



**Gratiot County**  
State of Michigan

Comprehensive Financial Plan  
For Pension and  
Other Post-Employment Benefits  
October 18, 2016

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# Comprehensive Financial Plan

This Comprehensive Financial Plan (the “Plan”) is being prepared pursuant to Act 34, Public Acts of Michigan, 2001, as amended (“Act 34”). In accordance with Act 34, Gratiot County (the “County”) has chosen to issue bonds to finance all or a portion of the County’s unfunded pension liability, as further described in this Plan.

The County qualifies to issue such bonds as the County meets the minimum bond rating requirement of Act 34, as of September 30, 2000 all of the County’s defined benefit pension plans were closed to all new employees hired after September 30, 2000, the County has established a defined contribution plan for such employees not eligible to participate in the defined benefit plan, and has the legal capacity to issue bonds in the required amount. The County’s outstanding limited tax general obligation bond rating of “AA” from S&P Global Ratings was affirmed on July 1, 2014 in association with ongoing surveillance. A copy of the rating rationale is included in Appendix E herein. It should be noted that the County will have the rating reassigned as a part of the bond issuance process for the Limited Tax General Obligation Pension Obligation Bonds (POBs).

As noted above, the County has the legal debt capacity to issue the POBs, as computed below:

LEGAL DEBT MARGIN - August 3, 2016	
2016 State Equalized Value (SEV)	\$1,992,633,500
Legal Debt Limit - 10% of SEV	\$199,263,350
Total Bonded Debt Outstanding	\$10,066,716
Amount Subject to Debt Limitation	\$10,066,716
<b>LEGAL DEBT MARGIN AVAILABLE</b>	<b>\$189,196,634</b>

*Source: Gratiot County Equalization Department and Municipal Advisory Council of Michigan*

The County proposes to issue bonds in the amount not to exceed \$8,000,000 to fund its pension obligation, which is well within the County’s legal debt capacity, leaving over 90% of the County’s current bonding capacity remaining.

## Pension Plans

Gratiot County currently participates in the Municipal Employees' Retirement System of Michigan ("MERS"), an agent multiple-employer defined benefit pension plan that covers all full-time employees and certain part-time employees of the County. As of the most recent actuarial report dated December 31, 2015, membership for the defined benefit plan consisted of 94 retirees and beneficiaries currently receiving benefits, 15 vested former members and 50 active employees. The County's defined benefit plan is comprised of 4 divisions.

Over the past ten years, the County's annual required contribution for its defined benefit pension plan increased from \$684,344 in 2006 to \$1,312,644 in 2015, as shown below.

Defined Benefit Contributions			
Actuarial Valuation Date	Annual Required Contribution	Annual Contribution	Percentage of ARC Contributed
12/31/2006	684,344	684,344	100.00%
12/31/2007	631,391	631,391	100.00%
12/31/2008	746,209	746,209	100.00%
12/31/2009	762,791	762,791	100.00%
12/31/2010	817,231	817,231	100.00%
12/31/2011	867,149	867,149	100.00%
12/31/2012	986,669	986,669	100.00%
12/31/2013	1,297,990	1,297,990	100.00%
12/31/2014	1,257,279	1,258,906	100.13%
12/31/2015*	1,312,644	2,312,644	176.18%

\* Unaudited

Source: Gratiot County Financial Statements

These increases were largely attributed to changes in the assumptions used by MERS as well as a 25% investment loss incurred in 2008.

## Defined Benefit Plan

As of December 31, 2015, the date of the most recent actuarial valuation, membership in the Act 34 defined benefit plan consisted of 159 members as follows:

- 50 active employees
- 15 vested former members
- 94 retirees and beneficiaries currently receiving benefits

As of December 31, 2015, the most recent actuarial valuation date, the defined benefit plan was 77.3% funded. As of December 31, 2014 and December 31, 2013, the defined benefit plan funded percentage was 75.3% and 76.0%, respectively. The decrease in funding percentage from 2013 to 2014 is primarily attributable to recognized losses since the prior valuation. Prior to 2015, MERS employed a 10-year asset smoothing method for investment gains and losses, which applies to the investment loss of 25.6% incurred in 2008. Therefore, the plan will continue to phase-in losses from 2008 through 2018. As of December 31, 2015, the actuarial accrued liability for benefits for the Act 34 defined benefit plan was \$29,228,761 and the actuarial value of assets was \$22,599,432, resulting in an unfunded pension liability of \$6,629,329 for the defined benefit plan. The covered payroll (annual payroll for active employees covered by the plan) was \$2,413,194 and the ratio for the unfunded actuarial accrued liability to the covered payroll was 274.7%. Further detail on the County's historical pension funding is provided below.

Historical Pension Funding							
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL	Funded Ratio	Covered Payroll	UAAAL as % of Covered Payroll	
12/31/2010	\$17,282,772	\$23,095,947	\$5,813,175	74.8%	\$2,758,544	210.7%	
12/31/2011	17,930,626	24,093,424	6,162,798	74.4%	2,679,989	230.0%	
12/31/2012	18,529,808	24,677,102	6,147,294	75.1%	2,532,911	242.7%	
12/31/2013	19,443,117	25,582,638	6,139,521	76.0%	2,498,016	245.8%	
12/31/2014	20,392,294	27,081,082	6,688,788	75.3%	2,498,100	267.8%	
12/31/2015	22,599,432	29,228,761	6,629,329	77.3%	2,413,194	274.7%	

Effective with the December 31, 2015 actuarial report, MERS revised several of their actuarial assumptions. The main actuarial assumptions used and/or changes made in determining the actuarial valuation of the County's Act 34 defined benefit plan as of December 31, 2015 included:

- Entry Age Normal Method
- Fixed amortization policies
- Decreased price inflation, wage inflation, and discount rate
- 7.75% assumed investment rate of return (versus previously used 8.00%)
- A 5 year smoothing of investment returns (versus previously used 10 year smoothing)
- Inclusion of 0.25% for Administrative Expense

## Defined Contribution Plan

The County's defined contribution plan covers all full-time employees that elected to participate in the plan. Options for contributions that are currently provided by the County are:

- General – Division 01: 3% employer contribution and 0% employee contribution or 5% employer contribution and required 3% employee contribution or 5% employer contribution and required 4% employee contribution.
- Sheriff Union – Division 02: 3% employer contribution and 0% employee contribution or 5% employer contribution and required 4% employee contribution.
- Empls Asso Emp (Clerical) – Division 11: 3% employer contribution and 0% employee contribution or 6% employer contribution and required 9% employee contribution.

There is a slight discrepancy between the contribution options that MERS has on file and those which the County has in effect for the General and Clerical Divisions. The County changed the percentages in 2005 for these two Divisions, but the changes did not get updated with MERS. The County intends to amend the existing adoption agreement with MERS so that the discrepancy is resolved.

Under the County's defined contribution plan, employees are provided with maximum portability of both employee and employer contributions including earnings on the employer and employee contributions by allowing the employee, upon termination of employment, to withdraw the entire amount of the employee contribution, including earnings and a percentage of the employer contributions, on a sliding scale based on the years of service as shown below:

Defined Contribution Plan	
Service Time	Retained by Employee
0 - 2 Complete Years	0%
2 Complete Years	25%
3 Complete Years	50%
4 Complete Years	75%
5 Complete Years or More	100%

During the year ended December 31, 2015, employees contributed \$147,779 to the defined contribution plan. During the year, contributions totaling \$203,612 were made by the County in accordance with contribution requirements established by the County Board.

## Post-Employment Health Benefit Plans

The County administers a single-employer defined benefit healthcare plan that provides other post-employment benefits (“OPEB”). The Gratiot County Retiree Medical Benefits Plan provides \$500 per year toward the cost of health insurance premiums for eligible retirees, plus an additional \$200 per year for each year of credited service over ten years, up to a maximum of \$2,500 for all employees. Upon reaching the age of 65, the County provided benefits are reduced to \$55.60 per month, plus ½ of the increase in premium cost over this amount. This reduction is due to the retirees becoming eligible for Medicare coverage at that time.

As of September 30, 2014, the date of the most recent actuarial valuation, the healthcare plan had 68 retirees and survivors and 138 active plan members. The healthcare plan had an accrued liability of \$3,388,578. The market value of the healthcare plan assets was \$0 resulting in an unfunded actuarial accrued liability of \$3,388,578. The healthcare plan was 0% funded. The covered payroll (annual payroll for active employees covered by the plan) was \$3,281,378 and the ratio for the unfunded actuarial accrued liability to the covered payroll was 103%.

The main actuarial assumptions used in determining the actuarial valuation as of September 30, 2014 included:

- The projected unit credit cost method
- A level dollar, closed amortization method
- An amortization period of 24 years
- A 4% investment rate of return
- A medical inflation rate declining from 9% in 2014 to 5% in 2018

The following are tables showing the County’s contribution and funding progress of its post-employment health benefits plan over the past eight years.

OPEB Contributions				
Year Ended September 30	Annual OPEB Cost	Annual Contribution	Percentage of OPEB Cost Contributed	Net Asset (Obligation)
2008	\$413,249	\$74,385	18.0%	\$296,558
2009	416,063	85,709	20.6%	743,451
2010	420,733	105,604	25.1%	1,058,550
2011	337,832	71,958	21.3%	1,324,556
2012	343,605	72,844	21.2%	1,595,331
2013	354,147	88,183	24.9%	1,861,325
2014	251,480	139,320	55.4%	1,973,569
2015	260,841	166,677	63.9%	2,067,795

Historical OPEB Funding							UAAL as % of
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL	Funded Ratio	Covered Payroll	Covered Payroll	
10/1/2007	--	\$3,980,009	\$3,980,009	0.0%	N/A	--	--
9/30/2011	--	3,626,928	3,626,928	0.0%	5,249,143	69.1%	
9/30/2014	--	3,388,578	3,388,578	0.0%	N/A	--	

