City of Monroe
Monroe, Michigan
Incorporated in 1837

City of Monroe

County of Monroe
State of Michigan

Comprehensive Financial Plan For Pension and Other Post-Employment Benefits

March 21, 2016

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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, as amended ("Act 329"). In accordance with Act 329, the City of Monroe (the "City") has chosen to issue bonds to finance a portion of the City's unfunded post-employment health care liability, as further described in this Plan.

The City qualifies to issue such bonds as the City meets the minimum bond rating requirement of Act 329, and has the legal capacity to issue bonds in the required amount. The City's outstanding limited tax general obligation bond rating of "AA-" from Standard & Poor's Rating Services was affirmed on December 4, 2014 in association with City's issuance of General Obligation Refunding Bonds. A copy of the rating rationale is included in Appendix E herein. It should be noted that the City will have the rating reassigned as a part of the bond issuance process for the Limited Tax General Obligation Other Post-Employment Benefit Bonds (OPEBs).

As noted above, the City has the legal debt capacity to issue the OPEBs, as computed below.

LEGAL DEBT MARGIN COMPUTATION - As of March 11, 2016		
2015 State Equalized Value (SEV)		$1,023,485,230
Plus: Equivalent IFT Value		28,971,440
Total 2015 Value		$1,052,456,670
Legal Debt Limit - 10% of SEV		$105,245,667
Total Bonded Debt Outstanding	$48,491,368	
Less: 2011 Sewer Limited Tax	(3,537,776)	
Less: 2012 Sewer Limited Tax	(7,650,054)	
Bonded Debt Applicable to Debt Margin		37,303,538
Legal Debt Margin Available		**$67,942,129**

The City has authorized an amount not to exceed $39,000,000 for the issuance of bonds to fund its post-employment health care liability. If bonds were issued at the full authorized amount, it would use approximately 57% of the City's current legal debt margin, but would still leave approximately $28.9 million of remaining capacity. It should be noted that approximately 74% of the City's existing debt is paid from water and sewer rates and charges. Further information regarding the City's capacity to issue the OPEBs is shown in the following table. This table is based on the estimated actual amount that the City anticipates issuing for the debt, bond proceeds from which will be used to fund up to 90% of the Unfunded Accrued Actuarial Liability.

Debt Capacity Projection								
June 30th Fiscal Year	December 31st Tax Year	State Equalized Value*	Legal Debt Limit	Total Debt Outstanding	Debt Exempt from Capacity	Projected Debt Capacity	Estimated OPEB Bond Amount Outstanding	Adjusted Debt Capacity
2015	**2014**	$1,052,456,670	$105,245,667	$48,491,368	$11,187,830	$67,942,129	$35,505,000	$32,437,129
2016	**2015**	1,026,660,230	102,666,023	46,026,662	10,710,416	67,349,777	34,190,000	33,159,777
2017	**2016**	1,036,926,832	103,692,683	43,500,247	10,219,741	70,412,177	32,855,000	37,557,177
2018	**2017**	1,047,296,100	104,729,610	40,896,454	9,718,022	73,551,178	31,495,000	42,056,178
2019	**2018**	1,057,769,061	105,776,906	38,220,258	9,205,236	76,761,884	30,110,000	46,651,884
2020	**2019**	1,068,346,752	106,834,675	35,461,578	8,679,189	80,052,286	28,690,000	51,362,286
2021	**2020**	1,079,030,220	107,903,022	32,618,300	8,139,880	83,424,602	27,235,000	56,189,602
2022	**2021**	1,089,820,522	108,982,052	29,685,425	7,587,310	86,883,937	25,735,000	61,148,937
2023	**2022**	1,100,718,727	110,071,873	26,663,646	7,019,283	90,427,510	24,190,000	66,237,510
2024	**2023**	1,111,725,914	111,172,591	23,552,100	6,437,995	94,058,486	22,590,000	71,468,486
2025	**2024**	1,122,843,173	112,284,317	20,774,345	5,841,227	97,351,199	20,935,000	76,416,199
2026	**2025**	1,134,071,605	113,407,161	17,901,993	5,231,198	100,736,366	19,215,000	81,521,366
2027	**2026**	1,145,412,321	114,541,232	14,918,954	4,603,495	104,225,773	17,430,000	86,795,773
2028	**2027**	1,156,866,444	115,686,644	11,836,817	3,960,312	107,810,139	15,575,000	92,235,139
2029	**2028**	1,168,435,108	116,843,511	8,883,471	3,301,650	111,261,690	13,640,000	97,621,690
2030	**2029**	1,180,119,459	118,011,946	5,848,876	2,627,532	114,790,602	11,620,000	103,170,602
2031	**2030**	1,191,920,654	119,192,065	3,671,486	1,933,522	117,454,101	9,505,000	107,949,101
2032	**2031**	1,203,839,861	120,383,986	2,144,050	1,224,031	119,463,967	7,295,000	112,168,967
2033	**2032**	1,215,878,260	121,587,826	763,852	499,061	121,323,035	4,980,000	116,343,035
2034	**2033**	1,228,037,043	122,803,704	--	--	122,803,704	2,550,000	120,253,704
2035	**2034**	1,240,317,413	124,031,741	--	--	124,031,741	--	124,031,741
2036	**2035**	1,252,720,587	125,272,059	--	--	125,272,059	--	125,272,059
2037	**2036**	1,265,247,793	126,524,779	--	--	126,524,779	--	126,524,779
2038	**2037**	1,277,900,271	127,790,027	--	--	127,790,027	--	127,790,027
2039	**2038**	1,290,679,274	129,067,927	--	--	129,067,927	--	129,067,927
2040	**2039**	1,303,586,067	130,358,607	--	--	130,358,607	--	130,358,607

**Assumes a 1.00% annual increase in State Equalized Value.*

Pension Plans

The City administers the City of Monroe Employees Retirement System - a single employer defined benefit pension plan that provides pensions for substantially all full-time employees of the City (the "Pension Plan"). As of June 30, 2015, Pension Plan membership consisted of 274 retirees and beneficiaries currently receiving benefits, 20 vested former employees, and 148 active employees.

Over the past ten years, the City's annual required contribution for its defined benefit pension plan increased from $479,028 in 2006 to $1,622,379 in 2015, as shown below.

Pension Contributions			
Year Ended	Annual Required Contribution	Annual Contribution	Percentage of ARC Contributed
6/30/2006	$479,028	$479,028	100.00%
6/30/2007	487,016	487,016	100.00%
6/30/2008	1,444,880	1,444,880	100.00%
6/30/2009	1,439,269	1,439,269	100.00%
6/30/2010	1,483,539	1,483,539	100.00%
6/30/2011	1,191,553	1,191,553	100.00%
6/30/2012	1,274,568	1,274,568	100.00%
6/30/2013	1,351,441	1,351,441	100.00%
6/30/2014	1,488,154	1,488,154	100.00%
6/30/2015	1,622,379	1,622,379	100.00%

As of December 31, 2014, the most recent actuarial valuation date, the Pension plan was 99.1% funded. As of December 31, 2013 and December 31, 2012, the defined benefit plan funded percentage was 102.7% and 99.5%, respectively. As of December 31, 2014, the actuarial accrued liability for benefits for the Pension Plan was $137,594,718 and the actuarial value of assets was $136,342,647, resulting in an unfunded liability of $1,252,071 for the Pension Plan. The covered payroll (annual payroll for active employees covered by the Pension Plan) was $9,509,101 and the ratio for the unfunded actuarial accrued liability to the covered payroll was 13.2%. Further detail on the City's historical pension funding is provided below.

Historical Pension Funding						
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL	Funded Ratio	Covered Payroll	UAAL as % of Covered Payroll
12/31/2009	$131,184,000	$120,828,000	(10,356,000)	108.6%	$11,062,000	-93.6%
12/31/2010	132,119,000	124,415,000	(7,704,000)	106.2%	10,758,000	-71.6%
12/31/2011	131,234,000	128,991,000	(2,243,000)	101.7%	9,637,000	-23.3%
12/31/2012	130,063,000	130,741,000	678,000	99.5%	9,543,000	7.1%
12/31/2013	137,734,998	134,155,773	(3,579,225)	102.7%	9,829,890	-36.4%
12/31/2014	136,342,647	137,594,718	1,252,071	99.1%	9,509,101	13.2%

The main actuarial assumptions used in determining the actuarial valuation of the City's Pension Plan as of December 31, 2014 included:

- Entry Age Actuarial Cost Method
- An 7.50% investment rate of return
- Projected salary increases of 3.5% per year
- 2% or 3% cost of living adjustments depending on division
- A 7 year smoothing of investment returns

Post-Employment Health Benefit Plans

The City provides retiree healthcare benefits to eligible employees hired prior to June 30, 2008. Coverage is also provided to their spouses, and in the case of public safety employees, dependents as well. The Retiree Health Care Plan (the "OPEB Plan") is a single-employer defined benefit plan administered by the City. The benefits are provided under collective bargaining agreements and other contracts, and administrative costs are paid by the plan through employer and employee contributions. Retiree healthcare costs are recognized when contributions are made to the Post-Retirement Healthcare Trust. The City has no obligation to make contributions in advance of when claims and other administrative costs are incurred by the OPEB Plan.

As of December 31, 2014, the date of the most recent actuarial valuation, the OPEB Plan had 275 retirees and survivors and 121 active plan members. The OPEB Plan had an accrued liability of $57,762,426. The actuarial value of the OPEB Plan assets was $18,767,341 resulting in an unfunded actuarial accrued liability of $38,995,085. The OPEB Plan was 32.5% funded. The covered payroll (annual payroll for active employees covered by the plan) was $8,748,796 and the ratio for the unfunded actuarial accrued liability to the covered payroll was 445.7%

The main actuarial assumptions used in determining the actuarial valuation as of December 31, 2014 included:

- The individual entry-age actuarial cost method
- A level dollar, closed amortization method
- An amortization period of 24 years
- A 7% investment rate of return
- A 3.5% general inflation rate
- A medical inflation rate declining from 8.25% in 2015 to 3.5% in 2023 and thereafter

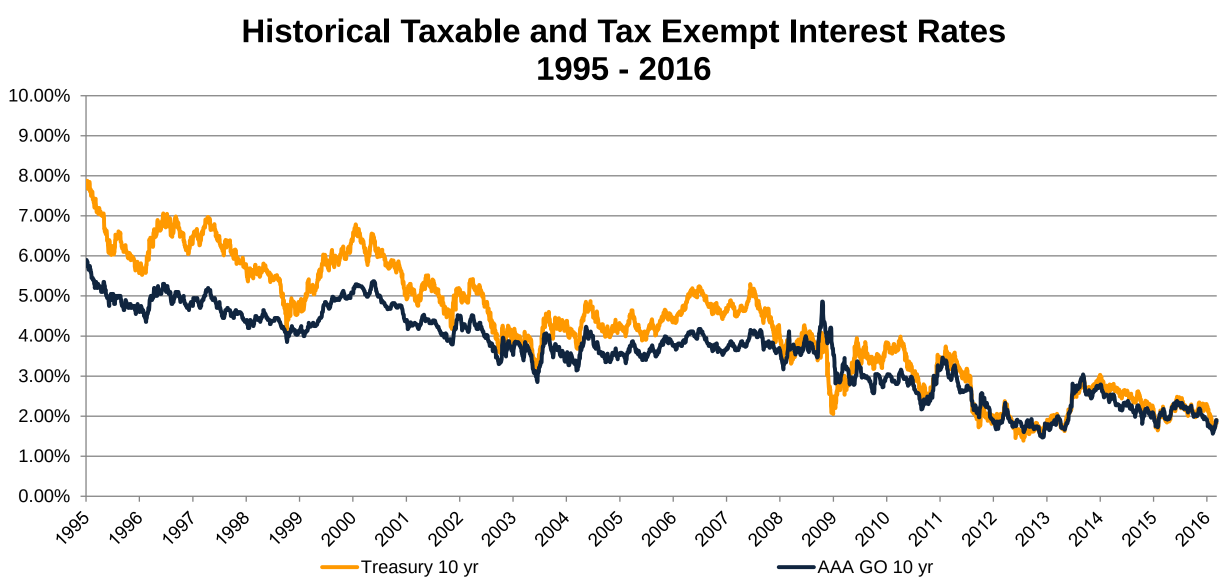
The following are tables showing the City's contribution and funding progress of its post-employment health benefits plan over the past five years.

OPEB Contributions				
Year Ended June 30	Annual OPEB Cost	Annual Contribution	Percentage of OPEB Cost Contributed	Net Asset (Obligation)
2010	$5,006,672	$2,868,823	57.3%	$4,042,799
2011	4,651,746	3,232,963	69.5%	5,459,701
2012	4,755,247	3,499,862	73.6%	6,713,022
2013	3,788,047	4,193,368	110.7%	6,304,821
2014	3,579,680	4,087,995	114.2%	5,797,942

Historical OPEB Funding						
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL	Funded Ratio	Covered Payroll	UAAL as % of Covered Payroll
12/31/2006	$8,668,479	$62,970,849	$54,302,370	13.8%	$13,007,162	417.5%
12/31/2008	8,148,464	51,985,601	43,837,137	15.7%	11,289,204	388.3%
12/31/2010	12,465,300	51,703,768	39,238,468	24.1%	10,758,097	364.7%
12/31/2012	14,793,096	52,084,559	37,291,463	28.4%	9,513,707	392.0%
12/31/2014	18,767,341	57,762,426	38,995,085	32.5%	8,748,796	445.7%

Bond Issuance Considerations

The City intends to issue bonds as authorized by Act 329 to fund the unfunded post-employment health care liability for its OPEB Plan. Given the near historic low interest rates, as shown on the graph below, the City anticipates receiving favorable interest rates for the other post-employment benefit bonds it intends to issue.



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

The annual required contribution that the City makes for its OPEB Plan is comprised of two parts, the unfunded accrued liability and the normal cost component. The unfunded accrued liability is the portion of the other post-employment healthcare 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 other post-employment benefit bonds.

The City anticipates issuing bonds in the approximate amount of $36,000,000, as the City does not intend to fully fund its Unfunded Accrued Actuarial Liability with bond proceeds. The City intends to fund up to 90% of its $38,995,085 UAAL as of the December 31, 2014 actuarial report for its OPEB Plan, or $35,095,576.50 with bond proceeds. It is the City's intent to continue to fund the remaining UAAL on an annual basis. Below is a breakdown of the sources and uses of funds for the other post-employment benefit bonds.

Sources and Uses	
Sources	
Bond Par Amount	$35,505,000
Total Sources	$35,505,000
Uses	
Other Post Employment Benefit Fund Deposit	$35,095,577
Costs of Issuance (Including Underwriter's Discount)	$409,424
Total Uses	$35,505,000

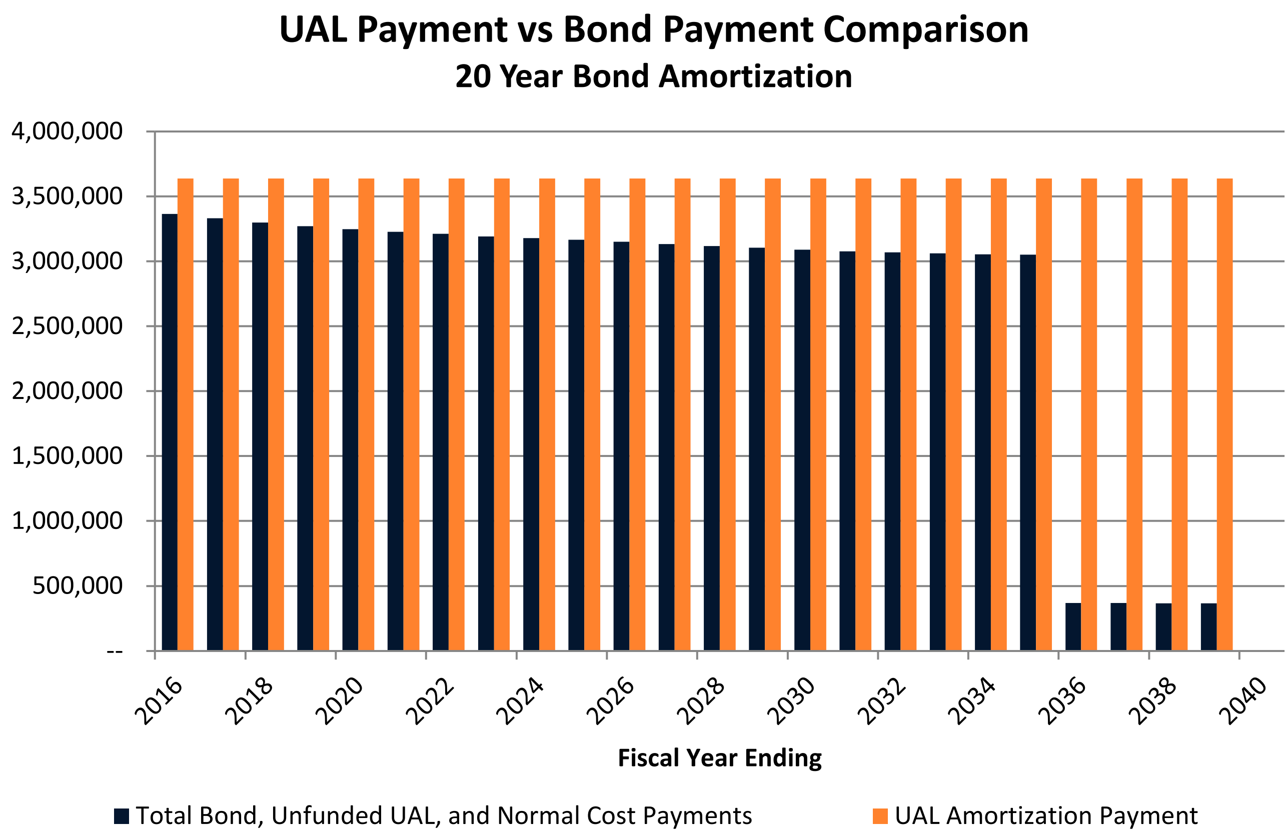
The financial analysis on the following page assume a 7% investment return on the actuarial value of assets. Provided is a comparison of the annual unfunded accrued actuarial liability amortization payment and normal cost for the unfunded accrued liability, provided by Gabriel Roeder Smith & Company Consultants & Actuaries, to the estimated bond payments and normal cost. The City intends to issue bonds with a 20 year repayment schedule. The final determination on the term of the financing will be based on interest rates and resulting bond payments at the time of sale.

Baseline				OPEB Bonds					
Fiscal Year Beginning July 1	UAL Amortization Payment	Normal Cost	Total UAL Payments	Estimated Bond Payments *	UAL Amortization Payment Remaining After Funding **	Normal Cost	Total Bond, Unfunded UAL, and Normal Cost Payments	Difference	Present Value @ 4.35%***
2016	3,637,245	326,485	3,963,730	2,675,412	363,725	326,485	3,365,621	598,109	593,830
2017	3,637,245	289,772	3,927,017	2,677,835	363,725	289,772	3,331,332	595,686	566,485
2018	3,637,245	257,147	3,894,392	2,678,097	363,725	257,147	3,298,969	595,424	542,360
2019	3,637,245	231,568	3,868,813	2,674,371	363,725	231,568	3,269,664	599,150	522,741
2020	3,637,245	208,944	3,846,189	2,674,595	363,725	208,944	3,247,264	598,926	500,512
2021	3,637,245	187,291	3,824,536	2,676,815	363,725	187,291	3,227,830	596,706	477,630
2022	3,637,245	168,228	3,805,473	2,678,747	363,725	168,228	3,210,699	594,774	456,009
2023	3,637,245	152,821	3,790,066	2,674,547	363,725	152,821	3,191,092	598,974	439,865
2024	3,637,245	138,003	3,775,248	2,676,553	363,725	138,003	3,178,281	596,968	419,906
2025	3,637,245	122,781	3,760,026	2,679,273	363,725	122,781	3,165,779	594,248	400,367
2026	3,637,245	108,244	3,745,489	2,677,355	363,725	108,244	3,149,324	596,166	384,723
2027	3,637,245	92,960	3,730,205	2,675,619	363,725	92,960	3,132,304	597,902	369,573
2028	3,637,245	77,102	3,714,347	2,677,791	363,725	77,102	3,118,618	595,730	352,704
2029	3,637,245	62,170	3,699,415	2,678,183	363,725	62,170	3,104,078	595,338	337,609
2030	3,637,245	48,757	3,686,002	2,677,241	363,725	48,757	3,089,723	596,280	323,885
2031	3,637,245	37,596	3,674,841	2,675,104	363,725	37,596	3,076,424	598,417	311,340
2032	3,637,245	28,165	3,665,410	2,677,052	363,725	28,165	3,068,942	596,468	297,240
2033	3,637,245	20,085	3,657,330	2,677,460	363,725	20,085	3,061,269	596,061	284,512
2034	3,637,245	14,388	3,651,633	2,675,914	363,725	14,388	3,054,027	597,606	273,222
2035	3,637,245	10,094	3,647,339	2,676,990	363,725	10,094	3,050,809	596,531	261,230
2036	3,637,245	6,361	3,643,606	--	363,725	6,361	370,086	3,273,521	1,373,078
2037	3,637,245	4,581	3,641,826	--	363,725	4,581	368,306	3,273,521	1,315,179
2038	3,637,245	3,523	3,640,768	--	363,725	3,523	367,248	3,273,521	1,259,723
2039	3,637,245	2,152	3,639,397	--	363,725	2,152	365,877	3,273,521	1,206,604
	$87,293,880	**$2,599,218**	**$89,893,098**	**$53,534,952**	**$8,729,388**	**$2,599,218**	**$64,863,558**	**$25,029,540**	**$13,270,324**

* Estimate only based on estimated true interest cost of 4.35%

** Assumes pro rata share of UAL amortization payment, not verified by an actuary

*** Estimated bond true interest cost



Based on the preceding analysis, the City has determined that it is financially beneficial to pursue the issuance of other post-employment benefit bonds to fund up to 90% of its Unfunded Accrued Actuarial Liability in the approximate amount of $36,000,000, including estimated costs of issuance. If costs of issuance exceed estimates, the issuance may exceed $36,000,000.

Description of Action Required to Meet Obligations

The City allocates retirement healthcare costs to the various funds that receive retirement healthcare benefits. Similarly, the annual debt service for the Other Post-Employment Benefit Bonds will be allocated proportionately to the funds receiving benefits. The City has seven (7) funds which are allocated retirement healthcare costs and will be allocated proportionate amounts of annual debt service for the Other Post-Employment Benefit Bonds. Revenue sources for the funds that will be allocated portions of the annual bond payments include annual operating levies, state shared revenues, parking fees and fines, inspection fees, utility service fees, and other sources of annual revenue.

The City Manager completes an annual budget and presents it to the Monroe City Council 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 City Council annually. The other post-employment benefit bonds will carry the City's limited tax general obligation full faith and credit pledge; therefore, the annual debt service will be legally required to be part of the City's total budget.

Since 2013 the City has levied 0.5634 mills of its charter operational tax rate limit to fund a portion of the UAL on the OPEB plan.

Plan to Mitigate the Increase in Health Care Costs

The City has taken several steps to address the increase in future health care costs as well as the overall wellness of City employees including:

- Closing the plan to new hires as of July 1, 2008 to limit the additional cost to the plan of adding new participants.
- Implementation of Public Act 152 of 2012 hard caps to limit the employer cost of benefits.
- For employees retiring after June 30, 2008, implemented mirroring which provides retirees with the same health benefit as active employees.
- For employees retiring after June 30, 2008, the City only covers 4% per year of service of the employer cost portion of the benefit.
- Requiring employee's spouses to take coverage from their employer, if coverage is available.
- Implemented employee driven health coverage through a high deductible health plan with an attached health savings account.
- Requiring employee contributions to the plan in the amount of 3% of the annual average base wage of all full-time employees.
- Requiring retirees to switch to Medicare for coverage when they become eligible.
- Providing flu shots to employees and retirees at the City's cost.

