



MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2011
MUSKEGON, CITY OF (6116)

Fall, 2012

Muskegon, City of

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, 2011. The report includes the determination of liabilities and contribution rates resulting from the participation of Muskegon, City of (6116) 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. Muskegon, City of 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, 2011 annual actuarial valuation is to (i) measure funding progress, (ii) establish contribution requirements for the fiscal year beginning July 1, 2013, 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, 2011 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 actuarial 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: <http://www.mersofmich.com/Appendix>. 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

TABLE OF CONTENTS

	Page
Executive Summary	5
Employer Contribution Details Table 1	8
Benefit Provisions Table 2	10
Membership Summary Table 3	13
Reported Assets (Market Value) Table 4	15
Flow of Valuation Assets Table 5	16
Actuarial Accrued Liabilities and Valuation Assets Table 6	17
Actuarial Accrued Liabilities - Comparative Schedule Table 7	19
GASB 25 and GASB 27 Information	20
Benefit Provision History	22
Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method	26

Executive Summary for Muskegon, City of (6116)

Required Employer Contributions

The computed minimum required employer contributions to the retirement system for the fiscal years beginning July 1, 2013 (2011 Valuation) and July 1, 2012 (2010 Valuation) are as follows:

Division	Percentage of Payroll		Monthly \$ Based on Valuation Payroll	
	2011 Valuation	2010 Valuation	2011 Valuation	2010 Valuation
01 - NonUnion Gen	-	-	\$ 12,476	\$ 8,311
02 - NonUn Police	-	-	550	157
10 - General Ret	-	-	1,339	7,856
11 - Clerical	-	-	2,624	1,459
12 - DPW 517M	-	-	9,321	4,059
20 - PLC/Fire Ret	-	-	21,319	44,723
21 - PolicePatrol	-	-	15,663	11,585
22 - Police Comm	9.86%	6.37%	8,804	5,602
50 - FF Local 370	-	-	10,235	618
Municipality Total			\$ 82,331	\$ 84,370

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 4%-8% annually, until full funding is reached. The required employer contribution for such a closed division typically reaches its highest level about 11-16 years after the division becomes closed. Prospective benefit changes as well as Retirement System gains and losses will also affect future contribution rates.

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 2011 valuation reflects changes in actuarial assumptions and/or methods (see the [Appendix](#)). For benefit provision changes see Table 2.

2011 System Experience

Based on the smoothed Actuarial Value of Assets (Valuation Assets), the recognized rate of investment return for MERS overall was 5.2% (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.

2011 Funded Position

The ratio of the Valuation Assets to the Actuarial Accrued Liability for Muskegon, City of in aggregate is 97%; last year's ratio was 100%.

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. The following three years, 2009 - 2011, have been less volatile and MERS' portfolio recovered with average annual investment returns of over 10%. While economic worries continue to haunt investors world-wide and market volatility continues, equity markets have rebounded, particularly in the United States. At this time, MERS maintains the 8% annual return assumption on investments in the belief that over the long term this is achievable. However, MERS continuously 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 (four-tenths, for 2008 - 2011) 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, 2011 the actuarial value of assets is 121% of market value (up from 116% in 2010). 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, 2011 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 80% (instead of 97%); and ii) your total employer contribution requirement for the fiscal year starting July 1, 2013 would be \$ 2,359,896 (instead of \$ 987,972). 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 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 work to impose them incrementally.

Remember that only four-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 6 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 6 years (as described above).

