



**MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN**  
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2015  
LAPEER CO (4403)



Spring, 2016

Lapeer 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 Lapeer Co (4403) 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. Lapeer 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 January 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](http://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

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### 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](http://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 86% to 82%, a change of -4%.

The new assumptions changed your total monthly employer contribution requirement, before any phase-in, from \$282,247 to \$312,566, a change of \$30,319 (a 11% increase). Under the 5-year phase-in the first year increase is instead 2% (from \$282,247 to \$288,314 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
<b>Funded Ratio</b>	82%	86%	88%

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:	January 1, 2017	January 1, 2017	January 1, 2017	January 1, 2016	January 1, 2017	January 1, 2017	January 1, 2017	January 1, 2016
<b>Division</b>								
02 - POLC Sheriff	16.37%	17.95%	15.97%	14.75%	\$ 57,260	\$ 62,804	\$ 55,873	\$ 46,363
04 - S.T.A.R.S.	7.97%	8.32%	7.88%	7.79%	55,767	58,231	55,149	46,982
06 - CMH Union	9.74%	10.37%	9.58%	8.95%	23,491	25,019	23,111	19,770
10 - AFSCME	10.61%	12.14%	10.23%	9.05%	12,550	14,358	12,099	9,760
11 - Gnrl Non Union	10.12%	11.15%	9.86%	8.86%	20,760	22,880	20,231	15,819
12 - Gnrl Teamsters	10.06%	11.11%	9.80%	8.60%	23,710	26,178	23,091	18,048
13 - Elected & Appt. Dept H	8.79%	10.63%	8.33%	7.81%	9,159	11,075	8,679	7,091
20 - COAM/POAM Disp	11.80%	12.63%	11.59%	11.45%	7,893	8,449	7,753	5,908
40 - MCF Non Union	16.82%	18.01%	16.52%	15.79%	70,121	75,093	68,877	60,271
60 - CMH Non Union	9.94%	11.08%	9.65%	8.62%	7,603	8,479	7,384	5,183
<b>Municipality Total</b>					<b>\$ 288,314</b>	<b>\$ 312,566</b>	<b>\$ 282,247</b>	<b>\$ 235,195</b>

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
<b>Division</b>		
02 - POLC Sheriff	2.49%	2.49%
04 - S.T.A.R.S.	1.27%	1.27%
06 - CMH Union	0.00%	0.00%
10 - AFSCME	0.00%	0.00%
11 - Gnrl Non Union	0.00%	0.00%
12 - Gnrl Teamsters	0.00%	0.00%

Valuation Date:	Employee Contribution Rate	
	12/31/2015	12/31/2014
<b>Division</b>		
13 - Elected & Appt. Dept H	2.53%	2.53%
20 - COAM/POAM Disp	0.00%	0.00%
40 - MCF Non Union	0.00%	0.00%
60 - CMH Non Union	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 \$ 409,732, instead of \$ 312,566.
- To accelerate to a 100% funding ratio in 20 years, estimated monthly employer contributions for the entire employer would be \$ 323,399, instead of \$ 312,566.

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 72% (instead of 82%); and ii) your total employer contribution requirement for the fiscal year starting January 1, 2017 would be \$ 4,539,780 (instead of \$ 3,750,792).

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%
<b>12/31/2015 Valuation Results</b>				
Accrued Liability	\$ 143,408,429	\$ 126,725,588	\$ 112,789,127	\$ 101,069,884
Valuation Assets	\$ 92,702,549	\$ 92,702,549	\$ 92,702,549	\$ 92,702,549
Unfunded Accrued Liability	\$ 50,705,880	\$ 34,023,039	\$ 20,086,578	\$ 8,367,335
<b>Funded Ratio</b>	65%	73%	82%	92%
Monthly Normal Cost	\$ 338,491	\$ 258,047	\$ 197,416	\$ 151,509
Monthly Amortization Payment	\$ 248,463	\$ 182,278	\$ 115,150	\$ 44,530
<b>Total Employer Contribution<sup>1</sup></b>	\$ 586,954	\$ 440,325	\$ 312,566	\$ 196,039

<sup>1</sup> 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 1/1	Actuarial Accrued Liability	Valuation Assets	Funded Percentage	Computed Annual Employer Contribution
<b>7.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return</b>					
<b>WITH 5-YEAR PHASE-IN</b>					
2015	2017	\$ 112,789,127	\$ 92,702,549	82%	\$ 3,459,768
2016	2018	118,392,310	94,729,804	80%	3,897,780
2017	2019	124,065,234	96,684,341	78%	4,364,220
2018	2020	129,786,999	98,592,589	76%	4,864,908
2019	2021	135,569,773	100,495,383	74%	5,394,288
2020	2022	141,415,963	105,434,319	75%	5,639,328
<b>NO 5-YEAR PHASE-IN</b>					
2015	2017	\$ 112,789,127	\$ 92,702,549	82%	\$ 3,750,792
2016	2018	118,392,310	94,729,804	80%	4,095,348
2017	2019	124,065,234	97,009,390	78%	4,469,844
2018	2020	129,786,999	99,146,579	76%	4,885,884
2019	2021	135,569,773	101,184,491	75%	5,337,084
2020	2022	141,415,963	106,195,388	75%	5,579,580
<b>6.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return</b>					
<b>NO 5-YEAR PHASE-IN</b>					
2015	2017	\$ 126,725,588	\$ 92,702,549	73%	\$ 5,283,900
2016	2018	132,882,146	93,835,968	71%	5,670,096
2017	2019	139,120,385	96,862,817	70%	6,075,132
2018	2020	145,420,625	99,730,058	69%	6,523,536
2019	2021	151,796,812	102,449,480	68%	7,016,940
2020	2022	158,252,961	108,298,365	68%	7,315,164
<b>5.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return</b>					
<b>NO 5-YEAR PHASE-IN</b>					
2015	2017	\$ 143,408,429	\$ 92,702,549	65%	\$ 7,043,448
2016	2018	150,223,075	92,941,975	62%	7,474,896
2017	2019	157,136,168	96,966,666	62%	7,920,924
2018	2020	164,129,410	100,801,159	61%	8,416,572
2019	2021	171,219,048	104,427,775	61%	8,968,596
2020	2022	178,411,056	110,860,850	62%	9,372,480

