

MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2015 SAGINAW CO (7303)



Spring, 2016

Saginaw 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 Saginaw Co (7303) 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. Saginaw 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.
  - 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 <u>Appendix</u>.

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 94% to 90%, a change of -4%.

The new assumptions changed your total monthly employer contribution requirement, before any phase-in, from \$221,202 to \$378,419, a change of \$157,217 (a 71% increase). Under the 5-year phase-in the first year increase is instead 14% (from \$221,202 to \$252,623 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 As	ssumptions
	12/31/2015	12/31/2015	12/31/2014
Funded Ratio	90%	94%	98%

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					New		Previous				
	Assum		Assum	ptions		Assum	ptio		Assumptions			ns
	Phase-in	Full			Ι.	Phase-in		Full				
Valuation Date.		Impact	40/04/0045	40/04/0044				Impact	40	104 1004 5	40	104 1004 4
Valuation Date:		12/31/2015				2/31/2015		/31/2015		/31/2015		/31/2014
Fiscal Year Beginning:	October 1, 2017	October 1, 2017	October 1, 2017	2016		ctober 1, 2017	O	ctober 1, 2017	00	tober 1, 2017	O	ctober 1, 2016
Division												
01 - General	-	-	-	-	\$	6,386	\$	25,718	\$	1,553	\$	1,886
02 - Sheriff POAM	-	-	-	-		29,530		52,750		23,723		4,699
09 - UAW Managers	-	-	-	-		67,615		105,819	İ	58,063		3,814
10 - UAWProfessional	-	-	-	-		3,326		7,778	İ	2,214		2,178
11 - Gnrl Local486	-	-	-	-	Ī	10,548		13,720		9,757		2,300
13 - Sheriff/Cooks	-	-	-	-	Ī	835		1,859		577		0
14 - Nurses	-	-	-	-		11,864		15,056		11,066		278
15 - Hlth Dept	-	-	-	-		25,798		35,222		23,441		1,400
16 - Elctd Commsnrs	-	-	-	-		2,838		4,574		2,406		0
17 - Animal Control	-	-	-	-		2,682		3,654		2,438		608
18 - Judges	-	-	-	-		0		0		0		0
19 - Dist Judges	-	-	-	-		5,442		6,314		5,225		4,741
20 - Sheriff FOP	-	-	-	-		908		908		938		1,529
21 - Shrff/Lts/Capts	-	-	-	-		41,648		47,408		40,209		19,519
23 - P.O.A.M. Non 312	-	-	-	-		2,527		7,579		1,264		1,607
91 - Juvenile Probtn	-	-	-	-		6,401		7,789		6,053		708
92 - Dist Court Prob	-	-	-	-		4,559		5,759		4,258		1,124
93 - Pros Attys Union	-	-	-	-		8,259		11,135		7,540		635
94 - Upper Management	-	-	-	-		21,269		25,177		20,291		11,256
95 - NonUnion Mgmnt	-	-	-	-		0		0		0		0
96 - UAW Para prof.	-	-	-	-		188		200		186		173
Municipality Total					\$	252,623	\$	378,419	\$	221,202	\$	58,455

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:

	Employee Con	tribution Rate
Valuation Date:	12/31/2015	12/31/2014
Division		
01 - General	3.88%	3.88%
02 - Sheriff POAM	4.00%	4.00%
09 - UAW Managers	3.20%	3.20%
10 - UAWProfessional	0.00%	0.00%
11 - Gnrl Local486	0.00%	0.00%
13 - Sheriff/Cooks	1.00%	1.00%
14 - Nurses	0.00%	0.00%
15 - Hlth Dept	0.00%	0.00%
16 - Elctd Commsnrs	0.00%	0.00%
17 - Animal Control	0.00%	0.00%
18 - Judges	0.00%	0.00%
19 - Dist Judges	0.00%	0.00%
20 - Sheriff FOP	0.00%	0.00%
21 - Shrff/Lts/Capts	0.00%	0.00%
23 - P.O.A.M. Non 312	4.00%	4.00%
91 - Juvenile Probtn	3.45%	3.45%
92 - Dist Court Prob	3.84%	3.84%
93 - Pros Attys Union	0.00%	0.00%
94 - Upper Management	0.00%	0.00%
95 - NonUnion Mgmnt	0.00%	0.00%
96 - UAW Para prof.	4.34%	4.34%

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.** 

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 79% (instead of 90%); and ii) your total employer contribution requirement for the fiscal year starting October 1, 2017 would be \$ 9,047,316 (instead of \$ 4,541,028).

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						t Return	
		Lower Future Annual Returns			-	Valuation Assumption	Hi	gher Returns
12/31/2015 Valuation Results		5.75%		6.75%		7.75%		8.75%
Accrued Liability	\$	180,380,432	\$	163,493,434	\$	149,188,929	\$	136,966,882
Valuation Assets	\$	133,962,801	\$	133,962,801	\$	133,962,801	\$	133,962,801
Unfunded Accrued Liability	\$	46,417,631	\$	29,530,633	\$	15,226,128	\$	3,004,081
Funded Ratio		74%		82%		90%		98%
Monthly Normal Cost	\$	31,077	\$	23,165	\$	17,201	\$	12,707
Monthly Amortization Payment	\$	1,031,486	\$	671,994	\$	361,218	\$	123,881
Total Employer Contribution <sup>1</sup>	\$	1,062,563	\$	695,159	\$	378,419	\$	136,588

<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.

								1
Valuation	Fiscal Year					From all and	Con	nputed Annual
Year Ending 12/31	Beginning 10/1	Act	uarial Accrued	\ Va	luation Assets	Funded	_	Employer Contribution
12/31	10/1		Liability	Va	iualion Assels	Percentage		ontribution
7 750/ 4 22		 	t Data and F.	 	Ammunal Mantrat De	ote of Detum		
1	EAR PHASE-		unt Kate and Fu	iure <i>i</i>	Annual Market Ra	l Return		
1			140 100 000	\$	122 062 001	000/	\$	2 024 476
2015 2016	2017	\$	149,188,929	Φ	133,962,801	90%	Ф	3,031,476
	2018		148,487,418		127,151,425	86%		4,415,796
2017	2019		147,259,550		120,657,468	82%		5,776,476
2018	2020		145,626,745		115,985,314	80%		7,029,996
2019	2021		143,580,589		112,405,548	78%		4,611,780
2020	2022		141,147,334		113,156,449	80%		3,787,872
NO 5-YEA	AR PHASE-IN							
2015	2017	\$	149,188,929	\$	133,962,801	90%	\$	4,541,028
2016	2018	*	148,487,418	*	127,151,425	86%	Ψ	5,356,140
2017	2019		147,259,550		121,078,982	82%		6,182,748
2018	2020		145,626,745		117,907,894	81%		6,943,668
2019	2020		143,580,589		115,259,254	80%		4,091,076
2020	2022		141,147,334		116,513,250	83%		3,249,888
2020	2022		141,147,554		110,515,250	0370		3,249,000
   6.75% Assur	ned Interest I	 Disco	unt Rate and Fu	 ture /	Annual Market Ra	te of Return		
1	AR PHASE-IN			l				
2015	2017	\$	163,493,434	\$	133,962,801	82%	\$	8,341,908
2016	2018	ľ	162,428,425	`	125,905,637	78%	•	9,294,384
2017	2019		160,800,719		119,648,116	74%		10,264,536
2018	2020		158,739,019		119,389,592	75%		11,126,856
2019	2021		156,238,414		119,761,807	77%		4,828,104
2020	2022		153,328,712	!	124,516,602	81%		3,346,548
5.75% Assur	ned Interest I	ı Disco	unt Rate and Fut	i ture <i>l</i>	Annual Market Ra	ate of Return		
1	AR PHASE-IN			l				
2015	2017	\$	180,380,432	\$	133,962,801	74%	\$	12,750,756
2016	2018		178,848,139		124,659,607	70%		13,824,756
2017	2019		176,711,494		118,398,596	67%		14,922,504
2018	2020		174,108,484		121,688,671	70%		15,882,912
2019	2021		171,038,578		125,626,707	73%		5,773,452
2020	2022		167,535,966		133,798,036	80%		3,456,240
	= = <b>==</b>		, ,			1		-,,

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

Table 1

	Amort.	Emplo	yer Contribu	tions <sup>1</sup>			
Division	Period for Unfund. Liab. <sup>4,5</sup>	Normal Cost	Unfunded Accrued Liability	Total Computed Employer Contribut.	Blended Employer Contribut. <sup>6</sup>	Employee Contribution Rate	Employee Contribut. Conversion Factor <sup>2</sup>
Percentage of Payroll							
01 - General	4	-	-	-		3.88%	
02 - Sheriff POAM	4	-	-	-		4.00%	
09 - UAW Managers	4	-	-	-		3.20%	
10 - UAWProfessional	4	-	-	-		0.00%	
11 - Gnrl Local486	5	-	-	-		0.00%	
13 - Sheriff/Cooks	5	-	-	-		1.00%	
14 - Nurses	4	-	-	-		0.00%	
15 - Hlth Dept	4	-	-	-		0.00%	
16 - Elctd Commsnrs	4	-	-	-		0.00%	
17 - Animal Control	4	-	-	_		0.00%	
18 - Judges	5	-	-	_		0.00%	
19 - Dist Judges	5	-	-	_		0.00%	
20 - Sheriff FOP	5	-	-	_		0.00%	
21 - Shrff/Lts/Capts	5	-	-	_		0.00%	
23 - P.O.A.M. Non 312	5	-	-	_		4.00%	
91 - Juvenile Probtn	4	-	-	-		3.45%	
92 - Dist Court Prob	4	_	_	_		3.84%	
93 - Pros Attys Union	4	-	_	_		0.00%	
94 - Upper Management	9	-	-	-		0.00%	
95 - NonUnion Mgmnt	9	-	-	-		0.00%	
96 - UAW Para prof.	9	-	-	_		4.34%	
Estimated Monthly							
Contribution <sup>3</sup>							
01 - General	4	\$ 1,586	\$ 24,132	\$ 25,718			
02 - Sheriff POAM	4	4,351	48,399	52,750			
09 - UAW Managers	4	2,573	103,246	105,819			
10 - UAWProfessional	4	2,195	5,583	7,778			
11 - Gnrl Local486	5	1,026	12,694	13,720			
13 - Sheriff/Cooks	5	0	1,859	1,859			
14 - Nurses	4	271	14,785	15,056			
15 - Hith Dept	4	1,197	34,025	35,222			
16 - Elctd Commsnrs	4	0	4,574	4,574			
17 - Animal Control	4	0	3,654	3,654			
18 - Judges	5	0	0,001	0,001			
19 - Dist Judges	5	323	5,991	6,314			
20 - Sheriff FOP	5	908	0,001	908			

**Table 1** (continued)

	Amort.	Employer Contributions <sup>1</sup>					
Division	Period for Unfund. Liab. <sup>4,5</sup>	Normal Cost	Unfunded Accrued Liability	Total Computed Employer Contribut.	Blended Employer Contribut. <sup>6</sup>	Employee Contribution Rate	Employee Contribut. Conversion Factor <sup>2</sup>
21 - Shrff/Lts/Capts	5	876	46,532	47,408			
23 - P.O.A.M. Non 312	5	1,277	6,302	7,579			
91 - Juvenile Probtn	4	0	7,789	7,789			
92 - Dist Court Prob	4	0	5,759	5,759			
93 - Pros Attys Union	4	418	10,717	11,135			
94 - Upper Management	9	0	25,177	25,177			
95 - NonUnion Mgmnt	9	0	0	0			
96 - UAW Para prof.	9	200	0	200			
Total Municipality		\$ 17,201	\$ 361,218	\$ 378,419			
Estimated Annual							
Contribution <sup>3</sup>		\$ 206,412	\$ 4,334,616	\$ 4,541,028			

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

**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.

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>&</sup>lt;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>&</sup>lt;sup>4</sup> 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.

