



County of Ottawa
State of Michigan

Comprehensive Financial Plan
For Pension and
Other Post-Employment Benefits

October 14, 2014

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Comprehensive Financial Plan

This Comprehensive Financial Plan (the “Plan”) is being prepared pursuant to Act 329, Public Acts of Michigan, 2012 (“Act 329”). In accordance with Act 329, the County of Ottawa (the “County”), has chosen to issue bonds to finance 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 329, has closed its defined benefit pension plan for all employees, excluding Division 13, 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 “Aaa” from Moody’s Investors Service was affirmed on March 7, 2013 in association with the County’s issuance of Limited Tax General Obligation Wastewater Treatment System Bonds. 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 Pension Obligation Bonds (POBs).

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

2014 State Equalized Value		\$10,952,303,550
Legal Debt Limit - 10% of SEV		\$1,095,230,355
Total Bonded Debt Outstanding - 9/1/14	\$125,172,000	
Less: Special Assessment Bonds	400,000	
Revenue Bonds	0	
Net Amount Subject to Legal Debt Limit		124,772,000
LEGAL DEBT MARGIN AVAILABLE		\$970,458,355

Pension Plans

The County of Ottawa established a defined benefit pension plan in 1949 to provide retirement benefits for qualifying full-time employees of the County’s various divisions. The County currently participates in the Municipal Employees’ Retirement System of Michigan (“MERS”), an agent multiple-employer defined benefit pension plan that covers substantially all the employees of the County. As of the most recent actuarial report dated December 31, 2013, membership for the defined benefit plan consisted of 473 retirees and beneficiaries currently receiving benefits, 158 vested former members and 770 active employees. The County’s defined benefit plan is comprised of 15 divisions.

Over the past several years, the County’s annual recommended contribution for its defined benefit pension plan increased from \$3,944,897 in 2006 to \$5,783,302 in 2013, as shown below.

<u>Year Ended</u>	<u>Annual Required Contribution</u>	<u>Percentage of ARC Contributed</u>
12/31/06	\$3,944,897	100%
12/31/07	4,317,144	100%
12/31/08	4,478,672	100%
12/31/09	4,916,278	100%
12/31/10	5,508,432	100%
12/31/11	5,599,403	100%
12/31/12	5,705,285	100%
12/31/13	5,783,302	100%

These increases were largely attributed to changes in the assumptions used by MERS as well as a 25% investment loss incurred in 2008. Accordingly, the County began exploring a plan to fund legacy costs in its 2009 Business Plan. After thorough research and discussion, on May 25, 2010, the County stated its intent to establish a defined contribution pension plan for all newly hired employees, excluding Division 13, dependent on various financial indicators. The Division 13 employees are elected judges who are covered under the Michigan judges retirement system created under The Judges Retirement Act of 1992. The County's defined benefit plan, excluding Division 13 employees, is hereinafter referred to as the "Act 329 defined benefit plan." The County established a defined contribution pension plan for certain employees hired on or after January 1, 2012 who are eligible for MERS membership and those employees hired before January 1, 2012 that elected to participate in the defined contribution plan. On January 1, 2012, the first employee groups were moved into the defined contribution plan for employees hired on or after January 1, 2012. On April 1, 2013, employees hired on or after January 1, 2012 of the remaining groups, excluding Division 13, were moved into the defined contribution plan. Division 13 is the County's only division remaining with an open defined benefit pension plan for new employees.

Defined Benefit Plan

As of December 31, 2013, the date of the most recent actuarial valuation, membership in the Act 329 defined benefit plan, excluding Division 13 which is comprised of 4 active members and 2 retirees and beneficiaries, consisted of 1,395 members as follows:

- 766 active employees
- 158 vested former members
- 471 retirees and beneficiaries currently receiving benefits

As of December 31, 2013, the most recent actuarial valuation date, the defined benefit plan as whole, was 78.5% funded and was 78.3% funded excluding Division 13. As of December 31, 2012 and December 31, 2011, the defined benefit plan funded percentage was 79.3% and 81.4%, respectively. The decrease in funding percentage is primarily attributable to recognized losses since the prior valuation. MERS employs a 10-year asset smoothing method for investment gains and losses, which applies to the investment loss of

25.59% incurred in 2008. Therefore, the plan will continue to phase-in losses from 2008 through 2018. As of December 31, 2013, the actuarial accrued liability for benefits was \$223,089,534 and the actuarial value of assets was \$174,768,933 resulting in an unfunded liability of \$48,320,601 for the Act 329 defined benefit plan. The covered payroll (annual payroll for active employees covered by the plan, excluding Division 13) was \$40,345,008 and the ratio for the unfunded actuarial accrued liability to the covered payroll was 120%. Further detail on the County's historical pension funding, including Division 13, is provided below.

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Accrued Actuarial Liability	Funded Ratio	Covered Payroll	UAL as a Percentage of Covered Payroll
12/31/2005	\$106,312,114	\$126,887,611	\$20,575,497	83.8%	\$38,259,539	53.8%
12/31/2006	116,418,835	138,434,883	\$22,016,048	84.1%	40,525,474	54.3%
12/31/2007	127,103,598	151,513,633	\$24,410,035	83.9%	41,772,689	58.4%
12/31/2008	134,207,078	164,292,703	\$30,085,625	81.7%	42,158,377	71.4%
12/31/2009	142,666,997	175,705,139	\$33,038,142	81.2%	44,865,784	73.6%
12/31/2010	152,352,857	184,346,935	\$31,994,078	82.6%	43,300,146	73.9%
12/31/2011	160,910,020	197,600,606	\$36,690,586	81.4%	43,711,453	83.9%
12/31/2012	167,699,094	211,500,142	\$43,801,048	79.3%	42,108,218	104.0%
12/31/2013	175,891,057	224,197,096	\$48,306,039	78.5%	40,487,096	119.3%

The main actuarial assumptions used in determining the actuarial valuation of the County's Act 329 defined benefit plan as of December 31, 2013 included:

- Entry Age Normal Method
- An 8.00% investment rate of return
- A 10 year smoothing of investment returns

Defined Contribution Plan

As noted above, the County's defined contribution plan covers certain employee groups hired after January 1, 2012 who are eligible for MERS membership and those employees hired before January 1, 2012 that elected to participate in the defined contribution plan. Participation in the defined contribution plan is mandatory for all eligible employees. The County contributes 3% of each participant's base salary to the plan. Employees are required to contribute a minimum of 3% base pay to the plan. The County also matches employee contributions up to a total County contribution of 6%. In accordance with these provisions, the County contributed \$249,959 and employees contributed \$269,915 for the year ended December 31, 2013. Participating employees are vested 50% after 3 years of service, 75% after 4 years of service and 100% after 5 years of service.

Post-Employment Health Benefit Plans

The County administers a single-employer defined benefit healthcare plan (the Retiree Health Plan) that provides other post-employment benefits (“OPEB”). The Plan provides health insurance premiums for retirees until age 65 when they become eligible for Medicare. Benefit provisions are established through negotiations between the County and bargaining units and employee groups. For employees hired before January 1, 2008, the County offers health care benefits to retirees that they may purchase at the actuarially determined blended rate for current employees and retirees. There are currently 877 active employees and retirees in the Plan. A legal trust has been established for the Plan.

As of December 31, 2013, the date of the most recent actuarial valuation, 67 retirees were eligible for post-employment health benefits. The Plan had an accrued liability of \$4,987,215. The actuarial value of the Plan assets at fair value was \$4,490,991 resulting in an unfunded actuarial accrued liability of \$496,224. The Plan was 90.1% funded. The covered payroll (annual payroll for active employees covered by the plan) was \$42,294,193 and the ratio for the unfunded actuarial accrued liability to the covered payroll was 1.2%.

The main actuarial assumptions used in determining the actuarial valuation as of December 31, 2013 included:

- The projected unit credit cost method
- A level dollar amortization method
- An open amortization period
- An amortization period of 30 years
- A 5% investment rate of return
- A 2.3% general inflation rate
- A medical inflation rate declining from 10% in 2013 to 4% in 2090

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

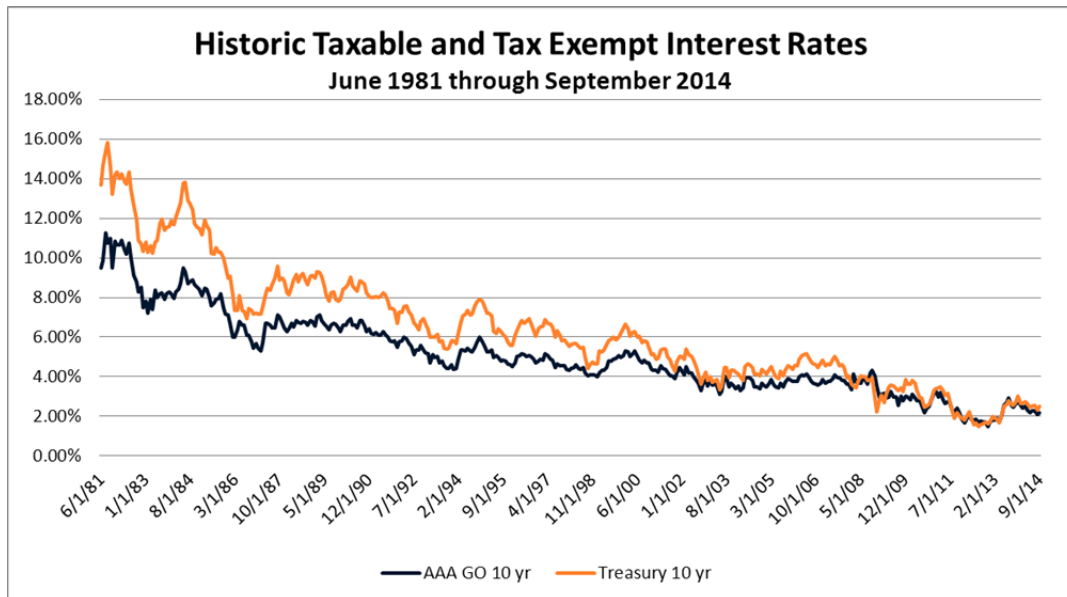
Fiscal Year Ended	Annual OPEB Cost	Percentage of ARC Contributed	Net Asset (Obligation)
12/31/2011	\$869,330	100%	\$466,571
12/31/2012	176,240	98%	463,350
12/31/2013	207,666	98%	458,615

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Accrued Actuarial Liability	Funded Ratio	Covered Payroll	UAL as a Percentage of Covered Payroll
12/31/2008	\$977,996	\$7,853,881	\$6,875,885	12.5%	\$43,379,815	15.9%
12/31/2009	1,890,604	7,618,482	\$5,727,878	24.8%	45,932,817	12.5%
12/31/2010	2,879,313	9,125,944	\$6,246,631	31.6%	44,125,422	14.2%
12/31/2011	3,526,643	4,485,898	\$959,255	78.6%	44,134,714	2.2%
12/31/2012	3,825,988	4,389,537	\$563,549	87.2%	44,048,199	1.3%
12/31/2013	4,490,991	4,987,215	\$496,224	90.1%	42,294,193	1.2%

In addition, the County provides certain post-employment health care benefits to unclassified employees and employees of the Police Officers Association of Michigan and the Command Officers Association of Michigan in accordance with their contracts. For these groups, the County will credit the retiree \$4 to \$10 for each year of service, to a maximum of \$100 to \$250 per month, to be applied toward health coverage through the County for the retiree and spouse until age 65. The County makes contributions to the Other Post Employment Benefit Fund based on actuarially determined rates.

Bond Issuance Considerations

The County intends to issue bonds as authorized by Act 329 to partially fund the unfunded pension liability for its Act 329 defined benefit pension plan, (which excludes Division 13). 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.



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 329 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 329, only the unfunded accrued liability may be financed with Pension Obligation Bonds.