Employer Contribution Details for Muskegon, City of (6116) For the Fiscal Year Beginning July 1, 2013

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 - NonUnion Gen	17	-	-	-			
02 - NonUn Police	17	-	-	-			
10 - General Ret	17	-	-	-			
11 - Clerical	17	-	-	-			
12 - DPW 517M	17	-	-	-			
20 - PLC/Fire Ret	17	-	-	-			
21 - PolicePatrol	17	-	-	-			
22 - Police Comm	20	9.22%	0.64%	9.86%			
50 - FF Local 370	17	-	-	-			
Estimated Monthly Contribution³							
01 - NonUnion Gen	17	\$ 8,997	\$ 3,479	\$ 12,476		\$ 153,408	
02 - NonUn Police	17	0	550	550		7,176	
10 - General Ret	17	0	1,339	1,339		17,496	
11 - Clerical	17	3,242	(618)	2,624			
12 - DPW 517M	17	9,102	219	9,321		112,080	
20 - PLC/Fire Ret	17	0	21,319	21,319		278,424	
21 - PolicePatrol	17	23,222	(7,559)	15,663			
22 - Police Comm	20	8,233	571	8,804			0.68%
50 - FF Local 370	17	13,007	(2,772)	10,235			
Total Municipality		\$ 65,803	\$ 16,528	\$ 82,331			
Estimated Annual Contribution³		\$ 789,636	\$ 198,336	\$ 987,972			

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 July 1, 2013 fiscal year, the negative unfunded accrued liability is amortized (spread) over 10 years. This amortization is used to reduce the employer contribution rate.

⁵ If the division is closed to new hires, with new hires not covered by MERS defined benefit or hybrid provisions, the amortization period will decrease by 2 years each valuation year, until a minimum 5 year amortization is attained. This will result in amortization payments that increase faster than 4.5% each year. If the division is closed to new hires, with new hires (and transfers) covered by MERS defined benefit or hybrid provisions, the standard open division amortization period will apply.

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

⁷ For linked divisions, the employer will be invoiced the Total Required Employer Contribution rate shown above for each linked division (a contribution rate for the open division; a contribution dollar for the closed-but-linked division), unless the employer elects to contribute the Blended Employer Contribution rate shown above, by contacting MERS at 800-767-2308.

Please see the Comments on the Investment Markets.

Benefit Provisions for Muskegon, City of (6116)

Table 2

01 - NonUnion Gen: Closed to new hires

	2011 Valuation	2010 Valuation
Benefit Multiplier:	Benefit B-3 (80% max)	Benefit B-3 (80% max)
Normal Retirement Age:	60	60
Vesting:	5 years	5 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:	5%	5%
RS50% Percentage:	50%	50%
D-2:	D-2 (25%)	D-2 (25%)
DC Plan for New Hires:	2/1/2006	2/1/2006
	Annuity Withdrawal (Valuation Interest Rate)	Annuity Withdrawal (Valuation Interest Rate)
Act 88:	Yes	Yes

02 - NonUn Police: Closed to new hires

	2011 Valuation	2010 Valuation
Benefit Multiplier:	3.0% Multiplier (80% max)	2.75% Multiplier (80% max)
Normal Retirement Age:	55	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	53/25	53/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
Member Contributions:	6%	6%
RS50% Percentage:	50%	50%
D-2:	D-2 (25%)	D-2 (25%)
DC Plan for New Hires:	2/1/2006	2/1/2006
	Annuity Withdrawal (Valuation Interest Rate)	Annuity Withdrawal (Valuation Interest Rate)
Act 88:	Yes	Yes

10 - General Ret: Closed to new hires

	2011 Valuation	2010 Valuation
Benefit Multiplier:	Old Plan Benefits	Old Plan Benefits
Normal Retirement Age:	-	-
Vesting:	-	-
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	-	-
Member Contributions:	-	-
Act 88:	Yes	Yes

Table 2**11 - Clerical: Closed to new hires**

	2011 Valuation	2010 Valuation
Benefit Multiplier:	Benefit B-3 (80% max)	Benefit B-3 (80% max)
Normal Retirement Age:	60	60
Vesting:	5 years	5 years
Early Retirement (Unreduced):	55/30	55/30
Early Retirement (Reduced):	55/15	55/15
	50/25	50/25
Final Average Compensation:	3 years	3 years
Member Contributions:	5%	5%
RS50% Percentage:	50%	50%
D-2:	D-2 (25%)	D-2 (25%)
DC Plan for New Hires:	11/1/2006	11/1/2006
Act 88:	Yes	Yes

