



MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2011
DEARBORN, CITY OF (8251)

Fall, 2012

Dearborn, 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 Dearborn, City of (8251) 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. Dearborn, 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

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Executive Summary for Dearborn, City of (8251)

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
02 - Police hired after 7/1/05	10.04%	9.42%	\$ 36,755	\$ 26,996
05 - Fire Hired on or after 5/	10.51%	10.56%	4,244	1,619
Municipality Total			\$ 40,999	\$ 28,615

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 Dearborn, City of in aggregate is 133%; last year's ratio was 152%.

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 110% (instead of 133%); and ii) your total employer contribution requirement for the fiscal year starting July 1, 2013 would be \$ 558,660 (instead of \$ 491,988). 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 Dearborn, City of (8251) 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							
02 - Police hired after 7	25	11.71%	-1.67%	10.04%			
05 - Fire Hired on or aft	25	11.56%	-1.05%	10.51%			
Estimated Monthly Contribution³							
02 - Police hired after 7	25	\$ 42,869	\$ (6,114)	\$ 36,755			0.95%
05 - Fire Hired on or aft	25	4,668	(424)	4,244			0.95%
Total Municipality		\$ 47,537	\$ (6,538)	\$ 40,999			
Estimated Annual Contribution³		\$ 570,444	\$ (78,456)	\$ 491,988			

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 Dearborn, City of (8251)

Table 2

02 - Police hired after 7/1/05: Open Division

	2011 Valuation	2010 Valuation
Benefit Multiplier:	Benefit B-4 (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
Member Contributions:	5%	5%
D-2:	D-2 (25%)	D-2 (25%)
Act 88:	No	No

05 - Fire Hired on or after 5/1/09: Open Division

	2011 Valuation	2010 Valuation
Benefit Multiplier:	Benefit B-4 (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
Member Contributions:	5%	5%
D-2:	D-2 (25%)	D-2 (25%)
Act 88:	No	No

Membership Summary for Dearborn, City of (8251)

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
02 - Police hired after 7/1/05							
Active Members	67	\$ 4,393,073	55	\$ 3,438,943	29.9	3.1	3.2
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
05 - Fire Hired on or after 5/1/09							
Active Members	10	\$ 484,535	4	\$ 183,950	30.7	1.0	1.5
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
Total Municipality							
Active Members	77	\$ 4,877,608	59	\$ 3,622,893	30.0	2.8	3.0
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
Total Participants	77		59				

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 Dearborn, City of (8251)

Table 4

Division	2011 Valuation		2010 Valuation	
	Employer and Retiree ¹	Employee ²	Employer and Retiree ¹	Employee ²
02 - Police hired after 7/1/05	\$ 1,753,661	\$ 849,135	\$ 1,271,041	\$ 658,681
05 - Fire Hired on or after 5/1/09	59,336	24,228	12,812	5,175
Municipality Total	\$ 1,812,997	\$ 873,363	\$ 1,283,853	\$ 663,856
Combined Reserves	\$ 2,686,360		\$ 1,947,709	

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 Dearborn, City of (8251)

Table 5

Year Ended 12/31	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Net Transfers	Valuation Asset Balance
	Employer	Member					
2009	\$ 249,005	\$ 778,126	\$ 418,416	\$ 0	\$ 0	\$ 0	\$ 1,445,547
2010	418,393	174,190	239,224	0	(12,323)	0	2,265,031
2011	491,090	224,035	274,282	0	(15,185)	0	3,239,253

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 Dearborn, City of (8251) As of December 31, 2011

Table 6

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
02 - Police hired after 7/1/05				
Active Members	\$ 2,363,173	\$ 3,113,510	131.8%	\$ (750,337)
Vested Former Members	0	0	100.0%	0
Retirees And Beneficiaries	0	0	100.0%	0
Pending Refunds	<u>24,980</u>	<u>24,980</u>	100.0%	<u>0</u>
Total	\$ 2,388,153	\$ 3,138,490	131.4%	\$ (750,337)
05 - Fire Hired on or after 5/1/09				
Active Members	\$ 54,830	\$ 100,095	182.6%	\$ (45,265)
Vested Former Members	0	0	100.0%	0
Retirees And Beneficiaries	0	0	100.0%	0
Pending Refunds	<u>668</u>	<u>668</u>	100.0%	<u>0</u>
Total	\$ 55,498	\$ 100,763	181.6%	\$ (45,265)
Total Municipality				
Active Members	\$ 2,418,003	\$ 3,213,605	132.9%	\$ (795,602)
Vested Former Members	0	0	0.0%	0
Retirees and Beneficiaries	0	0	0.0%	0
Pending Refunds	<u>25,648</u>	<u>25,648</u>	100.0%	<u>0</u>
Total Participants	\$ 2,443,651	\$ 3,239,253	132.6%	\$ (795,602)

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 Dearborn, City of (8251)

Table 7

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities	UAL as Percent of Annual Payroll
2009	\$ 925,521	\$ 1,445,547	156%	\$ (520,026)	0%
2010	1,490,602	2,265,031	152%	(774,429)	0%
2011	2,443,651	3,239,253	133%	(795,602)	0%

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

GASB 25 and GASB 27 Information for Dearborn, City of (8251)

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	\$	0
Terminated employees (vested former members) not yet receiving benefits		0
Non-Vested terminated employees (pending refunds of accumulated member contributions)		25,648
Current employees -		
Accumulated employee contributions including allocated investment income		847,715
Employer financed		<u>1,570,288</u>
Total Actuarial Accrued Liability	\$	2,443,651
Net Assets Available for Benefits at Actuarial Value	\$	<u>3,239,253</u>
(Market Value is 2,686,360)		
Unfunded (Overfunded) Actuarial Accrued Liability	\$	(795,602)

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

Fiscal Year Beginning	July 1, 2013
Annual Required Contribution (ARC)	\$ 491,988 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
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Assumptions: Continuous Payments; Interest at 8% Per Year

Benefit Provision History for Dearborn, City of (8251)

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.

02 - Police hired after 7/1/05

4/1/2009	Benefit F50 (With 25 Years of Service)
4/1/2009	Fiscal Month - July
4/1/2009	10 Year Vesting
4/1/2009	Benefit D2 Plan
4/1/2009	Benefit FAC-3 (3 Year Final Average Compensation)
4/1/2009	Benefit B-4 (80% max)
4/1/2009	Day of work defined as 80 hours per month
4/1/2009	Member Contribution Rate 5.00%

05 - Fire Hired on or after 5/1/09

4/1/2009	10 Year Vesting
4/1/2009	Benefit D2 Plan
4/1/2009	Benefit FAC-3 (3 Year Final Average Compensation)
4/1/2009	Exclude Temporary Employees requiring less than 12 months
4/1/2009	Benefit B-4 (80% max)
4/1/2009	Day of work defined as 100.8 hours per month
4/1/2009	Member Contribution Rate 5.00%
4/1/2009	Benefit F50 (With 25 Years of Service)
4/1/2009	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	0.00%

Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
02 - Police hired after 7/1/	20%
05 - Fire Hired on or after	10%

Miscellaneous and Technical Assumptions

Loads – None.