



MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2015
MANISTEE CO (5101)



Spring, 2016

Manistee Co

In care of:
Municipal Employees' Retirement System of Michigan
1134 Municipal Way
Lansing, Michigan 48917

This report presents the results of the Annual Actuarial Valuation, prepared as of December 31, 2015. The report includes the determination of liabilities and contribution rates resulting from the participation of Manistee Co (5101) in the Municipal Employees' Retirement System of Michigan ("MERS"). MERS is a nonprofit organization, independent from the State, that has provided retirement plans for municipal employees for more than 65 years. Manistee Co is responsible for the employer contributions needed to provide MERS benefits for its employees and former employees under the Michigan Constitution and the MERS Plan Document.

The purpose of the December 31, 2015 annual actuarial valuation is to:

- Measure funding progress
- Establish contribution requirements for the fiscal year beginning October 1, 2017
- Provide actuarial information in connection with applicable Governmental Accounting Standards Board (GASB) statements

This valuation report should not be relied upon for any other purpose. Reliance on information contained in this report by anyone for anything other than the intended purpose could be misleading.

The valuation uses financial data, plan provision data, and participant data as of December 31, 2015 furnished by MERS. In accordance with Actuarial Standards of Practice No. 23, the data was checked for internal and year to year consistency as well as general reasonableness, but was not otherwise audited. CBIZ Retirement Plan Services 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 MERS Retirement Board, and are reviewed every five years in an Experience Study. The most recent study was completed in 2015, and this December 31, 2015 valuation report reflects changes in assumptions and methods. 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-2015AnnualActuarialValuation-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 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).

This information is purely actuarial in nature. It is not intended to serve as a substitute for legal, accounting or investment advice.

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 associated third parties such as the auditor for the municipality). CBIZ Retirement Plan Services is not responsible for the consequences of any unauthorized use.

You should notify MERS if you disagree with anything contained in the report or are aware of any information that would affect the results of the report that have not been communicated to us. If you have reason to believe that the plan provisions are incorrectly described, that important plan provisions relevant to this valuation are not described, that conditions have changed since the calculations were made, that the information provided in this report is inaccurate or is in anyway incomplete, or if you need further information in order to make an informed decision on the subject matter in this report, please contact your Regional Manager at 1.800.767.MERS(6377).

Sincerely,

Cathy Nagy, MAAA, FSA
Jim Koss, MAAA, ASA
Curtis Powell, MAAA, EA
Alan Sonnanstine, MAAA, ASA

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Executive Summary

New Actuarial Assumptions and Methods

The actuarial assumptions and methods are adopted by the MERS Retirement Board, and are reviewed every five years in an Experience Study. The Experience Study is a comprehensive, detailed analysis that reviews MERS' funding policy and compares actual experience with the current actuarial assumptions; the study recommends adjustments as necessary. The most recent study was completed in 2015, and this December 31, 2015 valuation report reflects several changes in actuarial assumptions.

The main assumption and method changes were:

- The mortality table was adjusted to reflect longer lifetimes.
- The assumed annual rate of investment return, net of all expenses, was lowered from 8% to 7.75%.
- The asset smoothing was changed from 10 to 5 years.
- The amortization period was moved to a fixed period amortization for the December 31, 2014 annual valuations.
 - o The period will continue to gradually decrease for both open and closed divisions until the current unfunded accrued liability (UAL) is completely paid off.
 - o Moving to this type of "fixed period amortization" means that all unfunded liabilities will be fully funded by a specific date in the future.
 - o Once the amortization period drops below 15 years (10 years for closed divisions), any future liability and asset gains or losses will be spread over a 15-year fixed period for open divisions and a 10-year fixed period for closed divisions — creating "layers" of UAL on an annual basis.
 - o This transparent method allows tracking of what changed your UAL, and sets a fixed period in time in which that UAL change will be fully funded.

Various other actuarial assumptions were revised, but the revisions had a smaller impact than the two assumption changes above (first two bullets). For a summary of all of the actuarial assumptions and methods, please refer to the division-specific assumptions described on the last page of this report, and to the [Appendix](#).

The new amortization period layers and the new 5-year asset smoothing do not impact this 2015 annual valuation, other than the 6 year projections. These method changes will first impact the December 31, 2016 annual valuations.

The impacts of the assumption changes on the funded ratio and the required employer contributions are displayed on the next few pages. While these changes in assumptions will mean larger liabilities and contributions than anticipated by the prior assumptions for most employers, they will ensure each employer makes reasonable progress towards funding the unfunded liabilities of the employer. When

discussing changes in assumptions it is important to remember that, although the assumptions used impact the annual contributions, the true cost of the plan will be based on what will actually happen in the future – independent of the assumptions used. MERS recognizes that many municipalities are already taking steps to reduce their UAL. The MERS Board approved a “phase in” of the total impact of the assumption changes over the next 5 years (impacting fiscal years beginning 2017 – 2021) as an option for you. Of course, if the employer pays less in the first 4 years, they will likely have to pay somewhat more in later years.

MERS created a dedicated resource page on their website, www.mersofmich.com, regarding this topic, with links to frequently asked questions, upcoming events and additional details.

Impacts from the Assumption Changes

The new actuarial assumptions changed your December 31, 2015 percent funded from 74% to 70%, a change of -4%.

The new assumptions changed your total monthly employer contribution requirement, before any phase-in, from \$138,782 to \$157,261, a change of \$18,479 (a 13% increase). Under the 5-year phase-in the first year increase is instead 3% (from \$138,782 to \$142,461 monthly).

Additional detail is shown on the following pages.

Funded Ratio and Required Employer Contributions

The MERS Defined Benefit Plan is an agent multiple-employer plan, meaning that assets are pooled for investment purposes but separate accounts are maintained for each individual employer. Each municipality is responsible for their own plan liabilities; MERS does not borrow from one municipality's account to pay for another.

The funded ratio of a plan is the percentage of the dollar value of the accrued benefits that is covered by the actuarial value of assets.

Your Funded Ratio:

For comparison purposes, we have included your December 31, 2015 funded ratio if it had been calculated under the previous assumptions. Note: Your actual funded level as of December 31, 2015 is the amount listed under the new assumptions.

	New Assumptions	Previous Assumptions	
	12/31/2015	12/31/2015	12/31/2014
Funded Ratio	70%	74%	75%

Michigan Law requires that pension plans be pre-funded, meaning money is set aside now to pay for future benefits. Pension plans are usually funded by employer and employee contributions, and investment income.

How quickly a plan attains the 100% funding goal depends on many factors such as:

- The current funded ratio
- The future experience of the plan
- The amortization period

It is more important to look at the trend in the funded ratio over a period of time than at a particular point in time.

Your Required Employer Contributions:

Your computed employer contributions are shown in the following table. Employee contributions, if any, are in addition to the computed employer contributions. Note: Your minimum required contribution is the amount listed under the new assumptions, with phase-in. For comparison purposes, we have included your computed employer contribution if it had been calculated under the previous assumptions.