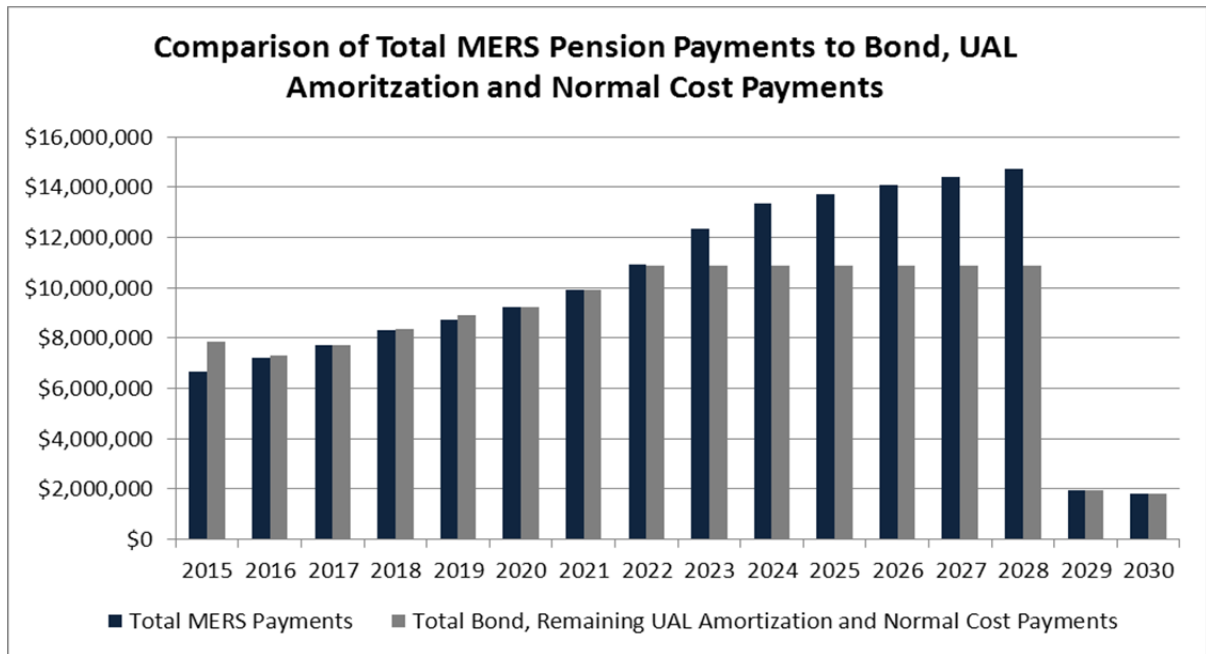
The County is expecting to issue Pension Obligation Bonds to fund \$29 million or approximately 60% of its \$48,320,601 unfunded accrued actuarial liability for its Act 329 defined benefit plan. Within this analysis, the total unfunded accrued liability and remaining unfunded accrued liability assume an 8% investment return on the market value of assets rather than the actuarial value of assets. The Pension Obligation Bonds are structured so that the debt service on the Bonds, coupled with the annual payment on the remaining unfunded accrued liability and the normal cost component, eventually approximate a level payment. Provided below is a comparison of the annual unfunded accrued actuarial liability amortization payment and normal cost for the full amount of the unfunded accrued liability, provided by CBIZ Retirement Plan Services, to the estimated bond payments plus remaining unfunded accrued liability amortization and normal cost.

14 Year Bond Amortization									
Assumes Bond Proceeds are Not Applied to 2015 UAL Payment									
MERS Pension Payments				Pension Obligation Bonds					
Fiscal Year Beginning January 1	UAL Amortization Payment - Adjusted for 8% Investment Return on Market Value of Assets with the Exception of Fiscal Year 2015	Normal Cost	Total MERS Payments	Estimated Bond Payments	Additional UAL Amortization Payment - For Remaining UAL - Adjusted for 8% Investment Return on Market Value of Assets with the Exception of Fiscal Year 2015	Normal Cost	Total Bond, Amortization and Normal Cost Payments	Difference	Present Value @ 4.01%
2015	3,191,000	3,461,000	\$6,652,000	1,179,400	\$3,191,000	3,461,000	7,831,400	(1,179,400)	(1,179,272)
2016	3,859,000	3,331,000	\$7,190,000	2,316,834	\$1,659,000	3,331,000	7,306,834	(116,834)	(112,317)
2017	4,478,000	3,250,000	\$7,728,000	2,335,459	\$2,129,000	3,250,000	7,714,459	13,541	12,516
2018	5,152,000	3,166,000	\$8,318,000	2,601,687	\$2,574,000	3,166,000	8,341,687	(23,687)	(21,049)
2019	5,650,000	3,075,000	\$8,725,000	2,987,154	\$2,823,000	3,075,000	8,885,154	(160,154)	(136,833)
2020	6,268,000	2,975,000	\$9,243,000	3,128,954	\$3,132,000	2,975,000	9,235,954	7,046	5,788
2021	7,029,000	2,868,000	\$9,897,000	3,554,374	\$3,513,000	2,868,000	9,935,374	(38,374)	(30,307)
2022	8,165,000	2,762,000	\$10,927,000	4,054,744	\$4,080,000	2,762,000	10,896,744	30,256	22,974
2023	9,658,000	2,660,000	\$12,318,000	3,409,674	\$4,826,000	2,660,000	10,895,674	1,422,326	1,038,367
2024	10,800,000	2,556,000	\$13,356,000	2,943,752	\$5,397,000	2,556,000	10,896,752	2,459,248	1,726,152
2025	11,283,000	2,445,000	\$13,728,000	2,813,357	\$5,638,000	2,445,000	10,896,357	2,831,643	1,910,909
2026	11,768,000	2,326,000	\$14,094,000	2,686,809	\$5,881,000	2,326,000	10,893,809	3,200,191	2,076,359
2027	12,210,000	2,199,000	\$14,409,000	2,593,951	\$6,102,000	2,199,000	10,894,951	3,514,049	2,192,094
2028	12,671,000	2,068,000	\$14,739,000	2,493,279	\$6,332,000	2,068,000	10,893,279	3,845,721	2,306,503
2029	0	1,933,000	\$1,933,000	0	\$0	1,933,000	1,933,000	0	0
2030	0	1,795,000	\$1,795,000	0	\$0	1,795,000	1,795,000	0	0
	\$112,182,000	\$42,870,000	\$155,052,000	\$39,099,428	\$57,277,000	\$42,870,000	\$139,246,428	\$15,805,572	\$9,811,885

* Fiscal Year 2015 information assumes County will pay \$3.2 million for UAL amortization regardless of whether it issues POBs.

** Assumes Option A amortization provided by MERS

*** Estimate only based on estimated true interest cost of 4.01%



Based on the preceding analysis, the County has determined that it is financially beneficial to pursue the issuance of Pension Obligation Bonds in the approximate amount of \$29,295,000, including estimated costs of issuance, but in any event not to exceed \$29,000,000 plus the costs of issuing the Bonds.

Description of Action Required to Meet Obligations

The County allocates pension costs to the various funds that receive pension benefits. Similarly, the annual debt service for the Pension Obligation Bonds will be allocated proportionately to the funds receiving pension benefits. The County has 21 funds which are allocated pension costs and will be allocated proportionate amounts of annual debt service for the Pension Obligation Bonds. Revenue sources for the funds that will be allocated portions of the annual bond payments include annual operating levies, state shared revenues and other sources of annual revenue.

The County’s Administration completes an annual budget and presents it the County’s Board of Commissioners for approval. The annual debt service amounts for each fund within the budget will be included in the annual budget process to be presented and approved by the Board of Commissioners annually. The Pension Obligation 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 329, the Plan contains the following elements:

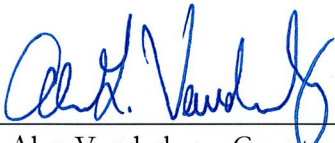
- **An analysis of the current and future obligations with respect to each retirement program of the County.** The County has a defined benefit plan as well as a defined contribution pension plan. Information regarding the defined benefit plan was obtained from MERS. Information with respect to both 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, Donlon and Associates, Inc. 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 unfunded pension liability for the Act 329 defined benefit plan provided by Tegrity Group is \$48,320,601 as of December 31, 2013. 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 liability of \$29,000,000. The County will continue to make annual payments to MERS for the remaining liability, including the liability for Division 13. The complete bond schedules prepared by PFM are provided under Appendix C.
- **The debt service amortization schedule.** The preliminary debt service amortization schedules for the Pension Obligation Bonds provided by PFM can be found under Appendix D.
- **A description of actions required to satisfy the debt service amortization schedule.** The Pension Obligation Bonds are a limited tax general obligation of the County, paid from various County funds. A description of actions the County takes to allocate costs to its various funds, create the annual budget and obtain budget approval from the County's Board of Commissioners is contained on page 7 herein.
- **Certification that the Comprehensive Financial Plan is complete and accurate.** A certification from the County Administrator attesting that the Plan is complete with information provided by reliable sources is provided on page 9.

Act 329 also requires the Plan be prepared and made publically available. Accordingly, the County has prepared this Plan, which has been approved by the County's Board of Commissioners on October 14, 2014, 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 329 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.



By: Alan Vanderberg, County Administrator

Dated: October 14, 2014



Appendix A: Analysis of Current and Future Retirement Program Obligations of the County of Ottawa



MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2013
OTTAWA CO (7003)

Spring, 2014

Ottawa 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, 2013. The report includes the determination of liabilities and contribution rates resulting from the participation of Ottawa Co (7003) in the Municipal Employees' Retirement System of Michigan ("MERS"). MERS is an independent public nonprofit organization that has partnered with Michigan municipalities for more than 65 years, helping them provide safe, secure retirement plans for their employees. Ottawa 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, 2013 annual actuarial valuation is to:

- measure funding progress,
- establish contribution requirements for the fiscal year beginning January 1, 2015, and
- provide actuarial information in connection with applicable Governmental Accounting Standards Board 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, 2013 furnished by MERS' administrative staff. 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. Tegrit Group does not assume responsibility for the accuracy or completeness of the data used in this valuation.

The actuarial assumptions and methods are adopted by the Retirement Board. 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-2013AnnualActuarialValuation-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).

Our advice 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 related third parties such as the auditor for the municipality). Tegrit Group 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 MERS at: <http://www.mersofmich.com/MERS/About-MERS/Contact-Us>

Sincerely,

Alan Sonnanstine, MAAA, ASA
Cathy Nagy, MAAA, FSA
Jim Koss, MAAA, ASA
Rebecca Stouffer, MAAA, ASA

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Executive Summary

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 trusts 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:

	12/31/2013	12/31/2012
Funded Ratio	79%	79%

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.

As a result of the plan's funding policy, the funded ratio is expected to approach 100% over time. How quickly a plan attains the 100% goal depends on many factors such as:

- The current funded ratio,
- The future experience of the plan, and
- 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 minimum required employer contributions are shown on the following page. Employee contributions, if any, are shown in Table 2, and are in addition to the required employer contribution on the next page.

Valuation Date:	Percentage of Payroll		Monthly \$ Based on Valuation Payroll	
	12/31/2013	12/31/2012	12/31/2013	12/31/2012
Fiscal Year Beginning:	January 1, 2015	January 1, 2014	January 1, 2015	January 1, 2014
Division				
01 - General	-	-	\$ 59,344	\$ 53,482
02 - Sheriff/Command	-	35.44%	42,370	51,666
06 - Mental Health Group T.	-	-	48,432	38,889
10 - Elctd/Unclassfd	-	-	186,488	170,919
11 - Mich Nurses Asso	-	12.88%	12,004	10,664
12 - Brd of Commsnrs	-	-	895	577
13 - Judges Elctd	8.96%	10.90%	1,060	1,288
15 - Juvenile Court	-	11.15%	15,490	17,065
16 - Fr of the Court	-	8.53%	9,465	8,977
18 - District Court	-	8.27%	13,688	12,531
19 - Administrator	-	-	1,437	1,481
20 - Sheriff POAM	-	11.38%	37,299	35,303
21 - Detectives & Rd Ptrl	-	16.41%	92,977	90,012
22 - Non 312 Command	-	10.05%	2,887	2,649
60 - Mental Health Unclass	-	-	31,535	34,341
Municipality Total			\$ 555,371	\$ 529,844

You may contribute more than the minimum required contributions, as these additional contributions will earn investment income, and later you may have to contribute less than otherwise. MERS strongly encourages employers to contribute more than the minimum contribution shown above.

Assuming that experience of the plan meets actuarial assumptions:

- To accelerate to a 100% funding ratio in 10 years, estimated monthly contributions for the entire employer would be \$ 783,098, instead of \$ 555,371.
- To accelerate to a 100% funding ratio in 20 years, estimated monthly contributions for the entire employer would be \$ 576,576, instead of \$ 555,371.

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](#)), and

- 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 the Investment Markets

At this time, MERS maintains the 8% annual return assumption in the belief that over the long-term this is achievable. For example, MERS' 30 year return was 9.3% on December 31, 2013. The MERS portfolio returned 14.8% in 2013; the two year (12.9%), three year (9.2%), four year (10.4%), and five year (11.7%) returns all exceed the 8% annual return assumption. It has now been five years since the peak of the financial crisis and the stock market decline still weighs down MERS' medium term returns. This was a one in fifty year event comparable only to the Stock Market Crash of 1929 during the Great Depression. The stock market and economy have stabilized since 2008 and are on the long road to recovery. MERS regularly monitors the investment return assumption to make sure it is reasonable compared to long term expectations.