In addition to these reductions, the City has taken step to reduce its pension benefit costs by instituting a two tier system of pension benefits for new public safety employees. The benefits provide for a reduced pension multiplier and pension benefits are calculated based on base wages only. All employees have had the amount of overtime and vacation payout benefits limited that can be counted towards final average compensation (FAC).

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 City**. The City has a defined benefit plan. Information regarding the defined benefit plan was obtained by the actuarial firm Gabriel Roeder Smith & Company. Information with respect to the pension plan is contained within Appendix A.

- **An analysis of the current and future obligations with respect to the postemployment health care plan of the City.** The City has a defined benefit post-employment healthcare plan. Information regarding the defined benefit plan was obtained by the actuarial firm, Gabriel Roeder Smith & Company Consultant & Actuaries. 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 post-employment health care liability.** The unfunded post-employment health care liability for the OPEB Plan provided by the actuary is $38,995,085 as of December 31, 2014. The Sources and Uses of Funds provided by the City's financial advisor, Public Financial Management ("PFM"), demonstrate that the bond proceeds will cover the liability of $35,095,576.50, or 90%. The City will continue to make annual payments to the OPEB Plan for the remaining liability. The complete bond schedules prepared by PFM, along with the Sources and Uses, are provided under Appendix C.

- **The debt service amortization schedule**. The preliminary debt service amortization schedules for the other post-employment benefit bonds provided by PFM can be found under Appendix D.

- **A description of actions required to satisfy the debt service amortization schedule.** The other post-employment benefit bonds are a limited tax general obligation of the City, paid from various City funds. A description of actions the City takes to allocate costs to its various funds, create the annual budget and obtain budget approval from the City Council is contained on pages 8 and 9 herein.

- **Certification that the Comprehensive Financial Plan is complete and accurate.** A certification from the Finance Director attesting that the Plan is complete with information provided by reliable sources is provided on page 11.

- Evidence that the City has taken steps to address the increase in future health care costs on page 9.

Act 329 also requires the Plan be prepared and made publically available. Accordingly, the City has prepared this Plan, which has been approved by the City Council on March 21, 2016, and has been made available for public review.

Certification

The City has prepared this Comprehensive Financial Plan for Pension and Other Post-Employment Benefits as required under Act 329 for the issuance of Other Post-Employment Benefit Bonds. In preparing this plan, information has been obtained from the plan's actuaries, Gabriel Roeder Smith & Company Consultant & Actuaries, and Public Financial Managment. The City 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: Edward Sell, Finance Director

Dated: March 21, 2016

City of Monroe
Monroe, Michigan
Incorporated in 1837

Appendix A: Analysis of Current and Future Retirement Program Obligations of the City of Monroe

Gabriel Roeder Smith & Company
Consultants & Actuaries

CITY OF MONROE EMPLOYEES RETIREMENT SYSTEM

SEVENTIETH ANNUAL ACTUARIAL VALUATION

DECEMBER 31, 2014

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June 4, 2015

The Board of Trustees
City of Monroe Employees Retirement System
Monroe, Michigan

Dear Board Members:

Submitted in this report are the results of the Seventieth Annual Actuarial Valuation of the City of Monroe Employees Retirement System. The date of the valuation was December 31, 2014.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board.

The purpose of the valuation is to measure the System's funding progress and to determine the employer contribution rate for the fiscal year beginning July 1, 2016.

Please see the following page for additional disclosures required by the Actuarial Standards of Practice. To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the applicable state statutes.

Mark Buis and James D. Anderson are Members of the American Academy of Actuaries (MAAA) who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. It is our opinion that the actuarial assumptions used for the valuation are reasonable.

Respectfully submitted,

Mark Buis

Mark Buis, FSA, EA, MAAA

James D. Anderson

James D. Anderson, FSA, EA, MAAA

MB/JDA:sc

Additional Disclosures Required by Actuarial Standards of Practice

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

The funded ratio reported in this valuation is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

The funded ratio is not appropriate for assessing the need for or amount of future contributions.

The funded ratio would be different if based on the market value of assets.

The contribution allocation procedure including the amortization period and method is set by the Board. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

This report should not be relied on for any purpose other than the purpose described in the primary communication.

The signing actuaries are independent of the plan sponsor.

The valuation was based upon information, furnished by the City, concerning Retirement System benefits, financial transactions, and individual active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided. This information is summarized in Section B.

Valuation results, comments and conclusion are contained in Section A.

This report relies on the actuarial cost methods and assumptions which are summarized in Section C.

SECTION A

VALUATION RESULTS, COMMENTS, RECOMMENDATIONS AND CONCLUSION

FUNDING OBJECTIVE

The funding objective of the Retirement System is to establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level from year to year and will not result in intergenerational cost transfers. This objective is stated in the Retirement System Ordinance and meets the requirements of the Constitution of the State of Michigan.

CONTRIBUTION RATES

The Retirement System is supported by member contributions, City contributions and investment return from Retirement System assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

(1) cover the actuarial costs allocated to the current year by the actuarial cost methods described in Section C (the normal cost); and

(2) finance over a period of future years the actuarial costs not covered by present assets and anticipated future normal costs (unfunded actuarial accrued liability).

Computed Contributions for the fiscal year beginning July 1, 2016 are shown on page A-2.

CITY'S COMPUTED CONTRIBUTIONS FOR THE FISCAL YEAR BEGINNING JULY 1, 2016

	City's Contributions Expressed as Percents of Active Member Payroll - Weighted Averages				
Contributions for	**General Members**	**Police Members**	**Fire Members**	**Hybrid Members**	**Total**
Total Normal Cost	14.56 %	19.17 %	20.77 %	9.26 %	14.77 %
Member Contributions	(4.17)%	(5.42)%	(5.49)%	(3.67)%	(4.49)%
Employer Normal Cost	10.39 %	13.75 %	15.28 %	5.59 %	10.28 %
Amortization Amounts*	(24.87)%	17.82 %	76.93 %	(1.53)%	8.11 %
Employer Contribution Rate	0.00 %	31.57 %	92.21 %	4.06 %	18.39 %
Estimated Dollar Contribution	$0	$926,616	$788,227	$130,956	$1,845,799

* *The Unfunded Accrued Liability is amortized over a period of 25 years.*

These amounts are for pension contributions only. Effective 1/1/2000, the Board decided that a minimum contribution rate of 4% per valuation group would be contributed to the Post-Retirement Health Care Fund.

All members of the Retirement System except police officers and firefighters are covered by Social Security. Social Security taxes are not included in the above amounts.

CITY'S COMPUTED CONTRIBUTIONS FOR THE FISCAL YEAR BEGINNING JULY 1, 2016 (CONCLUDED)

Determining Dollar Contributions

For any period of time, the percent-of-payroll contribution rate needs to be converted to dollar amounts. We recommend one of the following procedures.

(1) Contribute dollar amounts at the end of each payroll period which are equal to the City's percent-of-payroll contribution requirement multiplied by the covered active member payroll for the period. Adjustments should be made as necessary to exclude items of pay that are not covered compensation for Retirement System benefits and to include non-payroll payments that are covered compensation.

(2) Contribute the annual amounts to the designated fund from the following schedule:

Group	Pension Fund
General	$ 0
Police	926,616
Fire	788,227
Hybrid	130,956
Total	$ 1,845,799

These dollar amounts are derived by multiplying the City's percent-of-payroll contribution requirement by the projected valuation payroll for the fiscal year beginning July 1, 2016. The projected valuation payroll reflects the pay increase assumptions described on page C-8.

The above amounts (Methods 1 and 2) are assumed to be contributed, on average, halfway through the fiscal year. If contributions are made on a later schedule, interest should be added at the rate of 0.625% (=0.075 ÷ 12) for each month of delay.

City's Computed Contributions - Comparative Schedule

Fiscal Year July - June	Valuation Date December 31	As Percents of Valuation Payroll: General Members	Police and Fire Members	Water Dept. Members	Sewage Disposal Members	Hybrid Members	Valuation Payroll	Employer Contribution: Computed	Employer Contribution: Actual
1986-87	1985	10.69 %	13.14 % (1)	12.30 %	10.07 %		$ 6,791,152	$ 846,903	$ 846,903
1987-88	1986	10.34 % (1)	12.70 % (1)	12.54 % (1)	9.91 % (1)		6,898,835	836,738	836,738
1988-89	1987	10.03 % (1,4)	12.62 %	13.07 % (1)	9.40 % (1,4)		7,082,224	850,875	850,875
1989-90	1988	8.39 % (1,4)	12.07 %	13.82 % (1)	11.77 % (1,4)		7,827,433	895,701	895,701
1990-91	1989	4.20 % (1,4)	13.43 % (1,4)	13.00 % (1,4)	9.35 % (1,4)		7,787,845	791,566	791,566
1991-92	1990 (2)	5.48 % (4)	9.24 %	10.64 %	7.78 % (4)		9,106,876	737,022	737,021
1992-93	1991	5.00 % (4,5)	5.45 % (4)	11.11 %	6.03 % (4)		8,817,472	551,961	551,961
1993-94	1992	5.00 % (4,5)	5.00 % (4,5)	10.45 %	6.61 % (4)		9,354,039	565,293	565,293
1993-94	1992 (2)	5.00 %	5.00 %	9.36 %	5.40 %		9,354,039	536,817	565,293
1994-95	1993	5.00 %	5.00 %	7.13 %	5.00 %		9,190,716	462,980	520,675
1994-95	1993 (1)	5.00 % (4,5)	5.00 % (4,5)	7.55 %	5.00 % (4,5)		9,190,716	520,675	520,675
1995-96	1994	4.00 % (4,5)	4.00 % (4,5)	5.07 %	4.00 % (4,5)		9,651,905	425,850	425,850
1996-97	1995 (1)	4.00 % (4,5)	4.00 % (4,5)	4.00 % (4,5)	4.00 % (4,5)		9,978,002	417,297	417,297
1997-98	1996	4.00 % (4,5)	4.00 % (4,5)	4.00 % (4,5)	4.00 % (4,5)		10,172,609	317,709	317,709
1998-99	1997 (1)	4.00 % (4,5)	4.00 % (4,5)	4.00 % (4,5)	4.00 % (4,5)	4.00 % (4,5)	10,529,011	440,112	547,316
1999-00	1998 (1)	4.00 % (4,5)	4.00 % (4,5)			4.00 % (4,5)	10,584,002	442,412	426,131
2000-01	1999 (1)	0.00 % (4,5)	0.00 % (4,5)			0.32 % (4,5)	10,474,156	3,790	11,596
2001-02	2000 (1)	0.00 % (4,5)	0.00 % (4,5)			3.61 % (4,5)	11,856,866	67,664	0
2002-03	2001 (1)	0.00 % (4,5)	0.00 % (4,5)			0.00 % (4,5)	11,906,969	0	0
2003-04	2002 (1,2)	0.00 % (4,5)	0.00 % (4,5)			0.00 % (4,5)	12,514,944	0	0
2004-05	2003	0.00 % (4,5)	0.00 % (4,5)			0.00 % (4,5)	12,572,732	0	0
2005-06	2004	0.00 % (4,5)	8.28 % (4,5)			0.00 % (4,5)	13,015,919	479,028	479,028
2006-07	2004 (1)	0.00 % (4,5)	8.28 % (4,5)			0.00 % (4,5)	13,232,960	487,016	487,368
2007-08	2005 (1)	0.00 % (4,5)	21.31 % (4,5)			5.21 % (5)	13,232,960	1,444,879	1,444,880
2008-09	2006	0.00 % (4,5)	20.95 % (5)			5.07 % (5)	13,007,162	1,439,268	1,439,269
2009-10	2007	0.00 % (4,5)	20.92 % (5)			4.80 % (5)	13,371,922	1,483,539	1,483,539
2010-11	2008 (2)	0.00 % (4,5)	20.49 % (1,5)			2.74 % (5)	11,289,204	1,191,553	1,191,553
2011-12	2009 (2)	0.00 % (4,5)	22.67 % (5)			3.48 % (5)	11,061,644	1,274,568	1,274,568
2012-13	2010	0.00 % (4,5)	25.04 % (5)			3.83 % (5)	10,758,097	1,351,541	1,351,541
2013-14	2011	0.00 % (4,5)	36.24 % (5)			3.87 % (5)	9,636,542	1,488,154	1,488,054
2014-15	2012	0.00 % (4,5)	38.86 % (5)			4.12 % (5)	9,543,247	1,622,379	1,622,379 #
2015-16	2013	0.00 % (4,5)	40.36 % (5)			4.07 % (5)	9,524,423	1,695,874	
2016-17	2014	0.00 % (4,5)	45.25 % (5)			4.06 % (5)	9,207,491	1,845,799	

(1) After Retirement System amendments.
(2) After assumptions revised.
(3) After change in valuation method to Entry-Age Normal Cost.
(4) Reflects Temporary (Credit)/Charge.
(5) Minimum Contribution Rate per Board Resolution.
 # Scheduled contributions for the fiscal year.

PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITIES

	General Members	Police Members	Fire Members	Hybrid Members	Total
A. Accrued Liability					
1. For retirees and beneficiaries	$ 40,579,076	$ 25,053,801	$32,591,544	$ 954,427	$ 99,178,848
2. For vested terminated members	433,030	-	596,911	301,905	1,331,846
3. For present active members					
a. Value of expected future benefit payments	17,530,904	17,220,513	5,158,349	5,988,852	45,898,618
b. Value of future normal costs	2,385,323	4,213,255	1,314,788	2,258,122	10,171,488
c. Active member accrued liability: (a) - (b)	15,145,581	13,007,258	3,843,561	3,730,730	35,727,130
4. Total accrued liability	56,157,687	38,061,059	37,032,016	4,987,062	136,237,824
B. Present Assets (Funding Value)	67,280,001	29,962,480	27,058,104	5,756,550	130,057,135
C. Unfunded Accrued Liability: (A.4) - (B)	(11,122,314)	8,098,579	9,973,912	(769,488)	6,180,689
D. Funding Ratio: (B) / (A.4)	119.8%	78.7%	73.1%	115.4%	95.5%
E. Funded Ratio - Market Value Basis	125.2%	82.3%	76.3%	120.6%	99.7%

FUNDING PROGRESS TESTS

The Retirement System's funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of active member payroll. If the contributions to the System are level in concept and soundly executed, the System will ***pay all promised benefits when due -- the ultimate test of financial soundness***.

There is no single all-encompassing test to measure a Retirement System's funding progress and current funded status.

A traditional measure has been the relationship of valuation assets to actuarial accrued liabilities - a method that is influenced by the choice of actuarial cost method. This relationship is shown on page A-5.

We believe a better understanding of funding progress and status can be achieved using the following measures which are independent of the actuarial funding method. A year-by-year comparison of these measures is shown on page A-6 right.

TEST 1 - ***The ratio of valuation assets to the actuarial present value of vested benefits (APVVB)*** computed as if the Retirement System were terminated on the valuation date - a plan termination test. The ratio is expected to gradually increase in the absence of benefit improvements and changes in actuarial assumptions.

TEST 2 - ***The ratio of valuation assets to the actuarial present value of credited projected benefits (APVCPB)*** - a plan continuation test. The ratio is expected to gradually increase in the absence of benefit improvements and changes in actuarial assumptions.

TEST 3 - ***The ratio of the unfunded actuarial present value of credited projected benefits (UAPVCPB) to member payroll*** - a plan continuation test. In a soundly financed retirement system, the amount of the unfunded actuarial present value of credited projected benefits will be controlled and prevented from increasing in the absence of benefit improvements or strengthening of actuarial assumptions. However, in an inflationary environment it is seldom practical to impose this control on dollar amounts which are depreciating in value. The ratio is a relative index of condition where inflation is present in both items. The ratio is expected to gradually decrease in the absence of benefit improvements and changes in actuarial assumptions.

FUNDING PROGRESS MEASURES - COMPARATIVE SCHEDULE
($ AMOUNTS IN THOUSANDS)

Valuation Date December 31	(1) Valuation Assets	(2) Member Payroll	(3) APVVB	(4) APVCPB	(5) UAPVCPB	Termination Measure TEST 1 (1) ÷ (3)	Continuation Tests TEST 2 (1) ÷ (4)	TEST 3 (5) ÷ (2)
1987(1)	$ 24,032	$ 7,082	$ 15,679	$ 23,367	$ (665)	153.3 %	102.8 %	-
1988(1)	27,163	7,827	17,445	25,838	(1,325)	155.7 %	105.1 %	-
1989(1)	31,228	7,787	19,316	28,887	(2,341)	161.7 %	108.1 %	-
1990(2)	34,603	9,107	21,491	31,119	(3,484)	161.0 %	111.2 %	-
1991	39,320	8,817	22,899	32,949	(6,371)	171.7 %	119.3 %	-
1992(3)	43,834	9,354	25,639	36,882	(6,952)	171.0 %	118.8 %	-
1993(1,2)	49,703	9,191	28,481	38,633	(11,070)	174.5 %	128.7 %	-
1994	54,055	9,652	31,254	42,409	(11,646)	173.0 %	127.5 %	-
1995(1)	59,462	9,978	33,285	45,707	(13,755)	178.6 %	130.1 %	-
1996	65,597	10,173	34,719	48,508	(17,089)	188.9 %	135.2 %	-
1997(1)	72,727	10,529	42,155	54,843	(17,884)	172.5 %	132.6 %	-
1998	83,049	10,584	42,305	55,146	(27,903)	196.3 %	150.6 %	-
1999(1)	94,155	10,474	45,827	58,143	(36,012)	205.5 %	161.9 %	-
2000(1)	104,266	11,857	50,310	64,229	(40,037)	207.2 %	162.3 %	-
2001(1)	110,126	11,907	53,161	67,124	(43,002)	207.2 %	164.1 %	-
2002(1,2)	110,362	12,515	59,278	76,417	(33,945)	186.2 %	144.4 %	-
2003	110,752	12,573	64,316	81,705	(29,047)	172.2 %	135.6 %	-
2004	111,524	13,016	72,927	93,215	(18,309)	152.9 %	119.6 %	-
2005(1,3)	118,935	13,233	77,866	97,222	(21,713)	152.7 %	122.3 %	-
2006	124,033	13,007	83,477	100,726	(23,307)	148.6 %	123.1 %	-
2007	130,366	13,372	87,361	106,681	(23,685)	149.2 %	122.2 %	-
2008(1,2,3)	130,512	11,289	95,032	111,661	(18,851)	137.3 %	116.9 %	-
2009(2)	131,184	11,062	99,789	115,213	(15,971)	131.5 %	113.9 %	-
2010	132,119	10,758	105,476	119,415	(12,704)	125.3 %	110.6 %	-
2011	131,234	9,637	111,010	124,343	(6,891)	118.2 %	105.5 %	-
2012	130,063	9,543	113,438	126,541	(3,522)	114.7 %	102.8 %	-
2013	130,300	9,524	116,527	128,719	(1,581)	111.8 %	101.2 %	-
2014	130,057	9,207	123,494	132,530	2,473	105.3 %	98.1 %	26.9 %

(1) After Retirement System amendments.
(2) Economic assumptions revised.
(3) Asset valuation method revised.

APVVB - actuarial present value of vested benefits (see page A-6 Left).
APVCPB - actuarial present value of credited projected benefits (see page A-6 Left).
UAPVCPB - unfunded actuarial present value of credited projected benefits (see page A-6 Left).

DEVELOPMENT OF FUNDING VALUE OF ASSETS

Year Ended December 31	2012	2013	2014	2015	2016	2017	2018	2019	2020
A. Funding Value Beginning of Year	$131,234,283	$130,063,087	$130,299,553						
B. Market Value End of Year	121,436,535	135,144,666	135,893,438						
C. Market Value Beginning of Year	115,400,471	121,436,535	135,144,666						
D. Non-Investment Net Cash Flow	(6,383,460)	(6,400,766)	(6,576,418)						
E. Investment Income									
E1. Market Total: B-C-D	12,419,524	20,108,897	7,325,190						
E2. Amount for Immediate Recognition (7.5%)	9,603,191	9,514,703	9,525,851						
E3. Amount for Phased-In Recognition: E1-E2	2,816,333	10,594,194	(2,200,661)						
F. Phased-In Recog. of Investment Return									
F1. Current Year: (1/7) x E3	402,333	1,513,456	(314,380)						
F2. First Prior Year	(1,270,098)	402,333	1,513,456	$ (314,380)					
F3. Second Prior Year	523,430	(1,270,098)	402,333	1,513,456	$ (314,380)				
F4. Third Prior Year	1,309,406	523,430	(1,270,098)	402,333	1,513,456	$ (314,380)			
F5. Fourth Prior Year	(5,355,998)	1,309,406	523,430	(1,270,098)	402,333	1,513,456	$ (314,380)		
F6. Fifth Prior Year	0	(5,355,998)	1,309,406	523,430	(1,270,098)	402,333	1,513,456	$ (314,380)	
F7. Sixth Prior Year	0	0	(5,355,998)	1,309,405	523,430	(1,270,101)	402,335	1,513,458	$ (314,381)
F8. Total Recognized Investment Gain	(4,390,927)	(2,877,471)	(3,191,851)	2,164,146	854,741	331,308	1,601,411	1,199,078	(314,381)
G. Funding Value End of Year A+D+E2+F8	130,063,087	130,299,553	130,057,135						
H. Difference between Market & Funding Value	(8,626,552)	4,845,113	5,836,303	3,672,157	2,817,416	2,486,108	884,697	(314,381)	0
I. Recognized Rate of Return	4.1%	5.2%	5.0 %						
J. Market Rate of Return	11.1%	17.0%	5.6%						
K. Ratio of Funding Value to Market Value	107.1%	96.4%	95.7 %						

The Funding Value of Assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment return (line E3) are phased-in over a closed 7-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than market value. The Funding Value of Assets is ***unbiased*** with respect to Market Value. At any time it may be either greater or less than Market Value. If assumed rates are exactly realized for 6 consecutive years, it will become equal to Market Value.

DERIVATION OF EXPERIENCE GAIN (LOSS)
YEAR ENDED DECEMBER 31, 2014

The actuarial gains or losses realized in the operation of the Retirement System provide an experience test. Gains and losses are expected to cancel each other over a period of years but sizable year to year fluctuations are common. Detail on the derivation of the actuarial gain (loss) is shown below, along with a year-by-year comparative schedule.

(1)	UAAL* at end of prior year	$2,408,674
(2)	Total normal cost	1,377,441
(3)	Actual contributions	2,000,011
(4)	Interest accrual	157,726
(5)	Expected UAAL before changes	1,943,830
(6)	Change from Retirement System amendments and/or revised actuarial assumptions/methods	0
(7)	Expected UAAL after changes	1,943,830
(8)	Actual UAAL at end of year	6,180,689
(9)	Gain (loss) (7) - (8)	(4,236,859)
(10)	Gain (loss) as percent of actuarial accrued liabilities at start of year ($132,708,227)	(3.2)%

* *Unfunded actuarial accrued liability.*

Valuation Date December 31	Actuarial Gain (Loss) as % of Beginning Accrued Liability
2005	0.6 %
2006	2.0 %
2007	0.3 %
2008	(8.0)%
2009	(2.9)%
2010	(3.0)%
2011	(4.8)%
2012	(2.6)%
2013	(1.6)%
2014	(3.2)%

COMMENT A: Contribution requirements varied by group. The plan is approximately 95.5% funded on a system-wide basis. Total contribution requirements increased primarily due to the phasing-in of past unfavorable investment performance. Shown below are the contribution requirements from last year's valuation compared to this year's valuation.

	Employer Contribution for Fiscal Year Beginning	
	July 1, 2015	**July 1, 2016**
General	$ -	$ -
Police	884,297	926,616
Fire	686,420	788,227
Hybrid	125,157	130,956
Total	$ 1,695,874	$ 1,845,799

COMMENT B: On a market value basis, investment results were less favorable than expected, with approximately a 5.6% rate of return (see page A-7). However, under the asset valuation method, investment gains and losses are spread over a 7-year period. Partial recognition of this year's loss was combined with the continued phase-in of investment gains and losses from prior years resulting in a net recognized rate of return of 5.0%, leading to an overall asset loss on the actuarial value of assets. The overall experience gain (loss) this year (including liability gains and losses) was $(4,236,859) (see page A-8).