	Percentage of Payroll				Monthly \$ Based on Valuation Payroll			
	New Assumptions		Previous Assumptions		New Assumptions		Previous Assumptions	
	Phase-in	Full Impact			Phase-in	Full Impact		
Valuation Date:	12/31/2015	12/31/2015	12/31/2015	12/31/2014	12/31/2015	12/31/2015	12/31/2015	12/31/2014
Fiscal Year Beginning:	October 1, 2017	October 1, 2017	October 1, 2017	October 1, 2016	October 1, 2017	October 1, 2017	October 1, 2017	October 1, 2016
Division								
01 - General	-	-	-	-	\$ 0	\$ 0	\$ 0	\$ 0
02 - Sheriff/POAM	-	-	-	-	14,723	16,695	14,229	14,709
04 - MCF	10.94%	12.25%	10.55%	10.88%	48,055	53,831	46,612	43,179
10 - 911 Employees	7.41%	8.33%	7.15%	6.72%	3,500	3,932	3,393	2,416
11 - Exec Employees	-	-	-	-	14,842	16,246	14,491	13,349
12 - Elected Officials	-	-	-	-	6,037	6,689	5,872	5,480
13 - GEA & TPOAM	-	-	-	-	9,488	10,768	9,167	9,354
14 - Court Employees	-	-	-	-	18,593	20,985	17,996	18,142
20 - Sheriff/Adm	-	-	-	-	5,396	6,100	5,219	5,042
41 - Medical Facility Admin	-	-	-	-	10,261	10,317	10,246	8,463
HA - AFSCME hired aft 10/01	8.07%	8.23%	7.93%	8.79%	2,458	2,506	2,446	591
HB - Sheriff POAM (POLC) af	6.61%	6.61%	6.54%	6.61%	2,274	2,274	2,295	1,390
HC - Executive after 10/1/2	7.93%	8.01%	7.80%	8.25%	2,446	2,470	2,442	978
HE - Court EEs hired af 11/	8.01%	8.12%	7.89%	7.98%	4,388	4,448	4,374	1,381
Municipality Total					\$ 142,461	\$ 157,261	\$ 138,782	\$ 124,474

Under the new assumptions, both the full impact and the phased in employer contribution requirements are shown in the table above. The phase in allows the employer to spread the increase of the new actuarial assumptions over 5 fiscal years. By default, MERS will invoice you the phased in contribution amount. However, MERS strongly encourages employers to contribute more than the minimum required contribution, including paying the full amount of the impact of the changes, if possible.

Employee contribution rates reflected in the valuations are shown below:

Valuation Date:	Employee Contribution Rate	
	12/31/2015	12/31/2014
Division		
01 - General	0.00%	0.00%
02 - Sheriff/POAM	12.28%	9.57%
04 - MCF	4.22%	3.24%

Valuation Date:	Employee Contribution Rate	
	12/31/2015	12/31/2014
Division		
10 - 911 Employees	2.52%	2.52%
11 - Exec Employees	2.44%	2.44%
12 - Elected Officials	4.53%	4.53%
13 - GEA & TPOAM	5.99%	4.71%
14 - Court Employees	3.28%	3.28%
20 - Sheriff/Adm	2.88%	2.88%
41 - Medical Facility Admin	0.00%	0.00%
HA - AFSCME hired aft 10/01	0.00%	0.00%
HB - Sheriff POAM (POLC) af	0.00%	0.00%
HC - Executive after 10/1/2	0.00%	0.00%
HE - Court EEs hired af 11/	0.00%	0.00%

The employer may contribute more than the minimum required contributions, as these additional contributions will earn investment income and may result in lower future contribution requirements. **MERS strongly encourages employers to contribute more than the minimum contribution shown above.**

Assuming that experience of the plan meets actuarial assumptions:

- To accelerate to a 100% funding ratio in 10 years, estimated monthly employer contributions for the entire employer would be \$ 231,997, instead of \$ 157,261.
- To accelerate to a 100% funding ratio in 20 years, estimated monthly employer contributions for the entire employer would be \$ 165,640, instead of \$ 157,261.

If you are interested in making additional contributions, please contact MERS and they can assist you with evaluating your options.

How and Why Do These Numbers Change?

In a defined benefit plan contributions vary from one annual actuarial valuation to the next as a result of the following:

- Changes in benefit provisions (see Table 2)
- Changes in actuarial assumptions and methods (see the [Appendix](#))
- Experience of the plan (investment experience and demographic experience); this is the difference between actual experience of the plan and the actuarial assumptions

Actuarial valuations do not affect the ultimate cost of the plan; the benefit payments (current and future) determine the cost of the plan. Actuarial valuations only affect the timing of the contributions into the plan. Because assumptions are for the long term, plan experience will not match the actuarial

assumptions in any given year (except by coincidence). Each annual actuarial valuation will adjust the required employer contributions up or down based on the prior year's actual experience.

Comments on Asset Smoothing

The actuarial value of assets, used to determine both your funded ratio and your required employer contribution, is based on a smoothed value of assets (10-year smoothing prior to 2016; 5-year smoothing beginning in 2016). A smoothing method reduces the volatility of the valuation results, which affects your required employer contribution and funded ratio. The smoothed actuarial rate of return for 2015 was 5.21%.

As of December 31, 2015 the actuarial value of assets is 113% of market value. This means that meeting the actuarial assumption in the next few years will require average annual market returns that exceed the 7.75% investment return assumption.

If the December 31, 2015 valuation results were based on market value on that date instead of smoothed funding value: i) the funded percent of your entire municipality would be 62% (instead of 70%); and ii) your total employer contribution requirement for the fiscal year starting October 1, 2017 would be \$ 2,190,876 (instead of \$ 1,887,132).

The asset smoothing method is a powerful tool for reducing the volatility of your required employer contributions. **However, if the current 13% difference between the smoothed value and the market value of assets is not made up, the result would be gradual increases in your employer contribution requirement over the next few years (to around the levels described above).**

Risk Characteristics of Defined Benefit Plans

It is important to understand that retirement plans, by their nature, are exposed to certain risks. While risks cannot be eliminated entirely, they can be mitigated through various strategies. Below are a few examples of risk (this is not an all-inclusive list):

- Economic - investment return, wage inflation, etc.
- Demographic - longevity, disability, retirement, etc.
- Plan Sponsor and Employees - contribution volatility, attract/retain employees, etc.

The MERS Retirement Board adopts certain assumptions and methods to mitigate the economic and demographic risks, and the contribution volatility risks. For example, the investment risk is the largest economic risk and is mitigated by having a balanced portfolio and a clearly defined investment strategy. Demographic risks vary based on the age of the workforce and are mitigated by preparing special studies called experience studies on a regular basis to determine if the assumptions used are reasonable compared to the experience. Risk may be mitigated through a plan design that provides benefits that are sustainable in the long run. An Experience Study is completed every five years to review the assumptions and methods. The next Experience Study will be completed in 2020.

Alternate Scenarios to Estimate the Potential Volatility of Results ("What If Scenarios")

The calculations in this report are based on assumptions about long-term economic and demographic behavior. These assumptions will never materialize in a given year, except by coincidence. Therefore the results will vary from one year to the next. The volatility of the results depends upon the characteristics of the plan. For example:

- Open divisions that have substantial assets compared to their active employee payroll will have more volatile employer contribution rates due to investment return fluctuations.
- Open divisions that have substantial accrued liability compared to their active employee payroll will have more volatile employer contribution rates due to demographic experience fluctuations.
- Small divisions will have more volatile contribution patterns than larger divisions because statistical fluctuations are relatively larger among small populations.
- Shorter amortization periods result in more volatile contribution patterns.

The analysis in this section is intended to review the potential volatility of the actuarial valuation results. It is important to note that calculations in this report are mathematical estimates based upon assumptions regarding future events, which may or may not materialize. Actuarial calculations can and do vary from one valuation to the next, sometimes significantly depending on the group's size.

Many assumptions are important in determining the required employer contributions.

For example:

- Lower investment returns would result in higher required employer contributions, and vice-versa.

- Smaller than projected pay increases would lower required employer contributions.
- Reductions in the number of active employees would lower required contribution dollars, but would usually increase the contribution rate expressed as a percentage of (the now lower) payroll.
- Retirements at earlier ages than projected would usually increase required employer contributions.
- More non-vested terminations of employment than projected would decrease required contributions.
- More disabilities or survivor (death) benefits than projected would increase required contributions.
- Longer lifetimes after retirement than projected would increase required employer contributions.

In the table below, we show the impact of varying one actuarial assumption: the future annual rate of investment return. Lower investment returns would result in higher required employer contributions, and vice-versa.

The relative impact of each investment return scenario below will vary from year to year, as the participant demographics change. The impact of each scenario should be analyzed for a given year, not from year to year. The results in the table are based on the December 31, 2015 valuation, and are for the municipality in total, not by division. These results do not reflect a 5-year phase in of the impact of the new actuarial assumptions.