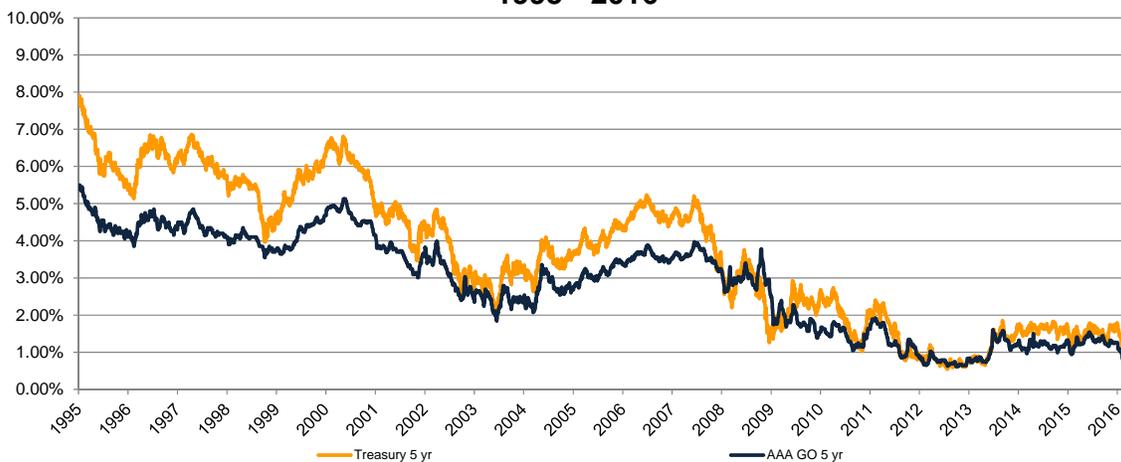
At the current time, the County anticipates continuing to use a “pay as you go” basis for funding its OPEB costs. However, the County has taken steps to reduce its OPEB costs. As of the dates specified below, new County employees will not receive retiree health or life insurance benefits:

- General – Division 01: hired on or after October 1, 2005
- Sheriff Union – Division 02: hired on or after October 1, 2008.
  - Effective October 1, 2011, new hires offered MERS Health Care Savings Program with the County contributing \$300 per year and the employee contributing mandatory 1-5%
- Clerical – Division 11: hired on or after October 1, 2008

### Bond Issuance Considerations

The County intends to issue bonds as authorized by Act 34 to fund the unfunded pension liability for its Act 34 defined benefit pension plan. Given the near historic low interest rates, as shown on the graph below, the County anticipates receiving favorable interest rates for the pension obligation bonds it intends to issue.

**Historical Taxable and Tax Exempt Interest Rates  
1995 - 2016**



The County understands that the value of assets and liabilities may change depending on market conditions and actuarial experiences differing from projections. The County recognizes that such changes may result in additional required contributions to the plan. The County also recognizes that such changes could result in the plan becoming overfunded.

The annual required contribution that the County makes for its Act 34 defined benefit pension plan is comprised of two parts, the unfunded accrued liability and the normal cost component. The unfunded accrued liability is the portion of the pension liability that is not funded, while the normal cost is the cost of future benefits earned by employees in the current year. Under Act 34, only the unfunded accrued liability may be financed with pension obligation bonds.

The County is expecting to issue pension obligation bonds for its Unfunded Accrued Actuarial Liability as of the most recent available actuarially determined UAAL using MERS revised assumptions for its Act 34 defined benefit plan, net of estimated issuance cost of \$125,671. Below is a breakdown of the estimated sources and uses of funds for the pension obligation bonds. The bond proceeds will fully fund the County’s revised unfunded accrued actuarial liability, currently estimated to be \$6,629,329, for its Act 34 defined benefit plan.

<b>Sources and Uses</b>	
<b>Sources</b>	
Bond Par Amount	\$6,755,000
<b>Total Sources</b>	<b>\$6,755,000</b>
<b>Uses</b>	
Pension Fund Deposit	\$6,629,329
Costs of Issuance (Including Underwriter's Discount)	\$125,671
<b>Total Uses</b>	<b>\$6,755,000</b>

The following financial analysis assume the updated MERS assumptions for valuation, including a 7.75% investment return on the actuarial value of assets. Provided below is a comparison of the annual unfunded accrued actuarial liability amortization payment and normal cost for the unfunded accrued liability, provided by CBIZ Retirement Plan Services, to the estimated bond payments and normal cost. The County intends to use the Option B repayment scenario as provided by CBIZ Retirement Plan Services.

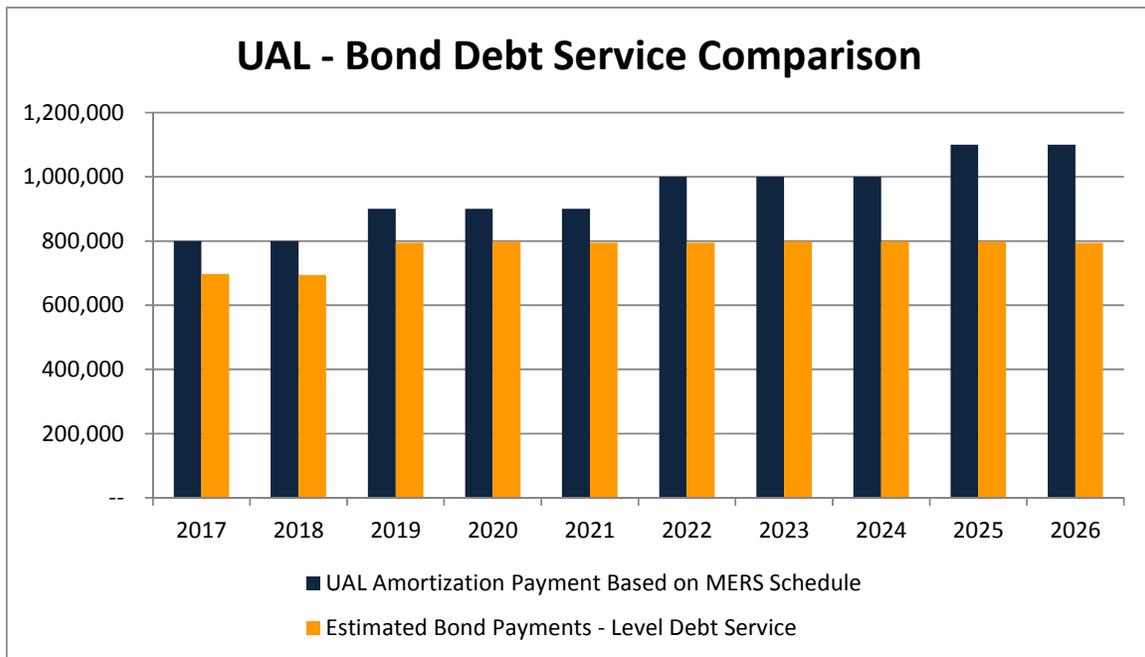
**Option B Amortization:**

Baseline				POB Bonds				
7.75% - Actuarial Value of Assets								
Fiscal Year Ending September 30	UAL Amortization Payment Based on MERS Schedule *			Estimated Bond Payments ***	Normal Cost**	Total Bond and Normal Cost		Present Value @ 3.06%****
	MERS Schedule *	Normal Cost**	Total UAL Payments			Payments	Difference	
2017	800,000	236,000	1,036,000	696,604	236,000	932,604	103,396	100,823
2018	800,000	231,000	1,031,000	693,974	231,000	924,974	106,027	100,299
2019	900,000	210,000	1,110,000	794,956	210,000	1,004,956	105,045	96,401
2020	900,000	193,000	1,093,000	797,866	193,000	990,866	102,135	90,930
2021	900,000	174,000	1,074,000	794,566	174,000	968,566	105,435	91,063
2022	1,000,000	153,000	1,153,000	794,918	153,000	947,918	205,082	171,834
2023	1,000,000	131,000	1,131,000	798,289	131,000	929,289	201,711	163,960
2024	1,000,000	109,000	1,109,000	799,048	109,000	908,048	200,952	158,462
2025	1,100,000	92,000	1,192,000	797,586	92,000	889,586	302,414	231,344
2026	1,100,000	78,000	1,178,000	794,486	78,000	872,486	305,514	226,732
	<b>\$9,500,000</b>	<b>\$1,607,000</b>	<b>\$11,107,000</b>	<b>\$7,762,291</b>	<b>\$1,607,000</b>	<b>\$9,369,291</b>	<b>\$1,737,709</b>	<b>\$1,431,848</b>

\* Assumes Option B calculation, sized for actuarial value of assets

\*\* Estimate only based on estimated taxable interest rates - Assumes par amount of \$6,755,000

\*\*\* Estimated bond all-in true interest cost



Based on the preceding analysis, the County has determined that it is financially beneficial to pursue the issuance of pension obligation bonds in an amount not to exceed \$8,000,000, including estimated costs of issuance.

## Impact on Changes of Rate of Return on Investments

The calculation determining the UAL is based upon, among other assumptions, a 7.75% future annual investment rate of return on the actuarial value of assets. If actual investment returns achieved are lower than 7.75% annually the result would be a higher liability, and vice-versa. The table below summarizes the County's UAL under different rate of return assumptions as of December 31, 2015.

12/31/2015 Valuation Results	Assumed Future Annual Smoothed Rate of Investment Return			
	5.75%	6.75%	7.75%	8.75%
Accrued Liability	36,517,463	\$32,561,777	\$29,228,761	\$26,400,709
Valuation Assets	22,599,432	22,599,432	22,599,432	22,599,432
Unfunded Accrued Liability	13,918,031	9,962,345	6,629,329	3,801,277
Funded Ratio	62%	69%	77%	86%
Adjusted Unfunded Accrued Liability Net of Estimated Bond Proceeds*	7,288,702	3,333,016	--	(2,828,052)
Adjusted Funded Ratio Net of Estimated Bond Proceeds*	80%	90%	100%	111%

\*Assumes application of \$6,629,329 of bond proceeds to UAL

## Description of Action Required to Meet Obligations

Debt service for the Bonds will be paid out of the General Fund. Revenue sources for the annual bond payments include annual operating levies, licenses and permits, state shared revenues, charges for services, fines and forfeitures, and other sources of annual revenue.

The County Administrator completes an annual budget and presents it to the County Board for approval. The annual debt service amounts for the Bonds within the budget will be included in the annual budget process to be presented and approved by the County Board annually. The Bonds will carry the County's limited tax general obligation full faith and credit pledge; therefore, the annual debt service will be legally required to be part of the County's total budget.

## Plan Compliance

As outlined in Act 34, the Plan contains the following elements:

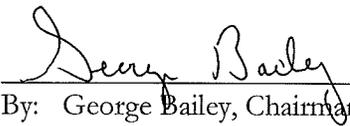
- **An analysis of the current and future obligations with respect to each retirement program of the County.** The County has a defined benefit plan as well as a defined contribution pension plan. Information regarding the defined benefit plan was obtained from MERS. Information with respect to both plans is contained within Appendix A.
- **An analysis of the current and future obligations with respect to the postemployment health care plan of the County.** The County has a defined benefit postemployment healthcare plan. Information regarding the defined benefit plan was obtained by the actuarial firm, Watkins Ross. Information with respect to the plan is contained within Appendix B.
- **Evidence that the issuance coupled with any other legally available funds, is sufficient to eliminate the unfunded pension liability.** The estimated unfunded pension liability for the Act 34 defined benefit plan is \$6,629,329 as of December 31, 2015. The Sources and Uses of Funds provided by the County's financial advisor, Public Financial Management ("PFM"), demonstrate that the bond proceeds will cover the unfunded pension liability. The complete bond schedules prepared by PFM, along with the Sources and Uses, are provided under Appendix C.
- **The debt service amortization schedule.** The preliminary debt service amortization schedules for the Bonds provided by PFM can be found under Appendix D.
- **A description of actions required to satisfy the debt service amortization schedule.** The Bonds are a limited tax general obligation of the County, paid from the County's General Fund. A description of actions the County takes to create the annual budget and obtain budget approval from the County Board is contained on page 9 herein.
- **Certification that the Comprehensive Financial Plan is complete and accurate.** A certification from the Chairman of the Board of Commissioners attesting that the Plan is complete with information provided by reliable sources is provided on page 11.