12 - DPW 517M: Closed to new hires

	2011 Valuation	2010 Valuation
Benefit Multiplier:	Benefit B-3 (80% max)	Benefit B-3 (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/30	55/30
Early Retirement (Reduced):	55/15	55/15
	50/25	50/25
Final Average Compensation:	3 years	3 years
Member Contributions:	5%	5%
RS50% Percentage:	50%	50%
D-2:	D-2 (25%)	D-2 (25%)
DC Plan for New Hires:	5/1/2007	5/1/2007
Act 88:	Yes	Yes

20 - PLC/Fire Ret: Closed to new hires

	2011 Valuation	2010 Valuation
Benefit Multiplier:	Old Plan Benefits	Old Plan Benefits
Normal Retirement Age:	-	-
Vesting:	-	-
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	-	-
Member Contributions:	-	-
Act 88:	Yes	Yes

Table 2**21 - PolicePatrol: Closed to new hires**

	2011 Valuation	2010 Valuation
Benefit Multiplier:	3.0% Multiplier (75% max)	3.0% Multiplier (75% max)
Normal Retirement Age:	55	55
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
Member Contributions:	6%	6%
RS50% Percentage:	50%	50%
D-2:	D-2 (25%)	D-2 (25%)
DC Plan for New Hires:	8/1/2006 Annuity Withdrawal (Valuation Interest Rate)	8/1/2006 Annuity Withdrawal (Valuation Interest Rate)
Act 88:	Yes	Yes

22 - Police Comm: Open Division

	2011 Valuation	2010 Valuation
Benefit Multiplier:	3.0% Multiplier (80% max)	3.0% Multiplier (80% max)
Normal Retirement Age:	55	55
Vesting:	10 years	10 years
Early Retirement (Unreduced):	53/25	53/25
Early Retirement (Reduced):	55/15	50/25
	50/25	55/15
Final Average Compensation:	3 years	3 years
Member Contributions:	6%	6%
RS50% Percentage:	50%	50%
D-2:	D-2 (25%)	D-2 (25%)
	Annuity Withdrawal (Valuation Interest Rate)	Annuity Withdrawal (Valuation Interest Rate)
Act 88:	Yes	Yes

50 - FF Local 370: Closed to new hires

	2011 Valuation	2010 Valuation
Benefit Multiplier:	2.75% Multiplier (85% max)	2.75% Multiplier (85% max)
Normal Retirement Age:	55	55
Vesting:	10 years	10 years
Early Retirement (Unreduced):	53/25	53/25
Early Retirement (Reduced):	55/15	50/25
	50/25	55/15
Final Average Compensation:	3 years	3 years
Member Contributions:	6%	6%
RS50% Percentage:	50%	50%
D-2:	D-2 (25%)	D-2 (25%)
DC Plan for New Hires:	5/1/2007 Annuity Withdrawal (Valuation Interest Rate)	5/1/2007 Annuity Withdrawal (Valuation Interest Rate)
Act 88:	Yes	Yes

Membership Summary for Muskegon, City of (6116)

