



**TOWN OF SHREWSBURY  
POST RETIREMENT BENEFITS PLAN**

Actuarial Valuation Report  
June 30, 2014

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## **SECTION I - OVERVIEW**

The Town of Shrewsbury has engaged Sherman Actuarial Services to prepare an actuarial valuation of their post-retirement benefits program as of June 30, 2014. This valuation was performed using employee census data, enrollment data, claims, premiums, participant contributions and plan provision information provided by personnel of the Town of Shrewsbury. SAS did not audit these data, although they were reviewed for reasonableness. The results of the valuation are dependent on the accuracy of the data.

The purposes of the valuation are to analyze the current funded position of the Town's post-retirement benefits program, determine the level of contributions necessary to assure sound funding and provide reporting and disclosure information for financial statements, governmental agencies and other interested parties. This valuation report contains information required by the Government Accounting Standards Board's Statements Nos. 43 and 45, respectively entitled "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans" and "Accounting and Financial Reporting by Employers for Post-employment Benefits Other Than Pensions." Liabilities have been determined based on a 4% discount rate. According to GASB principles, if the benefits are not pre-funded, the rate earned by the General Asset Account must be used. To estimate that impact the effect of fully prefunding the obligation, we have used an alternative discount rate of 8%. Since they are on a prefunding approach, the Light and Cable disclosures and forecasts are based on an 8% discount rate

Section II provides a summary of the principal valuation results. Section V provides a projection of funding amounts.

This report is based on the participant data as of June 30, 2014, the plan provisions and the health plans offered as of July 1, 2014.

While the actuary believes that the assumptions are reasonable for financial reporting purposes, it should be understood that there is a range of assumptions that could be deemed reasonable that would yield different results. Moreover, while the actuary considers the assumption set to be reasonable based on prior plan experience, it should be understood that future plan experience may differ considerably from what has been assumed.

The report was prepared under the supervision of Daniel Sherman, an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries, who takes responsibility for the overall appropriateness of the analysis, assumptions and results. Daniel Sherman is deemed to meet the General Qualification Standard and the basic education and experience requirement in the pension area. Based on over twenty years of performing FAS 106 valuations of similar complexity, Mr. Sherman is qualified by experience in retiree medical valuation. Daniel Sherman has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The costs and actuarial exhibits presented in this report have been prepared in accordance with Generally Accepted Accounting Practices and the requirements of GASB 45. I am available to answer questions about this report.

Respectfully Submitted,

SHERMAN ACTUARIAL SERVICES, LLC



January 9, 2015

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Daniel Sherman, ASA, MAAA, EA  
CEO

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Date

## SECTION II – REQUIRED INFORMATION

|   | Town<br>Pay-as-you-go<br>4% | Town<br>Full prefunding<br>8% | Light & Cable<br>Full prefunding<br>8% |
|---|-----------------------------|-------------------------------|--|
| a) Actuarial valuation date   | June 30, 2014               | June 30, 2014                 | June 30, 2014                          |
| b) Actuarial Value of Assets  | \$ 418,528                  | \$ 418,528                    | \$ 1,669,052                           |
| c) Actuarial Accrued Liability  |                             |                               |  |
| Active participants   | \$ 41,512,677               | \$ 18,841,645                 | \$ 1,535,884                           |
| Retired participants  | 27,468,264                  | 18,842,982                    | 1,516,367                              |
| Total AAL   | \$ 68,980,941               | \$ 37,684,627                 | \$ 3,052,251                           |
| d) Unfunded Actuarial Liability "UAL" [ c - b ]                             | \$ 68,562,413               | \$ 37,266,099                 | \$ 1,383,199                           |
| e) Funded ratio [ b / c ]   | 0.6%                        | 1.1%                          | 54.7%                                  |
| f) Annual covered payroll   | \$ 52,875,483               | \$ 52,875,483                 | \$ 4,777,924                           |
| g) UAL as percentage of covered payroll                                     | 129.7%                      | 70.5%                         | 28.9%                                  |
| h) Normal Cost for fiscal year 2014   | \$ 3,863,429                | \$ 1,466,092                  | \$ 68,866                              |
| i) Amortization of UAL for fiscal year 2014 *                               | \$ 2,285,414                | \$ 2,036,693                  | \$ 162,965                             |
| j) Interest to the middle of the fiscal year                                | \$ 0                        | \$ 0                          | \$ 0                                   |
| k) Annual Required Contribution "ARC"<br>for fiscal year 2014 [ h + i + j ] | \$ 6,148,843                | \$ 3,502,785                  | \$ 231,831                             |
| l) Expected claims cost   | \$ 2,151,036                | \$ 2,151,036                  | \$ 187,413                             |

\* 30-year amortization, increasing 4% per year for the Town  
10-year amortization, increasing 4% per year for Light and Cable

### SECTION III - MEMBERSHIP DATA AND MEDICAL PREMIUM

#### Monthly Premiums effective June 30, 2014

Health benefits are available to employees and retirees through a number of plans.

| <b>Plan</b>                                    | <b>Gross Premium</b> | <b>Cost Sharing</b> |
|--|----------------------|---------------------|
| BCBS Options (individual)                      | \$628.00             | 60/40               |
| BCBS Options (family)                          | \$1,685.00           | 60/40               |
| Fallon Senior Plan (individual)                | \$278.00             | 75/25               |
| Fallon Directcare (individual)                 | \$505.00             | 78/22               |
| Fallon Directcare (family)                     | \$1,357.00           | 78/22               |
| Fallon Selectcare (individual)                 | \$542.00             | 73/27               |
| Fallon Selectcare (family)                     | \$1,460.00           | 73/27               |
| Harvard Pilgram EPO (individual)               | \$610.00             | 60/40               |
| Harvard Pilgram EPO (family)                   | \$1,590.00           | 60/40               |
| Harvard Pilgram Medicare Enhanced (individual) | \$328.33             | 50/50               |
| Harvard Pilgram PPO (individual)               | \$1,750.00           | 50/50               |
| Harvard Pilgram PPO (family)                   | \$3,886.00           | 50/50               |
| BCBS Managed Blue for Seniors (individual)     | \$267.18             | 60/40               |
| Medicare HMO Blue (individual)                 |                      |                     |
| Medex 2 (individual)                           | \$311.63             | 50/50               |
| Tufts Medicare Plus (individual)               | \$320.00             | 60/40               |
| Tufts POS (individual)                         | \$1,750.00           | 50/50               |
| Tufts POS (family)                             | \$3,886.00           | 50/50               |
| Tufts Navigator (individual)                   | \$645.00             | 60/40               |
| Tufts Navigator (family)                       | \$1,688.00           | 60/40               |
| Tufts Medicare Preferred (individual)          | \$252.00             | 75/25               |

Cost Sharing for surviving spouses is 50/50.