	Assumed Future Annual Smoothed Rate of Investment Return			
	Lower Future Annual Returns		Valuation Assumption	Higher Returns
	5.75%	6.75%	7.75%	8.75%
12/31/2015 Valuation Results				
Accrued Liability	\$ 63,625,070	\$ 56,497,227	\$ 50,527,189	\$ 45,498,665
Valuation Assets	\$ 35,413,881	\$ 35,413,881	\$ 35,413,881	\$ 35,413,881
Unfunded Accrued Liability	\$ 28,211,189	\$ 21,083,346	\$ 15,113,308	\$ 10,084,784
Funded Ratio	56%	63%	70%	78%
Monthly Normal Cost	\$ 109,970	\$ 80,639	\$ 58,463	\$ 41,467
Monthly Amortization Payment	\$ 142,500	\$ 115,496	\$ 87,895	\$ 58,622
Total Employer Contribution¹	\$ 261,200	\$ 205,948	\$ 157,261	\$ 112,095

¹ If assets exceed accrued liabilities for a division, the division's amortization payment is negative and is used to reduce the division's employer contribution requirement. If the overfunding credit is larger than the normal cost, the division's full credit is included in the municipality's amortization payment above but the division's total contribution requirement is zero. This can cause the displayed normal cost and amortization payment to not add up to the displayed total employer contribution.

Six Year Projection Scenarios

The table on the following page illustrates the plan's projected liabilities and computed employer contributions for the next six fiscal years, under the new actuarial assumptions and under three future economic/assumption scenarios. All four projections take into account the past financial losses that will continue to affect the smoothed rate of return for the next four years. Under the 7.75% scenarios, two sets of projections are shown:

- Based on the phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. This projects your minimum required contribution.
- Based on no phase-in of the increased contribution requirements.

The 7.75% scenarios provide an estimate of computed employer contributions based on current actuarial assumptions, and a projected 7.75% market return. The other two scenarios may be useful if the municipality chooses to budget more conservatively, and make contributions in addition to the minimum requirements. The 6.75% and 5.75% projections provide an indication of the potential required employer contribution if MERS were to realize investment returns of 6.75% and 5.75% over the long-term.

Valuation Year Ending 12/31	Fiscal Year Beginning 10/1	Actuarial Accrued Liability	Valuation Assets	Funded Percentage	Computed Annual Employer Contribution
7.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
WITH 5-YEAR PHASE-IN					
2015	2017	\$ 50,527,189	\$ 35,413,881	70%	\$ 1,733,472
2016	2018	52,653,648	36,151,544	69%	1,896,732
2017	2019	54,810,114	36,851,245	67%	2,105,064
2018	2020	56,951,520	37,467,658	66%	2,327,244
2019	2021	59,054,269	38,025,821	64%	2,560,608
2020	2022	61,099,231	39,682,750	65%	2,664,828
NO 5-YEAR PHASE-IN					
2015	2017	\$ 50,527,189	\$ 35,413,881	70%	\$ 1,911,072
2016	2018	52,653,648	36,151,544	69%	2,016,768
2017	2019	54,810,114	36,900,836	67%	2,170,056
2018	2020	56,951,520	37,696,399	66%	2,340,588
2019	2021	59,054,269	38,376,141	65%	2,524,812
2020	2022	61,099,231	40,112,933	66%	2,628,000
6.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
NO 5-YEAR PHASE-IN					
2015	2017	\$ 56,497,227	\$ 35,413,881	63%	\$ 2,501,136
2016	2018	58,800,595	35,810,470	61%	2,615,880
2017	2019	61,131,478	36,359,278	60%	2,779,008
2018	2020	63,445,946	37,408,287	59%	2,957,616
2019	2021	65,720,773	38,321,638	58%	3,153,516
2020	2022	67,937,731	40,333,024	59%	3,276,372
5.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
NO 5-YEAR PHASE-IN					
2015	2017	\$ 63,625,070	\$ 35,413,881	56%	\$ 3,171,768
2016	2018	66,136,131	35,469,314	54%	3,298,824
2017	2019	68,672,533	35,844,840	52%	3,474,840
2018	2020	71,191,955	37,239,051	52%	3,664,860
2019	2021	73,671,725	38,473,886	52%	3,874,824
2020	2022	76,094,745	40,667,335	53%	4,029,696

Employer Contribution Details (Without a 5-year Phase-In) For the Fiscal Year Beginning October 1, 2017

Table 1

Division	Amort. Period for Unfund. Liab. ^{4,5}	Employer Contributions ¹			Blended Employer Contribut. ⁶	Employee Contribution Rate	Employee Contribut. Conversion Factor ²
		Normal Cost	Unfunded Accrued Liability	Total Computed Employer Contribut.			
Percentage of Payroll							
01 - General	19	-	-	-		0.00%	
02 - Sheriff/POAM	23	-	-	-	15.41%	12.28%	
04 - MCF	23	5.35%	6.90%	12.25%		4.22%	0.85%
10 - 911 Employees	23	7.38%	0.95%	8.33%		2.52%	0.87%
11 - Exec Employees	23	-	-	-	21.41%	2.44%	
12 - Elected Officials	23	-	-	-		4.53%	
13 - GEA & TPOAM	23	-	-	-	18.13%	5.99%	
14 - Court Employees	23	-	-	-	21.09%	3.28%	
20 - Sheriff/Adm	23	-	-	-		2.88%	
41 - Medical Facility A	20	-	-	-		0.00%	
HA - AFSCME hired aft 1	23	8.31%	-0.08%	8.23%	18.13%	0.00%	0.82%
HB - Sheriff POAM (POLC	23	6.49%	0.12%	6.61%	15.41%	0.00%	0.87%
HC - Executive after 10	23	7.76%	0.25%	8.01%	21.41%	0.00%	0.93%
HE - Court EEs hired af	23	7.99%	0.13%	8.12%	21.09%	0.00%	0.90%
Estimated Monthly Contribution³							
01 - General	19	\$ 0	\$ (10,903)	\$ 0			
02 - Sheriff/POAM	23	3,256	13,439	16,695			
04 - MCF	23	23,510	30,321	53,831			
10 - 911 Employees	23	3,484	448	3,932			
11 - Exec Employees	23	5,135	11,111	16,246			
12 - Elected Officials	23	1,077	5,612	6,689			
13 - GEA & TPOAM	23	2,628	8,140	10,768			
14 - Court Employees	23	6,864	14,121	20,985			
20 - Sheriff/Adm	23	976	5,124	6,100			
41 - Medical Facility A	20	0	10,317	10,317			
HA - AFSCME hired aft 1	23	2,530	(24)	2,506			
HB - Sheriff POAM (POLC	23	2,233	41	2,274			
HC - Executive after 10	23	2,393	77	2,470			
HE - Court EEs hired af	23	4,377	71	4,448			
Total Municipality		\$ 58,463	\$ 87,895	\$ 157,261			
Estimated Annual Contribution³		\$ 701,556	\$ 1,054,740	\$ 1,887,132			

¹ The above employer contribution requirements are in addition to the employee contributions, if any.

² If employee contributions are increased/decreased by 1.00% of pay, the employer contribution requirement will decrease/increase by the Employee Contribution Conversion Factor. The conversion factor is usually under 1%, because employee contributions may be refunded at termination of employment, and not used to fund retirement pensions. Employer contributions will all be used to fund pensions.

- ³ For divisions that are open to new hires, estimated contributions are based on projected fiscal year payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts. 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 October 1, 2017 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 it reaches 6 or 5 years. Then it decreases by 1 year each valuation year until the UAL is paid off. Under Amortization Option B, the period will decrease by 2 years each valuation year, until it reaches 16 or 15 years. Thereafter, the period will reduce by 1 year each valuation year, until the UAL is paid off. This will result in amortization payments that increase faster than the usual 3.75% 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 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.

Note that the Employer Contribution Details shown in Table 1 do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 1 above. The contribution requirements including the 5-year phase-in are shown on page 8.

Please see the Comments on Asset Smoothing.

