



# **Pittsfield Charter Township Other Postemployment Benefits**

## **Actuarial Valuation Report as of January 1, 2015**

**Produced by Cheiron**

**July 2015**

## TABLE OF CONTENTS

<i>Section</i>	<i>Page</i>
Letter of Transmittal .....	i
Section I Summary of Results .....	1
Section II GASB Valuation Results .....	6
Section III Sensitivity of Results .....	9
Section IV Accounting Disclosures .....	10
 <i>Appendices</i>	
Appendix A Membership Data, Assumptions, and Methods .....	13
Appendix B Substantive Plan Provisions .....	23
Appendix C Glossary of Terms .....	26
Appendix D List of Abbreviations .....	28

***Via Email***

July 21, 2015

Board of Trustees  
Pittsfield Charter Township  
6201 W. Michigan Ave  
Ann Arbor, MI 48108

***Re: Pittsfield Charter Township Other Postemployment Benefits Valuation***

Dear Members of the Board:

Cheiron has been retained by Pittsfield Charter Township to complete their Other Post-Employment Benefits (OPEB) actuarial valuation as of January 1, 2015. The following report contains our findings as well as commentary about GASB standards. This is the second actuarial valuation that Cheiron is performing for Pittsfield Charter Township. Results shown before January 1, 2013 were calculated by the prior actuary.

Appendix A describes the member data, assumptions, and methods used in calculating the figures throughout the report. Appendix B contains a summary of the substantive plan provisions based on documentation provided by and discussions with the Pittsfield Charter Township staff.

In preparing our report, we relied on information (some oral and some written) supplied by Pittsfield Charter Township. This information includes, but is not limited to the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with the Actuarial Standard of Practice No. 23.

The purpose of this report is to present the annual actuarial valuation of Pittsfield Charter Township's Other Postemployment Benefits. This report is for the use of the Township and its auditors in preparing financial reports in accordance with applicable law and accounting requirements. This valuation report was prepared for the Township for the purposes described herein and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

Future results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and, changes in plan provisions or applicable law. Actuarial computations are calculated based on our understanding of GASB 43 and 45 and are for purposes of fulfilling employer financial accounting requirements. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results in this report. This valuation report does not reflect future changes in benefits, penalties, taxes, or administrative costs that may be required as a result of the Patient Protection and Affordable Care Act of 2010, related legislation, or regulations.

The results of this valuation reflect only the financial condition of the plan as of the valuation date. We recommend reviewing forecasts of the plan's financial condition under alternative scenarios. Such forecasts, however, are beyond the scope of this assignment.

For plans with under 200 total actives and retirees, GASB accounting rules and Actuarial Standards of Practice allow for a valuation to be completed once every three years as long as the population, plan design, or other key model components (such as claim costs or medical trends) have not changed significantly since the last full valuation. The results of this valuation should not be used for future fiscal years unless Cheiron has reviewed the plan and determined that no significant changes have occurred. Given the dynamic nature of the health care industry and the changes to GASB's financial reporting requirements that will be effective for the plan's reporting for the fiscal year ending December 31, 2017, a new valuation will likely be required prior to January 1, 2018.

We hereby certify that, to the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we collectively meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Sincerely,  
Cheiron



Gaelle Gravot, FSA, MAAA  
Principal Consulting Actuary



Kathleen T. McGugan, ASA, EA, MAAA  
Associate Actuary



William R. Hallmark, ASA, FCA, EA, MAAA  
Consulting Actuary

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION I - SUMMARY OF RESULTS**

Pittsfield Charter Township has engaged Cheiron to provide a valuation of the Township's Other Postemployment Benefits. The primary purpose of performing this actuarial valuation is to:

- Determine the Annual Required Contribution (ARC), Annual OPEB Cost (AOC), and the Net Other Postemployment Benefit (OPEB) Obligation (NOO) of the Postemployment Benefits under GASB 45 for the fiscal year ending December 31, 2015;
- Provide information for financial statement disclosures under GASB 43 and 45; and,
- Show the sensitivity of the valuation results to changes in health trend assumptions.

We have determined costs, liabilities, and trends for the substantive Plan using actuarial assumptions and methods that we consider reasonable.

***GASB's OPEB Requirements:***

The Governmental Accounting Standards Board (GASB) released Statement 43 regarding financial reporting for post-employment benefit plans other than pension plans and a companion Statement (Number 45) regarding the employer accounting for these plans. Statement 43 is generally applicable where an entity has a separate trust or fund for OPEB benefits. Statement 45, which was adopted in the fiscal year ending June 30, 2007, requires the plan sponsor to book the actuarial cost (net of employee, retiree, and their dependents' contributions) of the plan as an expense on its financial statements and then accrue a liability to the extent actual contributions were less than this expense. Additional disclosures include a description of the plan, summary of significant accounting policies, contributions, and a schedule of funding progress, along with the methods and assumptions used for those disclosures.

This report does not reflect any changes in postemployment benefit accounting requirements from newly adopted GASB Statements for OPEB plans. The new statements will be effective for the Township's Plan year ending December 31, 2017. All references and calculations with respect to GASB reflect current Statements No. 43 and 45.

***Implicit Subsidy***

GASB 45 requires that the valuation of OPEB plans take into consideration the liability associated with the implicit subsidy that exists when the premium rates charged to active and retired employees are the same, or "blended." This provides the users of the Township's financial statement an estimate of the total value of the promised retiree benefit.

The employer's share of the current coverage costs for active and retired employees should be calculated based on the claim costs or age-adjusted premiums for the employer. The current age adjusted costs used in this valuation are based on the estimated age related costs for the applicable plans offered by the Township to its employees and retirees.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION I - SUMMARY OF RESULTS**

It is our opinion that the Actuarial Standard of Practice 6 (ASOP 6) requires the recognition of the age related costs and the inherent implicit subsidy that exists in the health benefit plans offered by Pittsfield Charter Township. However, while the valuation results include the liability and ARC associated with the implicit subsidy, each year the implicit subsidy is actually paid through the active employee premiums. Because of this, the Township would not need to contribute the full ARC to the trust to be considered as having contributed the full ARC. Instead, the Township could contribute the full ARC less the amount of the implicit subsidy for the year as shown in this report.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION I - SUMMARY OF RESULTS**

*Valuation Results*

The table below presents the key results of the 2015 valuation.