## SECTION III - MEMBERSHIP DATA AND DEPARTMENT RESULTS

| <b>Number of Employees</b>          | <b>Public Buildings</b> | <b>Sewer</b>   | <b>Water</b>     | <b>Electric</b>  | <b>CATV</b>      | <b>School</b>     | <b>All Others</b> | <b>Total</b>      |
|-------------------------------------|-------------------------|----------------|------------------|------------------|------------------|-------------------|-------------------|-------------------|
| Actives                             | 19                      | 4              | 12               | 34               | 27               | 791               | 160               | 1,047             |
| Retired                             | 4                       | 2              | 12               | 29               | 6                | 362               | 91                | 506               |
| <b>Total</b>                        | <b>23</b>               | <b>6</b>       | <b>24</b>        | <b>63</b>        | <b>33</b>        | <b>1,153</b>      | <b>251</b>        | <b>1,553</b>      |
| <b>Accrued Liability</b>            | <b>@ 4%</b>             |                |                  |                  |                  |                   |                   |                   |
| Active                              | 1,235,975               | 255,874        | 924,497          | 1,826,155        | 1,328,365        | 29,372,300        | 9,724,031         | 44,667,197        |
| Retired                             | 286,664                 | 95,295         | 1,486,383        | 1,663,823        | 498,261          | 18,726,313        | 6,873,609         | 29,630,348        |
| <b>Total</b>                        | <b>1,522,639</b>        | <b>351,169</b> | <b>2,410,880</b> | <b>3,489,978</b> | <b>1,826,626</b> | <b>48,098,613</b> | <b>16,597,640</b> | <b>74,297,545</b> |
| <b>Assets</b>                       | <b>9,238</b>            | <b>2,131</b>   | <b>14,628</b>    | <b>1,098,438</b> | <b>570,613</b>   | <b>291,829</b>    | <b>100,703</b>    | <b>2,087,580</b>  |
| <b>Unfunded Accrued Liability</b>   | <b>1,513,401</b>        | <b>349,038</b> | <b>2,396,252</b> | <b>2,391,540</b> | <b>1,256,013</b> | <b>47,806,784</b> | <b>16,496,937</b> | <b>72,209,965</b> |
| <b>Annual Required Contribution</b> |                         |                |                  |                  |                  |                   |                   |                   |
| Normal Cost with interest           | 37,016                  | 11,713         | 8,974            | 80,674           | 96,850           | 3,125,143         | 680,583           | 4,040,953         |
| Amortization of UAL with interest   | 50,447                  | 11,635         | 79,875           | 239,154          | 125,601          | 1,593,559         | 549,898           | 2,650,169         |
| <b>Total - FYE14</b>                | <b>87,463</b>           | <b>23,348</b>  | <b>88,849</b>    | <b>319,828</b>   | <b>222,451</b>   | <b>4,718,702</b>  | <b>1,230,481</b>  | <b>6,691,122</b>  |
| Expected Claims Costs               | 33,733                  | 6,298          | 73,935           | 114,949          | 45,723           | 1,471,416         | 592,395           | 2,338,449         |
| <b>Accrued Liability</b>            | <b>@ 8%</b>             |                |                  |                  |                  |                   |                   |                   |
| Active                              | 702,936                 | 136,492        | 499,365          | 915,742          | 620,142          | 12,986,081        | 4,516,771         | 20,377,529        |
| Retired                             | 198,712                 | 68,391         | 864,751          | 1,159,795        | 356,572          | 12,931,724        | 4,779,404         | 20,359,349        |
| <b>Total</b>                        | <b>901,648</b>          | <b>204,883</b> | <b>1,364,116</b> | <b>2,075,537</b> | <b>976,714</b>   | <b>25,917,805</b> | <b>9,296,175</b>  | <b>40,736,878</b> |
| <b>Assets</b>                       | <b>10,014</b>           | <b>2,275</b>   | <b>15,150</b>    | <b>1,098,438</b> | <b>570,613</b>   | <b>287,845</b>    | <b>103,244</b>    | <b>2,087,580</b>  |
| <b>Unfunded Accrued Liability</b>   | <b>891,634</b>          | <b>202,608</b> | <b>1,348,966</b> | <b>977,099</b>   | <b>406,101</b>   | <b>25,629,960</b> | <b>9,192,931</b>  | <b>38,649,298</b> |
| <b>Annual Required Contribution</b> |                         |                |                  |                  |                  |                   |                   |                   |
| Normal Cost with interest           | 16,129                  | 4,870          | 3,413            | 30,818           | 38,048           | 1,202,376         | 170,438           | 1,466,092         |
| Amortization of UAL with interest   | 48,730                  | 11,073         | 73,725           | 115,119          | 47,846           | 1,400,747         | 502,419           | 2,036,693         |
| <b>Total - FYE14</b>                | <b>64,859</b>           | <b>15,943</b>  | <b>77,138</b>    | <b>145,937</b>   | <b>85,894</b>    | <b>2,603,123</b>  | <b>672,857</b>    | <b>3,502,785</b>  |
| Expected Claims Costs               | 33,733                  | 6,298          | 73,935           | 114,949          | 45,723           | 1,471,416         | 592,395           | 2,338,449         |

## SECTION IV – REQUIRED SUPPLEMENTARY INFORMATION

## SCHEDULE OF FUNDING PROGRESS - 8%

| Actuarial<br>Valuation<br>Date | (a)<br>Actuarial<br>Value of<br>Assets | (b)<br>Actuarial<br>Accrued<br>Liability<br>(AAL) | (b) - (a)<br>Unfunded<br>AAL<br>(UAL) | (a) / (b)<br>Funded<br>Ratio | Covered<br>Payroll | [(b)-(a)] / (c)<br>UAL as<br>Percentage<br>of Covered<br>Payroll |
|--------------------------------|--|---|---------------------------------------|------------------------------|--------------------|--|
| July 1, 2007                   | 0                                      | 34,641,767  | 34,641,767                            | 0.00%                        | 52,977,722         | 65.4%  |
| June 30, 2010                  | 0                                      | 42,827,747  | 42,827,747                            | 0.00%                        | 58,901,418         | 72.7%  |
| June 30, 2012                  | 187,844                                | 36,892,324  | 36,704,480                            | 0.51%                        | 54,804,649         | 67.0%  |
| June 30, 2014                  | 418,528                                | 37,684,627  | 37,266,099                            | 1.11%                        | 52,875,483         | 70.5%  |

