adopted 11/10/2003)	Yes (Adopted 11/10/2003)

11 - Dsptrchr: Open Division

	2012 Valuation	2011 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	Benefit B-3 (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:	3 years	3 years
Member Contributions:	5%	5%
Act 88:	Yes (Adopted 11/10/2003)	Yes (Adopted 11/10/2003)

14 - Adm/NonUnion: Open Division

	2012 Valuation	2011 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	Benefit B-3 (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:	3 years	3 years
Member Contributions:	5%	5%
Act 88:	Yes (Adopted 11/10/2003)	Yes (Adopted 11/10/2003)

Table 2 (continued)**15 - Utilities Dr: Closed to new hires**

	2012 Valuation	2011 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	Benefit B-3 (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:	3 years	3 years
Member Contributions:	6%	6%
Act 88:	Yes (Adopted 10/1/2007)	Yes (Adopted 10/1/2007)

20 - Pol Cmnd: Open Division

	2012 Valuation	2011 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	Benefit B-4 (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:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	9.06%	9.06%
Act 88:	Yes (Adopted 11/10/2003)	Yes (Adopted 11/10/2003)

Membership Summary

Table 3

Division	2012 Valuation		2011 Valuation		2012 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
01 - AFSCME							
Active Members	15	\$ 528,807	17	\$ 602,922	46.6	6.3	7.2
Vested Former Members	7	66,331	6	56,183	50.0	12.9	16.2
Retirees and Beneficiaries	5	26,413	4	18,704	67.0		
02 - Pol Ptrl							
Active Members	31	\$ 1,908,525	30	\$ 1,860,017	36.0	9.6	9.6
Vested Former Members	3	16,540	4	36,816	40.3	6.5	8.9
Retirees and Beneficiaries	4	79,716	3	59,326	54.3		
05 - Fire Fght							
Active Members	23	\$ 1,614,967	23	\$ 1,579,022	38.0	9.3	9.8
Vested Former Members	2	75,726	2	75,726	52.0	25.6	25.6
Retirees and Beneficiaries	1	25,042	1	25,042	58.0		
10 - Elctd Ofc							
Active Members	3	\$ 234,513	3	\$ 234,513	58.4	4.1	10.8
Vested Former Members	1	14,444	1	14,444	52.0	8.0	8.0
Retirees and Beneficiaries	4	66,787	4	65,914	76.8		
11 - Dsptchr							
Active Members	9	\$ 398,795	9	\$ 395,048	38.2	9.8	9.8
Vested Former Members	4	18,922	4	18,922	34.8	5.5	11.3
Retirees and Beneficiaries	0	0	0	0	0.0		
14 - Adm/NonUnion							
Active Members	34	\$ 1,908,244	33	\$ 1,942,390	47.6	10.1	11.5
Vested Former Members	7	109,943	6	98,649	52.3	11.2	20.3
Retirees and Beneficiaries	5	88,548	3	27,695	66.4		
15 - Utilities Dr							
Active Members	0	\$ 0	0	\$ 0	0.0	0.0	0.0
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	1	19,167	1	19,167	56.0		
20 - Pol Cmnd							
Active Members	9	\$ 714,115	8	\$ 646,496	43.0	16.3	17.6
Vested Former Members	2	53,011	1	23,169	46.5	16.9	16.9
Retirees and Beneficiaries	8	326,646	8	319,486	57.4		
Total Municipality							
Active Members	124	\$ 7,307,966	123	\$ 7,260,408	42.0	9.7	10.5
Vested Former Members	26	354,917	24	323,909	47.1	11.7	16.2
Retirees and Beneficiaries	28	632,319	24	535,334	63.0		
Total Participants	178		171				

