



MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2012
MADISON HEIGHTS, CITY OF (6308)

Spring, 2013

Madison Heights, 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, 2012. The report includes the determination of liabilities and contribution rates resulting from the participation of Madison Heights, City of (6308) 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. Madison Heights, 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, 2012 annual actuarial valuation is to (i) measure funding progress, (ii) establish contribution requirements for the fiscal year beginning July 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 July 1, 2014 (2012 Valuation) and July 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 - Non-Union and Depart	-	-	\$ 28,727	\$ 26,338
10 - Gnrl Crth	-	-	4,094	3,495
11 - Dept of Public Svcs	-	-	24,466	22,156
12 - AFSCME	-	-	13,283	12,432
13 - Cler Tmst	-	-	12,910	12,117
14 - Disptchrs	-	-	978	644
Municipality Total			\$ 84,458	\$ 77,182

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 Madison Heights, City of in aggregate is 72%; last year's ratio was 74%.

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 63% (instead of 72%); and ii) your total employer contribution requirement for the fiscal year starting July 1, 2014 would be \$ 1,280,724 (instead of \$ 1,013,496). 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 July 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 - Non-Union and Depa	22	-	-	-			
10 - Gnrl Crth	16	-	-	-			
11 - Dept of Public Svc	16	-	-	-			
12 - AFSCME	22	-	-	-			
13 - Cler Tmst	22	-	-	-			
14 - Disptchrs	23	-	-	-			
Estimated Monthly Contribution³							
01 - Non-Union and Depa	22	\$ 8,240	\$ 20,487	\$ 28,727		\$ 420,552	
10 - Gnrl Crth	16	1,390	2,704	4,094		50,424	
11 - Dept of Public Svc	16	4,734	19,732	24,466		303,000	
12 - AFSCME	22	2,208	11,075	13,283		200,388	
13 - Cler Tmst	22	5,350	7,560	12,910		182,904	
14 - Disptchrs	23	1,833	(855)	978			
Total Municipality		\$ 23,755	\$ 60,703	\$ 84,458			
Estimated Annual Contribution³		\$ 285,060	\$ 728,436	\$ 1,013,496			

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, 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.

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 - Non-Union and Department Heads: Closed to new hires

	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):	55/15	55/15
Early Retirement (Reduced):	50/25	50/25
Final Average Compensation:	3 years	3 years
Member Contributions:	2.50%	2.50%
DC Plan for New Hires:	7/1/2010	7/1/2010
Act 88:	Yes (Adopted 2/9/1970)	Yes (Adopted 2/9/1970)

10 - Gnrl Crth: Closed to new hires

	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):	50/25	50/25
	55/15	55/15
Early Retirement (Reduced):	-	-
Final Average Compensation:	5 years	5 years
Member Contributions:	5.54%	5.54%
DC Plan for New Hires:	10/1/2006	10/1/2006
Act 88:	Yes (Adopted 2/9/1970)	Yes (Adopted 2/9/1970)

11 - Dept of Public Svcs TPOAM: 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):	55/15	55/15
Early Retirement (Reduced):	50/25	50/25
Final Average Compensation:	5 years	5 years
Member Contributions:	4.84%	4.84%
DC Plan for New Hires:	8/1/2006	6/1/2010
Act 88:	Yes (Adopted 2/9/1970)	Yes (Adopted 2/9/1970)

Table 2 (continued)**12 - AFSCME: 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):	55/15	55/15
Early Retirement (Reduced):	50/25	50/25
Final Average Compensation:	5 years	5 years
Member Contributions:	4.94%	4.94%
DC Plan for New Hires:	7/1/2010	7/1/2010
Act 88:	Yes (Adopted 2/9/1970)	Yes (Adopted 2/9/1970)

13 - Cler Tmst: Closed to new hires

	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):	55/15	55/15
Early Retirement (Reduced):	50/25	50/25
Final Average Compensation:	5 years	5 years
Member Contributions:	2.50%	2.50%
DC Plan for New Hires:	7/1/2010	7/1/2010
Act 88:	Yes (Adopted 2/9/1970)	Yes (Adopted 2/9/1970)

14 - Disptchrs: Closed to new hires

	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):	55/15	55/15
Early Retirement (Reduced):	50/25	50/25
Final Average Compensation:	5 years	5 years
Member Contributions:	2.50%	2.50%
DC Plan for New Hires:	9/1/2010	9/1/2010
Act 88:	Yes (Adopted 2/9/1970)	Yes (Adopted 2/9/1970)