## TOWN - SCHEDULE OF FUNDING PROGRESS - 4.0%

| Actuarial<br>Valuation<br>Date | (a)<br>Actuarial<br>Value of<br>Assets | (b)<br>Actuarial<br>Accrued<br>Liability<br>(AAL) | (b) - (a)<br>Unfunded<br>AAL<br>(UAL) | (a) / (b)<br>Funded<br>Ratio | Covered<br>Payroll | [(b)-(a)] / (c)<br>UAL as<br>Percentage<br>of Covered<br>Payroll |
|--------------------------------|--|---|---------------------------------------|------------------------------|--------------------|--|
| July 1, 2007                   | 0                                      | 72,976,092  | 72,976,092                            | 0.00%                        | 52,977,722         | 137.7%   |
| June 30, 2010                  | 0                                      | 89,913,036  | 89,913,036                            | 0.00%                        | 58,901,418         | 152.7%   |
| June 30, 2012                  | 187,844                                | 68,074,406  | 67,886,562                            | 0.28%                        | 54,804,649         | 123.9%   |
| June 30, 2014                  | 418,528                                | 68,980,941  | 68,562,413                            | 0.61%                        | 52,875,483         | 129.7%   |

## LIGHT - SCHEDULE OF FUNDING PROGRESS - 8.0%

| Actuarial<br>Valuation<br>Date | (a)<br>Actuarial<br>Value of<br>Assets | (b)<br>Actuarial<br>Accrued<br>Liability<br>(AAL) | (b) - (a)<br>Unfunded<br>AAL<br>(UAL) | (a) / (b)<br>Funded<br>Ratio | Covered<br>Payroll | [(b)-(a)] / (c)<br>UAL as<br>Percentage<br>of Covered<br>Payroll |
|--------------------------------|--|---|---------------------------------------|------------------------------|--------------------|--|
| December 31, 2012              | 993,694                                | 2,367,001   | 1,373,307                             | 41.98%                       | 2,669,154          | 51.5%  |
| December 31, 2014              | 1,098,438                              | 2,075,537   | 977,099                               | 52.92%                       | 2,736,400          | 35.7%  |

**CABLE - SCHEDULE OF FUNDING PROGRESS - 8.0%**

| Actuarial<br>Valuation<br>Date | (a)<br>Actuarial<br>Value of<br>Assets | (b)<br>Actuarial<br>Accrued<br>Liability<br>(AAL) | (b) - (a)<br>Unfunded<br>AAL<br>(UAL) | (a) / (b)<br>Funded<br>Ratio | Covered<br>Payroll | [(b)-(a)] / (c)<br>UAL as<br>Percentage<br>of Covered<br>Payroll |
|--------------------------------|--|---|---------------------------------------|------------------------------|--------------------|--|
| December 31, 2012              | 367,986                                | 956,086   | 588,100                               | 38.49%                       | 2,140,743          | 27.5%  |
| December 31, 2014              | 570,613                                | 976,714   | 406,101                               | 58.42%                       | 2,041,524          | 19.9%  |

Prior to 2012, the discount rate was 3.5%

### SECTION V – NET OPEB OBLIGATION

GASB Statement No. 45 requires the development of Annual OPEB Cost and Net OPEB Obligation (NOO). This development is shown in the following table.

#### Town

| Year Ending June 30 | Annual Required Contribution | Interest on NOO | Amortization of NOO | Annual OPEB Cost (1)+(2)-(3) | Contribution | Change in NOO (4)-(5) | NOO Balance |
|---------------------|------------------------------|-----------------|---------------------|------------------------------|--------------|-----------------------|-------------|
|                     | (1)                          | (2)             | (3)                 | (4)                          | (5)          | (6)                   | (7)         |
| 2009                | 6,699,898                    | 0               | 0                   | 6,699,898                    | 1,503,566    | 5,196,332             | 5,196,332   |
| 2010                | 7,210,567                    | 181,872         | 150,149             | 7,178,844                    | 1,903,118    | 5,275,726             | 10,472,058  |
| 2011                | 7,273,809                    | 366,522         | 302,591             | 7,209,878                    | 1,747,999    | 5,461,879             | 15,933,937  |
| 2012                | 6,282,041                    | 557,688         | 460,413             | 6,379,316                    | 2,157,560    | 4,221,756             | 20,155,693  |
| 2013                | 6,553,481                    | 806,228         | 671,856             | 6,687,853                    | 1,786,301    | 4,901,552             | 25,057,246  |
| 2014                | 6,125,495                    | 1,002,290       | 835,242             | 6,292,543                    | 2,171,480    | 4,121,063             | 29,178,309  |
| 2015                | 6,389,773                    | 1,167,132       | 972,610             | 6,584,295                    | 2,285,135    | 4,299,161             | 33,477,469  |

#### Sewer

| Year Ending June 30 | Annual Required Contribution | Interest on NOO | Amortization of NOO | Annual OPEB Cost (1)+(2)-(3) | Contribution | Change in NOO (4)-(5) | NOO Balance |
|---------------------|------------------------------|-----------------|---------------------|------------------------------|--------------|-----------------------|-------------|
|                     | (1)                          | (2)             | (3)                 | (4)                          | (5)          | (6)                   | (7)         |
| 2009                | 21,451                       | 0               | 0                   | 21,451                       | 4,763        | 16,688                | 16,688      |
| 2010                | 30,635                       | 584             | 482                 | 30,533                       | 9,016        | 21,517                | 38,205      |
| 2011                | 28,509                       | 1,337           | 1,104               | 28,276                       | 8,652        | 19,624                | 57,829      |
| 2012                | 23,554                       | 2,024           | 1,671               | 23,907                       | 4,284        | 19,623                | 77,452      |
| 2013                | 24,552                       | 3,098           | 2,582               | 25,068                       | 2,517        | 22,551                | 100,002     |
| 2014                | 23,348                       | 4,000           | 3,333               | 24,015                       | 6,298        | 17,717                | 117,719     |
| 2015                | 24,340                       | 4,709           | 3,924               | 25,125                       | 8,682        | 16,444                | 134,163     |