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

Table 1

Division	Amort. Period for Unfund. Liab. <sup>4,5</sup>	Employer Contributions <sup>1</sup>			Blended Employer Contribut. <sup>6</sup>	Employee Contribution Rate	Employee Contribut. Conversion Factor <sup>2</sup>
		Normal Cost	Unfunded Accrued Liability	Total Computed Employer Contribut.			
<b>Percentage of Payroll</b>							
02 - POLC Sheriff	23	7.98%	9.97%	17.95%		2.49%	0.82%
04 - S.T.A.R.S.	23	6.54%	1.78%	8.32%		1.27%	0.84%
06 - CMH Union	23	8.01%	2.36%	10.37%		0.00%	0.81%
10 - AFSCME	23	8.32%	3.82%	12.14%		0.00%	0.80%
11 - Gnrl Non Union	23	8.06%	3.09%	11.15%		0.00%	0.81%
12 - Gnrl Teamsters	23	7.89%	3.22%	11.11%		0.00%	0.79%
13 - Elected & Appt. De	23	7.95%	2.68%	10.63%		2.53%	0.76%
20 - COAM/POAM Disp	23	8.87%	3.76%	12.63%		0.00%	0.83%
40 - MCF Non Union	23	9.45%	8.56%	18.01%		0.00%	0.80%
60 - CMH Non Union	23	7.59%	3.49%	11.08%		0.00%	0.76%
<b>Estimated Monthly Contribution<sup>3</sup></b>							
02 - POLC Sheriff	23	\$ 27,921	\$ 34,883	\$ 62,804			
04 - S.T.A.R.S.	23	45,773	12,458	58,231			
06 - CMH Union	23	19,325	5,694	25,019			
10 - AFSCME	23	9,840	4,518	14,358			
11 - Gnrl Non Union	23	16,539	6,341	22,880			
12 - Gnrl Teamsters	23	18,591	7,587	26,178			
13 - Elected & Appt. De	23	8,283	2,792	11,075			
20 - COAM/POAM Disp	23	5,934	2,515	8,449			
40 - MCF Non Union	23	39,402	35,691	75,093			
60 - CMH Non Union	23	5,808	2,671	8,479			
<b>Total Municipality</b>		<b>\$ 197,416</b>	<b>\$ 115,150</b>	<b>\$ 312,566</b>			
<b>Estimated Annual Contribution<sup>3</sup></b>		<b>\$ 2,368,992</b>	<b>\$ 1,381,800</b>	<b>\$ 3,750,792</b>			

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

<sup>2</sup> 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.

<sup>3</sup> 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](#).

<sup>4</sup> If projected assets exceed projected liabilities as of the beginning of the January 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.

<sup>5</sup> 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.

<sup>6</sup> 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

### 02 - POLC Sheriff: Open Division

	2015 Valuation	2014 Valuation
<b>Benefit Multiplier:</b>	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	50/25	50/25
<b>Early Retirement (Reduced):</b>	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	2.49%	2.49%
<b>Act 88:</b>	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)

### 04 - S.T.A.R.S.: Open Division

	2015 Valuation	2014 Valuation
<b>Benefit Multiplier:</b>	2.00% Multiplier (no max)	2.00% Multiplier (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	55/25	55/25
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	1.27%	1.27%
<b>Act 88:</b>	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)

### 06 - CMH Union: Open Division

	2015 Valuation	2014 Valuation
<b>Benefit Multiplier:</b>	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	-	-
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	0%	0%
<b>Act 88:</b>	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)

Table 2 (continued)

<b>10 - AFSCME: Open Division</b>		
	<b>2015 Valuation</b>	<b>2014 Valuation</b>
<b>Benefit Multiplier:</b>	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	-	-
<b>Early Retirement (Reduced):</b>	50/25 55/15	50/25 55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	0%	0%
<b>Act 88:</b>	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)
<b>11 - Gnrl Non Union: Open Division</b>		
	<b>2015 Valuation</b>	<b>2014 Valuation</b>
<b>Benefit Multiplier:</b>	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	-	-
<b>Early Retirement (Reduced):</b>	50/25 55/15	50/25 55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	0%	0%
<b>Act 88:</b>	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)
<b>12 - Gnrl Teamsters: Open Division</b>		
	<b>2015 Valuation</b>	<b>2014 Valuation</b>
<b>Benefit Multiplier:</b>	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	-	-
<b>Early Retirement (Reduced):</b>	50/25 55/15	50/25 55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	0%	0%
<b>Act 88:</b>	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)
<b>13 - Elected &amp; Appt. Dept Heads: Open Division</b>		
	<b>2015 Valuation</b>	<b>2014 Valuation</b>
<b>Benefit Multiplier:</b>	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	-	-
<b>Early Retirement (Reduced):</b>	50/25 55/15	50/25 55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	2.53%	2.53%
<b>Act 88:</b>	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)

Table 2 (continued)

<b>20 - COAM/POAM Disp: Open Division</b>		
	<b>2015 Valuation</b>	<b>2014 Valuation</b>
<b>Benefit Multiplier:</b>	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	50/25	50/25
<b>Early Retirement (Reduced):</b>	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	0%	0%
<b>Act 88:</b>	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)
<b>40 - MCF Non Union: Open Division</b>		
	<b>2015 Valuation</b>	<b>2014 Valuation</b>
<b>Benefit Multiplier:</b>	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	55/25	55/25
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	0%	0%
<b>Act 88:</b>	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)
<b>60 - CMH Non Union: Open Division</b>		
	<b>2015 Valuation</b>	<b>2014 Valuation</b>
<b>Benefit Multiplier:</b>	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	-	-
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	0%	0%
<b>Act 88:</b>	Yes (Adopted 10/30/1970)	Yes (Adopted 10/30/1970)

