

**Town of Boxford Other
Postemployment Benefits Plan**

GASB 45 Actuarial Valuation

as of

July 1, 2013

For the fiscal years ending

June 30, 2014

June 30, 2015

Delivered September 2014

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LETTER

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September 30, 2014

Personal and Confidential

Ms. Kathleen Benevento
Town Accountant / Finance Director
Town of Boxford
7A Spofford Road
Boxford, MA 01921

Dear Ms. Benevento:

We have performed an actuarial valuation of the Town of Boxford Other Postemployment Benefits Plan for the fiscal year ending June 30, 2014. The figures presented in this report reflect the adoption, by the Town of Boxford, of Statement No. 45 of the Governmental Accounting Standards Board ("GASB 45") effective July 1, 2007.

The financial results of the actuarial valuation are summarized in the report. The Executive Summaries highlight the results of the valuation. Additional information summarizing census data, actuarial assumptions, claim rates and the methodology for developing them, as well as a glossary of selected terms used in this study, is also included in the report.

All costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and reasonable expectations and, in combination, represent our best estimate of the anticipated experience under the plan.

We refer you to Section I of this report for a detailed summary and commentary on the results of the valuation and a comparison with the prior valuation. Section II is a summary of the plan provisions, and Section III describes the actuarial cost method and assumptions. Details for cost calculations, supporting data, and disclosures are provided in Exhibits A through C.

We will be pleased to answer any questions that you may have regarding this actuarial valuation report.

Very truly yours,



Parker E. Elmore, A.S.A., E.A., M.A.A.A.
President & CEO

September 30, 2014**ACTUARIAL CERTIFICATION**

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Boxford other postemployment benefit programs as of July 1, 2013 for the fiscal year ending June 30, 2014 in accordance with generally accepted actuarial principles and practices. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statements Number 43 and 45 for the determination of the liability for postemployment benefits other than pensions.

The actuarial data is based on the plan of benefits verified by the Town and on participant claims or premium data provided by the Town and/or vendors employed by the Town.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may yield results significantly different than those reported here. As such, additional determinations may be needed for other purposes including determining the benefit security at termination and/or adequacy of the funding of an ongoing plan.

To the best of our knowledge, this report is complete and accurate and in our opinion represents the information necessary to comply with GASB Statements Number 43 and 45 with respect to the benefit obligations addressed. The signing actuaries are members of the Society of Actuaries, the American Academy of Actuaries and other professional actuarial organizations and meet their "General Qualification Standards for Statements of Actuarial Opinion" to render the actuarial opinion contained herein. Further, in our opinion, the assumptions as approved by the Town are reasonably related to the experience and expectations of the postemployment benefits programs.



Parker E. Elmore, ASA, EA, FCA, MAAA
President, CEO & Actuary

SECTION I
PRINCIPAL RESULTS OF THE VALUATION

Town of Boxford
Assuming Pay-as-you-go funding - 4.00% discount rate
Comparison of Plan Liabilities to Prior Valuation

| | <u>July 1, 2013</u> | <u>July 1, 2011</u> |
|---|----------------------|----------------------|
| I. Present Value of Future Benefits | | |
| A. Actives | 11,515,660 | 17,531,761 |
| B. Retirees/Disabled | 5,201,898 | 7,893,424 |
| C. Total | 16,717,558 | 25,425,185 |
| II. Present Value of Future Normal Cost | 5,808,366 | 9,107,132 |
| III. Actuarial Accrued Liability (Projected Unit Credit) | | |
| A. Actives | 5,707,294 | 8,424,629 |
| B. Retirees/Disabled | 5,201,898 | 7,893,424 |
| C. Total | 10,909,192 | 16,318,053 |
| IV. Plan Assets | 283,207 | 0 |
| V. Unfunded Actuarial Accrued Liability ("UAAL") | 10,625,985 | 16,318,053 |
| VI. Funded Ratio | 2.60% | 0.00% |
| VII. Annual Covered Payroll | 9,961,028 | 34,392,073 |
| VIII. UAAL as % of Covered Payroll | 106.70% | 47.4% |
| IX. Net OPEB Obligation | 6,567,154 | 4,339,762 |
| X. Number of Covered Participants | | |
| A. Actives | 191 | 199 |
| B. Retirees/Disabled | 101 | 88 |
| C. Total | 292 | 287 |
| For the Fiscal Year Ending: | <u>June 30, 2014</u> | <u>June 30, 2012</u> |
| XI. Normal Cost | 500,470 | 775,413 |
| XII. Amortization of UAAL - 30 year increase 4.50% per yr | 770,977 | 706,007 |
| XIII. Annual Required Contribution ('ARC') [XI. + XII.] | 1,271,447 | 1,481,420 |
| XIV. Interest on Net OPEB Obligation | 262,686 | 173,591 |
| XV. Adjustment to Annual Required Contribution | (365,172) | (241,316) |
| XVI. Amortization of Actuarial (Gains) / Losses | (496,977) | 133,242 |
| XVII. Annual OPEB Cost [XIII. + XIV. + XV. + XVI.] | 671,984 | 1,546,937 |
| XVIII. Expected Employer Contribution | 416,723 | 474,154 |
| XIX. Contribution to Trust Fund over 30 Years | 270,563 | 0 |
| XX. Total Employer Contribution | 687,286 | 474,154 |
| XXI. Percentage of Annual OPEB Cost Contributed | 102.3% | 30.7% |
| XXII. Net OPEB Obligation at Beginning of Year (IX.) | 6,567,154 | 4,339,762 |
| XXIII. Increase in Net OPEB Obligations (XVII. - XX.) | (15,302) | 1,072,783 |
| XXIV. Net OPEB Obligation at End of Year (XXII. + XXIII.) | 6,551,852 | 5,412,545 |
| XXV. Discount Rate | 4.00% | 4.00% |