COMMENT C: As of this valuation, the Market Value of assets exceeds the Funding Value by $5.8 million. This means that currently there is $5.8 million in investment gains yet to be recognized. The deferred gains will be phased-in over the next six years and amortized. If the Market Value had been used this year, the funded status would be about 99.7% instead of 95.5%.

RECOMMENDATION A: The actuary recommends that transfers be made from the reserve for employer contributions to the reserve for retired benefit payments, as shown below:

	Reserve for Employer Contributions		
	Balance Before Transfer	Amounts Transferred to Reserve for Retired Benefit Payments	Balance After Transfer
General	$26,107,706	$ 109,625	$ 25,998,081
Police & Fire	(411,678)	1,378,576	(1,790,254)
Hybrid	3,100,190	(183,512)	3,283,702
Total	$28,796,218	$1,304,689	$ 27,491,529

The computed employer contribution rates developed in this report assume that these transfers have been made.

The table above shows appropriate beginning reserve balances at 1/1/2015 for each valuation group.

RECOMMENDATION B: Useful and reliable valuation results are dependent on an underlying set of appropriate actuarial assumptions. From time to time the assumptions should be reevaluated in the light of emerging experience - the plan's own and the experience of similar groups -- and expected future experience. With a plan the size of the City of Monroe Employees Retirement System, credible experience is limited and can vary significantly from year to year. Over an extended period however, some trends can be detected. We believe that it is timely for an analysis to be made of the Retirement System's experience during the last 5 years. **Additionally, the GFOA recommends that a study be performed at least once every 5 years.** Such a study would:

- Analyze retirement probabilities, termination probabilities, probabilities of disablement, mortality rates and pay changes;
- Look at economic and demographic experience separately;
- Suggest appropriate changes in economic and demographic assumptions and show their effect on computed contribution rates; and
- Review the amortization policy.

It is recommended that an experience study be conducted prior to the next regular annual actuarial valuation.

CONCLUSION: The Retirement System continues to operate in accordance with the actuarial principles of level percent of payroll financing.

ACTUARIAL BALANCE SHEET - DECEMBER 31, 2014
($ AMOUNTS IN THOUSANDS)

Present Resources and Expected Future Resources

	General Members	Police Members	Fire Members	Hybrid Members	Total
A. Actuarial value of system assets					
1. Net assets from system financial statements	$70,299	$31,307	$28,272	$6,015	$135,893
2. Market value adjustment	(3,019)	(1,345)	(1,214)	(258)	(5,836)
3. Actuarial value of assets	67,280	29,962	27,058	5,757	130,057
B. Actuarial present value of expected future employer contributions					
1. For normal costs	1,695	2,954	966	1,307	6,922
2. For unfunded actuarial accrued liabilities	(11,122)	8,099	9,974	(769)	6,182
3. Total	(9,427)	11,053	10,940	538	13,104
C. Actuarial present value of expected future member contributions	690	1,259	350	950	3,249
D. Total Present and Expected Future Resources	$58,543	$42,274	$38,348	$7,245	$146,410

Actuarial Present Value of Expected Future Benefit Payments and Reserves

	General Members	Police Members	Fire Members	Hybrid Members	Total
A. To retirants and beneficiaries	$40,579	$25,054	$32,592	$ 954	$ 99,179
B. To vested terminated members	433	0	597	302	1,332
C. To present active members					
1. Allocated to service rendered prior to valuation date	15,146	13,007	3,844	3,731	35,728
2. Allocated to service likely to be rendered after valuation date	2,385	4,213	1,315	2,258	10,171
3. Total	17,531	17,220	5,159	5,989	45,899
D. Total Actuarial Present Value of Expected Future Benefit payments	58,543	42,274	38,348	7,245	146,410
E. Total Actuarial Present Value of Expected Future Payments and Reserves	$58,543	$42,274	$38,348	$7,245	$146,410

Note: Not all sums balance due to rounding.

20-YEAR PROJECTION OF BENEFIT PAYMENTS

Year	Projected Benefit Payment
2015	$ 8,980,445
2016	9,261,358
2017	9,533,683
2018	9,808,004
2019	10,101,952
2020	10,423,401
2021	10,721,214
2022	11,002,189
2023	11,280,302
2024	11,588,865
2025	11,916,869
2026	12,276,462
2027	12,626,082
2028	12,914,513
2029	13,159,907
2030	13,358,900
2031	13,539,702
2032	13,640,300
2033	13,749,374
2034	13,797,554

SECTION B

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

BRIEF SUMMARY* OF NON-HYBRID BENEFIT PROVISIONS DECEMBER 31, 2014

REGULAR RETIREMENT (no reduction factor for age): The eligibility conditions and benefit factors for regular retirement are shown on page B-5.

EARLY RETIREMENT

Eligibility - Teamsters Local 214 and COMEA Unit I and II: Age 50 with 10 or more years of service.

Annual Amount - Actuarial equivalent of the accrued Regular Retirement benefit.

DEFERRED RETIREMENT (vested benefit):

Eligibility - 10 or more years of service. Benefit begins at age 60.

Annual Amount - Computed as a regular benefit but based upon service and final average compensation at time of termination.

DUTY DISABILITY RETIREMENT:

Eligibility - No age or service requirements. Must be in receipt of worker's compensation.

Annual Amount - Computed as a regular retirement. If a retirant is paid a worker's compensation benefit which is more than the difference between the retirant's final average compensation and the amount of retirement allowance computed the amount of the retirement allowance shall be reduced to the amount which is the difference between final average compensation and the worker's compensation benefit. The reduction shall continue for the worker's compensation period. Upon termination of worker's compensation or attainment of age 65, whichever occurs first, additional service credit is granted and the benefit is recomputed.

NON-DUTY DISABILITY RETIREMENT:

Eligibility - 10 or more years of service.

Annual Amount Computed as a regular retirement.

DUTY DEATH BEFORE RETIREMENT:

Eligibility - No age or service requirements.

Annual Amount - Refund of member contributions paid at time of death. A benefit equal to the worker's compensation benefit is paid beginning at the end of the worker's compensation period. Payments to spouse terminate upon remarriage or death.

* *In case of disagreement between this summary and either City ordinance or labor agreements, the latter supersedes.*

NON-DUTY DEATH BEFORE RETIREMENT:

Eligibility - 10 years of service.

Annual Amount - Computed according to the regular retirement formula but actuarially reduced in accordance with Joint and 100% Survivor option.

MEMBER CONTRIBUTIONS: Vary by employment unit as shown on page B-5.

ANNUITY WITHDRAWAL: Annuity withdrawal is not available to persons hired January 1, 1989 and later. Members of the police and fire units of the City may withdraw their accumulated contributions at the time of retirement. The retirement allowances of such members will be reduced in accordance with the interest and mortality assumptions (50% Unisex Mix) used in calculating option factors as of December 31, preceding the date of retirement.

OPTIONAL FORMS OF BENEFIT PAYMENT:

Option A - Straight life retirement allowance
Option B - 100% survivor allowance
Option C - 50% survivor allowance
Option D 120 - 120 months certain and life
Option D 180 - 180 months certain and life
Option E - Members electing early retirement may choose to have the formula amount payable to age 62 (if possible) and a reduced amount thereafter. Option E cannot be elected in conjunction with another option, and does not provide a survivor benefit.
Social Security Coordination: members covered by Social Security may elect to receive their benefit paid in a form that pays more initially but reduces at age 65 by the amount of the estimated Social Security P.I.A.

Benefit amounts under these optional forms of payment are calculated using a unisex mortality table consisting of 90% male mortality rates and 10% female rates.

* *In case of disagreement between this summary and either City ordinance or labor agreements, the latter supersedes.*

BRIEF SUMMARY* OF HYBRID BENEFIT PROVISIONS (THAT BECAME EFFECTIVE MAY 1, 1997) DECEMBER 31, 2014

REGULAR RETIREMENT (no reduction for age):

Eligibility **-** Age 60 with 10 or more years of service or age 62 with 3 or more years of service.

Benefits -

(1) *Monthly Benefit Option* equal to the greater of (a) and (b):

(a) 1.5% times Final Average Compensation (FAC) times service, plus Cost-of-Living Adjustment (COLA).

(b) Annuitized Value of 2.0 times member contributions with interest plus COLA.

(2) *Lump Sum Option* equal to 1.5 times member contributions with interest.

EARLY RETIREMENT:

Eligibility **-** Age 55 with 15 or more years of service.

Benefits -

(1) *Monthly Benefit Option* equal to the annuitized value of 1.5 times member contributions with interest plus COLA.

DEFERRED RETIREMENT (vested benefit):

Eligibility **-** 3 or more years of service. No age requirement.

Benefits - *Immediate Option* equal to a lump sum distribution in accordance with the following:

Years of Service	Immediate Lump Sum
Less than 3	1.0 times member contributions with interest
At least 3, but less than 7	1.25 times member contributions with interest
7 or more	1.5 times member contributions with interest

OR

Deferred Option: Member can leave own contributions and the credited interest on them in the plan to earn additional interest until retirement, then elect either the Monthly Benefit Option or the Lump Sum Option described under Regular Retirement.

* *In case of disagreement between this summary and either City ordinance or labor agreements, the latter supersedes.*

BRIEF SUMMARY* OF HYBRID BENEFIT PROVISIONS THAT BECAME EFFECTIVE MAY 1, 1997
DECEMBER 31, 2014

DISABILITY RETIREMENT (the same provisions apply to duty and non-duty disabilities):

***Eligibility* -** No age or service requirements.

***Benefits* -** Payable in accordance with the following:

Years of Service	Benefit Payable (includes COLA)
Less than 3	1.0% times FAC times Service
At least 3, but less than 7	1.25% times FAC times Service
7 or more	1.5% times FAC times Service

DEATH BEFORE RETIREMENT:

***Eligibility* -** No age or service requirements.

***Benefits* -** 1.0 times member contribution with interest is payable to the deceased member's beneficiary. In addition, if the member had at least 3 years of service at death, the beneficiary will receive the greater of (a) and (b):

(a) If monthly worker's compensation benefits were being paid prior to the member's death, the Retirement System will continue to pay the same amount to the beneficiary on a monthly basis.

(b) A life annuity to the beneficiary of 1.5% times the member's FAC (just prior to death) times service.

Note: The monthly amounts from (a) and (b) include COLAs.

RETIREES' BURIAL BENEFIT:

***Eligibility* -** The death of a member who is receiving monthly retirement benefits.

***Benefits* -** A one-time cash payment of $2,500.

SPECIAL NOTES:

COLAs - The percent increase in the CPI up to 2%.

Interest on Member Contributions - The annual rate of return on the market value of the Fund-1%.

* *In case of disagreement between this summary and either City ordinance or labor agreements, the latter supersedes.*

Benefit Provisions by Unit
December 31, 2014

Unit Name	No.	GRS Code	Eligibility	FAC[1] Months In	FAC[1] Lump Sums	Retirement Benefit PCT	Retirement Benefit COLA[2]	Employee Contrib.
General Unit I	13	11	55 & 25, 60 & 10 or 65 & 5	36	Y	2.2%	2% Fixed	4%
General Unit II	2	36	55 & 25, 60 & 10, 65 & 5	36	Y	2.2%	2% CPI	4%
General Teamsters	8	19	60 & 10, 65 & 5, 80 pts	48	Y	2.2%	2% Fixed	5%
Water Unit I	2	14	55 & 25, 60 & 10 or 65 & 5	36	Y	2.2%	2% Fixed	4%
Water Unit II	1	37	55 & 25, 60 & 10, 65 & 5	36	Y	2.2%	2% CPI	4%
Water Teamsters	6	15	60 & 10, 65 & 5, 80 pts	48	Y	2.2%	2% Fixed	5%
Sewage Unit 1	4	17	55 & 25, 60 & 10 or 65 & 5	36	Y	2.2%	2% Fixed	4%
Sewage Unit II	1	38	55 & 25, 60 & 10, 65 & 5	36	Y	2.2%	2% CPI	4%
Sewage Teamsters	5	16	60 & 10, 65 & 5, 80 pts	48	Y	2.2%	2% Fixed	5%
Police Patrol	20	22	50 & 25, 55 & 10, or 60 & 5	36	Y [4]	2.65% (80% cap)	3% CPI	5.5%
Police Patrol (Hired on or After 7/1/2008)	10	22	55 & 10, or 60 & 5	36	N	2.0%/2.25%[5] (80% cap)	2% CPI	5.5%
Police Command	8	23	50 & 25, 55 & 10, or 60 & 5	36	Y [3]	2.65% (80% cap)	3% CPI	5.5%
Police Command (Hired on or After 7/1/2008)	0	23	55 & 10, or 60 & 5	36	N	2.0%/2.25%[5] (80% cap)	2% CPI	5.5%
Fire	10	33	50 & 25, 55 & 10, or 60 & 5	36	Y [3]	2.65% (80% cap)	3% CPI	5.5%
Fire (Hired on or After 7/1/2008)	0	33	55 & 10, or 60 & 5	36	N	2.0%/2.25%[5] (80% cap)	2% CPI	5.5%
Appointed/Confidential	3	35	55 & 15, 60 & 10, 65 & 5	36	Y	2.2%	2% Fixed	2%
Elected	0	34	55 & 25, 60 & 10, 65 & 5	36	Y	2.2%	No	2%
Appointed/Elected Hybrid	8	50+	60 & 10 or 62 & 3	36	Y	1.5%	2% CPI	2%
Hybrid	47	50+	60 & 10 or 62 & 3	36	Y	1.5%	2% CPI	4%
Total Active Members	148							

(1) *Final Average Compensation. The benefit multiplier times FAC times credited service is the amount of retirement allowance payable. For Police and Fire members hired prior to 7/1/2008, FAC is frozen at 30.2 years of service. For Police and Fire members hired on or after 7/1/2008, FAC is frozen at 37.2 years of service.*

(2) *Cost-of-Living Adjustments (COLAs) apply beginning on the anniversary of retirement following 12 months of receiving benefits. COLAs are either fixed at the stated rate or equal to the lesser of the stated rate and the annual increase in the CPI-U for the preceding calendar year. COLAs are not compounded each year.*

(3) *Police Command and Fire receive three years Sick Pay Bonus included in FAC due to an Arbitration Award which was effective 7/1/1998. However, they do not have vacation pay-off included in FAC. Effective 1/1/2012, FAC for Police Command and Fire will not include more than 200 hours per year of overtime.*

(4) *Effective 7/1/2009, Police Patrol will receive three years Sick Pay Bonus included in FAC, for members hired prior to 7/1/2008. However, they do not have vacation pay included in FAC. Effective 8/15/2011, FAC for Police will not include more than 200 hours per year of overtime.*

(5) *The pension multiplier for employees hired on or after 7/1/2008 will be 2.0% of the employee's FAC for the first 15 years of service, and 2.25% for each year thereafter.*

SAMPLE BENEFIT COMPUTATIONS FOR
GENERAL MEMBER
RETIRING DECEMBER 31, 2014

DATA:

A.	$45,000	Final Average Compensation
B.	32	Years of Credited Service
C.	60	Age of Retirant
D.	55	Age of Spouse
E.	100%	Percentage of Pension to Continue to Spouse after retirant's death (Retirant makes this choice)

COMPUTATIONS:

		Annual Amount
F.	Formula Benefit: 0.022 x 32 yrs. x $45,000 =	$31,680
G.	Reduction for Line E Election (1-0.84909)* x (F) =	4,781
H.	Benefit Payable to Retirant while Spouse is Alive: F-G	$26,899
I.	Benefit Payable to Spouse after Retirant's Death	$26,899
J.	Benefit Payable to Retirant after Spouse's Death	$26,899

PROJECTED BENEFITS:

Year Ended December 31	Retirant's Benefit (Retirant & Spouse Alive)	Spouse's Benefit (After Retirant's Death)	Retirant's Benefit (After Spouse's Death)
2015	$26,899	$26,899	$26,899
2016	27,437	27,437	27,437
2017	27,975	27,975	27,975
2018	28,513	28,513	28,513
2019	29,051	29,051	29,051
2020	29,589	29,589	29,589
2021	30,127	30,127	30,127
2022	30,665	30,665	30,665
2023	31,203	31,203	31,203
2024	31,741	31,741	31,741

* *Factors effective January 1, 2011.*

In each succeeding year the amount increases by $538 (amount may vary if CPI applies).

The benefits of elected members do not increase.

SAMPLE BENEFIT COMPUTATIONS FOR *POLICE* MEMBER RETIRING DECEMBER 31, 2014 (AND HIRED BEFORE JULY 1, 2008)

DATA:

A.	$45,000	Final Average Compensation (FAC)
B.	30.2	Years of Credited Service
C.	55	Age of Retirant
D.	50	Age of Spouse
E.	25,000	Annuity Withdrawal at Retirement (Available if hired before 1989)
F.	100%	Percentage of Pension to Continue to Spouse after retirant's death (Retirant makes this choice)

COMPUTATIONS:

		Annual Amount
G.	Formula Benefit: (0.0265 x 30.2 yrs.) x $45,000 = (Benefit is capped at 80% of FAC)	$36,000
H.	Reduction for Annuity Withdrawal: 0.00736* x 12 x 25,000 =	2,208
I.	Reduction for Line F Election (1-0.88472)* x (G-H)	3,896
J.	Benefit Payable to Retirant while Spouse is Alive: G-H-I	$29,896
K.	Benefit Payable to Spouse after Retirant's Death	$29,896
L.	Benefit Payable to Retirant after Spouse's Death	$29,896

PROJECTED BENEFITS:

Year Ended December 31	Retirant's Benefit (Retirant & Spouse Alive)	Spouse's Benefit (After Retirant's Death)	Retirant's Benefit (After Spouse's Death)
2015	$29,896	$29,896	$29,896
2016	30,793	30,793	30,793
2017	31,690	31,690	31,690
2018	32,587	32,587	32,587
2019	33,484	33,484	33,484
2020	34,381	34,381	34,381
2021	35,278	35,278	35,278
2022	36,175	36,175	36,175
2023	37,072	37,072	37,072
2024	37,969	37,969	37,969

* *Factors effective January 1, 2011.*

In each succeeding year, the amount payable increases by $897.

SAMPLE BENEFIT COMPUTATIONS FOR *FIRE* MEMBER RETIRING DECEMBER 31, 2014 (AND HIRED BEFORE JULY 1, 2008)

DATA:

A.	$45,000	Final Average Compensation (FAC)
B.	30.2	Years of Credited Service
C.	55	Age of Retirant
D.	50	Age of Spouse
E.	25,000	Annuity Withdrawal at Retirement (Available if hired before 1989)
F.	100%	Percentage of Pension to Continue to Spouse after retirant's death (Retirant makes this choice)

COMPUTATIONS:

		Annual Amount
G.	Formula Benefit: (0.0265 x 30.2 yrs.) x $45,000 = (Benefit is capped at 80% of FAC)	$36,000
H.	Reduction for Annuity Withdrawal: 0.00736* x 12 x 25,000 =	2,208
I.	Reduction for Line F Election (1-0.88472)* x (G-H)	3,896
J.	Benefit Payable to Retirant while Spouse is Alive: G-H-I	$29,896
K.	Benefit Payable to Spouse after Retirant's Death	$29,896
L.	Benefit Payable to Retirant after Spouse's Death	$29,896

PROJECTED BENEFITS:

Year Ended December 31	Retirant's Benefit (Retirant & Spouse Alive)	Spouse's Benefit (After Retirant's Death)	Retirant's Benefit (After Spouse's Death)
2015	$29,896	$29,896	$29,896
2016	30,793	30,793	30,793
2017	31,690	31,690	31,690
2018	32,587	32,587	32,587
2019	33,484	33,484	33,484
2020	34,381	34,381	34,381
2021	35,278	35,278	35,278
2022	36,175	36,175	36,175
2023	37,072	37,072	37,072
2024	37,969	37,969	37,969

* *Factors effective January 1, 2011.*

In each succeeding year, the amount payable increases by $897.

SAMPLE BENEFIT COMPUTATIONS FOR *HYBRID* MEMBER TERMINATING DECEMBER 31, 2014 (ASSUMES CONTINUOUS HYBRID COVERAGE FROM DATE OF HIRE)

DATA:

A.	$28,000	Final Average Compensation
B.	10	Years of Credited Service
C.	35	Age of Member; Spouse's Age = 30
D.	$11,200	Estimated Accumulated 4% Member Contributions

HYBRID ALTERNATIVES:

A. Take a one-time cash distribution of 1.5 times $11,200 = $16,800, at age 35. (Plan will not owe Member any other benefits.)

B. Leave $11,200 in Plan until age 60:
Assume the Accumulated Member Contributions are credited with 6.5% return each year: the $11,200 grows to $54,070.

Choice B1: ***Cash option*** of 1.5 times $54,070 = $81,105

No further benefits are payable

Choice B2: ***Annual pension benefit*** = the greater of

(a) 1.5% x 10 years x $28,000 = $4,200 OR
(b) 2 x $54,070 / 12.2104# = $8,856

plus cost-of-living adjustment* (COLA) each July 1 after one year of retirement.

Assume Member elects B2 under the Joint & 100% Survivor form of benefit and COLA rate = 2% each year:
$8,856 x 0.84909 = $7,520

* *COLA rate = lesser of 2% or the rate of change in the CPI in the prior calendar year; COLA rate is applied to benefit paid the prior July 1.*

\# *Factors effective January 1, 2011.*

PROJECTED BENEFITS:

Year Ended December 31	Retirant's Benefit (Retirant & Spouse Alive)	Spouse's Benefit (After Retirant's Death)	Retirant's Benefit (After Spouse's Death)
2039	$7,520	$7,520	$7,520
2040	7,670	7,670	7,670
2041	7,820	7,820	7,820
2042	7,970	7,970	7,970
2043	8,120	8,120	8,120

In each succeeding year, the amount payable increases (in this illustration) by $150 (amount may vary if CPI applies).

SAMPLE BENEFIT COMPUTATIONS FOR *HYBRID* MEMBER RETIRING DECEMBER 31, 2014 (ASSUMES CONTINUOUS HYBRID COVERAGE FROM DATE OF HIRE)

DATA:

A.	$45,000	Final Average Compensation
B.	32	Years of Credited Service
C.	60	Age of Member; Spouse's Age = 55
D.	$57,600	Estimated Accumulated 4% Member Contributions

HYBRID ALTERNATIVES:

A. Take a one-time ***cash distribution*** of 1.5 times $57,600 = $86,400, at age 60. (Plan will not owe Member any other benefits.)

B. Elect a ***annual pension benefit*** = the greater of

(a) 1.5% x 32 years x $45,000 = $21,600 OR

(b) 2 x $57,600 / 12.2104# = $9,435

plus cost of living adjustment* (COLA) each July 1 after one year of retirement.

Assume Member elects B under the Joint & 100% Survivor form of benefit and COLA rate = 2% each year:

$21,600 x .84909 = $18,340

* *COLA rate = lesser of 2% or the rate of change in the CPI in the prior calendar year; COLA rate is applied to benefit paid the prior July 1.*

\# *Factors effective January 1, 2011.*

PROJECTED BENEFITS:

Year Ended December 31	Retirant's Benefit (Retirant & Spouse Alive)	Spouse's Benefit (After Retirant's Death)	Retirant's Benefit (After Spouse's Death)
2015	$18,340	$18,340	$18,340
2016	18,707	18,707	18,707
2017	19,074	19,074	19,074
2018	19,441	19,441	19,441

In each succeeding year, the amount payable increases (in this illustration) by $367 (amount may vary if CPI applies).