Act 34 also requires the Plan be prepared and made publically available. Accordingly, the County has prepared this Plan, which has been approved by the County Board on October 18, 2016, and has been made available for public review.

**Certification**

The County has prepared this Comprehensive Financial Plan for Pension and Other Post-Employment Benefits as required under Act 34 for the issuance of Pension Obligation Bonds. In preparing this plan, information has been obtained from the Municipal Employees Retirement System and its actuaries, CBIZ Retirement Plan Services, and Public Financial Management. The County believes the information provided by these firms to be reliable.

I certify that this Comprehensive Financial Plan is complete and accurate to the best of my knowledge and belief.

  
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By: George Bailey, Chairman of the Board of Commissioners

Dated: October 18, 2016



# Appendix A: Analysis of Current and Future Retirement Program Obligations of Gratiot County



**MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN**  
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2015  
GRATIOT CO (2905)



Spring, 2016

Gratiot 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 Gratiot Co (2905) 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. Gratiot Co is responsible for the employer contributions needed to provide MERS benefits for its employees and former employees under the Michigan Constitution and the MERS Plan Document.

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

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

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

The valuation uses financial data, plan provision data, and participant data as of December 31, 2015 furnished by MERS. In accordance with Actuarial Standards of Practice No. 23, the data was checked for internal and year to year consistency as well as general reasonableness, but was not otherwise audited. CBIZ Retirement Plan Services does not assume responsibility for the accuracy or completeness of the data used in this valuation.

The actuarial assumptions and methods are adopted by the MERS Retirement Board, and are reviewed every five years in an Experience Study. The most recent study was completed in 2015, and this December 31, 2015 valuation report reflects changes in assumptions and methods. Please refer to the division-specific assumptions described in table(s) in this report, and to the Appendix on the MERS website at:

[www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2015AnnualActuarialValuation-Appendix.pdf](http://www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2015AnnualActuarialValuation-Appendix.pdf).



The actuarial assumptions used for this valuation produce results that we believe are reasonable.

To the best of our knowledge, this report is complete and accurate, was prepared in conformity with generally recognized actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and is in compliance with Act No. 220 of the Public Acts of 1996, as amended, and the MERS Plan Document as revised. All of the undersigned are members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The Retirement Board of the Municipal Employees' Retirement System of Michigan confirms that the System provides for payment of the required employer contribution as described in Section 20m of Act No. 314 of 1965 (MCL 38.1140m).

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

**This report was prepared at the request of the Retirement Board and may be provided only in its entirety by the municipality to other interested parties (MERS customarily provides the full report on request to associated third parties such as the auditor for the municipality). CBIZ Retirement Plan Services is not responsible for the consequences of any unauthorized use.**

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

Sincerely,

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

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## Executive Summary

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### New Actuarial Assumptions and Methods

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

The main assumption and method changes were:

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

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

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

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

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

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

### **Impacts from the Assumption Changes**

The new actuarial assumptions changed your December 31, 2015 percent funded from 82% to 77%, a change of -5%.

The new assumptions changed your total monthly employer contribution requirement, before any phase-in, from \$109,936 to \$150,576, a change of \$40,640 (a 37% increase). Under the 5-year phase-in the first year increase is instead 7% (from \$109,936 to \$118,064 monthly).

Additional detail is shown on the following pages.

## Funded Ratio and Required Employer Contributions

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

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

### Your Funded Ratio:

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

	New Assumptions	Previous Assumptions	
	12/31/2015	12/31/2015	12/31/2014
<b>Funded Ratio</b>	77%	82%	75%

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

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

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

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

**Your Required Employer Contributions:**

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

	Percentage of Payroll				Monthly \$ Based on Valuation Payroll			
	New Assumptions		Previous Assumptions		New Assumptions		Previous Assumptions	
	Phase-in	Full Impact			Phase-in	Full Impact		
Valuation Date:	12/31/2015	12/31/2015	12/31/2015	12/31/2014	12/31/2015	12/31/2015	12/31/2015	12/31/2014
Fiscal Year Beginning:	January 1, 2017	January 1, 2017	January 1, 2017	January 1, 2016	January 1, 2017	January 1, 2017	January 1, 2017	January 1, 2016
<b>Division</b>								
01 - General	-	-	-	-	\$ 52,344	\$ 68,488	\$ 48,310	\$ 61,383
02 - Sheriff Union	-	-	-	-	52,044	64,488	48,932	53,858
04 - Med Care Dfrd	-	-	-	-	0	0	0	0
10 - EMS Empls Dfrd	-	-	-	-	1,175	1,399	1,119	1,314
11 - Empls Asso Emp	-	-	-	-	12,501	16,201	11,575	16,758
<b>Municipality Total</b>					<b>\$ 118,064</b>	<b>\$ 150,576</b>	<b>\$ 109,936</b>	<b>\$ 133,313</b>

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

Employee contribution rates reflected in the valuations are shown below:

Valuation Date:	Employee Contribution Rate	
	12/31/2015	12/31/2014
<b>Division</b>		
01 - General	2.60%	2.60%
02 - Sheriff Union	0.00%	0.00%
04 - Med Care Dfrd	3% < ; 5% >	3% < ; 5% >
10 - EMS Empls Dfrd	0.00%	0.00%
11 - Empls Asso Emp	2.60%	2.60%

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 68% (instead of 77%); and ii) your total employer contribution requirement for the fiscal year starting January 1, 2017 would be \$ 2,603,508 (instead of \$ 1,806,912).

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

## Risk Characteristics of Defined Benefit Plans

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

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

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

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

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

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

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

Many assumptions are important in determining the required employer contributions.

For example:

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

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

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

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

	Assumed Future Annual Smoothed Rate of Investment Return			
	Lower Future Annual Returns		Valuation Assumption	Higher Returns
	5.75%	6.75%	7.75%	8.75%
<b>12/31/2015 Valuation Results</b>				
Accrued Liability	\$ 36,517,463	\$ 32,561,777	\$ 29,228,761	\$ 26,400,709
Valuation Assets	\$ 22,599,432	\$ 22,599,432	\$ 22,599,432	\$ 22,599,432
Unfunded Accrued Liability	\$ 13,918,031	\$ 9,962,345	\$ 6,629,329	\$ 3,801,277
<b>Funded Ratio</b>	62%	69%	77%	86%
Monthly Normal Cost	\$ 34,625	\$ 25,828	\$ 19,233	\$ 14,298
Monthly Amortization Payment	\$ 298,476	\$ 209,541	\$ 131,343	\$ 61,932
<b>Total Employer Contribution<sup>1</sup></b>	\$ 333,101	\$ 235,369	\$ 150,576	\$ 76,230

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

## Six Year Projection Scenarios

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

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

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

Valuation Year Ending 12/31	Fiscal Year Beginning 1/1	Actuarial Accrued Liability	Valuation Assets	Funded Percentage	Computed Annual Employer Contribution
<b>7.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return</b>					
<b>WITH 5-YEAR PHASE-IN</b>					
2015	2017	\$ 29,228,761	\$ 22,599,432	77%	\$ 1,416,768
2016	2018	30,277,079	23,920,696	79%	1,683,144
2017	2019	31,187,553	24,837,018	80%	1,963,008
2018	2020	31,975,427	25,864,153	81%	2,245,176
2019	2021	32,652,625	27,032,592	83%	704,556
2020	2022	33,203,924	29,168,093	88%	720,276
<b>NO 5-YEAR PHASE-IN</b>					
2015	2017	\$ 29,228,761	\$ 22,599,432	77%	\$ 1,806,912
2016	2018	30,277,079	23,920,696	79%	1,926,192
2017	2019	31,187,553	25,272,780	81%	2,065,440
2018	2020	31,975,427	26,583,194	83%	2,222,244
2019	2021	32,652,625	27,890,618	85%	570,216
2020	2022	33,203,924	30,064,457	91%	581,484
<b>6.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return</b>					
<b>NO 5-YEAR PHASE-IN</b>					
2015	2017	\$ 32,561,777	\$ 22,599,432	69%	\$ 2,824,428
2016	2018	33,638,305	23,698,598	71%	2,966,664
2017	2019	34,561,304	25,936,139	75%	3,120,336
2018	2020	35,347,342	28,137,087	80%	3,299,424
2019	2021	36,009,412	30,321,044	84%	592,260
2020	2022	36,532,145	33,503,304	92%	592,680
<b>5.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return</b>					
<b>NO 5-YEAR PHASE-IN</b>					
2015	2017	\$ 36,517,463	\$ 22,599,432	62%	\$ 3,997,212
2016	2018	37,620,697	23,476,459	62%	4,165,164
2017	2019	38,551,469	26,764,085	69%	4,336,920
2018	2020	39,328,152	30,003,663	76%	4,542,000
2019	2021	39,965,227	33,192,698	83%	634,428
2020	2022	40,447,214	37,346,587	92%	643,032

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

Table 1

Division	Amort. Period for Unfund. Liab. <sup>4,5</sup>	Employer Contributions <sup>1</sup>			Blended Employer Contribut. <sup>6</sup>	Employee Contribution Rate	Employee Contribut. Conversion Factor <sup>2</sup>
		Normal Cost	Unfunded Accrued Liability	Total Computed Employer Contribut.			
<b>Percentage of Payroll</b>							
01 - General	4	-	-	-		2.60%	
02 - Sheriff Union	4	-	-	-		0.00%	
10 - EMS Emplys Dfrd	4	-	-	-		0.00%	
11 - Emplys Asso Emp	4	-	-	-		2.60%	
<b>Estimated Monthly Contribution<sup>3</sup></b>							
01 - General	4	\$ 8,174	\$ 60,314	\$ 68,488			
02 - Sheriff Union	4	9,286	55,202	64,488			
10 - EMS Emplys Dfrd	4	0	1,399	1,399			
11 - Emplys Asso Emp	4	1,773	14,428	16,201			
<b>Total Municipality</b>		<b>\$ 19,233</b>	<b>\$ 131,343</b>	<b>\$ 150,576</b>			
<b>Estimated Annual Contribution<sup>3</sup></b>		<b>\$ 230,796</b>	<b>\$ 1,576,116</b>	<b>\$ 1,806,912</b>			

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

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

<sup>3</sup> For divisions that are open to new hires, estimated contributions are based on projected fiscal year payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts. For divisions that will have no new hires, invoices will be based on the above dollar amounts which are based on projected fiscal year payroll. See description of Open Divisions and Closed Divisions in the [Appendix](#).