#### Light

| Year Ending December 31 | Annual Required Contribution | Interest on NOO | Amortization of NOO | Annual OPEB Cost (1)+(2)-(3) | Contribution | Change in NOO (4)-(5) | NOO Balance |
|-------------------------|------------------------------|-----------------|---------------------|------------------------------|--------------|-----------------------|-------------|
|                         | (1)                          | (2)             | (3)                 | (4)                          | (5)          | (6)                   | (7)         |
| 2009                    | 182,724                      | 0               | 0                   | 182,724                      | 71,874       | 110,850               | 110,850     |
| 2010                    | 197,678                      | 3,880           | 3,203               | 197,001                      | 77,770       | 119,231               | 230,081     |
| 2011                    | 194,643                      | 8,053           | 6,648               | 193,238                      | 852,074      | (658,836)             | (428,755)   |
| 2012                    | 175,737                      | (15,006)        | (12,389)            | 173,120                      | 350,053      | (176,933)             | (605,688)   |
| 2013                    | 182,947                      | (48,455)        | (61,594)            | 196,086                      | 339,811      | (143,725)             | (749,413)   |
| 2014                    | 145,937                      | (59,953)        | (88,294)            | 174,278                      | 124,448      | 49,830                | (699,583)   |
| 2015                    | 151,929                      | (55,967)        | (89,970)            | 185,932                      | 142,181      | 43,751                | (655,833)   |

## SECTION V – NET OPEB OBLIGATION

## Cable

| Year Ending December 31 | Annual Required Contribution | Interest on NOO | Amortization of NOO | Annual OPEB Cost (1)+(2)-(3) | Contribution | Change in NOO (4)-(5) | NOO Balance |
|-------------------------|------------------------------|-----------------|---------------------|------------------------------|--------------|-----------------------|-------------|
|                         | (1)                          | (2)             | (3)                 | (4)                          | (5)          | (6)                   | (7)         |
| 2009                    | 369,793                      | 0               | 0                   | 369,793                      | 4,938        | 364,855               | 364,855     |
| 2010                    | 192,890                      | 12,770          | 10,543              | 190,663                      | 7,259        | 183,404               | 548,259     |
| 2011                    | 194,008                      | 19,189          | 15,842              | 190,661                      | 259,445      | (68,784)              | 479,475     |
| 2012                    | 101,744                      | 16,782          | 13,854              | 104,672                      | 151,214      | (46,542)              | 432,933     |
| 2013                    | 106,023                      | 34,635          | 44,026              | 96,632                       | 216,614      | (119,982)             | 312,951     |
| 2014                    | 85,894                       | 25,036          | 36,871              | 74,059                       | 128,602      | (54,543)              | 258,408     |
| 2015                    | 89,520                       | 20,673          | 33,233              | 76,960                       | 138,371      | (61,411)              | 196,997     |

## Total

| Year Ending | Annual Required Contribution | Interest on NOO | Amortization of NOO | Annual OPEB Cost (1)+(2)-(3) | Contribution | Change in NOO (4)-(5) | NOO Balance |
|-------------|------------------------------|-----------------|---------------------|------------------------------|--------------|-----------------------|-------------|
|             | (1)                          | (2)             | (3)                 | (4)                          | (5)          | (6)                   | (7)         |
| 2009        | 7,273,866                    | 0               | 0                   | 7,273,866                    | 1,585,141    | 5,688,725             | 5,688,725   |
| 2010        | 7,631,770                    | 199,106         | 164,377             | 7,597,041                    | 1,997,163    | 5,599,878             | 11,288,603  |
| 2011        | 7,690,969                    | 395,101         | 326,185             | 7,622,053                    | 2,868,170    | 4,753,883             | 16,042,486  |
| 2012        | 6,583,076                    | 561,488         | 463,549             | 6,681,015                    | 2,663,111    | 4,017,904             | 20,060,390  |
| 2013        | 6,867,002                    | 795,506         | 656,870             | 7,005,638                    | 2,345,243    | 4,660,395             | 24,720,785  |
| 2014        | 6,380,674                    | 971,373         | 787,152             | 6,564,895                    | 2,430,828    | 4,134,067             | 28,854,853  |
| 2015        | 6,655,563                    | 1,136,547       | 919,797             | 6,872,313                    | 2,574,368    | 4,297,944             | 33,152,797  |

## SECTION VI – SCHEDULE OF EMPLOYER CONTRIBUTIONS

The Government Accounting Standards Board's Statement No. 45 "Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions" outlines various requirements of a funding schedule that will amortize the unfunded actuarial liability and cover normal costs. Amortization of the unfunded actuarial liability is to be based on a schedule that extends no longer than 30 years. The contribution towards the amortization of the unfunded actuarial liability may be made in level payments or in payments increasing at the same rate as salary increases.

In the amortization schedules shown on the following pages, the amortization of the unfunded accrued liability is increasing at 4.0% for 30 years. The normal cost is expected to increase at the same rate as the assumed ultimate health care trend rate. The contributions were computed assuming that the contribution is paid at the end of the fiscal year. Projected benefit payments/employer contributions reflect only the benefit for those individuals now employed or retired, not any future entrants. .

Paragraph 12 of GASB 45 stipulates that valuations must be performed at least biennially. The following projections are intended only to illustrate long-term implications of Full Prefunding versus Partial Prefunding.