The actuarial value of assets, used to determine both your funded ratio and your required employer contribution, is based on a 10-year smoothed value of assets. Only a portion (six-tenths, for 2008 - 2013) of the 2008 investment market losses was recognized in this actuarial valuation report. This reduces the volatility of the valuation results, which affects your required employer contribution and funded ratio.

As of December 31, 2013 the actuarial value of assets is 106% of market value. This means that meeting the actuarial assumption in the next few years will require average annual market returns that exceed the 8% investment return assumption.

If the December 31, 2013 valuation results were based on market value on that date instead of 10-year smoothed funding value: i) the funded percent of your entire municipality would be 74% (instead of 79%); and ii) your total employer contribution requirement for the fiscal year starting January 1, 2015 would be \$ 7,379,004 (instead of \$ 6,664,452).

The asset smoothing method is a powerful tool for reducing the volatility of your required employer contributions. **However, if the current 6% 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).**

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

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.

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.

Other assumptions are also important in determining the required employer contributions.

For example:

- 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 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.

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, 2013 valuation, and are for the municipality in total, not by division.

	Assumed Future Annual Smoothed Rate of Investment Return			
	Lower Future Annual Returns		Valuation Assumption	Higher Returns
	6%	7%	8%	9%
12/31/2013 Valuation Results				
Accrued Liability	\$ 286,986,049	\$ 252,745,256	\$ 224,197,096	\$ 200,237,744
Valuation Assets	\$ 175,891,057	\$ 175,891,057	\$ 175,891,057	\$ 175,891,057
Unfunded Accrued Liability	\$ 111,094,992	\$ 76,854,199	\$ 48,306,039	\$ 24,346,687
Funded Ratio	61%	70%	79%	88%
Monthly Normal Cost	\$ 538,611	\$ 397,585	\$ 289,635	\$ 207,537
Monthly Amortization Payment	\$ 525,047	\$ 396,211	\$ 265,736	\$ 132,673
Total Employer Contribution¹	\$ 1,063,658	\$ 793,796	\$ 555,371	\$ 340,516

¹ If assets exceed accrued liabilities for a division, the division's amortization payment is negative and is used to reduce the division's employer contribution requirement. If the overfunding credit is larger than the normal cost, the division's full credit is included in the municipality's amortization

payment above but the division's total contribution requirement is zero. This can cause the displayed normal cost and amortization payment to not add up to the displayed total employer contribution.

Employer Contribution Details

For the Fiscal Year Beginning January 1, 2015

Table 1

Division	Amort. Period for Unfund. Liab. ^{4,5}	Employer Contributions ¹			Blended Employer Contribut. ⁷	GASB ARC ⁶	Member Contribut. Conversion Factor ²
		Normal Cost	Unfunded Accrued Liability	Total Required Employer Contribut.			
Percentage of Payroll							
01 - General	22	-	-	-			
02 - Sheriff/Command	23	-	-	-			
06 - Mental Health Grou	22	-	-	-			
10 - Elctd/Unclssfd	22	-	-	-			
11 - Mich Nurses Asso	23	-	-	-			
12 - Brd of Commsnrs	22	-	-	-			
13 - Judges Elctd	25	10.32%	-1.36%	8.96%			
15 - Juvenile Court	23	-	-	-			
16 - Fr of the Court	23	-	-	-			
18 - District Court	23	-	-	-			
19 - Administrator	22	-	-	-			
20 - Sheriff POAM	23	-	-	-			
21 - Detectives & Rd Pt	23	-	-	-			
22 - Non 312 Command	23	-	-	-			
60 - Mental Health Uncl	22	-	-	-			
Estimated Monthly Contribution³							
01 - General	22	\$ 34,737	\$ 24,607	\$ 59,344		\$ 803,208	
02 - Sheriff/Command	23	15,206	27,164	42,370		621,984	
06 - Mental Health Grou	22	30,480	17,952	48,432		647,640	
10 - Elctd/Unclssfd	22	74,844	111,644	186,488		2,651,124	
11 - Mich Nurses Asso	23	4,888	7,116	12,004		173,796	
12 - Brd of Commsnrs	22	564	331	895		11,964	
13 - Judges Elctd	25	1,221	(161)	1,060			0.80%
15 - Juvenile Court	23	10,529	4,961	15,490		206,616	
16 - Fr of the Court	23	4,826	4,639	9,465		132,972	
18 - District Court	23	7,198	6,490	13,688		191,388	
19 - Administrator	22	1,292	145	1,437		17,784	
20 - Sheriff POAM	23	26,876	10,423	37,299		491,160	
21 - Detectives & Rd Pt	23	61,344	31,633	92,977		1,247,940	
22 - Non 312 Command	23	2,350	537	2,887		36,900	
60 - Mental Health Uncl	22	13,280	18,255	31,535		445,992	
Total Municipality		\$ 289,635	\$ 265,736	\$ 555,371			
Estimated Annual Contribution³		\$ 3,475,620	\$ 3,188,832	\$ 6,664,452			

¹ The above Employer contribution requirements are in addition to the Member contributions, if any, shown in Table 2.

- ² If Member contributions are increased/decreased by 1.00% of pay, the Employer contribution requirement will decrease/increase by the Member Contribution Conversion Factor.
- ³ For divisions that are open to new hires, estimated contributions are based on valuation payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts (usually higher). For divisions that will have no new hires, invoices will be based on the above dollar amounts which are based on projected fiscal year payroll. See description of Open Divisions and Closed Divisions in the [Appendix](#).
- ⁴ If projected assets exceed projected liabilities as of the beginning of the January 1, 2015 fiscal year, the negative unfunded accrued liability is amortized (spread) over 10 years. This amortization is used to reduce the employer contribution rate. Note that if the overfunding credit is larger than the normal cost, the full credit is shown above but the total contribution requirement is zero. This will cause the displayed normal cost and unfunded accrued liability contributions to not add across.
- ⁵ If the division is closed to new hires, with new hires not covered by MERS Defined Benefit Plan or Hybrid Plan provisions, the amortization period will decrease as follows: Under Amortization Option A, the period will decrease by 2 years each valuation year, until a minimum 5-year amortization is attained. Under Amortization Option B, the period will decrease by 2 years each valuation year, until reaching 15 years. Thereafter, the period will reduce by 1 year each valuation year, until a minimum 5-year amortization is attained. This will result in amortization payments that increase faster than the usual 4.5% each year. If the division is closed to new hires, with new hires (and transfers) covered by MERS Defined Benefit Plan or Hybrid Plan provisions, the standard open division amortization period will apply.
- ⁶ For reporting and disclosure purposes under Statement Nos. 25 and 27 of the Governmental Accounting Standards Board, the annual required contribution (ARC) for this division is based on a 30 year level dollar amortization.
- ⁷ For linked divisions, the employer will be invoiced the Total Required Employer Contribution rate shown above for each linked division (a contribution rate for the open division; a contribution dollar for the closed-but-linked division), unless the employer elects to contribute the Blended Employer Contribution rate shown above, by contacting MERS at 800-767-2308.

Please see the Comments on the Investment Markets.

Benefit Provisions

Table 2

01 - General: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	1.99%	1.99%
DC Plan for New Hires:	1/1/2012	1/1/2012
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)
02 - Sheriff/Command: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	50/25	50/25
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	4.23%	4.23%
DC Plan for New Hires:	4/1/2013	
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)
06 - Mental Health Group T.: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	1.99%	1.99%
DC Plan for New Hires:	1/1/2012	1/1/2012
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)

Table 2 (continued)

10 - Elctd/Unclassfd: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	4.64%	4.64%
DC Plan for New Hires:	1/1/2012	1/1/2012
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)
11 - Mich Nurses Asso: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	6.99%	6.99%
DC Plan for New Hires:	4/1/2013	
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)
12 - Brd of Commsnrs: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	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)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	0%	0%
DC Plan for New Hires:	1/1/2012	1/1/2012
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)

Table 2 (continued)

13 - Judges Elctd: Open Division

	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	2%	2%
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)

15 - Juvenile Court: Closed to new hires

	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	6.54%	6.54%
DC Plan for New Hires:	4/1/2013	
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)

16 - Fr of the Court: Closed to new hires

	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	6.79%	6.79%
DC Plan for New Hires:	4/1/2013	
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)

Table 2 (continued)

18 - District Court: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	5.95%	5.95%
DC Plan for New Hires:	4/1/2013	
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)
19 - Administrator: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	4.64%	4.64%
DC Plan for New Hires:	1/1/2012	1/1/2012
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)
20 - Sheriff POAM: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	3.83%	3.83%
DC Plan for New Hires:	4/1/2013	
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)

Table 2 (continued)

21 - Detectives & Rd Ptrl: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	50/25	50/25
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	3.10%	3.10%
DC Plan for New Hires:	4/1/2013	
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)
22 - Non 312 Command: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.00% Multiplier (no max)	2.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
Member Contributions:	0%	0%
DC Plan for New Hires:	4/1/2013	
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)
60 - Mental Health Unclass: Closed to new hires		
	2013 Valuation	2012 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Member Contributions:	4.81%	4.81%
DC Plan for New Hires:	1/1/2012	1/1/2012
Act 88:	Yes (Adopted 1/12/1971)	Yes (Adopted 1/12/1971)

Membership Summary

Table 3

Division	2013 Valuation		2012 Valuation		2013 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
01 - General							
Active Members	132	\$ 5,088,066	156	\$ 5,890,890	47.0	11.0	11.5
Vested Former Members	53	360,814	55	331,681	50.0	10.6	12.5
Retirees and Beneficiaries	165	1,391,925	158	1,314,515	72.5		
02 - Sheriff/Command							
Active Members	24	\$ 1,797,622	24	\$ 1,749,387	45.8	19.1	19.1
Vested Former Members	4	75,205	3	61,879	48.8	11.8	16.8
Retirees and Beneficiaries	27	1,069,526	27	1,010,934	67.6		
06 - Mental Health Group							
Active Members	104	\$ 4,703,849	112	\$ 4,966,702	47.1	12.4	12.5
Vested Former Members	21	246,773	22	263,867	51.1	12.2	13.5
Retirees and Beneficiaries	37	501,964	32	420,752	64.9		
10 - Elctd/Unclssfd							
Active Members	156	\$ 10,397,589	163	\$ 10,587,529	48.6	14.9	15.6
Vested Former Members	25	431,640	26	485,535	50.8	13.1	13.5
Retirees and Beneficiaries	113	3,801,975	106	3,448,270	67.5		
11 - Mich Nurses Asso							
Active Members	21	\$ 951,519	23	\$ 993,474	47.6	11.9	12.4
Vested Former Members	4	45,513	4	45,513	51.0	11.3	12.4
Retirees and Beneficiaries	21	359,430	20	338,786	69.9		
12 - Brd of Commsnrs							
Active Members	7	\$ 117,880	7	\$ 87,515	65.8	6.8	6.8
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	11	38,120	11	37,280	79.1		
13 - Judges Elctd							
Active Members	4	\$ 142,008	4	\$ 141,816	64.8	28.9	28.9
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	2	20,398	2	19,931	77.9		
15 - Juvenile Court							
Active Members	42	\$ 1,798,212	44	\$ 1,836,606	40.5	11.9	12.0
Vested Former Members	11	90,295	11	80,362	44.2	9.9	13.5
Retirees and Beneficiaries	6	102,247	5	94,539	61.1		
16 - Fr of the Court							
Active Members	26	\$ 1,147,296	30	\$ 1,262,790	41.0	11.1	11.1
Vested Former Members	2	20,145	2	20,145	52.2	13.0	17.1
Retirees and Beneficiaries	7	141,124	7	141,123	67.3		

Table 3 (continued)

Division	2013 Valuation		2012 Valuation		2013 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
18 - District Court							
Active Members	45	\$ 1,822,714	46	\$ 1,818,254	46.5	12.3	12.7
Vested Former Members	7	72,115	6	63,520	48.0	13.3	16.3
Retirees and Beneficiaries	18	287,800	15	241,053	67.7		
19 - Administrator							
Active Members	1	\$ 148,481	1	\$ 152,463	51.8	10.0	10.0
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
20 - Sheriff POAM							
Active Members	78	\$ 3,851,167	79	\$ 3,722,590	44.1	11.5	11.5
Vested Former Members	18	152,321	18	151,367	47.8	9.7	13.7
Retirees and Beneficiaries	25	324,012	24	308,693	65.1		
21 - Detectives & Rd Ptrl							
Active Members	98	\$ 6,419,621	103	\$ 6,582,234	40.0	12.3	12.7
Vested Former Members	9	137,610	8	117,478	49.5	11.3	14.1
Retirees and Beneficiaries	24	858,236	23	790,911	60.6		
22 - Non 312 Command							
Active Members	5	\$ 324,457	5	\$ 316,239	40.5	15.2	15.2
Vested Former Members	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
60 - Mental Health Unclas							
Active Members	27	\$ 1,776,615	31	\$ 1,999,729	45.5	14.5	15.3
Vested Former Members	4	102,513	5	105,540	49.5	14.5	16.9
Retirees and Beneficiaries	17	619,053	15	558,644	63.8		
Total Municipality							
Active Members	770	\$ 40,487,096	828	\$ 42,108,218	45.7	12.8	13.2
Vested Former Members	158	1,734,944	160	1,726,887	49.5	11.4	13.5
Retirees and Beneficiaries	473	9,515,810	445	8,725,431	68.8		
Total Participants	1401		1433				

¹ Annual payroll for active members; annual deferred benefits payable for vested former members; annual benefits being paid for retirees and beneficiaries.