<sup>4</sup> If projected assets exceed projected liabilities as of the beginning of the January 1, 2017 fiscal year, the negative unfunded accrued liability is amortized (spread) over 10 years. This amortization is used to reduce the employer contribution rate. Note that if the overfunding credit is larger than the normal cost, the full credit is shown above but the total contribution requirement is zero. This will cause the displayed normal cost and unfunded accrued liability contributions to not add across.

<sup>5</sup> If the division is closed to new hires, with new hires not covered by MERS Defined Benefit Plan or Hybrid Plan provisions, the amortization period will decrease as follows: Under Amortization Option A, the period will decrease by 2 years each valuation year, until it reaches 6 or 5 years. Then it decreases by 1 year each valuation year until the UAL is paid off. Under Amortization Option B, the period will decrease by 2 years each valuation year, until it reaches 16 or 15 years. Thereafter, the period will reduce by 1 year each valuation year, until the UAL is paid off. This will result in amortization payments that increase faster than the usual 3.75% each year. If the division is closed to new hires, with new hires (and transfers) covered by MERS Defined Benefit Plan or Hybrid Plan provisions, the standard open division amortization period will apply.

<sup>6</sup> For linked divisions, the employer will be invoiced the Total Required Employer Contribution rate shown above for each linked division (a contribution rate for the open division; a contribution dollar for the closed-but-linked division), unless the employer elects to contribute the Blended Employer Contribution rate shown above, by contacting MERS at 800-767-2308.

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

**Please see the Comments on Asset Smoothing.**

## Benefit Provisions

Table 2

### 01 - General: Closed to new hires

	2015 Valuation	2014 Valuation
<b>Benefit Multiplier:</b>	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	55/25	55/25
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>COLA for Future Retirees:</b>	2.50% (Non-Compound)	2.50% (Non-Compound)
<b>Employee Contributions:</b>	2.60%	2.60%
<b>DC Plan for New Hires:</b>	4/9/1999	4/9/1999
<b>Act 88:</b>	No	No

### 02 - Sheriff Union: Closed to new hires

	2015 Valuation	2014 Valuation
<b>Benefit Multiplier:</b>	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	50/25	50/25
<b>Early Retirement (Reduced):</b>	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>COLA for Future Retirees:</b>	2.50% (Non-Compound)	2.50% (Non-Compound)
<b>COLA for Current Retirees:</b>	2.50% (Non-Compound)	2.50% (Non-Compound)
<b>Employee Contributions:</b>	0%	0%
<b>DC Plan for New Hires:</b>	10/1/2000	10/1/2000
<b>Act 88:</b>	No	No

### 04 - Med Care Dfrd: Closed to new hires

	2015 Valuation	2014 Valuation
<b>Benefit Multiplier:</b>	Svc x (1.20% times FAC < \$4,200, plus 1.70% times FAC > \$4,200)	Svc x (1.20% times FAC < \$4,200, plus 1.70% times FAC > \$4,200)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	-	-
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	3% under \$4,200; 5% over \$4,200	3% under \$4,200; 5% over \$4,200
<b>Act 88:</b>	No	No

Table 2 (continued)

**10 - EMS Empls Dfrd: Closed to new hires**

	<b>2015 Valuation</b>	<b>2014 Valuation</b>
<b>Benefit Multiplier:</b>	2.00% to Social Security Age (no max); 1.70% after SS Age (no max)	2.00% to Social Security Age (no max), 1.70% after SS Age (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	8 years	8 years
<b>Early Retirement (Unreduced):</b>	-	-
<b>Early Retirement (Reduced):</b>	50/25 55/15	50/25 55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>COLA for Future Retirees:</b>	2.50% (Non-Compound)	2.50% (Non-Compound)
<b>Employee Contributions:</b>	0%	0%
<b>Act 88:</b>	No	No

**11 - Empls Asso Emp: Closed to new hires**

	<b>2015 Valuation</b>	<b>2014 Valuation</b>
<b>Benefit Multiplier:</b>	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	55/25	55/25
<b>Early Retirement (Reduced):</b>	50/25 55/15	50/25 55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>COLA for Future Retirees:</b>	2.50% (Non-Compound)	2.50% (Non-Compound)
<b>Employee Contributions:</b>	2.60%	2.60%
<b>DC Plan for New Hires:</b>	10/1/2000	10/1/2000
<b>Act 88:</b>	No	No

## Participant Summary

**Table 3**

Division	2015 Valuation		2014 Valuation		2015 Valuation		
	Number	Annual Payroll <sup>1</sup>	Number	Annual Payroll <sup>1</sup>	Average Age	Average Benefit Service <sup>2</sup>	Average Eligibility Service <sup>2</sup>
01 - General							
Active Employees	24	\$ 1,226,619	25	\$ 1,273,308	55.6	24.6	25.8
Vested Former Employees	7	50,611	7	50,611	56.8	11.5	14.6
Retirees and Beneficiaries	49	659,560	52	660,071	75.2		
02 - Sheriff Union							
Active Employees	18	\$ 914,822	18	\$ 917,203	48.5	21.7	22.6
Vested Former Employees	2	32,059	2	32,059	45.9	15.5	17.1
Retirees and Beneficiaries	28	552,177	28	541,211	69.2		
04 - Med Care Dfrd							
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	0	0	1	1,324	0.0		
10 - EMS Emplys Dfrd							
Active Employees	0	\$ 0	0	\$ 0	0.0	0.0	0.0
Vested Former Employees	3	11,968	3	11,968	51.4	7.7	8.4
Retirees and Beneficiaries	2	10,129	2	9,891	64.9		
11 - Emplys Asso Emp							
Active Employees	8	\$ 271,753	9	\$ 307,589	57.6	23.0	23.0
Vested Former Employees	3	31,971	2	16,743	50.0	17.3	22.1
Retirees and Beneficiaries	15	166,780	15	164,848	73.9		
<b>Total Municipality</b>							
<b>Active Employees</b>	<b>50</b>	<b>\$ 2,413,194</b>	<b>52</b>	<b>\$ 2,498,100</b>	<b>53.4</b>	<b>23.3</b>	<b>24.2</b>
<b>Vested Former Employees</b>	<b>15</b>	<b>126,609</b>	<b>14</b>	<b>111,381</b>	<b>52.9</b>	<b>12.4</b>	<b>15.2</b>
<b>Retirees and Beneficiaries</b>	<b>94</b>	<b>1,388,646</b>	<b>98</b>	<b>1,377,345</b>	<b>73.0</b>		
<b>Total Participants</b>	<b>159</b>		<b>164</b>				

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

<sup>2</sup> Description can be found under Miscellaneous and Technical Assumptions in the [Appendix](#).

## Reported Assets (Market Value)

**Table 4**

Division	2015 Valuation		2014 Valuation	
	Employer and Retiree <sup>1</sup>	Employee <sup>2</sup>	Employer and Retiree <sup>1</sup>	Employee <sup>2</sup>
01 - General	\$ 9,548,697	\$ 244,513	\$ 9,246,947	\$ 217,941
02 - Sheriff Union	7,858,717	37,737	7,609,186	37,494
04 - Med Care Dfrd	0	0	28,155	0
10 - EMS Empls Dfrd	120,296	0	103,977	0
11 - Empls Asso Emp	2,010,463	84,272	1,919,053	76,403
<b>Municipality Total</b>	<b>\$ 19,538,173</b>	<b>\$ 366,522</b>	<b>\$ 18,907,318</b>	<b>\$ 331,838</b>
<b>Combined Reserves</b>	<b>\$ 19,904,695</b>		<b>\$ 19,239,156</b>	

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

<sup>2</sup> Reserve for Employee Contributions

The December 31, 2015 valuation assets are equal to 1.135382 times the reported market value of assets (compared to 1.059937 as of December 31, 2014). The derivation of valuation assets is described, and detailed calculations of valuation assets are shown, in the [Appendix](#).

**Flow of Valuation Assets**

**Table 5**

Year Ended 12/31	Employer Contributions		Employee Contributions	Investment Income	Benefit Payments	Employee Contribution Refunds	Net Transfers	Valuation Asset Balance
	Required	Additional						
2005	\$ 621,427		\$ 3,735	\$ 821,292	\$ (633,012)	\$ (3,735)	\$ 0	\$ 13,440,536
2006	664,393		0	1,089,845	(695,400)	0	0	14,499,374
2007	687,750		9,240	1,178,091	(776,210)	0	6,066	15,604,311
2008	635,261		49,501	706,953	(884,930)	0	0	16,111,096
2009	639,348		47,279	755,438	(933,553)	(598)	0	16,619,010
2010	741,231		54,257	916,789	(1,048,515)	0	0	17,282,772
2011	769,139	\$ 0	45,710	908,270	(1,075,265)	0	0	17,930,626
2012	838,476	0	46,649	846,733	(1,132,676)	0	0	18,529,808
2013	975,045	0	45,005	1,137,999	(1,244,740)	0	0	19,443,117
2014	1,091,184	0	43,769	1,138,297	(1,324,073)	0	0	20,392,294
2015	1,312,644	1,001,626	39,943	1,211,232	(1,358,308)	0	1	22,599,432

Notes:

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

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

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

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

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

Table 6

Division	Actuarial Accrued Liability	Valuation Assets <sup>1</sup>	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
01 - General				
Active Employees	\$ 7,200,642	\$ 4,151,018	57.6%	\$ 3,049,624
Vested Former Employees	524,636	524,636	100.0%	0
Retirees And Beneficiaries	6,443,380	6,443,380	100.0%	0
Pending Refunds	0	0	0.0%	0
<b>Total</b>	<b>\$ 14,168,658</b>	<b>\$ 11,119,034</b>	<b>78.5%</b>	<b>\$ 3,049,624</b>
02 - Sheriff Union				
Active Employees	\$ 4,996,000	\$ 2,244,363	44.9%	\$ 2,751,637
Vested Former Employees	179,365	179,365	100.0%	0
Retirees And Beneficiaries	6,541,764	6,541,764	100.0%	0
Pending Refunds	0	0	0.0%	0
<b>Total</b>	<b>\$ 11,717,129</b>	<b>\$ 8,965,492</b>	<b>76.5%</b>	<b>\$ 2,751,637</b>
10 - EMS Emplys Dfrd				
Active Employees	\$ 0	\$ 0	0.0%	\$ 0
Vested Former Employees	82,844	10,866	13.1%	71,978
Retirees And Beneficiaries	125,716	125,716	100.0%	0
Pending Refunds	0	0	0.0%	0
<b>Total</b>	<b>\$ 208,560</b>	<b>\$ 136,582</b>	<b>65.5%</b>	<b>\$ 71,978</b>
11 - Emplys Asso Emp				
Active Employees	\$ 1,413,960	\$ 657,870	46.5%	\$ 756,090
Vested Former Employees	228,681	228,681	100.0%	0
Retirees And Beneficiaries	1,491,773	1,491,773	100.0%	0
Pending Refunds	0	0	0.0%	0
<b>Total</b>	<b>\$ 3,134,414</b>	<b>\$ 2,378,324</b>	<b>75.9%</b>	<b>\$ 756,090</b>
<b>Total Municipality</b>				
<b>Active Employees</b>	<b>\$ 13,610,602</b>	<b>\$ 7,053,251</b>	<b>51.8%</b>	<b>\$ 6,557,351</b>
<b>Vested Former Employees</b>	<b>1,015,526</b>	<b>943,548</b>	<b>92.9%</b>	<b>71,978</b>
<b>Retirees and Beneficiaries</b>	<b>14,602,633</b>	<b>14,602,633</b>	<b>100.0%</b>	<b>0</b>
<b>Pending Refunds</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>
<b>Total Participants</b>	<b>\$ 29,228,761</b>	<b>\$ 22,599,432</b>	<b>77.3%</b>	<b>\$ 6,629,329</b>

<sup>1</sup> Includes both employer and employee assets.

**Please see the Comments on Asset Smoothing.**

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

[http://www.mersofmich.com/Portals/0/Assets/PageResources/MERS/PlanDocument/Pension/MERSPlanDocument\\_Section46.pdf](http://www.mersofmich.com/Portals/0/Assets/PageResources/MERS/PlanDocument/Pension/MERSPlanDocument_Section46.pdf).

## Actuarial Accrued Liabilities - Comparative Schedule

**Table 7**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2001	\$ 14,249,986	\$ 10,501,044	74%	\$ 3,748,942
2002	15,025,431	10,927,677	73%	4,097,754
2003	16,505,312	11,802,020	72%	4,703,292
2004	17,708,602	12,630,829	71%	5,077,773
2005	18,725,489	13,440,536	72%	5,284,953
2006	19,714,211	14,499,374	74%	5,214,837
2007	20,818,333	15,604,311	75%	5,214,022
2008	21,744,266	16,111,096	74%	5,633,170
2009	22,249,386	16,619,010	75%	5,630,376
2010	23,095,947	17,282,772	75%	5,813,175
2011	24,093,424	17,930,626	74%	6,162,798
2012	24,677,102	18,529,808	75%	6,147,294
2013	25,582,638	19,443,117	76%	6,139,521
2014	27,081,082	20,392,294	75%	6,688,788
2015	29,228,761	22,599,432	77%	6,629,329

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	\$ 8,708,251	\$ 6,703,164	77%	\$ 2,005,087
2006	9,153,360	7,209,896	79%	1,943,464
2007	9,553,366	7,745,461	81%	1,807,905
2008	10,037,288	7,986,915	80%	2,050,373
2009	10,383,398	8,255,359	80%	2,128,039
2010	10,846,860	8,561,599	79%	2,285,261
2011	11,298,840	8,855,603	78%	2,443,237
2012	11,742,542	9,151,241	78%	2,591,301
2013	12,454,145	9,579,140	77%	2,875,005
2014	13,170,967	10,032,185	76%	3,138,782
2015	14,168,658	11,119,034	79%	3,049,624

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

### Table 9-01: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	37	\$ 1,492,513	\$ 24,340	0.00%
2006	36	1,492,379	\$ 24,607	0.00%
2007	35	1,454,029	\$ 20,251	2.60%
2008	34	1,433,782	\$ 24,201	2.60%
2009	33	1,443,599	\$ 25,736	2.60%
2010	31	1,352,526	\$ 28,485	2.60%
2011	31	1,376,419	\$ 33,254	2.60%
2012	29	1,293,784	\$ 38,632	2.60%
2013	28	1,338,313	\$ 51,614	2.60%
2014	25	1,273,308	\$ 61,383	2.60%
2015	24	1,226,619	\$ 68,488	2.60%

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

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

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

See the Benefit Provision History on page 30 for past benefit provision changes.

## Division 02 - Sheriff Union

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

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 7,633,698	\$ 5,096,298	67%	\$ 2,537,400
2006	8,149,747	5,524,814	68%	2,624,933
2007	8,773,708	5,966,738	68%	2,806,970
2008	9,136,073	6,183,497	68%	2,952,576
2009	9,285,758	6,428,544	69%	2,857,214
2010	9,559,045	6,741,895	71%	2,817,150
2011	9,985,257	7,055,169	71%	2,930,088
2012	10,069,022	7,317,250	73%	2,751,772
2013	10,148,868	7,712,132	76%	2,436,736
2014	10,740,175	8,104,999	76%	2,635,176
2015	11,717,129	8,965,492	77%	2,751,637

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

### Table 9-02: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	31	\$ 1,302,105	\$ 25,245	0.00%
2006	30	1,301,819	\$ 26,707	0.00%
2007	27	1,196,354	\$ 27,369	0.00%
2008	24	1,109,593	\$ 31,085	0.00%
2009	24	1,126,990	\$ 31,615	0.00%
2010	24	1,095,788	\$ 33,579	0.00%
2011	22	1,040,487	\$ 38,296	0.00%
2012	21	968,170	\$ 40,696	0.00%
2013	18	854,679	\$ 43,240	0.00%
2014	18	917,203	\$ 53,858	0.00%
2015	18	914,822	\$ 64,488	0.00%

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

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

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

See the Benefit Provision History on page 30 for past benefit provision changes.

## Division 04 - Med Care Dfrd

### Table 8-04: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 20,192	\$ 30,942	153%	\$ (10,750)
2006	11,117	29,949	269%	(18,832)
2007	10,525	29,487	280%	(18,962)
2008	4,181	29,481	705%	(25,300)
2009	3,953	29,203	739%	(25,250)
2010	3,739	29,261	783%	(25,522)
2011	3,532	29,292	829%	(25,760)
2012	3,349	29,189	872%	(25,840)
2013	3,175	29,523	930%	(26,348)
2014	3,015	29,843	990%	(26,828)

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

### Table 9-04: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	0	\$ 0	\$ 0	0.00%
2006	0	0	\$ 0	0.00%
2007	0	0	\$ 0	0.00%
2008	0	0	\$ 0	0.00%
2009	0	0	\$ 0	0.00%
2010	0	0	\$ 0	0.00%
2011	0	0	\$ 0	0.00%
2012	0	0	\$ 0	0.00%
2013	0	0	\$ 0	0.00%
2014	0	0	\$ 0	0.00%
2015	0	0	\$ 0	0.00%

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

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

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

See the Benefit Provision History on page 30 for past benefit provision changes.

## Division 10 - EMS Emplys Dfrd

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

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 128,402	\$ 11,150	9%	\$ 117,252
2006	133,222	15,644	12%	117,578
2007	143,561	21,282	15%	122,279
2008	153,486	27,930	18%	125,556
2009	167,393	37,524	22%	129,869
2010	167,296	52,180	31%	115,116
2011	186,078	69,366	37%	116,712
2012	175,728	84,164	48%	91,564
2013	187,778	98,444	52%	89,334
2014	191,212	110,209	58%	81,003
2015	208,560	136,582	66%	71,978

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

**Table 9-10: Computed Employer Contributions - Comparative Schedule**

Valuation Date December 31	Active Employees		Computed Employer Contribution <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	0	\$ 0	\$ 650	0.00%
2006	0	0	\$ 691	0.00%
2007	0	0	\$ 774	0.00%
2008	0	0	\$ 863	0.00%
2009	0	0	\$ 983	0.00%
2010	0	0	\$ 963	0.00%
2011	0	0	\$ 1,140	0.00%
2012	0	0	\$ 1,025	0.00%
2013	0	0	\$ 1,309	0.00%
2014	0	0	\$ 1,314	0.00%
2015	0	0	\$ 1,399	0.00%

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

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

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

See the Benefit Provision History on page 30 for past benefit provision changes.

## Division 11 - Empl's Asso Emp

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

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2005	\$ 2,234,946	\$ 1,598,982	72%	\$ 635,964
2006	2,266,765	1,719,071	76%	547,694
2007	2,337,173	1,841,343	79%	495,830
2008	2,413,238	1,883,273	78%	529,965
2009	2,408,884	1,868,380	78%	540,504
2010	2,519,007	1,897,837	75%	621,170
2011	2,619,717	1,921,196	73%	698,521
2012	2,686,461	1,947,964	73%	738,497
2013	2,788,672	2,023,878	73%	764,794
2014	2,975,713	2,115,058	71%	860,655
2015	3,134,414	2,378,324	76%	756,090

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

### Table 9-11: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2005	17	\$ 430,338	\$ 7,347	0.00%
2006	13	350,285	\$ 6,163	0.00%
2007	13	349,901	\$ 4,885	3.82%
2008	11	319,399	\$ 5,628	3.82%
2009	10	292,736	\$ 5,768	3.82%
2010	9	257,781	\$ 6,846	3.82%
2011	9	263,083	\$ 8,497	3.82%
2012	9	270,957	\$ 10,304	3.82%
2013	9	277,927	\$ 13,224	2.60%
2014	9	307,589	\$ 16,758	2.60%
2015	8	271,753	\$ 16,201	2.60%

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

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

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

See the Benefit Provision History on page 30 for past benefit provision changes.