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	2012 Valuation		2011 Valuation	
	Employer and Retiree ¹	Employee ²	Employer and Retiree ¹	Employee ²
01 - AFSCME	\$ 719,727	\$ 299,821	\$ 605,155	\$ 339,802
02 - Pol Ptrl	2,356,958	1,047,378	1,984,992	1,043,823
05 - Fire Fght	1,742,107	725,192	1,420,651	643,549
10 - Elctd Ofc	224,145	126,792	217,136	110,386
11 - Dsptrchr	279,673	255,304	220,525	228,652
14 - Adm/NonUnion	2,955,445	1,255,766	2,380,070	1,256,213
15 - Utilities Dr	156,958	0	159,721	0
20 - Pol Cmnd	2,762,993	810,365	2,397,286	662,066
Municipality Total	\$ 11,198,006	\$ 4,520,618	\$ 9,385,536	\$ 4,284,491
Combined Reserves	\$ 15,718,624		\$ 13,670,027	

¹ Reserve for Employer Contributions and Benefit Payments

² 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	\$ 246,282	\$ 256,435	\$ 248,166	\$ (68,650)	\$ (32,466)	\$ 0	\$ 4,826,738
2003	285,559	293,987	512,225	(80,032)	(12,091)	1	5,826,387
2004	298,754	305,396	445,275	(93,853)	(31,493)	0	6,750,466
2005	357,073	336,650	473,095	(146,120)	(15,748)	0	7,755,416
2006	416,355	353,345	654,031	(169,433)	(29,878)	36,086	9,015,922
2007	472,566	359,907	733,266	(206,619)	(96,078)	(1)	10,278,963
2008	510,445	367,989	580,155	(199,071)	(88,761)	65,728	11,515,448
2009	503,828	365,468	803,796	(310,482)	(84,863)	34,825	12,828,020
2010	742,471	432,920	1,032,060	(448,528)	(69,956)	312,836	14,829,823
2011	784,130	413,860	972,208	(482,536)	(39,475)	5,514	16,483,524
2012	751,402	415,425	929,886	(580,364)	(51,588)	26,952	17,975,237

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 ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
01 - AFSCME				
Active Members	\$ 412,636	\$ 516,692	125.2%	\$ (104,056)
Vested Former Members	405,195	405,195	100.0%	0
Retirees And Beneficiaries	217,205	217,205	100.0%	0
Pending Refunds	<u>26,825</u>	<u>26,825</u>	100.0%	<u>0</u>
Total	\$ 1,061,861	\$ 1,165,917	109.8%	\$ (104,056)
02 - Pol Ptrl				
Active Members	\$ 3,921,932	\$ 2,611,300	66.6%	\$ 1,310,632
Vested Former Members	149,397	149,397	100.0%	0
Retirees And Beneficiaries	1,130,470	1,130,470	100.0%	0
Pending Refunds	<u>1,906</u>	<u>1,906</u>	100.0%	<u>0</u>
Total	\$ 5,203,705	\$ 3,893,073	74.8%	\$ 1,310,632
05 - Fire Fght				
Active Members	\$ 2,334,748	\$ 1,867,568	80.0%	\$ 467,180
Vested Former Members	656,976	656,976	100.0%	0
Retirees And Beneficiaries	294,839	294,839	100.0%	0
Pending Refunds	<u>2,129</u>	<u>2,129</u>	100.0%	<u>0</u>
Total	\$ 3,288,692	\$ 2,821,512	85.8%	\$ 467,180
10 - Elctd Ofc				
Active Members	\$ 166,066	\$ 66,480	40.0%	\$ 99,586
Vested Former Members	94,263	39,325	41.7%	54,938
Retirees And Beneficiaries	586,402	274,527	46.8%	311,875
Pending Refunds	<u>20,987</u>	<u>20,987</u>	100.0%	<u>0</u>
Total	\$ 867,718	\$ 401,319	46.2%	\$ 466,399
11 - Dsptchr				
Active Members	\$ 469,194	\$ 553,119	117.9%	\$ (83,925)
Vested Former Members	43,017	43,017	100.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	<u>15,644</u>	<u>15,644</u>	100.0%	<u>0</u>
Total	\$ 527,855	\$ 611,780	115.9%	\$ (83,925)
14 - Adm/NonUnion				
Active Members	\$ 3,072,023	\$ 3,109,317	101.2%	\$ (37,294)
Vested Former Members	719,572	719,572	100.0%	0
Retirees And Beneficiaries	875,515	875,515	100.0%	0
Pending Refunds	<u>111,381</u>	<u>111,381</u>	100.0%	<u>0</u>
Total	\$ 4,778,491	\$ 4,815,785	100.8%	\$ (37,294)