Benefit Provisions

Table 2

01 - General: Closed to new hires		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.00% Multiplier (no max)	2.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	0%	0%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)
02 - Sheriff/POAM: Closed to new hires, linked to Division HB		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	50/25	50/25
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	12.28%	9.57%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)
04 - MCF: Open Division		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.00% Multiplier (no max)	2.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	30 and Out	30 and Out
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	4.22%	3.24%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

Table 2 (continued)

10 - 911 Employees: Open Division		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	2.52%	2.52%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)
11 - Exec Employees: Closed to new hires, linked to Division HC		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	55/20	55/20
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	2.44%	2.44%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)
12 - Elected Officials: Closed to new hires, linked to Division HD		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	55/20	55/20
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	4.53%	4.53%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)
13 - GEA & TPOAM: Closed to new hires, linked to Division HA		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	55/20	55/20
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	5.99%	4.71%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

Table 2 (continued)

14 - Court Employees: Closed to new hires, linked to Division HE

	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	55/20	55/20
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	3.28%	3.28%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

20 - Sheriff/Adm: Closed to new hires, linked to Division HF

	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	50/25	50/25
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	2.88%	2.88%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

41 - Medical Facility Administrator: Closed to new hires

	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.00% Multiplier (no max)	2.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	50/30	50/30
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	0%	0%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

HA - AFSCME hired aft 10/01/2011: Open Division, linked to Division 13

	2015 Valuation	2014 Valuation
Benefit Multiplier:	Hybrid Plan - 1.50% Multiplier	Hybrid Plan - 1.50% Multiplier
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0%	0%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

Table 2 (continued)

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

	2015 Valuation	2014 Valuation
Benefit Multiplier:	Hybrid Plan - 1.50% Multiplier	Hybrid Plan - 1.50% Multiplier
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0%	0%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

HC - Executive after 10/1/2012: Open Division, linked to Division 11

	2015 Valuation	2014 Valuation
Benefit Multiplier:	Hybrid Plan - 1.50% Multiplier	Hybrid Plan - 1.50% Multiplier
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0%	0%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

HE - Court EEs hired af 11/1/2012: Open Division, linked to Division 14

	2015 Valuation	2014 Valuation
Benefit Multiplier:	Hybrid Plan - 1.50% Multiplier	Hybrid Plan - 1.50% Multiplier
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0%	0%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

Participant Summary

Table 3

Division	2015 Valuation		2014 Valuation		2015 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
01 - General							
Active Employees	0	\$ 0	0	\$ 0	0.0	0.0	0.0
Vested Former Employees	1	4,004	2	6,209	56.8	8.3	8.3
Retirees and Beneficiaries	15	56,094	17	58,617	76.1		
02 - Sheriff/POAM							
Active Employees	20	\$ 1,041,121	20	\$ 1,026,719	42.4	13.3	13.3
Vested Former Employees	5	32,364	6	33,124	47.4	7.7	17.1
Retirees and Beneficiaries	18	269,920	18	266,862	69.4		
04 - MCF							
Active Employees	133	\$ 4,764,948	128	\$ 4,762,440	44.6	9.9	10.3
Vested Former Employees	43	198,147	37	167,785	48.5	8.2	10.9
Retirees and Beneficiaries	98	1,009,435	93	910,701	69.9		
10 - 911 Employees							
Active Employees	12	\$ 511,836	10	\$ 431,427	44.4	12.6	13.7
Vested Former Employees	4	49,050	5	56,597	51.5	12.4	18.1
Retirees and Beneficiaries	1	7,065	0	0	67.0		
11 - Exec Employees							
Active Employees	17	\$ 797,847	17	\$ 778,071	46.1	11.4	12.7
Vested Former Employees	4	49,452	4	49,452	49.4	10.2	12.9
Retirees and Beneficiaries	9	219,015	9	219,015	66.4		
12 - Elected Officials							
Active Employees	3	\$ 226,266	3	\$ 224,009	58.0	19.0	23.4
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	3	100,829	3	98,722	66.2		
13 - GEA & TPOAM							
Active Employees	21	\$ 633,618	25	\$ 756,257	53.8	15.1	15.1
Vested Former Employees	2	1,475	2	1,475	56.8	1.8	14.0
Retirees and Beneficiaries	15	216,394	12	167,501	67.9		
14 - Court Employees							
Active Employees	22	\$ 940,869	25	\$ 1,160,842	53.1	12.3	17.1
Vested Former Employees	8	136,774	8	83,976	51.4	12.1	15.4
Retirees and Beneficiaries	25	470,345	21	376,180	64.9		
20 - Sheriff/Adm							
Active Employees	3	\$ 189,048	3	\$ 187,431	51.2	29.6	29.6
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	4	127,712	4	127,712	59.9		

Table 3 (continued)

Division	2015 Valuation		2014 Valuation		2015 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
41 - Medical Facility Adm							
Active Employees	0	\$ 0	0	\$ 0	0.0	0.0	0.0
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	2	109,685	2	109,685	69.3		
HA - AFSCME hired aft 10/							
Active Employees	8	\$ 160,598	5	\$ 80,788	48.4	0.9	0.9
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
HB - Sheriff POAM (POLC)							
Active Employees	8	\$ 293,975	8	\$ 252,324	40.7	1.8	1.8
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
HC - Executive after 10/1							
Active Employees	4	\$ 149,735	4	\$ 142,298	39.8	2.5	7.2
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
HE - Court EEs hired af 1							
Active Employees	8	\$ 366,760	6	\$ 207,654	43.6	1.4	4.7
Vested Former Employees	1	695	0	0	58.3	1.8	8.0
Retirees and Beneficiaries	0	0	0	0	0.0		
Total Municipality							
Active Employees	259	\$ 10,076,621	254	\$ 10,010,260	46.1	10.4	11.4
Vested Former Employees	68	471,961	64	398,618	49.5	8.7	12.4
Retirees and Beneficiaries	190	2,586,494	179	2,334,995	69.1		
Total Participants	517		497				

¹ Annual payroll for active employees; annual deferred benefits payable for vested former employees; 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	2015 Valuation		2014 Valuation	
	Employer and Retiree ¹	Employee ²	Employer and Retiree ¹	Employee ²
01 - General	\$ 1,268,770	\$ 0	\$ 1,349,160	\$ 0
02 - Sheriff/POAM	2,952,757	771,903	3,152,565	665,249
04 - MCF	11,560,879	738,771	12,201,116	629,315
10 - 911 Employees	1,181,197	190,903	1,172,542	179,508
11 - Exec Employees	2,154,866	227,847	2,270,298	211,575
12 - Elected Officials	823,574	108,312	896,533	97,429
13 - GEA & TPOAM	2,198,768	314,013	2,340,215	323,293
14 - Court Employees	4,374,419	436,275	4,583,732	465,738
20 - Sheriff/Adm	1,459,682	94,379	1,557,007	88,360
41 - Medical Facility Administrator	221,605	0	292,697	0
HA - AFSCME hired aft 10/01/2011	17,585	0	8,131	0
HB - Sheriff POAM (POLC) af 10/1/12	40,454	0	22,524	0
HC - Executive after 10/1/2012	20,243	0	11,846	0
HE - Court EEs hired af 11/1/2012	33,957	0	12,991	0
Municipality Total	\$ 28,308,756	\$ 2,882,403	\$ 29,871,357	\$ 2,660,467
Combined Reserves	\$ 31,191,159		\$ 32,531,824	

¹ Reserve for Employer Contributions and Benefit Payments

² Reserve for Employee Contributions

The December 31, 2015 valuation assets are equal to 1.135382 times the reported market value of assets (compared to 1.059937 as of December 31, 2014). 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	Employer Contributions		Employee Contributions	Investment Income	Benefit Payments	Employee Contribution Refunds	Net Transfers	Valuation Asset Balance
	Required	Additional						
2005	\$ 929,721		\$ 124,285	\$ 1,209,641	\$ (678,110)	\$ (342)	\$ 0	\$ 19,852,104
2006	1,068,561		189,730	1,620,885	(851,189)	(7,341)	0	21,872,750
2007	1,123,584		224,450	1,771,002	(1,045,981)	(19,857)	9,097	23,935,045
2008	1,178,188		230,119	1,182,754	(1,182,275)	(6,298)	23,222	25,360,755
2009	1,256,070		247,418	1,402,588	(1,339,391)	(9,407)	52,425	26,970,458
2010	1,536,237		276,547	1,639,656	(1,561,388)	(25,378)	0	28,836,132
2011	1,329,259	\$ 0	298,496	1,572,288	(1,763,005)	(16,612)	0	30,256,558
2012	1,253,282	0	339,894	1,458,482	(1,835,042)	(23,342)	56,346	31,506,178
2013	1,277,307	0	309,257	1,925,047	(1,979,373)	(33,091)	36,130	33,041,455
2014	1,304,362	0	407,374	1,915,524	(2,197,586)	(37,483)	48,038	34,481,684
2015	1,352,930	0	381,789	1,718,738	(2,505,464)	(15,796)	0	35,413,881

Notes:

Transfers in and out are usually related to the transfer of participants between municipalities, and to employer and employee payments for service credit purchases (if any) that the governing body has approved.