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

Reported Assets (Market Value)

Table 4

Division	2013 Valuation		2012 Valuation	
	Employer and Retiree ¹	Employee ²	Employer and Retiree ¹	Employee ²
01 - General	\$ 16,396,266	\$ 1,138,756	\$ 16,131,744	\$ 1,120,922
02 - Sheriff/Command	14,260,181	918,768	10,029,493	835,207
06 - Mental Health Group T.	11,331,250	1,017,087	11,063,591	976,615
10 - Elctd/Unclssfd	53,704,808	4,775,646	47,304,750	4,622,991
11 - Mich Nurses Asso	3,920,624	652,711	3,541,464	608,673
12 - Brd of Commsnrs	321,979	1,705	303,489	1,703
13 - Judges Elctd	989,160	67,613	858,500	64,771
15 - Juvenile Court	4,575,205	861,493	3,885,658	773,773
16 - Fr of the Court	2,189,301	542,830	2,341,332	545,730
18 - District Court	4,789,621	685,965	4,262,904	614,794
19 - Administrator	203,595	66,271	153,811	59,317
20 - Sheriff POAM	9,401,268	587,085	7,980,351	420,581
21 - Detectives & Rd Ptrl	19,200,603	2,460,319	16,505,368	2,399,863
22 - Non 312 Command	534,892	4,388	440,799	4,383
60 - Mental Health Unclass	9,218,399	829,632	8,040,615	752,943
Municipality Total	\$ 151,037,152	\$ 14,610,269	\$ 132,843,869	\$ 13,802,266
Combined Reserves	\$ 165,647,421		\$ 146,646,135	

¹ Reserve for Employer Contributions and Benefit Payments

² Reserve for Employee Contributions

The December 31, 2013 valuation assets are equal to 1.061840 times the reported market value of assets (compared to 1.143563 as of December 31, 2012). 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	Contributions		Investment Income	Benefit Payments	Member Contrib. Refunds	Net Transfers	Valuation Asset Balance
	Employer	Member					
2003	\$ 2,840,429	\$ 797,453	\$ 6,925,168	\$ (2,609,879)	\$ (28,948)	\$ 89,002	\$ 90,403,304
2004	3,421,876	1,107,349	6,353,584	(3,135,433)	(39,674)	23,643	98,134,649
2005	3,688,813	1,212,933	6,508,964	(3,400,621)	(42,559)	209,935	106,312,114
2006	3,994,873	1,303,124	8,701,535	(3,860,702)	(52,064)	19,955	116,418,835
2007	4,316,186	1,422,309	9,471,980	(4,445,562)	(89,685)	9,535	127,103,598
2008	4,481,958	1,487,706	6,101,446	(5,074,762)	(73,207)	180,339	134,207,078
2009	4,916,276	1,625,370	7,475,867	(5,663,669)	(62,415)	168,490	142,666,997
2010	5,518,172	1,564,291	8,737,148	(6,401,711)	(85,521)	353,481	152,352,857
2011	5,599,987	1,562,660	8,509,570	(7,240,822)	(95,598)	221,366	160,910,020
2012	5,528,369	1,673,350	7,819,305	(8,038,069)	(61,504)	(132,377)	167,699,094
2013	6,022,293	1,631,270	10,269,421	(9,036,793)	(123,713)	(570,515)	175,891,057

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

Actuarial Accrued Liabilities and Valuation Assets As of December 31, 2013

Table 6

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
01 - General				
Active Members	\$ 9,015,187	\$ 4,630,048	51.4%	\$ 4,385,139
Vested Former Members	1,938,643	1,938,643	100.0%	0
Retirees And Beneficiaries	11,907,224	11,907,224	100.0%	0
Pending Refunds	<u>143,473</u>	<u>143,473</u>	100.0%	<u>0</u>
Total	\$ 23,004,527	\$ 18,619,388	80.9%	\$ 4,385,139
02 - Sheriff/Command				
Active Members	\$ 8,683,961	\$ 3,509,701	40.4%	\$ 5,174,260
Vested Former Members	463,993	463,993	100.0%	0
Retirees And Beneficiaries	12,143,921	12,143,921	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 21,291,875	\$ 16,117,615	75.7%	\$ 5,174,260
06 - Mental Health Group T.				
Active Members	\$ 9,791,638	\$ 6,661,305	68.0%	\$ 3,130,333
Vested Former Members	1,527,665	1,527,665	100.0%	0
Retirees And Beneficiaries	4,822,113	4,822,113	100.0%	0
Pending Refunds	<u>100,875</u>	<u>100,875</u>	100.0%	<u>0</u>
Total	\$ 16,242,291	\$ 13,111,958	80.7%	\$ 3,130,333
10 - Elctd/Unclassfd				
Active Members	\$ 36,418,981	\$ 16,387,272	45.0%	\$ 20,031,709
Vested Former Members	2,682,758	2,682,758	100.0%	0
Retirees And Beneficiaries	42,838,962	42,838,962	100.0%	0
Pending Refunds	<u>187,893</u>	<u>187,893</u>	100.0%	<u>0</u>
Total	\$ 82,128,594	\$ 62,096,885	75.6%	\$ 20,031,709
11 - Mich Nurses Asso				
Active Members	\$ 2,344,563	\$ 1,033,663	44.1%	\$ 1,310,900
Vested Former Members	289,702	289,702	100.0%	0
Retirees And Beneficiaries	3,496,532	3,496,532	100.0%	0
Pending Refunds	<u>36,253</u>	<u>36,253</u>	100.0%	<u>0</u>
Total	\$ 6,167,050	\$ 4,856,150	78.7%	\$ 1,310,900
12 - Brd of Commsnrs				
Active Members	\$ 114,193	\$ 59,886	52.4%	\$ 54,307
Vested Former Members	0	0	0.0%	0
Retirees And Beneficiaries	283,815	283,815	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 398,008	\$ 343,701	86.4%	\$ 54,307

Table 6 (continued)

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
13 - Judges Elctd				
Active Members	\$ 860,479	\$ 875,041	101.7%	\$ (14,562)
Vested Former Members	0	0	0.0%	0
Retirees And Beneficiaries	247,083	247,083	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 1,107,562	\$ 1,122,124	101.3%	\$ (14,562)
15 - Juvenile Court				
Active Members	\$ 5,088,098	\$ 4,150,946	81.6%	\$ 937,152
Vested Former Members	440,162	440,162	100.0%	0
Retirees And Beneficiaries	1,114,692	1,114,692	100.0%	0
Pending Refunds	<u>67,103</u>	<u>67,103</u>	100.0%	<u>0</u>
Total	\$ 6,710,055	\$ 5,772,903	86.0%	\$ 937,152
16 - Fr of the Court				
Active Members	\$ 2,161,694	\$ 1,301,740	60.2%	\$ 859,954
Vested Former Members	143,131	143,131	100.0%	0
Retirees And Beneficiaries	1,455,684	1,455,684	100.0%	0
Pending Refunds	<u>531</u>	<u>531</u>	100.0%	<u>0</u>
Total	\$ 3,761,040	\$ 2,901,086	77.1%	\$ 859,954
18 - District Court				
Active Members	\$ 3,926,518	\$ 2,732,726	69.6%	\$ 1,193,792
Vested Former Members	331,634	331,634	100.0%	0
Retirees And Beneficiaries	2,744,578	2,744,578	100.0%	0
Pending Refunds	<u>5,258</u>	<u>5,258</u>	100.0%	<u>0</u>
Total	\$ 7,007,988	\$ 5,814,196	83.0%	\$ 1,193,792
19 - Administrator				
Active Members	\$ 313,024	\$ 286,555	91.5%	\$ 26,469
Vested Former Members	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 313,024	\$ 286,555	91.5%	\$ 26,469
20 - Sheriff POAM				
Active Members	\$ 8,305,223	\$ 6,391,019	77.0%	\$ 1,914,204
Vested Former Members	832,348	832,348	100.0%	0
Retirees And Beneficiaries	3,369,387	3,369,387	100.0%	0
Pending Refunds	<u>13,279</u>	<u>13,279</u>	100.0%	<u>0</u>
Total	\$ 12,520,237	\$ 10,606,033	84.7%	\$ 1,914,204
21 - Detectives & Rd Ptrl				
Active Members	\$ 17,724,586	\$ 11,861,770	66.9%	\$ 5,862,816
Vested Former Members	837,971	837,971	100.0%	0
Retirees And Beneficiaries	10,288,961	10,288,961	100.0%	0
Pending Refunds	<u>11,731</u>	<u>11,731</u>	100.0%	<u>0</u>
Total	\$ 28,863,249	\$ 23,000,433	79.7%	\$ 5,862,816

Table 6 (continued)

Division	Actuarial Accrued Liability	Valuation Assets¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
22 - Non 312 Command				
Active Members	\$ 670,232	\$ 572,629	85.4%	\$ 97,603
Vested Former Members	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	0	0	0.0%	0
Total	\$ 670,232	\$ 572,629	85.4%	\$ 97,603
60 - Mental Health Unclass				
Active Members	\$ 5,910,740	\$ 2,568,777	43.5%	\$ 3,341,963
Vested Former Members	640,966	640,966	100.0%	0
Retirees And Beneficiaries	7,344,870	7,344,870	100.0%	0
Pending Refunds	114,788	114,788	100.0%	0
Total	\$ 14,011,364	\$ 10,669,401	76.1%	\$ 3,341,963
Total Municipality				
Active Members	\$ 111,329,117	\$ 63,023,078	56.6%	\$ 48,306,039
Vested Former Members	10,128,973	10,128,973	100.0%	0
Retirees and Beneficiaries	102,057,822	102,057,822	100.0%	0
Pending Refunds	681,184	681,184	100.0%	0
Total Participants	\$ 224,197,096	\$ 175,891,057	78.5%	\$ 48,306,039

¹ Includes both employer and member assets.

Please see the Comments on the Investment Markets.

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

http://www.mersofmich.com/Portals/0/Assets/PageResources/MERS/PlanDocument/Pension/sec_43c.pdf.

Actuarial Accrued Liabilities - Comparative Schedule

Table 7

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities	UAL as Percent of Annual Payroll
1999	\$ 64,714,899	\$ 64,327,582	99%	\$ 387,317	1%
2000	74,713,813	72,063,781	96%	2,650,032	9%
2001	83,294,598	78,249,013	94%	5,045,585	16%
2002	94,625,203	82,390,079	87%	12,235,124	37%
2003	102,982,304	90,403,304	88%	12,579,000	37%
2004	115,966,795	98,134,649	85%	17,832,146	48%
2005	126,887,611	106,312,114	84%	20,575,497	54%
2006	138,434,883	116,418,835	84%	22,016,048	54%
2007	151,513,633	127,103,598	84%	24,410,035	58%
2008	164,292,703	134,207,078	82%	30,085,625	71%
2009	175,705,139	142,666,997	81%	33,038,142	74%
2010	184,346,935	152,352,857	83%	31,994,078	74%
2011	197,600,606	160,910,020	81%	36,690,586	84%
2012	211,500,142	167,699,094	79%	43,801,048	104%
2013	224,197,096	175,891,057	79%	48,306,039	119%

Notes: Actuarial assumptions were revised for the 2000, 2004, 2008, 2009, 2010, 2011, and 2012 actuarial valuations.