Table 3

Division	2011 Valuation		2010 Valuation		2011 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
01 - NonUnion Gen							
Active Members	29	\$ 1,945,514	34	\$ 2,264,338	50.0	20.3	20.9
Vested Former Members	6	85,181	5	57,571	47.2	10.1	11.0
Retirees and Beneficiaries	12	458,236	9	306,401	62.2		
02 - NonUn Police							
Active Members	0	\$ 0	1	\$ 106,153	0.0	0.0	0.0
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	2	36,018	0	0	57.0		
10 - General Ret							
Active Members	0	\$ 0	0	\$ 0	0.0	0.0	0.0
Vested Former Members	13	139,192	14	150,557	54.2	2.9	14.3
Retirees and Beneficiaries	121	1,324,640	132	1,462,091	76.5		
11 - Clerical							
Active Members	20	\$ 696,626	20	\$ 681,454	46.4	15.6	15.6
Vested Former Members	1	3,794	1	3,794	31.0	5.8	5.8
Retirees and Beneficiaries	3	39,026	3	39,026	58.7		
12 - DPW 517M							
Active Members	47	\$ 2,131,366	51	\$ 2,245,332	49.3	17.2	17.2
Vested Former Members	5	73,038	4	53,209	51.6	14.4	15.4
Retirees and Beneficiaries	13	341,937	10	264,685	61.3		
20 - PLC/Fire Ret							
Active Members	0	\$ 0	0	\$ 0	0.0	0.0	0.0
Vested Former Members	4	64,491	4	64,490	48.0	0.0	12.7
Retirees and Beneficiaries	135	2,779,814	136	2,822,943	74.5		
21 - PolicePatrol							
Active Members	49	\$ 2,985,318	51	\$ 3,044,625	39.8	12.9	12.9
Vested Former Members	5	108,695	6	154,768	39.8	12.2	12.4
Retirees and Beneficiaries	5	187,089	3	102,524	50.8		
22 - Police Comm							
Active Members	15	\$ 1,071,507	15	\$ 1,055,318	44.4	18.3	18.3
Vested Former Members	1	41,150	1	41,150	49.0	20.8	20.8
Retirees and Beneficiaries	3	155,375	3	155,375	58.0		
50 - FF Local 370							
Active Members	27	\$ 1,820,659	33	\$ 2,135,966	45.0	17.7	17.8
Vested Former Members	2	68,491	1	16,750	46.5	17.4	20.8
Retirees and Beneficiaries	7	357,441	2	106,301	56.4		
Total Municipality							
Active Members	187	\$ 10,650,990	205	\$ 11,533,186	45.6	16.5	16.7
Vested Former Members	37	584,032	36	542,289	48.9	7.9	13.8
Retirees and Beneficiaries	301	5,679,576	298	5,259,346	73.0		
Total Participants	525		539				

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) for Muskegon, City of (6116)

Table 4

Division	2011 Valuation		2010 Valuation	
	Employer and Retiree ¹	Employee ²	Employer and Retiree ¹	Employee ²
01 - NonUnion Gen	\$ 8,409,871	\$ 1,890,213	\$ 7,965,465	\$ 2,326,741
02 - NonUn Police	281,091	0	201,489	64,042
10 - General Ret	9,001,685	388,743	10,147,691	388,355
11 - Clerical	1,484,041	478,385	1,454,108	443,110
12 - DPW 517M	6,969,899	1,994,268	6,883,298	1,972,502
20 - PLC/Fire Ret	16,920,380	173,154	19,170,526	172,981
21 - PolicePatrol	7,670,808	2,434,114	7,186,296	2,353,201
22 - Police Comm	4,531,152	1,067,877	4,478,574	1,002,584
50 - FF Local 370	8,344,149	2,184,357	7,787,641	2,369,742
Municipality Total	\$ 63,613,076	\$ 10,611,111	\$ 65,275,088	\$ 11,093,258
Combined Reserves	\$ 74,224,187		\$ 76,368,346	

¹ Reserve for Employer Contributions and Benefit Payments

² Reserve for Employee Contributions

The December 31, 2011 valuation assets are equal to 1.205815 times the reported market value of assets (compared to 1.162921 as of December 31, 2010). The derivation of valuation assets is described, and detailed calculations of valuation assets are shown, in the [Appendix](#).