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Town of Boxford

Comparison of Plan Funding vs. Pay-as-you-go Funding

| | <u>pay-as-you-go-4.00%</u> <u>discount rate</u> | <u>Plan Funding -7.00%</u> <u>discount rate</u> |
|--|--|--|
| I. Present Value of Future Benefits | | |
| A. Actives | 11,515,660 | 6,097,903 |
| B. Retirees/Disabled | 5,201,898 | 3,958,366 |
| C. Total | 16,717,558 | 10,056,269 |
| II. Present Value of Future Normal Cost | 5,808,366 | 2,749,765 |
| III. Actuarial Accrued Liability (Projected Unit Credit) | | |
| A. Actives | 5,707,294 | 3,348,138 |
| B. Retirees/Disabled | 5,201,898 | 3,958,366 |
| C. Total | 10,909,192 | 7,306,504 |
| IV. Plan Assets | 283,207 | 283,207 |
| V. Unfunded Actuarial Accrued Liability ("UAAL") | 10,625,985 | 7,023,297 |
| VI. Funded Ratio | 2.60% | 3.88% |
| VII. Annual Covered Payroll | 9,961,028 | 9,961,028 |
| VIII. UAAL as % of Covered Payroll | 106.70% | 70.50% |
| IX. Net OPEB Obligation | 6,567,154 | 6,567,154 |
| X. Number of Covered Participants | | |
| A. Actives | 191 | 191 |
| B. Retirees/Disabled | 101 | 101 |
| C. Total | 292 | 292 |
| For Fiscal Year Ending June 30, 2014 | | |
| XI. Normal Cost | 500,470 | 277,120 |
| XII. Amortization of UAAL - 30 year increase 4.50% per yr | 770,977 | 1,594,131 |
| XIII. Annual Required Contribution ('ARC') [XI. + XII.] | 1,271,447 | 1,871,251 |
| XIV. Interest on Net OPEB Obligation | 262,686 | 459,701 |
| XV. Adjustment to Annual Required Contribution | (365,172) | (494,601) |
| XVI. Amortization of Actuarial (Gains) / Losses | (496,977) | (944,456) |
| XVII. Annual OPEB Cost [XIII. + XIV. + XV. + XVI.] | 671,984 | 891,895 |
| XVIII. Expected Employer Contribution | 416,723 | 416,723 |
| XIX. Contribution over 30 Years increasing at 4.50% per yr | 270,563 | 276,241 |
| XX. Total Employer Contribution | 687,286 | 692,964 |
| XXI. Percentage of Annual OPEB Cost Contributed | 102.3% | 77.7% |
| XXII. Net OPEB Obligation at Beginning of Year (IX.) | 6,567,154 | 6,567,154 |
| XXIII. Increase in Net OPEB Obligations (XVII. - XVIII.) | (15,302) | 198,931 |
| XXIV. Net OPEB Obligation at End of Year (XXII. + XXIII.) | 6,551,852 | 6,766,085 |
| XXV. Discount Rate | 4.00% | 7.00% |

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Town of Boxford

Assuming pay-as-you-go - 4.00% discount rate

Plan Liabilities as of July 1, 2013

| | <u>Medical</u> | <u>Dental</u> | <u>Life</u> | <u>Excise Tax</u> | <u>Total</u> |
|--|------------------|---------------|-------------|-------------------|------------------|
| I. Present Value of Future Benefits | | | | | |
| A. Actives | 11,513,766 | 0 | 0 | 1,894 | 11,515,660 |
| B. Retirees/Disabled | <u>5,187,990</u> | <u>0</u> | <u>0</u> | <u>13,908</u> | <u>5,201,898</u> |
| C. Total | 16,701,756 | 0 | 0 | 15,802 | 16,717,558 |
| II. Present Value of Future Normal Cost | 5,806,522 | 0 | 0 | 1,844 | 5,808,366 |
| III. Actuarial Accrued Liability (Projected Unit Credit) | | | | | |
| A. Actives | 5,707,244 | 0 | 0 | 50 | 5,707,294 |
| B. Retirees/Disabled | <u>5,187,990</u> | <u>0</u> | <u>0</u> | <u>13,908</u> | <u>5,201,898</u> |
| C. Total | 10,895,234 | 0 | 0 | 13,958 | 10,909,192 |
| IV. Plan Assets | 282,844 | 0 | 0 | 363 | 283,207 |
| V. Unfunded Actuarial Accrued Liability ("UAAL") | 10,612,390 | 0 | 0 | 13,595 | 10,625,985 |
| VI. Annual Covered Payroll | 9,961,028 | 9,961,028 | 9,961,028 | 9,961,028 | 9,961,028 |
| VII. UAAL as % of Covered Payroll | 106.5% | 0.0% | 0.0% | 0.1% | 106.7% |
| VIII. Net OPEB Obligation @ Beginning of Fiscal Year | 6,558,752 | 0 | 0 | 8,402 | 6,567,154 |
| IX. Number of Eligible Participants | | | | | |
| A. Actives | 191 | 191 | 191 | 191 | |
| B. Retirees/Disabled | <u>101</u> | <u>0</u> | <u>0</u> | <u>101</u> | |
| C. Total | 292 | 191 | 191 | 292 | |