## Participant Summary

**Table 3**

Division	2015 Valuation		2014 Valuation		2015 Valuation		
	Number	Annual Payroll <sup>1</sup>	Number	Annual Payroll <sup>1</sup>	Average Age	Average Benefit Service <sup>2</sup>	Average Eligibility Service <sup>2</sup>
02 - POLC Sheriff							
Active Employees	75	\$ 3,900,580	73	\$ 3,771,938	42.1	12.5	12.9
Vested Former Employees	17	137,194	16	120,752	46.1	7.3	16.0
Retirees and Beneficiaries	53	1,270,571	50	1,152,207	66.4		
04 - S.T.A.R.S.							
Active Employees	288	\$ 7,802,578	288	\$ 7,237,326	36.1	5.6	5.7
Vested Former Employees	39	218,328	33	181,582	45.8	11.9	13.1
Retirees and Beneficiaries	71	517,471	69	491,669	70.8		
06 - CMH Union							
Active Employees	64	\$ 2,689,589	66	\$ 2,650,699	45.6	10.1	10.1
Vested Former Employees	9	48,522	10	63,025	54.5	8.2	12.8
Retirees and Beneficiaries	21	314,446	18	268,386	65.7		
10 - AFSCME							
Active Employees	36	\$ 1,318,531	36	\$ 1,294,086	51.4	13.8	13.8
Vested Former Employees	17	142,765	19	153,206	52.7	11.4	13.6
Retirees and Beneficiaries	41	405,523	40	375,185	68.9		
11 - Gnrl Non Union							
Active Employees	49	\$ 2,287,567	47	\$ 2,142,519	47.1	12.7	13.0
Vested Former Employees	11	168,264	12	177,884	51.7	14.3	15.7
Retirees and Beneficiaries	31	458,805	29	434,158	72.4		
12 - Gnrl Teamsters							
Active Employees	70	\$ 2,626,856	68	\$ 2,518,253	49.4	15.1	15.1
Vested Former Employees	12	123,369	10	106,855	46.7	12.3	13.8
Retirees and Beneficiaries	40	493,536	39	439,299	73.1		
13 - Elected & Appt. Dept							
Active Employees	24	\$ 1,161,536	23	\$ 1,089,442	61.5	19.2	21.2
Vested Former Employees	5	88,414	5	88,414	54.1	10.9	19.2
Retirees and Beneficiaries	19	334,867	19	339,318	74.7		
20 - COAM/POAM Disp							
Active Employees	16	\$ 745,795	13	\$ 619,208	41.8	11.1	11.5
Vested Former Employees	3	33,425	2	20,395	48.1	11.5	14.8
Retirees and Beneficiaries	3	63,504	3	63,504	61.6		
40 - MCF Non Union							
Active Employees	91	\$ 4,648,259	95	\$ 4,580,417	44.2	10.0	10.0
Vested Former Employees	15	205,811	13	152,345	51.7	12.1	13.2
Retirees and Beneficiaries	54	912,705	54	900,072	69.0		

**Table 3 (continued)**

Division	2015 Valuation		2014 Valuation		2015 Valuation		
	Number	Annual Payroll <sup>1</sup>	Number	Annual Payroll <sup>1</sup>	Average Age	Average Benefit Service <sup>2</sup>	Average Eligibility Service <sup>2</sup>
60 - CMH Non Union							
Active Employees	14	\$ 853,145	12	\$ 721,577	48.1	15.5	15.5
Vested Former Employees	4	54,596	4	54,596	51.9	13.0	19.8
Retirees and Beneficiaries	6	140,590	6	140,590	71.8		
<b>Total Municipality</b>							
<b>Active Employees</b>	<b>727</b>	<b>\$ 28,034,436</b>	<b>721</b>	<b>\$ 26,625,465</b>	<b>42.5</b>	<b>9.8</b>	<b>10.0</b>
<b>Vested Former Employees</b>	<b>132</b>	<b>1,220,688</b>	<b>124</b>	<b>1,119,054</b>	<b>49.1</b>	<b>11.2</b>	<b>14.3</b>
<b>Retirees and Beneficiaries</b>	<b>339</b>	<b>4,912,018</b>	<b>327</b>	<b>4,604,388</b>	<b>69.9</b>		
<b>Total Participants</b>	<b>1198</b>		<b>1172</b>				

<sup>1</sup> Annual payroll for active employees; annual deferred benefits payable for vested former employees; annual benefits being paid for retirees and beneficiaries.

<sup>2</sup> 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 <sup>1</sup>	Employee <sup>2</sup>	Employer and Retiree <sup>1</sup>	Employee <sup>2</sup>
02 - POLC Sheriff	\$ 15,229,142	\$ 1,205,401	\$ 16,039,157	\$ 1,258,846
04 - S.T.A.R.S.	9,080,928	427,657	9,192,109	350,334
06 - CMH Union	6,202,789	49,707	6,446,973	52,769
10 - AFSCME	6,477,530	45,758	6,847,090	46,000
11 - Gnrl Non Union	8,465,538	26,312	8,893,437	31,753
12 - Gnrl Teamsters	9,386,175	45,130	9,772,593	53,557
13 - Elected & Appt. Dept Heads	6,764,171	397,780	7,150,139	366,150
20 - COAM/POAM Disp	2,036,262	0	2,048,230	0
40 - MCF Non Union	12,562,249	81,961	12,907,323	78,475
60 - CMH Non Union	3,149,391	14,895	3,184,667	13,572
<b>Municipality Total</b>	<b>\$ 79,354,175</b>	<b>\$ 2,294,601</b>	<b>\$ 82,481,718</b>	<b>\$ 2,251,456</b>
<b>Combined Reserves</b>	<b>\$ 81,648,776</b>		<b>\$ 84,733,174</b>	