GASB 25 and GASB 27 Information

The following information has been prepared to provide the information necessary to comply with GASB Statements Number 25 and 27. Statement 25 is effective for fiscal years beginning after June 15, 1996 and Statement 27 is effective for fiscal years beginning after June 15, 1997.

All entries and the annual employer contribution amount were based on the actuarial methods and assumptions used in the December 31, 2013 actuarial valuation. The entry age normal actuarial method was used to determine the disclosure entries.

GASB 25 Information (as of 12/31/2013)

Actuarial Accrued Liability	
Retirees and beneficiaries currently receiving benefits	\$ 102,057,822
Terminated employees (vested former members) not yet receiving benefits	10,128,973
Non-Vested terminated employees (pending refunds of accumulated member contributions)	681,184
Current employees -	
Accumulated employee contributions including allocated investment income	12,729,223
Employer financed	<u>98,599,894</u>
Total Actuarial Accrued Liability	\$ 224,197,096
Net Assets Available for Benefits at Actuarial Value	\$ <u>175,891,057</u>
(Market Value is 165,647,421)	
Unfunded (Overfunded) Actuarial Accrued Liability	\$ 48,306,039

GASB 27 Information (as of 12/31/2013)

Fiscal Year Beginning	January 1, 2015
Annual Required Contribution (ARC)	\$ 7,693,188 ¹

¹ Based on valuation payroll (based on projected fiscal year payroll for divisions that will have no new hires). For divisions that are open to new hires the actual required contribution will be based on current monthly payroll (during the fiscal year beginning January 1, 2015) times the computed employer contribution rate(s) shown in Table 1. The ARC shown here is the sum of the ARC's calculated separately for each division.

GASB 27 Information (Used in the 12/31/2013 Annual Actuarial Valuation)

Amortization Factors Used to Compute Employer Contribution Requirements Used for Funding Calculations and Most ARC Calculations (see below) (Payments Increase 4.5% per Year)

Amortization Factor Used - Underfunded or Overfunded Liabilities (5 years)	0.221706
Amortization Factor Used - Underfunded or Overfunded Liabilities (6 years)	0.187731
Amortization Factor Used - Underfunded or Overfunded Liabilities (7 years)	0.163488
Amortization Factor Used - Underfunded or Overfunded Liabilities (8 years)	0.145330
Amortization Factor Used - Underfunded or Overfunded Liabilities (9 years)	0.131227
Amortization Factor Used - Underfunded or Overfunded Liabilities (10 years)	0.119963
Amortization Factor Used - Underfunded or Overfunded Liabilities (11 years)	0.110763
Amortization Factor Used - Underfunded or Overfunded Liabilities (12 years)	0.103112
Amortization Factor Used - Underfunded or Overfunded Liabilities (13 years)	0.096652
Amortization Factor Used - Underfunded or Overfunded Liabilities (14 years)	0.091128
Amortization Factor Used - Underfunded or Overfunded Liabilities (15 years)	0.086353
Amortization Factor Used - Underfunded or Overfunded Liabilities (16 years)	0.082185
Amortization Factor Used - Underfunded or Overfunded Liabilities (17 years)	0.078519
Amortization Factor Used - Underfunded or Overfunded Liabilities (18 years)	0.075270
Amortization Factor Used - Underfunded or Overfunded Liabilities (19 years)	0.072372
Amortization Factor Used - Underfunded or Overfunded Liabilities (20 years)	0.069773
Amortization Factor Used - Underfunded or Overfunded Liabilities (21 years)	0.067430
Amortization Factor Used - Underfunded or Overfunded Liabilities (22 years)	0.065308
Amortization Factor Used - Underfunded or Overfunded Liabilities (23 years)	0.063378
Amortization Factor Used - Underfunded or Overfunded Liabilities (24 years)	0.061616
Amortization Factor Used - Underfunded or Overfunded Liabilities (25 years)	0.060002

Amortization Factor Used to Compute the GASB Annual Required Contribution (ARC) For Divisions that are Closed to New Hires (and new hires are not covered by MERS DB or Hybrid provisions in a linked division) If Division is Less than 100% Funded, and Uses a Funding Period over 15 Years

Amortization Factor Used - Underfunded Liabilities (30 year level \$)	0.085453
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Assumptions: Continuous Payments; Interest at 8% Per Year

Benefit Provision History

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

1/1/2012	DC Adoption Date 01-01-2012
9/24/2002	Blanket Resolution (All Service)
1/1/2001	Benefit B-3 (80% max)
1/1/2001	Member Contribution Rate 1.99%
7/1/1998	Benefit B-2
1/1/1994	E 2% COLA Adopted (01/01/1994)
1/1/1994	E Cola Adoption Date 01-01-1994
1/1/1994	E Cola Increase Amount 2
1/1/1994	E Cola Increase Type Percent
1/1/1991	Flexible E 2% COLA Adopted (01/01/1991)
1/1/1990	Flexible E 2% COLA Adopted (01/01/1990)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1978	Member Contribution Rate 0.00%
1/1/1978	Benefit F55 (With 25 Years of Service)
1/1/1972	Benefit C-1 (Old)
1/12/1971	Covered by Act 88
1/1/1949	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1949	10 Year Vesting
1/1/1949	Benefit C (Old)
1/1/1949	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
1/1/1949	Fiscal Month - January

02 - Sheriff/Command

4/1/2013	DC Adoption Date 04-01-2013
9/24/2002	Blanket Resolution (All Service)
7/1/2001	Benefit B-4 (80% max)
7/1/2001	Member Contribution Rate 4.23%
1/1/1997	Member Contribution Rate 1.00%
4/1/1995	Benefit B-3 (80% max)
4/1/1995	Benefit F50 (With 25 Years of Service)
1/1/1994	Flexible E 2% COLA Adopted (01/01/1994)
1/1/1994	E Cola Adoption Date 01-01-1994
1/1/1994	E Cola Increase Amount 2
1/1/1994	E Cola Increase Type Percent
1/1/1991	Flexible E 2% COLA Adopted (01/01/1991)
1/1/1990	Flexible E 2% COLA Adopted (01/01/1990)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)

02 - Sheriff/Command

1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1984	Benefit C-2/Base B-1
1/1/1984	Member Contribution Rate 0.00%
1/1/1984	Benefit F55 (With 25 Years of Service)
1/1/1984	E2 2.5% COLA for future retirees (11/08/1983)
1/1/1972	Benefit C-1 (Old)
1/12/1971	Covered by Act 88
1/1/1949	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1949	10 Year Vesting
1/1/1949	Benefit C (Old)
1/1/1949	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
1/1/1949	Fiscal Month - January

06 - Mental Health Group T.

1/1/2012	DC Adoption Date 01-01-2012
9/24/2002	Blanket Resolution (All Service)
1/1/2001	Benefit B-3 (80% max)
1/1/2001	Member Contribution Rate 1.99%
8/1/1998	Benefit B-2
8/1/1998	10 Year Vesting
8/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
8/1/1998	Member Contribution Rate 0.00%
8/1/1998	Benefit F55 (With 25 Years of Service)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

10 - Elctd/Unclassfd

1/1/2012	DC Adoption Date 01-01-2012
2/1/2004	Benefit B-4 (80% max)
2/1/2004	Member Contribution Rate 4.64%
9/24/2002	Blanket Resolution (All Service)
1/1/1996	Benefit B-3 (80% max)
1/1/1996	Member Contribution Rate 2.00%
1/1/1994	Flexible E 2% COLA Adopted (01/01/1994)
1/1/1994	E Cola Adoption Date 01-01-1994
1/1/1994	E Cola Increase Amount 2
1/1/1994	E Cola Increase Type Percent
1/1/1991	Member Contribution Rate 0.00%
1/1/1991	Flexible E 2% COLA Adopted (01/01/1991)
1/1/1990	10 Year Vesting
1/1/1990	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1990	Benefit C-2/Base B-1
1/1/1990	Member Contribution Rate 2.00%
1/1/1990	Benefit F55 (With 25 Years of Service)

10 - Elctd/Unclassfd

1/1/1990	Flexible E 2% COLA Adopted (01/01/1990)
1/1/1990	E2 2.5% COLA for future retirees (01/01/1990)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

11 - Mich Nurses Asso

4/1/2013	DC Adoption Date 04-01-2013
1/1/2003	Member Contribution Rate 6.99%
1/1/2003	E2 2.5% COLA for future retirees (01/01/2003)
9/24/2002	Blanket Resolution (All Service)
7/1/1997	Benefit B-3 (80% max)
7/1/1997	Member Contribution Rate 4.10%
1/1/1994	Flexible E 2% COLA Adopted (01/01/1994)
1/1/1994	E Cola Adoption Date 01-01-1994
1/1/1994	E Cola Increase Amount 2
1/1/1994	E Cola Increase Type Percent
1/1/1993	10 Year Vesting
1/1/1993	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1993	Benefit B-1
1/1/1993	Member Contribution Rate 0.00%
1/1/1993	Benefit F55 (With 25 Years of Service)
1/1/1991	Flexible E 2% COLA Adopted (01/01/1991)
1/1/1990	Flexible E 2% COLA Adopted (01/01/1990)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

12 - Brd of Commsnrs

1/1/2012	DC Adoption Date 01-01-2012
9/24/2002	Blanket Resolution (All Service)
10/1/1995	8 Year Vesting
1/1/1990	10 Year Vesting
1/1/1990	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1990	Benefit C-2/Base B-1
1/1/1990	Member Contribution Rate 0.00%
1/1/1990	Benefit F55 (With 25 Years of Service)
1/1/1990	E2 2.5% COLA for future retirees (01/01/1990)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

13 - Judges Elctd

9/24/2002	Blanket Resolution (All Service)
1/1/2001	E2 2.5% COLA for future retirees (03/01/1996)
1/1/2000	E2 2% COLA for future retirees (03/01/1996)
1/1/1999	E2 2.3% COLA for future retirees (03/01/1996)
1/1/1997	E2 2.5% COLA for future retirees (03/01/1996)
3/1/1996	Benefit B-3 (80% max)
1/1/1996	Member Contribution Rate 2.00%
10/1/1995	Member Contribution Rate 0.00%
10/1/1995	Benefit F55 (With 25 Years of Service)
10/1/1995	10 Year Vesting
10/1/1995	Benefit FAC-5 (5 Year Final Average Compensation)
10/1/1995	Benefit C-1 (Old)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

15 - Juvenile Court

4/1/2013	DC Adoption Date 04-01-2013
3/1/2012	Benefit B-4 (80% max)
3/1/2012	Member Contribution Rate 6.54%
5/1/2007	Benefit B-2
5/1/2007	Member Contribution Rate 5.78%
1/1/2003	E2 2.5% COLA for future retirees (01/01/2002)
9/24/2002	Blanket Resolution (All Service)
1/1/2002	Benefit B-1
1/1/2002	Member Contribution Rate 2.58%
7/1/1998	10 Year Vesting
7/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/1998	Benefit C-1 (Old)
7/1/1998	Member Contribution Rate 0.00%
7/1/1998	Benefit F55 (With 25 Years of Service)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

16 - Fr of the Court

4/1/2013	DC Adoption Date 04-01-2013
7/1/2007	Benefit B-4 (80% max)
7/1/2007	Member Contribution Rate 6.79%
1/1/2005	Benefit B-3 (80% max)
1/1/2005	Member Contribution Rate 5.05%
9/24/2002	Blanket Resolution (All Service)
2/1/2002	Benefit B-2
2/1/2002	Member Contribution Rate 2.98%
12/1/1999	10 Year Vesting

16 - Fr of the Court

12/1/1999	Benefit FAC-5 (5 Year Final Average Compensation)
12/1/1999	Benefit C-1 (Old)
12/1/1999	Member Contribution Rate 0.00%
12/1/1999	Benefit F55 (With 25 Years of Service)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

18 - District Court

4/1/2013	DC Adoption Date 04-01-2013
1/1/2009	Benefit B-3 (80% max)
1/1/2009	Member Contribution Rate 5.95%
7/1/2006	Benefit B-2
7/1/2006	Member Contribution Rate 3.47%
9/24/2002	Blanket Resolution (All Service)
1/1/2002	Benefit C-2/Base B-1
1/1/2002	Member Contribution Rate 1.72%
7/1/1998	10 Year Vesting
7/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/1998	Benefit C-1 (Old)
7/1/1998	Member Contribution Rate 0.00%
7/1/1998	Benefit F55 (With 25 Years of Service)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