For Fiscal Year Ending June 30, 2014

| | | | | | |
|--|-----------|------|------|--------|-----------|
| X. Normal Cost | 500,415 | 0 | 0 | 55 | 500,470 |
| XI. Amortization of UAAL - 30 year increase 4.50% per yr | 769,991 | 0 | 0 | 986 | 770,977 |
| XII. Annual Required Contribution ("ARC") [X. + XI.] | 1,270,406 | 0 | 0 | 1,041 | 1,271,447 |
| XIII. Interest on Net OPEB Obligation | 262,350 | 0 | 0 | 336 | 262,686 |
| XIV. Adjustment to Annual Required Contribution | (364,705) | 0 | 0 | (467) | (365,172) |
| XV. Amortization of Actuarial (Gains) / Losses | (496,342) | 0 | 0 | (635) | (496,977) |
| XVI. Annual OPEB Cost [XII. + XIII. + XIV. + XV.] | 671,709 | 0 | 0 | 275 | 671,984 |
| XVII. Expected Employer Contribution | 416,723 | 0 | 0 | 0 | 416,723 |
| XVIII. Contribution to Trust Fund over 30 Years | 270,217 | 0 | 0 | 346 | 270,563 |
| XIX. Total Employer Contribution | 686,940 | 0 | 0 | 346 | 687,286 |
| XX. Percentage of Annual OPEB Cost Contributed | 102.3% | 0.0% | 0.0% | 125.8% | 102.3% |
| XXI. Net OPEB Obligation at Beginning of Year (VIII.) | 6,558,752 | 0 | 0 | 8,402 | 6,567,154 |
| XXII. Increase in Net OPEB Obligations (XVI. - XIX.) | (15,231) | 0 | 0 | (71) | (15,302) |
| XXIII. Net OPEB Obligation at End of Year (XXI. + XXII.) | 6,543,521 | 0 | 0 | 8,331 | 6,551,852 |

Town of Boxford Other Postemployment Benefits Plan

Actuarial Valuation as of July 1, 2013

September 2014

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SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Town of Boxford
Plan Liabilities as of July 1, 2013
Assuming maintain pay-as-you-go funding method

| | General Government Employees and Retirees | Schools Employees and Retirees | Total |
|--|---|-----------------------------------|------------|
| I. Present Value of Future Benefits | | | |
| A. Actives | 3,467,028 | 8,048,632 | 11,515,660 |
| B. Retirees/Disabled | <u>1,639,043</u> | <u>3,562,855</u> | 5,201,898 |
| C. Total | 5,106,071 | 11,611,487 | 16,717,558 |
| II. Present Value of Future Normal Cost | 1,736,725 | 4,071,641 | 5,808,366 |
| III. Actuarial Accrued Liability (Projected Unit Credit) | | | |
| A. Actives | 1,730,303 | 3,976,991 | 5,707,294 |
| B. Retirees/Disabled | <u>1,639,043</u> | <u>3,562,855</u> | 5,201,898 |
| C. Total | 3,369,346 | 7,539,846 | 10,909,192 |
| IV. Plan Assets | 87,470 | 195,737 | 283,207 |
| V. Unfunded Actuarial Accrued Liability ("UAAL") | 3,281,876 | 7,344,109 | 10,625,985 |
| VI. Annual Covered Payroll | 3,447,215 | 6,513,813 | 9,961,028 |
| VII. UAAL as % of Covered Payroll | 95.2% | 112.7% | 106.7% |
| VIII. Net OPEB Obligation | 2,028,291 | 4,538,863 | 6,567,154 |
| IX. Number of Covered Participants | | | |
| A. Actives | 53 | 138 | 191 |
| B. Retirees/Disabled | <u>38</u> | <u>63</u> | 101 |
| C. Total | 91 | 201 | 292 |
| For Fiscal Year Ending June 30, 2014 | | | |
| X. Normal Cost | 134,742 | 365,728 | 500,470 |
| XI. Amortization of UAAL - 30 year increase 4.50% per yr | 238,119 | 532,858 | 770,977 |
| XII. Annual Required Contribution ('ARC') [X. + XI.] | 372,861 | 898,586 | 1,271,447 |
| XIII. Interest on Net OPEB Obligation | 81,132 | 181,554 | 262,686 |
| XIV. Adjustment to Annual Required Contribution | (112,785) | (252,387) | (365,172) |
| XV. Amortization of Actuarial (Gains) / Losses | (153,493) | (343,484) | (496,977) |
| XVI. Annual OPEB Cost [XII. + XIII. + XIV. + XV.] | 187,715 | 484,269 | 671,984 |
| XVII. Expected Employer Contribution | 119,060 | 297,663 | 416,723 |
| XVIII. Contribution to Trust Fund over 30 Years | 83,564 | 186,999 | 270,563 |
| XIX. Total Employer Contribution | 202,624 | 484,662 | 687,286 |
| XX. Percentage of Annual OPEB Cost Contributed | 63.4% | 61.5% | 62.0% |
| XXI. Net OPEB Obligation at Beginning of Year (VIII.) | 2,028,291 | 4,538,863 | 6,567,154 |
| XXII. Increase in Net OPEB Obligations (XVI. - XIX.) | (14,909) | (393) | (15,302) |
| XXIII. Net OPEB Obligation at End of Year (XXI. + XXII.) | 2,013,382 | 4,538,470 | 6,551,852 |