<b>Table I-1 Summary of Key Valuation Results</b>		
<b>Valuation Date</b>	<b>1/1/2015</b>	<b>1/1/2013</b>
<b>Discount Rate (per annum)</b>	<b>7.25%</b>	<b>8.00%</b>
<b>Actuarial Liability</b>		
- Retirees	\$ 3,836,000	\$ 2,998,000
- Active Employees	<u>6,299,000</u>	<u>6,439,000</u>
- Total	\$ 10,135,000	\$ 9,437,000
<b>Assets</b>	\$ 6,220,000	\$ 4,109,000
<b>Unfunded Actuarial Liability (UAL)</b>	\$ <b>3,915,000</b>	\$ <b>5,328,000</b>
Normal Cost	\$ 260,000	\$ 252,000
Amortization of UAL	\$ 190,000	\$ 281,000
<b>Total ARC</b>	\$ <b>450,000</b>	\$ <b>533,000</b>
Normal Cost % of pay	3.64%	3.68%
Amortization of UAL % of pay	2.66%	4.10%
<b>Total Cost (ARC as % of pay)</b>	<b>6.30%</b>	<b>7.78%</b>
Prior Year Payroll	6,988,000	6,703,000
Projected Payroll	7,143,000	6,852,000
<b>Total Cost (ARC)</b>	\$ <b>450,000</b>	\$ <b>534,000</b>
<b>Actual/Expected Contribution Amount</b>	\$ <b>618,336</b>	\$ <b>713,312</b>

Table I-1 shows that the total unfunded liability decreased by \$1.4 million. This change is the result of a number of offsetting effects, including assumption changes, medical cost experience, and asset growth. These changes are discussed further in the GASB Valuation Results section.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION I - SUMMARY OF RESULTS**

The table below shows the results broken down between the explicit cost and implicit subsidy portions of the benefits.

<b>Table I-1a Summary of Key Valuation Results</b>			
<b>Valuation Date</b>	<b>1/1/2015</b>	<b>1/1/2015</b>	<b>1/1/2015</b>
<b>Discount Rate (per annum)</b>	<b>7.25%</b>	<b>7.25%</b>	<b>7.25%</b>
	<b>Explicit Cost</b>	<b>Implicit Subsidy</b>	<b>Total Liability</b>
<b>Actuarial Liability</b>			
- Retirees	\$ 3,445,000	\$ 391,000	\$ 3,836,000
- Active Employees	<u>3,710,000</u>	<u>2,589,000</u>	<u>6,299,000</u>
- Total	\$ 7,155,000	\$ 2,980,000	\$ 10,135,000
<b>Assets</b>	\$ 6,220,000	\$ 0	\$ 6,220,000
<b>Unfunded Actuarial Liability (UAL)</b>	<b>\$ 935,000</b>	<b>\$ 2,980,000</b>	<b>\$ 3,915,000</b>
<b>Normal Cost</b>	\$ 144,000	\$ 116,000	\$ 260,000
<b>Amortization of UAL</b>	\$ 46,000	\$ 144,000	\$ 190,000
<b>Total ARC</b>	<b>\$ 190,000</b>	<b>\$ 260,000</b>	<b>\$ 450,000</b>
<b>Normal Cost % of pay</b>	2.02%	1.62%	3.64%
<b>Amortization of UAL % of pay</b>	0.64%	2.02%	2.66%
<b>Total Cost (ARC as % of pay)</b>	<b>2.66%</b>	<b>3.64%</b>	<b>6.30%</b>



**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION I - SUMMARY OF RESULTS**

The table below shows the expected net benefit payments for the next 16 years. These payments include the expected annual implicit subsidy as well as expected plan premium payments. The implicit subsidy payments are shown because these payments are included as a plan contribution under the GASB accounting standards.

<b>Table I-2 Expected Net Benefit Payments</b>							
<b>Fiscal Year</b>	<b>Expected Net</b>	<b>Expected</b>	<b>Total</b>	<b>Fiscal Year</b>	<b>Expected Net</b>	<b>Expected</b>	<b>Total</b>
<b>Ending</b>	<b>Benefit</b>	<b>Implicit</b>	<b>Benefit</b>	<b>Ending</b>	<b>Benefit</b>	<b>Implicit</b>	<b>Benefit</b>
<b>December 31</b>	<b>Payments</b>	<b>Subsidy</b>	<b>Payments</b>	<b>December 31</b>	<b>Payments</b>	<b>Subsidy</b>	<b>Payments</b>
2015	\$ 185,000	\$ 18,000	\$203,000	2023	\$ 350,000	\$ 73,000	\$423,000
2016	200,000	(6,000)	194,000	2024	399,000	98,000	497,000
2017	222,000	2,000	224,000	2025	441,000	125,000	566,000
2018	239,000	11,000	250,000	2026	491,000	152,000	643,000
2019	254,000	20,000	274,000	2027	529,000	161,000	690,000
2020	270,000	31,000	301,000	2028	586,000	193,000	779,000
2021	290,000	40,000	330,000	2029	614,000	211,000	825,000
2022	316,000	56,000	372,000	2030	672,000	243,000	915,000

The remainder of this report provides additional detail. First, we develop the GASB valuation results and illustrate the sensitivity of the GASB results to changes in the health care trend rates. We conclude with disclosure information needed to satisfy the GASB OPEB accounting and financial reporting requirements.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION II - GASB VALUATION RESULTS**

The development of the unfunded actuarial liability (UAL) is shown below.