<sup>&</sup>lt;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>&</sup>lt;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.

Yes (Adopted 10/19/1965)

# **Benefit Provisions**

Act 88:

02 - Sheriff POAM: Closed to new hires

## Table 2

01 - General: Closed to new hires					
	2015 Valuation	2014 Valuation			
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)			
Normal Retirement Age:	60	60			
Vesting:	6 years	6 years			
Early Retirement (Unreduced):	50/25	50/25			
	55/20	55/20			
Early Retirement (Reduced):	55/15	55/15			
Final Average Compensation:	5 years	5 years			
Employee Contributions:	3.88%	3.88%			
DC Plan for New Hires:	1/1/2000	1/1/2000			
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)			

02 - Sheriii i OAM. Closed to new lines						
	2015 Valuation	2014 Valuation				
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)				
Normal Retirement Age:	60	60				
Vesting:	6 years	6 years				
Early Retirement (Unreduced):	25 and Out	25 and Out				
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:	4%	4%				
DC Plan for New Hires:	9/30/2000	9/30/2000				

Yes (Adopted 10/19/1965)

09 - UAW Managers: Closed to new hires						
	2015 Valuation	2014 Valuation				
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)				
Normal Retirement Age:	60	60				
Vesting:	6 years	6 years				
Early Retirement (Unreduced):	55/15	55/15				
	25 and Out	25 and Out				
Early Retirement (Reduced):	-	-				
Final Average Compensation:	5 years	5 years				
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)				
Employee Contributions:	3.20%	3.20%				
DC Plan for New Hires:	3/1/1998	3/1/1998				
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)				

10 - UAWProfessional: Closed to new hires					
	2015 Valuation	2014 Valuation			
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)			
Normal Retirement Age:	60	60			
Vesting:	6 years	6 years			
Early Retirement (Unreduced):	50/25	50/25			
	55/15	55/15			
Early Retirement (Reduced):	-	-			
Final Average Compensation:	5 years	5 years			
Employee Contributions:	0%	0%			
DC Plan for New Hires:	3/1/1998	3/1/1998			
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)			

# 11 - Gnrl Local486: Closed to new hires

	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 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
<b>Employee Contributions:</b>	0%	0%
DC Plan for New Hires:	9/30/2000	9/30/2000
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

# 13 - Sheriff/Cooks: Closed to new hires

To Cheminocons. Closed to new miles		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	50/25	50/25
	55/20	55/20
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
<b>Employee Contributions:</b>	1%	1%
DC Plan for New Hires:	9/30/2000	9/30/2000
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

14 - Nurses: Closed to new hires		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	50/25	50/25
	55/20	55/20
Early Retirement (Reduced):	55/15	55/15

Final Average Compensation: 5 years 5 years

Employee Contributions: 0% 0%

DC Plan for New Hires: 1/1/1999 1/1/1999

Act 88: Yes (Adopted 10/19/1965) Yes (Adopted 10/19/1965)

# 15 - HIth Dept: Closed to new hires

	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	50/25	50/25
	55/20	55/20
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	0%	0%
DC Plan for New Hires:	1/1/1999	1/1/1999
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

#### 16 - Elctd Commsnrs: Closed to new hires

16 - Elicta Comments: Closed to new nires		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	55/15	55/15
	25 and Out	25 and Out
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	0%	0%
DC Plan for New Hires:	3/1/1998	3/1/1998
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

17 - Animal Control: Closed to new hires		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	50/25	50/25
	55/20	55/20
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	0%	0%
DC Plan for New Hires:	1/1/2000	1/1/2000
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

18 - Judges:	Closed to	new hires
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_		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	55/15	55/15
,	25 and Out	25 and Out
Early Retirement (Reduced):	-	-
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
<b>Employee Contributions:</b>	0%	0%
DC Plan for New Hires:	1/1/1999	1/1/1999
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

# 19 - Dist Judges: Closed to new hires

•		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	55/15	55/15
	25 and Out	25 and Out
Early Retirement (Reduced):	-	-
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
<b>Employee Contributions:</b>	0%	0%
DC Plan for New Hires:	1/1/1999	1/1/1999
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

20 - Sheriff FOP: Closed to new hires			
	2015 Valuation	2014 Valuation	
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)	
Normal Retirement Age:	60	60	
Vesting:	6 years	6 years	
Early Retirement (Unreduced):	55/15	55/15	
	25 and Out	25 and Out	
Early Retirement (Reduced):	-	-	
Final Average Compensation:	5 years	5 years	
Employee Contributions:	0%	0%	
DC Plan for New Hires:	1/1/2000	1/1/2000	
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)	

#### 21 - Shrff/Lts/Capts: Closed to new hires 2015 Valuation 2014 Valuation 2.50% Multiplier (80% max) **Benefit Multiplier:** 2.50% Multiplier (80% max) **Normal Retirement Age:** 6 years 6 years **Vesting:** 55/15 55/15 Early Retirement (Unreduced): 25 and Out 25 and Out Early Retirement (Reduced): 5 years 5 years **Final Average Compensation:** 2.50% (Non-Compound) 2.50% (Non-Compound) **COLA for Future Retirees:** 0% 0% **Employee Contributions:** DC Plan for New Hires: 1/1/1999 1/1/1999 Yes (Adopted 10/19/1965) Yes (Adopted 10/19/1965) Act 88:

23 - P.O.A.M. Non 312: Closed to new hires		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	25 and Out	25 and Out
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:	4%	4%
DC Plan for New Hires:	9/30/2000	9/30/2000
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

91 - Juvenile Probtn: Closed to new hires		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	55/20	55/20
	25 and Out	25 and Out
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	3.45%	3.45%
DC Plan for New Hires:	9/30/2000	9/30/2000
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

# 92 - Dist Court Prob: Closed to new hires

	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	55/20	55/20
	25 and Out	25 and Out
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
<b>Employee Contributions:</b>	3.84%	3.84%
DC Plan for New Hires:	1/1/2000	1/1/2000
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

## 93 - Pros Attys Union: Closed to new hires

or incomment		
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	50/25	50/25
	55/20	55/20
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
<b>Employee Contributions:</b>	0%	0%
DC Plan for New Hires:	1/1/1999	1/1/1999
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

94 - Upper Management: CI	osed to new hires	
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	55/15	55/15
	25 and Out	25 and Out
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
<b>Employee Contributions:</b>	0%	0%
RS50% Percentage:	50%	50%
DC Plan for New Hires:	6/20/2006	6/20/2006
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

#### 95 - NonUnion Mamnt: Closed to new hires

33 - Norionion Mgmmt. Olo	sca to new miles	
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	55/15	55/15
	25 and Out	25 and Out
Early Retirement (Reduced):	-	-
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	0%	0%
DC Plan for New Hires:	6/20/2006	6/20/2006
Act 88:	Yes (Adopted 10/1/2005)	Yes (Adopted 10/1/2005)

## 96 - UAW Para prof.: Closed to new hires

or or the and promisorous	u 10 11011 1111 00	
	2015 Valuation	2014 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	50/25	50/25
	55/15	55/15
Early Retirement (Reduced):	-	-
Final Average Compensation:	5 years	5 years
<b>Employee Contributions:</b>	4.34%	4.34%
DC Plan for New Hires:	6/20/2006	6/20/2006
Act 88:	Yes (Adopted 10/19/1965)	Yes (Adopted 10/19/1965)

# **Participant Summary**

Table 3

	2015 Valuation 2014 Valuation				aluation	2015 Valuation			
Division	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>
01 - General			,			,			
Active Employees	11	\$	428,361	13	\$	481,646	59.7	28.9	28.9
Vested Former Employees	16		107,909	16		107,957	54.0	11.7	12.7
Retirees and Beneficiaries	150		1,776,694	159		1,783,141	73.0		
02 - Sheriff POAM									
Active Employees	8	\$	515,941	9	\$	570,129	48.9	23.7	24.4
Vested Former Employees	6		43,586	6		43,657	54.3	7.0	9.2
Retirees and Beneficiaries	59		1,438,627	62		1,438,568	69.5		
09 - UAW Managers					$\vdash$				
Active Employees	6	\$	378,264	10	\$	606,318	55.2	30.4	30.4
Vested Former Employees	4		77,317	4		75,145	49.4	16.3	16.3
Retirees and Beneficiaries	90		3,096,059	86		2,886,441	66.0		
10 - UAWProfessional			, ,		$\vdash$	, ,			
Active Employees	6	\$	338,418	6	\$	331,768	55.9	27.3	27.3
Vested Former Employees	12		58,283	14		65,041	56.1	7.4	10.3
Retirees and Beneficiaries	56		881,071	54		878,290	69.4		
11 - Gnrl Local486		<del>                                     </del>	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·			
Active Employees	3	\$	137,587	3	\$	148,770	51.6	24.8	24.8
Vested Former Employees	2		19,562	2		19,562	51.4	12.6	19.2
Retirees and Beneficiaries	13		257,463	13		257,463	64.5		
13 - Sheriff/Cooks			· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·			
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	7		126,004	7		125,909	67.9		
14 - Nurses				i					
Active Employees	1	\$	51,524	1	\$	50,699	55.9	27.5	27.5
Vested Former Employees	3		31,248	3		31,248	55.2	11.6	11.8
Retirees and Beneficiaries	18		300,038	18		300,038	73.8		
15 - Hith Dept		<u> </u>		i	$\vdash$				
Active Employees	6	\$	212,736	7	\$	238,745	54.9	29.3	29.3
Vested Former Employees	10		56,408	11		58,090	53.4	9.4	11.2
Retirees and Beneficiaries	66		818,804	65		806,266	71.8		
16 - Elctd Commsnrs	†	<u> </u>	,	<b> </b>	$\vdash$	, -			
Active Employees	0	\$	0	0	\$	0	0.0	0.0	0.0
Vested Former Employees	4		19,626	4		19,626	68.5	13.0	13.0
Retirees and Beneficiaries	15		151,541	15		149,509	69.6	-	-

Table 3 (continued)