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Town of Boxford

Detail of Plan Liabilities by Group and Dependency Status

Assuming Pay-as-you-go funding - 4.00% discount rate

Plan Liabilities as of July 1, 2013

| | <u>Present Value of Future Benefits</u> | <u>Actuarial Accrued Liability (Projected Unit Credit)</u> | <u>Normal Cost</u> |
|--------------------------|---|--|--------------------|
| Actives | | | |
| Under Age 65 | | | |
| A. Participants | 2,278,072 | 1,168,727 | 100,074 |
| B. Spouses | <u>992,429</u> | <u>506,288</u> | <u>41,026</u> |
| C. Total | 3,270,501 | 1,675,015 | 141,100 |
| Age 65 and Over | | | |
| A. Participants | 4,687,496 | 2,287,923 | 204,597 |
| B. Spouses | <u>3,557,663</u> | <u>1,744,356</u> | <u>154,773</u> |
| C. Total | 8,245,159 | 4,032,279 | 359,370 |
| Actives Total | | | |
| A. Participants | 6,965,568 | 3,456,650 | 304,671 |
| B. Spouses | <u>4,550,092</u> | <u>2,250,644</u> | <u>195,799</u> |
| C. Total | 11,515,660 | 5,707,294 | 500,470 |
| Retirees/Disabled | | | |
| Under Age 65 | | | |
| A. Participants | 921,326 | 921,326 | 0 |
| B. Spouses | <u>230,366</u> | <u>230,366</u> | <u>0</u> |
| C. Total | 1,151,692 | 1,151,692 | 0 |
| Age 65 and Over | | | |
| A. Participants | 3,642,710 | 3,642,710 | <u>0</u> |
| B. Spouses | <u>407,496</u> | <u>407,496</u> | <u>0</u> |
| C. Total | 4,050,206 | 4,050,206 | 0 |
| Retirees/Disabled Total | | | |
| A. Participants | 4,564,036 | 4,564,036 | 0 |
| B. Spouses | <u>637,862</u> | <u>637,862</u> | <u>0</u> |
| C. Total | 5,201,898 | 5,201,898 | 0 |
| Total Population | | | |
| A. Participants | 11,529,604 | 8,020,686 | 304,671 |
| B. Spouses | <u>5,187,954</u> | <u>2,888,506</u> | <u>195,799</u> |
| C. Total | 16,717,558 | 10,909,192 | 500,470 |

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Town of Boxford

Assuming Funding over 30 years at 7.00% discount rate

Plan Liabilities as of July 1, 2013

| | <u>Medical</u> | <u>Dental</u> | <u>Life</u> | <u>Excise Tax</u> | <u>Total</u> |
|--|------------------|---------------|-------------|-------------------|------------------|
| I. Present Value of Future Benefits | | | | | |
| A. Actives | 6,097,259 | 0 | 0 | 644 | 6,097,903 |
| B. Retirees/Disabled | <u>3,949,961</u> | <u>0</u> | <u>0</u> | <u>8,405</u> | <u>3,958,366</u> |
| C. Total | 10,047,220 | 0 | 0 | 9,049 | 10,056,269 |
| II. Present Value of Future Normal Cost | 2,749,139 | 0 | 0 | 626 | 2,749,765 |
| III. Actuarial Accrued Liability (Projected Unit Credit) | | | | | |
| A. Actives | 3,348,120 | 0 | 0 | 18 | 3,348,138 |
| B. Retirees/Disabled | <u>3,949,961</u> | <u>0</u> | <u>0</u> | <u>8,405</u> | <u>3,958,366</u> |
| C. Total | 7,298,081 | 0 | 0 | 8,423 | 7,306,504 |
| IV. Plan Assets | 282,881 | 0 | 0 | 326 | 283,207 |
| V. Unfunded Actuarial Accrued Liability ("UAAL") | 7,015,200 | 0 | 0 | 8,097 | 7,023,297 |
| VI. Annual Covered Payroll | 9,961,028 | 9,961,028 | 9,961,028 | 9,961,028 | 9,961,028 |
| VII. UAAL as % of Covered Payroll | 70.4% | 0.0% | 0.0% | 0.1% | 70.5% |
| VIII. Net OPEB Obligation | 6,558,752 | 0 | 0 | 8,402 | 6,567,154 |
| IX. Number of Covered Participants | | | | | |
| A. Actives | 191 | 191 | 191 | 191 | |
| B. Retirees/Disabled | <u>101</u> | <u>0</u> | <u>0</u> | <u>101</u> | |
| C. Total | 292 | 191 | 191 | 292 | |