SUMMARY OF REPORTED ASSETS
AS OF DECEMBER 31, 2014

The ledger balances of the Retirement System as of December 31, 2014 were reported to the actuary to total $135,893,438, as follows:

Accounts	December 31, 2014	December 31, 2013
Reserve for Employees' Contributions		
General members	$ 3,722,028	$ 4,031,696
Police and Fire members	3,724,287	3,829,283
Hybrid members	1,776,746	1,536,057
Totals	9,223,061	9,397,036
Reserve for Employer Contributions		
General members	26,107,706	36,175,567
Police and Fire members	(411,678)	(7,463,444)
Hybrid members	3,100,190	3,919,463
Totals	28,796,218	32,631,586
Reserve for Retired Members' Benefits	97,666,365	92,990,820
Reserve for DROP Accounts	207,794	125,224
Reserve for Market Value Difference	0	0
Market Value of Assets	$135,893,438	$135,144,666

Revenues and Expenditures

	Year Ended December 31 2014	Year Ended December 31 2013
REVENUES:		
a. Member contributions	$ 444,745	$ 427,515
b. City contributions	1,555,266	1,410,555
c. Investment income		
1. Interest and dividends	2,056,830	1,999,826
2. Gain or (loss) on sales	6,177,694	18,940,148
3. Asset appreciation	0	0
d. Total revenues	10,234,535	22,778,044
EXPENDITURES:		
a. Refunds of member contributions	36,938	26,201
b. Annuity withdrawal	0	0
c. Retirement benefits paid	8,539,491	8,212,635
d. Miscellaneous	20,583	21,368
e. Investment expense	888,751	809,709
f. Total expenditures	9,485,763	9,069,913
RESERVE INCREASE:		
Total revenues minus total expenditures	$ 748,772	$ 13,708,131

Market Value of Assets

	2014	2013
Cash	$ 0	$ 0
Receivables/Payables	(602,583)	(449,306)
Other short-term	1,584,824	1,623,883
Accrued interest and dividends	351,212	376,769
Bonds - government	10,609,004	14,759,723
- corporate	27,017,486	27,384,418
- mortgages and foreign bonds	10,342,664	2,459,756
- other bonds	0	0
Stocks - common	31,948,990	33,049,280
- preferred	0	0
- other stocks	46,010,108	47,968,149
Real estate investments	8,625,929	7,962,426
Other assets	5,804	9,568
Total Market Value of Assets	135,893,438	135,144,666
Increase in Assets		
From reserve increase	748,772	13,708,131
Unreconciled difference	0	0

In financing the accrued service costs and reserves, the ledger balances of $135,893,438 and the funding value adjustment were applied as follows:

	Ledger Balances applied to			
	Member Accrued Service Costs	Retirant and Beneficiary Benefits	Funding Value Adjustment	Total Assets Applied
Employees' Contributions				
General members	$ 3,722,028	$ 0	$ 0	$ 3,722,028
Police and Fire members	3,724,287			3,724,287
Hybrid members	1,776,746			1,776,746
Totals	9,223,061	0	0	9,223,061
Employer Contributions				
General members	25,998,081	109,625	(3,019,184)	23,088,522
Police and Fire members	(1,790,254)	1,378,576	(2,558,794)	(2,970,472)
Hybrid members	3,283,702	(183,512)	(258,325)	2,841,865
Totals	27,491,529	1,304,689	(5,836,303)	22,959,915
Retired Benefit Payments#		97,874,159		97,874,159
Totals	$36,714,590	$99,178,848	$(5,836,303)	$130,057,135

 # Includes reserves for DROP accounts.

RETIRANT AND BENEFICIARY COMPARATIVE SCHEDULE

Valuation Date December 31	Annual Allowances Added No.	Added Amount	Removed No.	Removed Amount	End of Year No.	End of Year Amount	% Incr.	Expected Removed No.^	Expected Removed Annual Amount	Ratio of No. Active to No. Retired	Annual Allowances as a % of Payroll
1983	6	$ 32,102	3	$ 4,898	90	$ 377,404	7.8 %	3.4	$ 8,469	2.9	6.0 %
1984	7	73,321	1	1,360	96	449,365	19.1 %	3.6	9,378	2.7	6.9 %
1985	11	106,338	9	28,916	98	526,787	17.2 %	3.7	10,476	2.7	7.8 %
1986	12	183,554	3	11,946	107	698,395	32.6 %	4.2	12,260	2.4	10.1 %
1987	4	61,683	2	4,513	109	755,565	8.2 %	4.3	13,750	2.4	10.7 %
1988	10	117,976	7	31,939	112	841,602	11.4 %	4.6	16,668	2.4	10.8 %
1989	10	133,485	7	30,728	115	944,359	12.2 %	4.6	18,465	2.2	12.1 %
1990	3	21,060	4	12,468	114	952,951	0.9 %	4.8	20,352	2.4	10.5 %
1991	19	250,460	8	30,706	125	1,172,705	23.1 %	4.6	21,722	2.1	13.3 %
1992	16	297,352	6	12,939	135	1,457,118	24.3 %	4.8	23,836	1.9	15.6 %
1993	10	308,378	7	42,985	138	1,722,511	18.2 %	4.8	24,445	1.9	18.7 %
1994	8	191,304	2	8,191	144	1,905,624	10.6 %	4.7	30,636	1.8	19.7 %
1995	19	350,373	9	114,849	153	2,141,148	12.4 %	4.4	71,016	1.6	22.1 %
1996	13	213,394	10	95,392	156	2,259,150	5.5 %	4.8	79,164	1.6	22.8 %
1997	13	259,745	4	34,781	165	2,484,114	10.0 %	5.1	55,092	1.5	23.6 %
1998	10	167,935	12	203,731	163	2,448,318	(1.4)%	5.1	48,216	1.6	23.1 %
1999	14	359,489	7	87,216	170	2,720,591	11.1 %	5.9	64,332	1.5	26.0 %
2000	8	161,432	5	35,632	173	2,846,392	16.3 %	6.2	71,448	1.5	24.0 %
2001	12	322,924	7	63,269	178	3,106,047	9.1 %	6.6	76,284	1.5	26.1 %
2002	4	103,833	4	23,884	178	3,185,996	2.6 %	7.0	83,736	1.5	25.5 %
2003	14	363,172	8	163,536	184	3,385,632	6.3 %	6.1	72,516	1.3	26.9 %
2004*	20	600,971	10	115,910	194	3,870,693	14.3 %	6.6	87,156	1.2	29.7 %
2005	15	886,100	7	73,162	202	4,683,631	21.0 %	6.6	115,488	1.2	35.4 %
2006	14	323,353	6	77,574	210	4,929,410	5.2 %	6.9	126,447	1.1	37.9 %
2007	10	397,641	10	123,374	210	5,203,677	5.6 %	7.3	142,544	1.1	38.9 %
2008	34	1,438,533	2	38,940	242	6,603,270	26.9 %	8.0	162,084	0.8	58.5 %
2009	9	351,759	8	142,896	243	6,812,133	3.2 %	8.1	167,980	0.8	61.6 %
2010#	10	321,610	4	69,176	249	7,064,567	3.7 %	8.7	180,172	0.7	65.7 %
2011	16	854,874	2	44,768	263	7,874,673	11.5 %	9.4	201,591	0.6	81.7 %
2012	8	390,843	3	51,290	268	8,214,226	4.3 %	10.2	218,184	0.6	86.1 %
2013	7	274,106	8	131,955	267	8,356,377	1.7 %	10.6	235,203	0.6	87.7 %
2014	14	621,502	7	167,007	274	8,810,872	5.4 %	10.9	246,720	0.5	95.7 %

* *Annual allowances do not include one-time adjustments made to non-COLA retirees after December 31, 2004.*
\# *Annual allowances do not reflect the fixed COLA increase applied to eligible retirees, for valuation purposes.*
^ *Expected number of removals in the coming year.*

RETIRANTS AND BENEFICIARIES DECEMBER 31, 2014
TABULATED BY TYPE OF ALLOWANCES BEING PAID

Type of Allowances Being Paid	No.	Annual Allowances
Age and Service Allowances		
Option A allowance - benefit terminating at death of retirant	70	$2,320,921
Option B allowance - 100% joint and survivor benefit	73	2,535,135
Option C allowance - 50% joint and survivor benefit	45	1,946,934
Option D 120 - 120 months certain and life or Option D180 - 180 months certain and life	18	615,669
Allowance to survivor beneficiary of deceased retirant	35	632,576
Total age and service allowances	243	8,071,936
Casualty Allowances		
Duty disability allowance	4	92,228
Non-duty disability allowance	18	418,971
Total Non-duty disability	22	511,199
Allowance to survivor beneficiary of deceased member		
Duty death	0	0
Non-duty death	11	248,438
Total	11	248,438
Total casualty allowances	33	759,637
Total Allowances Being Paid	276	$8,831,573

RETIRANTS AND BENEFICIARIES DECEMBER 31, 2014
TABULATED BY AGE

	Age & Service		Casualty		Totals	
Ages	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
Under 40	1	$ 42,876	1	$ 3,203	2	$ 46,079
40-44						
45-49						
50-54	15	856,008	3	102,467	18	958,475
55-59	39	1,757,233	9	286,105	48	2,043,338
60	4	132,222	1	17,524	5	149,746
61	6	218,472			6	218,472
62	6	250,629	1	16,601	7	267,230
63	9	391,052	1	10,145	10	401,197
64	7	244,678			7	244,678
65	13	491,042	1	30,568	14	521,610
66	17	684,637	1	30,349	18	714,986
67	4	102,153	2	31,049	6	133,202
68	8	362,226	1	6,242	9	368,468
69	3	164,210			3	164,210
70	7	222,667			7	222,667
71	4	149,414	1	19,826	5	169,240
72	4	37,592			4	37,592
73	8	172,500			8	172,500
74	7	174,420			7	174,420
75	9	204,172			9	204,172
76	5	92,169	1	35,461	6	127,630
77	4	88,510	1	22,021	5	110,531
78	2	72,724	2	46,617	4	119,341
79	9	246,666	1	18,435	10	265,101
80	4	90,544			4	90,544
81	3	39,868			3	39,868
82	5	57,304	1	11,647	6	68,951
83	6	116,127			6	116,127
84	6	63,070	2	22,677	8	85,747
85	4	82,519	2	44,749	6	127,268
86	3	83,963			3	83,963
87	5	99,588			5	99,588
88	2	32,198			2	32,198
89	1	20,778	1	3,951	2	24,729
90 & Over	11	207,004			11	207,004
Totals	**241**	**$8,051,235**	**33**	**$759,637**	**274**	**$8,810,872**

ACTIVE MEMBERS DECEMBER 31, 2014
TABULATED BY VALUATION DIVISIONS

Valuation Divisions	Teamsters No.	Teamsters Annualized Payroll	Others No.	Others Annualized Payroll	Total No.	Total Annualized Payroll
General members	8	$ 423,240	18	$1,174,452	26	$1,597,692
Police and Fire members	0	0	48	3,477,093	48	3,477,093
Water Department members	6	339,873	3	252,566	9	592,439
Sewage Disposal members	5	265,674	5	315,327	10	581,001
Hybrid members	0	0	55	2,959,266	55	2,959,266
Total Active Members	19	$1,028,787	129	$8,178,704	148	$9,207,491

Also included in the valuation were 20 former members eligible for a deferred pension.

Comparative Schedule

Valuation Date December 31	Active Members Gen.	P.F.	Water	Sew.	Hybrid	Total	Annualized Payroll	Average Age	Average Service	Average Pay	% Inc.
1983	116	94	29	25		264	$ 6,311,002	40.8	12.1	$23,905	7.2 %
1984	112	93	29	26		260	6,551,873	40.8	12.3	25,200	5.4 %
1985	113	95	29	27		264	6,791,152	40.7	12.4	25,724	2.1 %
1986	113	94	28	24		259	6,898,835	40.5	12.4	26,636	3.5 %
1987	108	90	29	25		252	7,082,224	41.1	13.1	28,104	5.5 %
1988	108	94	28	28		258	7,827,433	41.1	13.1	30,339	8.0 %
1989	101	94	30	28		253	7,787,845	41.2	13.3	30,782	1.5 %
1990	121	95	28	28		272	9,106,876	41.2	13.1	33,481	8.8 %
1991	108	92	32	29		261	8,817,472	41.1	13.1	33,783	0.9 %
1992	109	87	32	29		257	9,354,039	41.1	12.6	36,397	7.7 %
1993	110	88	30	31		259	9,190,716	41.2	13.0	35,485	(2.5)%
1994	106	87	29	31		253	9,651,905	41.8	13.4	38,150	7.5 %
1995	109	86	27	29		251	9,707,937	41.3	12.9	38,677	1.4 %
1996	106	86	27	31		250	9,923,449	41.4	12.8	39,694	2.6 %
1997	89	87	28	31	17	252	10,529,013	41.5	13.1	41,782	5.3 %
1998	80	88	27	30	29	254	10,584,003	42.2	13.2	41,669	(0.3)%
1999	76	83	25	30	35	249	10,474,154	42.7	13.2	42,065	0.9 %
2000	73	85	23	28	46	255	11,856,866	42.6	13.1	46,498	10.5 %
2001	72	85	23	28	51	259	11,906,969	43.0	13.2	45,973	(1.1)%
2002	71	87	23	27	51	259	12,514,944	43.8	13.9	48,320	5.1 %
2003	66	86	21	26	46	245	12,572,735	44.2	14.5	51,317	6.2 %
2004	60	86	21	23	52	242	13,015,922	43.9	13.9	53,785	6.2 %
2005	59	85	20	21	62	247	13,232,960	43.8	13.3	53,575	(0.4)%
2006	56	85	19	21	60	241	13,007,162	44.2	13.8	53,972	0.7 %
2007	54	82	18	21	57	232	13,371,922	45.1	14.6	57,638	6.8 %
2008	44	71	15	13	49	192	11,289,204	44.6	13.6	58,798	2.0 %
2009	41	67	14	14	53	189	11,061,644	45.2	14.1	58,527	(0.5)%
2010	37	62	13	14	54	180	10,758,097	45.9	14.7	59,767	2.1 %
2011	36	45	13	12	51	157	9,636,542	46.7	15.4	61,379	2.7 %
2012	33	50	11	12	56	162	9,543,247	46.0	14.7	58,909	(4.0)%
2013	30	50	11	12	57	160	9,524,423	46.6	15.2	59,528	1.1 %
2014	26	48	9	10	55	148	9,207,491	46.6	15.1	62,213	4.5 %

GENERAL ACTIVE MEMBERS - DECEMBER 31, 2014
BY AGE AND YEARS OF SERVICE

Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
35-39				1				1	$ 55,651
40-44					1			1	91,551
45-49				3		2		5	319,403
50-54				2	1	3	2	8	416,060
55-59				2	3	4		9	547,516
60					1			1	63,829
63		1						1	103,682
Totals		**1**		**8**	**6**	**9**	**2**	**26**	**$1,597,692**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age:	52.7	years
Service:	23.6	years
Annual Pay:	$61,450	

POLICE ACTIVE MEMBERS - DECEMBER 31, 2014
BY AGE AND YEARS OF SERVICE

Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	2							2	$ 91,632
25-29	5							5	246,268
30-34	3		1					4	221,170
35-39		1	4	1				6	464,528
40-44			3	4				7	564,869
45-49		1		2	3	3		9	675,509
50-54				1	1	1		3	247,645
55-59					1	1		2	181,216
Totals	**10**	**2**	**8**	**8**	**5**	**5**		**38**	**$2,692,837**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 40.3 years

Service: 13.8 years

Annual Pay: $70,864

FIRE DEPARTMENT ACTIVE MEMBERS - DECEMBER 31, 2014
BY AGE AND YEARS OF SERVICE

Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
35-39				1				1	$ 87,859
40-44			3	2				5	349,429
45-49				1	1			2	182,593
50-54			1		1			2	164,375
Totals			**4**	**4**	**2**			**10**	**$784,256**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 44.3 years

Service: 15.9 years

Annual Pay: $78,426

WATER DEPARTMENT ACTIVE MEMBERS - DECEMBER 31, 2014
BY AGE AND YEARS OF SERVICE

Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
35-39				1				1	$ 55,613
45-49				2	3			5	310,154
50-54					2	1		3	226,672
Totals				**3**	**5**	**1**		**9**	**$592,439**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 48.1 years

Service: 21.8 years

Annual Pay: $65,827

SEWAGE DISPOSAL ACTIVE MEMBERS - DECEMBER 31, 2014
BY AGE AND YEARS OF SERVICE

	Years of Service to Valuation Date							Totals	
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
45-49				1	1			2	$139,641
50-54					2	2	1	5	258,778
55-59				2	1			3	182,582
Totals				**3**	**4**	**2**	**1**	**10**	**$581,001**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age:	51.5	years
Service:	23.0	years
Annual Pay:	$58,100	

HYBRID ACTIVE MEMBERS - DECEMBER 31, 2014
BY AGE AND YEARS OF SERVICE

Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	1							1	$ 33,763
25-29	2							2	82,310
35-39	3	1	1	1				6	269,973
40-44	5	3	5	3				16	900,021
45-49	3	2	4	1				10	591,479
50-54	1		1	2				4	194,100
55-59	1	3	1	1				6	304,356
60		2	2	1	1			6	351,801
61			1					1	61,532
62		1						1	75,664
64			1					1	50,678
65			1					1	43,589
Totals	**16**	**12**	**17**	**9**	**1**			**55**	**$2,959,266**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 47.3 years

Service: 9.3 years

Annual Pay: $53,805

ACTIVE MEMBERS ADDED TO AND REMOVED FROM ROLLS

Year Ended December 31	Number Added During Year A	Number Added During Year E	Terminations During Year: Retired A	Retired E	Disabled A	Disabled E	Died-in-Service A	Died-in-Service E	Other A	Other E	Active Members End of Year
2000	18	12	8	3.7	1	0.5	0	0.6	3	10.7	255
2001	13	9	6	4.0	0	0.5	0	0.5	3	11.2	259
2002*	7	7	2	7.2	0	0.2	0	0.2	5	3.4	259
2003	4	18	9	8.1	2	0.2	0	0.2	7	7.2	245
2004	16	19	16	7.2	0	0.3	0	0.3	3	7.2	242
2005	21	16	11	7.2	0	0.3	0	0.3	5	7.2	247
2006	8	14	9	7.9	0	0.2	1	0.2	4	2.5	241
2007	2	11	5	9.1	0	0.3	0	0.3	6	7.5	232
2008	3	43	34	8.7	0	0.3	0	0.2	9	5.6	192
2009*	4	7	3	2.6	2	0.3	1	0.2	1	4.1	189
2010	1	10	7	5.1	1	0.4	0	0.2	2	3.9	180
2011	2	25	13	5.7	0	0.4	0	0.2	12	3.1	157
2012	15	10	5	3.8	2	0.4	0	0.2	3	2.5	162
2013	9	11	3	4.1	0	0.4	1	0.2	7	4.0	160
2014	5	17	10	7.0	1	0.4	2	0.2	4	4.2	148
15-Year Total	128	229	141	91.4	9	5.1	5	4.0	74	84.3	

* *Change in assumptions*

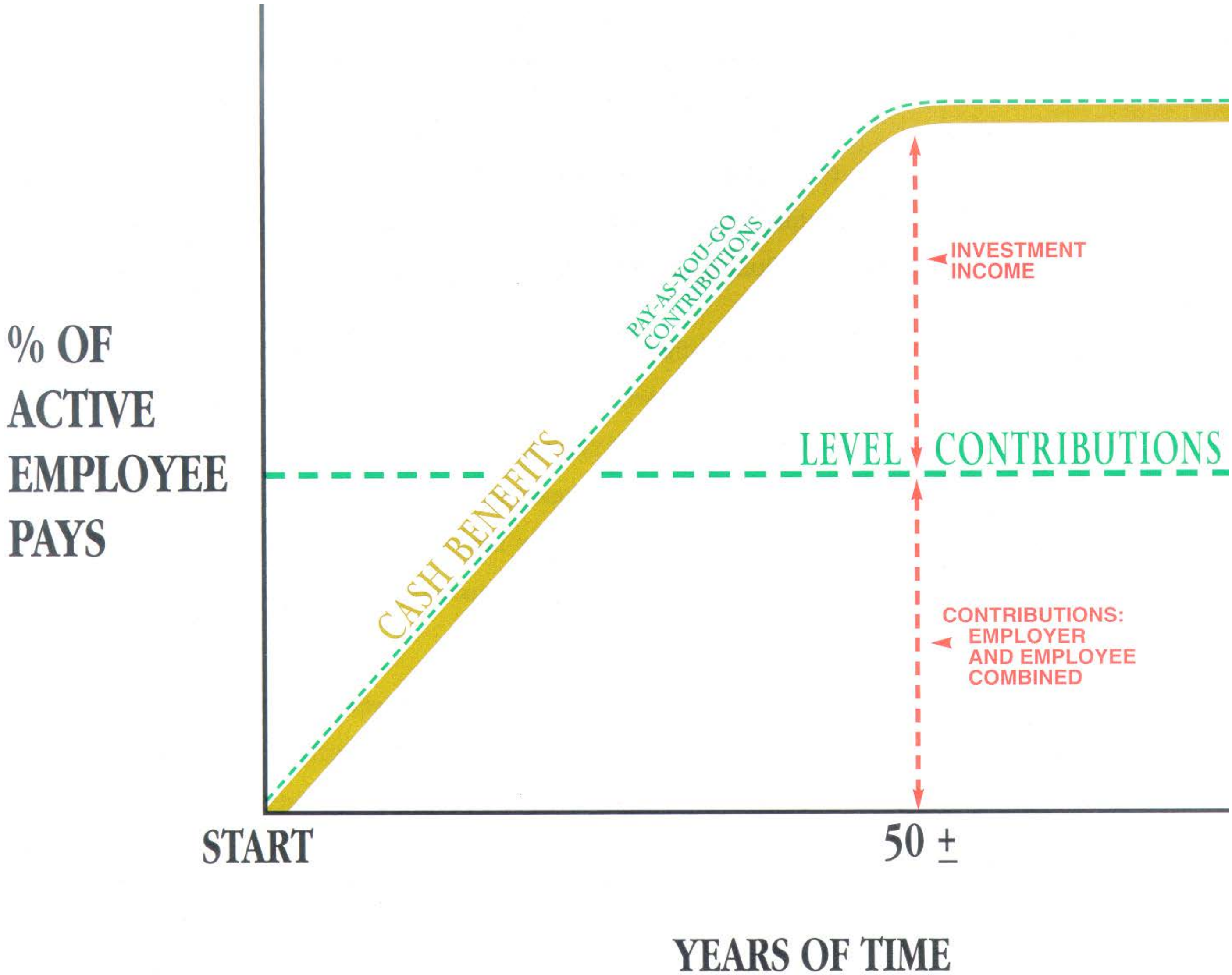
"A" denotes actual experience
"E" denotes expected experience

DEFERRED MEMBERS

	Count	Average Benefit
General	6	8,560
Police	0	0
Fire	3	30,054
Hybrid	11	5,259
Total	20	9,968

SECTION C

ACTUARIAL VALUATION PROCESS, ACTUARIAL COST METHODS, ACTUARIAL ASSUMPTIONS, AND DEFINITIONS OF TECHNICAL TERMS



CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

Economic Risk Areas
- Rates of investment return
- Rates of pay increase
- Changes in active member group size

Non-Economic Risk Areas
- Ages at actual retirement
- Rates of mortality
- Rates of withdrawal of active members (turnover)
- Rates of disability

THE ACTUARIAL VALUATION PROCESS

The actuarial valuation is the mathematical process by which the level contribution rate is determined, and the flow of activity constituting the valuation may be summarized as follows:

A. ***Covered person data***, furnished by plan administrator.

Retired lives now receiving benefits

Former employees with vested benefits not yet payable

Active employees

B. + ***Asset data*** (cash & investments), furnished by plan administrator

C. + ***Assumptions concerning future financial experience in various risk areas***, which assumptions are established by the Pension Board after consulting with the actuary

D. + ***A schedule of benefits*** to be provided by the plan

E. + ***The funding method*** for employer contributions (the long-term, planned pattern for employer contributions)

F. + ***Mathematically combining the assumptions, the funding method, the benefits, and the data***

G. = Determination of:

Plan Financial Position

and/or ***Employer's New Contribution Rate***

ACTUARIAL COST METHODS USED FOR THE DECEMBER 31, 2014 VALUATION

Normal Costs were calculated as follows:

The series of contributions payable from date of employment to accumulate the reserve of each member's projected allowance at time of retirement, death, or disability was computed using the assumptions summarized on the following pages. Each contribution in the series is a constant percentage of the member's year-by-year projected covered compensation. This method is commonly referred to as the entry-age actuarial cost method.