Additional employer contributions, if any, are shown separately starting in 2011. Prior to 2011, additional contributions are combined with the required employer contributions.

In the actuarial valuation additional employer contributions are combined with required contributions and used to reduce computed future required employer contributions.

The investment income column reflects the recognized investment income based on the smoothed value of assets. It does not reflect the market value investment return in any given year.

Actuarial Accrued Liabilities and Valuation Assets As of December 31, 2015

Table 6

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
01 - General				
Active Employees	\$ 0	\$ 938,202	0.0%	\$ (938,202)
Vested Former Employees	33,520	33,520	100.0%	0
Retirees And Beneficiaries	468,817	468,817	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 502,337	\$ 1,440,539	286.8%	\$ (938,202)
02 - Sheriff/POAM				
Active Employees	\$ 3,288,285	\$ 930,784	28.3%	\$ 2,357,501
Vested Former Employees	273,420	273,420	100.0%	0
Retirees And Beneficiaries	3,013,285	3,013,285	100.0%	0
Pending Refunds	<u>11,423</u>	<u>11,423</u>	100.0%	<u>0</u>
Total	\$ 6,586,413	\$ 4,228,912	64.2%	\$ 2,357,501
04 - MCF				
Active Employees	\$ 8,770,970	\$ 3,486,331	39.7%	\$ 5,284,639
Vested Former Employees	990,142	990,142	100.0%	0
Retirees And Beneficiaries	9,437,980	9,437,980	100.0%	0
Pending Refunds	<u>50,348</u>	<u>50,348</u>	100.0%	<u>0</u>
Total	\$ 19,249,440	\$ 13,964,801	72.5%	\$ 5,284,639
10 - 911 Employees				
Active Employees	\$ 1,265,624	\$ 1,199,062	94.7%	\$ 66,562
Vested Former Employees	291,907	291,907	100.0%	0
Retirees And Beneficiaries	66,603	66,603	100.0%	0
Pending Refunds	<u>286</u>	<u>286</u>	100.0%	<u>0</u>
Total	\$ 1,624,420	\$ 1,557,858	95.9%	\$ 66,562
11 - Exec Employees				
Active Employees	\$ 2,062,307	\$ 195,006	9.5%	\$ 1,867,301
Vested Former Employees	367,611	332,019	90.3%	35,592
Retirees And Beneficiaries	2,172,392	2,172,392	100.0%	0
Pending Refunds	<u>5,872</u>	<u>5,872</u>	100.0%	<u>0</u>
Total	\$ 4,608,182	\$ 2,705,289	58.7%	\$ 1,902,893
12 - Elected Officials				
Active Employees	\$ 1,062,672	\$ 108,312	10.2%	\$ 954,360
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	963,091	949,735	98.6%	13,356
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 2,025,763	\$ 1,058,047	52.2%	\$ 967,716

Table 6 (continued)

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
13 - GEA & TPOAM				
Active Employees	\$ 2,167,552	\$ 758,790	35.0%	\$ 1,408,762
Vested Former Employees	11,848	11,848	100.0%	0
Retirees And Beneficiaries	2,068,666	2,068,666	100.0%	0
Pending Refunds	<u>13,662</u>	<u>13,662</u>	100.0%	<u>0</u>
Total	\$ 4,261,728	\$ 2,852,966	66.9%	\$ 1,408,762
14 - Court Employees				
Active Employees	\$ 2,335,099	\$ 290,597	12.4%	\$ 2,044,502
Vested Former Employees	810,572	400,626	49.4%	409,946
Retirees And Beneficiaries	4,764,784	4,764,784	100.0%	0
Pending Refunds	<u>5,968</u>	<u>5,968</u>	100.0%	<u>0</u>
Total	\$ 7,916,423	\$ 5,461,975	69.0%	\$ 2,454,448
20 - Sheriff/Adm				
Active Employees	\$ 1,232,819	\$ 347,074	28.2%	\$ 885,745
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	1,417,379	1,417,379	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 2,650,198	\$ 1,764,453	66.6%	\$ 885,745
41 - Medical Facility Administrator				
Active Employees	\$ 0	\$ 0	0.0%	\$ 0
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	946,288	251,606	26.6%	694,682
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 946,288	\$ 251,606	26.6%	\$ 694,682
HA - AFSCME hired aft 10/01/2011				
Active Employees	\$ 20,165	\$ 19,966	99.0%	\$ 199
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 20,165	\$ 19,966	99.0%	\$ 199
HB - Sheriff POAM (POLC) af 10/1/12				
Active Employees	\$ 53,123	\$ 45,931	86.5%	\$ 7,192
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 53,123	\$ 45,931	86.5%	\$ 7,192
HC - Executive after 10/1/2012				
Active Employees	\$ 35,437	\$ 22,984	64.9%	\$ 12,453
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 35,437	\$ 22,984	64.9%	\$ 12,453

Table 6 (continued)

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
HE - Court EEs hired af 11/1/2012				
Active Employees	\$ 40,677	\$ 31,959	78.6%	\$ 8,718
Vested Former Employees	6,595	6,595	100.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 47,272	\$ 38,554	81.6%	\$ 8,718
Total Municipality				
Active Employees	\$ 22,334,730	\$ 8,374,998	37.5%	\$ 13,959,732
Vested Former Employees	2,785,615	2,340,077	84.0%	445,538
Retirees and Beneficiaries	25,319,285	24,611,247	97.2%	708,038
Pending Refunds	<u>87,559</u>	<u>87,559</u>	100.0%	<u>0</u>
Total Participants	\$ 50,527,189	\$ 35,413,881	70.1%	\$ 15,113,308
The following results show the combined accrued liabilities and assets for each set of linked divisions. These results are already included in the table above.				
Linked Divisions HB, 02				
Active Employees	\$ 3,341,408	\$ 976,715	29.2%	\$ 2,364,693
Vested Former Employees	273,420	273,420	100.0%	0
Retirees and Beneficiaries	3,013,285	3,013,285	100.0%	0
Pending Refunds	<u>11,423</u>	<u>11,423</u>	100.0%	<u>0</u>
Total	\$ 6,639,536	\$ 4,274,843	64.4%	\$ 2,364,693
Linked Divisions HC, 11				
Active Employees	\$ 2,097,744	\$ 217,990	10.4%	\$ 1,879,754
Vested Former Employees	367,611	332,019	90.3%	35,592
Retirees and Beneficiaries	2,172,392	2,172,392	100.0%	0
Pending Refunds	<u>5,872</u>	<u>5,872</u>	100.0%	<u>0</u>
Total	\$ 4,643,619	\$ 2,728,273	58.8%	\$ 1,915,346
Linked Divisions HA, 13				
Active Employees	\$ 2,187,717	\$ 778,756	35.6%	\$ 1,408,961
Vested Former Employees	11,848	11,848	100.0%	0
Retirees and Beneficiaries	2,068,666	2,068,666	100.0%	0
Pending Refunds	<u>13,662</u>	<u>13,662</u>	100.0%	<u>0</u>
Total	\$ 4,281,893	\$ 2,872,932	67.1%	\$ 1,408,961
Linked Divisions HE, 14				
Active Employees	\$ 2,375,776	\$ 322,556	13.6%	\$ 2,053,220
Vested Former Employees	817,167	407,221	49.8%	409,946
Retirees and Beneficiaries	4,764,784	4,764,784	100.0%	0
Pending Refunds	<u>5,968</u>	<u>5,968</u>	100.0%	<u>0</u>
Total	\$ 7,963,695	\$ 5,500,529	69.1%	\$ 2,463,166

¹ Includes both employer and employee assets.