19 - Administrator

1/1/2012	DC Adoption Date 01-01-2012
1/1/2007	6 Year Vesting
1/1/2007	Blanket Resolution (All Service)
1/1/2007	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/2007	Benefit B-4 (80% max)
1/1/2007	Member Contribution Rate 4.64%
1/1/2007	Benefit F55 (With 25 Years of Service)
1/1/2007	E2 2.5% COLA for future retirees (01/01/2007)
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

20 - Sheriff POAM

4/1/2013	DC Adoption Date 04-01-2013
1/1/2012	Benefit B-3 (80% max)
1/1/2012	Member Contribution Rate 3.83%
1/1/2006	Benefit B-2
1/1/2006	Member Contribution Rate 1.27%
9/24/2002	Blanket Resolution (All Service)

20 - Sheriff POAM

12/1/1996	Benefit F55 (With 25 Years of Service)
1/1/1994	Flexible E 2% COLA Adopted (01/01/1994)
1/1/1994	E Cola Adoption Date 01-01-1994
1/1/1994	E Cola Increase Amount 2
1/1/1994	E Cola Increase Type Percent
1/1/1991	Member Contribution Rate 0.00%
1/1/1991	Flexible E 2% COLA Adopted (01/01/1991)
1/1/1990	Flexible E 2% COLA Adopted (01/01/1990)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/1/1989	10 Year Vesting
1/1/1989	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1989	Benefit C-2/Base B-1
1/1/1989	Member Contribution Rate 2.00%
1/1/1989	Benefit F50 (With 25 Years of Service)
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
1/1/1984	Member Contribution Rate 0.00%
1/1/1984	E2 2.5% COLA for future retirees (11/08/1983)
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

21 - Detectives & Rd Ptrl

4/1/2013	DC Adoption Date 04-01-2013
9/24/2002	Blanket Resolution (All Service)
1/1/1999	Benefit B-4 (80% max)
1/1/1999	Member Contribution Rate 3.10%
1/1/1997	Member Contribution Rate 1.00%
1/1/1995	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1995	10 Year Vesting
1/1/1995	Benefit B-3 (80% max)
1/1/1995	Member Contribution Rate 0.00%
1/1/1995	Benefit F50 (With 25 Years of Service)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/1/1984	E2 2.5% COLA for future retirees (11/08/1983)
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

22 - Non 312 Command

4/1/2013	DC Adoption Date 04-01-2013
9/24/2002	Blanket Resolution (All Service)
1/1/2001	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/2001	10 Year Vesting
1/1/2001	Benefit B-2
1/1/2001	Member Contribution Rate 0.00%
1/1/2001	Benefit F55 (With 25 Years of Service)

22 - Non 312 Command

5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

60 - Mental Health Unclass

1/1/2012	DC Adoption Date 01-01-2012
2/1/2004	Benefit B-4 (80% max)
2/1/2004	Member Contribution Rate 4.81%
9/24/2002	Blanket Resolution (All Service)
8/1/1998	10 Year Vesting
8/1/1998	Benefit FAC-5 (5 Year Final Average Compensation)
8/1/1998	Benefit B-3 (80% max)
8/1/1998	Member Contribution Rate 2.00%
8/1/1998	Benefit F55 (With 25 Years of Service)
8/1/1990	E2 2.5% COLA for future retirees (08/01/1990)
5/9/1989	Day of work defined as 8 Hours a Day for all employees
1/12/1971	Covered by Act 88
1/1/1949	Fiscal Month - January

Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method

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

Increase in Final Average Compensation

Division	FAC Increase Assumption
All Divisions	1.00%

Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
All Divisions	85%

Miscellaneous and Technical Assumptions

Loads – None.

Amortization Policy for Closed Divisions

Closed Division	Amortization Option
All Closed Divisions	Option A



County of Ottawa

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The County of Ottawa Defined Contribution Pension Plan was established by the County and is administered by the Municipal Employees Retirement System of Michigan ("MERS"). Participation in the defined contribution plan is mandatory for certain employee groups hired after January 1, 2012 who are eligible for MERS membership and those employees hired before January 1, 2012 electing to participate in the defined benefit pension plan. Employees vest in the County's contributions based on the following sliding scale:

<u>Years of Service</u>	<u>Percent Vested</u>
3 Years	50%
4 Years	75%
5 Years	100%

The County contributes 3% of each participant's base salary to the plan. Employees are also required to contribute a minimum of 3% of base pay to the plan. The County also matches employee contributions up to a total County contribution of 6%. A history of the County's contributions to the defined contribution plan since its inception in 2012 is shown below:

<u>Year</u>	<u>Employer Contribution</u>	<u>Employee Contribution</u>
2013	\$249,959	\$269,915
2012	98,959	103,014

The County has budgeted \$350,000 in 2014 to contribute towards employees defined contribution pension plans. The County estimates this amount to increase by 265% over the next 5 years as follows:

<u>Fiscal Year</u>	<u>Estimated Contribution</u>
2015	\$ 597,570
2016	759,570
2017	919,570
2018	1,093,570
2019	1,276,570



Appendix B: Analysis of Current and Future Post Employment Healthcare Benefit Obligations of the County of Ottawa



County of Ottawa

Actuarial Valuation of the
Health Benefit Plan for County of Ottawa

As of

January 1, 2015

Prepared by
Donlon & Associates, Inc.

The logo for Donlon & Associates, Inc. consists of the letters "D&A" in a white, stylized serif font, centered on a solid black rectangular background.

**County of Ottawa
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I. Introduction

The County of Ottawa (the County) currently offers medical, prescription drug, and dental benefits which are considered Other Postemployment Benefits (OPEB) under Statements No. 43 and 45 of the Governmental Accounting Standards Board (GASB). The purpose of this report, prepared by Donlon & Associates, is to measure the liabilities and expense figures for the retiree medical benefits, in compliance with GASB Statements 43 and 45.

According to the provisions of this plan, employees and their dependents may continue their medical coverage beyond retirement after the employee reaches age 60 with 10 years of service, or after age 50 with 25 years of service. The exception to this is the "Unclassified" Benefit Group. Employees retiring from this Benefit Group must be at least 55 years old with 25 years of service, or age 60 with 10 years of service.

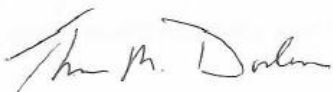
The Health Benefit Plan is fully insured with Priority Health Insurance Company. Employees and retirees under age 65 are given the opportunity to choose between three different health insurance plans: High Option, Low Option, and an HSA with a High Deductible Health Plan. The benefit provisions of these three plans are the same for both active employees and retirees under age 65. However, the employee contribution schedules are different for retirees. Retirees over age 65 are given the opportunity to enroll in the Low Option only. Retirees over age 65 also have a different contribution schedule.

Effective January 1, 2014 changes were made to the out-of-pocket maximums for each of the plan options to comply with the requirements of the Affordable Care Act. A brief summary of the current plan provisions is provided in Section VI of this report.

This report provides a description of the actuarial methodology and assumptions used to value the liabilities and calculate the expenses for the plan. All data provided by the County of Ottawa and Priority Health Insurance Company are assumed to be accurate and complete. No attempt was made to audit this data. This report also includes the information required for purposes of complying with GASB Statements 43 and 45.

This report has been prepared for the use of the County in estimating and recording the amount of OPEB liabilities for the benefit plans examined in this report. This report should not be used for any other purpose. This report is intended to be read in its entirety. To the best of our knowledge, there are no subsequent events that would impact our work or the conclusions presented in this report.

This report is in compliance with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board. The undersigned is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. He is available to answer any questions regarding this report.



Thomas M. Donlon, FSA, MAAA

May 5, 2014
Date

II. Summary of Major Changes Since Last Valuation

The major changes in assumptions and experience that affect the valuation results in this report are summarized below.

A. Age/Gender Cost Factors

The age/gender cost factors used in this valuation have been updated based on the study, “Health Care Costs – From Birth to Death”, sponsored by the Society of Actuaries and published in June 2013. This change to the cost factors decreased the Actuarial Accrued Liability (AAL) by \$786,700.

B. Trend Rates

The medical trend rates for years 2019 and beyond have been increased based on recent revisions to the Society of Actuaries (SOA) Long-Run Medical Cost Trend Model. The changes in trend assumptions resulted in an increase to the AAL of \$354,200.

C. Cadillac Tax

An additional provision of the Affordable Care Act is an excise tax to be imposed in 2018 on high cost, employer-provided health plans that are considered “Cadillac” plans. Based on the guidance that is currently available, we estimated the amount of the Cadillac Tax for all future years, and discounted the yearly values to the present value. The estimated Cadillac Tax increased by \$219,900 from \$188,200 in last year’s valuation, to \$408,100 this year. Note that the impact of the Cadillac Tax can significantly change when regulations and guidance are updated or changed.

D. Other Changes

The remaining increase of \$644,000 is primarily due to the following:

- The active employees are one year closer to retirement age, and have accrued one more year of service. In this 2015 valuation, there are 133 employees who are fully eligible for benefits, compared to 118 employees who were fully eligible in last year’s valuation.

- As shown below, the calendar year 2014 Priority Health premiums for active employees and retirees under age 65 are 10% higher than the 2013 rates. Since retirees over 65 contribute an amount equal to the entire premium, changes to that premium do not affect the County's AAL.

Single Coverage (excludes MI tax)	CY 2013 Monthly Premium	CY 2014 Monthly Premium	Increase
High Option Plan	\$525.10	\$579.65	10.4%
Low Option Plan	\$479.15	\$528.95	10.4%
HSA/HDHP	\$375.66	\$414.71	10.4%
Age 65 & Over – Low Option	\$597.33	\$569.28	(4.7%)

Below is a summary of the changes in the Actuarial Accrued Liability described above:

Total AAL as of 1/1/2014:	\$ 4,987,200
Decrease Due to Updated Age/Gender Cost Factors	(786,700)
Increase Due to Higher Long-Term Trend Rates	354,200
Increase Due to Increase in Cadillac Plan Excise Tax	219,900
Net Increase Due to Other Changes	<u>644,000</u>
Total AAL as of 1/1/2015:	\$ 5,418,600

III. Development of Annual OPEB Cost (Expense)

	<u>2014</u>	<u>2015</u>
A. Annual Required Contribution (ARC)		
1. Normal Cost		
a. Normal Cost	\$ 163,250	\$ 177,187
b. Interest on Normal Cost	8,163	8,859
c. Total Normal Cost = a. + b.	\$ 171,413	\$ 186,046
2. Amortization of Unfunded Actuarial Accrued Liability		
a. Actuarial Accrued Liability	\$ 4,987,215	\$ 5,418,623
b. Less Estimated Actuarial Value of Assets	<u>4,093,073</u>	<u>4,821,784</u>
c. Unfunded Actuarial Accrued Liability	\$ 894,142	\$ 596,839
d. Amortization Period	30 years	30 years
e. Discount Rate	5.00%	5.00%
f. Amortization Factor	16.141	16.141
g. Annual Amortization = c./f.	\$ 55,395	\$ 36,976
h. Interest on Amortization Payment	\$ 2,770	\$ 1,849
i. Total Amortization Payment = g. + h.	\$ 58,165	\$ 38,825
3. Annual Required Contribution (ARC) = 1.c. + 2.i.	\$ 229,578	\$ 224,871
B. Interest on net OPEB Obligation		
1. Net OPEB Obligation – Beginning of Year	\$ (458,615)	\$ (453,133)
2. Discount Rate	5.00%	5.00%
3. Interest on net OPEB Obligation	\$ (22,931)	\$ (22,657)
C. Adjustment to ARC		
1. Net OPEB Obligation – Beginning of Year	\$ (458,615)	\$ (453,133)
2. Amortization Factor	16.141	16.141
3. Adjustment to ARC	\$ 28,413	\$ 28,073
D. Annual OPEB Cost (Expense) = A. + B. + C.	\$ 235,060	\$ 230,287

IV. Notes to Financial Statements

A. Plan Description

The Health Benefit Plan for County of Ottawa is a single-employer defined benefit healthcare plan administered by the County of Ottawa. This plan provides medical, prescription drug, and dental benefits to eligible retirees and their spouses. The County of Ottawa has the authority to establish and amend benefit provisions of the Health Benefit Plan. The County of Ottawa issues a publicly available financial report that includes financial statements and required supplementary information for the Health Benefit Plan. That report may be obtained by submitting a request to: The County of Ottawa, 12220 Fillmore, Room 359, West Olive, Michigan 49460.