For Fiscal Year Ending June 30, 2014

| | | | | | |
|--|-----------|------|------|---------|-----------|
| X. Normal Cost | 277,101 | 0 | 0 | 19 | 277,120 |
| XI. Amortization of UAAL - 30 year increase 4.50% per yr | 1,592,293 | 0 | 0 | 1,838 | 1,594,131 |
| XII. Annual Required Contribution ("ARC") [X. + XI.] | 1,869,394 | 0 | 0 | 1,857 | 1,871,251 |
| XIII. Interest on Net OPEB Obligation | 459,113 | 0 | 0 | 588 | 459,701 |
| XIV. Adjustment to Annual Required Contribution | (493,968) | 0 | 0 | (633) | (494,601) |
| XV. Amortization of Actuarial (Gains) / Losses | (943,367) | 0 | 0 | (1,089) | (944,456) |
| XVI. Annual OPEB Cost [XII. + XIII. + XIV. + XV.] | 891,172 | 0 | 0 | 723 | 891,895 |
| XVII. Expected Employer Contribution | 416,723 | 0 | 0 | 0 | 416,723 |
| XVIII. Contribution over 30 Years increasing at 4.50% per year | 275,518 | 0 | 0 | 723 | 276,241 |
| XIX. Total Employer Contribution | 692,241 | 0 | 0 | 723 | 692,964 |
| XX. Percentage of Annual OPEB Cost Contributed | 77.7% | 0.0% | 0.0% | 100.0% | 77.7% |
| XXI. Net OPEB Obligation at Beginning of Year (VIII.) | 6,558,752 | 0 | 0 | 8,402 | 6,567,154 |
| XXII. Increase in Net OPEB Obligations (XVI. - XVII.) | 198,931 | 0 | 0 | 0 | 198,931 |
| XXIII. Net OPEB Obligation at End of Year (XXI. + XXII.) | 6,757,683 | 0 | 0 | 8,402 | 6,766,085 |

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

**Town of Boxford
Plan Liabilities as of July 1, 2013
Assuming Funding over 30 years at 7.00% discount rate**

| | General Government Employees and Retirees | Schools Employees and Retirees | Total |
|--|---|-----------------------------------|------------------|
| I. Present Value of Future Benefits | | | |
| A. Actives | 1,835,900 | 4,262,003 | 6,097,903 |
| B. Retirees/Disabled | <u>1,247,224</u> | <u>2,711,142</u> | <u>3,958,366</u> |
| C. Total | 3,083,124 | 6,973,145 | 10,056,269 |
| II. Present Value of Future Normal Cost | 822,191 | 1,927,574 | 2,749,765 |
| III. Actuarial Accrued Liability (Projected Unit Credit) | | | |
| A. Actives | 1,015,068 | 2,333,070 | 3,348,138 |
| B. Retirees/Disabled | <u>1,247,224</u> | <u>2,711,142</u> | <u>3,958,366</u> |
| C. Total | 2,262,292 | 5,044,212 | 7,306,504 |
| IV. Plan Assets | 87,470 | 195,737 | 283,207 |
| V. Unfunded Actuarial Accrued Liability ("UAAL") | 2,174,822 | 4,848,475 | 7,023,297 |
| VI. Annual Covered Payroll | 3,447,215 | 6,513,813 | 9,961,028 |
| VII. UAAL as % of Covered Payroll | 63.1% | 74.4% | 70.5% |
| VIII. Net OPEB Obligation | 2,028,291 | 4,538,863 | 6,567,154 |
| IX. Number of Covered Participants | | | |
| A. Actives | 53 | 138 | 191 |
| B. Retirees/Disabled | <u>38</u> | <u>63</u> | <u>101</u> |
| C. Total | 91 | 201 | 292 |
| For Fiscal Year Ending June 30, 2014 | | | |
| X. Normal Cost | 74,609 | 202,511 | 277,120 |
| XI. Amortization of UAAL - 30 year increase 4.50% per yr | 492,353 | 1,101,778 | 1,594,131 |
| XII. Annual Required Contribution ('ARC') [X. + XI.] | 566,962 | 1,304,289 | 1,871,251 |
| XIII. Interest on Net OPEB Obligation | 141,981 | 317,720 | 459,701 |
| XIV. Adjustment to Annual Required Contribution | (152,760) | (341,841) | (494,601) |
| XV. Amortization of Actuarial (Gains) / Losses | (291,698) | (652,758) | (944,456) |
| XVI. Annual OPEB Cost [XII. + XIII. + XIV. + XV.] | 264,485 | 627,410 | 891,895 |
| XVII. Expected Employer Contribution | 119,060 | 297,663 | 416,723 |
| XVIII. Contribution over 30 Years increasing at 4.50% per year | 85,532 | 190,709 | 276,241 |
| XIX. Total Employer Contribution | 204,592 | 488,372 | 692,964 |
| XX. Percentage of Annual OPEB Cost Contributed | 77.4% | 77.8% | 77.7% |
| XXI. Net OPEB Obligation at Beginning of Year (VIII.) | 2,028,291 | 4,538,863 | 6,567,154 |
| XXII. Increase in Net OPEB Obligations (XVI. - XIX.) | 59,893 | 139,038 | 198,931 |
| XXIII. Net OPEB Obligation at End of Year (XXI. + XXII.) | 2,088,184 | 4,677,901 | 6,766,085 |

Overview of GASB 43 and 45

GASB 43 requires retiree medical plans to disclose information about asset and liability levels and show historical contribution information. GASB 43 only applies in situations where a separate trust is established to prefund these benefits. GASB 45 requires employers to perform periodic actuarial valuations to determine annual accounting costs, and to keep a running tally of the extent to which these amounts are over or under funded.

GASB 43 and 45 apply to those benefits provided after retirement except for pension benefits such as medical insurance, dental and life insurance. The philosophy behind the accounting standard is that these post-employment benefits are part of the compensation earned by employees in return for their services, and the cost of these benefits should be recognized while employees are providing those services, rather than after they have retired. This philosophy has already been applied for years to defined benefit pensions; GASB 43 and 45 extend this practice to all other post-employment benefits.