## GASB 68 Information

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

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

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

Inactive employees or beneficiaries currently receiving benefits:	94
Inactive employees entitled to but not yet receiving benefits:	15
Active employees:	<u>50</u>
	159

Total Pension Liability as of 12/31/2014 measurement date:	\$ 26,397,038
Total Pension Liability as of 12/31/2015 measurement date:	\$ 28,478,394
Service Cost for the year ending on the 12/31/2015 measurement date:	\$ 274,806

Change in the Total Pension Liability due to:

- Benefit changes <sup>1</sup> :	\$ 0
- Differences between expected and actual experience <sup>2</sup> :	\$ (516,802)
- Changes in assumptions <sup>2</sup> :	\$ 1,548,598

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

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

Average expected remaining service lives of all employees (active and inactive):	2
Covered employee payroll: (Needed for Required Supplementary Information)	\$ 2,413,194

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

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Change in Net Pension Liability as of 12/31/2015:	\$ 3,196,858	-	\$ (2,717,110)

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

## GASB 68 Information

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

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

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

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

Inactive employees or beneficiaries currently receiving benefits:	94
Inactive employees entitled to but not yet receiving benefits:	15
Active employees:	<u>50</u>
	159

Total Pension Liability as of 12/31/2015 measurement date:	\$	27,375,641
Total Pension Liability as of 12/31/2016 measurement date:	\$	29,518,644
Service Cost for the year ending on the 12/31/2016 measurement date:	\$	266,782
Change in the Total Pension Liability due to:		
- Benefit changes <sup>1</sup> :	\$	0
- Differences between expected and actual experience <sup>2</sup> :	\$	(482,628)
- Changes in assumptions <sup>2</sup> :	\$	1,613,335

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

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

Average expected remaining service lives of all employees (active and inactive):	2
Covered employee payroll: (Needed for Required Supplementary Information)	\$ 2,413,194

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

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Change in Net Pension Liability as of 12/31/2016:	\$ 3,225,549	-	\$ (2,746,577)

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

## Benefit Provision History

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

### 01 - General

10/1/2007	Member Contribution Rate 2.60%
7/1/2001	Temporary Benefit B-4 (80% max) (07/01/2001 - 10/03/2001)
4/9/1999	DC Adoption Date 04-09-1999
3/1/1998	Benefit B-3 (80% max)
1/1/1995	E2 2.5% COLA for future retirees (01/01/1995)
12/1/1992	Temporary 6 Year Vesting (12/01/1992 - 03/03/1993)
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
5/1/1988	Benefit C-2/Base B-1
5/1/1988	Benefit F55 (With 25 Years of Service)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1980	Member Contribution Rate 0.00%
6/28/1977	Exclude Temporary Employees
12/1/1972	Benefit C-1 (Old)
1/1/1969	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1969	10 Year Vesting
1/1/1969	Benefit C (Old)
1/1/1969	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00% Fiscal Month - January

### 02 - Sheriff Union

1/1/2003	Temporary Benefit B-4 (80% max) (01/01/2003 - 04/03/2003)
7/1/2001	Temporary Benefit B-4 (80% max) (07/01/2001 - 10/03/2001)
10/1/2000	DC Adoption Date 10-01-2000
10/1/1999	Benefit B-3 (80% max)
1/1/1995	Benefit F50 (With 25 Years of Service)
1/1/1995	E1 2.5% COLA for past retirees (01/01/1995)
1/1/1995	E2 2.5% COLA for future retirees (01/01/1995)
1/1/1990	Member Contribution Rate 0.00%
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
4/1/1988	Benefit C-2/Base B-1
4/1/1988	Benefit F55 (With 25 Years of Service)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
6/28/1977	Exclude Temporary Employees
12/1/1972	Benefit C-1 (Old)
1/1/1969	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1969	10 Year Vesting
1/1/1969	Benefit C (Old)
1/1/1969	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00% Fiscal Month - January

**04 - Med Care Dfrd**

8/1/1978 Benefit FAC-5 (5 Year Final Average Compensation)  
 8/1/1978 10 Year Vesting  
 8/1/1978 Benefit C-1 (Old)  
 8/1/1978 Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%  
 Fiscal Month - January

**10 - EMS Emplys Dfrd**

8/1/1995 8 Year Vesting  
 1/1/1995 Benefit FAC-5 (5 Year Final Average Compensation)  
 1/1/1995 10 Year Vesting  
 1/1/1995 Benefit C-2/Base B-1  
 1/1/1995 Member Contribution Rate 0.00%  
 1/1/1995 E2 2.5% COLA for future retirees (01/01/1995)  
 Fiscal Month - January

**11 - Emplys Asso Emp**

10/1/2013 Member Contribution Rate 2.60%  
 10/1/2007 Member Contribution Rate 3.82%  
 1/17/2006 Day of work defined as 86 Hours a Month for All employees.  
 7/1/2001 Temporary Benefit B-4 (80% max) (07/01/2001 - 10/03/2001)  
 10/1/2000 DC Adoption Date 10-01-2000  
 3/1/1998 Benefit B-3 (80% max)  
 12/1/1995 Temporary Rule of 65 (Age + Service) Retirement (12/01/1995 - 02/02/1996)  
 1/1/1995 Benefit FAC-5 (5 Year Final Average Compensation)  
 1/1/1995 10 Year Vesting  
 1/1/1995 Benefit C-2/Base B-1  
 1/1/1995 Benefit F55 (With 25 Years of Service)  
 1/1/1995 Member Contribution Rate 0.00%  
 1/1/1995 E2 2.5% COLA for future retirees (01/01/1995)  
 6/21/1977 Exclude Temporary Employees  
 Fiscal Month - January

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

---

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

### Increase in Final Average Compensation

Division	FAC Increase Assumption
All Divisions	2.00%

### Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
All Divisions	100%

### Miscellaneous and Technical Assumptions

Loads – None.

### Amortization Policy for Closed Divisions

Closed Division	Amortization Option
All Closed Divisions	Option A



# Appendix B: Analysis of Current and Future Post Employment Healthcare Benefit Obligations of Gratiot County



WATKINS ROSS

*Retirement Plan Consultants, Actuaries and Administrators*

December 31, 2014

PERSONAL & CONFIDENTIAL

Mr. Jeff Huff  
Gratiot County  
214 East Center Street  
Ithaca, MI 48847

RE: Gratiot County Retiree Medical Plan

Dear Jeff:

Enclosed are three copies of the actuarial report for the Retiree Medical Benefits other than pension plan for the fiscal year ending September 30, 2014. This report is intended to assist you in complying with the Governmental Accounting Standards Board Statement No. 45. Your accountant's will need much of the information included in this report for your financial statements.

If you have any questions about this report, or if your auditors need any additional information, please call me at (616) 742-9244.

Sincerely,

Christian R. Veenstra, M.A.A.A.  
President/Enrolled Actuary

LJH/cas

Enclosures

200 Ottawa Avenue, N.W., Suite 600 / Grand Rapids, Michigan 49503-2426

Phone (616) 456-9696

Fax (616) 456-5021

**GRATIOT COUNTY**

RETIREE MEDICAL BENEFITS  
ACTUARIAL VALUATION REPORT  
UNDER THE GOVERNMENTAL ACCOUNTING  
STANDARDS BOARD  
FOR YEAR END SEPTEMBER 30, 2014

WATKINS, ROSS & CO.  
200 Ottawa Avenue, N.W., Suite 600  
Grand Rapids, MI 49503-2426  
(616) 456-9696

DECEMBER 2014

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## SECTION 1 – INTRODUCTION AND CERTIFICATION

---

Watkins, Ross & Co. is an independent employee benefits consulting firm providing actuarial and administrative services to clients who sponsor qualified retirement and other post-employment benefits plans. Our firm maintains no relationships with any of our clients that might impair the objectivity of our work.

The calculations summarized in this report involve actuarial calculations that require assumptions about future events. We believe that the assumptions used in the report are within the range of possible assumptions that are reasonable and appropriate for the purposes for which they have been used. However, other assumptions are also reasonable and appropriate and their use would produce different results.

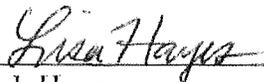
This report was prepared by or under the supervision of employees of Watkins, Ross & Co. who are enrolled actuaries (authorized under ERISA to certify pension valuations) who also have obtained, through formal training and actual work experience, the knowledge and skills required to prepare valuations of plans providing post-employment benefits other than pensions.

The schedules included in this report have been prepared in order to provide the information necessary to comply with the GASB Statement No. 45. This information may be used for the preparation of the plan sponsor's financial statements and may be inappropriate for other purposes.

This report was prepared on the basis of participant data provided by the plan sponsor and our understanding of the terms of the plan under which benefits are being provided. We relied upon the data as submitted, and have no reason to believe that any information that would have had a material effect on the results of this valuation was overlooked in the preparation of the report.

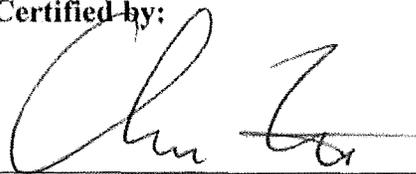
The enrolled actuary certifying this report represents himself as meeting the Qualification Standards of the American Academy of Actuaries to render actuarial opinions contained in the report.

**Prepared by:**



\_\_\_\_\_  
Lisa J. Hayes  
Senior Pension Analyst

**Certified by:**



\_\_\_\_\_  
Christian R. Veenstra, M.A.A.A.  
Enrolled Actuary #14-05668

**PLAN SPONSOR ACCOUNTING**

**STATEMENT NO. 45**

FOR PERIOD ENDING SEPTEMBER 30, 2014

## SECTION 2 – PLAN SPONSOR ACCOUNTING

### 2.1 OVERVIEW OF RESULTS

	2007	2011	2014
Present value future benefits	\$ 5,908,778	\$ 5,317,782	\$ 4,148,256
Past service liability:			
Active employees	2,614,315	2,348,003	1,960,196
Retired employees	1,365,694	1,278,925	1,428,381
Total	3,980,009	3,626,928	3,388,578
Market value of assets	-0-	-0-	-0-
Unfunded or (funded) status	3,980,000	3,626,928	3,388,578
ARC	413,249	357,821	294,410
Interest on net OPEB Obligation	-0-	42,342	74,453
ARC adjustment	-0-	(62,331)	(117,383)
Net OPEB cost	413,249	337,832	251,480
Annual required contribution – (ARC):			
Service Cost	183,085	144,256	80,712
Amortization of unfunded liability	230,164	213,565	213,698
ARC	413,249	357,821	294,410

## SECTION 2 – PLAN SPONSOR ACCOUNTING

---

### 2.2 NOTES TO EMPLOYER'S FINANCIAL STATEMENTS

#### Plan description

1. *Gratiot County Retiree Medical Plan* is a single employer plan administered by *Gratiot County*.
2. The plan was established by *Gratiot County* and can be amended at its discretion. A summary of the plan provisions is shown in Section 2.6 of this report.
3. Membership of the plan consisted of the following for the 2014 valuation:

	2011	2014
Retirees and survivors	60	68
Active plan members	119	138
Total plan members	179	204

#### Funding Policy

1. *Gratiot County* has the authority to establish and amend the obligations of *Gratiot County* and plan members to contribute to the plan.
2. Actively employed plan members are currently not obligated to make contributions to the plan.
3. Only benefit payments made directly to or on behalf of retirees from general operating funds will be counted as plan contributions.