## SECTION VI – SCHEDULE OF EMPLOYER CONTRIBUTIONS

## TOWN - 4%

| Fiscal Year      | Amortization       |               |            |                      |
|------------------|--------------------|---------------|------------|----------------------|
| <u>Ending In</u> | <u>Normal Cost</u> | <u>of UAL</u> | <u>ARC</u> | <u>Pay-as-You-Go</u> |
| 2014             | 3,863,429          | 2,285,414     | 6,148,843  | 2,171,480            |
| 2015             | 4,017,966          | 2,485,207     | 6,503,173  | 2,285,135            |
| 2016             | 4,178,685          | 2,647,446     | 6,826,131  | 2,236,706            |
| 2017             | 4,345,832          | 2,823,534     | 7,169,366  | 2,352,570            |
| 2018             | 4,519,665          | 3,008,559     | 7,528,224  | 2,503,297            |
| 2019             | 4,700,452          | 3,201,905     | 7,902,357  | 2,568,353            |
| 2020             | 4,888,470          | 3,407,121     | 8,295,591  | 2,751,105            |
| 2021             | 5,084,009          | 3,620,857     | 8,704,866  | 2,876,571            |
| 2022             | 5,287,369          | 3,845,706     | 9,133,075  | 3,114,055            |
| 2023             | 5,498,864          | 4,078,506     | 9,577,370  | 3,286,305            |
| 2024             | 5,718,819          | 4,322,124     | 10,040,943 | 3,437,910            |
| 2025             | 5,947,572          | 4,578,006     | 10,525,578 | 3,676,644            |
| 2026             | 6,185,475          | 4,843,935     | 11,029,410 | 3,848,262            |
| 2027             | 6,432,894          | 5,122,963     | 11,555,857 | 4,017,655            |
| 2028             | 6,690,210          | 5,416,026     | 12,106,236 | 4,194,464            |
| 2029             | 6,957,818          | 5,723,779     | 12,681,597 | 4,387,528            |
| 2030             | 7,236,131          | 6,046,610     | 13,282,741 | 4,589,471            |
| 2031             | 7,525,576          | 6,385,194     | 13,910,770 | 4,794,004            |
| 2032             | 7,826,599          | 6,740,462     | 14,567,061 | 5,014,906            |
| 2033             | 8,139,663          | 7,112,926     | 15,252,589 | 5,246,487            |
| 2034             | 8,465,250          | 7,503,328     | 15,968,578 | 5,482,440            |
| 2035             | 8,803,860          | 7,912,677     | 16,716,537 | 5,734,514            |
| 2036             | 9,156,014          | 8,341,632     | 17,497,646 | 5,992,906            |
| 2037             | 9,522,255          | 8,791,238     | 18,313,493 | 6,262,887            |
| 2038             | 9,903,145          | 9,262,416     | 19,165,561 | 6,545,197            |
| 2039             | 10,299,271         | 9,756,121     | 20,055,392 | 6,840,254            |
| 2040             | 10,711,242         | 10,273,349    | 20,984,591 | 7,148,697            |
| 2041             | 11,139,692         | 10,815,138    | 21,954,830 | 7,471,104            |
| 2042             | 11,585,280         | 11,382,569    | 22,967,849 | 7,808,102            |
| 2043             | 12,048,691         | 11,976,768    | 24,025,459 | 8,160,405            |
| 2044             | 12,530,639         | 12,598,904    | 25,129,543 | 8,528,652            |
| 2045             | 13,031,865         | 13,250,199    | 26,282,064 | 8,913,576            |

\* The contributions were computed assuming that the contribution is paid at the end of the fiscal year.

## SECTION VI – SCHEDULE OF EMPLOYER CONTRIBUTIONS

## TOWN – 8%

| Fiscal Year      | Amortization       |               |            |                      |
|------------------|--------------------|---------------|------------|----------------------|
| <u>Ending In</u> | <u>Normal Cost</u> | <u>of UAL</u> | <u>ARC</u> | <u>Pay-as-You-Go</u> |
| 2014             | 1,466,092          | 2,036,693     | 3,502,785  | 2,171,480            |
| 2015             | 1,532,066          | 2,118,161     | 3,650,227  | 2,285,135            |
| 2016             | 1,601,009          | 2,202,887     | 3,803,896  | 2,236,706            |
| 2017             | 1,673,054          | 2,291,002     | 3,964,056  | 2,352,570            |
| 2018             | 1,748,341          | 2,382,642     | 4,130,983  | 2,503,297            |
| 2019             | 1,827,016          | 2,477,948     | 4,304,964  | 2,568,353            |
| 2020             | 1,909,232          | 2,577,066     | 4,486,298  | 2,751,105            |
| 2021             | 1,995,147          | 2,680,149     | 4,675,296  | 2,876,571            |
| 2022             | 2,084,929          | 2,787,355     | 4,872,284  | 3,114,055            |
| 2023             | 2,178,751          | 2,898,849     | 5,077,600  | 3,286,305            |
| 2024             | 2,276,795          | 3,014,803     | 5,291,598  | 3,437,910            |
| 2025             | 2,379,251          | 3,135,395     | 5,514,646  | 3,676,644            |
| 2026             | 2,486,317          | 3,260,811     | 5,747,128  | 3,848,262            |
| 2027             | 2,598,201          | 3,391,243     | 5,989,444  | 4,017,655            |
| 2028             | 2,715,120          | 3,526,893     | 6,242,013  | 4,194,464            |
| 2029             | 2,837,300          | 3,667,969     | 6,505,269  | 4,387,528            |
| 2030             | 2,964,979          | 3,814,688     | 6,779,667  | 4,589,471            |
| 2031             | 3,098,403          | 3,967,276     | 7,065,679  | 4,794,004            |
| 2032             | 3,237,831          | 4,125,967     | 7,363,798  | 5,014,906            |
| 2033             | 3,383,533          | 4,291,006     | 7,674,539  | 5,246,487            |
| 2034             | 3,535,792          | 4,462,646     | 7,998,438  | 5,482,440            |
| 2035             | 3,694,903          | 4,641,152     | 8,336,055  | 5,734,514            |
| 2036             | 3,861,174          | 4,826,798     | 8,687,972  | 5,992,906            |
| 2037             | 4,034,927          | 5,019,870     | 9,054,797  | 6,262,887            |
| 2038             | 4,216,499          | 5,220,665     | 9,437,164  | 6,545,197            |
| 2039             | 4,406,241          | 5,429,492     | 9,835,733  | 6,840,254            |
| 2040             | 4,604,522          | 5,646,672     | 10,251,194 | 7,148,697            |
| 2041             | 4,811,725          | 5,872,539     | 10,684,264 | 7,471,104            |
| 2042             | 5,028,253          | 6,107,441     | 11,135,694 | 7,808,102            |
| 2043             | 5,254,524          | 6,351,739     | 11,606,263 | 8,160,405            |
| 2044             | 5,490,978          | -             | 5,490,978  | 8,528,652            |
| 2045             | 5,738,072          | -             | 5,738,072  | 8,913,576            |

\* The contributions were computed assuming that the contribution is paid at the end of the fiscal year.