Flow of Valuation Assets for Muskegon, City of (6116)

Table 5

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Net Transfers	Valuation Asset Balance
	Employer	Member					
2006	\$ 55,956,699	\$ 4,695,235	\$ 4,324,738	\$ (1,896,331)	\$ (9,077)	\$ 580,900	\$ 63,652,164
2007	16,582,297	4,334,437	5,963,112	(4,694,268)	(72,528)	392,610	86,157,824
2008	1,166,958	731,864	3,642,050	(4,879,568)	(16,639)	125,743	86,928,232
2009	860,608	732,249	3,215,403	(5,024,244)	(105,036)	74,389	86,681,601
2010	2,215,151	662,958	4,468,557	(5,066,044)	(209,631)	57,762	88,810,354
2011	1,183,329	642,901	4,207,086	(5,311,426)	(140,832)	109,227	89,500,639

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 for Muskegon, City of (6116) As of December 31, 2011

Table 6

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
01 - NonUnion Gen				
Active Members	\$ 7,422,944	\$ 6,957,312	93.7%	\$ 465,632
Vested Former Members	504,826	504,826	100.0%	0
Retirees And Beneficiaries	4,957,858	4,957,858	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	100.0%	<u>0</u>
Total	\$ 12,885,628	\$ 12,419,996	96.4%	\$ 465,632
02 - NonUn Police				
Active Members	\$ 0	\$ 0	100.0%	\$ 0
Vested Former Members	0	0	100.0%	0
Retirees And Beneficiaries	417,698	338,944	81.1%	78,754
Pending Refunds	<u>0</u>	<u>0</u>	100.0%	<u>0</u>
Total	\$ 417,698	\$ 338,944	81.1%	\$ 78,754
10 - General Ret				
Active Members	\$ 0	\$ 0	100.0%	\$ 0
Vested Former Members	947,032	616,268	65.1%	330,764
Retirees And Beneficiaries	10,674,256	10,674,256	100.0%	0
Pending Refunds	<u>32,595</u>	<u>32,595</u>	100.0%	<u>0</u>
Total	\$ 11,653,883	\$ 11,323,119	97.2%	\$ 330,764
11 - Clerical				
Active Members	\$ 1,879,153	\$ 1,958,989	104.2%	\$ (79,836)
Vested Former Members	7,949	7,949	100.0%	0
Retirees And Beneficiaries	399,385	399,385	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	100.0%	<u>0</u>
Total	\$ 2,286,487	\$ 2,366,323	103.5%	\$ (79,836)
12 - DPW 517M				
Active Members	\$ 6,599,408	\$ 6,644,129	100.7%	\$ (44,721)
Vested Former Members	420,581	420,581	100.0%	0
Retirees And Beneficiaries	3,744,417	3,744,417	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	100.0%	<u>0</u>
Total	\$ 10,764,406	\$ 10,809,127	100.4%	\$ (44,721)
20 - PLC/Fire Ret				
Active Members	\$ 0	\$ 0	100.0%	\$ 0
Vested Former Members	288,533	173,154	60.0%	115,379
Retirees And Beneficiaries	23,888,180	20,438,486	85.6%	3,449,694
Pending Refunds	<u>0</u>	<u>0</u>	100.0%	<u>0</u>
Total	\$ 24,176,713	\$ 20,611,640	85.3%	\$ 3,565,073

Table 6

Division	Actuarial Accrued Liability	Valuation Assets¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
21 - PolicePatrol				
Active Members	\$ 8,614,530	\$ 9,452,548	109.7%	\$ (838,018)
Vested Former Members	518,641	518,641	100.0%	0
Retirees And Beneficiaries	2,165,432	2,165,432	100.0%	0
Pending Refunds	<u>48,046</u>	<u>48,046</u>	100.0%	<u>0</u>
Total	\$ 11,346,649	\$ 12,184,667	107.4%	\$ (838,018)
22 - Police Comm				
Active Members	\$ 4,731,294	\$ 4,667,302	98.6%	\$ 63,992
Vested Former Members	294,970	294,970	100.0%	0
Retirees And Beneficiaries	1,789,121	1,789,121	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	100.0%	<u>0</u>
Total	\$ 6,815,385	\$ 6,751,393	99.1%	\$ 63,992
50 - FF Local 370				
Active Members	\$ 7,602,914	\$ 8,030,856	105.6%	\$ (427,942)
Vested Former Members	523,634	523,634	100.0%	0
Retirees And Beneficiaries	4,140,940	4,140,940	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	100.0%	<u>0</u>
Total	\$ 12,267,488	\$ 12,695,430	103.5%	\$ (427,942)
Total Municipality				
Active Members	\$ 36,850,243	\$ 37,711,136	102.3%	\$ (860,893)
Vested Former Members	3,506,166	3,060,023	87.3%	446,143
Retirees and Beneficiaries	52,177,287	48,648,839	93.2%	3,528,448
Pending Refunds	<u>80,641</u>	<u>80,641</u>	100.0%	<u>0</u>
Total Participants	\$ 92,614,337	\$ 89,500,639	96.6%	\$ 3,113,698