<sup>1</sup> Reserve for Employer Contributions and Benefit Payments

<sup>2</sup> 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	\$ 2,351,688		\$ 139,535	\$ 2,965,938	\$ (1,635,943)	\$ (1,110)	\$ 58,595	\$ 48,484,521
2006	4,689,470		233,928	4,031,129	(1,879,765)	(11,276)	0	55,548,007
2007	3,268,463		153,907	4,504,185	(2,144,291)	(8,522)	0	61,321,749
2008	2,820,446		121,929	2,983,475	(2,357,504)	(5,875)	0	64,884,220
2009	3,356,569		127,565	3,719,493	(2,592,458)	(7,466)	0	69,487,923
2010	2,701,704		120,400	4,108,154	(2,887,422)	(3,985)	0	73,526,774
2011	2,392,517	\$ 1,276,817	118,290	4,243,170	(3,227,971)	(18,286)	0	78,311,311
2012	2,469,808	12,604	118,808	3,720,946	(3,576,831)	(2,462)	11,703	81,065,887
2013	2,427,970	104,953	201,995	4,942,034	(3,871,478)	(12,924)	0	84,858,437
2014	2,590,936	1,456,298	213,190	5,008,867	(4,315,512)	(3,232)	2,842	89,811,826
2015	2,866,216	0	224,327	4,518,511	(4,713,623)	(1,488)	(3,220)	92,702,549

**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 <sup>1</sup>	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
02 - POLC Sheriff				
Active Employees	\$ 10,451,939	\$ 4,328,156	41.4%	\$ 6,123,783
Vested Former Employees	995,208	995,208	100.0%	0
Retirees And Beneficiaries	13,298,638	13,298,638	100.0%	0
Pending Refunds	<u>37,482</u>	<u>37,482</u>	100.0%	<u>0</u>
Total	<b>\$ 24,783,267</b>	<b>\$ 18,659,484</b>	<b>75.3%</b>	<b>\$ 6,123,783</b>
04 - S.T.A.R.S.				
Active Employees	\$ 6,930,458	\$ 4,745,167	68.5%	\$ 2,185,291
Vested Former Employees	1,268,890	1,268,890	100.0%	0
Retirees And Beneficiaries	4,689,987	4,689,987	100.0%	0
Pending Refunds	<u>91,832</u>	<u>91,832</u>	100.0%	<u>0</u>
Total	<b>\$ 12,981,167</b>	<b>\$ 10,795,876</b>	<b>83.2%</b>	<b>\$ 2,185,291</b>
06 - CMH Union				
Active Employees	\$ 4,473,879	\$ 3,492,838	78.1%	\$ 981,041
Vested Former Employees	339,466	339,466	100.0%	0
Retirees And Beneficiaries	3,260,044	3,260,044	100.0%	0
Pending Refunds	<u>6,623</u>	<u>6,623</u>	100.0%	<u>0</u>
Total	<b>\$ 8,080,012</b>	<b>\$ 7,098,971</b>	<b>87.9%</b>	<b>\$ 981,041</b>
10 - AFSCME				
Active Employees	\$ 3,483,721	\$ 2,714,940	77.9%	\$ 768,781
Vested Former Employees	950,662	950,662	100.0%	0
Retirees And Beneficiaries	3,732,725	3,732,725	100.0%	0
Pending Refunds	<u>8,097</u>	<u>8,097</u>	100.0%	<u>0</u>
Total	<b>\$ 8,175,205</b>	<b>\$ 7,406,424</b>	<b>90.6%</b>	<b>\$ 768,781</b>
11 - Gnrl Non Union				
Active Employees	\$ 5,226,539	\$ 4,143,608	79.3%	\$ 1,082,931
Vested Former Employees	1,051,332	1,051,332	100.0%	0
Retirees And Beneficiaries	4,445,835	4,445,835	100.0%	0
Pending Refunds	<u>719</u>	<u>719</u>	100.0%	<u>0</u>
Total	<b>\$ 10,724,425</b>	<b>\$ 9,641,494</b>	<b>89.9%</b>	<b>\$ 1,082,931</b>
12 - Gnrl Teamsters				
Active Employees	\$ 7,143,929	\$ 5,852,010	81.9%	\$ 1,291,919
Vested Former Employees	542,537	542,537	100.0%	0
Retirees And Beneficiaries	4,313,587	4,313,587	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	<b>\$ 12,000,053</b>	<b>\$ 10,708,134</b>	<b>89.2%</b>	<b>\$ 1,291,919</b>