	2015	2015 Valuation			Į V	aluation	2015 Valuation			
Division	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>	
17 - Animal Control		Γ			Γ					
Active Employees	0	\$	0	2	\$	107,496	0.0	0.0	0.0	
Vested Former Employees	0		0	0		0	0.0	0.0	0.0	
Retirees and Beneficiaries	5		108,647	3		55,050	58.2			
18 - Judges					Γ					
Active Employees	1	\$	27,434	1	\$	27,434	71.1	43.0	43.0	
Vested Former Employees	0		0	0		0	0.0	0.0	0.0	
Retirees and Beneficiaries	5		52,300	6		67,970	79.5			
19 - Dist Judges				İ	Γ		İ			
Active Employees	2	\$	54,868	2	\$	54,868	63.3	33.0	33.0	
Vested Former Employees	0		0	0		0	0.0	0.0	0.0	
Retirees and Beneficiaries	4		51,998	4		51,611	78.8			
20 - Sheriff FOP				İ						
Active Employees	2	\$	145,475	3	\$	215,514	52.0	28.0	28.0	
Vested Former Employees	0		0	0		0	0.0	0.0	0.0	
Retirees and Beneficiaries	14		516,631	14	İ	522,195	64.3			
21 - Shrff/Lts/Capts				İ						
Active Employees	1	\$	72,833	3	\$	212,881	44.2	23.9	23.9	
Vested Former Employees	0		0	0		0	0.0	0.0	0.0	
Retirees and Beneficiaries	13		536,585	10		435,762	63.6			
23 - P.O.A.M. Non 312				ĺ	Γ					
Active Employees	3	\$	184,022	3	\$	209,708	54.1	23.5	23.5	
Vested Former Employees	1		9,062	1		9,062	48.6	9.3	9.3	
Retirees and Beneficiaries	18		598,662	18		597,860	62.1			
91 - Juvenile Probtn				ĺ	Γ		İ			
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	5		141,912	5		141,912	67.3			
92 - Dist Court Prob				ĺ						
Active Employees	0	\$	0	1	\$	51,225	0.0	0.0	0.0	
Vested Former Employees	2		36,258	1		4,713	52.5	15.5	17.2	
Retirees and Beneficiaries	3		103,649	3		103,649	62.2			
93 - Pros Attys Union				ĺ						
Active Employees	1	\$	78,257	1	\$	77,264	65.7	26.9	26.9	
Vested Former Employees	0		0	0		0	0.0	0.0	0.0	
Retirees and Beneficiaries	7		270,805	7		270,805	65.0			
94 - Upper Management		Π			Τ					
Active Employees	1	\$	81,689	1	\$	81,719	70.7	15.0	15.0	
Vested Former Employees	0		0	0		0	0.0	0.0	0.0	
Retirees and Beneficiaries	10		590,131	10		577,091	65.5			

Table 3 (continued)

	2015 Valuation			2014	V	aluation	2015 Valuation			
Division	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>	
95 - NonUnion Mgmnt										
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	1		54,822	1		53,656	67.2			
96 - UAW Para prof.					Г					
Active Employees	1	\$	60,310	1	\$	59,728	59.4	33.5	33.5	
Vested Former Employees	0		0	0		0	0.0	0.0	0.0	
Retirees and Beneficiaries	4		70,874	4		70,874	59.0			
Total Municipality										
Active Employees	53	\$	2,767,719	67	\$	3,525,912	55.8	27.7	27.8	
Vested Former Employees	60		459,259	62		434,101	54.8	10.5	12.2	
Retirees and Beneficiaries Total Participants	<u>563</u> 676		11,943,317	<u>564</u> 693		11,574,060	69.4			

<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  $\underline{\text{Appendix}}.$ 

# **Reported Assets (Market Value)**

Table 4

	2015 Va	luation	2014 Va	luation	
	Employer and		Employer and		
Division	Retiree <sup>1</sup>	Employee <sup>2</sup>	Retiree <sup>1</sup>	Employee <sup>2</sup>	
01 - General	\$ 16,481,622	\$ 267,884	\$ 18,493,322	\$ 272,801	
02 - Sheriff POAM	15,500,321	627,646	17,066,097	683,270	
09 - UAW Managers	30,631,639	214,940	33,958,450	316,434	
10 - UAWProfessional	9,151,369	150,435	10,149,633	159,437	
11 - Gnrl Local486	2,546,161	0	2,833,834	0	
13 - Sheriff/Cooks	1,046,972	0	1,189,484	65	
14 - Nurses	2,137,857	7,484	2,470,831	7,436	
15 - Hlth Dept	6,901,252	48,703	7,813,070	48,389	
16 - Elctd Commsnrs	1,193,737	1,524	1,364,805	1,514	
17 - Animal Control	935,199	0	1,020,024	0	
18 - Judges	672,979	66,709	739,829	66,278	
19 - Dist Judges	377,659	50,036	436,290	49,713	
20 - Sheriff FOP	6,225,804	58,314	6,775,675	81,057	
21 - Shrff/Lts/Capts	4,247,185	51,285	4,704,230	104,805	
23 - P.O.A.M. Non 312	7,306,024	182,058	8,019,201	173,570	
91 - Juvenile Probtn	936,855	0	1,094,007	0	
92 - Dist Court Prob	1,044,745	19,585	1,161,030	17,539	
93 - Pros Attys Union	2,499,407	0	2,799,717	0	
94 - Upper Management	4,727,597	31,840	5,307,206	31,634	
95 - NonUnion Mgmnt	557,946	0	621,636	0	
96 - UAW Para prof.	1,055,668	32,748	1,142,318	29,936	
Municipality Total	\$116,177,998	\$ 1,811,191	\$ 129,160,689	\$ 2,043,878	
Combined Reserves	\$ 117,9	89,189	\$ 131,204,567		

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

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 <a href="https://example.com/appendix">Appendix</a>.

<sup>&</sup>lt;sup>2</sup> Reserve for Employee Contributions

#### Flow of Valuation Assets

Table 5

Year						Employee		Valuation
Ended	Employer C	ontributions	Employee	Investment	Benefit	Contribution	Net	Asset
12/31	Required	Additional	Contributions	Income	Payments	Refunds	Transfers	Balance
2005	\$ 2,393,756		\$ 84,348	\$ 5,351,532	\$ (5,526,819)	\$ (51,759)	\$ 329,837	\$ 87,919,362
2006	2,718,336		216,719	6,996,640	(5,982,593)	(2,893)	68,448	91,934,019
2007	3,042,832		220,975	7,437,289	(6,482,434)	(4,111)	91,996	96,240,566
2008	3,161,891		187,842	3,863,205	(7,805,116)	(3,575)	421,418	96,066,231
2009	3,106,777		134,975	2,741,524	(9,213,487)	0	144,517	92,980,537
2010	3,114,732		127,851	3,822,727	(9,373,913)	0	80,076	90,752,010
2011	4,151,136	\$ 0	122,049	3,948,807	(9,603,674)	0	114,001	89,484,329
2012	4,672,827	0	112,274	3,535,581	(9,781,816)	0	19,921	88,043,116
2013	5,342,289	0	99,342	4,817,789	(10,624,888)	0	122,127	87,799,775
2014	397,713	51,623,224	80,446	10,421,658	(11,277,194)	0	22,954	139,068,576
2015	378,427	0	70,844	5,986,477	(11,572,834)	0	31,311	133,962,801

#### Notes:

Transfers in and out are usually related to the transfer of participants between municipalities, and to 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

			1				Unfunded
						(0	Ornunaea Overfunded)
		Actuarial				,,	Accrued
Division	Acc	crued Liability	Valu	iation Assets <sup>1</sup>	Percent Funded	Liabilities	
01 - General							
Active Employees	\$	2,712,209	\$	1,796,832	66.2%	\$	915,377
Vested Former Employees		768,876		768,876	100.0%		0
Retirees And Beneficiaries		16,443,177		16,443,177	100.0%		0
Pending Refunds		<u>8,203</u>		<u>8,203</u>	100.0%		<u>0</u>
Total	\$	19,932,465	\$	19,017,088	95.4%	\$	915,377
02 - Sheriff POAM							
Active Employees	\$	3,745,697	\$	1,893,050	50.5%	\$	1,852,647
Vested Former Employees		375,577		375,577	100.0%		0
Retirees And Beneficiaries		16,042,211		16,042,211	100.0%		0
Pending Refunds		<u>565</u>		<u>565</u>	100.0%		<u>0</u>
Total	\$	20,164,050	\$	18,311,403	90.8%	\$	1,852,647
09 - UAW Managers							
Active Employees	\$	2,800,418	\$	126,767	4.5%	\$	2,673,651
Vested Former Employees		598,182		88,160	14.7%		510,022
Retirees And Beneficiaries		35,596,058		34,807,724	97.8%		788,334
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>
Total	\$	38,994,658	\$	35,022,651	89.8%	\$	3,972,007
10 - UAWProfessional							
Active Employees	\$	1,909,168	\$	1,705,554	89.3%	\$	203,614
Vested Former Employees		470,007		470,007	100.0%		0
Retirees And Beneficiaries		8,385,540		8,385,540	100.0%		0
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>
Total	\$	10,764,715	\$	10,561,101	98.1%	\$	203,614
11 - Gnrl Local486							
Active Employees	\$	702,957	\$	94,708	13.5%	\$	608,249
Vested Former Employees		122,127		122,127	100.0%		0
Retirees And Beneficiaries		2,674,030		2,674,030	100.0%		0
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>
Total	\$	3,499,114	\$	2,890,865	82.6%	\$	608,249
13 - Sheriff/Cooks							
Active Employees	\$	0	\$	0	0.0%	\$	0
Vested Former Employees		0		0	0.0%		0
Retirees And Beneficiaries		1,277,816		1,188,713	93.0%		89,103
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>
Total	\$	1,277,816	\$	1,188,713	93.0%	\$	89,103

Table 6 (continued)

Table 0 (continued)		Actuarial					Unfunded Overfunded) Accrued	
Division			Valu	ation Assets <sup>1</sup>	Percent Funded	Liabilities		
14 - Nurses								
Active Employees	\$	303,467	\$	0	0.0%	\$	303,467	
Vested Former Employees		211,499		7,484	3.5%		204,015	
Retirees And Beneficiaries		2,486,047		2,428,298	97.7%		57,749	
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>	
Total	\$	3,001,013	\$	2,435,782	81.2%	\$	565,231	
15 - Hlth Dept								
Active Employees	\$	1,297,917	\$	27,462	2.1%	\$	1,270,455	
Vested Former Employees		379,101		348,535	91.9%		30,566	
Retirees And Beneficiaries		7,514,857		7,514,857	100.0%		0	
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>	
Total	\$	9,191,875	\$	7,890,854	85.8%	\$	1,301,021	
16 - Elctd Commsnrs		-		·			·	
Active Employees	\$	0	\$	0	0.0%	\$	0	
Vested Former Employees		163,951		1,524	0.9%		162,427	
Retirees And Beneficiaries		1,368,609		1,355,554	99.0%		13,055	
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>	
Total	\$	1,532,560	\$	1,357,078	88.5%	\$	175,482	
17 - Animal Control				, ,				
Active Employees	\$	0	\$	0	0.0%	\$	0	
Vested Former Employees	ļ <sup>`</sup>	0		0	0.0%		0	
Retirees And Beneficiaries		1,213,107		1,061,808	87.5%		151,299	
Pending Refunds		0		0	0.0%		0	
Total	\$	1,213,10 <del>7</del>	\$	1,061,808	87.5%	\$	151,299	
18 - Judges				, ,			· · · · · · · · · · · · · · · · · · ·	
Active Employees	\$	344,926	\$	419,791	121.7%	\$	(74,865)	
Vested Former Employees		0		0	0.0%		Ô	
Retirees And Beneficiaries		420,037		420,037	100.0%		0	
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>	
Total	\$	764,963	\$	839,828	109.8%	\$	(74,865)	
19 - Dist Judges		·		·				
Active Employees	\$	442,817	\$	116,739	26.4%	\$	326,078	
Vested Former Employees		0		0	0.0%		0	
Retirees And Beneficiaries		368,858		368,858	100.0%		0	
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>	
Total	\$	811,67 <b>5</b>	\$	485,59 <b>7</b>	59.8%	\$	326,078	
20 - Sheriff FOP	<del>                                     </del>	•		,			· · · · · · · · · · · · · · · · · · ·	
Active Employees	\$	1,006,986	\$	1,574,900	156.4%	\$	(567,914)	
Vested Former Employees	l <sup>*</sup>	0		0	0.0%		Ó	
Retirees And Beneficiaries		5,559,974		5,559,974	100.0%		0	
Pending Refunds		0		0	0.0%		<u>0</u>	
Total	\$	6,566,960	\$	7,134,874	108.6%	\$	(567,914)	