Actuarial Accrued Liability was computed and financed as follows:

Retirants and Beneficiaries. The actuarial present value of retirement allowances likely to be paid retirants and beneficiaries was computed using the investment return and mortality assumptions. This amount was financed by applicable actuarial assets.

Active and Inactive Members. The portion of the actuarial present value of benefits likely to be paid active and inactive members that is not covered by future normal cost contributions was computed using the assumptions outlined on the following pages. **The computed amount was reduced by applicable assets.**

Amortization Charges and Credits. Each year's unfunded actuarial accrued liability is amortized over a 25 year period.

Assets were valued using a 7-year smoothing method illustrated on page A-7.

SCHEDULE OF AMORTIZATIONS FOR DEVELOPMENT OF EMPLOYER CONTRIBUTION RATES ATTRIBUTABLE TO GAINS, LOSSES, AND PLAN AMENDMENTS

Description	Unfunded (Overfunded)	Amortization Years Initial	Amortization Years Remaining	Amortization Charge/(Credit) $	Amortization Charge/(Credit) % of Pay
GENERAL	$ (11,122,314)	30	25	$ (751,187)	(24.87)%
HYBRID	(769,488)	30	25	(49,350)	(1.53)%
POLICE	8,098,579	30	25	523,037	17.82 %
FIRE	9,973,912	30	25	657,611	76.93 %
TOTAL	**$ 6,180,689**			$ 380,111	

ACTUARIAL ASSUMPTIONS IN THE VALUATION PROCESS

The actuary calculates contribution requirements and actuarial present values for a retirement system by applying actuarial assumptions to the benefit provisions and people information of the system, using the actuarial cost methods described on page C-3.

The principal areas of risk which require assumptions about future experience are:

(i) long-term rates of investment return to be generated by the assets of the system

(ii) patterns of pay increases to members

(iii) rates of mortality among members, retirants and beneficiaries

(iv) rates of withdrawal of active members

(v) rates of disability among active members

(vi) the age patterns of actual retirements

In making a valuation, the actuary calculates the monetary effect of each assumption for as long as a present covered person survives - - a period of time which can be as long as a century.

The employer contribution rate has been computed to remain level from year to year so long as benefits and the basic experience and make-up of members do not change. Examples of favorable experience which would tend to reduce the employer contribution rate are:

(1) Investment returns in excess of 7.5 % per year.
(2) Member terminations at a higher rate than outlined on page C-9.
(3) Mortality among retirants and beneficiaries at a higher rate than indicated by the Mortality Table that is assumed.
(4) Increases in the number of active members.

Examples of unfavorable experience which would tend to increase the employer contribution rate are:

(1) Pay increases in excess of the rates outlined on page C-8.

(2) An acceleration in the rate of retirement from the rates outlined on page C-10.

(3) A pattern of hiring employees at older ages than in the past.

Actual experience of the system will not coincide exactly with assumed experience, regardless of the skill of the actuary and the precision of the calculations. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time one or more of the assumptions are modified to reflect experience trends (but not random or temporary year-to-year fluctuations). The rationale for the assumptions used in this valuation is included in the 5-year experience study ending December 31, 2009.

Investment Return

The investment return rate assumed in the valuations was 7.5% per year, compounded annually (net after administrative expenses).

The **Wage Inflation Rate** assumed in this valuation was 3.5% per year. The Wage Inflation Rate is defined to be the portion of total pay increases for an individual that are due to macro economic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes rated to individual merit and seniority effects.

While an exact **Price Inflation** assumption is not required to perform this valuation, we have assumed price inflation would not be lower than the fixed cost-of-living assumption (2% or 3% depending on division). A price inflation assumption on the order of 3.5% to 4.0% would be consistent with the other economic assumptions.

The assumed **real rate of return** over wage inflation is defined to be the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 7.5% investment return rate translates to an assumed real rate of return over wage inflation of 4.0%. The assumed real rate of return over price inflation would be higher – on the order of 3.5% to 4.5%, considering both an inflation assumption and an average expense provision.

The Active Member Population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at the wage inflation rate – 3.5% per year.

Pay increase assumptions for individual active members are shown for sample ages on page C-8. Part of the assumption for each age is for merit and/or seniority increase, and the other 3.5% recognizes wage inflation, including price inflation, productivity increases, and other macro economic forces. Changes actually experienced in average pay and total payroll have been as follows:

	Year Ended					3-Year	5-Year
Increase in	**2014**	**2013**	**2012**	**2011**	**2010**	**Average**	**Average**
Average pay	4.5 %	1.1 %	(4.0)%	2.7 %	2.1 %	0.5 %	1.2 %
Total payroll	(3.3)%	(0.2)%	(1.0)%	(10.4)%	(2.7)%	(1.5)%	(3.6)%

The nominal rate of return was computed using the approximate formula i = I divided by 1/2 (A + B - I), where I is recognized investment income net of expenses, A is the beginning of year funding value of assets, and B is the end of year funding value.

These rates of return should not be used for measurement of an investment advisor's performance or for comparisons with other systems -- ***to do so will mislead***.

Pay Projections. These assumptions are used to project current pays to those upon which benefits will be based. The assumptions were first used for the December 31, 2009 valuation.

	Annual Rate of Pay Increase for Sample Ages					
	General, Water, Sewage, Hybrid			Police - Fire		
Sample Ages	Base (Economic)	Merit & Longevity	Total	Base (Economic)	Merit & Longevity	Total
20	3.5%	3.0%	6.5%	3.5%	2.3%	5.8%
25	3.5%	2.4%	5.9%	3.5%	2.3%	5.8%
30	3.5%	2.1%	5.6%	3.5%	2.0%	5.5%
35	3.5%	1.9%	5.4%	3.5%	0.8%	4.3%
40	3.5%	1.7%	5.2%	3.5%	0.2%	3.7%
45	3.5%	1.3%	4.8%	3.5%	0.2%	3.7%
50	3.5%	0.9%	4.4%	3.5%	0.2%	3.7%
55	3.5%	0.5%	4.0%	3.5%	0.1%	3.6%
60	3.5%	0.1%	3.6%	3.5%	0.0%	3.5%
65	3.5%	0.0%	3.5%	3.5%	0.0%	3.5%
Ref.		354			353	

If the number of active members remains constant, the total active member payroll will increase 3.5% annually, the base portion of the individual pay increase assumptions. This increasing payroll was partially recognized in amortizing unfunded actuarial accrued liabilities.

Mortality Table. The RP2000 Mortality Table. This table was first used for the December 31, 2009 valuations. The mortality table is selected by the Board of Trustees. This assumption is needed to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. Sample values follow:

	Single Life Retirement Values			
Sample Attained	Present Value of $1 Monthly for Life		Future Life Expectancy (Years)	
Ages	Men	Women	Men	Women
55	$133.68	$138.42	26.18	28.91
60	123.21	129.20	21.74	24.38
65	110.73	118.12	17.61	20.12
70	96.66	105.41	13.88	16.23
75	81.22	91.30	10.57	12.74
80	65.29	76.14	7.75	9.68
Ref:	506 x 1.00	507 x 1.00		

The membership size in this group is not sufficiently large to determine if there is a margin for mortality improvements. However, based upon our experience with a broad cross section of public sector plans similar in nature to this plan, it is our opinion that there is no provision for future mortality improvement in the current mortality assumption. We recommend this table be updated with the next experience study to include additional margin for future improvement in mortality.

Rates of separation from active membership. The rates apply to members separating from active employment before retirement, death or disability. It was assumed that general, water and sewage members who quit prior to age 45 will withdraw their accumulated contributions. For Police and Fire, age 50 was assumed.

Sample Ages	Years of Service	% of Active Members Separating Within Next Year: General, Water, and Sewage	Hybrid	Police	Fire
ALL	0	24.00%	24.00%	9.60%	8.00%
	1	16.00%	16.00%	7.20%	5.60%
	2	12.00%	12.00%	5.60%	4.00%
	3	8.00%	8.00%	4.00%	3.20%
	4	5.60%	5.60%	3.60%	2.80%
20	5 & Over	3.60%	7.20%	2.70%	2.10%
25		3.60%	7.20%	2.70%	2.10%
30		3.30%	6.60%	2.34%	1.74%
35		2.64%	5.28%	1.38%	0.90%
40		1.11%	2.22%	0.54%	0.36%
45		0.75%	1.50%	0.30%	0.30%
50		0.75%	1.50%	0.30%	0.30%
55		0.75%	1.50%	0.30%	0.30%
60		0.75%	1.50%	0.30%	0.30%
65		0.75%	1.50%	0.30%	0.30%
Ref.		11 x 0.8	11 x 0.8	29 x 0.8	30 x 0.8
		59 x 0.6	59 x 1.2	53 x 0.6	54 x 0.6

The rates in this table were first used in the December 31, 2009 valuation.

Rates of Disability. These assumptions represent the probabilities of active members becoming disabled.

Sample Ages	Percent Becoming Disabled Within Next Year: General, Water, Sewage and Hybrid	Police and Fire
20	0.04%	0.12%
25	0.04%	0.12%
30	0.04%	0.12%
35	0.04%	0.12%
40	0.10%	0.30%
45	0.13%	0.40%
50	0.25%	0.74%
55	0.45%	1.34%
60	0.71%	2.12%
65	0.83%	2.49%
Ref.	9 x 0.5	9 x 1.5

The rates in this table were first used in the December 31, 2009 valuation.

Rates of Retirement. These rates are used to measure the probabilities of an eligible member retiring during the next year.

Retirement Ages	Percent of Active Members Retiring within Next Year* General, Water, and Sewage	Appointed	Hybrid	Police	Fire	Rule of 80 General, Water, and Sewage
50				40.0%	40.0%	20.0%
51				30.0%	30.0%	20.0%
52				25.0%	25.0%	20.0%
53				25.0%	25.0%	20.0%
54				25.0%	25.0%	20.0%
55	25.0%	22.5%	20.0%	25.0%	25.0%	25.0%
56	25.0%	15.0%	20.0%	25.0%	25.0%	25.0%
57	25.0%	15.0%	20.0%	25.0%	25.0%	25.0%
58	25.0%	15.0%	20.0%	25.0%	25.0%	25.0%
59	25.0%	15.0%	20.0%	25.0%	25.0%	25.0%
60	25.0%	22.5%	40.0%	50.0%	100.0%	30.0%
61	25.0%	12.0%	40.0%	50.0%		30.0%
62	25.0%	22.5%	40.0%	50.0%		30.0%
63	25.0%	13.5%	40.0%	50.0%		30.0%
64	25.0%	22.5%	40.0%	50.0%		30.0%
65	50.0%	70.0%	40.0%	100.0%		50.0%
66	50.0%	30.0%	40.0%			50.0%
67	50.0%	40.0%	40.0%			50.0%
68	50.0%	50.0%	40.0%			50.0%
69	50.0%	60.0%	40.0%			50.0%
70	100.0%	100.0%	100.0%			100.0%
Ref.	1865	1867	1868	1869	1870	1866

* *Fire members and Police members hired prior to 7/1/2008, retirement rates were changed to 75% once members reach 30.2 years of service. For Police members hired on or after 7/1/2008, retirement rates were changed to 75% once members reach 37.2 years of service.*

The rates in this table were first used in the December 31, 2009 valuation.

The above probabilities apply to members satisfying the conditions described on page B-5.

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS
DECEMBER 31, 2014

Marriage Assumption:	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits for General and Police/Fire members. 80% of males and 70% of females are assumed to be married for purposes of death-in-service benefits for Hybrid members. Male spouses are assumed to be three years older than female spouses for active member valuation purposes. In retired or inactive cases where spouse information is needed, but not available, the three-year age difference is also assumed.
Pay Increase Timing:	Beginning of (Fiscal) year for all groups. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
Decrement Timing:	Decrements are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and mortality decrements do not operate during the first 10 years of service.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Normal Form of Benefit:	The assumed normal form of benefit is a straight life benefit, except where otherwise noted.
Final Average Compensation (FAC) Adjustment:	The normal cost and actuarial accrued liability, for age and service benefits were increased by 4% for the General and Hybrid members and 2% for the Police and Fire members to account for inclusion of longevity, overtime pay, vacation pay, etc. in the FAC used to calculate retirement benefits.

Hybrid Benefit Election: Upon normal retirement eligibility, Hybrid members can choose the Monthly Benefit Option or the Lump Sum Option. For valuation purposes, it was assumed that 80% of members would elect the Monthly Benefit Option and 20% would elect the Lump Sum Option.

Upon deferred retirement eligibility, Hybrid members can choose the Immediate Option or the Deferred Option. For valuation purposes, it was assumed that 30% would elect the Immediate Option and 70% would elect the Deferred Option.

Option Factors: Option factors are based upon 7.5% interest and the RP2000 Mortality table with a 90% Unisex Blend. The Annuity Withdrawal reduction factor is based upon 7.50% interest and the RP2000 Mortality table with a 50% Unisex Blend.

Accrued Service. Service credited under the system which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between the actuarial present value of system benefits and the actuarial present value of future normal costs. Also referred to as “past service liability.”

Actuarial Assumptions. Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future benefits” between future normal costs and actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

Actuarial Equivalent. One series of payments is said to be actuarially equivalent to another series of payments if the two series have the same actuarial present value.

Actuarial Gain (Loss). The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities -- during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.

Actuarial Present Value. The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payments.

Amortization. Paying off an interest-discounted amount with periodic payments of interest and (generally) principal -- as opposed to paying off with a lump sum payment.

Credited Projected Benefit. The portion of a member's projected benefit attributable to service before the valuation date - allocated based on the ratio of accrued service to projected total service and based on anticipated future compensation.

Normal Cost. The portion of the actuarial present value of future benefits that is assigned to the current year by the actuarial cost method. Sometimes referred to as "current service cost."

Unfunded Actuarial Accrued Liabilities. The difference between actuarial accrued liabilities and valuation assets. Sometimes referred to as "unfunded past service liability" or "unfunded supplemental present value."

Most retirement systems have unfunded actuarial accrued liabilities. They arise each time new benefits are added and each time an actuarial loss occurs.

The existence of unfunded actuarial accrued liabilities is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liabilities do not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liabilities and the trend in its amount (after due allowance for devaluation of the dollar).

Valuation Assets. The value of cash, investments and other property belonging to a pension plan, as used for the purpose of an actuarial valuation.

Sec. 20m. The governing board vested with the general administration, management, and operation of a system or other decision-making body that is responsible for implementation and supervision of any system shall confirm in the annual actuarial valuation and the summary annual report required under section 20h(2) that each plan under this act provides for the payment of the required employer contribution as provided in this section and shall confirm in the summary annual report that the system has received the required employer contribution for the year covered in the summary annual report. The required employer contribution is the actuarially determined contribution amount. An annual required employer contribution in a plan under this act shall consist of a current service cost payment and a payment of at least the annual accrued amortized interest on any unfunded actuarial liability and the payment of the annual accrued amortized portion of the unfunded principal liability. For fiscal years that begin before January 1, 2006, the required employer contribution shall not be determined using an amortization period greater than 40 years. For years that begin after December 31, 2005, the required employer contribution shall not be determined using an amortization period greater than 30 years. In a plan year, any current service cost payment may be offset by a credit for amortization of accrued assets, if any, in excess of actuarial accrued liability. A required employer contribution for a plan administered under this act shall allocate the actuarial present value of future plan benefits between the current service costs to be paid in the future and the actuarial accrued liability. The governing board vested with the general administration, management, and operation of a system or other decision-making body of a system shall act upon the recommendation of an actuary and the board and the actuary shall take into account the standards of practice of the actuarial standards board of the American Academy of Actuaries in making the determination of the required employer contribution.

SECTION D

FINANCIAL REPORTING

This information is presented in draft form for review by the System's auditor. Please let us know if there are any items the auditor changes so that we may maintain consistency with the System's financial statements.

The information on the following pages should be used for Employer Reporting under GASB Statement No. 27. Information to be used for plan reporting is now issued in a separate report in accordance with GASB Statement No. 67.

STATEMENT OF PLAN NET ASSETS
AS OF DECEMBER 31, 2013 AND 2014

		2014	2013
Assets			
Cash and short-term investments			
Cash		$ 0	$ 0
Money market mutual funds		1,584,824	1,623,883
Subtotals		1,584,824	1,623,883
Receivables			
Accounts receivable/(payable)		(602,583)	(449,306)
Accrued interest and dividends		351,212	376,769
Subtotals		(251,371)	(72,537)
Investments, at fair value			
Bonds	- government	10,609,004	14,759,723
	- corporate	27,017,486	27,384,418
	- foreign bonds	10,342,664	2,459,756
Stocks	- common	31,948,990	33,049,280
	- preferred	0	0
	- other equity	15,713,943	15,906,773
Mutual Funds		30,296,165	32,061,376
Real Estate & Mortgages		8,625,929	7,962,426
Other Assets		5,804	9,568
Subtotals		134,559,985	133,593,320
Net assets held in trust for pension benefits (A schedule of funding progress for the plan is presented on page D-6)		$135,893,438	$135,144,666

STATEMENT OF CHANGES IN PLAN NET ASSETS
FOR THE YEARS ENDED DECEMBER 31, 2013 AND 2014

	Reconciliation as of December 31, 2014	Reconciliation as of December 31, 2013
Additions		
Contributions		
Employer	$ 1,555,266	$ 1,410,555
Plan members	444,745	427,515
Total contributions	2,000,011	1,838,070
Investment return		
Net appreciation	0	0
Interest and dividends	2,056,830	1,999,826
Gain on sale of securities	6,177,694	18,940,148
Miscellaneous	0	0
	8,234,524	20,939,974
Less investment expense	888,751	809,709
Net investment return	7,345,773	20,130,265
Total additions	9,345,784	21,968,335
Deductions		
Benefits	8,539,491	8,212,635
Refunds of contributions	36,938	26,201
Other	20,583	21,368
Total deductions	8,597,012	8,260,204
Net increase	748,772	13,708,131
Net assets held in trust for pension benefits		
Beginning of year	135,144,666	121,436,535
End of year	$135,893,438	$135,144,666

Plan Description and Contribution Information

Membership information as of December 31, 2014, the date of the latest actuarial valuation, is as follows:

	General	Police	Fire	Hybrid	Total
Retirees and beneficiaries	147	50	61	16	274
Terminated vested members	6	0	3	11	20
Active members	45	38	10	55	148
Total	**198**	**88**	**74**	**82**	**442**

Plan Description. The City of Monroe Employees Retirement System is a single-employer defined benefit pension plan that includes hybrid (combination of defined benefit and defined contribution) features and covers the General, Police, Fire, Water Department, and Sewage Disposal employees of the City of Monroe.

The plan provides retirement, disability, death, and termination benefits to eligible plan members and their beneficiaries.

Contributions. Plan members contribute between 2.0% and 5.5% of annual pay to the Fund depending on the unit in which they are employed. See the table on page B-5.

The employer's funding policy provides for periodic employer contributions based upon a ***fundamental financial objective of having rates of contribution which remain relatively level from generation to generation of the City of Monroe citizens.*** To determine the employer contribution rates and to assess the extent to which the fundamental financial objective is being achieved, the System has actuarial valuations prepared annually. In preparing those valuations, the entry age actuarial cost method is used to determine normal cost and actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized by level percent-of-payroll contributions over a period of future years not in excess of 30.

On the basis of the December 31, 2014 actuarial valuation, the employer contribution rates were determined to be as follows:

		Percents of Active Member Payroll				
	Contributions for	**General**	**Police**	**Fire**	**Hybrid**	**Total**
(1)	Normal Cost	14.56 %	19.17 %	20.77 %	9.26 %	14.77 %
(2)	Accrued Liability	(24.87)%	17.82 %	76.93 %	(1.53)%	8.11 %
(3)	Total	(10.31)%	36.99 %	97.70 %	7.73 %	22.88 %
(4)	Member Contribution	4.17 %	5.42 %	5.49 %	3.67 %	4.49 %
(5)	Net	(14.48)%	31.57 %	92.21 %	4.06 %	18.39 %
(6)	Employer Rate: (5) but not less than 0%	0.00 %	31.57 %	92.21 %	4.06 %	18.39 %

REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF FUNDING PROGRESS
(DOLLAR AMOUNTS IN THOUSANDS)

Actuarial Valuation Date December 31	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded (Overfunded) AAL (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll [(b)-(a)]/(c)
2002	$ 110,362	$ 81,224	$ (29,138)	135.9 %	$ 12,515	-
2003	110,752	86,365	(24,387)	128.2 %	12,573	-
2004	111,524	98,058	(13,466)	113.7 %	13,016	-
2005	118,935	101,937	(16,998)	116.7 %	13,233	-
2006	124,033	105,394	(18,639)	117.7 %	13,007	-
2007	130,366	110,753	(19,613)	117.7 %	13,372	-
2008	130,512	117,030	(13,482)	111.5 %	11,289	-
2009	131,184	120,828	(10,356)	108.6 %	11,062	-
2010	132,119	124,415	(7,704)	106.2 %	10,758	-
2011	131,234	128,991	(2,243)	101.7 %	9,637	-
2012	130,063	130,741	678	99.5 %	9,543	7.1 %
2013	130,300	132,708	2,408	98.2 %	9,524	25.3 %
2014	130,057	136,238	6,181	95.5 %	9,207	67.1 %

This information is presented in draft form for review by the System's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the System's financial statements.

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year July-June	Annual Required Contribution
2002-2003	$ 0
2003-2004	0
2004-2005	0
2005-2006	479,028
2006-2007	487,016
2007-2008	1,444,879
2008-2009	1,439,268
2009-2010	1,483,539
2010-2011	1,191,553
2011-2012	1,274,568
2012-2013	1,351,541
2013-2014	1,488,154
2014-2015	1,622,379
2015-2016	1,695,874
2016-2017	1,845,799

This information is presented in draft form for review by the System's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the System's financial statements.

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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

Valuation date	December 31, 2014
Actuarial cost method	Entry age actuarial cost method
Amortization method	Level percent-of-pay
Amortization period	25 years, closed
Asset valuation method	7-year smoothed market
Actuarial assumptions	
Investment rate of return (includes wage inflation at 3.5%)	7.5%
Cost-of-living adjustments	3% simple for Police Unit 2% simple for Police Unit after 7/1/2008 3% simple for Fire Unit 2% simple for Fire Unit after 7/1/2008 2% simple for Hybrid members 2% simple for General

City of Monroe
Monroe, Michigan
Incorporated in 1837

Appendix B: Analysis of Current and Future Post-Employment Healthcare Benefit Obligations of the City of Monroe

GRS Gabriel Roeder Smith & Company
Consultant & Actuaries

CITY OF MONROE RETIREE HEALTH CARE PLAN

ACTUARIAL VALUATION REPORT

DECEMBER 31, 2014

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GRS
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www.gabrielroeder.com

August 13, 2015

Mr. Ed Sell
City of Monroe
City of Monroe Retiree Health Care Plan
Monroe, Michigan

Dear Mr. Sell:

Submitted in this report are the results of an actuarial valuation of the assets and benefit values associated with the employer financed retiree health benefits provided by the City of Monroe. The date of the valuation was December 31, 2014, effective for the fiscal years beginning July 1, 2016 and July 1, 2017.

This report was prepared at the request of the City of Monroe and is intended for use by the City of Monroe and those designated or approved by the City of Monroe. This report may be provided to parties other than the City of Monroe only in its entirety and only with the permission of the City of Monroe.