<b>Table II-1 Unfunded Actuarial Liability</b>		
<b>Valuation Date</b>	<b>1/1/2015</b>	<b>1/1/2013</b>
<b>Actuarial Liability</b>		
Retirees:		
Group 1	\$ 1,586,000	995,000
Group 2	472,000	-
Group 3	1,419,000	1,540,000
Group 4	<u>359,000</u>	<u>463,000</u>
<b>Total Retirees</b>	<b>\$ 3,836,000</b>	<b>\$ 2,998,000</b>
Active Employees:		
Group 1	1,571,000	2,195,000
Group 2	3,169,000	3,246,000
Group 3	1,557,000	997,000
Group 4	<u>2,000</u>	<u>1,000</u>
<b>Total Active Employees</b>	<b>\$ 6,299,000</b>	<b>\$ 6,439,000</b>
<b>Total Actuarial Liability</b>	<b>\$ 10,135,000</b>	<b>\$ 9,437,000</b>
<b>Assets</b>	<b>\$ 6,220,000</b>	<b>\$ 4,109,000</b>
<b>Unfunded Actuarial Liability (UAL)</b>	<b>\$ 3,915,000</b>	<b>\$ 5,328,000</b>

The groups shown above reflect the following member divisions:

- Group 1: AFSCME (Division 1), Dispatch (Division 11), and non-represented employees (Division 14);
- Group 2: Police Patrol (Division 2) and Firefighters (Division 5);
- Group 3: Police Command (Division 20); and,
- Group 4: Elected Officials (Division 10).

The Annual Required Contribution (ARC) under GASB 45 consists of two parts: (1) the *normal cost*, which represents the annual cost attributable to service earned in a given year, and (2) the amortization of the unfunded actuarial liability (UAL).

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION II - GASB VALUATION RESULTS**

The UAL as of January 1, 2015 is amortized as a level percent of payroll over 30 years. The Annual Required Contribution (ARC) for the fiscal year ending January 1, 2015 is developed in the table below. The prior calculation is shown for comparison.

<b>Table II-2</b>		
<b>GASB Annual Required Contribution (ARC)</b>		
<b>Valuation Date</b>	<b>1/1/2015</b>	<b>1/1/2013</b>
<b>Normal Cost:</b>		
Group 1	\$ 61,000	\$ 65,000
Group 2	145,000	161,000
Group 3	54,000	27,000
Group 4	-	-
Total Normal Cost	\$ 260,000	\$ 252,000
Amortization of UAL	190,000	281,000
<b>Total ARC</b>	<b>\$ 450,000</b>	<b>\$ 533,000</b>

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION II - GASB VALUATION RESULTS**

***Reconciliation***

The table below provides an estimate of the major factors contributing to the change in liability since the last valuation report.

<b>Table II-3 Reconciliation of Actuarial Liability</b>	
<b>Actuarial Liability at 1/1/2013</b>	<b>\$ 9,437,000</b>
Expected Actuarial Liability at 1/1/2015	11,159,000
Actual Liability as of 1/1/2015	10,135,000
(Gain) or Loss	(1,024,000)
Changes due to:	
Demographic (Gain)/Loss	53,000
Change in health cost assumptions	(2,048,000)
Change in Discount rate assumption	1,253,000
Plan amendments	(235,000)
Other Assumptions (Gain)/Loss	(47,000)
<b>Total Changes</b>	<b>\$ (1,024,000)</b>

- *Demographic* refers to the change in liability from updating the census.
- *Change in health cost assumptions* refers to the change in expected current and future healthcare claims and expense costs. This item also reflects the change in expected future trends.
- *Change in discount rate assumption* refers to the change in assumed discount rate from 8.00% to 7.25%.
- *Plan Amendments* refers to the changes made to the PPO plan between 1/1/2013 and the current valuation. This also includes the plan change to the HMO expected to occur on 1/1/2016. The HMO plan change impacts future retirees only.
- *Other assumption gain/loss* includes the effects of the updated demographic assumptions.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION III - SENSITIVITY OF RESULTS**

The liabilities and ARC produced in this report are sensitive to the assumptions used. The tables below show the impact of a 1% increase or decrease in the health care trend rates on the GASB actuarial liability and the ARC to provide some measure of sensitivity.

<b>Table III-1</b>			
<b>Actuarial Liability - January 1, 2015</b>			
<b>Pay-As-You-Go-Funding (7.25% assumed discount)</b>			
<b>(Sensitivity of Healthcare Trends)</b>			
	<b>- 1%</b>	<b>Valuation</b>	<b>+ 1%</b>
Retirees and Beneficiaries	\$ 3,432,000	\$ 3,836,000	\$ 4,315,000
Active Employees	<u>4,916,000</u>	<u>6,299,000</u>	<u>8,156,000</u>
Total	\$ 8,348,000	\$ 10,135,000	\$ 12,471,000
Assets	<u>\$ 6,220,000</u>	<u>\$ 6,220,000</u>	<u>\$ 6,220,000</u>
UAL	\$ 2,128,000	\$ 3,915,000	\$ 6,251,000

<b>Table III-2</b>			
<b>GASB ARC - January 1, 2015</b>			
<b>Pay-As-You-Go-Funding (7.25% assumed discount)</b>			
<b>(Sensitivity of Healthcare Trends)</b>			
	<b>- 1%</b>	<b>Valuation</b>	<b>+ 1%</b>
Normal Cost	\$ 196,000	\$ 260,000	\$ 350,000
UAL Amortization	<u>103,000</u>	<u>190,000</u>	<u>303,000</u>
Total	\$ 299,000	\$ 450,000	\$ 653,000

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION IV - ACCOUNTING DISCLOSURES**

**Statement 45 of the Governmental Accounting Standards Board (GASB)** established standards for accounting and financial reporting of Other Postemployment Benefit (OPEB) information by governmental employers and plans. In accordance with those statements, we have prepared the following disclosures.

***Net OPEB Obligation***

The table below shows the development of the Net OPEB Obligation for the fiscal year ending December 31, 2014, and projects the Net OPEB Obligation for the fiscal year ending December 31, 2015.