Table 6 (continued)

Division		Actuarial rued Liability	Valu	ation Assets <sup>1</sup>	Percent Funded	(0	Unfunded Overfunded) Accrued Liabilities
21 - Shrff/Lts/Capts							
Active Employees	\$	555,094	\$	51,285	9.2%	\$	503,809
Vested Former Employees		0		0	0.0%		0
Retirees And Beneficiaries		6,727,442		4,829,120	71.8%		1,898,322
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>
Total	\$	7,282,536	\$	4,880,405	67.0%	\$	2,402,131
23 - P.O.A.M. Non 312							
Active Employees	\$	1,261,019	\$	963,968	76.4%	\$	297,051
Vested Former Employees		49,352		49,352	100.0%		0
Retirees And Beneficiaries		7,488,514		7,488,514	100.0%		0
Pending Refunds		, , <u>0</u>		. <u>0</u>	0.0%		<u>0</u>
Total	\$	8,798,88 <b>5</b>	\$	8,501,83 <b>4</b>	96.6%	\$	297,051
91 - Juvenile Probtn		<u> </u>		<u> </u>			•
Active Employees	\$	0	\$	0	0.0%	\$	0
Vested Former Employees		0		0	0.0%		0
Retirees And Beneficiaries		1,370,230		1,063,688	77.6%		306,542
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>
Total	\$	1,370,230	\$	1,063,688	77.6%	\$	306,542
92 - Dist Court Prob							·
Active Employees	\$	0	\$	0	0.0%	\$	0
Vested Former Employees		314,312		77,976	24.8%		236,336
Retirees And Beneficiaries		1,130,445		1,130,445	100.0%		0
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>
Total	\$	1,444,757	\$	1,208,421	83.6%	\$	236,336
93 - Pros Attys Union							
Active Employees	\$	390,530	\$	0	0.0%	\$	390,530
Vested Former Employees		0		0	0.0%		0
Retirees And Beneficiaries		2,865,005		2,837,782	99.0%		27,223
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>
Total	\$	3,255,535	\$	2,837,782	87.2%	\$	417,753
94 - Upper Management							
Active Employees	\$	322,315	\$	31,840	9.9%	\$	290,475
Vested Former Employees		0		0	0.0%		0
Retirees And Beneficiaries		7,182,501		5,371,939	74.8%		1,810,562
Pending Refunds		<u>0</u>		<u>0</u>	0.0%		<u>0</u>
Total	\$	7,504,816	\$	5,403,779	72.0%	\$	2,101,037
95 - NonUnion Mgmnt							
Active Employees	\$	0	\$	41,566	0.0%	\$	(41,566)
Vested Former Employees		0		0	0.0%		Ô
Retirees And Beneficiaries		591,916		591,916	100.0%		0
Pending Refunds		, <u>0</u>		<u>0</u>	0.0%		<u>0</u>
Total	\$	591,916	\$	633,482	107.0%	\$	(41,566 <u>)</u>

Division		Actuarial	\/_I		Dansant Francisch	((	Unfunded Overfunded) Accrued
Division	A	crued Liability	vai	uation Assets	Percent Funded		Liabilities
96 - UAW Para prof.							
Active Employees	\$	426,265	\$	436,750	102.5%	\$	(10,485)
Vested Former Employees		0		0	0.0%		0
Retirees And Beneficiaries	İ	799,018		799,018	100.0%		0
Pending Refunds	İ	<u>0</u>		<u>0</u>	0.0%		<u>0</u>
Total	\$	1,225,283	\$	1,235,768	100.9%	\$	(10,485)
Total Municipality							
Active Employees	\$	18,221,785	\$	9,281,212	50.9%	\$	8,940,573
Vested Former Employees	İ	3,452,984		2,309,618	66.9%		1,143,366
Retirees and Beneficiaries		127,505,392		122,363,203	96.0%		5,142,189
Pending Refunds		<u>8,768</u>		<u>8,768</u>	100.0%		<u>0</u>
Total Participants	\$	149,188,929	\$	133,962,801	89.8%	\$	15,226,128

<sup>&</sup>lt;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.

# **Actuarial Accrued Liabilities - Comparative Schedule**

Table 7

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2001	\$ 93,444,440	\$ 76,976,633	82%	\$ 16,467,807
2002	99,129,201	78,295,659	79%	20,833,542
2003	104,989,442	82,375,896	78%	22,613,546
2004	109,067,562	85,338,467	78%	23,729,095
2005	116,271,363	87,919,362	76%	28,352,001
2006	121,846,675	91,934,019	75%	29,912,656
2007	125,684,383	96,240,566	77%	29,443,817
2008	135,044,418	96,066,231	71%	38,978,187
2009	136,732,789	92,980,537	68%	43,752,252
2010	137,462,228	90,752,010	66%	46,710,218
2011	138,842,567	89,484,329	64%	49,358,238
2012	139,666,340	88,043,116	63%	51,623,224
2013	142,346,636	87,799,775	62%	54,546,861
2014	142,319,348	139,068,576	98%	3,250,772
2015	149,188,929	133,962,801	90%	15,226,128

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	\$ 18,062,828	\$ 15,756,918	87%	\$ 2,305,910
2006	19,290,800	16,150,497	84%	3,140,303
2007	19,151,816	15,020,616	78%	4,131,200
2008	20,136,698	14,740,482	73%	5,396,216
2009	20,208,441	13,880,928	69%	6,327,513
2010	20,009,957	13,239,723	66%	6,770,234
2011	20,294,019	12,758,515	63%	7,535,504
2012	19,902,410	12,289,309	62%	7,613,101
2013	19,599,081	12,057,652	62%	7,541,429
2014	19,285,438	19,890,908	103%	(605,470)
2015	19,932,465	19,017,088	95%	915,377

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

Table 9-01: Computed Employer Contributions - Comparative Schedule

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	57	\$ 1,891,182	\$ 28,023	0.00%
2006	52	1,836,864	\$ 29,798	3.88%
2007	49	1,663,682	\$ 34,152	3.88%
2008	33	1,161,510	\$ 45,027	3.88%
2009	33	1,226,665	\$ 55,451	3.88%
2010	28	1,004,444	\$ 62,454	3.88%
2011	25	939,216	\$ 78,236	3.88%
2012	23	853,425	\$ 90,848	3.88%
2013	14	516,849	\$ 108,120	3.88%
2014	13	481,646	\$ 1,886	3.88%
2015	11	428,361	\$ 25,718	3.88%

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

**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 56 for past benefit provision changes.

<sup>&</sup>lt;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.

#### **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	\$ 15,162,346	\$ 10,269,905	68%	\$ 4,892,441
2006	16,093,985	10,766,307	67%	5,327,678
2007	17,404,182	12,459,731	72%	4,944,451
2008	18,097,683	12,530,204	69%	5,567,479
2009	18,063,622	12,048,918	67%	6,014,704
2010	18,167,949	11,679,664	64%	6,488,285
2011	18,461,481	11,607,609	63%	6,853,872
2012	18,511,500	11,349,958	61%	7,161,542
2013	18,705,014	11,360,963	61%	7,344,051
2014	19,002,807	18,813,211	99%	189,596
2015	20,164,050	18,311,403	91%	1,852,647

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

Table 9-02: Computed Employer Contributions - Comparative Schedule

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	18	\$ 971,244	\$ 34,308	4.00%
2006	18	993,622	\$ 39,039	4.00%
2007	16	1,051,611	\$ 37,574	4.00%
2008	9	556,792	\$ 44,048	4.00%
2009	9	551,299	\$ 51,357	4.00%
2010	9	556,221	\$ 60,714	4.00%
2011	9	575,442	\$ 72,406	4.00%
2012	9	571,396	\$ 87,744	4.00%
2013	9	566,327	\$ 110,062	4.00%
2014	9	570,129	\$ 4,699	4.00%
2015	8	515,941	\$ 52,750	4.00%

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

**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 56 for past benefit provision changes.

<sup>&</sup>lt;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.

# **Division 09 - UAW Managers**

Table 8-09: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 27,381,296	\$ 17,524,845	64%	\$ 9,856,451
2006	28,210,689	18,621,355	66%	9,589,334
2007	29,073,477	22,201,445	76%	6,872,032
2008	33,655,793	23,427,965	70%	10,227,828
2009	34,503,332	22,726,869	66%	11,776,463
2010	34,834,216	22,176,771	64%	12,657,445
2011	34,545,933	21,684,388	63%	12,861,545
2012	35,308,533	21,474,996	61%	13,833,537
2013	36,644,206	22,159,800	61%	14,484,406
2014	36,649,796	36,329,218	99%	320,578
2015	38,994,658	35,022,651	90%	3,972,007

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

Table 9-09: Computed Employer Contributions - Comparative Schedule

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	36	\$ 2,119,452	\$ 74,457	3.20%
2006	35	1,958,416	\$ 73,549	3.20%
2007	31	1,823,338	\$ 51,074	3.20%
2008	19	1,138,639	\$ 82,298	3.20%
2009	19	1,215,989	\$ 101,445	3.20%
2010	18	1,183,514	\$ 116,671	3.20%
2011	17	1,055,648	\$ 131,408	3.20%
2012	16	907,495	\$ 165,447	3.20%
2013	12	745,579	\$ 213,459	3.20%
2014	10	606,318	\$ 3,814	3.20%
2015	6	378,264	\$ 105,819	3.20%

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

**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 56 for past benefit provision changes.

<sup>&</sup>lt;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.

### **Division 10 - UAWProfessional**

Table 8-10: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date	Actuarial			Unfunded (Overfunded) Accrued
December 31	Accrued Liability	Valuation Assets	Percent Funded	Liabilities
2005	\$ 11,663,061	\$ 9,696,031	83%	\$ 1,967,030
2006	10,791,050	9,182,137	85%	1,608,913
2007	10,624,411	8,526,110	80%	2,098,301
2008	10,967,405	8,098,960	74%	2,868,445
2009	11,121,208	7,664,257	69%	3,456,951
2010	11,117,976	7,365,110	66%	3,752,866
2011	11,280,242	7,230,548	64%	4,049,694
2012	11,301,354	7,063,933	63%	4,237,421
2013	10,905,024	6,712,078	62%	4,192,946
2014	10,375,412	10,926,965	105%	(551,553)
2015	10,764,715	10,561,101	98%	203,614

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

Table 9-10: Computed Employer Contributions - Comparative Schedule

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	28	\$ 1,316,123	\$ 21,208	0.00%
2006	19	968,541	\$ 16,191	0.00%
2007	18	920,299	\$ 18,457	0.00%
2008	9	499,823	\$ 24,076	0.00%
2009	8	494,821	\$ 30,422	0.00%
2010	8	489,208	\$ 35,429	0.00%
2011	9	526,168	\$ 43,203	0.00%
2012	9	530,101	\$ 52,269	0.00%
2013	7	381,854	\$ 61,756	0.00%
2014	6	331,768	\$ 2,178	0.00%
2015	6	338,418	\$ 7,778	0.00%

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

**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.

<sup>&</sup>lt;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.