Overview of GASB 43 and 45
(continued)

The process of determining the liability for OPEB benefits is based on many assumptions about future events. The key actuarial assumptions are:

Turnover and retirement rates: How likely is it that an employee will qualify for post-employment benefits and when will they start?

Medical inflation and claims cost assumptions: When an employee starts receiving post-employment benefits many years from now, how much will be paid each year for the benefits and how rapidly will the costs grow?

Mortality assumption: How long is a retiree likely to receive benefits?

Discount rate assumption: What is the present value of those future benefit payments in terms of today's dollars?

Since the liability is being recognized over the employee's whole career with the Town, the present value is divided into three pieces: the part that is attributed to past years (the "Accrued Liability" or "Past Service Liability"), the part that is being earned this year (the "Normal Cost"), and the part that will be earned in future years (the "Future Service Liability").

Once the Accrued Liability and the Normal Cost have been calculated, the next step is to determine an annual contribution. This consists of two pieces:

- ✓ Normal Cost – because the benefits earned each year should be paid for each year
- ✓ Past Service Cost – a catch-up payment to fund the Accrued Liability over the next 10-30 years

The final step is to keep track going forward of how much of the contribution is actually paid. There is no requirement to actually fund these benefits, but the cumulative deficiency must be disclosed on the Town's financial statements as the OPEB liability. In addition, the Discount Rate used to calculate the liabilities must reflect the expected investment income of whatever funds are set aside to prefund the benefits; if there is no prefunding then the Discount Rate will be much lower and the liabilities significantly higher than if the benefits are prefunded.

Commentary on Plan Experience and Contribution Amounts

1. Transition to GASB 45:

The Plan adopted and implemented GASB 45 ("Accounting and Financial Reporting by Employers for Postemployment Benefits other than Pensions") effective for the fiscal year ending June 30, 2008. As part of this implementation, the Employer must recognize the Actuarial Accrued Liability for past service. Under GASB 45, this amount may be amortized over a period not to exceed thirty (30) years. The Unfunded Actuarial Accrued Liability at transition was amortized over a 30 year period with amortization payments increasing at 4.50% per year. This approach yields an amortization charge of \$770,977. Additionally the Employer must recognize a "normal cost" which represents the annual accrual of benefits for current active employees toward their ultimate postemployment benefits. The normal cost for the 2014 fiscal year is \$500,470. The combined amortization charge and normal cost represent the Annual Required Contribution ("ARC") for the plan for the 2014 fiscal year. As the Employer has chosen to continue their "pay-as-you-go" funding policy, this valuation must utilize a discount rate which represents earnings on short term investments. For this discount rate, we have used 4.00% per annum. The incremental cost of GASB 45 for the 2014 fiscal year beyond the "pay-as-you-go" costs is \$255,261 reduced by contributions to an OPEB Trust of \$270,563 for a net change in the OPEB liability of \$(15,302).

2. Plan Experience:

Plan experience was far more favorable than expected. The gain was due to the change in Medicare integrated plan from Medex III to Medex II - premiums decreased by 66% and non-Medicare integrated plan premiums increased less than the expected 13% increase over the two year period. This was somewhat offset by the introduction of a more conservative mortality table and the inclusion of the ACA excise tax. The actuarial experience gain is amortized into the annual OPEB costs over a 30-year period. The net impact of plan experience is a decrease in the annual OPEB cost.

SECTION II

SUMMARY OF PLAN PROVISIONS

| | |
|----------------------------------|--|
| <u>Effective Date</u> | July 1, 2007; GASB 45 is adopted. |
| <u>Plan Year</u> | July 1 through June 30. |
| <u>Eligibility</u> | An employee hired before April 2, 2012 shall become eligible to retire under this plan upon attainment of age 55 as an active member and completion of 10 years of service or an employee shall be able to retire with 20 years of service regardless of age. Those hired on or after April 2, 2012 shall be eligible to retire upon attainment of age 60 with 10 years of creditable service. |
| <u>Credited Service</u> | Elapsed time from date of hire to termination of service date. |
| <u>Participant Contributions</u> | Premiums for Medical insurance vary by coverage level and plan selected ranging from 21% to 50% of underlying gross premiums. |
| <u>Benefits Offered</u> | Comprehensive Medical Insurance offered through Blue Cross Blue Shield of Massachusetts. |
| <u>Normal Retirement Date</u> | The normal retirement date is the first day of the month following a participant's 65th birthday. |
| <u>Early Retirement</u> | Early retirement is available for any participant who has attained benefit eligibility. |

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

A. ACTUARIAL COST METHOD

The actuarial cost method used to calculate the costs and liabilities of the plan is the Projected Unit Credit Actuarial Cost Method. Under this method, the normal cost and actuarial accrued liability are both based on an accrual of projected benefits over the period for which benefits are accrued. The normal cost is the actuarial present value of one year's benefit accrual on this basis. The actuarial accrued liability is the actuarial present value of the projected benefit times the ratio of past service to expected total service at retirement/termination.

Actuarial gains and losses are calculated each year and amortized over a 30 year period.

All employees who are plan participants on a valuation date are included in the actuarial valuation.

B. ASSET VALUATION METHOD

The actuarial value of assets is equal to the Market Value of the Plan's assets.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

C. ACTUARIAL ASSUMPTIONS

We used the following assumptions in this year's actuarial valuation:

Pre- and Post-Retirement Mortality

It is assumed that both pre-retirement and post-retirement mortality are represented by the RP-2000 Mortality Table projected to 2017 for males and females.