Please see the Comments on Asset Smoothing.

See the MERS Fiscal Responsibility Policy on the MERS website at:

http://www.mersofmich.com/Portals/0/Assets/PageResources/MERS/PlanDocument/Pension/MERSPlanDocument_Section46.pdf .

Actuarial Accrued Liabilities - Comparative Schedule

Table 7

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2001	\$ 17,304,572	\$ 14,180,756	82%	\$ 3,123,816
2002	18,936,031	15,068,096	80%	3,867,935
2003	20,679,808	16,710,314	81%	3,969,494
2004	22,701,054	18,266,909	80%	4,434,145
2005	24,390,467	19,852,104	81%	4,538,363
2006	27,629,462	21,872,750	79%	5,756,712
2007	31,065,279	23,935,045	77%	7,130,234
2008	33,375,896	25,360,755	76%	8,015,141
2009	34,479,961	26,970,458	78%	7,509,503
2010	36,592,533	28,836,132	79%	7,756,401
2011	39,228,060	30,256,558	77%	8,971,502
2012	41,258,320	31,506,178	76%	9,752,142
2013	43,329,826	33,041,455	76%	10,288,371
2014	46,145,483	34,481,684	75%	11,663,799
2015	50,527,189	35,413,881	70%	15,113,308

Notes: Actuarial assumptions were revised for the 2004, 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Division 01 - General

Table 8-01: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 861,372	\$ 1,391,511	162%	\$ (530,139)
2006	739,318	1,435,762	194%	(696,444)
2007	762,484	1,476,381	194%	(713,897)
2008	724,670	1,474,886	204%	(750,216)
2009	691,759	1,472,592	213%	(780,833)
2010	623,477	1,327,578	213%	(704,101)
2011	609,042	1,332,163	219%	(723,121)
2012	609,550	1,335,265	219%	(725,715)
2013	564,145	1,359,509	241%	(795,364)
2014	507,088	1,430,025	282%	(922,937)
2015	502,337	1,440,539	287%	(938,202)

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-01: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2005	1	\$ 8,318	0.00%	0.00%
2006	1	8,121	0.00%	0.00%
2007	1	9,656	0.00%	0.00%
2008	1	9,040	0.00%	0.00%
2009	1	8,640	0.00%	0.00%
2010	1	8,640	0.00%	0.00%
2011	1	8,520	0.00%	0.00%
2012	1	11,187	0.00%	0.00%
2013	0	0	\$ 0	0.00%
2014	0	0	\$ 0	0.00%
2015	0	0	\$ 0	0.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division 02 - Sheriff/POAM

Table 8-02: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 2,965,186	\$ 2,474,431	83%	\$ 490,755
2006	3,268,713	2,664,131	82%	604,582
2007	3,805,191	2,739,311	72%	1,065,880
2008	3,894,810	2,745,255	70%	1,149,555
2009	4,016,871	2,889,651	72%	1,127,220
2010	4,209,382	3,096,990	74%	1,112,392
2011	4,552,496	3,309,956	73%	1,242,540
2012	5,087,061	3,596,243	71%	1,490,818
2013	5,468,332	3,834,273	70%	1,634,059
2014	5,931,070	4,046,642	68%	1,884,428
2015	6,586,413	4,228,912	64%	2,357,501

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-02: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2005	22	\$ 855,823	11.24%	1.33%
2006	24	976,582	11.80%	1.33%
2007	24	1,070,070	12.00%	5.91%
2008	24	1,045,353	12.00%	7.91%
2009	25	1,121,135	12.00%	7.72%
2010	25	1,145,538	12.00%	7.54%
2011	25	1,173,102	12.00%	7.84%
2012	24	1,195,594	\$ 13,782	7.54%
2013	22	1,093,007	\$ 14,572	7.84%
2014	20	1,026,719	\$ 14,709	9.57%
2015	20	1,041,121	\$ 16,695	12.28%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division 04 - MCF

Table 8-04: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 8,494,618	\$ 7,803,105	92%	\$ 691,513
2006	10,249,703	8,597,858	84%	1,651,845
2007	12,025,114	9,693,514	81%	2,331,600
2008	12,956,859	10,284,029	79%	2,672,830
2009	13,070,921	10,968,020	84%	2,102,901
2010	14,101,940	11,647,589	83%	2,454,351
2011	15,101,655	12,165,558	81%	2,936,097
2012	15,684,070	12,579,145	80%	3,104,925
2013	16,420,741	13,104,416	80%	3,316,325
2014	17,578,284	13,599,449	77%	3,978,835
2015	19,249,440	13,964,801	73%	5,284,639

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-04: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2005	162	\$ 4,246,291	7.98%	0.00%
2006	147	4,521,201	9.48%	1.09%
2007	140	4,698,734	10.16%	1.09%
2008	150	4,948,211	10.84%	1.09%
2009	155	4,988,760	10.12%	1.09%
2010	166	5,446,601	10.37%	1.09%
2011	164	5,512,443	9.95%	1.79%
2012	150	5,046,655	10.54%	2.07%
2013	132	4,526,071	11.39%	2.07%
2014	128	4,762,440	10.88%	3.24%
2015	133	4,764,948	12.25%	4.22%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division 10 - 911 Employees

Table 8-10: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 525,814	\$ 425,553	81%	\$ 100,261
2006	615,270	502,473	82%	112,797
2007	720,834	585,087	81%	135,747
2008	817,655	664,918	81%	152,737
2009	854,423	812,535	95%	41,888
2010	938,807	975,230	104%	(36,423)
2011	1,086,257	1,084,705	100%	1,552
2012	1,174,771	1,184,073	101%	(9,302)
2013	1,294,055	1,308,870	101%	(14,815)
2014	1,400,025	1,433,088	102%	(33,063)
2015	1,624,420	1,557,858	96%	66,562

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-10: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2005	10	\$ 352,135	8.35%	2.52%
2006	11	387,106	8.43%	2.52%
2007	11	410,300	8.82%	2.52%
2008	11	425,346	9.16%	2.52%
2009	11	437,482	7.61%	2.52%
2010	11	448,872	6.19%	2.52%
2011	11	463,095	7.05%	2.52%
2012	11	464,434	6.73%	2.52%
2013	11	460,819	6.97%	2.52%
2014	10	431,427	6.72%	2.52%
2015	12	511,836	8.33%	2.52%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division 11 - Exec Employees

Table 8-11: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 1,858,680	\$ 1,291,514	69%	\$ 567,166
2006	2,104,166	1,444,167	69%	659,999
2007	2,500,478	1,720,662	69%	779,816
2008	2,788,124	1,936,487	69%	851,637
2009	3,211,291	2,157,213	67%	1,054,078
2010	3,278,546	2,275,482	69%	1,003,064
2011	3,529,663	2,364,102	67%	1,165,561
2012	3,769,364	2,446,624	65%	1,322,740
2013	3,914,884	2,537,327	65%	1,377,557
2014	4,168,459	2,630,629	63%	1,537,830
2015	4,608,182	2,705,289	59%	1,902,893

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-11: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2005	15	\$ 649,310	12.35%	2.44%
2006	10	458,324	15.57%	2.44%
2007	12	556,571	15.37%	2.44%
2008	17	742,830	14.58%	2.44%
2009	19	794,052	15.98%	2.44%
2010	18	807,660	15.99%	2.44%
2011	18	806,819	17.03%	2.44%
2012	17	795,876	\$ 12,324	2.44%
2013	17	755,305	\$ 12,095	2.44%
2014	17	778,071	\$ 13,349	2.44%
2015	17	797,847	\$ 16,246	2.44%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division 12 - Elected Officials