### Division 11 - Gnrl Local486

Table 8-11: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date	Actuarial			Unfunded (Overfunded) Accrued
December 31	Accrued Liability	Valuation Assets	Percent Funded	Liabilities
2005	\$ 2,410,948	\$ 1,658,767	69%	\$ 752,181
2006	2,504,715	1,803,532	72%	701,183
2007	2,899,137	2,034,522	70%	864,615
2008	3,076,394	2,001,772	65%	1,074,622
2009	2,975,074	1,924,910	65%	1,050,164
2010	3,037,755	1,908,266	63%	1,129,489
2011	3,067,062	1,884,508	61%	1,182,554
2012	3,075,893	1,857,645	60%	1,218,248
2013	3,202,910	1,857,577	58%	1,345,333
2014	3,333,390	3,003,686	90%	329,704
2015	3,499,114	2,890,865	83%	608,249

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

Table 9-11: Computed Employer Contributions - Comparative Schedule

	Active	Active Employees		Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	12	\$ 457,629	\$ 7,203	0.00%
2006	12	468,009	\$ 7,171	0.00%
2007	10	404,372	\$ 7,734	0.00%
2008	6	231,803	\$ 8,774	0.00%
2009	6	237,885	\$ 8,974	0.00%
2010	5	198,973	\$ 10,041	0.00%
2011	5	198,723	\$ 11,570	0.00%
2012	5	198,311	\$ 13,264	0.00%
2013	3	112,301	\$ 16,461	0.00%
2014	3	148,770	\$ 2,300	0.00%
2015	3	137,587	\$ 13,720	0.00%

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

**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.

<sup>&</sup>lt;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.

### **Division 13 - Sheriff/Cooks**

Table 8-13: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 944,740	\$ 952,266	101%	\$ (7,526)
2006	985,858	1,015,896	103%	(30,038)
2007	1,171,090	819,506	70%	351,584
2008	1,326,516	804,034	61%	522,482
2009	1,329,109	732,077	55%	597,032
2010	1,326,847	703,697	53%	623,150
2011	1,226,506	630,201	51%	596,305
2012	1,219,383	613,436	50%	605,947
2013	1,207,932	610,762	51%	597,170
2014	1,236,883	1,260,847	102%	(23,964)
2015	1,277,816	1,188,713	93%	89,103

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

**Table 9-13: Computed Employer Contributions - Comparative Schedule** 

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	5	\$ 156,881	\$ 1,152	1.00%
2006	5	157,360	\$ 863	1.00%
2007	5	193,655	\$ 3,466	1.00%
2008	2	65,922	\$ 4,017	1.00%
2009	2	71,599	\$ 4,737	1.00%
2010	2	69,882	\$ 5,273	1.00%
2011	1	36,711	\$ 5,144	1.00%
2012	1	36,820	\$ 6,023	1.00%
2013	1	36,441	\$ 7,000	1.00%
2014	0	0	\$ 0	0.00%
2015	0	0	\$ 1,859	0.00%

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

**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.

<sup>&</sup>lt;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.

### **Division 14 - Nurses**

Table 8-14: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date	Actuarial			Unfunded (Overfunded) Accrued
December 31	Accrued Liability	Valuation Assets	Percent Funded	Liabilities
2005	\$ 3,155,553	\$ 2,439,508	77%	\$ 716,045
2006	3,203,370	2,379,270	74%	824,100
2007	2,969,253	2,449,313	82%	519,940
2008	2,935,889	2,476,099	84%	459,790
2009	2,921,768	2,359,304	81%	562,464
2010	2,910,479	2,239,647	77%	670,832
2011	2,928,508	2,091,845	71%	836,663
2012	2,910,595	1,948,813	67%	961,782
2013	2,922,195	1,835,982	63%	1,086,213
2014	2,884,099	2,626,807	91%	257,292
2015	3,001,013	2,435,782	81%	565,231

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

**Table 9-14: Computed Employer Contributions - Comparative Schedule** 

	Active Employees		Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	7	\$ 313,024	\$ 6,572	0.00%
2006	6	308,972	\$ 7,474	0.00%
2007	6	288,478	\$ 4,989	0.00%
2008	3	146,401	\$ 3,965	0.00%
2009	3	155,484	\$ 5,462	0.00%
2010	3	152,204	\$ 6,892	0.00%
2011	2	102,584	\$ 8,985	0.00%
2012	2	102,354	\$ 11,906	0.00%
2013	1	50,662	\$ 16,120	0.00%
2014	1	50,699	\$ 278	0.00%
2015	1	51,524	\$ 15,056	0.00%

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

**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.

<sup>&</sup>lt;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.

# **Division 15 - HIth Dept**

Table 8-15: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date	Actuarial		D	Unfunded (Overfunded) Accrued
December 31	Accrued Liability	Valuation Assets	Percent Funded	Liabilities
2005	\$ 7,884,053	\$ 6,190,450	79%	\$ 1,693,603
2006	7,919,060	6,494,700	82%	1,424,360
2007	8,229,526	6,315,433	77%	1,914,093
2008	8,626,232	6,194,171	72%	2,432,061
2009	8,646,444	5,925,674	69%	2,720,770
2010	8,720,667	5,763,585	66%	2,957,082
2011	8,636,783	5,571,562	65%	3,065,221
2012	8,573,513	5,489,782	64%	3,083,731
2013	8,770,805	5,461,552	62%	3,309,253
2014	8,828,631	8,332,651	94%	495,980
2015	9,191,875	7,890,854	86%	1,301,021

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

Table 9-15: Computed Employer Contributions - Comparative Schedule

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	33	\$ 1,139,926	\$ 18,605	0.00%
2006	29	949,862	\$ 15,552	0.00%
2007	27	928,261	\$ 17,031	0.00%
2008	17	570,302	\$ 21,152	0.00%
2009	17	590,015	\$ 24,674	0.00%
2010	15	528,044	\$ 28,366	0.00%
2011	14	499,392	\$ 32,648	0.00%
2012	14	494,260	\$ 38,031	0.00%
2013	8	255,145	\$ 48,902	0.00%
2014	7	238,745	\$ 1,400	0.00%
2015	6	212,736	\$ 35,222	0.00%

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

**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.

<sup>&</sup>lt;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.

### **Division 16 - Elctd Commsnrs**

Table 8-16: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date	Actuarial	Valuation Assats	Domont Foundad	Unfunded (Overfunded) Accrued
December 31	Accrued Liability	Valuation Assets	Percent Funded	Liabilities
2005	\$ 1,478,703	\$ 1,896,484	128%	\$ (417,781)
2006	1,487,088	1,946,036	131%	(458,948)
2007	1,484,242	1,189,434	80%	294,808
2008	1,516,883	1,109,081	73%	407,802
2009	1,510,587	1,002,216	66%	508,371
2010	1,522,345	940,103	62%	582,242
2011	1,520,974	876,994	58%	643,980
2012	1,503,643	816,921	54%	686,722
2013	1,490,242	780,672	52%	709,570
2014	1,470,430	1,448,212	99%	22,218
2015	1,532,560	1,357,078	89%	175,482

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

Table 9-16: Computed Employer Contributions - Comparative Schedule

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	7	\$ 100,256	\$ 0	0.00%
2006	7	98,454	\$ 0	0.00%
2007	4	60,095	\$ 2,347	0.00%
2008	2	32,688	\$ 3,179	0.00%
2009	2	32,236	\$ 4,108	0.00%
2010	1	15,959	\$ 5,259	0.00%
2011	1	15,884	\$ 6,318	0.00%
2012	1	16,099	\$ 7,947	0.00%
2013	0	0	\$ 10,167	0.00%
2014	0	0	\$ 0	0.00%
2015	0	0	\$ 4,574	0.00%

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

**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.

<sup>&</sup>lt;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.

### **Division 17 - Animal Control**

**Table 8-17: Actuarial Accrued Liabilities - Comparative Schedule** 

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 1,001,215	i '	65%	\$ 354,197
2006	929,221	664,803	72%	264,418
2007	1,037,974	728,184	70%	309,790
2008	927,730	743,634	80%	184,096
2009	944,706	747,042	79%	197,664
2010	970,773	758,479	78%	212,294
2011	982,208	761,323	78%	220,885
2012	1,016,933	765,397	75%	251,536
2013	1,029,536	785,421	76%	244,115
2014	1,103,126	1,081,161	98%	21,965
2015	1,213,107	1,061,808	88%	151,299

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

Table 9-17: Computed Employer Contributions - Comparative Schedule

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	3	\$ 123,213	\$ 2,988	0.00%
2006	3	119,466	\$ 2,437	0.00%
2007	2	90,340	\$ 2,671	0.00%
2008	2	82,737	\$ 1,870	0.00%
2009	2	87,243	\$ 2,118	0.00%
2010	2	89,687	\$ 2,448	0.00%
2011	2	86,834	\$ 2,761	0.00%
2012	2	94,539	\$ 3,567	0.00%
2013	2	92,542	\$ 3,993	0.00%
2014	2	107,496	\$ 608	0.00%
2015	0	0	\$ 3,654	0.00%

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

**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.

<sup>&</sup>lt;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.

# **Division 18 - Judges**

Table 8-18: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 937,226		107%	
	' '	l		' ' '
2006	1,118,328	1,046,406	94%	71,922
2007	1,122,311	890,135	79%	232,176
2008	870,777	674,588	77%	196,189
2009	899,069	660,996	74%	238,073
2010	891,720	658,389	74%	233,331
2011	879,354	637,313	73%	242,041
2012	867,918	616,065	71%	251,853
2013	865,307	605,018	70%	260,289
2014	837,054	854,423	102%	(17,369)
2015	764,963	839,828	110%	(74,865)

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

Table 9-18: Computed Employer Contributions - Comparative Schedule

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	4	\$ 109,736	\$ 626	0.00%
2006	3	82,302	\$ 1,439	0.00%
2007	3	82,302	\$ 1,857	0.00%
2008	2	54,868	\$ 1,469	0.00%
2009	2	56,978	\$ 1,754	0.00%
	_			
2010	1	27,434	\$ 1,861	0.00%
2011	1	27,538	\$ 2,135	0.00%
2012	1	27,168	\$ 2,493	0.00%
2013	1	28,489	\$ 3,002	0.00%
2014	1	27,434	\$ 0	0.00%
2015	1	27,434	\$ 0	0.00%

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

**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.

<sup>&</sup>lt;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.

# **Division 19 - Dist Judges**

Table 8-19: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date	Actuarial			Unfunded (Overfunded) Accrued
December 31	Accrued Liability	Valuation Assets	Percent Funded	Liabilities
2005	\$ 926,324	\$ 841,993	91%	\$ 84,331
2006	1,078,351	876,742	81%	201,609
2007	1,087,270	853,927	79%	233,343
2008	1,102,321	854,101	77%	248,220
2009	1,211,493	862,841	71%	348,652
2010	1,186,822	882,320	74%	304,502
2011	1,192,004	906,515	76%	285,489
2012	798,085	932,821	117%	(134,736)
2013	783,928	657,120	84%	126,808
2014	772,769	515,133	67%	257,636
2015	811,675	485,597	60%	326,078

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

Table 9-19: Computed Employer Contributions - Comparative Schedule

	Active	Active Employees		Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	3	\$ 82,302	\$ 1,386	0.00%
2006	3	82,302	\$ 2,151	0.00%
2007	3	82,302	\$ 2,139	0.00%
2008	3	82,302	\$ 2,372	0.00%
2009	3	85,467	\$ 2,918	0.00%
2010	3	82,302	\$ 2,695	0.00%
2011	3	82,614	\$ 2,802	0.00%
2012	2	54,336	\$ 0	0.00%
2013	2	56,978	\$ 1,898	0.00%
2014	2	54,868	\$ 4,741	0.00%
2015	2	54,868	\$ 6,314	0.00%

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

**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.

<sup>&</sup>lt;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.