## SECTION VI – SCHEDULE OF EMPLOYER CONTRIBUTIONS

## LIGHT – 8%

| Fiscal Year      |                    | Amortization  |            |                      |
|------------------|--------------------|---------------|------------|----------------------|
| <u>Ending In</u> | <u>Normal Cost</u> | <u>of UAL</u> | <u>ARC</u> | <u>Pay-as-You-Go</u> |
| 2014             | 30,818             | 115,119       | 145,937    | 114,948              |
| 2015             | 32,205             | 119,724       | 151,929    | 132,681              |
| 2016             | 33,654             | 124,513       | 158,167    | 141,529              |
| 2017             | 35,168             | 129,494       | 164,662    | 145,313              |
| 2018             | 36,751             | 134,674       | 171,425    | 163,961              |
| 2019             | 38,405             | 140,061       | 178,466    | 172,429              |
| 2020             | 40,133             | 145,663       | 185,796    | 179,454              |
| 2021             | 41,939             | 151,490       | 193,429    | 192,905              |
| 2022             | 43,826             | 157,550       | 201,376    | 188,290              |
| 2023             | 45,798             | 163,852       | 209,650    | 200,660              |
| 2024             | 47,859             | -             | 47,859     | 216,270              |
| 2025             | 50,013             | -             | 50,013     | 215,924              |
| 2026             | 52,264             | -             | 52,264     | 225,641              |
| 2027             | 54,616             | -             | 54,616     | 235,795              |
| 2028             | 57,074             | -             | 57,074     | 246,406              |
| 2029             | 59,642             | -             | 59,642     | 257,494              |
| 2030             | 62,326             | -             | 62,326     | 269,081              |
| 2031             | 65,131             | -             | 65,131     | 281,190              |
| 2032             | 68,062             | -             | 68,062     | 293,843              |
| 2033             | 71,125             | -             | 71,125     | 307,066              |
| 2034             | 74,326             | -             | 74,326     | 320,884              |
| 2035             | 77,671             | -             | 77,671     | 335,324              |
| 2036             | 81,166             | -             | 81,166     | 350,414              |
| 2037             | 84,818             | -             | 84,818     | 366,182              |
| 2038             | 88,635             | -             | 88,635     | 382,660              |
| 2039             | 92,624             | -             | 92,624     | 399,880              |
| 2040             | 96,792             | -             | 96,792     | 417,875              |
| 2041             | 101,148            | -             | 101,148    | 436,679              |
| 2042             | 105,700            | -             | 105,700    | 456,330              |
| 2043             | 110,457            | -             | 110,457    | 476,864              |
| 2044             | 115,428            | -             | 115,428    | 498,323              |
| 2045             | 120,622            | -             | 120,622    | 520,748              |

\* The contributions were computed assuming that the contribution is paid at the middle of the fiscal year.

## SECTION VI – SCHEDULE OF EMPLOYER CONTRIBUTIONS

## CABLE – 8%

| Fiscal Year      |                    | Amortization  |            |                      |
|------------------|--------------------|---------------|------------|----------------------|
| <u>Ending In</u> | <u>Normal Cost</u> | <u>of UAL</u> | <u>ARC</u> | <u>Pay-as-You-Go</u> |
| 2012             | 38,048             | 47,846        | 85,894     | 45,723               |
| 2013             | 39,760             | 49,760        | 89,520     | 55,492               |
| 2014             | 41,549             | 51,750        | 93,299     | 53,499               |
| 2015             | 43,419             | 53,820        | 97,239     | 60,863               |
| 2016             | 45,373             | 55,973        | 101,346    | 69,812               |
| 2017             | 47,415             | 58,212        | 105,627    | 63,464               |
| 2018             | 49,549             | 60,540        | 110,089    | 75,728               |
| 2019             | 51,779             | 62,962        | 114,741    | 76,396               |
| 2020             | 54,109             | 65,480        | 119,589    | 68,006               |
| 2021             | 56,544             | 68,099        | 124,643    | 82,977               |
| 2022             | 59,088             | -             | 59,088     | 88,281               |
| 2023             | 61,747             | -             | 61,747     | 96,923               |
| 2024             | 64,526             | -             | 64,526     | 101,285              |
| 2025             | 67,430             | -             | 67,430     | 105,843              |
| 2026             | 70,464             | -             | 70,464     | 110,606              |
| 2027             | 73,635             | -             | 73,635     | 115,583              |
| 2028             | 76,949             | -             | 76,949     | 120,784              |
| 2029             | 80,412             | -             | 80,412     | 126,220              |
| 2030             | 84,031             | -             | 84,031     | 131,899              |
| 2031             | 87,812             | -             | 87,812     | 137,835              |
| 2032             | 91,764             | -             | 91,764     | 144,037              |
| 2033             | 95,893             | -             | 95,893     | 150,519              |
| 2034             | 100,208            | -             | 100,208    | 157,293              |
| 2035             | 104,717            | -             | 104,717    | 164,371              |
| 2036             | 109,429            | -             | 109,429    | 171,767              |
| 2037             | 114,353            | -             | 114,353    | 179,497              |
| 2038             | 119,499            | -             | 119,499    | 187,574              |
| 2039             | 124,876            | -             | 124,876    | 196,015              |
| 2040             | 130,495            | -             | 130,495    | 204,836              |
| 2041             | 136,367            | -             | 136,367    | 214,053              |
| 2042             | 142,504            | -             | 142,504    | 223,686              |
| 2043             | 148,917            | -             | 148,917    | 233,752              |

\* The contributions were computed assuming that the contribution is paid at the middle of the fiscal year.



## SCHEDULE A - ACTUARIAL ASSUMPTIONS AND METHODS

### TOWN OF SHREWSBURY, ALL GROUPS

- Medical Plan Selection:*** Current retirees who are under age 65 are assumed to remain in their current medical plan until age 65. At age 65, they are assumed to switch to a blend of Medicare plans similar to the current blend of Medicare-eligible retirees.
- Current retirees over age 65 remain in their current medical plan until death.
- Post-65 payments for future retirees: Similar to the pre-65 payments, a weighted average is used, but only Medicare plans are considered because of the adoption of Section 18 of MGL Chapter 32B.
- Spouse's age:*** Husbands are assumed to be 3 years older than their wives.
- Marital status:*** 65% of employees are assumed to have a covered spouse at retirement.
- Age-based Morbidity:*** Per capita costs are adjusted to reflect expected cost increases related to age. The increase in the net incurred claims was assumed to be:

| <u>Age</u>   | <u>Annual Increase</u> |
|--------------|------------------------|
| 49 and below | 2.6%                   |
| 50-54        | 3.2%                   |
| 55-59        | 3.4%                   |
| 60-64        | 3.7%                   |
| 65-69        | 3.2%                   |
| 70-74        | 2.4%                   |
| 75-79        | 1.8%                   |
| 80 and over  | 0.0%                   |

- Pre-Age 65 Retirees:*** Current retirees who are under age 65 are assumed to remain in their current medical plan until age 65. Current active employees who are assumed to retire prior to age 65 are valued with a weighted-average premium. This weighted-average premium is based on the medical plan coverage of current retirees under age 65. Age weighting is not used for teachers.