#### Annual Cost for Other Post-Employment Benefits (OPEB) – 09/30/2014

	TOTAL
1. Annual required contribution (ARC)	\$ 294,410
2. Interest on Net OPEB obligation	74,453
3. Adjustment to ARC	<u>(117,383)</u>
4. Annual OPEB cost, (1)+(2)+(3)	251,480
5. Contributions made <sup>(1)</sup>	94,436
6. Increase in net OPEB obligation, (4)-(5)	157,044
7. Net OPEB obligation (beginning of year)	<u>1,861,325</u>
8. Net OPEB obligation (end of year), (6)+(7)	2,018,369

<sup>(1)</sup> Estimated net retiree benefit payments.

## SECTION 2 – PLAN SPONSOR ACCOUNTING

---

### Plan Contributions

(1)	(2)	(3)	(4)	(5)
Fiscal Year Ending	Annual OPEB Cost	Contribution	Ratio (3)/(2)	Net OPEB Obligation at End of Year
09/30/2008	\$ 413,249	\$ -	0%	\$ 413,249
09/30/2009	416,063	85,861	21	743,451
09/30/2010	420,733	105,634	25	1,058,550
09/30/2011	337,832	71,826	21	1,324,556
09/30/2012	343,605	72,830	21	1,595,331
09/30/2013	354,147	88,153	25	1,861,325
09/30/2014	251,480	94,436	38	2,018,369

The information required for reporting purposes from the most recent actuarial valuation (regarding actuarial methods and assumptions used to determine the ARC) can be found in Section 2.5 of this report.

## SECTION 2 – PLAN SPONSOR ACCOUNTING

---

### 2.3 ACTUARIAL VALUATION INFORMATION (REQUIRED SUPPLEMENTARY INFORMATION)

	Second Preceding Report	First Preceding Report	Current Year Report
a. Valuation date	10/01/2007	09/30/2011	09/30/2014
b. Market value of plan assets	-0-	\$ -0-	\$ -0-
c. Actuarial accrued liability	3,980,009	3,626,928	3,388,578
d. Unfunded actuarial liability	3,980,009	3,626,928	3,388,578
e. Funded ratio, = (b)÷(c)	0%	0%	0%
f. Covered payroll	Not avail.	5,249,143	Not avail.
g. Unfunded liability / payroll ratio, = (d)÷(f)	Not avail.	69.1%	Not avail.

#### Factors Significantly Affecting Trends

Assumption or method changes:

- Mortality updated to 2014
- Medical trend rate increased *from* 7% graded to 5% over 2 years *to* 9% graded to 5% over 4 years.

## SECTION 2 – PLAN SPONSOR ACCOUNTING

### 2.4 RECONCILIATION OF ACTUARIAL LIABILITY

The actuarial liability decreased from \$3,626,928 as of September 30, 2011 to \$3,388,578 as of September 30, 2014. Reconciliation of the liability can be summarized as follows:

a. Actuarial accrued liability as of September 30, 2011		\$ 3,626,928
b. Service cost for:		
i. 2012	\$ 150,026	
ii. 2013	146,022	
iii. 2014 calculated with 2011 valuation	147,013	
Total service cost		443,061
c. Interest cost for:		
i. 2012	140,737	
ii. 2013	147,775	
iii. 2014 calculated with 2011 valuation	154,801	
Total interest cost		443,313
d. Expected benefit payments for:		
i. 2012	(108,501)	
ii. 2013	(114,811)	
iii. 2014 calculated with 2011 valuation	(118,144)	
Total expected benefit payments		(341,456)
e. (Gain)/loss prior to assumption changes <sup>(1)</sup>		(924,896)
f. Assumption changes (see Section 2.5):		
i. Mortality	25,421	
ii. Medical trend	116,207	
Total assumption changes		141,628
g. Increase due to 40% excise tax on “high cost” plan <sup>(2)</sup>		-0-
h. Actuarial accrued liability as of September 30, 2014		\$ 3,388,578

<sup>(1)</sup> Medicare eligible costs decreased 3%-9% depending on plan.

<sup>(2)</sup> Starting in 2018, the Patient Protection and Affordable Care Act (PPACA) imposes a 40% excise tax on plan costs over statutory limits:

- Statutory limits are \$10,200 and \$27,500 for single and family coverage respectively per annum
- Statutory limits increase by CPI and 1% from 2018 to 2019 and CPI after 2019

## SECTION 2 – PLAN SPONSOR ACCOUNTING

Employer contribution: Benefit payments.

Annual Required Contribution (ARC): Projected unit credit service cost plus amortization of unfunded liability and OPEB loss/(gain).

Amortization method and period: Projected Unit Credit, level dollar 30 year closed.

Investment return: 4% per year

Amortization factor as shown (4% per year for 24 years remaining at valuation date)

Year (1)	ARC (2)	Interest on Net OPEB Obligation (3) Int x (9)	ARC Adjustment (4) (9)/(5)	Amort. Factor (5)	OPEB Cost (6) (2)+(3)-(4)	Contri- bution (7)	Change in Net OPEB Obligation (8) (6)-(7)	Net OPEB Obligation Balance (9) BB <sup>(1)</sup> +(8)	Loss/ (Gain) (10) (2)-(7)	Amort. Factor (11)	Amort. of Loss/(Gain) (12) (13)/(11)	Ending Balance (13) (BB <sup>(1)</sup> x Int +(10)-(12)
2008	\$ 413,249	-	-	-	\$ 413,249	-	\$ 413,249	\$ 413,249	\$ 413,249	-	-	\$ 413,249
2009	416,063	-	-	17.66	416,063	\$ 85,861	330,202	743,451	330,202	17.66	-	743,451
2010	420,733	-	-	17.33	420,733	105,634	315,099	1,058,550	315,099	17.33	-	1,058,550
2011	357,821	\$ 42,342	\$ 62,331	16.98	337,832	71,826	266,006	1,324,556	285,995	16.98	\$ 62,331	1,324,556
2012	369,570	51,515	77,480	16.62	343,605	72,830	270,775	1,595,331	296,740	16.62	77,480	1,595,331
2013	369,570	60,667	99,351	16.25	354,147	88,153	265,994	1,861,325	298,678	16.25	93,351	1,861,325
2014	369,570	74,453	117,383	15.86	251,480	94,436	157,044	2,018,369	199,974	15.86	117,383	2,018,369
2015	369,570	80,735	130,629	15.45	259,734	121,731 <sup>(2)</sup>	138,003	2,156,372	187,897	15.45	130,629	2,156,372
2016	386,831	86,255	143,479	15.03	256,531	<sup>(3)</sup>	<sup>(3)</sup>	<sup>(3)</sup>	<sup>(3)</sup>	15.03	143,479	<sup>(3)</sup>

(1) BB = beginning balance for the year.

(2) Estimated benefit payments.

(3) To be determined.

## SECTION 2 – PLAN SPONSOR ACCOUNTING

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### 2.5 ACTUARIAL ASSUMPTIONS (REQUIRED SUPPLEMENTARY INFORMATION)

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest valuation date follows:

Valuation date	September 30, 2014	
Actuarial cost method	Projected Unit Credit (level dollar)	
Amortization method	Level dollar, closed	
Remaining amortization period	24 years (30 initially)	
Asset valuation method	Not applicable	
Actuarial assumptions:		
Discount rate	4.0%	
Salary scale	Not applicable	
Return on plan assets	Not applicable	
Mortality rate	IRC 1.430(h) Annuitant and Non-annuitant (sex distinct)	
Turnover rates	<b>Age</b>	<b>Rate</b>
	25	5.00%
	30	4.50
	35	3.55
	40	1.45
	45	0.75
Retirement rates	<b>Age</b>	<b>Rate</b>
	55-61	15%
	62	30
	63-69	15
	70	100
Utilization	Active employees will elect coverage at retirement consistent with current coverage – 25% electing plan 001, 75% electing plan 003; actual coverage used for retirees.	
Marital status	75% of active employees are assumed to have a covered spouse at retirement with males 2 years older than females; actual spouse date used for retirees	

## SECTION 2 – PLAN SPONSOR ACCOUNTING

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Monthly medical premiums (subject to limits)	<b>Sheriff</b>	<b>Non-Sheriff</b>
Pre-65		
Single	\$ 472.71	\$ 461.37
2-person	1,035.53	1,010.02
Medicare eligible	<b>With RX</b>	<b>Without RX</b>
Single	195.24	120.19
2-person	380.99	200.87
Medical inflation rates	9% in 2014 graded down to 5% in 2018	
Impact of Healthcare Reform		
Early retiree reinsurance	Gratiot County has not and will not apply for the early retiree subsidy	
Loss of RDS tax exclusion	As a Governmental plan, it is not impacted by this change	
40% excise tax on “high cost” group health coverage	Monthly premiums are not projected to exceed the 2018 thresholds; The thresholds were indexed by CPI plus 1% in 2019 and CPI only beginning in 2020; The CPI is assumed to be 3% in 2019 and following	
Individual or plan sponsor decisions	No change in behavior on account of Healthcare reform was anticipated	
Assumption changes since prior valuation	Mortality updated to 2014; Medical trend updated <i>from</i> 7% graded to 5% over 2 years <i>to</i> 9% graded to 5% over 4 years	

## SECTION 2 – PLAN SPONSOR ACCOUNTING

---

### 2.6 SUMMARY OF PLAN PROVISIONS

#### Eligibility

Employees Association	Hired prior to November 1, 2006 and age 60 with 10 years of service or age 55 with 25 years of service
Personnel Policy	Hired prior to October 1, 2005 and age 60 with 10 years of service or age 55 with 25 years of service
Sheriff	Hired prior to October 1, 2008 and age 55 with 10 years of service
Dispatch	Hired prior to August 8, 2005 and age 60 with 10 years of service or age 55 with 25 years of service
TPOAM	Hired prior to October 1, 2006 and age 60 with 10 years of service or age 55 with 25 years of service

#### Employer benefits

Pre-65 limit <sup>(1)</sup>	
10 years of service	\$ 500
Each additional year	200
Maximum	2,500
Post-65 limit	
Employees Association and Personnel Policy	Employer pays \$55.60 per month plus ½ of cost in excess of \$55.60
Surviving spouse	Covered at own cost
Life insurance	\$5,000

<sup>(1)</sup> Also post-65 limit for Dispatch, Buy-out and Sheriff (Sheriff maximum \$3,500).

## SECTION 3 – GLOSSARY

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**Actuarial Accrued Liability** – The portion of the “actuarial present value of future benefit payments” that is allocated to past eligibility service. Sometimes referred to as “past service liability”.