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 - Non-Union and Depart							
Active Members	11	\$ 989,346	11	\$ 972,440	50.3	15.8	18.6
Vested Former Members	3	49,505	2	46,752	48.3	7.8	13.6
Retirees and Beneficiaries	20	552,888	21	589,086	72.7		
10 - Gnrl Crth							
Active Members	6	\$ 307,811	6	\$ 305,279	48.1	17.2	19.8
Vested Former Members	0	0	1	13,425	0.0	0.0	0.0
Retirees and Beneficiaries	8	146,362	7	132,948	68.8		
11 - Dept of Public Svcs							
Active Members	18	\$ 904,241	20	\$ 1,047,392	46.5	17.6	17.6
Vested Former Members	4	62,746	4	44,500	53.0	18.8	20.1
Retirees and Beneficiaries	39	752,281	40	714,470	66.4		
12 - AFSCME							
Active Members	6	\$ 394,205	9	\$ 618,088	47.5	14.0	15.1
Vested Former Members	6	77,111	5	43,346	47.7	10.9	15.9
Retirees and Beneficiaries	19	469,636	17	376,135	67.7		
13 - Cler Tmst							
Active Members	20	\$ 913,203	21	\$ 952,124	47.7	15.8	16.4
Vested Former Members	9	74,642	8	64,897	50.4	10.3	13.0
Retirees and Beneficiaries	33	476,032	34	488,565	70.6		
14 - Disptchrs							
Active Members	6	\$ 296,804	6	\$ 294,722	38.3	11.2	11.2
Vested Former Members	4	37,073	4	37,073	43.3	11.4	16.1
Retirees and Beneficiaries	1	13,799	1	13,799	61.0		
Total Municipality							
Active Members	67	\$ 3,805,610	73	\$ 4,190,045	47.0	15.8	16.8
Vested Former Members	26	301,077	24	249,993	48.8	11.6	15.3
Retirees and Beneficiaries	120	2,410,998	120	2,315,003	68.9		
Total Participants	213		217				

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 - Non-Union and Department Heads	\$ 4,839,414	\$ 37,875	\$ 4,583,346	\$ 76,098
10 - Gnrl Crth	1,383,493	143,107	1,335,570	130,603
11 - Dept of Public Svcs TPOAM	6,668,713	392,762	6,400,734	393,094
12 - AFSCME	3,526,812	165,761	3,374,716	207,088
13 - Cler Tmst	4,680,881	166,226	4,530,814	142,257
14 - Disptchrs	704,330	7,868	635,812	592
Municipality Total	\$ 21,803,643	\$ 913,599	\$ 20,860,992	\$ 949,732
Combined Reserves	\$ 22,717,242		\$ 21,810,724	

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	\$ 339,396	\$ 71,486	\$ 629,243	\$ (1,125,225)	\$ (3,440)	\$ 0	\$ 22,303,419
2003	408,187	72,924	1,608,211	(1,213,089)	0	0	23,179,652
2004	482,846	76,364	1,511,128	(1,346,317)	(6,436)	0	23,897,237
2005	537,515	62,351	1,489,401	(1,520,666)	(7,281)	0	24,458,557
2006	577,333	61,632	1,937,949	(1,641,503)	(2,139)	0	25,391,829
2007	668,249	65,339	2,054,668	(1,638,877)	0	0	26,541,208
2008	671,925	60,985	1,102,980	(1,734,081)	(4,983)	(3,514)	26,634,520
2009	682,056	59,268	990,212	(1,791,304)	(5,649)	0	26,569,103
2010	729,975	56,090	1,238,090	(2,045,599)	0	0	26,547,659
2011	769,629	92,448	1,177,872	(2,287,911)	0	0	26,299,697
2012	832,946	148,561	1,058,049	(2,360,656)	0	0	25,978,597