**Table 6 (continued)**

<b>Division</b>	<b>Actuarial Accrued Liability</b>	<b>Valuation Assets<sup>1</sup></b>	<b>Percent Funded</b>	<b>Unfunded (Overfunded) Accrued Liabilities</b>
<b>13 - Elected &amp; Appt. Dept Heads</b>				
Active Employees	\$ 4,810,094	\$ 4,343,401	90.3%	\$ 466,693
Vested Former Employees	675,925	675,925	100.0%	0
Retirees And Beneficiaries	3,110,131	3,110,131	100.0%	0
Pending Refunds	<u>2,093</u>	<u>2,093</u>	100.0%	<u>0</u>
<b>Total</b>	<b>\$ 8,598,243</b>	<b>\$ 8,131,550</b>	<b>94.6%</b>	<b>\$ 466,693</b>
<b>20 - COAM/POAM Disp</b>				
Active Employees	\$ 1,792,746	\$ 1,350,834	75.3%	\$ 441,912
Vested Former Employees	242,273	242,273	100.0%	0
Retirees And Beneficiaries	718,828	718,828	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
<b>Total</b>	<b>\$ 2,753,847</b>	<b>\$ 2,311,935</b>	<b>84.0%</b>	<b>\$ 441,912</b>
<b>40 - MCF Non Union</b>				
Active Employees	\$ 10,216,721	\$ 3,929,749	38.5%	\$ 6,286,972
Vested Former Employees	1,503,402	1,503,402	100.0%	0
Retirees And Beneficiaries	8,921,024	8,921,024	100.0%	0
Pending Refunds	<u>1,833</u>	<u>1,833</u>	100.0%	<u>0</u>
<b>Total</b>	<b>\$ 20,642,980</b>	<b>\$ 14,356,008</b>	<b>69.5%</b>	<b>\$ 6,286,972</b>
<b>60 - CMH Non Union</b>				
Active Employees	\$ 2,394,408	\$ 1,937,153	80.9%	\$ 457,255
Vested Former Employees	400,001	400,001	100.0%	0
Retirees And Beneficiaries	1,255,519	1,255,519	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
<b>Total</b>	<b>\$ 4,049,928</b>	<b>\$ 3,592,673</b>	<b>88.7%</b>	<b>\$ 457,255</b>
<b>Total Municipality</b>				
<b>Active Employees</b>	<b>\$ 56,924,434</b>	<b>\$ 36,837,856</b>	<b>64.7%</b>	<b>\$ 20,086,578</b>
<b>Vested Former Employees</b>	<b>7,969,696</b>	<b>7,969,696</b>	<b>100.0%</b>	<b>0</b>
<b>Retirees and Beneficiaries</b>	<b>47,746,318</b>	<b>47,746,318</b>	<b>100.0%</b>	<b>0</b>
<b>Pending Refunds</b>	<b><u>148,679</u></b>	<b><u>148,679</u></b>	<b>100.0%</b>	<b><u>0</u></b>
<b>Total Participants</b>	<b>\$ 112,789,127</b>	<b>\$ 92,702,549</b>	<b>82.2%</b>	<b>\$ 20,086,578</b>

<sup>1</sup> 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](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	\$ 43,599,768	\$ 35,020,726	80%	\$ 8,579,042
2002	47,793,702	37,275,307	78%	10,518,395
2003	49,842,139	40,320,750	81%	9,521,389
2004	53,364,956	44,605,818	84%	8,759,138
2005	57,449,535	48,484,521	84%	8,965,014
2006	62,191,494	55,548,007	89%	6,643,487
2007	67,484,457	61,321,749	91%	6,162,708
2008	72,924,490	64,884,220	89%	8,040,270
2009	75,451,001	69,487,923	92%	5,963,078
2010	79,860,857	73,526,774	92%	6,334,083
2011	85,385,423	78,311,311	92%	7,074,112
2012	89,282,225	81,065,887	91%	8,216,338
2013	94,903,895	84,858,437	89%	10,045,458
2014	101,824,866	89,811,826	88%	12,013,040
2015	112,789,127	92,702,549	82%	20,086,578

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

## Division 02 - POLC Sheriff

### Table 8-02: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 14,846,476	\$ 12,080,137	81%	\$ 2,766,339
2006	15,603,182	13,742,142	88%	1,861,040
2007	16,729,281	14,670,860	88%	2,058,421
2008	17,581,765	14,978,476	85%	2,603,289
2009	18,248,875	15,931,563	87%	2,317,312
2010	18,864,025	16,376,070	87%	2,487,955
2011	19,600,877	16,856,101	86%	2,744,776
2012	20,140,990	17,176,086	85%	2,964,904
2013	21,155,855	17,829,275	84%	3,326,580
2014	22,552,782	18,334,793	81%	4,217,989
2015	24,783,267	18,659,484	75%	6,123,783

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	77	\$ 3,355,802	11.74%	2.49%
2006	78	3,492,975	10.26%	2.49%
2007	77	3,540,996	10.76%	2.49%
2008	76	3,597,122	11.88%	2.49%
2009	76	3,860,058	11.30%	2.49%
2010	74	3,549,868	12.17%	2.49%
2011	73	3,563,819	12.05%	2.49%
2012	73	3,622,005	12.73%	2.49%
2013	73	3,623,507	13.43%	2.49%
2014	73	3,771,938	14.75%	2.49%
2015	75	3,900,580	17.95%	2.49%

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

<sup>2</sup> 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 39 for past benefit provision changes.

## Division 04 - S.T.A.R.S.

Table 8-04: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 6,002,991	\$ 5,088,416	85%	\$ 914,575
2006	6,591,302	5,638,412	86%	952,890
2007	7,324,970	6,226,954	85%	1,098,016
2008	7,953,439	6,673,168	84%	1,280,271
2009	8,026,964	7,220,033	90%	806,931
2010	8,555,727	7,741,169	90%	814,558
2011	9,432,054	8,301,368	88%	1,130,686
2012	9,947,561	8,889,986	89%	1,057,575
2013	11,055,158	9,554,589	86%	1,500,569
2014	11,568,898	10,114,388	87%	1,454,510
2015	12,981,167	10,795,876	83%	2,185,291

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	226	\$ 4,304,196	6.00%	2.33%
2006	228	4,903,116	5.98%	2.33%
2007	238	5,286,231	8.01%	0.00%
2008	239	5,520,840	8.24%	0.00%
2009	245	5,700,181	7.73%	0.00%
2010	237	5,527,623	7.99%	0.00%
2011	304	7,210,900	7.75%	0.00%
2012	306	7,290,485	7.78%	0.00%
2013	301	7,164,177	7.89%	1.27%
2014	288	7,237,326	7.79%	1.27%
2015	288	7,802,578	8.32%	1.27%

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

<sup>2</sup> 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 39 for past benefit provision changes.