<b>Table IV-1 Development of Net OPEB Obligation</b>		
	Actual December 31, 2014	Projected December 31, 2015
<b>1. Net OPEB Obligation/(Asset) at beginning of fiscal year</b>	\$ 109,677	\$ (91,726)
2. Annual Required Contribution for FYE	\$ 544,201	\$ 450,039
3. Interest on Net OPEB Obligation/(Asset)	8,774	(6,650)
4. Adjustment to Annual Required Contribution	(16,066)	(4,345)
5. Annual OPEB Cost (2.) + (3.) + (4.)	\$ 536,909	\$ 439,044
6. Employer Contributions	\$ (703,313)	\$ (600,000)
7. Implicit Subsidy Payment	\$ (35,000)	\$ (18,336)
<b>8. Net OPEB Obligation/(Asset) at end of fiscal year (1.) + (5.) + (6.) + (7.)</b>	\$ (91,726)	\$ (271,019)

***Schedule of Funding Progress***

The schedule of funding progress compares the assets used for funding purposes to the comparable liabilities to determine how well the Plan is funded and how this status has changed over the past several years. The actuarial liability is compared to the actuarial value of assets to determine the funding ratio. The actuarial liability under GASB is determined assuming that the Plan is ongoing and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION IV - ACCOUNTING DISCLOSURES**

<b>Fiscal year Beginning January 1</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Liabilities (b)</b>	<b>Unfunded Actuarial Liabilities (UAL) (b-a)</b>	<b>Funded Ratio (a/b)</b>	<b>Annual Covered Payroll (c)</b>	<b>(UAL) as Percentage of Covered Payroll (b-a)/c</b>
2015	\$ 6,220,000	\$ 10,135,000	\$ 3,915,000	61%	\$ 6,988,000	56.02%
2013	4,109,000	9,437,000	5,328,000	44%	6,703,000	79.49%
2010*	1,545,277	8,033,569	6,488,292	19%	6,465,155	100.36

\*Based on calculations by the prior actuary

***History of Employer Contributions***

The history of employer contributions shows whether the employer has made contributions that are consistent with the parameters established by GASB for calculating the ARC and the annual OPEB expense.

<b>Fiscal Year Ended December 31</b>	<b>Net Annual OPEB Cost (AOC)</b>	<b>Actual Contributions</b>	<b>Percentage of AOC Contributed</b>	<b>Net OPEB Obligation</b>
2015	\$ 439,044	\$ 618,336	137%	\$ (271,019)
2014	536,909	738,313	138%	(91,727)
2013	542,052	713,312	132%	109,677
2012*	794,357	656,639	83%	280,937
2011*	797,809	880,810	110%	143,219
2010*	781,160	957,986	123%	226,220
2009*	680,134	277,088	41%	403,046

\* Based on calculations by prior actuary

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**SECTION IV - ACCOUNTING DISCLOSURES**

We have also provided a *Note to Required Supplementary Information* for the financial statements.

**Table IV-4  
Note to Required Supplementary Information**

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

Valuation Date	January 1, 2015
Actuarial Cost Method	Individual Entry Age
Amortization Method	Level percent of pay open
Single Equivalent Amortization Period	30 years
Asset Valuation Method	Market value
Actuarial Assumptions:	
Payroll Growth Rate	4.50%
Discount Rate	7.25%
Ultimate Rate of Medical Inflation	5.00%



**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX A - MEMBER DATA, ASSUMPTIONS, AND METHODS**

**Member Data**

<b>Valuation Date</b>	<b>January 1, 2013</b>	<b>January 1, 2015</b>	<b>% Change</b>
<b>Active Employees</b>			
Group 1	60	58	(3.33%)
Group 2	54	47	(12.96%)
Group 3	6	11	83.33%
Group 4	3	3	0.00%
<b>Total</b>	<b>123</b>	<b>119</b>	<b>(3.25%)</b>
Average Age	42.4	42.3	(0.33%)
Average Service	9.7	9.7	(0.21%)
Total Payroll	\$ 6,703,000	\$ 6,988,000	4.25%
<b>Total Retirees and Spouses</b>			
Group 1	N/A	6	
Group 2	N/A	2	
Group 3	N/A	4	
Group 4	N/A	0	
<b>Pre-65 Total</b>	<b>6</b>	<b>12</b>	<b>100.00%</b>
Group 1	N/A	0	
Group 2	N/A	0	
Group 3	N/A	0	
Group 4	N/A	2	
<b>Post-65 Total</b>	<b>4</b>	<b>2</b>	<b>(50.00%)</b>
<b>Total</b>	<b>10</b>	<b>14</b>	<b>40.00%</b>
Average Age	65.4	61.6	(5.81%)

The groups shown above reflect the following member divisions:

- Group 1: AFSCME (Division 1), Dispatch (Division 11), and non-represented employees (Division 14);
- Group 2: Police Patrol (Division 2) and Firefighters (Division 5);
- Group 3: Police Command (Division 20); and,
- Group 4: Elected Officials (Division 10).

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX A - MEMBER DATA, ASSUMPTIONS, AND METHODS**

**Member Data as of January 1, 2015:**

<b>Eligible Active Employees</b>								
<b>Age</b>	<b>Service</b>							<b>Total</b>
	<b>Under 5</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 and Up</b>	
Under 25	3	0	0	0	0	0	0	3
25 - 29	9	3	1	0	0	0	0	13
30 - 34	4	5	8	1	0	0	0	18
35 - 39	6	5	7	4	0	0	0	22
40 - 44	8	1	3	6	2	0	0	20
45 - 49	3	5	2	4	2	0	0	16
50 - 54	3	2	1	4	0	1	0	11
55 - 59	2	0	2	0	2	0	0	6
60 - 64	0	2	2	1	0	0	0	5
65 and Up	1	1	2	0	1	0	0	5
<b>Total</b>	<b>39</b>	<b>24</b>	<b>28</b>	<b>20</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>119</b>

<b>Eligible Retirees</b>			
<b>Age</b>	<b>Gender</b>		<b>Total</b>
	<b>Male</b>	<b>Female</b>	
Under 50	0	0	0
50 - 54	1	0	1
55 - 59	1	0	1
60 - 64	2	2	4
65 - 69	0	0	0
70 - 74	0	0	0
75 - 79	1	0	1
80 - 84	0	0	0
85 - 89	0	0	0
90 and Up	0	0	0
<b>Total</b>	<b>5</b>	<b>2</b>	<b>7</b>