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 for Muskegon, City of (6116)

Table 7

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities	UAL as Percent of Annual Payroll
2006	\$ 63,537,463	\$ 63,652,164	100%	\$ (114,701)	0%
2007	83,118,204	86,157,824	104%	(3,039,620)	0%
2008	86,794,286	86,928,232	100%	(133,946)	0%
2009	87,394,951	86,681,601	99%	713,350	6%
2010	88,391,392	88,810,354	100%	(418,962)	0%
2011	92,614,337	89,500,639	97%	3,113,698	29%

Notes: Actuarial assumptions were revised for the 1997, 2000, 2004, 2008, 2009, 2010, and 2011 actuarial valuations.

GASB 25 and GASB 27 Information for Muskegon, City of (6116)

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, 2011 actuarial valuation. The entry age normal actuarial method was used to determine the disclosure entries.

GASB 25 Information (as of 12/31/2011)

Actuarial Accrued Liability		
Retirees and beneficiaries currently receiving benefits	\$	52,177,287
Terminated employees (vested former members) not yet receiving benefits		3,506,166
Non-Vested terminated employees (pending refunds of accumulated member contributions)		80,641
Current employees -		
Accumulated employee contributions including allocated investment income		8,946,850
Employer financed		<u>27,903,393</u>
Total Actuarial Accrued Liability	\$	92,614,337
Net Assets Available for Benefits at Actuarial Value	\$	<u>89,500,639</u>
(Market Value is 74,224,187)		
Unfunded (Overfunded) Actuarial Accrued Liability	\$	3,113,698

GASB 27 Information (as of 12/31/2011)

Fiscal Year Beginning		July 1, 2013
Annual Required Contribution (ARC)	\$	1,016,496 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 July 1, 2013) 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 12/31/2011 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 - Underfunded or Overfunded Liabilities (27 years)	0.057152

Amortization Factor Used to Compute the GASB Annual Required Contribution (ARC) For Divisions that are Closed to New Hires

(and new hires are not covered by MERS DB or Hybrid provisions in a linked division)

If Division is Less than 100% Funded, and Uses a Funding Period over 15 Years

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

Assumptions: Continuous Payments; Interest at 8% Per Year

Benefit Provision History for Muskegon, City of (6116)

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 - NonUnion Gen

7/1/2010	Fiscal Month - July
3/1/2006	Blanket Resolution (All Service)
2/1/2006	DC Adoption Date 02-01-2006
1/1/2006	5 Year Vesting
1/1/2006	Annuity Withdrawal - MERS Rate
1/1/2006	Benefit D2 Plan
1/1/2006	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/2006	Benefit RS 50 (50% Post-Ret. Spouse Benefits)
1/1/2006	Exclude Temporary Employees
1/1/2006	Benefit B-3 (80% max)
1/1/2006	Day of work defined as 150 Hours a Month for all employees
1/1/2006	Member Contribution Rate 5.00%
1/1/2006	Benefit F55 (With 25 Years of Service)
11/10/1964	Covered by Act 88