## Division 06 - CMH Union

### Table 8-06: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 2,977,996	\$ 2,337,663	78%	\$ 640,333
2006	3,495,191	2,874,782	82%	620,409
2007	4,019,542	3,581,079	89%	438,463
2008	4,514,708	3,953,621	88%	561,087
2009	4,760,194	4,400,022	92%	360,172
2010	5,152,176	4,946,375	96%	205,801
2011	5,712,715	5,626,574	99%	86,141
2012	6,186,499	6,006,035	97%	180,464
2013	6,545,267	6,325,525	97%	219,742
2014	7,293,162	6,889,317	95%	403,845
2015	8,080,012	7,098,971	88%	981,041

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

### Table 9-06: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	60	\$ 1,707,626	11.23%	0.00%
2006	61	1,913,430	10.83%	0.00%
2007	63	2,120,601	10.20%	0.00%
2008	61	2,159,843	9.90%	0.00%
2009	61	2,370,711	9.24%	0.00%
2010	64	2,438,785	9.21%	0.00%
2011	62	2,411,865	8.57%	0.00%
2012	63	2,399,198	8.71%	0.00%
2013	60	2,362,295	8.72%	0.00%
2014	66	2,650,699	8.95%	0.00%
2015	64	2,689,589	10.37%	0.00%

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

<sup>2</sup> 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 39 for past benefit provision changes.

## Division 10 - AFSCME

**Table 8-10: Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 4,985,414	\$ 4,707,886	94%	\$ 277,528
2006	5,281,718	5,095,846	96%	185,872
2007	5,581,134	5,474,019	98%	107,115
2008	5,844,132	5,790,661	99%	53,471
2009	6,169,658	6,052,906	98%	116,752
2010	6,282,205	6,221,094	99%	61,111
2011	6,641,977	6,539,902	99%	102,075
2012	6,907,582	6,605,789	96%	301,793
2013	7,150,032	6,724,524	94%	425,508
2014	7,485,077	7,306,241	98%	178,836
2015	8,175,205	7,406,424	91%	768,781

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	55	\$ 1,759,841	9.67%	0.00%
2006	53	1,758,585	9.43%	0.00%
2007	46	1,536,793	9.34%	0.00%
2008	42	1,408,252	8.53%	0.00%
2009	40	1,464,689	8.80%	0.00%
2010	35	1,243,956	8.85%	0.00%
2011	36	1,238,602	8.62%	0.00%
2012	35	1,236,547	9.73%	0.00%
2013	35	1,204,007	10.44%	0.00%
2014	36	1,294,086	9.05%	0.00%
2015	36	1,318,531	12.14%	0.00%

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

<sup>2</sup> 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 39 for past benefit provision changes.

## Division 11 - Grnl Non Union

**Table 8-11: Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 5,884,954	\$ 4,744,132	81%	\$ 1,140,822
2006	5,827,279	5,635,618	97%	191,661
2007	6,482,106	6,251,012	96%	231,094
2008	7,197,635	6,973,554	97%	224,081
2009	7,267,054	7,812,263	108%	(545,209)
2010	7,765,800	8,327,804	107%	(562,004)
2011	8,256,330	8,680,352	105%	(424,022)
2012	8,689,048	8,919,726	103%	(230,678)
2013	8,995,568	9,176,982	102%	(181,414)
2014	9,690,233	9,460,139	98%	230,094
2015	10,724,425	9,641,494	90%	1,082,931

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	69	\$ 2,836,445	10.82%	0.00%
2006	65	2,690,032	9.05%	0.00%
2007	64	2,771,502	9.25%	0.00%
2008	62	2,736,869	8.86%	0.00%
2009	58	2,699,285	5.98%	0.00%
2010	56	2,515,211	6.25%	0.00%
2011	53	2,388,523	6.39%	0.00%
2012	52	2,334,269	7.22%	0.00%
2013	45	2,085,028	7.19%	0.00%
2014	47	2,142,519	8.86%	0.00%
2015	49	2,287,567	11.15%	0.00%

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

<sup>2</sup> 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 39 for past benefit provision changes.

## Division 12 - Grnl Teamsters

**Table 8-12: Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 6,470,881	\$ 6,002,144	93%	\$ 468,737
2006	7,056,035	6,500,719	92%	555,316
2007	7,510,004	7,038,360	94%	471,644
2008	7,966,585	7,350,686	92%	615,899
2009	8,124,274	7,811,903	96%	312,371
2010	8,573,000	8,288,251	97%	284,749
2011	9,094,428	8,919,341	98%	175,087
2012	9,477,282	9,157,210	97%	320,072
2013	10,042,023	9,518,699	95%	523,324
2014	10,754,376	10,415,100	97%	339,276
2015	12,000,053	10,708,134	89%	1,291,919

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	79	\$ 2,475,485	8.93%	0.00%
2006	79	2,604,302	8.99%	0.00%
2007	78	2,635,934	8.83%	0.00%
2008	78	2,654,706	9.19%	0.00%
2009	74	2,665,630	8.47%	0.00%
2010	68	2,434,100	8.75%	0.00%
2011	66	2,349,500	8.17%	0.00%
2012	66	2,370,512	8.64%	0.00%
2013	67	2,421,245	9.15%	0.00%
2014	68	2,518,253	8.60%	0.00%
2015	70	2,626,856	11.11%	0.00%

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

<sup>2</sup> 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 39 for past benefit provision changes.