<b>Medical Plan Election</b>				
<b>Medical Plan</b>	<b>Actives</b>	<b>Retirees &amp; Spouses</b>		<b>Total</b>
		<b>Beneficiaries</b>	<b>of Retired</b>	
BCBSM 0002	0	5	5	10
BCN	111	2	2	115
Opt Out	8	0	0	8
<b>Total</b>	<b>119</b>	<b>7</b>	<b>7</b>	<b>133</b>

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX A - MEMBER DATA, ASSUMPTIONS, AND METHODS**

**Economic Assumptions:**

- 1. Expected Return on Trust Assets:** 7.25% per year
- 2. Expected Return on Assets for Benefits:** 7.25% per year
- 3. Per Person Cost Trends:**

<b>Year</b>	<b>Trends</b>	
	<b>Pre Med</b>	<b>Post Med</b>
<b>2015</b>	9.00%	6.00%
<b>2016</b>	8.73	5.93
<b>2017</b>	8.47	5.87
<b>2018</b>	8.20	5.80
<b>2019</b>	7.93	5.73
<b>2020</b>	7.67	5.67
<b>2021</b>	7.40	5.60
<b>2022</b>	7.13	5.53
<b>2023</b>	6.87	5.47
<b>2024</b>	6.60	5.40
<b>2025</b>	6.33	5.33
<b>2026</b>	6.07	5.27
<b>2027</b>	5.80	5.20
<b>2028</b>	5.53	5.13
<b>2029</b>	5.27	5.07
<b>2030</b>	5.00	5.00

Ultimate trends (beyond 2030) for Pre Medicare and Post Medicare retirees are 5%.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX A - MEMBER DATA, ASSUMPTIONS, AND METHODS**

**Demographic Assumptions:**

**1. Retirement Rates:**

Rates of retirement are based on the MERS assumptions but simplified, as shown below:

Age / Svc	Rates of Retirement					
	General		Police		Fire	
	15 - 24	25+	15 - 24	25+	15 - 24	25+
50	0.00%	1.60%	0.00%	24.0%	20.0%	1.6%
51	0.00	1.60	0.00	24.0	20.0	1.6
52	0.00	2.30	0.00	24.0	20.0	2.3
53	0.00	3.30	0.00	24.0	20.0	3.3
54	0.00	4.50	0.00	24.0	20.0	4.5
55	3.50	3.50	3.50	24.0	20.0	22.0
56	3.25	3.25	3.25	24.0	20.0	22.0
57	3.00	3.00	3.00	24.0	20.0	22.0
58	4.50	4.50	4.50	24.0	20.0	22.0
59	5.75	5.75	5.75	24.0	20.0	22.0
60	20.00	20.00	20.00	24.0	20.0	22.0
61	20.00	20.00	20.00	24.0	20.0	22.0
62	20.00	20.00	20.00	24.0	20.0	22.0
63	20.00	20.00	20.00	24.0	20.0	22.0
64	20.00	20.00	20.00	24.0	20.0	22.0
65	20.00	20.00	20.00	28.0	20.0	22.0
66	20.00	20.00	20.00	28.0	20.0	22.0
67	20.00	20.00	20.00	28.0	20.0	22.0
68	20.00	20.00	20.00	28.0	20.0	22.0
69	20.00	20.00	20.00	28.0	20.0	22.0
70	100.00	100.00	100.00	100.0	100.0	100.0

All members with 10 - 15 years of service and at least age 60 will have a 20% likelihood of retirement until age 70 when they will have 100%.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX A - MEMBER DATA, ASSUMPTIONS, AND METHODS**

**2. Termination Rates:**

Rates of termination for all employees from causes other than death, disability, and service are based on the MERS assumptions. Sample rates of termination are shown below.

<b>Rates of Termination</b>	
<b>Years of Service</b>	<b>All</b>
0	20.00%
1	17.00
2	14.00
3	11.00
4	9.00
5	6.50
10	5.00
15	3.70
20	3.00
25	2.70
30	2.60
34 and over	2.40

**3. Rate of Mortality:**

*Active Employees and Healthy Retirees:*

Rates of mortality for members and their beneficiaries are based on the MERS assumptions. MERS uses the 1994 GAM mortality table, blended 50% male and 50% female.

*Disabled Employee:*

Rates of mortality for disabled members and their beneficiaries are based on the MERS assumptions. MERS uses the 1994 GAM mortality table, blended 50% male and 50% female and set forward 10 years.

Note that we are relying on the MERS actuaries for this assumption and have not independently verified that the rates, including projected mortality improvements, are reasonable.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX A - MEMBER DATA, ASSUMPTIONS, AND METHODS**

**4. Disability Rates:**

Rates of disability are based on the MERS assumptions. Sample rates of disability are shown below.

<b>Rates of Disability</b>	
<b>Age</b>	<b>All</b>
20	0.02%
25	0.02
30	0.02
35	0.06
40	0.06
45	0.11
50	0.24
55	0.60
60	0.60

**5. Salary Increase Rate:**

Salary increase rates follow the MERS assumption:

Wage inflation component                      4.50%

In addition, the following merit component is added based on an individual member's age. Sample rates are shown below.

<b>Salary Merit Increases</b>	
<b>Age</b>	<b>Merit/ Longevity</b>
20	13.00%
25	6.80
30	3.26
35	2.05
40	1.30
45	0.81
50	0.52
55	0.30
60	0.00

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX A - MEMBER DATA, ASSUMPTIONS, AND METHODS**

- 6. Percent of Retirees Electing Coverage:** Current retirees are expected to continue coverage in their current plan. All active members currently enrolled in medical coverage through the Township are assumed to continue coverage after retirement, if eligible. For those currently opting out of coverage with the Township, 50% are assumed to resume coverage before retirement and then continue coverage after retirement.
- 7. Plan Election:** All active members are assumed to enroll in the BCN HMO plan at retirement. Members who have opted out of medical coverage are assumed to enroll in the BCN HMO if/when they resume coverage.
- 8. Family Composition:** 70% of members are assumed to cover a spouse at retirement.
- 9. Dependent Age:** For current retirees, actual spouse date of birth was used when available. For future retirees, male retirees are assumed to be three years older than their partner, and female retirees are assumed to be two years younger than their partner.