Discount Rate

4.00% per annum (previously 4.00%)

Employee Termination

It was assumed that employees would terminate employment in accordance with the sample rates shown in the following table:

| <u>Service</u> | <u>Non Public Safety Male</u> | <u>Non Public Safety Female</u> | <u>Public Safety</u> |
|----------------|-----------------------------------|---|--------------------------|
| 0 | 15.00% | 15.00% | 1.50% |
| 5 | 7.60% | 7.60% | 1.50% |
| 10 | 5.40% | 5.40% | 1.50% |
| 15 | 3.30% | 3.30% | 0.00% |
| 20 | 2.00% | 2.00% | 0.00% |
| 25 | 1.00% | 1.00% | 0.00% |
| 30 | 0.00% | 0.00% | 0.00% |

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Retirement Rates for non-teachers

It was assumed that the following percentage of eligible employees would retire each year:

| <u>Age</u> | <u>Non Public Safety Male</u> | <u>Non Public Safety Female</u> | <u>Public Safety</u> |
|------------|-----------------------------------|---|--------------------------|
| 45 | 0.00% | 0.00% | 1.00% |
| 46 | 0.00% | 0.00% | 1.00% |
| 47 | 0.00% | 0.00% | 1.00% |
| 48 | 0.00% | 0.00% | 1.00% |
| 49 | 0.00% | 0.00% | 1.00% |
| 50 | 1.00% | 1.50% | 2.00% |
| 51 | 1.00% | 1.50% | 2.00% |
| 52 | 1.00% | 2.50% | 2.00% |
| 53 | 1.00% | 2.50% | 5.00% |
| 54 | 2.00% | 2.50% | 7.50% |
| 55 | 2.00% | 5.50% | 15.00% |
| 56 | 2.50% | 6.50% | 10.00% |
| 57 | 2.50% | 6.50% | 10.00% |
| 58 | 5.00% | 6.50% | 10.00% |
| 59 | 6.50% | 6.50% | 15.00% |
| 60 | 12.00% | 5.00% | 20.00% |
| 61 | 20.00% | 13.00% | 20.00% |
| 62 | 30.00% | 15.00% | 25.00% |
| 63 | 25.00% | 12.50% | 25.00% |
| 64 | 22.00% | 18.00% | 30.00% |
| 65 | 40.00% | 15.00% | 100.00% |
| 66 | 25.00% | 20.00% | 100.00% |
| 67 | 25.00% | 20.00% | 100.00% |
| 68 | 30.00% | 25.00% | 100.00% |
| 69 | 30.00% | 20.00% | 100.00% |
| 70 | 100.00% | 100.00% | 100.00% |
| 71 | 100.00% | 100.00% | 100.00% |
| 72 | 100.00% | 100.00% | 100.00% |

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Healthcare Trend

It was assumed that healthcare costs would increase in accordance with the trend rates in the following table:

| <u>Year</u> | <u>Medical</u> | <u>Dental</u> |
|-------------|----------------|---------------|
| FY 2008 | 11.0% | 8.0% |
| FY 2009 | 10.0% | 7.5% |
| FY 2010 | 9.0% | 7.0% |
| FY 2011 | 8.0% | 6.5% |
| FY 2012 | 7.0% | 6.0% |
| FY 2013 | 6.0% | 5.5% |
| FY 2014 | 5.0% | 5.0% |
| FY 2015 | 5.0% | 5.0% |

Participation Rate

It was assumed that 80% of employees eligible to receive retirement benefits would enroll in the retiree medical plans upon retirement. For life insurance plans, it was assumed that 80% of eligible employees would elect coverage upon retirement.

Percent Married

It was assumed that 80% of participants who elect retiree healthcare coverage for themselves would also elect coverage for a spouse upon retirement. It was further assumed that husbands are three years older than their wives. For current retirees, the actual census information was used.

SECTION IIIACTUARIAL COST METHOD, ASSET VALUATION METHOD
AND ACTUARIAL ASSUMPTIONS
(continued)C. ACTUARIAL ASSUMPTIONS (continued)Compensation Increases

3.00% per year.

Additional Comments

The values in this report reflect a closed group and do not reflect any new entrants after the valuation date.

For purposes of this valuation, retiree contributions were assumed to increase with the same trend rate as health care claims.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

As part of the Other Post-Employment Benefits Program, there are situations where the cost is borne partly or entirely on the retirees. In most cases, the premium that is used to split the cost is lower than the true cost of providing the medical benefits, for two reasons:

- ✓ The cost sharing program is usually a fixed amount such as a COBRA premium that does not take into account the age of the retiree and his/her dependents. Since medical costs generally increase with age, the cost sharing premium is often lower than the true cost of the medical benefits:
- ✓ The cost sharing premium is usually a blended rate that takes into account the cost of medical benefits for active employees as well as retirees. Medical costs are generally higher for retirees than for active employees of the same age. This means that, again, the cost sharing premium is often lower than the true cost of the medical benefits.

Because of these two factors, a retiree who is paying 100% of the cost sharing premium is most likely not paying 100% of the true cost of the medical benefits. This situation is known as an “implicit subsidy”. GASB 43 and 45 require the plan sponsor to measure the liability for this subsidy; that is, the difference between the true cost of the medical benefits and the cost sharing premiums paid by the retiree. To do this, our valuation consists of several steps:

First, we calculate the liability for the true cost of medical benefits expected to be received by retirees and their dependents. This liability is based factors developed by actuaries that reflect how the cost of medical benefits varies by age and gender, as well as the other assumptions discussed on the prior page.