***Post-Age 65 Retirees:***

Current retirees over age 65 remain in their current medical plan until death for purposes of measuring their contributions. It is assumed that future retirees are Medicare eligible. It is furthermore assumed that all current retirees over 65 will participate in the Medicare Supplement plan in the same proportion as current retirees over 65. Per capita costs were developed from the monthly costs. Amounts to be received in the future for the Medicare Part D Retiree Drug Subsidy are not reflected in the valuation.

***Termination Benefit:***

75% of current active teachers and 75% of current active non-teachers over age 50 with at least 10 years of service are expected to elect medical coverage starting at age 65.

***Medical Plan Costs:***

The estimated gross per capita incurred claim costs for 2014-15 at age 64 and 65 are \$13,440 and \$3,634, respectively. Medicare eligible employees' per capita claims costs at age 65 is \$3,019.

It is assumed that future retirees participate in the same manner as current retirees. Employee cost sharing is based on current rates. The cost sharing varies by medical plan. Future cost sharing is based on the weighted average of the current cost sharing of retirees and beneficiaries.

**SCHEDULE A - ACTUARIAL ASSUMPTIONS AND METHODS****GROUPS 1 AND 2 (NON-TEACHERS)**

**SEPARATIONS FROM ACTIVE SERVICE:** Teacher separations are based on the same rates used by the Massachusetts Teachers Retirement Board. School department participants not in the Shrewsbury Retirement System were assumed to be Teachers.

Representative values of the assumed annual rates of withdrawal and vesting, disability, death and service retirement are as follows for non-Teachers:

| Age | Disability | Service Retirement |        | Years of Service | Rates of Withdrawal |
|-----|------------|--------------------|--------|------------------|---------------------|
|     |            | Male               | Female |                  |                     |
| 25  | .0002      |                    |        | 0                | .150                |
| 30  | .0003      |                    |        | 1                | .120                |
| 35  | .0006      |                    |        | 2                | .100                |
| 40  | .0010      |                    |        | 3                | .090                |
| 45  | .0015      |                    |        | 4                | .080                |
| 50  | .0019      | .01                | .015   | 5                | .076                |
| 55  | .0024      | .02                | .055   | 10               | .054                |
| 60  | .0028      | .12                | .050   | 15               | .033                |
| 62  | .0030      | .30                | .150   | 20               | .022                |
| 65  | .0030      | .40                | .150   | 25               | .010                |
| 69  |            | .30                | .200   | 30+              | .000                |

Mortality: 2008 IRS Static Mortality. For the period after disability retirement, the RP-2000 Combined Healthy Table set forward 2 years is used.

**SCHEDULE A - ACTUARIAL ASSUMPTIONS AND METHODS**  
**GROUPS 1 AND 2 (TEACHERS)**

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of withdrawal and vesting, disability, death and service retirement are as follows:

| Age | Disability | Years of Service | Rates of Withdrawal |
|-----|------------|------------------|---------------------|
| 25  | .0002      | 0                | .150                |
| 30  | .0003      | 1                | .120                |
| 35  | .0006      | 2                | .100                |
| 40  | .0010      | 3                | .090                |
| 45  | .0015      | 4                | .080                |
| 50  | .0019      | 5                | .076                |
| 55  | .0024      | 10               | .054                |
| 60  | .0028      | 15               | .033                |
| 62  | .0030      | 20               | .020                |
| 65  | .0030      | 25               | .010                |
| 69  |            | 30+              | .000                |

| Age | Male Service Retirement |      | Female Service Retirement |      |
|-----|-------------------------|------|---------------------------|------|
|     | <20                     | 20+  | <20                       | 20+  |
| 50  | 0.00                    | 0.01 | 0.00                      | 0.01 |
| 55  | 0.02                    | 0.03 | 0.02                      | 0.04 |
| 60  | 0.12                    | 0.20 | 0.12                      | 0.16 |
| 61  | 0.15                    | 0.30 | 0.15                      | 0.20 |
| 62  | 0.18                    | 0.35 | 0.18                      | 0.25 |
| 63  | 0.15                    | 0.35 | 0.15                      | 0.25 |
| 64  | 0.25                    | 0.30 | 0.25                      | 0.30 |
| 65  | 0.40                    | 0.50 | 0.40                      | 0.40 |
| 66  | 0.40                    | 0.30 | 0.40                      | 0.30 |
| 67  | 0.40                    | 0.30 | 0.40                      | 0.25 |
| 68  | 0.40                    | 0.30 | 0.40                      | 0.35 |
| 69  | 0.40                    | 0.40 | 0.40                      | 0.35 |
| 70  | 1.00                    | 1.00 | 1.00                      | 1.00 |

Teachers electing the increased benefit under Chapter 114 of the Acts of 2000 were assumed to have higher rates of retirement from ages 54 to 62 if their service was greater than 30 years. These rates are the same for males and females. The rate at age 54 is 0.035. The rate increases to 0.06 at age 55, 0.18 at age 56, and 0.30 at age 57. The rate for ages 58, 59, and 62 is 0.40. The rate for ages 60 and 61 is 0.35.

Mortality: The RP-2000 Combined Healthy Table with Projection Scale AA until 2007. For the period after disability retirement, the RP-2000 Combined Healthy Table set forward 2 years is used.

**SCHEDULE A - ACTUARIAL ASSUMPTIONS AND METHODS**

GROUP 4

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of disability, service retirement, and withdrawal are as follows:

| Age | Disability | Service Retirements | Years of Service | Rates of Withdrawal |
|-----|------------|---------------------|------------------|---------------------|
| 25  | 0.20%      |                     | 0                | 15.0%               |
| 30  | 0.30       |                     | 1                | 15.0                |
| 35  | 0.30       |                     | 2                | 15.0                |
| 40  | 0.30       |                     | 3                | 15.0                |
| 45  | 1.00       | 1.0%                | 4                | 15.0                |
| 50  | 1.25       | 2.0                 | 5                | 15.0                |
| 55  | 1.20       | 15.0                | 6                | 15.0                |
| 60  | 0.85       | 20.0                | 7                | 15.0                |
| 62  | 0.75       | 25.0                | 8                | 15.0                |
| 65  | 0.00       | 100.0               | 9                | 15.0                |
| 69  |            |                     | 10               | 15.0                |
|     |            |                     | 11+              | 0.0                 |

Mortality: 2008 IRS Static Mortality. For the period after disability retirement, the RP-2000 Combined Healthy Table set forward 2 years is used.