### **Division 20 - Sheriff FOP**

Table 8-20: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 5,996,764	\$ 4,718,670	79%	\$ 1,278,094
2006	7,838,478	5,142,627	66%	2,695,851
2007	7,450,313	6,104,070	82%	1,346,243
2007	8,118,694	6,319,592	78%	1,799,102
2009	8,174,582	6,279,416	77% 77%	1,895,166
2009	0,174,302	0,279,410	11 70	1,095,100
2010	8,296,149	6,136,690	74%	2,159,459
2011	7,424,929	5,643,842	76%	1,781,087
2012	7,465,796	5,584,843	75%	1,880,953
2013	6,621,436	5,017,221	76%	1,604,215
2014	6,614,575	7,267,704	110%	(653,129)
2015	6,566,960	7,134,874	109%	(567,914)

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

Table 9-20: Computed Employer Contributions - Comparative Schedule

	Active	Active Employees		Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	13	\$ 750,653	\$ 13,134	0.00%
2006	12	968,028	\$ 24,393	0.00%
2007	11	721,835	\$ 12,663	0.00%
2008	8	556,083	\$ 16,958	0.00%
2009	8	582,929	\$ 19,012	0.00%
2010	7	506,113	\$ 21,267	0.00%
2011	5	367,338	\$ 17,700	0.00%
2012	5	359,760	\$ 20,868	0.00%
2013	3	208,483	\$ 19,039	0.00%
2014	3	215,514	\$ 1,529	0.00%
2015	2	145,475	\$ 908	0.00%

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

**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.

<sup>&</sup>lt;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.

# Division 21 - Shrff/Lts/Capts

Table 8-21: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date	Actuarial			Unfunded (Overfunded) Accrued
December 31	Accrued Liability	Valuation Assets	Percent Funded	Liabilities
2005	\$ 3,663,346	\$ 2,082,637	57%	\$ 1,580,709
2006	3,723,126	2,156,666	58%	1,566,460
2007	3,836,042	2,889,583	75%	946,459
2008	4,139,263	2,948,289	71%	1,190,974
2009	4,201,089	2,861,615	68%	1,339,474
2010	4,236,423	2,755,217	65%	1,481,206
2011	5,020,206	3,121,737	62%	1,898,469
2012	5,092,140	3,068,826	60%	2,023,314
2013	6,598,786	3,763,079	57%	2,835,707
2014	6,608,487	5,097,274	77%	1,511,213
2015	7,282,536	4,880,405	67%	2,402,131

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

Table 9-21: Computed Employer Contributions - Comparative Schedule

	Active Employees		Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	3	\$ 214,537	\$ 10,856	0.00%
2006	3	219,058	\$ 11,067	0.00%
2007	2	143,928	\$ 6,217	0.00%
2008	1	71,891	\$ 8,361	0.00%
2009	1	79,413	\$ 10,273	0.00%
2010	1	77,857	\$ 11,983	0.00%
2011	3	222,991	\$ 19,204	0.00%
2012	3	228,719	\$ 22,391	0.00%
2013	3	216,478	\$ 36,561	0.00%
2014	3	212,881	\$ 19,519	0.00%
2015	1	72,833	\$ 47,408	0.00%

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

**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.

<sup>&</sup>lt;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.

### Division 23 - P.O.A.M. Non 312

Table 8-23: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 6,754,877	\$ 4,284,221	63%	\$ 2,470,656
2006	6,213,655	4,197,151	68%	2,016,504
2007	7,012,471	5,036,379	72%	1,976,092
2008	7,722,879	4,916,106	64%	2,806,773
2009	7,814,124	4,806,309	62%	3,007,815
2010 2011 2012	7,823,108 8,097,500 8,231,285	4,753,523 4,756,597 4,703,619	61% 59% 57%	3,069,585 3,340,903 3,527,666
2013	8,167,289	4,754,827	58%	3,412,462
2014	8,428,134	8,683,821	103%	(255,687)
2015	8,798,885	8,501,834	97%	297,051

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

Table 9-23: Computed Employer Contributions - Comparative Schedule

	Active	Active Employees		Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	15	\$ 786,868	\$ 18,877	4.00%
2006	13	656,257	\$ 15,580	4.00%
2007	12	693,801	\$ 15,523	4.00%
2008	6	338,658	\$ 20,886	4.00%
2009	6	337,939	\$ 23,350	4.00%
2010	5	284,169	\$ 25,079	4.00%
2011	5	306,129	\$ 30,712	4.00%
2012	4	237,691	\$ 36,232	4.00%
2013	3	177,391	\$ 39,992	4.00%
2014	3	209,708	\$ 1,607	4.00%
2015	3	184,022	\$ 7,579	4.00%

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

**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.

<sup>&</sup>lt;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.

### **Division 91 - Juvenile Probtn**

Table 8-91: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 1,593,730	\$ 991,024	62%	\$ 602,706
2006	1,261,699	836,077	66%	425,622
2007	1,315,958	973,577	74%	342,381
2008	1,323,310	986,068	75%	337,242
2009	1,327,127	941,592	71%	385,535
2010	1,320,595	900,679	68%	419,916
2011	1,310,998	865,255	66%	445,743
2012	1,301,493	834,828	64%	466,665
2013	1,355,111	803,258	59%	551,853
2014	1,329,960	1,159,578	87%	170,382
2015	1,370,230	1,063,688	78%	306,542

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

Table 9-91: Computed Employer Contributions - Comparative Schedule

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	3	\$ 152,014	\$ 4,398	3.45%
2006	2	95,194	\$ 3,019	3.45%
2007	1	48,971	\$ 2,198	3.45%
2008	1	50,064	\$ 2,533	3.45%
2009	1	52,846	\$ 3,226	3.45%
2010	1	52,266	\$ 3,837	3.45%
2011	1	51,702	\$ 4,573	3.45%
2012	1	51,587	\$ 5,584	3.45%
2013	0	0	\$ 8,077	0.00%
2014	0	0	\$ 708	0.00%
2015	0	0	\$ 7,789	0.00%

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

**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.

<sup>&</sup>lt;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.

### **Division 92 - Dist Court Prob**

Table 8-92: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	·	l ·	80%	'
2006	1,021,853	773,736	76%	248,117
2007	1,007,781	832,132	83%	175,649
2008	1,057,842	839,559	79%	218,283
2009	1,133,694	885,407	78%	248,287
2010	1,225,491	934,868	76%	290,623
2011	1,262,745	947,183	75%	315,562
2012	1,282,916	960,227	75%	322,689
2013	1,372,272	983,234	72%	389,038
2014	1,383,026	1,249,209	90%	133,817
2015	1,444,757	1,208,421	84%	236,336

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

Table 9-92: Computed Employer Contributions - Comparative Schedule

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	3	\$ 145,806	\$ 2,031	0.00%
2006	3	155,943	\$ 2,248	3.84%
2007	3	143,756	\$ 1,636	3.84%
2008	3	151,163	\$ 2,460	3.84%
2009	3	160,314	\$ 2,730	3.84%
2010	2	104,454	\$ 3,065	3.84%
2011	2	105,580	\$ 3,753	3.84%
2012	2	105,362	\$ 4,351	3.84%
2013	1	51,382	\$ 6,009	3.84%
2014	1	51,225	\$ 1,124	3.84%
2015	0	0	\$ 5,759	0.00%

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

**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.

<sup>&</sup>lt;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.

# **Division 93 - Pros Attys Union**

Table 8-93: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 2,372,936	\$ 1,520,538	64%	\$ 852,398
2006	2,402,518	1,695,880	71%	706,638
2007	2,584,877	2,003,804	78%	581,073
2008	2,386,680	1,765,640	74%	621,040
2009	2,500,001	1,932,219	77%	567,782
2010	2,652,842	2,097,445	79%	555,397
2011	2,720,200	2,235,267	82%	484,933
2012	2,878,247	2,309,542	80%	568,705
2013	2,927,625	2,350,397	80%	577,228
2014	3,139,907	2,967,524	95%	172,383
2015	3,255,535	2,837,782	87%	417,753

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

Table 9-93: Computed Employer Contributions - Comparative Schedule

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	7	\$ 557,901	\$ 9,596	0.00%
2006	7	534,234	\$ 8,550	0.00%
2007	7	551,261	\$ 7,159	0.00%
2008	6	477,852	\$ 7,647	0.00%
2009	6	500,867	\$ 7,327	0.00%
2010	5	414,075	\$ 6,855	0.00%
2011	5	412,512	\$ 6,823	0.00%
2012	3	244,413	\$ 7,809	0.00%
2013	3	240,880	\$ 9,648	0.00%
2014	1	77,264	\$ 635	0.00%
2015	1	78,257	\$ 11,135	0.00%

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

**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.

<sup>&</sup>lt;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.

# **Division 94 - Upper Management**

Table 8-94: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 3,978,065	\$ 4,723,377	119%	\$ (745,312)
2006	4,217,347	5,134,184	122%	(916,837)
2007	4,519,896	3,617,934	80%	901,962
2008	5,028,892	3,379,599	67%	1,649,293
2009	5,179,666	3,516,958	68%	1,662,708
2010	5,154,390	3,669,725	71%	1,484,665
2011	6,173,163	4,072,092	66%	2,101,071
2012	6,589,694	4,139,270	63%	2,450,424
2013	7,316,333	3,999,761	55%	3,316,572
2014	7,188,840	5,658,834	79%	1,530,006
2015	7,504,816	5,403,779	72%	2,101,037

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

**Table 9-94: Computed Employer Contributions - Comparative Schedule** 

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2005	7	\$ 725,130	5.34%	0.00%
2006	7	719,880	\$ 583	0.00%
2007	7	785,865	\$ 10,830	0.00%
2008	5	560,090	\$ 13,724	0.00%
2009	5	617,645	\$ 13,939	0.00%
2010	5	546,310	\$ 12,434	0.00%
2011	4	436,254	\$ 18,185	0.00%
2012	2	247,615	\$ 19,828	0.00%
2013	1	82,006	\$ 27,409	0.00%
2014	1	81,719	\$ 11,256	0.00%
2015	1	81,689	\$ 25,177	0.00%

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

**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.

<sup>&</sup>lt;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.