B. Monthly Retiree Contributions

Retirees under age 65, whose date of hire is prior to January 1, 2008, contribute an amount equal to the Priority Health insured premium rate, which is a “blended” premium rate for active employees and retirees under age 65 combined. Retirees under age 65, who are hired after January 1, 2008 will be required to make contributions equal to the actuarially determined cost of the medical and prescription drug benefits determined for retirees under age 65 only. All retirees over age 65 contribute an amount equal to the Priority Health insured premium rate applicable to retirees over age 65 only.

For purposes of this valuation, it is assumed the 2014 Priority Health insured premiums will increase by 10% on January 1, 2015. The assumed 2015 monthly contribution rates are summarized below.

<u>Retirees Under Age 65 with Date of Hire Before 1/1/08*</u>	<u>Employee</u>	<u>Spouse</u>
High Option Plan	\$637.62	\$797.01
Low Option Plan	\$581.85	\$727.30
HSA/HDHP	\$456.18	\$570.23
<u>Retirees Under Age 65 with Date of Hire On or After 1/1/08*</u>	<u>Employee</u>	<u>Spouse</u>
High Option Plan	\$908.54	\$908.54
Low Option Plan	\$829.07	\$829.07
HSA/HDHP	\$763.44	\$763.44
<u>Retirees Age 65 or Older</u>	<u>Employee</u>	<u>Spouse</u>
Low Option Plan	\$626.21	\$626.21

Note that all of the above rates include PPACA fees/taxes Michigan claims tax.

* Retirees under age 65 in certain Benefit Groups receive a monthly credit that is used to reduce the amount of the monthly contribution. Additional information about these credits is provided in Section C below.

C. Monthly Credits to Retiree Contributions

Retirees under age 65 in certain Benefit Groups receive a monthly credit, (currently set at the amount shown below), which is used to reduce the amount of their contribution for medical coverage. The number of active employees entitled to a monthly credit at retirement is also shown for each Benefit Group.

<u>Benefit Group Name:</u>	<u># of Active Employees</u>	<u>Retiree Credit per Year of Service</u>	<u>Maximum Monthly Credit</u>
Unclassified, Hired Before 1/1/2008	112	\$8.00	\$200
POAM 312 Eligible	98	\$10.00	\$250
POAM Non-312 Eligible, Hired Before 12/1/1996	15	\$4.00	\$100
POLC 312 Eligible	21	\$10.00	\$250
POLC Non-312 Eligible, Hired Before 1/1/2001	<u>6</u>	\$8.00	\$200
Total	252		

Currently there are 39 retirees under age 65 receiving a monthly credit which lowers their contribution amount.

D. Employer Contributions

The County of Ottawa is pre-funding the OPEB liabilities through a Section 115 Trust. It is the policy of the County of Ottawa to contribute an annual amount equal to the Annual Required Contribution (ARC) determined by an actuarial valuation of the Health Benefit Plan. The costs of administering the plan are financed through the County's OPEB Trust.

E. Annual OPEB Cost and Net OPEB Obligation

The Annual OPEB Cost is calculated based on the Annual Required Contribution (ARC) of the employer, an amount actuarially determined in accordance with the parameters of GASB Statement 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty years. The following table shows the components of the 2015 Annual OPEB Cost:

1. Annual Required Contribution	\$ 224,871
2. Interest on net OPEB obligation	\$ (22,657)
3. Adjustment to annual required contribution	\$ 28,073
4. Annual OPEB cost (expense)	\$ 230,287
5. Estimated 2015 Contributions made by the County	\$ 224,871
6. Increase in net OPEB obligation (4 – 5)	\$ 5,416
7. Net OPEB obligation – Beginning of Year (1/1/15)	\$ (453,133)
8. Net OPEB obligation – End of Year (12/31/15)	\$ (447,717)

F. Schedule of Funding Progress

Below is the schedule of funded status as of the current actuarial valuation date and the prior two actuarial valuation dates. The Funded Ratios for the 1/1/2013 Valuation and the 1/1/2014 Valuation have been re-stated based on the actual asset value as of those dates.

Actuarial Valuation Date	1/1/2013	1/1/2014	1/1/2015
Actuarial Accrued Liability (AAL)	\$ 4,389,537	\$ 4,987,215	\$ 5,418,623
Actuarial Value of Assets	<u>3,825,988</u>	<u>4,490,991</u>	<u>4,821,784*</u>
Unfunded Actuarial Accrued Liability (UAAL)	\$ 563,549	\$ 496,224	\$ 596,839
Funded Ratio	87.2%	90.1%	89.0%

* Below is the development of the projected actuarial value of the assets as of December 31, 2014.

Actuarial Value as of 1/1/2014	\$ 4,490,991
County Contributions Deposited to Trust	229,578
Retiree Medical Premium Payments	(509,480)
Retiree Medical Contributions	423,554
Estimated Administrative Costs/Advisory Fees	(40,000)
Estimated Investment Income	<u>227,141</u>
Actuarial Value as of 12/31/2014	\$ 4,821,784

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

G. Schedule of Employer Contributions

Below is the schedule of employer contributions as of the current actuarial valuation date and the prior two actuarial valuation dates.

Actuarial Valuation Date	1/1/2013	1/1/2014	1/1/2015
Annual Required Contribution	\$ 202,931	\$ 229,578	\$ 224,871
Total County Contributions	\$ 202,931	\$ 229,578	\$ 224,871
Percent Contributed	100%	100%*	100%*

*The County plans to contribute 100% of the ARC before the end of the calendar year.

V. Actuarial Methods and Assumptions

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided at the time of the valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. Retirees who elect dental coverage are required to contribute the entire amount of the insured dental premium. It is assumed that the insured dental premium is equivalent to the claims costs for dental coverage, and therefore dental benefits are excluded from this valuation.

The under age 65 fully insured medical premiums are blended rates applicable to both active employees and retirees. Therefore, we split those rates into an active cost and a retiree cost for each plan option, based on the age/gender characteristics of the participants in each option. For purposes of the valuation the resulting under age 65 rates were age-gender adjusted based on the overall enrollment of retirees under age 65 in the Health Benefit Plan.

Priority Health has confirmed that the premiums applicable to Medicare eligible retirees are community-rated, and are not based on the County's specific experience or the age and gender characteristics of the County's retirees. Therefore, the premium rates applicable to the retirees over age 65 in the Low Option Plan are not age-gender adjusted.

The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

1. Valuation Method

The method used for this Health Benefit Plan is called the Projected Unit Credit Method. According to this method an equal amount of an employee's projected benefit is allocated to each year from the date the employee first enters the plan until the date the employee is first eligible to receive benefits.

2. Valuation of Assets

Plan assets are held in a Section 115 Trust, and are reported at market value. The actuarial value of plan assets is set equal to the market value.

3. Eligible Plan Participants

All active and retired employees who are participants in the Medical Plan as of the date this valuation was performed are included in the calculations in this report.

4. Actuarial Assumptions

These are the actuarial assumptions used for the valuation of the Health Benefit Plan.

a.	Valuation Date		January 1, 2015
b.	Interest Rate		5.00%
	The Interest Rate Assumption includes an Inflation Rate Assumption of 2.8%		
c.	Amortization Method		Level Dollar Amount, Open
	Amortization Period for Actuarial Accrued Liability		30 Years
	Amortization Factor		16.141
d.	Percent of Current Spouses Electing Future Coverage		50%
e.	Mortality Table		RP-2000 with Mortality Improvement Scale BB to 2030
f.	Termination Rates	<u>Age</u>	<u>Rate</u>
		20	18.79%
		25	14.92%
		30	14.26%
		35	13.63%
		40	11.47%
		45	9.65%
		50	4.23%
		55	0.00%
		Average	7.62%
g.	Retirement Rates	<u>Age</u>	<u>Rate</u>
		50 - 59	2.0%
		60	5.0%
		61	5.0%
		62	20.0%
		63	10.0%
		64	10.0%
		65	70.0%
		66	20.0%
		67	20.0%
		68	20.0%
		69	20.0%
		70	100.0%

h. Healthcare Cost Trend Rates

<u>Year</u>	<u>Medical/Rx Trend Rate</u>
2015	10.0%
2016	9.0%
2017	8.0%
2018	7.0%
2019	6.0%
2020-2023	5.9%
2024-2035	5.8%
2036-2037	5.6%
2038	5.5%
2039-2040	5.3%
2041-2043	5.2%
2044-2048	5.1%
2049-2056	5.0%
2057-2061	4.9%
2062-2063	4.8%
2064-2065	4.7%
2066	4.6%
2067-2068	4.5%
2069-2070	4.4%
2071-2134	4.3%

The above medical trend rates were developed using the Society of Actuaries (SOA) Long-Run Medical Cost Trend Model for years 2019 and beyond. The 2015 medical trend rate is based on average increases experienced by similar types of plans, as well as Ottawa County's experience. This 2015 medical trend was then graded down each year until 2019.

The SOA Long-Run Medical Cost Trend Model and its baseline projection are based on an econometric analysis of historical U.S. medical expenditures and the judgments of experts in the field. The following assumptions were used as input variables into the SOA Long-Run Medical Cost Trend Model:

Rate of Inflation	2.8%
Rate of Growth in Real Income/GDP per capita	1.5%
Income Multiplier for Health Spending	1.30
Extra Trend due to Technology and other factors	1.1%
Health Share of GDP Resistance Point	23.0%
Year for Limiting Cost Growth to GDP Growth	2060

i. Assumed Calendar Year 2015 Monthly Insured Medical Premium Rates

	<u>Under Age 65</u>	
	<u>Retiree</u>	<u>Spouse</u>
Active & Retirees Under Age 65: (Blended Rates)		
High Option Plan	\$ 637.62	\$ 797.01
Low Option Plan	\$ 581.85	\$ 727.30
HSA/HDHP	\$ 456.18	\$ 570.23
	<u>Age 65 and Over</u>	
	<u>Retiree</u>	<u>Spouse</u>
Age 65 and Over:		
Low Option Plan	\$ 626.21	\$ 626.21

VI. Summary of Plan Provisions for the Health Benefit Plan for County of Ottawa

A. Eligibility

Continuation of medical and dental coverage is offered to retirees who are at least age 60 with 10 years of service, or after age 50 with 25 years of service. The exception to this is the “Unclassified” Benefit Group. Employees retiring from this Benefit Group must be at least 55 years old with 25 years of service, or age 60 with 10 years of service.

B. Benefits Covered

Below is a brief summary of the major provisions of the medical plans available to the County’s retirees. Retirees under age 65 may elect any of the three available plans: High Option Plan, Low Option Plan, or the HSA/High Deductible Plan. Retirees age 65 and over may elect the Low Option Plan only.

High Option Plan		
Plan Provisions	In-Network	Out-of-Network
Deductible	Not Applicable	\$250/person \$500/family
Office Visits	100% after \$10 copay (\$0 copay for preventive care)	80% after deductible
Coinsurance	100%	80%/20%
Inpatient/Outpatient Hospital Professional Services	100%	80% after deductible
Coinsurance Maximum per Year	Not Applicable	\$1,500/person \$3,000/family
Out-of-Pocket Maximum (including deductible and coinsurance)	\$6,350/person \$12,700/family	\$12,700/person \$25,400/family
Prescription Drug Copay Retail Pharmacy Generic Preferred Brand Non-Preferred Brand Mail Order (filled for up to 90 days) Generic Preferred Brand Non-Preferred Brand	 \$10 per script \$20 per script \$40 per script \$20 per script \$40 per script \$80 per script	 Not Covered

Low Option Plan		
Plan Provisions	In-Network	Out-of-Network
Deductible	Not Applicable	\$1,000/person \$2,000/family
Office Visits	100% after \$25 copay (\$0 copay for preventive care)	70% after deductible
Coinsurance	90%/10%	70%/30%
Inpatient/Outpatient Hospital Professional Services	100%	70% after deductible
Coinsurance Maximum per Year	\$1,000/person \$2,000/family	\$2,500/person \$5,000/family
Out-of-Pocket Maximum (including deductible and coinsurance)	\$6,350/person \$12,700/family	\$12,700/person \$25,400/family
Prescription Drug Copay Retail Pharmacy Generic Preferred Brand Non-Preferred Brand Mail Order (filled for up to 90 days) Generic Preferred Brand Non-Preferred Brand	\$10 per script \$30 per script \$60 per script \$20 per script \$60 per script \$120 per script	Not Covered

HSA/High Deductible Health Plan		
Plan Provisions	In-Network	Out-of-Network
Deductible	\$1,250/person \$2,500/family	\$3,000/person \$6,000/family
Office Visits	100% after deductible (no ded. for preventive care)	80% after deductible
Coinsurance	100%, deductible applies	80%/20%
Inpatient/Outpatient Hospital Professional Services	100%, deductible applies	80% after deductible
Coinsurance Maximum per Year	Not Applicable	Not Applicable
Out-of-Pocket Maximum (including deductible and coinsurance)	\$2,000/person \$4,000/family	\$4,000/person \$8,000/family
Prescription Drug Copay Retail Pharmacy Generic Formulary Brand Non-Formulary Brand Mail Order (filled for up to 90 days) Generic Formulary Brand Non-Formulary Brand	\$10 per script \$40 per script Not Covered \$20 per script \$80 per script Not Covered	Not Covered

The retiree medical benefits are the same benefits provided to active employees, except the employee contribution schedules are different for retiree benefits.