## Division 13 - Elected & Appt. Dept Heads

**Table 8-13: Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 4,745,842	\$ 4,150,853	87%	\$ 594,989
2006	5,687,804	5,217,257	92%	470,547
2007	5,988,163	6,071,842	101%	(83,679)
2008	6,316,152	6,299,285	100%	16,867
2009	6,509,265	6,493,331	100%	15,934
2010	6,911,978	6,745,462	98%	166,516
2011	7,159,028	7,370,412	103%	(211,384)
2012	7,416,706	7,533,800	102%	(117,094)
2013	7,688,872	7,768,762	101%	(79,890)
2014	7,945,278	7,966,793	100%	(21,515)
2015	8,598,243	8,131,550	95%	466,693

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	25	\$ 1,012,615	10.79%	2.53%
2006	25	1,144,909	9.62%	2.53%
2007	27	1,201,441	6.82%	2.53%
2008	25	1,087,404	7.63%	2.53%
2009	26	1,183,905	7.61%	2.53%
2010	24	1,083,981	8.68%	2.53%
2011	24	1,058,033	5.09%	2.53%
2012	23	1,033,001	6.40%	2.53%
2013	23	1,059,325	7.20%	2.53%
2014	23	1,089,442	7.81%	2.53%
2015	24	1,161,536	10.63%	2.53%

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

<sup>2</sup> 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 39 for past benefit provision changes.

## Division 20 - COAM/POAM Disp

### Table 8-20: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 1,180,535	\$ 690,563	58%	\$ 489,972
2006	1,305,872	795,241	61%	510,631
2007	1,398,310	919,935	66%	478,375
2008	1,541,693	1,037,678	67%	504,015
2009	1,566,343	1,229,516	78%	336,827
2010	1,709,932	1,408,578	82%	301,354
2011	1,877,994	1,587,521	85%	290,473
2012	2,010,409	1,706,187	85%	304,222
2013	2,201,118	1,863,562	85%	337,556
2014	2,434,881	2,170,995	89%	263,886
2015	2,753,847	2,311,935	84%	441,912

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	16	\$ 658,457	13.07%	0.00%
2006	16	655,631	13.45%	0.00%
2007	15	639,262	13.42%	0.00%
2008	16	695,634	13.26%	0.00%
2009	16	727,271	11.84%	0.00%
2010	16	692,364	11.67%	0.00%
2011	16	705,498	11.21%	0.00%
2012	16	708,848	11.55%	0.00%
2013	16	714,011	11.84%	0.00%
2014	13	619,208	11.45%	0.00%
2015	16	745,795	12.63%	0.00%

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

<sup>2</sup> 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 39 for past benefit provision changes.

## Division 40 - MCF Non Union

### Table 8-40: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 8,199,330	\$ 7,206,677	88%	\$ 992,653
2006	9,041,058	7,993,524	88%	1,047,534
2007	9,974,903	8,799,434	88%	1,175,469
2008	11,401,936	9,463,994	83%	1,937,942
2009	12,140,501	10,075,912	83%	2,064,589
2010	13,313,568	10,837,700	81%	2,475,868
2011	14,665,104	11,561,516	79%	3,103,588
2012	15,454,455	12,140,833	79%	3,313,622
2013	16,800,339	12,973,786	77%	3,826,553
2014	18,601,707	13,764,128	74%	4,837,579
2015	20,642,980	14,356,008	70%	6,286,972

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

### Table 9-40: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	89	\$ 3,344,614	10.75%	0.00%
2006	89	3,450,225	10.70%	0.00%
2007	92	3,840,560	10.71%	0.00%
2008	89	3,855,445	12.49%	0.00%
2009	93	4,164,596	12.43%	0.00%
2010	96	4,288,706	13.18%	0.00%
2011	95	4,459,948	13.32%	0.00%
2012	93	4,361,594	13.98%	0.00%
2013	97	4,558,300	14.46%	0.00%
2014	95	4,580,417	15.79%	0.00%
2015	91	4,648,259	18.01%	0.00%

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

<sup>2</sup> 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 39 for past benefit provision changes.

## Division 60 - CMH Non Union

### Table 8-60: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 2,155,116	\$ 1,476,050	68%	\$ 679,066
2006	2,302,053	2,054,466	89%	247,587
2007	2,476,044	2,288,254	92%	187,790
2008	2,606,445	2,363,097	91%	243,348
2009	2,637,873	2,460,474	93%	177,399
2010	2,732,446	2,634,271	96%	98,175
2011	2,944,916	2,868,224	97%	76,692
2012	3,051,693	2,930,235	96%	121,458
2013	3,269,663	3,122,733	96%	146,930
2014	3,498,472	3,389,932	97%	108,540
2015	4,049,928	3,592,673	89%	457,255

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

### Table 9-60: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	9	\$ 474,533	15.00%	0.00%
2006	9	492,632	10.17%	0.00%
2007	9	522,479	9.68%	0.00%
2008	9	529,886	11.12%	0.00%
2009	9	546,753	9.19%	0.00%
2010	10	582,803	8.77%	0.00%
2011	9	537,109	8.23%	0.00%
2012	9	546,357	8.85%	0.00%
2013	11	638,867	9.12%	0.00%
2014	12	721,577	8.62%	0.00%
2015	14	853,145	11.08%	0.00%

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

<sup>2</sup> 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 39 for past benefit provision changes.

## GASB 68 Information

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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](http://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:	339
Inactive employees entitled to but not yet receiving benefits:	132
Active employees:	<u>727</u>
	1,198

Total Pension Liability as of 12/31/2014 measurement date:	\$ 99,064,908
Total Pension Liability as of 12/31/2015 measurement date:	\$ 109,669,422
Service Cost for the year ending on the 12/31/2015 measurement date:	\$ 2,290,470

Change in the Total Pension Liability due to:

- Benefit changes <sup>1</sup> :	\$ 0
- Differences between expected and actual experience <sup>2</sup> :	\$ 553,707
- Changes in assumptions <sup>2</sup> :	\$ 4,402,610

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

<sup>2</sup> 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):	6
Covered employee payroll: (Needed for Required Supplementary Information)	\$ 28,034,436

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:	\$ 13,337,477	-	\$ (11,233,598)

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.

## GASB 68 Information

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This page is for those municipalities who need to “roll-forward” their total pension liability due to the timing of completion of the actuarial valuation in relation to their fiscal year-end.