Table 8-12: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 855,121	\$ 560,973	66%	\$ 294,148
2006	922,024	651,056	71%	270,968
2007	1,059,238	718,005	68%	341,233
2008	1,126,015	756,764	67%	369,251
2009	1,155,370	812,393	70%	342,977
2010	1,215,266	877,694	72%	337,572
2011	1,341,349	941,492	70%	399,857
2012	1,423,344	924,598	65%	498,746
2013	1,757,853	1,047,645	60%	710,208
2014	1,844,538	1,053,537	57%	791,001
2015	2,025,763	1,058,047	52%	967,716

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-12: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2005	4	\$ 235,763	12.86%	4.53%
2006	4	242,835	12.30%	4.53%
2007	3	202,975	15.51%	4.53%
2008	3	210,143	16.02%	4.53%
2009	3	215,059	15.48%	4.53%
2010	3	219,128	15.21%	4.53%
2011	2	158,524	20.20%	4.53%
2012	1	101,700	\$ 3,038	4.53%
2013	3	220,124	\$ 5,186	4.53%
2014	3	224,009	\$ 5,480	4.53%
2015	3	226,266	\$ 6,689	4.53%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division 13 - GEA & TPOAM

Table 8-13: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 2,693,735	\$ 1,861,029	69%	\$ 832,706
2006	2,954,578	2,083,855	71%	870,723
2007	2,876,309	2,097,872	73%	778,437
2008	3,101,910	2,175,229	70%	926,681
2009	3,140,019	2,230,121	71%	909,898
2010	3,264,650	2,360,063	72%	904,587
2011	3,436,020	2,500,608	73%	935,412
2012	3,571,455	2,628,676	74%	942,779
2013	3,602,669	2,668,206	74%	934,463
2014	3,884,839	2,823,151	73%	1,061,688
2015	4,261,728	2,852,966	67%	1,408,762

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-13: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2005	37	\$ 914,912	12.44%	3.56%
2006	35	944,223	12.58%	3.56%
2007	36	977,433	11.96%	3.56%
2008	32	890,442	13.58%	3.56%
2009	32	857,407	14.09%	3.56%
2010	31	870,042	13.98%	3.56%
2011	29	822,796	\$ 9,516	3.56%
2012	28	828,770	\$ 9,031	4.71%
2013	26	767,554	\$ 8,413	4.71%
2014	25	756,257	\$ 9,354	4.71%
2015	21	633,618	\$ 10,768	5.99%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division 14 - Court Employees

Table 8-14: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 3,598,963	\$ 2,354,082	65%	\$ 1,244,881
2006	4,135,910	2,717,068	66%	1,418,842
2007	4,538,473	3,049,991	67%	1,488,482
2008	4,887,832	3,364,001	69%	1,523,831
2009	5,331,403	3,793,544	71%	1,537,859
2010	5,915,663	4,267,875	72%	1,647,788
2011	6,422,241	4,538,489	71%	1,883,752
2012	6,724,479	4,794,736	71%	1,929,743
2013	7,009,083	5,116,441	73%	1,892,642
2014	7,342,963	5,352,120	73%	1,990,843
2015	7,916,423	5,461,975	69%	2,454,448

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-14: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2005	35	\$ 1,257,413	14.01%	3.28%
2006	34	1,253,205	15.15%	3.28%
2007	34	1,378,853	14.93%	3.28%
2008	35	1,468,586	14.88%	3.28%
2009	36	1,515,890	14.66%	3.28%
2010	36	1,543,725	15.29%	3.28%
2011	36	1,524,043	16.34%	3.28%
2012	36	1,526,060	\$ 19,955	3.28%
2013	32	1,423,975	\$ 18,681	3.28%
2014	25	1,160,842	\$ 18,142	3.28%
2015	22	940,869	\$ 20,985	3.28%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division 20 - Sheriff/Adm

Table 8-20: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 1,394,032	\$ 1,060,087	76%	\$ 333,945
2006	1,460,355	1,153,422	79%	306,933
2007	1,884,275	1,440,780	76%	443,495
2008	2,187,117	1,588,242	73%	598,875
2009	2,115,719	1,518,250	72%	597,469
2010	2,146,704	1,548,938	72%	597,766
2011	2,253,644	1,592,306	71%	661,338
2012	2,308,192	1,629,893	71%	678,299
2013	2,375,062	1,695,294	71%	679,768
2014	2,498,228	1,743,985	70%	754,243
2015	2,650,198	1,764,453	67%	885,745

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-20: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2005	4	\$ 191,599	15.10%	2.88%
2006	4	200,457	14.17%	2.88%
2007	5	243,343	16.10%	2.88%
2008	6	286,767	19.27%	2.88%
2009	4	229,462	22.36%	2.88%
2010	4	230,387	22.12%	2.88%
2011	4	235,776	23.32%	2.88%
2012	4	237,370	25.05%	2.88%
2013	4	235,773	\$ 4,702	2.88%
2014	3	187,431	\$ 5,042	2.88%
2015	3	189,048	\$ 6,100	2.88%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division 41 - Medical Facility Administrator

Table 8-41: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 886,758	\$ 455,348	51%	\$ 431,410
2006	888,604	423,986	48%	464,618
2007	892,883	413,442	46%	479,441
2008	890,904	370,944	42%	519,960
2009	892,185	316,139	35%	576,046
2010	898,098	458,693	51%	439,405
2011	895,693	427,179	48%	468,514
2012	904,083	385,792	43%	518,291
2013	899,992	347,652	39%	552,340
2014	917,999	310,240	34%	607,759
2015	946,288	251,606	27%	694,682

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-41: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2005	1	\$ 63,466	45.82%	0.00%
2006	1	91,308	35.93%	0.00%
2007	1	99,058	35.66%	0.00%
2008	1	94,500	39.23%	0.00%
2009	1	104,165	38.93%	0.00%
2010	1	107,776	30.92%	0.00%
2011	1	108,352	33.02%	0.00%
2012	1	119,622	35.22%	0.00%
2013	1	107,541	40.53%	0.00%
2014	0	0	\$ 8,463	0.00%
2015	0	0	\$ 10,317	0.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division HA - AFSCME hired aft 10/01/2011

Table 8-HA: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	4,466	4,510	101%	(44)
2014	13,473	8,618	64%	4,855
2015	20,165	19,966	99%	199

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-HA: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2011	0	\$ 0	0.00%	0.00%
2013	4	69,578	9.02%	0.00%
2014	5	80,788	8.79%	0.00%
2015	8	160,598	8.23%	0.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

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

Table 8-HB: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2012	\$ 1,951	\$ 1,133	58%	\$ 818
2013	8,802	9,020	103%	(218)
2014	27,066	23,874	88%	3,192
2015	53,123	45,931	87%	7,192

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-HB: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2012	1	\$ 31,595	5.80%	0.00%
2013	6	179,423	6.60%	0.00%
2014	8	252,324	6.61%	0.00%
2015	8	293,975	6.61%	0.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division HC - Executive after 10/1/2012

Table 8-HC: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	4,925	4,605	94%	320
2014	18,074	12,556	70%	5,518
2015	35,437	22,984	65%	12,453

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-HC: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	3	77,372	6.97%	0.00%
2014	4	142,298	8.25%	0.00%
2015	4	149,735	8.01%	0.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

Division HE - Court EEs hired af 11/1/2012

Table 8-HE: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	4,817	3,687	77%	1,130
2014	13,377	13,770	103%	(393)
2015	47,272	38,554	82%	8,718

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-HE: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	2	74,441	7.34%	0.00%
2014	6	207,654	7.98%	0.00%
2015	8	366,760	8.12%	0.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 for the 12/31/2015 valuation do **not** reflect phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 8.

See the Benefit Provision History on page 45 for past benefit provision changes.