The actuarial calculations were prepared for purposes of complying with the requirements of Statement No. 45 of the Governmental Accounting Standards Board (GASB). In addition, we have included information which may be helpful if there is a trust requiring a GASB Statement No. 43 disclosure. The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards. Determinations of the liability associated with the benefits described in this report for purposes other than satisfying the City of Monroe's financial reporting requirements may be significantly different than the values shown in this report.

The valuation was based upon information furnished by the City of Monroe concerning retiree health benefits, individual members, and plan finances. Data was checked for internal consistency, but was not otherwise audited. We are not responsible for the accuracy or completeness of the information provided by the City of Monroe.

To the best of our knowledge, the information contained in this report is accurate and fairly represents the actuarial position of the City of Monroe as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Please see the following page for additional disclosures required by the Actuarial Standards of Practice. Mark Buis and James D. Anderson 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.

Respectfully submitted,

Mark Buis

Mark Buis, FSA, EA, FCA, MAAA

James D. Anderson

James D. Anderson, FSA, EA, MAAA

MB:bd

Additional Disclosures Required by Actuarial Standards of Practice

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report should not be relied on for any purpose other than the purpose described in the primary communication.

The signing actuaries are independent of the plan sponsor.

The valuation was based upon information furnished by the City of Monroe, concerning Retiree Health benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy and completeness of the information provided by the City of Monroe.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Annual Required Contribution

This report presents the annual expense required to be recognized by the plan sponsor for purposes of complying with the accounting requirements of Governmental Accounting Standards Board Statement No. 45. In addition, the plan may also need to comply with GASB Statement No. 43. Please consult with legal counsel and the auditors to determine whether you have a plan for GASB Statement No. 43 purposes.

The Annual Required Contribution (ARC) for the fiscal years beginning July 1, 2016 and July 1, 2017 has been calculated under three different interest rate assumptions. Below is a summary of the Annual Required Contribution. In the first year GASB Statement No. 45 is adopted, the annual OPEB cost required to be disclosed on the employer's financial statements is equal to the ARC. Actual claims paid on behalf of retirees may be treated as employer contributions in relation to the ARC and act to reduce the Net OPEB Obligation (NOO).

Annual Required Contribution	7.00% Interest	6.00% Interest	5.00% Interest	Estimated Claims/Premiums Paid for Retirements
Fiscal Year Beginning 2016	$3,963,730	$4,311,760	$4,708,826	$3,827,581
Fiscal Year Beginning 2017	3,927,016	4,265,932	4,651,687	4,106,755

For additional details, please see Section A of the report.

Additional OPEB Reporting Requirements

In addition to the annual OPEB cost described above, employers will have to disclose a Net OPEB Obligation (or asset). The Net OPEB Obligation is the cumulative difference between annual OPEB costs and annual employer contributions in relation to the ARC, accumulated from the implementation of Statement No. 45. The Net OPEB Obligation is zero as of the beginning of the fiscal year that Statement No. 45 is implemented unless the employer chooses to recognize a beginning balance. The requirements for determining the employer's contributions in relation to the ARC are described in paragraph 13g. of Statement No. 45. Additional information required to be disclosed in the employer's financial statements is detailed in paragraphs 24 through 27 of Statement No. 45.

EXECUTIVE SUMMARY

Liabilities and Assets

	7.00% Interest	6.00% Interest	5.00% Interest
1. Present Value of Future Benefit Payments	$61,145,319	$68,767,922	$78,130,294
2. Actuarial Accrued Liability	57,762,426	64,208,072	71,927,594
3. Plan Assets	18,767,341	18,767,341	18,767,341
4. Unfunded Actuarial Accrued Liability (2) – (3)	38,995,085	45,440,731	53,160,253
5. Funded Ratio (3)/(2)	32.5%	29.2%	26.1%

The Present Value of Future Benefit Payments (PVFB) is the present value of all benefits projected to be paid from the Plan for past and future service to current members. The Actuarial Accrued Liability is the portion of the PVFB allocated to past service by the Plan's funding method (see the Section titled "Actuarial Cost Method and Actuarial Assumptions").

SECTION A

VALUATION RESULTS

DEVELOPMENT OF THE ANNUAL REQUIRED CONTRIBUTION FOR THE OTHER POSTEMPLOYMENT BENEFITS FISCAL YEAR BEGINNING JULY 1, 2016

Contributions for	Development of the Annual Required Contribution		
	Fiscal Year Beginning 2016		
	7.00% Interest	**6.00% Interest**	**5.00% Interest**
Employer Normal Cost	$ 326,485	$ 474,391	$ 664,027
Amortization of UAAL*	3,637,245	3,837,369	4,044,799
Annual Required Contribution (ARC)	$3,963,730	$4,311,760	$4,708,826
	Fiscal Year Beginning 2017		
Annual Required Contribution (ARC)	$3,927,016	$4,265,932	$4,651,687

* *Unfunded Actuarial Accrued Liabilities.*

The unfunded actuarial accrued liabilities were amortized as a level dollar over a closed period of 24 years. A 30-year amortization period for unfunded actuarial accrued liabilities is the maximum period that complies with GASB requirements.

DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY AS OF DECEMBER 31, 2014

	7.00% Interest	6.00% Interest	5.00% Interest
A. Present Value of Future Benefits			
i) Retirees and Beneficiaries	$44,289,815	$48,675,223	$53,888,208
ii) Vested Terminated Members	0	0	0
iii) Active Members	16,855,504	20,092,699	24,242,086
Total Present Value of Future Benefits	$61,145,319	$68,767,922	$78,130,294
B. Present Value of Future Normal Costs	3,382,893	4,559,850	6,202,700
C. Actuarial Accrued Liability (A.-B.)	57,762,426	64,208,072	71,927,594
D. Actuarial Value of Assets	18,767,341	18,767,341	18,767,341
E. Unfunded Actuarial Accrued Liability (C.-D.)	$38,995,085	$45,440,731	$53,160,253
F. Funded Ratio (D./C.)	32.5%	29.2%	26.1%

The Unfunded Actuarial Accrued Liability (UAAL) is not booked as an expense all in one year and does not appear in the Employer's Statement of Net Assets. Nevertheless, it is reported in the Notes to the Financial Statements and in the Required Supplementary Information. These are information sections within the employer's financial statements.

ANNUAL REQUIRED CONTRIBUTIONS
COMPARISON BY OPEB DIVISION

OPEB Report Group	Annual Required Contribution for July 01, 2016 - June 30, 2017		
	7.00% Interest	**6.00% Interest**	**5.00% Interest**
General	$1,891,141	$2,032,826	$2,191,174
Police	866,614	959,937	1,069,333
Fire	801,318	856,100	916,788
Hybrid	404,657	462,897	531,531
Total	**$3,963,730**	**$4,311,760**	**$4,708,826**

OPEB Report Group	Annual Required Contribution for July 01, 2017 - June 30, 2018		
	7.00% Interest	**6.00% Interest**	**5.00% Interest**
General	$1,884,981	$2,024,043	$2,179,035
Police	863,347	954,587	1,061,254
Fire	802,135	857,338	918,577
Hybrid	376,553	429,964	492,821
Total	**$3,927,016**	**$4,265,932**	**$4,651,687**

VALUATION RESULTS BY DIVISION
GENERAL

Contributions for	Development of the Annual Required Contribution		
	Fiscal Year Beginning 2016		
	7.00% Interest	6.00% Interest	5.00% Interest
Employer Normal Cost	$ 89,672	$ 140,486	$ 206,074
Amortization of UAAL*	1,801,469	1,892,340	1,985,100
Annual Required Contribution (ARC)	$1,891,141	$2,032,826	$2,191,174
	Fiscal Year Beginning 2017		
Annual Required Contribution (ARC)	$1,884,981	$2,024,043	$2,179,035

* *Unfunded Actuarial Accrued Liabilities.*

Determination of Unfunded Actuarial Accrued Liability
as of December 31, 2014

	7.00% Interest	6.00% Interest	5.00% Interest
A. Present Value of Future Benefits			
i) Retirees and Beneficiaries	$22,745,184	$24,964,813	$27,599,283
ii) Vested Terminated Members	0	0	0
iii) Active Members	6,801,730	7,969,330	9,434,075
Total Present Value of Future Benefits	$29,546,914	$32,934,143	$37,033,358
B. Present Value of Future Normal Costs	938,109	1,270,917	1,732,848
C. Actuarial Accrued Liability (A.-B.)	28,608,805	31,663,226	35,300,510
D. Actuarial Value of Assets	9,295,164	9,254,826	9,210,606
E. Unfunded Actuarial Accrued Liability (C.-D.)	$19,313,641	$22,408,400	$26,089,904
F. Funded Ratio (D./C.)	32.5%	29.2%	26.1%

VALUATION RESULTS BY DIVISION
POLICE

Contributions for	Development of the Annual Required Contribution		
	Fiscal Year Beginning 2016		
	7.00% Interest	6.00% Interest	5.00% Interest
Employer Normal Cost	$ 75,111	$116,943	$ 171,481
Amortization of UAAL*	791,503	842,994	897,852
Annual Required Contribution (ARC)	$866,614	$959,937	$1,069,333
	Fiscal Year Beginning 2017		
Annual Required Contribution (ARC)	$863,347	$954,587	$1,061,254

* *Unfunded Actuarial Accrued Liabilities.*

Determination of Unfunded Actuarial Accrued Liability as of December 31, 2014

	7.00% Interest	6.00% Interest	5.00% Interest
A. Present Value of Future Benefits			
i) Retirees and Beneficiaries	$ 9,021,621	$ 9,958,513	$11,079,402
ii) Vested Terminated Members	0	0	0
iii) Active Members	4,532,081	5,486,845	6,727,186
Total Present Value of Future Benefits	$13,553,702	$15,445,358	$17,806,588
B. Present Value of Future Normal Costs	983,977	1,340,117	1,840,334
C. Actuarial Accrued Liability (A.-B.)	12,569,725	14,105,241	15,966,254
D. Actuarial Value of Assets	4,083,975	4,122,813	4,165,913
E. Unfunded Actuarial Accrued Liability (C.-D.)	$ 8,485,750	$ 9,982,428	$11,800,341
F. Funded Ratio (D./C.)	32.5%	29.2%	26.1%

VALUATION RESULTS BY DIVISION
FIRE

Contributions for	Development of the Annual Required Contribution		
	Fiscal Year Beginning 2016		
	7.00% Interest	6.00% Interest	5.00% Interest
Employer Normal Cost	$ 30,846	$ 46,489	$ 66,745
Amortization of UAAL*	770,472	809,611	850,043
Annual Required Contribution (ARC)	$801,318	$856,100	$916,788
	Fiscal Year Beginning 2017		
Annual Required Contribution (ARC)	$802,135	$857,338	$918,577

* *Unfunded Actuarial Accrued Liabilities.*

Determination of Unfunded Actuarial Accrued Liability as of December 31, 2014

	7.00% Interest	6.00% Interest	5.00% Interest
A. Present Value of Future Benefits			
i) Retirees and Beneficiaries	$11,136,608	$ 12,248,778	$ 13,572,179
ii) Vested Terminated Members	0	0	0
iii) Active Members	1,521,642	1,869,405	2,323,253
Total Present Value of Future Benefits	$12,658,250	$ 14,118,183	$ 15,895,432
B. Present Value of Future Normal Costs	422,536	571,510	779,338
C. Actuarial Accrued Liability (A.-B.)	12,235,714	13,546,673	15,116,094
D. Actuarial Value of Assets	3,975,453	3,959,549	3,944,090
E. Unfunded Actuarial Accrued Liability (C.-D.)	$ 8,260,261	$ 9,587,124	$ 11,172,004
F. Funded Ratio (D./C.)	32.5%	29.2%	26.1%

VALUATION RESULTS BY DIVISION
HYBRID

Contributions for	Development of the Annual Required Contribution		
	Fiscal Year Beginning 2016		
	7.00% Interest	6.00% Interest	5.00% Interest
Employer Normal Cost	$130,856	$170,473	$219,727
Amortization of UAAL*	273,801	292,424	311,804
Annual Required Contribution (ARC)	$404,657	$462,897	$531,531
	Fiscal Year Beginning 2017		
Annual Required Contribution (ARC)	$376,553	$429,964	$492,821

* *Unfunded Actuarial Accrued Liabilities.*

Determination of Unfunded Actuarial Accrued Liability as of December 31, 2014

	7.00% Interest	6.00% Interest	5.00% Interest
A. Present Value of Future Benefits			
i) Retirees and Beneficiaries	$1,386,402	$1,503,119	$1,637,344
ii) Vested Terminated Members	0	0	0
iii) Active Members	4,000,051	4,767,119	5,757,572
Total Present Value of Future Benefits	$5,386,453	$6,270,238	$7,394,916
B. Present Value of Future Normal Costs	1,038,271	1,377,306	1,850,180
C. Actuarial Accrued Liability (A.-B.)	4,348,182	4,892,932	5,544,736
D. Actuarial Value of Assets	1,412,749	1,430,153	1,446,732
E. Unfunded Actuarial Accrued Liability (C.-D.)	$2,935,433	$3,462,779	$4,098,004
F. Funded Ratio (D./C.)	32.5%	29.2%	26.1%

COMMENTS

COMMENT A: One of the key assumptions used in any valuation of the cost of post-employment benefits is the rate of return on Plan assets. Higher assumed investment returns will result in a lower ARC. Lower returns will tend to increase the computed ARC. As directed by the Plan Sponsor, we have calculated the liability and the resulting ARC using three different long-term projected rates of return. A 7.00% assumed long-term rate of investment return may be appropriate to develop the liabilities of the Plan in the case that the Plan Sponsor chooses to pre-fund the entire ARC and invests the resulting assets in such a way as to anticipate 7.00% return. If the Plan Sponsor chooses to pre-fund with contributions less than the ARC (or not pre-fund at all), GASB requires the use of a lower rate of return assumption. A 5.00% or 6.00% assumed rate of investment may be appropriate when determining the liabilities of the plan if the plan sponsor finances the benefits on a pay-as-you-go basis (assuming 5.00% or 6.00% is deemed a reasonable return projection for general assets).

COMMENT B: Based on the number of Plan members as of this valuation, the Plan Sponsor is required by GASB to perform actuarial valuations at least biennially, unless there are significant changes in the OPEB. This will permit fluctuations and trends in experience to be reflected in the contribution rate on a regular basis.

COMMENT C: The contribution rates shown include amortization of the unfunded actuarial accrued liability over a closed period of 24 years. The maximum time period permitted by the Governmental Accounting Standards Board Statements No. 43 and No. 45 is thirty years. A shorter amortization period would result in a higher ARC.

COMMENT D: GASB Statement No. 45 stipulates that Plan assets must be placed in a trust or equivalent arrangement that meets the following criteria:

- Employer contributions to the Plan are irrevocable
- Assets are dedicated to providing benefits to retirants and their beneficiaries
- Assets are legally protected from creditors

Our calculations assume these criteria have been met. Otherwise, the fund asset value cannot be counted in our calculations and contribution requirements may be higher than those shown. **Please consult with legal counsel to verify that Plan assets meet the criteria listed above.** The asset value of $18,767,341 was provided by the City as of December 31, 2014.

COMMENTS

COMMENT E: The "Cadillac" tax is a 40% excise tax paid by the coverage provider (employer and/or insurer) on the value of health plan costs in excess of certain thresholds. The thresholds are $10,200 for single coverage or $27,500 for family coverage in 2018. Many plans are below the thresholds today, but are likely to exceed them in the next decade. The thresholds will be indexed at CPI-U, which is lower than the medical inflation rates affecting the cost of the plans. There is considerable uncertainty about how the tax would be applied, and considerable latitude in grouping of participants for tax purposes. Combining early retiree and Medicare eligible retiree costs is allowed and can keep plans under the thresholds for a longer period of time. For this valuation no load was applied in connection with the "Cadillac" tax; based on the current plan provision and assumptions. We have not identified any other specific provision of health care reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will review and monitor the impact.

COMMENT F: Plan liabilities are higher than measured in the prior valuation. Factors contributing to the increase in liabilities include, but are not limited to:

- A change to the two-person hard cap amount as dictated by Michigan PA 152; and
- Resetting the health care cost trend assumption.

Partially offsetting these factors were liability decreases due to:

- Lower medical rates than projected.

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

RETIREE PREMIUM RATE DEVELOPMENT

Initial premium rates were developed separately for each class (pre-65 and post-65). The rates were calculated by using actual paid claims and exposure data for the period of January 2012 to December 2014 adjusted for catastrophic claims, plus the load for administration, network access fee, and stop loss premiums. The self-insured medical and prescription drug data was provided by the City. The data was analyzed for the pre-65 and post-65 participants separately since Medicare is available for the post-65 participants and has a significant impact on the claim experience. Furthermore, since the prescription drug claims and the medical claims exhibit different trends and claim payment patterns, we analyzed these claims separately as well.

As of January 1, 2014, Express Scripts was eliminated and the City of Monroe has drug coverage solely through BCBS.

Suffixes available to future retirees are 0023 (971), 0026 (972), and 0028 (981). We have developed separate premium rates for future retirees in order to reflect the benefit differences.

Age graded and sex distinct premiums are utilized in this valuation. The premiums developed by the preceding process are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process "distributes" the average premium over all age/sex combinations and assigns a unique premium for each specific age/sex combination. The age/sex specific premiums more accurately reflect the health care utilization and cost at that age.

RETIREE PREMIUM RATE DEVELOPMENT (CONCLUDED)

The tables below show the resulting medical, and prescription drug one-person monthly premiums at select ages. The premium (or per capita costs) rates shown below reflect the use of age grading.

FUTURE RETIREES

For Those Not Eligible for Medicare

Age	Male	Female
45	$ 369.72	$ 484.03
50	500.20	566.75
55	653.75	671.99
60	821.29	789.44

For Those Eligible for Medicare

Age	Male	Female
65	$ 363.54	$ 334.77
70	419.33	377.07
75	465.53	413.15

CURRENT RETIREES

For Those Not Eligible for Medicare

Age	Male	Female
45	$ 489.31	$ 640.60
50	661.99	750.08
55	865.21	889.36
60	1,086.96	1,044.81

For Those Eligible for Medicare

Age	Male	Female
65	$ 487.94	$ 449.32
70	562.83	506.10
75	624.84	554.53

The State of Michigan enacted Public Act 152, which defines a maximum benefit for all Public Employer medical plans. The resulting limit for the 2015 calendar year is $5,992.30 for individual coverage and $12,531.75 for two-person coverage. Public Act 152 is anticipated to decrease future health care costs for the City of Monroe Retiree Health Care Plan.

James E. Pranschke is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates shown above.

James E. Pranschke

James E. Pranschke, FSA,
MAAA

SECTION C

SUMMARY OF BENEFIT PROVISIONS

CITY OF MONROE RETIREE HEALTH CARE PLAN
SUMMARY OF BENEFITS AS OF DECEMBER 31, 2014

Leaving Employment as a Result of	Eligibility for Benefit	Benefit Provided by Employer Retiree	*Spouse	Retiree Share of Cost Retiree	Spouse
Normal Retirement					
- General, Water, Sewage (COMEA Units I & II)	Age 55 with 25 years of service; Age 60 with 10 years of service; or Age 65 with 5 years of service.	**health & Rx	**health & Rx	1	1
- General, Water, Sewage Teamsters	Age 60 with 10 years of service; Age 65 with 5 years of service; or 80 points.	**health & Rx	**health & Rx	1	1
- Police and Fire	Age 50 with 25 years of service; Age 55 with 10 years of service; or Age 60 with 5 years of service.	**health & Rx (2)	**health & Rx (2)	1	1
- Appointed Confidential	Age 55 with 15 years of service; Age 60 with 10 years of service; or Age 65 with 5 years of service.	**health & Rx	**health & Rx	1	1
- Elected	Age 55 with 25 years of service; Age 60 with 10 years of service; or Age 65 with 5 years of service.	**health & Rx	**health & Rx	1	1
- Hybrid and Appointed/Elected Hybrid	Age 60 with 10 years of service, or Age 62 with 3 years of service.	**health & Rx	**health & Rx	1	1
Early Retirement					
- Teamster Local 214, COMEA I & II	Age 50 with 10 years of service.	**health & Rx	**health & Rx	1	1
- Hybrid	Age 55 with 15 years of service.	**health & Rx	**health & Rx	1	1
Deferred Vested Termination					
- All non-Hybrid	Age 60 with 10 years of service.	N/A	N/A	N/A	N/A
- Hybrid	Age 62 with 3 years of service.	N/A	N/A	N/A	N/A
Non-Duty Disability					
- All non-Hybrid	10 years of service.	**health & Rx	**health & Rx	1	1
- Hybrid	No age and service requirement.	**health & Rx	**health & Rx	1	1
Duty Disability					
- All non-Hybrid	No age or service requirement.	** health & Rx (2)	** health & Rx (2)	1	1
- Hybrid	No age or service requirement.	** health & Rx (2)	** health & Rx (2)	1	1
Non-Duty Death-in-Service					
- All non-Hybrid	10 years of service.	N/A	**health & Rx	1	1
- Hybrid	No age and service requirement.	N/A	**health & Rx	1	1
Duty Death-in-Service					
- All non-Hybrid	No age or service requirement.	N/A	**health & Rx	1	1
- Hybrid	No age or service requirement.	N/A	**health & Rx	1	1

Notes:

Except as otherwise outlined below, Retiree Health Care is provided to all eligible retirees and their spouses*.

No vision or **life insurance benefits are offered through the City's Retiree Health Care Plan. Dental is offered at retiree's cost.

Employees (excluding firefighters) who are totally disabled between 5/1/97 and 12/31/09 are eligible for life insurance. Firefighters who are totally disabled after 5/01/97 are eligible for life insurance.

**" Spouse" means an employees spouse by legal marriage at the time of retirement. A retiree who remarries after the effective date of retirement is not eligible to add a new spouse to the retiree health care benefits.*

***The City will provide the retiree and their spouse the same health care benefits it provides its active employees.*

1. Employees hired on or before 6/30/08 and who later retire are eligible for retiree health care benefits. For each year of service, the City will pay an amount equal to 4% of its share of the lowest illustrated premium cost and the plan selected by the retiree and his eligible spouse/dependents (up to a maximim of 25 years of credited service) at the time the employee retires.

Employees hired on or after 7/01/08 are excluded from retiree health coverage and shall participate in a Retiree Health Care Savings Program. The City and the employee shall equally contribute 3% of the average annualized base wages of all regular full-time employees of the City, based on wages as of June 30th of each year.

Effective 1/01/2013, Police and Fire employees hired on or before 6/30/2008 will contribute 3% of the average annualized base wages of all full-time City employees to the City's Retiree Health Care Fund.

Effective 7/01/2014, General and Hybrid employees hired on or before 6/30/2008 will contribute 1.5% of the average annualized base wages of all full-time City employees to the City's Retiree Health Care Fund. This contribution will increase to 3.0% on 1/1/2015.

2. Police/Fire Only - Duty Disability retirees & their spouses shall be entitled to an employer contribution in an amount equal to 100% of its share of the illustrated premum cost of coverage under the Health Care Plan selected by the employee if he is disabled by a qualifying action. The eligible spouses of employees who are killed in the line of duty as a result of a qualifying action shall also be entitled to an Employer contribution in an amount equal to 100% of its share of the illustrated premium cost of coverage of the Plan selected by the retiree, spouse and dependents.