**Actuarial Assumptions** – Estimates of future plan experience with respect to rate of mortality, disability, turnover, retirement, rate or rates of investment income or salary increases.

**Actuarial Cost Method** – A method of allocating the dollar amount of the “actuarial present value of future plan benefits” to past, current and future service.

**Actuarial Present Value** – The dollar value at the valuation date of benefit payments expected to be made in the future, taking into account the time value of money and the probability of payment.

**Amortization** – Paying off an interest-bearing liability by means of periodic payments of interest and principal.

**Annual Required Contribution (ARC)** – The ARC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period.

**ARC Adjustment** – A modification to the Annual Required Contribution designed to offset the portion of the amortization of unfunded liability already recognized in the OPEB obligation.

**Governmental Accounting Standards Board (GASB)** – GASB is the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting them to the public.

**Implicit Rate Subsidy** – It is common practice for employers to allow retirees to continue in the employer’s group health insurance plan, often charging the retiree some portion of the premium charged to active employees. Under the theory that retirees have higher utilization of services, the difference between the true cost of providing retiree coverage and what the retiree is being charged is known as the implicit rate subsidy.

**Normal Cost** – The portion of the “actuarial present value of future benefit payments” that is allocated to one year of service. Sometimes referred to as “service cost”.

**Other Postemployment Benefits (OPEB)** – OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance as well as dental, vision, prescription drugs or other health care benefits.

**OPEB Cost** – The portion of the ARC required to be recognized on the balance sheet for the year.

**OPEB Obligation** – The accumulation on the balance sheet of the net difference between the OPEB cost and contribution/benefit payments.

## SECTION 3 – GLOSSARY

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**Reserve or Irrevocable Account** – Funds that have been set aside specifically for retiree OPEB purposes and are not generally available for other uses.

**Unfunded Actuarial Accrued Liability** – The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability”.

**Valuation Assets** – The value of current plan assets recognized for valuation purposes.



# Appendix C: Evidence that the Pension Obligation Bonds will Eliminate the Unfunded Pension Liability of the Defined Benefit Plan

Sources and Uses	
<b><u>Sources</u></b>	
Bond Par Amount	\$6,755,000
Total Sources	\$6,755,000
<b><u>Uses</u></b>	
Pension Fund Deposit	\$6,629,329
Costs of Issuance (Including Underwriter's Discount)	\$125,671
Total Uses	\$6,755,000

SOURCES AND USES OF FUNDS

Gratiot County  
Limited Tax General Obligation Pension Bonds, Series 2016  
(Federally Taxable)  
7.75% Return - AVA  
Option B

Dated Date                    12/01/2016  
Delivery Date                12/01/2016

Sources:

Bond Proceeds:	
Par Amount	6,755,000.00
	6,755,000.00
	6,755,000.00

Uses:

Project Fund Deposits:	
Pension Fund Deposit	6,629,329.00
Delivery Date Expenses:	
Cost of Issuance	75,008.50
Underwriter's Discount	50,662.50
	125,671.00
	6,755,000.00



# Appendix D: Debt Service Amortization Schedule

BOND DEBT SERVICE

Gratiot County  
Limited Tax General Obligation Pension Bonds, Series 2016  
(Federally Taxable)  
7.75% Return - AVA  
Option B

Period Ending	Principal	Coupon	Interest	Debt Service	Annual Debt Service
03/01/2017			40,534.63	40,534.63	
09/01/2017	575,000	1.420%	81,069.25	656,069.25	
09/30/2017					696,603.88
03/01/2018			76,986.75	76,986.75	
09/01/2018	540,000	1.670%	76,986.75	616,986.75	
09/30/2018					693,973.50
03/01/2019			72,477.75	72,477.75	
09/01/2019	650,000	1.860%	72,477.75	722,477.75	
09/30/2019					794,955.50
03/01/2020			66,432.75	66,432.75	
09/01/2020	665,000	2.000%	66,432.75	731,432.75	
09/30/2020					797,865.50
03/01/2021			59,782.75	59,782.75	
09/01/2021	675,000	2.170%	59,782.75	734,782.75	
09/30/2021					794,565.50
03/01/2022			52,459.00	52,459.00	
09/01/2022	690,000	2.410%	52,459.00	742,459.00	
09/30/2022					794,918.00
03/01/2023			44,144.50	44,144.50	
09/01/2023	710,000	2.710%	44,144.50	754,144.50	
09/30/2023					798,289.00
03/01/2024			34,524.00	34,524.00	
09/01/2024	730,000	2.940%	34,524.00	764,524.00	
09/30/2024					799,048.00
03/01/2025			23,793.00	23,793.00	
09/01/2025	750,000	3.080%	23,793.00	773,793.00	
09/30/2025					797,586.00
03/01/2026			12,243.00	12,243.00	
09/01/2026	770,000	3.180%	12,243.00	782,243.00	
09/30/2026					794,486.00
	6,755,000		1,007,290.88	7,762,290.88	7,762,290.88



## Appendix E: Evidence of Rating

# RatingsDirect®

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## Summary:

# Gratiot County, Michigan; General Obligation

### **Primary Credit Analyst:**

Errol R Arne, New York (1) 212-438-2379; [errol.arne@standardandpoors.com](mailto:errol.arne@standardandpoors.com)

### **Secondary Contact:**

Scott Nees, Chicago (1) 312-233-7064; [scott.nees@standardandpoors.com](mailto:scott.nees@standardandpoors.com)

## Table Of Contents

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Rationale

Outlook

Related Criteria And Research

## Summary:

# Gratiot County, Michigan; General Obligation

### Credit Profile

Gratiot Cnty

*Long Term Rating*

AA/Stable

Upgraded

## Rationale

Standard & Poor's Ratings Services raised its long-term rating and underlying rating (SPUR) on Gratiot County, Mich.'s general obligation (GO) bonds, issued by various issuers, to 'AA' from 'AA-' based on its local GO criteria published Sept. 12, 2013. The outlook is stable.

A pledge of the county's full faith credit and resources and its limited property tax pledge secure the outstanding bonds.

The rating reflects our assessment of the following factors for the county:

- In our opinion, the county's budgetary flexibility is very strong, with the available reserves for fiscal 2013 (Sept. 30) at \$8.6 million or 81% of the expenditures. Management expects at least breakeven results in its operations for fiscal 2014 and has adopted a balanced budget for fiscal 2015.
- Supporting the county's finances is liquidity we consider very strong, with total government available cash to total governmental expenditures at 49% and over 100% as to debt service. We believe the county has strong access to external liquidity.
- In our opinion, Gratiot's debt and contingent liabilities profile is strong, with total governmental fund debt service at 4% of total governmental fund expenditures, and with net direct debt at 56% of total governmental fund revenue. The county's overall net debt was 2.4% of market value in 2013 and the amortization of its debt is greater than 65% in 10 years.
- The county participates in Municipal Employees Retirement System of Michigan for its employees' pension. The county has made its annual required contributions for the past three years. The county provides other postemployment benefits (OPEB) through the Gratiot County retiree medical benefits plan in a single-employer defined health care plan administered by the county. The retiree health care plan has a 0% funded ratio and \$5.6 million unfunded actuarial accrued liability as of Sept. 30, 2013—when the last actuarial was performed. On a combined basis, the county's costs for pension and OPEB represented 6.8% of total governmental expenditures.
- The county's budgetary performance in our view has been strong with surpluses of 7.5% and 2.5% in the general fund and total governmental funds, respectively. Officials are expecting at least balanced operations in fiscal 2014 and have adopted a balanced budget for 2015 for all funds. Property taxes represented 64% of the total general fund revenues in 2013 while charges for services and state revenue sharing contributed 14% each.
- We view Gratiot's management conditions as strong. We consider the county's financial management practices "good" under our Financial Management Assessment (FMA) methodology. An FMA of good indicates our view that practices exist in most areas, although governance officials might not formalize or regularly monitor all practices regularly.
- We consider the county's economy to be weak with no access to a broad and diverse economy. The county is in the

heart of Michigan's Lower Peninsula, approximately 18 miles south of Mt. Pleasant and 45 miles north of Lansing County and serves 42,376 residents. The average unemployment rate for Gratiot County for 2013 was 9.7%, which is slightly higher than the state rate of 8.8% for the same time period. The projection for the 2018 per capita effective buying income (EBI) is 60.4%, which is a slight decrease over the 2013 per capita EBI of 60.5%. The 2013 market value per share is \$82,436.

We consider the Institutional Framework score for Michigan counties as strong.

## Outlook

The stable outlook reflects our view that the county will maintain its very strong flexibility, performance, and liquidity profile. We do not expect to change the rating in our two-year outlook horizon, but if the budget performance, flexibility, liquidity and debt profile materially deteriorates, we could lower the rating. However, we do not feel that this is likely during the next two years. If economic conditions improve and we believe they are sustainable, we could raise the rating, though we do not believe this will occur within the two-year outlook period.

## Related Criteria And Research

### Related Criteria

USPF Criteria: Local Government GO Ratings Methodology And Assumptions, Sept. 12, 2013

### Related Research

- S&P Public Finance Local GO Criteria: How We Adjust Data For Analytic Consistency, Sept. 12, 2013
- Institutional Framework Overview: Michigan Local Governments

### Ratings Detail (As Of July 1, 2014)

#### Gratiot Cnty GO

*Unenhanced Rating* AA(SPUR)/Stable Upgraded

#### Gratiot Cnty Cons Dr Drainage Dist #181, Michigan

Gratiot Cnty, Michigan

Gratiot Cnty Cons Dr Drainage Dist #181 (Gratiot Cnty) 2013 dr bnds (GO ltd tax) due 05/01/2033

*Long Term Rating* AA/Stable Upgraded

#### Gratiot Cnty Drainage Dist #96, Michigan

Gratiot Cnty, Michigan

Gratiot Cnty Drainage Dist #96 (Gratiot Cnty) drain (AGM)

*Unenhanced Rating* AA(SPUR)/Stable Upgraded

#### Gratiot Cnty Drain Dr Dist #007, Michigan

Gratiot Cnty, Michigan

Gratiot Cnty Drain Dr Dist #007 (Gratiot Cnty)

*Long Term Rating* AA/Stable Upgraded

#### Gratiot Cnty Drain Dr Dist #133, Michigan

Gratiot Cnty, Michigan

Gratiot Cnty Drain Dr Dist #133 (Gratiot Cnty) GO

**Ratings Detail (As Of July 1, 2014) (cont.)**

<i>Long Term Rating</i>	AA/Stable	Upgraded
Many issues are enhanced by bond insurance.		

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