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 - Non-Union and Department Heads				
Active Members	\$ 3,754,834	\$ 122,296	3.3%	\$ 3,632,538
Vested Former Members	301,503	301,503	100.0%	0
Retirees And Beneficiaries	5,153,688	5,153,688	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 9,210,025	\$ 5,577,487	60.6%	\$ 3,632,538
10 - Gnrl Crth				
Active Members	\$ 894,282	\$ 510,305	57.1%	\$ 383,977
Vested Former Members	0	0	0.0%	0
Retirees And Beneficiaries	1,231,407	1,231,407	100.0%	0
Pending Refunds	<u>4,051</u>	<u>4,051</u>	100.0%	<u>0</u>
Total	\$ 2,129,740	\$ 1,745,763	82.0%	\$ 383,977
11 - Dept of Public Svcs TPOAM				
Active Members	\$ 2,813,541	\$ 305,531	10.9%	\$ 2,508,010
Vested Former Members	446,852	108,830	24.4%	338,022
Retirees And Beneficiaries	7,660,752	7,660,752	100.0%	0
Pending Refunds	<u>129</u>	<u>129</u>	100.0%	<u>0</u>
Total	\$ 10,921,274	\$ 8,075,242	73.9%	\$ 2,846,032
12 - AFSCME				
Active Members	\$ 920,633	\$ 105,798	11.5%	\$ 814,835
Vested Former Members	388,008	44,863	11.6%	343,145
Retirees And Beneficiaries	4,871,281	4,056,934	83.3%	814,347
Pending Refunds	<u>15,095</u>	<u>15,095</u>	100.0%	<u>0</u>
Total	\$ 6,195,017	\$ 4,222,690	68.2%	\$ 1,972,327
13 - Cler Tmst				
Active Members	\$ 2,237,305	\$ 890,119	39.8%	\$ 1,347,186
Vested Former Members	439,688	439,688	100.0%	0
Retirees And Beneficiaries	4,211,504	4,211,504	100.0%	0
Pending Refunds	<u>1,661</u>	<u>1,661</u>	100.0%	<u>0</u>
Total	\$ 6,890,158	\$ 5,542,972	80.4%	\$ 1,347,186
14 - Disptchrs				
Active Members	\$ 443,634	\$ 537,624	121.2%	\$ (93,990)
Vested Former Members	128,286	128,286	100.0%	0
Retirees And Beneficiaries	148,533	148,533	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 720,453	\$ 814,443	113.0%	\$ (93,990)

Table 6 (continued)

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
Total Municipality				
Active Members	\$ 11,064,229	\$ 2,471,673	22.3%	\$ 8,592,556
Vested Former Members	1,704,337	1,023,170	60.0%	681,167
Retirees and Beneficiaries	23,277,165	22,462,818	96.5%	814,347
Pending Refunds	<u>20,936</u>	<u>20,936</u>	100.0%	<u>0</u>
Total Participants	\$ 36,066,667	\$ 25,978,597	72.0%	\$ 10,088,070

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	\$ 18,179,010	\$ 17,515,837	96%	\$ 663,173	14%
1999	19,451,724	19,792,233	102%	(340,508)	0%
2000	21,598,476	21,383,316	99%	215,160	4%
2001	22,938,928	22,391,959	98%	546,969	10%
2002	23,826,929	22,303,419	94%	1,523,510	29%
2003	25,520,723	23,179,652	91%	2,341,071	43%
2004	27,642,742	23,897,237	86%	3,745,505	66%
2005	28,414,461	24,458,557	86%	3,955,904	76%
2006	29,681,342	25,391,829	86%	4,289,513	83%
2007	31,205,728	26,541,208	85%	4,664,520	87%
2008	32,402,367	26,634,520	82%	5,767,847	107%
2009	32,752,091	26,569,103	81%	6,182,988	117%
2010	34,126,156	26,547,659	78%	7,578,497	175%
2011	35,497,987	26,299,697	74%	9,198,290	220%
2012	36,066,667	25,978,597	72%	10,088,070	265%

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	\$	23,277,165
Terminated employees (vested former members) not yet receiving benefits		1,704,337
Non-Vested terminated employees (pending refunds of accumulated member contributions)		20,936
Current employees -		
Accumulated employee contributions including allocated investment income		723,898
Employer financed		<u>10,340,331</u>
Total Actuarial Accrued Liability	\$	36,066,667
Net Assets Available for Benefits at Actuarial Value	\$	<u>25,978,597</u>
(Market Value is 22,717,242)		
Unfunded (Overfunded) Actuarial Accrued Liability	\$	10,088,070

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

Fiscal Year Beginning		July 1, 2014
Annual Required Contribution (ARC)	\$	1,169,004 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, 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 - Non-Union and Department Heads