SECTION D

SUMMARY OF PARTICIPANT DATA

TOTAL* ACTIVE MEMBERS AS OF DECEMBER 31, 2014
BY AGE AND YEARS OF SERVICE

	Years of Service to Valuation Date							Totals
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 Plus**	**No.**
20-24								
25-29								
30-34			1					1
35-39		2	5	5				12
40-44		2	11	9	1			23
45-49		3	4	10	8	5		30
50-54			2	5	7	7	3	24
55-59		3	1	5	5	5		19
60-64		4	4	1	2			11
65 & Over			1					1
Totals		**14**	**29**	**35**	**23**	**17**	**3**	**121**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 49.0 years
Service: 18.0 years

* *Excludes 27 members of the pension Retirement System not eligible for retiree health care because they were hired after the Plan closed on July 1, 2008.*

GENERAL, WATER, SEWAGE AND APPOINTED ACTIVE MEMBERS
AS OF DECEMBER 31, 2014
BY AGE AND YEARS OF SERVICE

	Years of Service to Valuation Date							Totals
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 Plus**	**No.**
20-24								
25-29								
30-34								
35-39				2				2
40-44					1			1
45-49				6	4	2		12
50-54				2	5	6	3	16
55-59				4	4	4		12
60-64		1			1			2
65 & Over								
Totals		**1**		**14**	**15**	**12**	**3**	**45**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age:	51.5	years
Service:	23.1	years

POLICE ACTIVE MEMBERS AS OF DECEMBER 31, 2014
BY AGE AND YEARS OF SERVICE

Age	Years of Service to Valuation Date							Totals
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.
20-24								
25-29								
30-34			1					1
35-39		1	4	1				6
40-44			3	4				7
45-49		1		2	3	3		9
50-54				1	1	1		3
55-59					1	1		2
60-64								
65 & Over								
Totals		**2**	**8**	**8**	**5**	**5**		**28**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 44.8 years
Service: 18.0 years

FIRE ACTIVE MEMBERS AS OF DECEMBER 31, 2014
BY AGE AND YEARS OF SERVICE

	Years of Service to Valuation Date							Totals
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.
20-24								
25-29								
30-34								
35-39				1				1
40-44			3	2				5
45-49				1	1			2
50-54			1		1			2
55-59								
60-64								
65 & Over								
Totals			**4**	**4**	**2**			**10**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 44.3 years
Service: 15.9 years

HYBRID ACTIVE MEMBERS AS OF DECEMBER 31, 2014
BY AGE AND YEARS OF SERVICE

	Years of Service to Valuation Date							Totals
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 Plus**	**No.**
20-24								
25-29								
30-34								
35-39		1	1	1				3
40-44		2	5	3				10
45-49		2	4	1				7
50-54			1	2				3
55-59		3	1	1				5
60-64		3	4	1	1			9
65 & Over			1					1
Totals		**11**	**17**	**9**	**1**			**38**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 50.3 years
Service: 12.6 years

TOTAL RETIRED MEMBERS
AS OF DECEMBER 31, 2014
BY AGE

Age	Number of Retirees & Beneficiaries		
	Male	**Female**	**Total**
Under 55	15	4	19
55-59	39	9	48
60-64	25	11	36
65 & Over	109	63	172
Totals	**188**	**87**	**275**

The number counts above include all retirees who are members of the City of Monroe Employees Retirement System; 35 have no health coverage, 85 have one-person coverage and 155 cover a retiree and spouse. There are 3 retirees who are covered under the retiree health care plan, but are not in the City of Monroe Employees Retirement System.

There are 0 terminated vested members eligible for deferred Plan benefits.

GENERAL, SEWAGE AND WATER RETIRED MEMBERS
AS OF DECEMBER 31, 2014
BY AGE

Age	Number of Retirees & Beneficiaries		
	Male	**Female**	**Total**
Under 55	5	1	6
55-59	18	8	26
60-64	15	11	26
65 & Over	53	38	91
Totals	**91**	**58**	**149**

19 have no health coverage, 51 have one-person coverage and 79 cover a retiree and spouse.

POLICE RETIRED MEMBERS
AS OF DECEMBER 31, 2014
BY AGE

Age	Number of Retirees & Beneficiaries		
	Male	**Female**	**Total**
Under 55	7	2	9
55-59	6	0	6
60-64	2	0	2
65 & Over	22	11	33
Totals	**37**	**13**	**50**

4 have no health coverage, 18 have one-person coverage and 28 cover a retiree and spouse.

FIRE RETIRED MEMBERS
AS OF DECEMBER 31, 2014
BY AGE

Age	Number of Retirees & Beneficiaries		
	Male	**Female**	**Total**
Under 55	3	0	3
55-59	14	1	15
60-64	7	0	7
65 & Over	26	9	35
Totals	**50**	**10**	**60**

5 have no health coverage, 14 have one-person coverage and 41 cover a retiree and spouse.

Hybrid Retired Members as of December 31, 2014 by Age

Age	Number of Retirees & Beneficiaries		
	Male	Female	Total
Under 55	0	1	1
55-59	1	0	1
60-64	1	0	1
65 & Over	8	5	13
Totals	**10**	**6**	**16**

7 have no health coverage, 2 have one-person coverage and 7 cover a retiree and spouse.

SECTION E

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

VALUATION METHODS FOR CITY OF MONROE RETIREE HEALTH CARE PLAN AS OF DECEMBER 31, 2014

Actuarial Cost Method. Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;

(ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

Actuarial gains (losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded actuarial accrued liabilities (UAAL) (full funding credit if assets exceed liabilities) were amortized on a level dollar basis since all divisions are closed to new hires. The UAAL was determined using the market value of assets and actuarial accrued liability calculated as of the valuation date.

Actuarial Value of System Assets. The Actuarial Value of Assets is set equal to the reported market value of assets. Assets were allocated among the subgroups shown in this report in proportion to each group's Actuarial Accrued Liability on the valuation date.

Amortization Factors: The following amortization factors were used in developing the Annual Required Contribution for the fiscal years shown:

	Fiscal Year Beginning July 01,	
Amortization Factor	**2016**	**2017**
7.00% Interest	11.86623	11.66227

	Fiscal Year Beginning July 01,	
Amortization Factor	**2016**	**2017**
6.00% Interest	12.92321	12.66890

	Fiscal Year Beginning July 01,	
Amortization Factor	**2016**	**2017**
5.00% Interest	14.14080	13.82305

ACTUARIAL ASSUMPTIONS FOR
CITY OF MONROE RETIREE HEALTH CARE PLAN
AS OF DECEMBER 31, 2014

The rate of investment return was 7.0% a year, compounded annually net after investment expenses. Alternate investment returns of 6.0% and 5.0% were also used in this valuation.

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefit amounts will be based. The assumptions were first used for the December 31, 2009 pension valuation.

	Annual Rate of Pay Increase for Sample Ages					
	General, Water, Sewage, Hybrid			Police - Fire		
Sample Ages	Base (Economic)	Merit & Longevity	Total	Base (Economic)	Merit & Longevity	Total
20	3.5%	3.0%	6.5%	3.5%	2.3%	5.8%
25	3.5%	2.4%	5.9%	3.5%	2.3%	5.8%
30	3.5%	2.1%	5.6%	3.5%	2.0%	5.5%
35	3.5%	1.9%	5.4%	3.5%	0.8%	4.3%
40	3.5%	1.7%	5.2%	3.5%	0.2%	3.7%
45	3.5%	1.3%	4.8%	3.5%	0.2%	3.7%
50	3.5%	0.9%	4.4%	3.5%	0.2%	3.7%
55	3.5%	0.5%	4.0%	3.5%	0.1%	3.6%
60	3.5%	0.1%	3.6%	3.5%	0.0%	3.5%
65	3.5%	0.0%	3.5%	3.5%	0.0%	3.5%
Ref.		354			353	

The Wage Inflation Rate assumed in this valuation was 3.5% per year. The Wage Inflation Rate is defined to be the portion of total pay increases for an individual that are due to macro economic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes related to individual merit and seniority effects.

ACTUARIAL ASSUMPTIONS FOR CITY OF MONROE RETIREE HEALTH CARE PLAN AS OF DECEMBER 31, 2014

The mortality table used was the RP2000 Mortality Table. This table was first used for the December 31, 2009 pension valuation. The mortality table is selected by the Board of Trustees. This assumption is needed to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. Sample values follow:

Sample Attained Ages	Probability of Dying Next Year: Men	Probability of Dying Next Year: Women	Future Life Expectancy (years): Men	Future Life Expectancy (years): Women
55	0.362%	0.272%	26.18	28.91
60	0.675%	0.506%	21.74	24.38
65	1.274%	0.971%	17.61	20.12
70	2.221%	1.674%	13.88	16.23
75	3.783%	2.811%	10.57	12.74
80	6.437%	4.588%	7.75	9.68
Ref	#506x1sb0yrs	#507x1sb0yrs		

The mortality table for disabled members is this same table, set forward 10 years.

All preretirement deaths are assumed to be non-duty related.

The membership size in this group is not sufficiently large to determine if there is a margin for mortality improvements. However, based upon our experience with a broad cross section of public sector plans similar in nature to this plan, it is our opinion that there is no provision for future mortality improvement in the current mortality assumption. We recommend this table be updated with the next experience study to include additional margin for future improvement in mortality.

Rates of disability represent the probabilities of active members becoming disabled. The rates in this table were first used in the December 31, 2009 pension valuation. Sample values follow:

	Percent Becoming Disabled within Next Year	
Sample Ages	**General, Water, Sewage and Hybrid**	**Police and Fire**
20	0.04%	0.12%
25	0.04%	0.12%
30	0.04%	0.12%
35	0.04%	0.12%
40	0.10%	0.30%
45	0.13%	0.40%
50	0.25%	0.74%
55	0.45%	1.34%
60	0.71%	2.12%
65	0.83%	2.49%
Ref	#9x0.5	#9x1.5

All disability occurrences are assumed to be non-duty related.

ACTUARIAL ASSUMPTIONS FOR
CITY OF MONROE RETIREE HEALTH CARE PLAN
AS OF DECEMBER 31, 2014

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

	Percent of Active Members Retiring within Next Year*					Rule of 80
Retirement Ages	**General, Water, and Sewage**	**Appointed**	**Hybrid**	**Police**	**Fire**	**General, Water, and Sewage**
50				40.0%	40.0%	20.0%
51				30.0%	30.0%	20.0%
52				25.0%	25.0%	20.0%
53				25.0%	25.0%	20.0%
54				25.0%	25.0%	20.0%
55	25.0%	22.5%	20.0%	25.0%	25.0%	25.0%
56	25.0%	15.0%	20.0%	25.0%	25.0%	25.0%
57	25.0%	15.0%	20.0%	25.0%	25.0%	25.0%
58	25.0%	15.0%	20.0%	25.0%	25.0%	25.0%
59	25.0%	15.0%	20.0%	25.0%	25.0%	25.0%
60	25.0%	22.5%	40.0%	50.0%	100.0%	30.0%
61	25.0%	12.0%	40.0%	50.0%		30.0%
62	25.0%	22.5%	40.0%	50.0%		30.0%
63	25.0%	13.5%	40.0%	50.0%		30.0%
64	25.0%	22.5%	40.0%	50.0%		30.0%
65	50.0%	70.0%	40.0%	100.0%		50.0%
66	50.0%	30.0%	40.0%			50.0%
67	50.0%	40.0%	40.0%			50.0%
68	50.0%	50.0%	40.0%			50.0%
69	50.0%	60.0%	40.0%			50.0%
70	100.0%	100.0%	100.0%			100.0%
Ref.	1865	1867	1868	1869	1870	1866

* *Fire members and Police members hired prior to 7/1/08, retirement rates were changed to 75% once members reach 30.2 years of service. For Police members hired after 7/1/08, retirement rates changed to 75% once members reach 37.2 years of service.*

The rates in this table were first used in the December 31, 2009 pension valuation.

The above probabilities apply to members satisfying the conditions described on page C-1.

ACTUARIAL ASSUMPTIONS FOR CITY OF MONROE RETIREE HEALTH CARE PLAN AS OF DECEMBER 31, 2014

Rates of separation from active membership. The rates apply to members separating from active employment before retirement, death or disability. It was assumed that general, water and sewage members who quit prior to age 45 will withdraw their accumulated contributions. For Police and Fire, age 50 was assumed.

Sample Ages	Years of Service	% of Active Members Separating within Next Year: General, Water, Sewage	Hybrid	Police	Fire
ALL	0	24.00%	24.00%	9.60%	8.00%
	1	16.00%	16.00%	7.20%	5.60%
	2	12.00%	12.00%	5.60%	4.00%
	3	8.00%	8.00%	4.00%	3.20%
	4	5.60%	5.60%	3.60%	2.80%
20	5 & Over	3.60%	7.20%	2.70%	2.10%
25		3.60%	7.20%	2.70%	2.10%
30		3.30%	6.60%	2.34%	1.74%
35		2.64%	5.28%	1.38%	0.90%
40		1.11%	2.22%	0.54%	0.36%
45		0.75%	1.50%	0.30%	0.30%
50		0.75%	1.50%	0.30%	0.30%
55		0.75%	1.50%	0.30%	0.30%
60		0.75%	1.50%	0.30%	0.30%
65		0.75%	1.50%	0.30%	0.30%
Ref.		11 x 0.8	11 x 0.8	29 x 0.8	30 x 0.8
		59 x 0.6	59 x 1.2	53 x 0.6	54 x 0.6

The rates in this table were first used in the December 31, 2009 pension valuation.

ACTUARIAL ASSUMPTIONS FOR CITY OF MONROE RETIREE HEALTH CARE PLAN AS OF DECEMBER 31, 2014

Health cost increases for active members are displayed in the following table:

Year After Valuation	Health Care Trend Inflation Rates
1	8.25 %
2	7.50
3	6.75
4	6.25
5	5.75
6	5.25
7	4.75
8	4.00
9	3.50
10	3.50
11+	3.50

The rates in this table were first used in the December 31, 2014 retiree health care valuation.

Public Act 152 which defines a maximum benefit for all Public Employer medical plans was first effective for the 2012 calendar year. The resulting limit for the 2015 calendar year is $5,992.30 for individual coverage and $12,531.75 for two-person coverage. We have assumed this limit will increase 3.5% for each future year, and this future limit will apply to each future retired member's benefit in all future years.

Miscellaneous and Technical Assumptions for City of Monroe Retiree Health Care Plan as of December 31, 2014

Administrative Expenses

No explicit assumption has been made for administrative expenses.

Decrement Operation

Disability and mortality decrements do not operate during the first 10 years (5 years for Hybrid) of service. Disability also does not operate during retirement eligibility.

Decrement Relativity

Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Decrement Timing

Decrements of all types are assumed to occur mid-year.

Eligibility Testing

Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Incidence of Contributions

Contributions are assumed to be received continuously throughout the year based upon the computed contribution shown in this report.

Marriage Assumption

100% of males and 100% of females are assumed to be married at time of decrement for General and Police/Fire members. 80% of males and 70% of females are assumed to be married at time of decrement for Hybrid members. Male spouses are assumed to be three years older than female spouses for active member valuation purposes. In retired cases where spouse information is needed but not available the three-year age difference is assumed.

Medicare Coverage

Assumed to be available for all covered employees on attainment of age 65. Disabled retirees were assumed to be eligible for Medicare coverage at age 65.

Health Care Coverage at Retirement

The table below shows the assumed portion of future retirees electing one-person or two-person/family coverage, or opting out of coverage entirely. It also shows the portion of members electing 2-person/family coverage that continue coverage to the spouse upon death of the retiree.

		Two-Person/Family		
	One-Person	**Electing**	**Continuing**	**Opt-Out**
Male	10%	80%	100%	10%
Female	10%	80%	100%	10%

APPENDIX A

AMORTIZATION PAYOFF SCHEDULE

Date	Period	Unfunded Liability (BOY)	Interest	Payment($)	Unfunded Liability (EOY)
December 31, 2014		$38,995,085			
July 1, 2016	24	43,160,408	$2,895,360	$3,637,245	$42,418,523
July 1, 2017	23	42,418,523	2,843,428	3,637,245	41,624,706
July 1, 2018	22	41,624,706	2,787,861	3,637,245	40,775,322
July 1, 2019	21	40,775,322	2,728,404	3,637,245	39,866,481
July 1, 2020	20	39,866,481	2,664,785	3,637,245	38,894,021
July 1, 2021	19	38,894,021	2,596,713	3,637,245	37,853,489
July 1, 2022	18	37,853,489	2,523,876	3,637,245	36,740,120
July 1, 2023	17	36,740,120	2,445,940	3,637,245	35,548,815
July 1, 2024	16	35,548,815	2,362,549	3,637,245	34,274,119
July 1, 2025	15	34,274,119	2,273,320	3,637,245	32,910,194
July 1, 2026	14	32,910,194	2,177,845	3,637,245	31,450,794
July 1, 2027	13	31,450,794	2,075,687	3,637,245	29,889,236
July 1, 2028	12	29,889,236	1,966,378	3,637,245	28,218,369
July 1, 2029	11	28,218,369	1,849,418	3,637,245	26,430,542
July 1, 2030	10	26,430,542	1,724,270	3,637,245	24,517,567
July 1, 2031	9	24,517,567	1,590,362	3,637,245	22,470,684
July 1, 2032	8	22,470,684	1,447,080	3,637,245	20,280,519
July 1, 2033	7	20,280,519	1,293,768	3,637,245	17,937,042
July 1, 2034	6	17,937,042	1,129,725	3,637,245	15,429,522
July 1, 2035	5	15,429,522	954,198	3,637,245	12,746,475
July 1, 2036	4	12,746,475	766,385	3,637,245	9,875,615
July 1, 2037	3	9,875,615	565,425	3,637,245	6,803,795
July 1, 2038	2	6,803,795	350,397	3,637,245	3,516,947
July 1, 2039	1	3,516,947	120,318	3,637,245	20

Unfunded liability at December 31, 2014 projected to July 1, 2016 with 7.00% interest. Payment based on 7.00% interest over 24 years beginning on Fiscal Year beginning July 1, 2016.

Date	Period	Unfunded Liability (BOY)	Interest	Payment($)	Unfunded Liability (EOY)
December 31, 2014		$45,440,731			
July 1, 2016	24	49,591,142	$2,861,465	$3,837,369	$48,615,238
July 1, 2017	23	48,615,238	2,802,911	3,837,369	47,580,780
July 1, 2018	22	47,580,780	2,740,844	3,837,369	46,484,255
July 1, 2019	21	46,484,255	2,675,052	3,837,369	45,321,938
July 1, 2020	20	45,321,938	2,605,313	3,837,369	44,089,882
July 1, 2021	19	44,089,882	2,531,390	3,837,369	42,783,903
July 1, 2022	18	42,783,903	2,453,031	3,837,369	41,399,565
July 1, 2023	17	41,399,565	2,369,971	3,837,369	39,932,167
July 1, 2024	16	39,932,167	2,281,927	3,837,369	38,376,725
July 1, 2025	15	38,376,725	2,188,600	3,837,369	36,727,956
July 1, 2026	14	36,727,956	2,089,674	3,837,369	34,980,261
July 1, 2027	13	34,980,261	1,984,813	3,837,369	33,127,705
July 1, 2028	12	33,127,705	1,873,659	3,837,369	31,163,995
July 1, 2029	11	31,163,995	1,755,837	3,837,369	29,082,463
July 1, 2030	10	29,082,463	1,630,945	3,837,369	26,876,039
July 1, 2031	9	26,876,039	1,498,559	3,837,369	24,537,229
July 1, 2032	8	24,537,229	1,358,231	3,837,369	22,058,091
July 1, 2033	7	22,058,091	1,209,482	3,837,369	19,430,204
July 1, 2034	6	19,430,204	1,051,809	3,837,369	16,644,644
July 1, 2035	5	16,644,644	884,675	3,837,369	13,691,950
July 1, 2036	4	13,691,950	707,514	3,837,369	10,562,095
July 1, 2037	3	10,562,095	519,723	3,837,369	7,244,449
July 1, 2038	2	7,244,449	320,664	3,837,369	3,727,744
July 1, 2039	1	3,727,744	109,661	3,837,369	36

Unfunded liability at December 31, 2014 projected to July 1, 2016 with 6.00% interest. Payment based on 6.00% interest over 24 years beginning on Fiscal Year beginning July 1, 2016.

AMORTIZATION PAYOFF SCHEDULE (CONCLUDED)

Date	Period	Unfunded Liability (BOY)	Interest	Payment($)	Unfunded Liability (EOY)
December 31, 2014		$53,160,253			
July 1, 2016	24	57,196,702	$2,759,537	$4,044,799	$55,911,440
July 1, 2017	23	55,911,440	2,695,274	4,044,799	54,561,915
July 1, 2018	22	54,561,915	2,627,798	4,044,799	53,144,914
July 1, 2019	21	53,144,914	2,556,948	4,044,799	51,657,063
July 1, 2020	20	51,657,063	2,482,555	4,044,799	50,094,819
July 1, 2021	19	50,094,819	2,404,443	4,044,799	48,454,463
July 1, 2022	18	48,454,463	2,322,425	4,044,799	46,732,089
July 1, 2023	17	46,732,089	2,236,307	4,044,799	44,923,597
July 1, 2024	16	44,923,597	2,145,882	4,044,799	43,024,680
July 1, 2025	15	43,024,680	2,050,936	4,044,799	41,030,817
July 1, 2026	14	41,030,817	1,951,243	4,044,799	38,937,261
July 1, 2027	13	38,937,261	1,846,565	4,044,799	36,739,027
July 1, 2028	12	36,739,027	1,736,654	4,044,799	34,430,882
July 1, 2029	11	34,430,882	1,621,246	4,044,799	32,007,329
July 1, 2030	10	32,007,329	1,500,069	4,044,799	29,462,599
July 1, 2031	9	29,462,599	1,372,832	4,044,799	26,790,632
July 1, 2032	8	26,790,632	1,239,234	4,044,799	23,985,067
July 1, 2033	7	23,985,067	1,098,956	4,044,799	21,039,224
July 1, 2034	6	21,039,224	951,663	4,044,799	17,946,088
July 1, 2035	5	17,946,088	797,007	4,044,799	14,698,296
July 1, 2036	4	14,698,296	634,617	4,044,799	11,288,114
July 1, 2037	3	11,288,114	464,108	4,044,799	7,707,423
July 1, 2038	2	7,707,423	285,073	4,044,799	3,947,697
July 1, 2039	1	3,947,697	97,087	4,044,799	(15)

Unfunded liability at December 31, 2014 projected to July 1, 2016 with 5.00% interest. Payment based on 5.00% interest over 24 years beginning on Fiscal Year beginning July 1, 2016.

HISTORICAL FUNDED RATIO

Actuarial Valuation Date December 31	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age* (b)	Unfunded (Overfunded) AAL (b)-(a)	Funded Ratio (a)/(b)	Present Value of Future Benefits (c)
2002	$ 3,848,290	$ 31,428,806	$27,580,516	12.2 %	
2006	8,668,479	62,970,849	54,302,370	13.8 %	$ 78,598,803
2008	8,148,464	51,985,601	43,837,137	15.7 %	59,820,933
2010	12,465,300	51,703,768	39,238,468	24.1 %	56,122,549
2012	14,793,096	52,084,559	37,291,463	28.4 %	55,770,806
2014	18,767,341	57,762,426	38,995,085	32.5 %	61,145,319

* *Results based on 7.00% interest.*

APPENDIX B

GLOSSARY

GLOSSARY

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

GLOSSARY

Annual Required Contribution (ARC). The ARC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ARC is an amount that is actuarially determined in accordance with the requirements so that, if paid on an ongoing basis, it would be expected to provide sufficient resources to fund both the normal cost for each year and the amortized unfunded liability.

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

Medical Trend Rate (Health Care Inflation). The increase in the cost of providing health care benefits over time. Trend includes such elements as pure price inflation, changes in utilization, advances in medical technology, and cost shifting.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

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

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

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

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

APPENDIX C

OVERVIEW

GASB BACKGROUND

The purpose of this valuation is to provide information on the cost associated with providing postemployment benefits other than pensions, or OPEB, to current and former employees. The information is designed to assist you in complying with Governmental Accounting Standards Board (GASB) Statements No. 43 and No. 45. OPEB benefits are most often associated with postemployment health care, but cover almost any benefit not provided through a pension plan, including life insurance, dental and vision benefits. It is important to note that OPEB benefits, by definition, do not include benefits *currently* being provided to active employees – however, this report includes the liabilities for benefits expected to be paid to current active employees in the future when they retire.