GASB 68 Information

The following information has been prepared to provide some of the information necessary to complete GASB Statement No. 68 disclosures. Statement 68 is effective for fiscal years beginning after June 15, 2014. Additional resources, including an Implementation Guide, are available at www.mersofmich.com.

Actuarial Valuation Date:	12/31/2015
Measurement Date of Total Pension Liability (TPL):	12/31/2015

At 12/31/2015, the following employees were covered by the benefit terms:

Inactive employees or beneficiaries currently receiving benefits:	190
Inactive employees entitled to but not yet receiving benefits:	68
Active employees:	<u>259</u>
	517

Total Pension Liability as of 12/31/2014 measurement date:	\$ 44,951,712
Total Pension Liability as of 12/31/2015 measurement date:	\$ 49,188,871
Service Cost for the year ending on the 12/31/2015 measurement date:	\$ 1,009,264

Change in the Total Pension Liability due to:

- Benefit changes ¹ :	\$ (95,585)
- Differences between expected and actual experience ² :	\$ (99,033)
- Changes in assumptions ² :	\$ 2,297,627

¹ A change in liability due to benefit changes is immediately recognized when calculating pension expense for the year.

² Changes in liability due to differences between actual and expected experience, and changes in assumptions, are recognized in pension expense over the average remaining service lives of all employees.

Average expected remaining service lives of all employees (active and inactive):	4
Covered employee payroll: (Needed for Required Supplementary Information)	\$ 10,076,621

Sensitivity of the Net Pension Liability to changes in the discount rate:

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Change in Net Pension Liability as of 12/31/2015:	\$ 5,716,928	-	\$ (4,820,756)

Note: The current discount rate shown for GASB 68 purposes is higher than the MERS assumed rate of return. This is because for GASB 68 purposes, the discount rate must be gross of administrative expenses, whereas for funding purposes it is net of administrative expenses.

Benefit Provision History

The following benefit provision history is provided by MERS. Any corrections to this history or discrepancies between this information and information displayed elsewhere in the valuation report should be reported to MERS. All provisions are listed by date of adoption.

01 - General

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

02 - Sheriff/POAM

10/1/2015	Participant Contribution Rate 12.28%
1/1/2014	Member Contribution Rate 9.57%
1/1/2013	Member Contribution Rate 7.84%
1/1/2012	Member Contribution Rate 7.54%
1/1/2011	Member Contribution Rate 7.72%
1/1/2010	Member Contribution Rate 7.91%
1/1/2009	Member Contribution Rate 5.91%
1/1/2008	Member Contribution Rate 4.77%
1/1/2007	E2 2.5% COLA for future retirees (07/01/2006)
7/1/2006	Member Contribution Rate 4.82%
7/1/2001	Member Contribution Rate 1.33%
10/1/1999	Member Contribution Rate 1.24%
7/1/1999	Member Contribution Rate 0.00%
10/1/1998	Benefit B-4 (80% max)
10/1/1998	Member Contribution Rate 2.88%
1/1/1997	Temporary Benefit B-4 (80% max) (01/01/1997 - 04/03/1997)
1/1/1995	8 Year Vesting
1/1/1995	Benefit B-2
1/1/1990	Blanket Resolution (All Service)
1/1/1988	Benefit C-2/Base C-1 (Old)
1/1/1988	Benefit F50 (With 25 Years of Service)
4/15/1986	Day of work defined as 4 Hours a Day for All employees.
1/1/1984	Member Contribution Rate 0.00%
12/8/1970	Covered by Act 88
12/1/1970	Benefit C-1 (Old)
12/1/1964	Benefit FAC-5 (5 Year Final Average Compensation)

02 - Sheriff/POAM

12/1/1964	10 Year Vesting
12/1/1964	Benefit C (Old)
12/1/1964	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
12/1/1964	Fiscal Month - January

04 - MCF

10/1/2015	Participant Contribution Rate 4.22%
1/1/2014	Member Contribution Rate 3.24%
1/1/2013	Member Contribution Rate 2.29%
1/1/2012	Member Contribution Rate 2.07%
6/1/2011	Member Contribution Rate 1.79%
4/1/2006	Member Contribution Rate 1.09%
2/1/2006	Benefit B-2
1/1/2001	30 Years & Out
1/1/2001	6 Year Vesting
1/1/2001	Benefit B-1
4/1/1986	Member Contribution Rate 0.00%
12/8/1970	Covered by Act 88
12/1/1970	Benefit C-1 (Old)
12/1/1964	Benefit FAC-5 (5 Year Final Average Compensation)
12/1/1964	10 Year Vesting
12/1/1964	Benefit C (Old)
12/1/1964	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
12/1/1964	Fiscal Month - January

10 - 911 Employees

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

11 - Exec Employees

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

11 - Exec Employees

12/1/1964	Fiscal Month - January
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12 - Elected Officials

10/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
10/1/1998	8 Year Vesting
10/1/1998	Benefit B-4 (80% max)
10/1/1998	Benefit F55 (With 20 Years of Service)
10/1/1998	Member Contribution Rate 4.53%
12/8/1970	Covered by Act 88
12/1/1964	Fiscal Month - January

13 - GEA & TPOAM

10/1/2015	Participant Contribution Rate 5.99%
1/1/2012	Member Contribution Rate 4.71%
7/1/1999	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/1999	8 Year Vesting
7/1/1999	Benefit B-4 (80% max)
7/1/1999	Benefit F55 (With 20 Years of Service)
7/1/1999	Member Contribution Rate 3.56%
12/8/1970	Covered by Act 88
12/1/1964	Fiscal Month - January

14 - Court Employees

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

20 - Sheriff/Adm

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

41 - Medical Facility Administrator

1/1/1998	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/1998	6 Year Vesting
1/1/1998	Benefit B-2

41 - Medical Facility Administrator

1/1/1998	Benefit F50 (With 30 Years of Service)
1/1/1998	Member Contribution Rate 0.00%
12/8/1970	Covered by Act 88
12/1/1964	Fiscal Month - January

HA - AFSCME hired aft 10/01/2011

10/1/2015	Hybrid Elapsed Time
10/1/2011	Benefit FAC-3 (3 Year Final Average Compensation)
10/1/2011	Loans
10/1/2011	Pickup
10/1/2011	Rollovers
10/1/2011	6 Year Vesting
10/1/2011	1.5% Multiplier
12/8/1970	Covered by ACT 88
12/1/1964	Fiscal Month - January

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

10/1/2015	Hybrid Elapsed Time
10/1/2012	Day of work defined as 4 Hours a Day for All employees.
10/1/2012	Benefit FAC-3 (3 Year Final Average Compensation)
10/1/2012	Loans
10/1/2012	Pickup
10/1/2012	Rollovers
10/1/2012	6 Year Vesting
10/1/2012	1.5% Multiplier
10/1/2012	Benefit F55 (With 25 Years of Service)
12/8/1970	Covered by ACT 88
12/1/1964	Fiscal Month - January

HC - Executive after 10/1/2012

10/1/2015	Hybrid Elapsed Time
10/1/2012	Benefit FAC-3 (3 Year Final Average Compensation)
10/1/2012	Loans
10/1/2012	Pickup
10/1/2012	Rollovers
10/1/2012	6 Year Vesting
10/1/2012	1.5% Multiplier
12/8/1970	Covered by ACT 88
12/1/1964	Fiscal Month - January

HE - Court EEs hired af 11/1/2012

10/1/2015	Hybrid Elapsed Time
11/1/2012	Benefit FAC-3 (3 Year Final Average Compensation)
11/1/2012	Loans

HE - Court EEs hired af 11/1/2012

11/1/2012	Pickup
11/1/2012	Rollovers
11/1/2012	6 Year Vesting
11/1/2012	1.5% Multiplier
12/8/1970	Covered by ACT 88
12/1/1964	Fiscal Month - January

Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method

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

Increase in Final Average Compensation

Division	FAC Increase Assumption
All Divisions	1.00%

Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
All Divisions	113%

Miscellaneous and Technical Assumptions

Loads – None.

Amortization Policy for Closed Divisions

Closed Division	Amortization Option
All Closed Divisions	Option A