8/1/2011	Member Contribution Rate 2.50%
7/1/2010	DC Adoption Date 07-01-2010
7/1/1995	Benefit B-4 (80% max)
1/1/1987	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/1987	Benefit B-3
1/1/1987	Benefit F55 (With 15 Years of Service)
1/1/1985	Benefit C-2/Base B-1
7/1/1984	Member Contribution Rate 0.00%
7/1/1975	Benefit C-1 (Old)
2/9/1970	Covered by Act 88
7/1/1956	10 Year Vesting
7/1/1956	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/1956	Benefit C (Old)
7/1/1956	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
	Fiscal Month - July

10 - Gnrl Crth

8/1/2011	Member Contribution Rate 5.54%
10/1/2006	DC Adoption Date 10-01-2006
7/1/1998	Benefit B-2
7/1/1998	Member Contribution Rate 3.04%
7/1/1998	Benefit F50 (With 25 Years of Service)
7/1/1990	Benefit C-2/Base B-1
7/1/1990	Benefit F55 (With 15 Years of Service)
7/1/1984	Member Contribution Rate 0.00%
7/1/1975	10 Year Vesting
7/1/1975	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/1975	Benefit C-1 (Old)
2/9/1970	Covered by Act 88
	Fiscal Month - July

11 - Dept of Public Svcs TPOAM

8/1/2011	Member Contribution Rate 4.84%
4/1/2010	Temporary 30 Years & Out (04/01/2010 - 06/30/2010)
8/1/2006	DC Adoption Date 08-01-2006
1/1/2005	Member Contribution Rate 2.34%
7/1/2004	Benefit B-3 (80% max)
7/1/2004	Member Contribution Rate 3.09%
1/1/1994	Benefit B-2
1/1/1994	Member Contribution Rate 1.50%
1/1/1994	Benefit F55 (With 15 Years of Service)

Benefit Provision History

11 - Dept of Public Svcs TPOAM

1/1/1987	10 Year Vesting
1/1/1987	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1987	Benefit C-2/Base B-1
7/1/1984	Member Contribution Rate 0.00%
2/9/1970	Covered by Act 88 Fiscal Month - July

12 - AFSCME

8/1/2011	Member Contribution Rate 4.94%
7/1/2010	DC Adoption Date 07-01-2010
7/1/2004	Member Contribution Rate 2.44%
8/1/2003	Benefit B-3 (80% max)
8/1/2003	Member Contribution Rate 3.26%
7/1/2003	Member Contribution Rate 0.82%
6/1/1998	Benefit B-2
6/1/1998	Member Contribution Rate 1.63%
7/1/1987	Benefit C-2/Base B-1
7/1/1987	Benefit F55 (With 15 Years of Service)
7/1/1984	10 Year Vesting
7/1/1984	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/1984	Member Contribution Rate 0.00%
2/9/1970	Covered by Act 88 Fiscal Month - July

13 - Cler Tmst

8/1/2011	Member Contribution Rate 2.50%
7/1/2010	DC Adoption Date 07-01-2010
7/1/2004	Member Contribution Rate 0.00%
7/1/2003	Member Contribution Rate 0.90%
1/1/1994	10 Year Vesting
1/1/1994	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1994	Benefit B-2
1/1/1994	Member Contribution Rate 1.80%
1/1/1994	Benefit F55 (With 15 Years of Service)
2/9/1970	Covered by Act 88 Fiscal Month - July

14 - Disptchrs

12/1/2011	Member Contribution Rate 2.50%
9/1/2010	DC Adoption Date 09-01-2010
12/1/2003	Benefit B-2
7/1/1990	Benefit F55 (With 15 Years of Service)
7/1/1990	10 Year Vesting
7/1/1990	Benefit FAC-5 (5 Year Final Average Compensation)

Benefit Provision History

MADISON HEIGHTS, CITY OF (6308)

14 - Disptchrs

7/1/1990	Benefit C-2/Base B-1
7/1/1990	Member Contribution Rate 0.00%
2/9/1970	Covered by Act 88
	Fiscal Month - July

Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method

Details on MERS plan provisions, actuarial assumptions, and actuarial methodology can be found in the [Appendix](#). Some actuarial assumptions are specific to this municipality and its divisions. These are listed below.

Increase in Final Average Compensation

Division	FAC Increase Assumption
All Divisions	3.00%

Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
All Divisions	80%

Miscellaneous and Technical Assumptions

Loads – None.

Amortization Policy for Closed Divisions

Closed Division	Amortization Option
All Closed Divisions	Option A