**Changes Since Last Valuation**

The disability assumptions have been updated to match the 2014 MERS assumptions. In addition, the per person cost trends were updated since the January 1, 2013 valuation. All retirees after 12/31/2014, will only have the BCN/HMO plan available for coverage; and, their benefits will mirror the Active plan benefits (i.e., future plan changes affecting the active HMO plan will also affect the retiree HMO for employees who retire on or after January 1, 2015). The discount rate has been lowered from 8.00% to 7.25%.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX A - MEMBER DATA, ASSUMPTIONS, AND METHODS**

**Methodology:**

The Entry Age Normal actuarial cost method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund the postemployment benefits between each member's date of hire and assumed retirement. The actuarial liability is the difference between the present value of future benefits and the present value of future normal cost. The unfunded actuarial liability is the difference between the actuarial liability and the actuarial value of assets.

The claims costs and expenses are based on the fully insured HMO and PPO premiums charged to the Township for the active and retiree population for January 2015. Using HMO enrollment, we developed a single per person per month (PPPM) HMO cost. Using the PPO enrollment (Medicare Eligible vs. Non-Medicare Eligible), we developed PPPM costs assumptions for Non-Medicare Eligible (NME) and Medicare Eligible (ME). The resulting per person per month (PPPM) costs were then adjusted using age curves to develop the expected costs of the medical and pharmacy benefits based on the covered individuals age and sex.

The costs to the plan consist of both an explicit subsidy and an implicit subsidy. The implicit subsidy arises from the difference between the actual cost to insure Pre-Medicare retirees and the premium charged those Pre-Medicare retirees. The plan sponsor charges the same monthly premium to insure Pre-Medicare retirees as it charges for active employees, thus charging retirees much less than the true cost of their coverage. If the premium structure were to charge Pre-Medicare retirees separately from actives, you would see a much lower premium for actives than for retirees and the implicit subsidy disappear. Typically, this implicit subsidy only occurs for Pre-Medicare retirees as Medicare retirees are rated separately and thus no implicit subsidy is assumed. However, as we developed our claim curves based on the blended Non-Medicare and Medicare rates, Medicare retirees are also impacted by the implicit subsidy.



**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX A - MEMBER DATA, ASSUMPTIONS, AND METHODS**

*Expected HMO and PPO Retiree and Spouse costs for Calendar Year 2015:*

Average Claim and Expense Assumptions For Calendar Year 2015					
Age	<u>HMO</u>		<u>PPO</u>		
	Male	Female	Male	Female	
40	\$3,238	\$5,755	\$5,865	\$10,426	
45	\$4,054	\$6,093	\$7,345	\$11,038	
50	\$5,370	\$7,227	\$9,728	\$13,091	
55	\$7,057	\$8,612	\$12,783	\$15,601	
60	\$9,172	\$10,280	\$16,616	\$18,623	
64	\$11,275	\$11,793	\$20,425	\$21,364	
65	\$8,864	\$9,459	\$13,062	\$13,938	
70	\$10,218	\$10,280	\$15,057	\$15,149	
75	\$11,078	\$10,884	\$16,324	\$16,038	
80	\$11,505	\$11,065	\$16,954	\$16,306	
85	\$11,487	\$10,842	\$16,927	\$15,977	

This report does not reflect future changes in benefits, penalties, taxes, or administrative costs that may be required as a result of the Patient Protection and Affordable Care Act of 2010 related legislation and regulations. Patient-Centered Outcomes Research Institute (PCORI) fees and Transitional Reinsurance fee are assumed to be included in the HMO and PPO premiums paid by the Township.

The Active HMO benefits are expected to decrease effective January 1, 2016. These benefits changes only impact employees who retire after January 1, 2015. Using OptumInsight comprehensive pricing tool, we estimated that the 2016 HMO plan design is about 4.3% less rich than the 2015 HMO plan design. The 2016 Medical trends applicable to actives were adjusted down from 9% to 4.7% to reflect this future plan change.

**Amortization Cost**

The actuarial value of the assets on hand to pay future benefits is subtracted from the *Actuarial Liability*, producing the *Unfunded Actuarial Liability*.

The *Unfunded Actuarial Liability* determined from this valuation is amortized as a level percent of pay amount over an open 30-year period. The payment for a given year is expressed as a percentage of projected active member payroll for that year. This percentage is the *Amortization Rate*.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX A - MEMBER DATA, ASSUMPTIONS, AND METHODS**

The sum of the *Normal Cost Rate* and the *Amortization Rate* is the Township's *Contribution Rate*. The Township's actuarial cost for a given year is determined by multiplying the active payroll by the *Contribution Rate*.

**Actuarial Value of Plan Assets**

Pittsfield Charter Township contributes funds to a Retiree Health Funding Vehicle, a Section 115 Trust account with MERS of Michigan. As of December 31, 2014, the market value of assets was \$6,219,548. The actuarial value of assets is equal to the market value.

**Changes Since The Last Valuation:**

HMO and PPO claims and expense have been updated to reflect current costs and benefits. Additionally, HMO claims and expenses are assumed to change due to plan changes to the BCN/HMO plan effective 1/1/2016. Below are the Calendar Year 2016 expected HMO claims and expenses applicable to future retirees.