Table 6 (continued)

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
15 - Utilities Dr				
Active Members	\$ 0	\$ 0	0.0%	\$ 0
Vested Former Members	0	0	0.0%	0
Retirees And Beneficiaries	232,326	179,491	77.3%	52,835
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 232,326	\$ 179,491	77.3%	\$ 52,835
20 - Pol Cmnd				
Active Members	\$ 2,822,181	\$ 720,508	25.5%	\$ 2,101,673
Vested Former Members	249,223	89,857	36.1%	159,366
Retirees And Beneficiaries	4,352,168	3,275,995	75.3%	1,076,173
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 7,423,572	\$ 4,086,360	55.0%	\$ 3,337,212
Total Municipality				
Active Members	\$ 13,198,780	\$ 9,444,984	71.6%	\$ 3,753,796
Vested Former Members	2,317,643	2,103,339	90.8%	214,304
Retirees and Beneficiaries	7,688,925	6,248,042	81.3%	1,440,883
Pending Refunds	<u>178,872</u>	<u>178,872</u>	100.0%	<u>0</u>
Total Participants	\$ 23,384,220	\$ 17,975,237	76.9%	\$ 5,408,983

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
1998	\$ 3,778,507	\$ 2,307,455	61%	\$ 1,471,052	51%
1999	4,202,782	2,887,981	69%	1,314,801	39%
2000	5,038,816	3,462,677	69%	1,576,139	43%
2001	5,900,412	4,176,971	71%	1,723,441	42%
2002	6,638,884	4,826,738	73%	1,812,146	40%
2003	8,233,918	5,826,387	71%	2,407,531	46%
2004	9,711,666	6,750,466	70%	2,961,200	55%
2005	10,943,440	7,755,416	71%	3,188,024	55%
2006	12,681,900	9,015,922	71%	3,665,978	61%
2007	14,059,796	10,278,963	73%	3,780,833	60%
2008	15,441,447	11,515,448	75%	3,925,999	63%
2009	16,665,216	12,828,020	77%	3,837,196	57%
2010	18,841,079	14,829,823	79%	4,011,256	56%
2011	21,644,476	16,483,524	76%	5,160,952	71%
2012	23,384,220	17,975,237	77%	5,408,983	74%

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	\$	7,688,925
Terminated employees (vested former members) not yet receiving benefits		2,317,643
Non-Vested terminated employees (pending refunds of accumulated member contributions)		178,872
Current employees -		
Accumulated employee contributions including allocated investment income		3,686,314
Employer financed		<u>9,512,466</u>
Total Actuarial Accrued Liability	\$	23,384,220
Net Assets Available for Benefits at Actuarial Value	\$	<u>17,975,237</u>
(Market Value is 15,718,624)		
Unfunded (Overfunded) Actuarial Accrued Liability	\$	5,408,983

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

Fiscal Year Beginning		January 1, 2014
Annual Required Contribution (ARC)	\$	782,580 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, 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 - AFSCME

1/1/2012	Member Contribution Rate 3.00%
1/1/2011	Member Contribution Rate 4.00%
1/1/2004	Benefit B-2
11/10/2003	Covered by Act 88
7/11/1995	Blanket Resolution (All Service)
8/1/1991	10 Year Vesting
8/1/1991	Benefit FAC-3 (3 Year Final Average Compensation)
8/1/1991	Benefit C-2/Base B-1
8/1/1991	Member Contribution Rate 5.00%
8/1/1991	Fiscal Month - January

02 - Pol Ptrl

1/1/2010	E2 2.5% COLA for future retirees (12/01/2009)
12/1/2009	Member Contribution Rate 6.17%
12/1/2009	Benefit F50 (With 25 Years of Service)
12/1/2006	Benefit B-3 (80% max)
8/1/2006	Temporary Benefit B-3 (80% max) (08/01/2006 - 09/30/2006)
8/1/2006	E2 2.5% Window COLA for future retirees (08/01/2006) to (09/30/2006)
11/10/2003	Covered by Act 88
1/1/2001	Benefit B-2
7/11/1995	Blanket Resolution (All Service)
8/1/1992	10 Year Vesting
8/1/1992	Benefit FAC-3 (3 Year Final Average Compensation)
8/1/1992	Benefit C-2/Base B-1
8/1/1992	Member Contribution Rate 5.00%
8/1/1992	Benefit F55 (With 15 Years of Service)
8/1/1991	Fiscal Month - January