02 - NonUn Police

8/1/2011	3.0% Multiplier (80% max)
8/1/2011	Benefit F55 (With 10 Years of Service)
7/1/2010	Fiscal Month - July
3/1/2006	Blanket Resolution (All Service)
2/1/2006	DC Adoption Date 02-01-2006
1/1/2006	10 Year Vesting
1/1/2006	Annuity Withdrawal - MERS Rate
1/1/2006	Benefit D2 Plan
1/1/2006	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/2006	Benefit RS 50 (50% Post-Ret. Spouse Benefits)
1/1/2006	DB Exempt from Social Security
1/1/2006	Exclude Temporary Employees
1/1/2006	2.75% Multiplier (80% max)
1/1/2006	Day of work defined as 150 Hours a Month for all employees
1/1/2006	Member Contribution Rate 6.00%
1/1/2006	Eligible at Age 53 (With 25 Years of Service)
11/10/1964	Covered by Act 88

10 - General Ret

7/1/2010	Fiscal Month - July
1/1/2009	Flexible E .5% COLA Adopted (01/01/2009)
1/1/2009	E Cola Adoption Date 01-01-2009
1/1/2009	E Cola Increase Amount .5
1/1/2009	E Cola Increase Type Percent
1/1/2008	Flexible E .9% COLA Adopted (01/01/2008)

Benefit Provision History for Muskegon, City of (6116)

10 - General Ret

8/1/2007	Flexible E .9% COLA Adopted (08/01/2007)
8/1/2006	Benefit FAC-3 (3 Year Final Average Compensation)
8/1/2006	Benefit B-3 (80% max)
8/1/2006	5 Year Vesting
3/1/2006	Blanket Resolution (Generic Service)
11/10/1964	Covered by Act 88

11 - Clerical

7/1/2010	Fiscal Month - July
11/1/2006	DC Adoption Date 11-01-2006
10/1/2006	5 Year Vesting
10/1/2006	Benefit D2 Plan
10/1/2006	Benefit FAC-3 (3 Year Final Average Compensation)
10/1/2006	Benefit RS 50 (50% Post-Ret. Spouse Benefits)
10/1/2006	Blanket Resolution (All Service)
10/1/2006	Exclude Temporary Employees
10/1/2006	Benefit B-3 (80% max)
10/1/2006	Day of work defined as 150 Hours a Month for all employees
10/1/2006	Member Contribution Rate 5.00%
10/1/2006	Benefit F55 (With 30 Years of Service)
11/10/1964	Covered by Act 88

12 - DPW 517M

7/1/2010	Fiscal Month - July
5/1/2007	DC Adoption Date 05-01-2007
4/1/2007	10 Year Vesting
4/1/2007	Benefit D2 Plan
4/1/2007	Benefit FAC-3 (3 Year Final Average Compensation)
4/1/2007	Benefit RS 50 (50% Post-Ret. Spouse Benefits)
4/1/2007	Benefit B-3 (80% max)
4/1/2007	Day of work defined as 150 Hours a Month for all employees
4/1/2007	Member Contribution Rate 5.00%
4/1/2007	Benefit F55 (With 30 Years of Service)
3/1/2006	Blanket Resolution (Generic Service)
11/10/1964	Covered by Act 88

20 - PLC/Fire Ret

7/1/2010	Fiscal Month - July
1/1/2009	Flexible E .5% COLA Adopted (01/01/2009)
1/1/2009	E Cola Adoption Date 01-01-2009
1/1/2009	E Cola Increase Amount .5
1/1/2009	E Cola Increase Type Percent
1/1/2008	Flexible E .9% COLA Adopted (01/01/2008)
8/1/2007	Flexible E .9% COLA Adopted (08/01/2007)

Benefit Provision History for Muskegon, City of (6116)

20 - PLC/Fire Ret

8/1/2006	10 Year Vesting
8/1/2006	Annuity Withdrawal - MERS Rate
8/1/2006	Benefit FAC-3 (3 Year Final Average Compensation)
8/1/2006	2.75% Multiplier (80% max)
8/1/2006	Benefit F55 (With 10 Years of Service)
3/1/2006	Blanket Resolution (Generic Service)
11/10/1964	Covered by Act 88