Average Claim and Expense Assumptions For Calendar Year 2016		
Age	<u>HMO</u>	
	Male	Female
40	\$3,376	\$6,001
45	\$4,227	\$6,353
50	\$5,599	\$7,535
55	\$7,358	\$8,979
60	\$9,564	\$10,719
64	\$11,756	\$12,296
65	\$8,988	\$9,591
70	\$10,360	\$10,423
75	\$11,232	\$11,036
80	\$11,666	\$11,220
85	\$11,647	\$10,993

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX B - SUBSTANTIVE PLAN PROVISIONS**

**Summary of Key Substantive Plan Provisions:**

**Non-represented employees (including elected officials), AFSCME, Dispatchers, and Firefighters:**

**Eligibility:** Retirement from Pittsfield Charter Township with 25 or more years of service having attained age 60 (age 55 for dispatchers and firefighters).

**Benefits:** For employees hired before December 31, 2006 (December 31, 2007 for non-represented members), the Township will pay a portion of the cost of medical plan premiums for the retiree and spouse for life. The Township portion of premiums is 100% for employees with 10 or more years of service as of 12/31/2009 and 90% for all others. Benefits continue to the surviving spouse after the retiree's death.

For employees hired after December 31, 2006 (December 31, 2007 for non-represented members), the Township will pay a portion of the retiree-only medical plan premiums for life. The maximum amount payable by the Township is \$600 per month, and this amount is not indexed. No benefits are payable for spouse coverage or surviving spouse coverage.

**Pension Plan Eligibility:**

Non-represented, AFSCME, and dispatch employees are eligible for unreduced benefits from the pension plan at age 60 and 10 years of service (8 years for elected officials) and reduced benefits at age 50 with 25 years of service or age 55 with 15 years of service.

Firefighters are eligible for unreduced benefits from the pension plan at age 60 with 10 years of service or age 55 with 15 years of service and reduced benefits at age 50 with 25 years of service.

**Police Patrol (POAM):**

**Eligibility:** Retirement from Pittsfield Charter Township with 25 or more years of service having attained age 50.

**Benefits:** Prior to age 55, retirees may purchase coverage through the Township but the full amount of the premium is paid by the retiree. Beginning at age 55, the Township will pay a portion of the cost of medical plan premiums for the retiree and his/her spouse for life. The Township portion of premiums is 100% for employees hired before January 1, 2007 and 50% for those hired after. Benefits continue to the surviving spouse after the retiree's death.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX B - SUBSTANTIVE PLAN PROVISIONS**

**Pension Plan Eligibility:**

Police patrol members are eligible for unreduced benefits from the pension plan at age 60 with 10 years of service or age 50 with 25 years of service and reduced benefits at age 55 with 15 years of service.

**Police Command:**

**Eligibility:** Retirement from Pittsfield Charter Township with 25 or more years of service having attained age 50.

**Benefits:** The Township will pay 100% of the cost of medical plan premiums for the retiree and his/her spouse for life. Benefits continue to the surviving spouse after the retiree's death.

**Pension Plan Eligibility:**

Police command members are eligible for unreduced benefits from the pension plan at age 60 with 10 years of service or age 50 with 25 years of service and reduced benefits at age 55 with 15 years of service.

**Medical Benefit Plans:**

**Medical:** Beginning in 2015, all active employees and new retirees will participate in the Blue Care Network (BCN) HMO plan. Members who are retired as of 12/31/2014, will remain with their current plan.

**Premiums:** Monthly medical premiums for 2015 are as follows:

	<b>BCN</b>	<b>BCBSM 0002</b>
<b>Non-Medicare</b>	<b>PEPM</b>	<b>PEPM</b>
Single	\$476.84	\$1,161.84
EE + 1	1,039.54	2,788.39
Family	1,297.04	3,485.49
<b>Medicare</b>		
Single	Not Available	1,268.31
EE + 1	Not Available	2,536.62
Family	Not Available	3,804.93

BCN has yet to provide Medicare rates. Note that the PPO Medicare rates are higher than the non-Medicare rates. We would have expected the non-Medicare rates to be higher than the Medicare rates as the Township would become secondary payor for medical expenses as soon as the retiree becomes Medical Eligible. We encourage Pittsfield Charter Township to inquire as to why the Medicare rates are higher than the non-Medicare rates.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX B - SUBSTANTIVE PLAN PROVISIONS**

**Summary of Benefit Plans:**

<b>Group Eligibility</b>	<b>Actives (Retirees Post 1/1/2015)</b>	<b>Actives (Retirees Post 1/1/2015)</b>	<b>Retirees (prior 1/1/2015)</b>
<b>Date</b>	<b>1/1/2015</b>	<b>1/1/2016</b>	<b>1/1/2015</b>
<b>Plan:</b>	<b>BCN HMO</b>	<b>BCN HMO</b>	<b>BCBSM 0002</b>
<b><u>In-Network (INN) Benefits</u></b>			
Deductible (Individual / Family)	\$0	\$500 / \$1,000	\$0
Coinsurance	0%	10%	0%
Out-of-Pocket Max (Individ/ Family)	\$6,350 / \$12,700	\$750 / \$1,500	\$600 / \$1,200
Copays			
Office Visit (OV)-Primary Care (PCP)	\$10	\$20	\$15
OV - Specialist Care Provider (SCP)	\$10	\$40	\$15
Hospital Emergency Room (ER)	\$50	\$250	\$50
Outpatient Surgery	DC	DC	DC
Hospital Inpatient	DC	DC	DC
Lifetime Max	unlimited	unlimited	unlimited
<b><u>Out-of-Network (OON) Benefits</u></b>			
Deductible (Individual / Family)	Not Covered	Not Covered	\$250 / \$500
Coinsurance			20%
Office Visits (PCP) & (SCP)			DC
Out-of-Pocket Max (Individ / Family)			\$2,250 / \$4,500
Lifetime Max			unlimited
<b><u>Prescription Drugs</u></b>			
Retail - Generic/Formulary /Non-Form. Copay	\$10 / \$40 / \$40	\$10 / \$40 / \$80	\$10 / \$20 / \$20
Retail Days	30 days	30 days	30 days
Mail Order (90 Days) - Generic/Form. /Non-Form. Copay	\$20 / \$80 / \$80	\$20 / \$80 / \$160	\$20 / \$40 / \$40
Contraceptives	Covered	Covered	Covered
Non-Network Pharmacy	Not Covered	Not Covered	25% Coinsurance after Copay
<b><u>Mental Health and Substance Abuse</u></b>			
Mental Health Inpatient	DC (authorization required)	DC (authorization required)	DC
Mental Health Outpatient	\$10 (authorization required)	\$20 (authorization required)	DC
Substance Abuse Inpatient	DC (authorization required)	DC (authorization required)	DC
Substance Abuse Outpatient	\$10 (authorization required)	\$20 (authorization required)	DC
<b><u>Detail Benefits</u></b>			
Preventive Care	DC	DC	DC
Diagnostic Services	\$10	\$20	DC
Urgent Care	\$20	\$40	DC
Chiropractic Benefit	\$10	\$20	DC, Annual Limit 24 visits
Allergy	\$10	\$20	DC
Nursing Services	DC up to 45 days per year	DC up to 45 days per year	DC up to 120 Days
Hearing	Covered per 36 months	Covered per 36 months	Not covered
DME	DC	DC	DC
<b><u>Vision Care Services</u></b>			
<b>Dental: (Individual / Family)</b>	Delta Dental	Delta Dental	Delta Dental
Deductible	\$0	\$0	\$0
Out-of-Pocket Max (Dental / Orthodontia)	\$1,000 Per Person Per Year / \$1,500 Per Person Per Lifetime	\$1,000 Per Person Per Year / \$1,500 Per Person Per Lifetime	\$1,000 Per Person Per Year / \$1,500 Per Person Per Lifetime
Coinsurance I/II/III	100% / 50% / 50%	100% / 50% / 50%	100% / 50% / 50%
Orthodontia Coverage	Children up to age 19	Children up to age 19	Children up to age 19
Orthodontia Coinsurance	50%	50%	50%