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](http://www.mersofmich.com).

Actuarial Valuation Date:	12/31/2015
Measurement Date of Total Pension Liability (TPL):	12/31/2016

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

Inactive employees or beneficiaries currently receiving benefits:	339
Inactive employees entitled to but not yet receiving benefits:	132
Active employees:	<u>727</u>
	1,198

Total Pension Liability as of 12/31/2015 measurement date:	\$ 104,387,147
Total Pension Liability as of 12/31/2016 measurement date:	\$ 115,147,251
Service Cost for the year ending on the 12/31/2016 measurement date:	\$ 2,366,432
Change in the Total Pension Liability due to:	
- Benefit changes <sup>1</sup> :	\$ 0
- Differences between expected and actual experience <sup>2</sup> :	\$ 952,237
- Changes in assumptions <sup>2</sup> :	\$ 4,501,823

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

<sup>2</sup> 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):	6
Covered employee payroll: (Needed for Required Supplementary Information)	\$ 28,034,436

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 12/31/2016:	\$ 13,868,536	-	\$ (11,686,453)

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.

### 02 - POLC Sheriff

1/1/1999	Benefit B-4 (80% max)
1/1/1999	Member Contribution Rate 2.49%
1/1/1994	Benefit B-3 (80% max)
1/1/1991	Benefit B-2
1/1/1991	Benefit F50 (With 25 Years of Service)
1/1/1988	Benefit C-2/Base B-1
6/1/1985	Member Contribution Rate 0.00%
1/1/1981	Benefit F55 (With 25 Years of Service)
1/1/1981	Member Contribution Rate 5.00%
4/6/1978	Exclude Temporary Employees
1/1/1973	Benefit C-1 (Old)
10/30/1970	Covered by Act 88
6/1/1966	Benefit FAC-5 (5 Year Final Average Compensation)
6/1/1966	10 Year Vesting
6/1/1966	Benefit C (Old)
6/1/1966	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
	Fiscal Month - January

### 04 - S.T.A.R.S.

2/1/2013	Benefit F55 (With 25 Years of Service)
2/1/2013	Member Contribution Rate 1.27%
5/1/2007	Member Contribution Rate 0.00%
10/1/2005	Benefit B-2
10/1/2005	Member Contribution Rate 2.33%
1/1/1987	Member Contribution Rate 0.00%
1/1/1973	Benefit C-1 (Old)
10/30/1970	Covered by Act 88
6/1/1966	Benefit FAC-5 (5 Year Final Average Compensation)
6/1/1966	10 Year Vesting
6/1/1966	Benefit C (Old)
6/1/1966	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
6/1/1966	Fiscal Month - January

### 06 - CMH Union

4/1/2003	Benefit B-3 (80% max)
5/1/2001	Member Contribution Rate 0.00%
1/1/2001	Member Contribution Rate 4.14%
1/1/2000	Member Contribution Rate 4.41%
1/1/1999	Member Contribution Rate 0.23%
11/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)

**06 - CMH Union**

11/1/1998	10 Year Vesting
11/1/1998	Benefit B-2
11/1/1998	Member Contribution Rate 0.00%
4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

**10 - AFSCME**

1/1/2000	Benefit B-3 (80% max)
3/1/1991	Benefit B-2
1/1/1986	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1986	10 Year Vesting
1/1/1986	Member Contribution Rate 0.00%
10/30/1970	Covered by Act 88
	Fiscal Month - January

**11 - Gnrl Non Union**

12/31/2000	Benefit B-3 (80% max)
12/1/1990	Benefit B-2
1/1/1986	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1986	10 Year Vesting
1/1/1986	Member Contribution Rate 0.00%
4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

**12 - Gnrl Teamsters**

1/1/2000	Benefit B-3 (80% max)
1/1/1991	Benefit B-2
1/1/1986	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1986	10 Year Vesting
1/1/1986	Member Contribution Rate 0.00%
4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

**13 - Elected & Appt. Dept Heads**

1/1/2005	Benefit B-4 (80% max)
1/1/2005	Member Contribution Rate 2.53%
1/1/2001	Benefit B-3 (80% max)
12/1/1990	Benefit B-2
6/1/1985	Benefit FAC-5 (5 Year Final Average Compensation)
6/1/1985	10 Year Vesting
6/1/1985	Member Contribution Rate 0.00%

**13 - Elected & Appt. Dept Heads**

4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

**20 - COAM/POAM Disp**

12/31/2000	Benefit FAC-5 (5 Year Final Average Compensation)
12/31/2000	10 Year Vesting
12/31/2000	Benefit B-3 (80% max)
12/31/2000	Benefit F50 (With 25 Years of Service)
12/31/2000	Member Contribution Rate 0.00%
4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

**40 - MCF Non Union**

1/1/2008	Benefit B-4 (80% max)
1/1/1999	Benefit B-3 (80% max)
1/1/1999	Benefit F55 (With 25 Years of Service)
1/1/1991	10 Year Vesting
1/1/1991	Benefit B-2
1/1/1991	Benefit F55 (With 30 Years of Service)
1/1/1991	Member Contribution Rate 0.00%
1/1/1991	Benefit FAC-5 (5 Year Final Average Compensation)
10/30/1970	Covered by Act 88
6/1/1966	Fiscal Month - January

**60 - CMH Non Union**

5/1/2001	Benefit B-3 (80% max)
11/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
11/1/1998	10 Year Vesting
11/1/1998	Benefit B-2
11/1/1998	Member Contribution Rate 0.00%
4/6/1978	Exclude Temporary Employees
10/30/1970	Covered by Act 88
	Fiscal Month - January

**Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method**

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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	2.00%

**Withdrawal Rate Scaling Factor**

Division	Withdrawal Rate Scaling Factor
All Divisions	123%

**Miscellaneous and Technical Assumptions**

Loads – None.