# **Division 95 - NonUnion Mgmnt**

Table 8-95: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2006	\$ 439,948	\$ 294,920	67%	\$ 145,028
2007	448,612	374,535	83%	74,077
2008	642,217	361,625	56%	280,592
2009	645,988	336,850	52%	309,138
2010	649,049	308,581	48%	340,468
2011	653,894	289,480	44%	364,414
2012	655,605	271,515	41%	384,090
2013	653,599	259,933	40%	393,666
2014	653,574	658,895	101%	(5,321)
2015	591,916	633,482	107%	(41,566)

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

**Table 9-95: Computed Employer Contributions - Comparative Schedule** 

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2006	1	\$ 60,395	\$ 1,358	0.00%
2007	1	62,066	\$ 686	0.00%
2008	0	0	\$ 1,580	0.00%
2009	0	0	\$ 1,839	0.00%
2010	0	0	\$ 2,117	0.00%
2011	0	0	\$ 2,436	0.00%
2012	0	0	\$ 2,793	0.00%
2013	0	0	\$ 3,153	0.00%
2014	0	0	\$ 0	0.00%
2015	0	0	\$ 0	0.00%

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

**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.

<sup>&</sup>lt;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.

# Division 96 - UAW Para prof.

Table 8-96: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date	Actuarial			Unfunded (Overfunded) Accrued
December 31	Accrued Liability	Valuation Assets	Percent Funded	Liabilities
2006	\$ 1,115,536	\$ 755,097	68%	\$ 360,439
2007	1,253,744	920,196	73%	333,548
2008	1,384,320	894,662	65%	489,658
2009	1,421,665	884,139	62%	537,526
2010	1,406,675	879,528	63%	527,147
2011	1,163,858	911,555	78%	252,303
2012	1,179,404	951,370	81%	228,034
2013	1,208,005	983,468	81%	224,537
2014	1,193,010	1,242,515	104%	(49,505)
2015	1,225,283	1,235,768	101%	(10,485)

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

**Table 9-96: Computed Employer Contributions - Comparative Schedule** 

	Active	Employees	Computed	Employee
Valuation Date		Annual	Employer	Contribution
December 31	Number	Payroll	Contribution <sup>1</sup>	Rate <sup>2</sup>
2006	6	\$ 229,016	\$ 3,152	4.34%
2007	4	166,460	\$ 2,398	4.34%
2008	2	91,310	\$ 3,225	4.34%
2009	2	96,885	\$ 3,674	4.34%
2010	2	94,620	\$ 3,655	4.34%
2011	2	102,928	\$ 1,881	4.34%
2012	2	100,721	\$ 1,925	4.34%
2013	1	59,758	\$ 1,950	4.34%
2014	1	59,728	\$ 173	4.34%
2015	1	60,310	\$ 200	4.34%

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

**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.

<sup>&</sup>lt;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.

### **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 <a href="https://www.mersofmich.com">www.mersofmich.com</a>.

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:  Inactive employees entitled to but not yet receiving benefits:  Active employees:		563 60 <u>53</u> 676
Total Pension Liability as of 12/31/2014 measurement date:	\$	139,309,355
Total Pension Liability as of 12/31/2015 measurement date:	\$	145,954,971
Service Cost for the year ending on the 12/31/2015 measurement date:		366,482
Change in the Total Pension Liability due to:  - Benefit changes <sup>1</sup> :  - Differences between expected and actual experience <sup>2</sup> :  - Changes in assumptions <sup>2</sup> :	\$ \$ \$	0 (116,667) 6,937,875

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

Average expected remaining service lives of all employees (active and inactive):

Covered employee payroll: (Needed for Required Supplementary Information) \$ 2,767,719

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

1% Decrease Current Discount 1% Increase (7.00%) Rate (8.00%) (9.00%)

Change in Net Pension Liability as of 12/31/2015: \$ 13,742,025 - \$ (11,765,587)

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.

<sup>&</sup>lt;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.

# **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	
4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
5/1/2006	Benefit B-4 (80% max)
5/1/2006	Member Contribution Rate 3.88%
10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/03/2002)
1/1/2000	DC Adoption Date 01-01-2000
5/1/1996	Benefit F50 (With 25 Years of Service)
5/1/1996	Benefit F55 (With 20 Years of Service)
1/1/1995	Benefit F55 (With 25 Years of Service)
1/1/1993	6 Year Vesting
1/1/1993	Benefit B-3 (80% max)
9/1/1990	Temporary 2.25% Multiplier (no max) (09/01/1990 - 01/03/1991)
9/1/1990	Temporary Benefit F55 (With 20 Years of Service) (09/01/1990 - 01/03/1991)
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Benefit C-2/Base B-1
1/1/1988	Member Contribution Rate 0.00%
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
4/1/1982	Member Contribution Rate 4.00%
1/1/1980	Flexible E 2% COLA Adopted (01/01/1980)
12/8/1972	Blanket Resolution (All Service)
1/1/1967	Benefit C-1 (Old)
10/19/1965	Covered by Act 88
1/1/1959	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1959	10 Year Vesting
1/1/1959	Benefit C (Old)
1/1/1959	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
	Fiscal Month - October

### 02 - Sheriff POAM

4/4/0000	T 00.3/ 0.0 + /0.4/0.4/0.000 4.0/0.4/0.000
4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/03/2002)
1/1/2001	E2 2.5% COLA for future retirees (01/01/1995)
9/30/2000	DC Adoption Date 09-30-2000
4/1/2000	Member Contribution Rate 4.00%
1/1/2000	E2 2.4% COLA for future retirees (01/01/1995)
4/1/1995	Benefit B-4 (80% max)
4/1/1995	Member Contribution Rate 7.09%
1/1/1995	E2 2.5% COLA for future retirees (01/01/1995)
1/1/1995	25 Years & Out

# 02 - Sheriff POAM

1/1/1992	6 Year Vesting
1/1/1992	Benefit B-3 (80% max)
1/1/1992	Benefit F50 (With 25 Years of Service)
9/1/1990	Temporary 2.25% Multiplier (no max) (09/01/1990 - 01/03/1991)
9/1/1990	Temporary Benefit F55 (With 20 Years of Service) (09/01/1990 - 01/03/1991)
1/1/1989	Benefit B-2
1/1/1989	Member Contribution Rate 0.00%
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
1/1/1983	Member Contribution Rate 4.00%
1/1/1980	Flexible E 2% COLA Adopted (01/01/1980)
12/8/1972	Blanket Resolution (All Service)
1/1/1967	Benefit C-1 (Old)
10/19/1965	Covered by Act 88
1/1/1959	10 Year Vesting
1/1/1959	Benefit C (Old)
1/1/1959	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
1/1/1959	Benefit FAC-5 (5 Year Final Average Compensation)
	Fiscal Month - October

# 09 - UAW Managers

Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
E2 2.5% COLA for future retirees (06/01/2005)
Member Contribution Rate 3.20%
Temporary 20 Years & Out (10/01/2002 - 12/03/2002)
DC Adoption Date 03-01-1998
25 Years & Out
Benefit F55 (With 15 Years of Service)
Benefit F55 (With 20 Years of Service)
Benefit FAC-5 (5 Year Final Average Compensation)
6 Year Vesting
Benefit B-4 (80% max)
Benefit F50 (With 25 Years of Service)
Temporary Benefit F55 (With 20 Years of Service) (09/01/1990 - 01/03/1991)
Flexible E 2% COLA Adopted (01/01/1989)
Flexible E 2% COLA Adopted (01/01/1988)
Flexible E 2% COLA Adopted (01/01/1987)
Flexible E 2% COLA Adopted (01/01/1985)
Member Contribution Rate 0.00%
Member Contribution Rate 4.00%
Flexible E 2% COLA Adopted (01/01/1980)
Blanket Resolution (All Service)
Covered by Act 88
Fiscal Month - October

# 10 - UAWProfessional

4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/05/2002)
3/1/1998	DC Adoption Date 03-01-1998
1/1/1998	Benefit F55 (With 15 Years of Service)
1/1/1993	Benefit B-3 (80% max)
1/1/1993	Benefit F50 (With 25 Years of Service)
9/1/1990	Temporary 2.25% Multiplier (no max) (09/01/1990 - 01/03/1991)
9/1/1990	Temporary Benefit F55 (With 20 Years of Service) (09/01/1990 - 01/03/1991)
1/1/1990	6 Year Vesting
1/1/1990	Benefit B-2
1/1/1990	Benefit F55 (With 20 Years of Service)
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
1/1/1987	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1987	10 Year Vesting
1/1/1987	Benefit C-2/Base B-1
1/1/1987	Benefit F55 (With 25 Years of Service)
1/1/1987	Member Contribution Rate 0.00%
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
4/1/1982	Member Contribution Rate 4.00%
12/8/1972	Blanket Resolution (All Service)
10/19/1965	Covered by Act 88
	Fiscal Month - October

# 11 - Gnrl Local486

1991)
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# 11 - Gnrl Local486

10/19/1965 Covered by Act 88
Fiscal Month - October

# 13 - Sheriff/Cooks

4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/03/2002)
10/1/2001	Benefit B-4 (80% max)
10/1/2001	Member Contribution Rate 1.00%
9/30/2000	DC Adoption Date 09-30-2000
3/1/2000	Benefit F50 (With 25 Years of Service)
1/1/1994	6 Year Vesting
1/1/1994	Benefit B-3 (80% max)
1/1/1994	Benefit F55 (With 20 Years of Service)
9/1/1990	Temporary Benefit F55 (With 20 Years of Service) (09/01/1990 - 01/03/1991)
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
9/1/1987	Benefit FAC-5 (5 Year Final Average Compensation)
9/1/1987	10 Year Vesting
9/1/1987	Benefit C-2/Base B-1
9/1/1987	Benefit F55 (With 25 Years of Service)
9/1/1987	Member Contribution Rate 0.00%
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
1/1/1980	Flexible E 2% COLA Adopted (01/01/1980)
12/8/1972	Blanket Resolution (All Service)
10/19/1965	Covered by Act 88
	Fiscal Month - October

### 14 - Nurses

4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
1/1/1999	DC Adoption Date 01-01-1999
4/1/1996	Benefit F50 (With 25 Years of Service)
1/1/1993	Benefit B-3 (80% max)
1/1/1991	6 Year Vesting
1/1/1991	Benefit B-2
1/1/1991	Benefit F55 (With 20 Years of Service)
9/1/1990	Temporary Benefit F55 (With 20 Years of Service) (09/01/1990 - 01/03/1991)
1/1/1989	Benefit C-2/Base B-1
1/1/1989	Benefit F55 (With 25 Years of Service)
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1988	10 Year Vesting
1/1/1988	Member Contribution Rate 0.00%
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)

14 - Nu	urses
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1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
1/1/1982	Member Contribution Rate 4.00%
1/1/1980	Flexible E 2% COLA Adopted (01/01/1980)
12/8/1972	Blanket Resolution (All Service)
10/19/1965	Covered by Act 88
	Fiscal Month - October

# 15 - Hlth Dept

4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/03/2002)
1/1/1999	DC Adoption Date 01-01-1999
12/1/1996	Benefit F50 (With 25 Years of Service)
1/1/1993	Benefit B-3 (80% max)
9/1/1990	Temporary 2.25% Multiplier (no max) (09/01/1990 - 01/03/1991)
9/1/1990	Temporary Benefit F55 (With 20 Years of Service) (09/01/1990 - 01/03/1991)
1/1/1990	6 Year Vesting
1/1/1990	Benefit B-2
1/1/1990	Benefit F55 (With 20 Years of Service)
1/1/1990	Member Contribution Rate 0.00%
1/1/1988	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1988	10 Year Vesting
1/1/1988	Benefit C-2/Base B-1
1/1/1988	Benefit F55 (With 25 Years of Service)
4/1/1982	Member Contribution Rate 4.00%
12/8/1972	Blanket Resolution (All Service)
10/19/1965	Covered by Act 88
	Fiscal Month - October