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX C - GLOSSARY OF TERMS**

**1. Actuarial Assumptions**

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, and retirement; changes in compensation; rates of investment earnings, and asset appreciation or depreciation; procedures used to determine the actuarial value of assets; and, other relevant items.

**2. Actuarial Cost Method**

A procedure for determining the actuarial present value of pension plan benefits and expenses and for developing an allocation of such value to each year of service, usually in the form of a normal cost and an actuarial liability.

**3. Actuarial Gain (Loss)**

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**4. Actuarial Liability**

The portion of the actuarial present value of projected benefits which will not be paid by future normal costs. It represents the value of the past normal costs with interest to the valuation date.

**5. Actuarial Present Value (Present Value)**

The value as of a given date of a future amount or series of payments. The actuarial present value discounts the payments to the given date at the assumed investment return and includes the probability of the payment being made. As a simple example: assume you owe \$100 to a friend one year from now. Also, assume there is a 1% probability of your friend dying over the next year, in which case you won't be obligated to pay him. If the assumed investment return is 10%, the actuarial present value is:

$$\begin{array}{rclclcl} & & \text{Probability} & & 1 & & \\ & & \text{of Payment} & & \hline \text{Amount} & & & & (1+\text{Discount Rate}) & & \\ \$100 & \times & (1 - .01) & & 1/(1+.1) & = & \$90 \end{array}$$

**6. Actuarial Valuation**

The determination, as of a specified date, of the normal cost, actuarial liability, actuarial value of assets, and related actuarial present values for a pension plan.

**7. Actuarial Value of Assets**

The value of cash, investments and other property belonging to a pension plan as used by the actuary for the purpose of an actuarial valuation. The purpose of an actuarial value of assets is to smooth out fluctuations in market values. This way, long-term costs are not distorted by short-term fluctuations in the market.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX C - GLOSSARY OF TERMS**

**8. Amortization Payment**

The portion of the pension plan contribution which is designed to pay interest and principal on the unfunded actuarial liability in order to pay for that liability in a given number of years.

**9. Entry Age Normal Actuarial Cost Method**

A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated as a level percentage of pay from the individual's date of entry into the plan to the individual's assumed cessation of employment.

**10. Normal Cost**

That portion of the actuarial present value of pension plan benefits and expenses which is allocated to a valuation year by the actuarial cost method.

**11. Unfunded Actuarial Liability**

The excess of the actuarial liability over the actuarial value of assets.

**12. Funded Percentage**

The ratio of the actuarial value of assets to the actuarial liability.

**13. Mortality Table**

A set of percentages which estimate the probability of death at a particular point in time. Typically, the rates are annual and based on age and sex.

**14. Discount Rate**

The assumed interest rate used for converting projecting dollar related values to a present value as of the valuation date.

**15. Medical Trend**

The assumed increase in dollar related values in the future due to the increase in the cost of health care.

**PITTSFIELD CHARTER TOWNSHIP OTHER POSTEMPLOYMENT BENEFITS  
ACTUARIAL VALUATION AS OF JANUARY 1, 2015**

**APPENDIX D - LIST OF ABBREVIATIONS**

Actuarial Liability (AL)  
Actuarial Valuation Report (AVR)  
Annual Required Contribution (ARC)  
Coordination of Benefits (COB)  
Deductible and Coinsurance (DC)  
Deferred Retirement Option Plan (DROP)  
Durable Medical Equipment (DME)  
Employee Assistance Program (EAP)  
Employee Benefits Division (EBD)  
Fiscal Year Ending (FYE)  
Governmental Accounting Standards Board (GASB)  
Hospital Emergency Room (ER)  
In-Network (INN)  
Inpatient (IP)  
Medicare Eligible (ME)  
Net Other Postemployment Benefit (NOO)  
Non-Medicare Eligible (NME)  
Not Applicable (NA)  
Office Visit (OV)  
Other Postemployment Benefit (OPEB)  
Out-of-Network (OON)  
Out-of-Pocket (OOP)  
Outpatient (OP)  
Pay-as-you-go (PAYGo)  
Per Person Per Month (PPPM)  
Pharmacy (Rx)  
Preferred Provider Organization (PPO)  
Primary Care Physician (PCP)  
Specialist Care Provider (SCP)  
Summary Plan Description (SPD)  
Unfunded Actuarial Liability (UAL)  
Urgent Care (UC)