21 - PolicePatrol

7/1/2010	Fiscal Month - July
1/1/2009	3.0% Multiplier (75% max)
1/1/2009	Benefit F50 (With 25 Years of Service)
1/1/2007	2.75% Multiplier (75% max)
8/1/2006	DC Adoption Date 08-01-2006
7/1/2006	10 Year Vesting
7/1/2006	Annuity Withdrawal - MERS Rate
7/1/2006	Benefit D2 Plan
7/1/2006	Benefit FAC-3 (3 Year Final Average Compensation)
7/1/2006	Benefit RS 50 (50% Post-Ret. Spouse Benefits)
7/1/2006	DB Exempt from Social Security
7/1/2006	Exclude Temporary Employees
7/1/2006	Benefit B-4 (75% max)
7/1/2006	Day of work defined as 150 Hours a Month for all employees
7/1/2006	Member Contribution Rate 6.00%
7/1/2006	Benefit F55 (With 10 Years of Service)
7/1/2006	Eligible at Age 51 (With 25 Years of Service)
3/1/2006	Blanket Resolution (Generic Service)
11/10/1964	Covered by Act 88

22 - Police Comm

7/1/2010	Fiscal Month - July
1/1/2007	3.0% Multiplier (80% max)
7/1/2006	10 Year Vesting
7/1/2006	Annuity Withdrawal - MERS Rate
7/1/2006	Benefit D2 Plan
7/1/2006	Benefit FAC-3 (3 Year Final Average Compensation)
7/1/2006	Benefit RS 50 (50% Post-Ret. Spouse Benefits)
7/1/2006	DB Exempt from Social Security
7/1/2006	Exclude Temporary Employees
7/1/2006	Benefit B-4 (80% max)
7/1/2006	Day of work defined as 150 Hours a Month for all employees
7/1/2006	Member Contribution Rate 6.00%
7/1/2006	Benefit F55 (With 10 Years of Service)
7/1/2006	Eligible at Age 53 (With 25 Years of Service)
3/1/2006	Blanket Resolution (Generic Service)

Benefit Provision History for Muskegon, City of (6116)

22 - Police Comm

11/10/1964 Covered by Act 88

50 - FF Local 370

7/1/2010 Fiscal Month - July
5/1/2007 DC Adoption Date 05-01-2007
4/1/2007 10 Year Vesting
4/1/2007 Annuity Withdrawal - MERS Rate
4/1/2007 Benefit D2 Plan
4/1/2007 Benefit FAC-3 (3 Year Final Average Compensation)
4/1/2007 Benefit RS 50 (50% Post-Ret. Spouse Benefits)
4/1/2007 2.75% Multiplier (85% max)
4/1/2007 Day of work defined as 150 Hours a Month for all employees
4/1/2007 Member Contribution Rate 6.00%
4/1/2007 Benefit F55 (With 10 Years of Service)
4/1/2007 Eligible at Age 53 (With 25 Years of Service)
3/1/2006 Blanket Resolution (Generic Service)
11/10/1964 Covered by Act 88

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
01 - NonUnion Gen	1.00%
02 - NonUn Police	0.00%
10 - General Ret	0.00%
11 - Clerical	1.00%
12 - DPW 517M	1.00%
20 - PLC/Fire Ret	0.00%
21 - PolicePatrol	1.00%
22 - Police Comm	1.00%
50 - FF Local 370	1.00%

Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
01 - NonUnion Gen	100%
02 - NonUn Police	0%
10 - General Ret	0%
11 - Clerical	100%
12 - DPW 517M	100%
20 - PLC/Fire Ret	0%
21 - PolicePatrol	100%
22 - Police Comm	100%
50 - FF Local 370	100%

Miscellaneous and Technical Assumptions

Loads – None.