GASB Statements No. 43 and No. 45 were released in the spring of 2004. GASB Statement No. 43 covers the accounting rules for OPEB *plans* while GASB Statement No. 45 describes the rules for *employers* sponsoring OPEB plans. Your auditor can assist you in determining which statements apply to your particular situation.

The specific items required to be disclosed on an OPEB sponsor's financial statements are described in detail in GASB Statements No. 43 and No. 45.

GASB Statement No. 45

Among the requirements of Statement No. 45 are recognition each year of an expense called the Annual OPEB Cost, and the accumulation of a liability to be disclosed on the employer's Statement of Net Assets called the Net OPEB Obligation (NOO).

The fundamental items required to determine the Annual OPEB Cost and the NOO are:

- the Annual Required Contribution (ARC)
- the Employer's Contributions in relation to the ARC

Although GASB does not require OPEB contributions, it has chosen to call the base component of the annual OPEB cost the Annual Required Contribution. The ARC is provided in this report.

Paragraph 13g. of Statement No. 45 states:

> "An employer has made a contribution in relation to the ARC if the employer has:
>
> 1. made payments of benefits directly to or on behalf of a retiree or beneficiary,
> 2. made premium payments to an insurer, or
> 3. irrevocably transferred assets to a trust, or equivalent arrangement in which Plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the Plan and are legally protected from creditors of the employer(s) or plan administrator."

For each fiscal year shown in this report, we have provided the ARC and the estimated benefits and/or premiums (based on valuation assumptions).

The NOO is the cumulative difference between the Annual OPEB Cost each year and the Employer's Contribution in relation to the ARC. The Annual OPEB Cost for a year is equal to:

- the ARC, plus
- interest on the prior year's NOO, plus
- amortization of the prior year's NOO.

The Annual OPEB Cost and NOO are generally developed by the Plan Sponsor's auditor based on information contained herein and elsewhere.

GASB Statement No. 43

If the Plan has assets for Statement No. 43 purposes, then certain additional information useful in complying with the Statement is contained in this report.

OPEB PRE-FUNDING

Many employers fund retiree health care benefits using the pay-as-you-go (or cash disbursement) method. Under this method, the employer's annual contribution is equal to the actual disbursements during the year for OPEB for retired employees. This method of funding will result in increasing contributions over time. First, per capita cash disbursements will tend to increase from year to year as the cost of health care services, or the utilization of these services, increases. Second, the number of retired members is likely to increase for years to come. The more retirees, the greater the disbursements as a percentage of employee payroll.

A retiree health care plan is similar to a defined benefit pension plan in that promises are made to employees to provide them with a benefit payable at some future date. For defined benefit pension plan sponsors, a common funding objective is to contribute to a fund, annual amounts which will i) remain level as a percentage of active member payroll, and ii) when combined with present assets and future investment return be sufficient to meet the financial obligations of the Plan to current and future retirees. The GASB statements are not funding requirements. They are accounting standards that require plan sponsors to calculate the annual expense associated with OPEB using certain methods.

The ultimate determination as to the level of pre-funding will be the result of decisions made in an attempt to support benefit security for members and the fiscal management needs of the employer.

City of Monroe
Monroe, Michigan
Incorporated in 1837

Appendix C: Evidence that the Other Post-Employment Benefit Bonds, Along with Other Legally Available Funds, will Eliminate the Unfunded Post-Employment Health Care Liability of the Defined Benefit Plan

Sources and Uses	
Sources	
Bond Par Amount	$35,505,000
Total Sources	$35,505,000
Uses	
Other Post Employment Benefit Fund Deposit	$35,095,577
Costs of Issuance (Including Underwriter's Discount)	$409,424
Total Uses	$35,505,000

The City of Monroe recognizes that its issuance of Other Post-Employment Benefit Bonds will only fund a portion of its unfunded accrued actuarial liability. The City will continue to make payments to the OPEB Plan for its remaining liability.

Anticipated Remaining UAAL for Closed Plans	
Unfunded Accrued Actuarial Liability For Closed Plans	$38,995,085
Less: Estimated Deposit from Proposed Bond Proceeds	35,095,577
Estimated Remaining Unfunded Liability after Bond Issuance	$3,899,509 *

** See "UAL Amortization Payment Remaining After Funding" shown on page 7 of the Plan for an estimated amortization schedule.*

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BOND DEBT SERVICE

City of Monroe
Proposed 2016 Retiree Health Care Plan Obligation Bonds
(Federally Taxable)
20 Year Amortization - 7 % Interest
90% Funding

Dated Date	05/01/2016
Delivery Date	05/01/2016

Period Ending	Principal	Coupon	Interest	Debt Service
06/30/2017	1,305,000	1.730%	1,370,411.50	2,675,411.50
06/30/2018	1,330,000	1.860%	1,347,835.00	2,677,835.00
06/30/2019	1,355,000	2.120%	1,323,097.00	2,678,097.00
06/30/2020	1,380,000	2.520%	1,294,371.00	2,674,371.00
06/30/2021	1,415,000	2.670%	1,259,595.00	2,674,595.00
06/30/2022	1,455,000	2.960%	1,221,814.50	2,676,814.50
06/30/2023	1,500,000	3.280%	1,178,746.50	2,678,746.50
06/30/2024	1,545,000	3.430%	1,129,546.50	2,674,546.50
06/30/2025	1,600,000	3.580%	1,076,553.00	2,676,553.00
06/30/2026	1,660,000	3.730%	1,019,273.00	2,679,273.00
06/30/2027	1,720,000	3.880%	957,355.00	2,677,355.00
06/30/2028	1,785,000	4.080%	890,619.00	2,675,619.00
06/30/2029	1,860,000	4.280%	817,791.00	2,677,791.00
06/30/2030	1,940,000	4.430%	738,183.00	2,678,183.00
06/30/2031	2,025,000	4.550%	652,241.00	2,677,241.00
06/30/2032	2,115,000	4.636%	560,103.50	2,675,103.50
06/30/2033	2,215,000	4.722%	462,052.10	2,677,052.10
06/30/2034	2,320,000	4.808%	357,459.80	2,677,459.80
06/30/2035	2,430,000	4.894%	245,914.20	2,675,914.20
06/30/2036	2,550,000	4.980%	126,990.00	2,676,990.00
	35,505,000		18,029,951.60	53,534,951.60

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SOURCES AND USES OF FUNDS

City of Monroe
Proposed 2016 Retiree Health Care Plan Obligation Bonds
(Federally Taxable)
20 Year Amortization - 7 % Interest
90% Funding

Dated Date	05/01/2016
Delivery Date	05/01/2016

Sources:	
Bond Proceeds:	
Par Amount	35,505,000.00
	35,505,000.00

Uses:	
Project Fund Deposits:	
Project Fund	35,095,576.50
Delivery Date Expenses:	
Cost of Issuance	160,000.00
Underwriter's Discount	248,535.00
	408,535.00
Other Uses of Funds:	
Additional Proceeds	888.50
	35,505,000.00

Notes:
Cost of issuance is an estimate only
Underwriters discount is an estimate only
Assumes taxable rates as of 3/09/2016 + 0.50%
Funds 90% of UAL as of July 1, 2015

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BOND PRICING

City of Monroe
Proposed 2016 Retiree Health Care Plan Obligation Bonds
(Federally Taxable)
20 Year Amortization - 7 % Interest
90% Funding

Bond Component	Maturity Date	Amount	Rate	Yield	Price
Bond Component:					
	05/01/2017	1,305,000	1.730%	1.730%	100.000
	05/01/2018	1,330,000	1.860%	1.860%	100.000
	05/01/2019	1,355,000	2.120%	2.120%	100.000
	05/01/2020	1,380,000	2.520%	2.520%	100.000
	05/01/2021	1,415,000	2.670%	2.670%	100.000
	05/01/2022	1,455,000	2.960%	2.960%	100.000
	05/01/2023	1,500,000	3.280%	3.280%	100.000
	05/01/2024	1,545,000	3.430%	3.430%	100.000
	05/01/2025	1,600,000	3.580%	3.580%	100.000
	05/01/2026	1,660,000	3.730%	3.730%	100.000
	05/01/2027	1,720,000	3.880%	3.880%	100.000
	05/01/2028	1,785,000	4.080%	4.080%	100.000
	05/01/2029	1,860,000	4.280%	4.280%	100.000
	05/01/2030	1,940,000	4.430%	4.430%	100.000
	05/01/2031	2,025,000	4.550%	4.550%	100.000
	05/01/2032	2,115,000	4.636%	4.636%	100.000
	05/01/2033	2,215,000	4.722%	4.722%	100.000
	05/01/2034	2,320,000	4.808%	4.808%	100.000
	05/01/2035	2,430,000	4.894%	4.894%	100.000
	05/01/2036	2,550,000	4.980%	4.980%	100.000
		35,505,000			

Dated Date	05/01/2016	
Delivery Date	05/01/2016	
First Coupon	11/01/2016	
Par Amount	35,505,000.00	
Original Issue Discount	-	
Production	35,505,000.00	100.000000%
Underwriter's Discount	(248,535.00)	(0.700000%)
Purchase Price	35,256,465.00	99.300000%
Accrued Interest	-	
Net Proceeds	35,256,465.00	

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BOND SUMMARY STATISTICS

City of Monroe
Proposed 2016 Retiree Health Care Plan Obligation Bonds
(Federally Taxable)
20 Year Amortization - 7 % Interest
90% Funding

Dated Date	05/01/2016
Delivery Date	05/01/2016
Last Maturity	05/01/2036
Arbitrage Yield	4.275120%
True Interest Cost (TIC)	4.354891%
Net Interest Cost (NIC)	4.397091%
All-In TIC	4.406680%
Average Coupon	4.337303%
Average Life (years)	11.708
Duration of Issue (years)	8.983
Par Amount	35,505,000.00
Bond Proceeds	35,505,000.00
Total Interest	18,029,951.60
Net Interest	18,278,486.60
Total Debt Service	53,534,951.60
Maximum Annual Debt Service	2,679,273.00
Average Annual Debt Service	2,676,747.58
Underwriter's Fees (per $1000)	
Average Takedown	-
Other Fee	7.000000
Total Underwriter's Discount	7.000000
Bid Price	99.300000

Bond Component	Par Value	Price	Average Coupon	Average Life	PV of 1 bp change
Bond Component	35,505,000.00	100.000	4.337%	11.708	30,633.25
	35,505,000.00			11.708	30,633.25

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BONDS SUMMARY STATISTICS

City of Monroe
Proposed 2016 Retiree Health Care Plan Obligation Bonds
(Federally Taxable)
20 Year Amortization - 7 % Interest
90% Funding

	TIC	All-In TIC	Arbitrage Yield
Par Value	35,505,000.00	35,505,000.00	35,505,000.00
+ Accrued Interest	-	-	-
+ Premium (Discount)	-	-	-
- Underwriter's Discount	(248,535.00)	(248,535.00)	
- Cost of Issuance Expense		(160,000.00)	
- Other Amounts	-	-	-
Target Value	35,256,465.00	35,096,465.00	35,505,000.00
Target Date	05/01/2016	05/01/2016	05/01/2016
Yield	4.354891%	4.406680%	4.275120%

City of Monroe
Monroe, Michigan
Incorporated in 1837

Appendix D: Debt Service Amortization Schedule and Estimate Savings

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BOND DEBT SERVICE

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06/30/2035	2,430,000	4.894%	245,914.20	2,675,914.20
06/30/2036	2,550,000	4.980%	126,990.00	2,676,990.00
	35,505,000		18,029,951.60	53,534,951.60

Amortizing Remaining UAL for the Existing UAL Amortization Timeframe

Baseline				OPEB Bonds					
Fiscal Year Beginning July 1	UAL Amortization Payment	Normal Cost	Total UAL Payments	Estimated Bond Payments *	UAL Amortization Payment Remaining After Funding **	Normal Cost	Total Bond, Unfunded UAL, and Normal Cost Payments	Difference	Present Value @ 4.35%***
2016	3,637,245	326,485	3,963,730	2,675,412	363,725	326,485	3,365,621	598,109	593,830
2017	3,637,245	289,772	3,927,017	2,677,835	363,725	289,772	3,331,332	595,686	566,485
2018	3,637,245	257,147	3,894,392	2,678,097	363,725	257,147	3,298,969	595,424	542,360
2019	3,637,245	231,568	3,868,813	2,674,371	363,725	231,568	3,269,664	599,150	522,741
2020	3,637,245	208,944	3,846,189	2,674,595	363,725	208,944	3,247,264	598,926	500,512
2021	3,637,245	187,291	3,824,536	2,676,815	363,725	187,291	3,227,830	596,706	477,630
2022	3,637,245	168,228	3,805,473	2,678,747	363,725	168,228	3,210,699	594,774	456,009
2023	3,637,245	152,821	3,790,066	2,674,547	363,725	152,821	3,191,092	598,974	439,865
2024	3,637,245	138,003	3,775,248	2,676,553	363,725	138,003	3,178,281	596,968	419,906
2025	3,637,245	122,781	3,760,026	2,679,273	363,725	122,781	3,165,779	594,248	400,367
2026	3,637,245	108,244	3,745,489	2,677,355	363,725	108,244	3,149,324	596,166	384,723
2027	3,637,245	92,960	3,730,205	2,675,619	363,725	92,960	3,132,304	597,902	369,573
2028	3,637,245	77,102	3,714,347	2,677,791	363,725	77,102	3,118,618	595,730	352,704
2029	3,637,245	62,170	3,699,415	2,678,183	363,725	62,170	3,104,078	595,338	337,609
2030	3,637,245	48,757	3,686,002	2,677,241	363,725	48,757	3,089,723	596,280	323,885
2031	3,637,245	37,596	3,674,841	2,675,104	363,725	37,596	3,076,424	598,417	311,340
2032	3,637,245	28,165	3,665,410	2,677,052	363,725	28,165	3,068,942	596,468	297,240
2033	3,637,245	20,085	3,657,330	2,677,460	363,725	20,085	3,061,269	596,061	284,512
2034	3,637,245	14,388	3,651,633	2,675,914	363,725	14,388	3,054,027	597,606	273,222
2035	3,637,245	10,094	3,647,339	2,676,990	363,725	10,094	3,050,809	596,531	261,230
2036	3,637,245	6,361	3,643,606	--	363,725	6,361	370,086	3,273,521	1,373,078
2037	3,637,245	4,581	3,641,826	--	363,725	4,581	368,306	3,273,521	1,315,179
2038	3,637,245	3,523	3,640,768	--	363,725	3,523	367,248	3,273,521	1,259,723
2039	3,637,245	2,152	3,639,397	--	363,725	2,152	365,877	3,273,521	1,206,604
	$87,293,880	**$2,599,218**	**$89,893,098**	**$53,534,952**	**$8,729,388**	**$2,599,218**	**$64,863,558**	**$25,029,540**	**$13,270,324**

* Estimate only based on estimated true interest cost of 4.35%

** Assumes pro rata share of UAL amortization payment, not verified by an actuary

*** Estimated bond true interest cost

Accounting for Remaining UAL Upfront

Baseline				OPEB Bonds					
Fiscal Year Beginning July 1	UAL Amortization Payment	Normal Cost	Total UAL Payments	Estimated Bond Payments *	UAL Not Funded with Bond Proceeds	Normal Cost	Total Bond, Unfunded UAL, and Normal Cost Payments	Difference	Present Value @ 4.35%***
2016	3,637,245	326,485	3,963,730	2,675,412	3,899,509	326,485	6,901,405	(2,937,675)	(2,916,657)
2017	3,637,245	289,772	3,927,017	2,677,835	--	289,772	2,967,607	959,410	912,380
2018	3,637,245	257,147	3,894,392	2,678,097	--	257,147	2,935,244	959,148	873,669
2019	3,637,245	231,568	3,868,813	2,674,371	--	231,568	2,905,939	962,874	840,080
2020	3,637,245	208,944	3,846,189	2,674,595	--	208,944	2,883,539	962,650	804,470
2021	3,637,245	187,291	3,824,536	2,676,815	--	187,291	2,864,106	960,431	768,771
2022	3,637,245	168,228	3,805,473	2,678,747	--	168,228	2,846,975	958,499	734,874
2023	3,637,245	152,821	3,790,066	2,674,547	--	152,821	2,827,368	962,699	706,971
2024	3,637,245	138,003	3,775,248	2,676,553	--	138,003	2,814,556	960,692	675,749
2025	3,637,245	122,781	3,760,026	2,679,273	--	122,781	2,802,054	957,972	645,422
2026	3,637,245	108,244	3,745,489	2,677,355	--	108,244	2,785,599	959,890	619,444
2027	3,637,245	92,960	3,730,205	2,675,619	--	92,960	2,768,579	961,626	594,397
2028	3,637,245	77,102	3,714,347	2,677,791	--	77,102	2,754,893	959,454	568,048
2029	3,637,245	62,170	3,699,415	2,678,183	--	62,170	2,740,353	959,062	543,873
2030	3,637,245	48,757	3,686,002	2,677,241	--	48,757	2,725,998	960,004	521,451
2031	3,637,245	37,596	3,674,841	2,675,104	--	37,596	2,712,700	962,142	500,575
2032	3,637,245	28,165	3,665,410	2,677,052	--	28,165	2,705,217	960,193	478,497
2033	3,637,245	20,085	3,657,330	2,677,460	--	20,085	2,697,545	959,785	458,125
2034	3,637,245	14,388	3,651,633	2,675,914	--	14,388	2,690,302	961,331	439,514
2035	3,637,245	10,094	3,647,339	2,676,990	--	10,094	2,687,084	960,255	420,510
2036	3,637,245	6,361	3,643,606	--	--	6,361	6,361	3,637,245	1,525,642
2037	3,637,245	4,581	3,641,826	--	--	4,581	4,581	3,637,245	1,461,310
2038	3,637,245	3,523	3,640,768	--	--	3,523	3,523	3,637,245	1,399,692
2039	3,637,245	2,152	3,639,397	--	--	2,152	2,152	3,637,245	1,340,671
	$87,293,880	**$2,599,218**	**$89,893,098**	**$53,534,952**	**$3,899,509**	**$2,599,218**	**$60,033,678**	**$29,859,420**	**$14,917,479**

* Estimate only based on estimated true interest cost of 4.35%

** Estimated bond true interest cost

City of Monroe
Monroe, Michigan
Incorporated in 1837

Appendix E: Evidence of Rating

STANDARD & POOR'S RATINGS SERVICES
McGRAW HILL FINANCIAL

RatingsDirect®

Summary:

Monroe, Michigan; General Obligation

Primary Credit Analyst:
Kathryn A Clayton, Chicago (1) 312-233-7023; kathryn.clayton@standardandpoors.com

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

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Summary:

Monroe, Michigan; General Obligation

Credit Profile		
US$6.41 mil 2014 rfdg bnds (ltd tax GO) due 05/01/2031		
Long Term Rating	AA-/Stable	New
Monroe GO		
Unenhanced Rating	AA-(SPUR)/Stable	Upgraded
Long Term Rating	AA-/Stable	Upgraded

Many issues are enhanced by bond insurance.

Rationale

Standard & Poor's Ratings Services raised its long-term rating and underlying rating (SPUR) to 'AA-' from 'A+' on Monroe, Mich.'s general obligation (GO) debt outstanding, reflecting our view of the city's improved budgetary performance. At the same time, we assigned our 'AA-' long-term rating to the city's series 2014 limited-tax GO refunding bonds. The outlook is stable.

The city's full faith and credit, limited-tax GO pledge secures the bonds. Bond proceeds will be used to refinance the series 2010 capital improvement bonds for interest cost saving purposes only.

The ratings reflect our assessment of the city's:

- Very strong budgetary flexibility, with fiscal 2014 audited available reserves at 36% of general fund expenditures;
- Strong management conditions with good policies;
- Very strong liquidity providing very strong cash levels to cover both debt service and expenditures;
- Strong budgetary performance in fiscal 2014 and projected in future years; and
- Strong debt and contingent liability position.

Partly offsetting the above strengths, in our view, is the city's very weak economy, with a highly concentrated tax base.

Very strong budgetary flexibility

In our opinion, the city's budgetary flexibility remains very strong, with reserves at more than 30% of expenditures and no plans to significantly spend the reserves down. The audited fiscal 2014 available balance was $5.74 million, or 36% of general fund expenditures, and includes the general fund assigned, unassigned, and committed budgetary stabilization balances as well as the economic development fund, which holds additional available balance outside of the general fund. Management expects at least break-even operations across available funds, and therefore, we do not anticipate that reserves will fall to less than 30% of expenditures.

Strong management

We view the city's management conditions as strong with good financial practices. Management uses a line-item approach and three years of historical figures to prepare its annual budget and provides the board with biannual

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budget-to-actual reports. The city projects financials one year past the current budget year and updates a capital improvement plan annually, but it does not maintain a formal debt management policy of its own. The city does maintain a reserve policy of 15% of general fund expenditures, as adopted by the city council.

Very strong liquidity

Supporting the city's finances is very strong liquidity, in our opinion, with total government available cash at 132% of total governmental fund expenditures and more than 34x debt service. We believe the city has strong access to external liquidity, based on historical debt issuance.

Strong budgetary performance

The city's budgetary performance, in our view, has been strong overall, with a surplus of 1.5% for the general fund in fiscal 2014 and a surplus of 5.2% for the total governmental funds after adjustments for recurring transfers and one-time spending of bond proceeds. The city's main source of revenue is property taxes, but this share has declined from a peak in 2009 as a result of the economic downturn. In spite of this, management has been able to align general fund expenditures with its depleted revenue stream, posting near break-even operations or small surpluses in each of the past three years. Management expect to post break-even or better operations in the general fund and across total governmental funds over fiscal 2015 and fiscal 2016.

Very weak economy

We consider Monroe's economy to be very weak because of its very concentrated tax base. The top 10 taxpayers represent 61% of total taxable value (TV), and its largest taxpayer, Detroit-Edison, a utility company, represents 48% of total TV. Management reports that operations have been stable at the utility company. The city serves as the seat of Monroe County; the employment base is diverse, with residents seeking employment in health care, at the DTE Energy Co. power plant, in education, and in the automotive industry. Unemployment in Monroe County for calendar 2012 was 8%. Per capita effective buying income is projected at 80% of the U.S. level, and per capita market value was $91,177 in fiscal 2013, supported by the strong values of the power plant. TV has been stable recently, growing by an average annual rate of 0.2% from 2011 to 2013, but is down 9.4% from its peak in 2008, reflecting a decline in city home prices. TV was $878.8 million in 2013.

Strong debt and contingent liability profile

In our opinion, the city's debt and contingent liability profile is strong, with total governmental fund debt service at 3.8% of total governmental fund expenditures and with net direct debt at 37% of total governmental fund revenue after accounting for debt supported with enterprise revenue. The city's overall net debt burden is 0.7% of market value, which we view positively.

The city sponsors a single-employer hybrid (combination of defined benefit and defined contribution) pension plan. It has contributed 100% of the annual required contribution (ARC) in each of the past three years. The ARC pension costs and other postemployment benefits (OPEBs) pay-as you-go financing for fiscal 2013 totaled 19.4% of expenditures, and management does not anticipate that these costs will increase substantially in the near term. In spite of this elevated carrying charge, we do not view the pension and OPEB plans as causing budgetary stress for the city given the pension funding level (102.7% funded) and the city's ability to reduce OPEB carrying charges. The city's OPEB liability is 24.1% funded. Management reports that it is overfunding its OPEB liability to allow for any unanticipated increases in health care-related costs.

Strong institutional framework

We consider the Institutional Framework score for Michiganmunicipalities with populations greater than 4,000 strong.

Outlook

The stable outlook reflects our view of the city's very strong budgetary flexibility and liquidity supported by strong management. Should the city's currently strong budgetary performance deteriorate during the next two years, we could lower the ratings, although this is not expected given current fiscal projections. We do not expect to raise the ratings due to the significant concentration in the local tax base and overall very weak economy, which we do not expect will improve during the next two years.

Related Criteria And Research

Related Criteria

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

Related Research

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