## SCHEDULE B - SUMMARY OF PROGRAM PROVISIONS

- Eligibility:**
- Retirement:** Age 55 with 10 years of service, or 20 years of service. Eligible for immediate commencement of Medical Insurance and Life Insurance benefits.
  - Termination:** Age 50 with 10 years of service. Eligible for deferred commencement of Medical Insurance and Life Insurance benefits at age 65.
  - Disability:** Under age 55 with 10 years of service. Eligible for immediate commencement of Medical Insurance and Life Insurance benefits.
- Benefit Types:**
- Medical Insurance:** Medical and prescription drug benefits are provided to all eligible retirees through a variety of plans as summarized in Section III.
  - Life Insurance:** The Town of Shrewsbury contributes \$4.24 per month for retirees receiving life insurance.
- Duration of Benefits:** Lifetime.
- Dependent Coverage:** Spouse benefits are payable for the lifetime of the spouse.
- MGL Chapter 32B, Section 18A:** All Medicare-eligible retirees and spouses are required to transfer to a Medicare supplemental plan.
- Retiree Contributions:** Retirees pay a variable portion of their post-retirement medical costs. The percentage varies by plan. Cost sharing for widows is 50%.

**SCHEDULE C – CONSIDERATION OF HEALTH CARE REFORM*****Summary of Effects of Selected Provisions***

**Early Retiree Reinsurance Program – Effective 6/1/2010:** Due to the short-term nature of the payments expected to be received under this program, there is no impact on long-term GASB 45 liabilities.

**Removal of Lifetime Maximum:** This does not apply since the current medical plans have no lifetime maximums.

**Medicare Advantage Plans - Effective 1/1/2011:** The law provides for reductions to the amounts that would be provided to Medicare Advantage plans starting in 2011. Although Shrewsbury has two Medicare Advantage plans, the impact was deemed immaterial.

**Expansion of Child Coverage to Age 26:** Since few retirees cover children on retiree health plans, this provision will likely have a relatively small effect on the gross benefit cost. We have not reflected the impact of this cost.

**Medicare Part D Subsidy - Shrinking Medicare Prescription Drug “Donut Hole”- Starting 1/1/2011:** RDS payments are not reflected as an ongoing offsetting item in GASB 45 valuations, and so no impact is reflected.

**Excise Tax on High-Cost Employer Health Plans (aka Cadillac Tax) - Effective 1/1/2018:** There is considerable uncertainty about how the tax would be applied, and considerable latitude in grouping of participants for tax purposes. We have estimated the impact and included it in the liabilities.

**Other:** 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 continue to monitor any potential impacts.

## SCHEDULE D - GLOSSARY OF TERMS

### **Actuarial accrued liability**

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of OPEB benefits and expenses which is not provided for by future Normal Costs and therefore is the value of benefits already earned.

### **Actuarial assumptions**

Assumptions as to the occurrence of future events affecting OPEB costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided OPEB benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.

### **Actuarial cost method**

A procedure for determining the Actuarial Present Value of OPEB benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

### **Actuarial experience gain or 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.

### **Amortization (of unfunded actuarial accrued liability)**

That portion of the OPEB plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability or the Unfunded Frozen Actuarial Accrued Liability.

### **Annual OPEB cost**

An accrual-basis measure of the periodic cost of an employer's participation in a defined benefit OPEB plan.

### **Annual required contributions of the employer (ARC)**

The employer's periodic expense to a defined benefit OPEB plan, calculated in accordance with the parameters. It is the value of the cash contributions for a funded plan and the value of the expense entry in the profit and loss section of the financial statements.

### **Closed amortization period (closed basis)**

A specific number of years that is counted from one date and, therefore, declines to zero with the passage of time. For example, if the amortization period initially is thirty years on a closed basis, twenty-nine years remain after the first year, twenty-eight years after the second year, and so forth. In contrast, an open amortization period (open basis) is one that begins again or is recalculated at each actuarial valuation date. Within a maximum number of years specified by law or policy (for example, thirty years), the period may increase, decrease, or remain stable.

**Covered payroll**

Annual compensation paid to active employees covered by an OPEB plan. If employees also are covered by a pension plan, the covered payroll should include all elements included in compensation on which contributions to the pension plan are based. For example, if pension contributions are calculated on base pay including overtime, covered payroll includes overtime compensation.

**Defined benefit OPEB plan**

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

**Funded ratio**

The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Funding policy**

The program for the amounts and timing of contributions to be made by plan members, employer(s), and other contributing entities (for example, state government contributions to a local government plan) to provide the benefits specified by an OPEB plan.

**Healthcare cost trend rate**

The rate of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

**Investment return assumption (discount rate)**

The rate used to adjust a series of future payments to reflect the time value of money.

**Level dollar amortization method**

The amount to be amortized is divided into equal dollar amounts to be paid over a given number of years; part of each payment is interest and part is principal (similar to a mortgage payment on a building). Because payroll can be expected to increase as a result of inflation, level dollar payments generally represent a decreasing percentage of payroll; in dollars adjusted for inflation, the payments can be expected to decrease over time.

**Level percentage of projected payroll amortization method**

Amortization payments are calculated so that they are a constant percentage of the projected payroll of active plan members over a given number of years. The dollar amount of the payments generally will increase over time as payroll increases due to inflation; in dollars adjusted for inflation, the payments can be expected to remain level.

**Net OPEB obligation**

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

**Normal cost**

That portion of the Actuarial Present Value of OPEB benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method. It is the value of benefits to be accrued in the valuation year by active employees.

**OPEB-related debt**

All long-term liabilities of an employer to an OPEB plan, the payment of which is not included in the annual required contributions of a sole or agent employer (ARC) or the actuarially determined required contributions of a cost-sharing employer. Payments generally are made in accordance with installment contracts that usually include interest. Examples include contractually deferred contributions and amounts assessed to an employer upon joining a multiple-employer plan.

**Other postemployment benefits**

Postemployment benefits other than pension benefits. Other postemployment benefits (OPEB) include postemployment healthcare benefits, regardless of the type of plan that provides them, and all postemployment benefits provided separately from a pension plan, excluding benefits defined as termination offers and benefits.

**Pay-as-you-go**

A method of financing a OPEB plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

**Required supplementary information (RSI)**

Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.