C. Retiree Contributions

Retiree contributions for calendar year 2014 are as follows:

<u>Retirees Under Age 65 with Date of Hire Before 1/1/08</u>	<u>Employee</u>	<u>Spouse</u>
High Option Plan	\$579.65	\$ 724.56
Low Option Plan	\$528.95	\$ 661.19
HSA/HDHP	\$414.71	\$ 518.39
<u>Retirees Under Age 65 with Date of Hire On or After 1/1/08*</u>	<u>Employee</u>	<u>Spouse</u>
High Option Plan	\$ 825.94	\$ 825.94
Low Option Plan	\$ 753.70	\$ 753.70
HSA/HDHP	\$ 694.03	\$ 694.03

* Currently there are no retirees with date of hire on or after 1/1/08.

<u>Retirees Age 65 or Older</u>	<u>Employee</u>	<u>Spouse</u>
Low Option Plan	\$ 569.28	\$ 569.28

Note that all of the above rates include PPACA fees/taxes Michigan claims tax.

In addition, retirees under age 65 in certain Benefit Groups receive a monthly credit that is used to reduce the amount of their contribution for medical coverage. The Benefit Groups and the amount of the monthly credits are shown below:

<u>Benefit Group Name:</u>	<u>Eligibility</u>	<u>Credit Amt. Per Year Of Service</u>	<u>Maximum Monthly Credit</u>
Unclassified, Hired Before 1/1/2008	55 & 25 yrs. of service, or 60 & 10 yrs. of service	\$8.00	\$200
POAM 312 Eligible	50 & 25 yrs. of service, or 60 & 10 yrs. of service	\$10.00	\$250
POAM Non-312 Eligible, Hired Before 12/1/1996	50 & 25 yrs. of service, or 60 & 10 yrs. of service	\$4.00	\$100
POLC 312 Eligible	50 & 25 yrs. of service, or 60 & 10 yrs. of service	\$10.00	\$250
POLC Non-312 Eligible, Hired Before 1/1/2001	50 & 25 yrs. of service, or 60 & 10 yrs. of service	\$8.00	\$200

VII. Employee/Retiree Census

As of January 1, 2014	Number	Average Age
Active Employees	805	45.2
Retirees Under Age 65	56	60.5
Retirees Age 65 and Over	<u>16</u>	67.9
Total	877	

As of January 1, 2015	Number	Average Age
Active Employees	807	45.1
Retirees Under Age 65	58	60.6
Retirees Age 65 and Over	<u>9</u>	67.1
Total	874	

VIII. Glossary

A. Actuarial Accrued Liability

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Total Projected Benefits, which is allocated to all periods prior to the valuation date.

B. Annual OPEB cost

Annual OPEB cost is an accrual basis measure of the periodic cost to a sole or agent employer of a defined benefit plan. It is derived from the annual required contribution (ARC). For an employer with no net OPEB obligation or net OPEB asset at the beginning of the year, annual OPEB cost is equal to the ARC. For an employer with a beginning net OPEB obligation or asset, annual OPEB is equal to the ARC with two required adjustments. The ARC is adjusted for (a) interest on the beginning net OPEB obligation (or asset) and (b) for an approximation of the amount included in the ARC for amortization of past contribution deficiencies or excess contributions.

C. Annual Required Contribution (ARC)

The ARC represents the level of employer contribution effort that would be required on a sustained, ongoing basis to (a) fund the Normal Cost each year and (b) amortize the total unfunded actuarial liabilities attributed to past service over a period not to exceed 30 years. The ARC is used as a foundation on which the measurement of the employer's annual OPEB cost is based.

D. Defined Benefit OPEB Plan

An "Other Post-Employment Benefits" Plan having terms that specify the amount of benefits to be provided at or after separation from employment. The benefits may be specified in dollars (for example, a flat dollar payment or an amount based on one or more factors such as age, years of service, and compensation), or as a type or level of coverage (for example, prescription drugs or a percentage of healthcare insurance premiums).

E. Net OPEB Obligation

The cumulative difference since the effective date of this Statement between annual OPEB cost and the employer's contributions to the plan, including the OPEB liability (asset) at transition, if any, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to OPEB-related debt.

F. Normal Cost

That portion of the Actuarial Present Value of Total Projected Benefits, which is allocated to a valuation year by the Actuarial Cost Method.

G. Amortization Period (closed and open basis)

A closed amortization period (closed basis) is a specific number of years that is counted from one date and, therefore, declines to zero with the passage of time. In contrast, an open amortization period (open basis) is one that begins again or is recalculated at each actuarial valuation date. Within a maximum number of years specified by law or policy, the period may increase, decrease, or remain the same.

H. Present Value Total Projected Benefits

Total projected benefits include all benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.

I. Projected Unit Credit Actuarial Cost Method

A method under which the projected benefits of each individual included in an Actuarial Valuation are allocated by a consistent formula to valuation years. The Present Value of Total Projected Benefits allocated to the valuation year is called the Normal Cost. The Present Value of Total Projected Benefits allocated to all periods prior to the valuation year is called the Actuarial Accrued Liability.



Appendix C: Evidence that the Pension Obligation Bonds, Along with Other Legally Available Funds, will Eliminate the Unfunded Pension Liability of the Defined Benefit Plan

GASB 25 and GASB 27 Information

The following information has been prepared to provide the information necessary to comply with GASB Statements Number 25 and 27. Statement 25 is effective for fiscal years beginning after June 15, 1996 and Statement 27 is effective for fiscal years beginning after June 15, 1997.

All entries and the annual employer contribution amount were based on the actuarial methods and assumptions used in the December 31, 2013 actuarial valuation. The entry age normal actuarial method was used to determine the disclosure entries.

GASB 25 Information (as of 12/31/2013)

Actuarial Accrued Liability	
Retirees and beneficiaries currently receiving benefits	\$ 102,057,822
Terminated employees (vested former members) not yet receiving benefits	10,128,973
Non-Vested terminated employees (pending refunds of accumulated member contributions)	681,184
Current employees -	
Accumulated employee contributions including allocated investment income	12,729,223
Employer financed	<u>98,599,894</u>
Total Actuarial Accrued Liability	\$ 224,197,096
Net Assets Available for Benefits at Actuarial Value	\$ <u>175,891,057</u>
(Market Value is 165,647,421)	
Unfunded (Overfunded) Actuarial Accrued Liability	\$ 48,306,039

GASB 27 Information (as of 12/31/2013)

Fiscal Year Beginning	January 1, 2015
Annual Required Contribution (ARC)	\$ 7,693,188 ¹

¹ Based on valuation payroll (based on projected fiscal year payroll for divisions that will have no new hires). For divisions that are open to new hires the actual required contribution will be based on current monthly payroll (during the fiscal year beginning January 1, 2015) times the computed employer contribution rate(s) shown in Table 1. The ARC shown here is the sum of the ARC's calculated separately for each division.

SOURCES AND USES OF FUNDS

County of Ottawa
State of Michigan
Limited Tax General Obligation Pension Obligation Bonds, Series 2014

Sources:

<hr/>	
Bond Proceeds:	
Par Amount	29,295,000.00
	<hr/>
	29,295,000.00
	<hr/> <hr/>

Uses:

<hr/>	
Project Fund Deposits:	
12/31/13 UAL Balance	29,000,000.00
Delivery Date Expenses:	
Cost of Issuance	175,000.00
Underwriter's Discount	<u>117,180.00</u>
	292,180.00
Other Uses of Funds:	
Additional Proceeds	2,820.00
	<hr/>
	29,295,000.00
	<hr/> <hr/>

Notes:

All costs of issuance, including underwriter's discount, are estimates only.

Assumes taxable interest rates as of July 22, 2014 plus 0.50% cushion.

Actual interest rates will vary based upon market conditions at the time of the bond sale.



County of Ottawa

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The County of Ottawa recognizes that its issuance of Pension Obligation Bonds will only fund a portion of its unfunded accrued actuarial liability. The County will continue to make payments to the Municipal Employees Retirement System of Michigan for its remaining liability, including the liability for Division 13.



Appendix D: Debt Service Amortization Schedule

BOND DEBT SERVICE

County of Ottawa
State of Michigan
Limited Tax General Obligation Pension Obligation Bonds, Series 2014
Assumes 14 Year Amortization

Period Ending	Principal	Coupon	Interest	Debt Service
12/31/2015	250,000	0.850%	929,400.46	1,179,400.46
12/31/2016	1,250,000	1.310%	1,066,834.00	2,316,834.00
12/31/2017	1,285,000	1.850%	1,050,459.00	2,335,459.00
12/31/2018	1,575,000	2.510%	1,026,686.50	2,601,686.50
12/31/2019	2,000,000	2.910%	987,154.00	2,987,154.00
12/31/2020	2,200,000	3.390%	928,954.00	3,128,954.00
12/31/2021	2,700,000	3.690%	854,374.00	3,554,374.00
12/31/2022	3,300,000	3.790%	754,744.00	4,054,744.00
12/31/2023	2,780,000	3.990%	629,674.00	3,409,674.00
12/31/2024	2,425,000	4.140%	518,752.00	2,943,752.00
12/31/2025	2,395,000	4.240%	418,357.00	2,813,357.00
12/31/2026	2,370,000	4.340%	316,809.00	2,686,809.00
12/31/2027	2,380,000	4.440%	213,951.00	2,593,951.00
12/31/2028	2,385,000	4.540%	108,279.00	2,493,279.00
	29,295,000		9,804,427.96	39,099,427.96



Appendix E: Evidence of Rating



Rating Action: Moody's assigns Aaa rating to Ottawa County's (MI) \$2.3 million Wastewater Treatment System Bonds, (Grand Haven-Spring Lake Sewer Authority 2013 Improvements, GOLT)

Global Credit Research - 07 Mar 2013

Aaa rating applies to \$133.4 million of post-sale GOLT debt

New York, March 07, 2013 --

Moody's Rating

Issue: Ottawa County Wastewater Treatment System Bonds (Grand Haven-Spring Lake Sewer Authority 2013 Improvements) (GOLT); Underlying Rating: Aaa; Sale Amount: \$2,320,000; Expected Sale Date: 3/18/2013; Rating Description: General Obligation Limited Tax

Opinion

Moody's Investors Service has assigned a Aaa rating to Ottawa County's (MI) \$2.3M Ottawa County Wastewater Treatment System Bonds, (Grand Haven-Spring Lake Sewer Authority 2013 Improvements), (General Obligation Limited Tax). Concurrently, Moody's has affirmed the Aaa rating on the county's outstanding general obligation limited tax debt. Post-sale, the county will have \$133.4 million of outstanding general obligation limited tax debt outstanding.

SUMMARY RATINGS RATIONALE

The bonds are ultimately secured by the county's general obligation limited tax pledge, which forms the basis of this rating. However, the county expects that debt service on the bonds will be payable from contract payments from the Townships of Grand Haven and Spring Lake. Proceeds of the bonds will finance Grand Haven and Spring Lake Township's 2013 wastewater system improvements. Assignment and affirmation of the Aaa rating reflects the county's substantial, relatively diverse tax base, recent declines in valuations, well managed financial operations that are supported by solid reserves and revenue raising flexibility, and debt levels that are expected to remain affordable.

STRENGTHS

- Well managed financial operations with revenue raising flexibility and significant alternate liquidity
- Relatively diverse tax base with stabilizing employment levels
- Low direct debt burden; history of timely contractual payments by underlying entities

WEAKNESSES

- Four consecutive years of declining taxable valuations through 2012
- Size of full valuation lower than comparably rated counties

WHAT COULD CHANGE THE RATING - DOWN

- Declines in the county's valuation or weakening of the county's socio-economic profile
- Deterioration in General Fund reserves or liquidity;
- Reduction in current levels of financial flexibility

PRINCIPAL METHODOLOGY

The principal methodology used in this rating was General Obligation Bonds Issued by U.S. Local Governments

published in October 2009. Please see the Credit Policy page on www.moody's.com for a copy of this methodology.

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