# 16 - Elctd Commsnrs

3/1/1998	DC Adoption Date 03-01-1998
1/1/1998	25 Years & Out
1/1/1998	Benefit F55 (With 15 Years of Service)
1/1/1995	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/1995	E2 2.5% COLA for future retirees (01/01/1995)
1/1/1993	Benefit B-4 (80% max)
1/1/1993	Benefit F50 (With 25 Years of Service)
1/1/1993	Benefit F55 (With 20 Years of Service)
1/1/1991	Member Contribution Rate 0.00%
9/1/1990	Temporary 2.25% Multiplier (no max) (09/01/1990 - 01/03/1991)
9/1/1990	Temporary Benefit F55 (With 20 Years of Service) (09/01/1990 - 01/03/1991)
1/1/1990	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1990	6 Year Vesting
1/1/1990	Benefit B-2
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)

# 16 - Elctd Commsnrs

1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1985	Member Contribution Rate 4.00%
1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
1/1/1980	Flexible E 2% COLA Adopted (01/01/1980)
12/8/1972	Blanket Resolution (All Service)
10/19/1965	Covered by Act 88
	Fiscal Month - October

# 17 - Animal Control

4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/03/2002)
1/1/2001	Benefit F50 (With 25 Years of Service)
1/1/2000	DC Adoption Date 01-01-2000
1/1/1994	6 Year Vesting
1/1/1994	Benefit B-3 (80% max)
1/1/1994	Benefit F55 (With 20 Years of Service)
1/1/1992	10 Year Vesting
1/1/1992	Benefit C-2/Base B-1
1/1/1992	Benefit F55 (With 25 Years of Service)
1/1/1992	Member Contribution Rate 0.00%
9/1/1990	Temporary Benefit F55 (With 20 Years of Service) (09/01/1990 - 01/03/1991)
1/1/1989	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
1/1/1984	Member Contribution Rate 4.00%
1/1/1980	Flexible E 2% COLA Adopted (01/01/1980)
12/8/1972	Blanket Resolution (All Service)
10/19/1965	Covered by Act 88
	Fiscal Month - October

### 18 - Judges

_	
4/1/2001	E2 2.5% COLA for future retirees (04/01/2001)
1/1/1999	DC Adoption Date 01-01-1999
1/1/1998	25 Years & Out
1/1/1998	Benefit F55 (With 15 Years of Service)
1/1/1994	Benefit B-4 (80% max)
1/1/1994	Benefit F50 (With 25 Years of Service)
9/1/1990	Temporary 2.25% Multiplier (no max) (09/01/1990 - 01/03/1991)
9/1/1990	Temporary Benefit F55 (With 20 Years of Service) (09/01/1990 - 01/03/1991)
1/1/1990	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1990	6 Year Vesting
1/1/1990	Benefit B-2
1/1/1990	Benefit F55 (With 20 Years of Service)

18 - Judges	
1/1/1990	Member Contribution Rate 0.00%
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1985	Member Contribution Rate 4.00%
1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
1/1/1980	Flexible E 2% COLA Adopted (01/01/1980)
12/8/1972	Blanket Resolution (All Service)
10/19/1965	Covered by Act 88
	Fiscal Month - October

# 19 - Dist Judges

Diot daagee	
4/1/2001	E2 2.5% COLA for future retirees (04/01/2001)
1/1/1999	DC Adoption Date 01-01-1999
1/1/1998	25 Years & Out
1/1/1998	Benefit F55 (With 15 Years of Service)
1/1/1994	Benefit B-4 (80% max)
1/1/1994	Benefit F50 (With 25 Years of Service)
9/1/1990	Temporary 2.25% Multiplier (no max) (09/01/1990 - 01/01/1991)
9/1/1990	Temporary Benefit F55 (With 20 Years of Service) (09/01/1990 - 01/01/1991)
1/1/1990	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1990	6 Year Vesting
1/1/1990	Benefit B-2
1/1/1990	Benefit F55 (With 20 Years of Service)
1/1/1990	Member Contribution Rate 0.00%
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1985	Member Contribution Rate 4.00%
1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
1/1/1980	Flexible E 2% COLA Adopted (01/01/1980)
12/8/1972	Blanket Resolution (All Service)
10/19/1965	Covered by Act 88
	Fiscal Month - October

# 20 - Sheriff FOP

2/15/2011	Non-Standard Transfer Rules
4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/03/2002)
1/1/2000	25 Years & Out
1/1/2000	Benefit F55 (With 15 Years of Service)
1/1/2000	DC Adoption Date 01-01-2000
1/1/1994	Benefit B-4 (80% max)
5/1/1992	6 Year Vesting
5/1/1992	Benefit B-3 (80% max)

20 - Sheriff FOP	20	- Sh	eriff	FOP
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	5/1/1992	Benefit F50 (With 25 Years of Service)
	1/1/1991	Benefit B-2
	1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
	1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
	1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
	1/1/1986	Member Contribution Rate 0.00%
	1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
	1/1/1983	Benefit FAC-5 (5 Year Final Average Compensation)
	1/1/1983	10 Year Vesting
	1/1/1983	Benefit C-2/Base B-1
	1/1/1983	Benefit F55 (With 25 Years of Service)
	1/1/1983	Member Contribution Rate 4.00%
	1/1/1980	Flexible E 2% COLA Adopted (01/01/1980)
	12/8/1972	Blanket Resolution (All Service)
1	0/19/1965	Covered by Act 88
		Fiscal Month - October

# 21 - Shrff/Lts/Capts

4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/03/2002)
1/1/2001	25 Years & Out
1/1/2001	Benefit F55 (With 15 Years of Service)
1/1/2001	E2 2.5% COLA for future retirees (01/01/2001)
1/1/1999	DC Adoption Date 01-01-1999
1/1/1994	Benefit B-4 (80% max)
5/1/1992	6 Year Vesting
5/1/1992	Benefit B-3 (80% max)
5/1/1992	Benefit F50 (With 25 Years of Service)
5/1/1992	Member Contribution Rate 0.00%
1/1/1991	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1991	10 Year Vesting
1/1/1991	Benefit B-2
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
1/1/1980	Flexible E 2% COLA Adopted (01/01/1980)
12/8/1972	Blanket Resolution (All Service)
0/19/1965	Covered by Act 88
	Fiscal Month - October

# 23 - P.O.A.M. Non 312

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4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/03/2002)
9/30/2000	DC Adoption Date 09-30-2000

### 23 - P.O.A.M. Non 312

12/1/1999	25 Years & Out
12/1/1999	Benefit FAC-5 (5 Year Final Average Compensation)
12/1/1999	6 Year Vesting
12/1/1999	Benefit B-4 (80% max)
12/1/1999	Member Contribution Rate 4.00%
12/1/1999	E2 2.5% COLA for future retirees (12/01/1999)
12/8/1972	Blanket Resolution (All Service)
0/19/1965	Covered by Act 88
	Fiscal Month - October

### 91 - Juvenile Probtn

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4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
6/1/2005	Benefit B-4 (80% max)
6/1/2005	Member Contribution Rate 3.45%
10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/03/2002)
10/1/2001	25 Years & Out
9/30/2000	DC Adoption Date 09-30-2000
1/1/1994	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1994	6 Year Vesting
1/1/1994	Benefit B-3 (80% max)
1/1/1994	Benefit F50 (With 25 Years of Service)
1/1/1994	Benefit F55 (With 20 Years of Service)
1/1/1994	Member Contribution Rate 0.00%
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
12/8/1972	Blanket Resolution (All Service)
10/19/1965	Covered by Act 88
	Fiscal Month - October

### 92 - Dist Court Prob

4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
3/1/2006	Benefit B-4 (80% max)
3/1/2006	Member Contribution Rate 3.84%
10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/03/2002)
10/1/2001	25 Years & Out
1/1/2000	DC Adoption Date 01-01-2000
12/1/1996	Benefit F50 (With 25 Years of Service)
12/1/1996	Benefit F55 (With 20 Years of Service)
1/1/1994	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1994	6 Year Vesting
1/1/1994	Benefit B-3 (80% max)
1/1/1994	Benefit F55 (With 25 Years of Service)
1/1/1994	Member Contribution Rate 0.00%

# 92 - Dist Court Prob

1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1985	Flexible E 2% COLA Adopted (01/01/1985)
12/8/1972	Blanket Resolution (All Service)
10/19/1965	Covered by Act 88
	Fiscal Month - October

# 93 - Pros Attys Union

10/1/2002	Temporary 20 Years & Out (10/01/2002 - 12/03/2002)	
1/1/1999	DC Adoption Date 01-01-1999	
11/1/1995	6 Year Vesting	
10/1/1995	Benefit FAC-5 (5 Year Final Average Compensation)	
10/1/1995	10 Year Vesting	
10/1/1995	Benefit B-3 (80% max)	
10/1/1995	Benefit F50 (With 25 Years of Service)	
10/1/1995	Benefit F55 (With 20 Years of Service)	
10/1/1995	Member Contribution Rate 0.00%	
12/8/1972	Blanket Resolution (All Service)	
10/19/1965	Covered by Act 88	
	Fiscal Month - October	

# 94 - Upper Management

6/20/2006	DC Adoption Date 06-20-2006
1/1/2000	E2 2.5% COLA for future retirees (02/01/1999)
2/1/1999	25 Years & Out
2/1/1999	Benefit FAC-3 (3 Year Final Average Compensation)
2/1/1999	Benefit RS 50 (50% Post-Ret. Spouse Benefits)
2/1/1999	6 Year Vesting
2/1/1999	Benefit B-4 (80% max)
2/1/1999	Benefit F55 (With 15 Years of Service)
2/1/1999	Member Contribution Rate 0.00%
12/8/1972	Blanket Resolution (All Service)
10/19/1965	Covered by Act 88
	Fiscal Month - October

# 95 - NonUnion Mgmnt

6/20/2006	DC Adoption Date 06-20-2006
1/1/2006	E2 2.5% COLA for future retirees (10/01/2005)
10/1/2005	Blanket Resolution (All Service)
10/1/2005	Covered by Act 88
10/1/2005	25 Years & Out
10/1/2005	Benefit FAC-5 (5 Year Final Average Compensation)
10/1/2005	6 Year Vesting
10/1/2005	Benefit B-4 (80% max)

# 95 - NonUnion Mgmnt

10/1/2005	Benefit F55 (With 15 Years of Service)
10/1/2005	Member Contribution Rate 0.00%

Fiscal Month - October

# 96 - UAW Para prof.

4/1/2008	Temporary 20 Years & Out (04/01/2008 - 10/01/2008)
6/20/2006	DC Adoption Date 06-20-2006
4/1/2006	Benefit FAC-5 (5 Year Final Average Compensation)
4/1/2006	6 Year Vesting
4/1/2006	Benefit B-4 (80% max)
4/1/2006	Benefit F50 (With 25 Years of Service)
4/1/2006	Benefit F55 (With 15 Years of Service)
4/1/2006	Member Contribution Rate 4.34%
10/19/1965	Covered by Act 88
	Fiscal Month - October

# Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method

Details on MERS plan provisions, actuarial assumptions, and actuarial methodology can be found in the <u>Appendix</u>. 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	80%

# **Miscellaneous and Technical Assumptions**

Loads - None.

# **Amortization Policy for Closed Divisions**

Closed Division	Amortization Option
All Closed Divisions	Option A