05 - Fire Fght

1/1/2007	Benefit B-3 (80% max)
11/10/2003	Covered by Act 88
3/1/2003	Benefit B-2
7/11/1995	Blanket Resolution (All Service)
8/1/1992	10 Year Vesting
8/1/1992	Benefit FAC-3 (3 Year Final Average Compensation)
8/1/1992	Benefit C-2/Base B-1
8/1/1992	Member Contribution Rate 5.00%
8/1/1992	Benefit F55 (With 15 Years of Service)
8/1/1991	Fiscal Month - January

Benefit Provision History

10 - Elctd Ofc

1/1/2005	E2 2.5% COLA for future retirees (11/01/2004)
11/10/2003	Covered by Act 88
5/1/1996	Benefit B-3 (80% max)
5/1/1996	Member Contribution Rate 6.93%
4/30/1996	Member Contribution Rate 0.00%
4/1/1996	Benefit B-2 (80% max)
7/11/1995	Blanket Resolution (All Service)
8/1/1991	8 Year Vesting
8/1/1991	Benefit FAC-3 (3 Year Final Average Compensation)
8/1/1991	Benefit B-2
8/1/1991	Member Contribution Rate 5.00%
8/1/1991	Fiscal Month - January

11 - Dsptrchr

12/1/2009	Benefit B-3 (80% max)
11/10/2003	Covered by Act 88
1/1/2003	Benefit B-2
7/11/1995	Blanket Resolution (All Service)
10/1/1992	10 Year Vesting
10/1/1992	Benefit FAC-3 (3 Year Final Average Compensation)
10/1/1992	Benefit C-2/Base B-1
10/1/1992	Member Contribution Rate 5.00%
8/1/1991	Fiscal Month - January

14 - Adm/NonUnion

8/1/2008	Member Contribution Rate 5.00%
8/1/2005	Temporary 25 Years & Out (08/01/2005 - 11/03/2005)
1/1/2005	Benefit B-3 (80% max)
1/1/2005	Member Contribution Rate 6.00%
11/10/2003	Covered by Act 88
1/1/2000	10 Year Vesting
1/1/2000	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/2000	Benefit B-2
1/1/2000	Member Contribution Rate 5.00%
7/11/1995	Blanket Resolution (All Service)
8/1/1991	Fiscal Month - January

15 - Utilities Dr

10/1/2007	10 Year Vesting
10/1/2007	Benefit FAC-3 (3 Year Final Average Compensation)
10/1/2007	Blanket Resolution (All Service)
10/1/2007	Covered by Act 88
10/1/2007	Benefit B-3 (80% max)
10/1/2007	Member Contribution Rate 6.00%

Benefit Provision History

15 - Utilities Dr

10/1/2007	Benefit F55 (With 25 Years of Service)
8/1/1991	Fiscal Month - January

20 - Pol Cmnd

10/1/2009	Temporary 20 Years & Out (10/01/2009 - 01/31/2010)
2/1/2007	Member Contribution Rate 9.06%
7/1/2005	Member Contribution Rate 10.06%
11/10/2003	Covered by Act 88
1/1/2001	E2 2.5% COLA for future retirees (01/01/2001)
1/1/1999	Benefit B-4 (80% max)
1/1/1999	Member Contribution Rate 11.06%
1/1/1999	Benefit F50 (With 25 Years of Service)
7/11/1995	Blanket Resolution (All Service)
6/1/1992	Benefit FAC-3 (3 Year Final Average Compensation)
6/1/1992	Benefit C-2/Base B-1
6/1/1992	Member Contribution Rate 5.00%
6/1/1992	Benefit F55 (With 15 Years of Service)
6/1/1992	10 Year Vesting
8/1/1991	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	0.00%

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