Next, we calculate the liability for the future premiums expected to be paid by the retiree for their own and their dependents’ coverage. This liability is based on the current premium rates without adjustment for age or gender. It also is based on the terms of the retiree medical program – different retirees pay different percentages based on their union, date of retirement, age at retirement, and other factors.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

I. CLAIMS COSTS DEVELOPMENT - Based on Active & Retiree Incurred Claims & Premiums

| | Number of Participants | | | |
|----------------------|------------------------|-------------------|---------------|--------------|
| | <u>Single</u> | <u>Two-Person</u> | <u>Family</u> | <u>Total</u> |
| HMO Blue New England | 68 | | 81 | 149 |
| Blue Care Elect PPO | 5 | | 10 | 15 |
| Managed Blue Senior | 50 | | | 50 |
| Medex | 22 | | | 22 |
| Total | 145 | 0 | 91 | 236 |

| | Per Contract Costs (monthly) - FY 2015 | | |
|----------------------|--|-------------------|---------------|
| | <u>Single</u> | <u>Two-Person</u> | <u>Family</u> |
| HMO Blue New England | 625.71 | 0.00 | 1,671.62 |
| Blue Care Elect PPO | 739.62 | 0.00 | 1,979.06 |
| Managed Blue Senior | 237.76 | 475.52 | |
| Medex | 276.73 | 553.46 | |

| | |
|---|------------------|
| Gross Expected FY 2015 Incurred Premiums | 2,632,971 |
| Adjustment to reflect children's claims | (468,413) |
| Total Expected FY 2015 Incurred Premiums (adults only) | 2,164,558 |

II. PRE-65 AND POST-65 PER CAPITA RETIREE ANNUAL CLAIM COSTS

| | <u>Employer</u> <u>Primary</u> | <u>Medicare</u> <u>Primary</u> |
|-------------|-----------------------------------|-----------------------------------|
| Age 65 | 10,019 | 2,996 |
| Average Age | 9,326 | 2,996 |

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

III. BREAKDOWN OF CLAIM COSTS

2,164,558 Active and Retired Claims (No Children) - Including Administrative fees & trend

4,685 Average Per-Capita Claim (including Retention & Pooling)

ALL ACTIVE EMPLOYEES AND SPOUSES (non-GIC)

| Age Bracket | Number of Females | Number of Males | Female Aging Factor | Male Aging Factor | Aged (F) Average Claims | Aged (M) Average Claims | Age Related Claims |
|-------------|-------------------|-----------------|---------------------|-------------------|-------------------------|-------------------------|--------------------|
| 24 & Under | 0 | 0 | 1.312 | 0.549 | 6,147 | 2,572 | 0 |
| 25 to 29 | 4 | 2 | 1.312 | 0.591 | 6,147 | 2,769 | 30,126 |
| 30 to 34 | 8 | 3 | 1.312 | 0.712 | 6,147 | 3,336 | 59,184 |
| 35 to 39 | 11 | 7 | 1.312 | 0.850 | 6,147 | 3,982 | 95,491 |
| 40 to 44 | 15 | 10 | 1.312 | 1.000 | 6,147 | 4,685 | 139,055 |
| 45 to 49 | 13 | 13 | 1.456 | 1.193 | 6,821 | 5,589 | 161,330 |
| 50 to 54 | 20 | 18 | 1.599 | 1.441 | 7,491 | 6,751 | 271,338 |
| 55 to 59 | 27 | 16 | 1.740 | 1.753 | 8,152 | 8,213 | 351,512 |
| 60 to 64 | 16 | 22 | 1.968 | 2.102 | 9,220 | 9,848 | 364,176 |
| 65 to 69 | 2 | 6 | 2.168 | 2.316 | 10,157 | 10,850 | 85,414 |
| 70 & Over | 3 | 0 | 2.396 | 2.557 | 11,225 | 11,980 | 33,675 |
| Total | 119 | 97 | | | | | 1,591,301 |

ALL RETIREES AND SPOUSES - NOT MEDICARE ELIGIBLE (non-GIC)

| Age Bracket | Number of Females | Number of Males | Female Aging Factor | Male Aging Factor | Aged (F) Average Claims | Aged (M) Average Claims | Age Related Claims |
|-------------|-------------------|-----------------|---------------------|-------------------|-------------------------|-------------------------|--------------------|
| 44 & Under | 0 | 0 | 1.312 | 1.000 | 6,147 | 4,685 | 0 |
| 45 to 49 | 0 | 0 | 1.456 | 1.193 | 6,821 | 5,589 | 0 |
| 50 to 54 | 1 | 1 | 1.599 | 1.441 | 7,491 | 6,751 | 14,242 |
| 55 to 59 | 3 | 2 | 1.740 | 1.753 | 8,152 | 8,213 | 40,882 |
| 60 to 64 | 18 | 10 | 1.968 | 2.102 | 9,220 | 9,848 | 264,440 |
| 65 to 69 | 0 | 1 | 2.168 | 2.316 | 10,157 | 10,850 | 10,850 |
| 70 to 74 | 1 | 0 | 2.396 | 2.557 | 11,225 | 11,980 | 11,225 |
| 75 to 79 | 0 | 0 | 2.593 | 2.769 | 12,148 | 12,973 | 0 |
| 80 to 84 | 1 | 0 | 2.724 | 2.910 | 12,762 | 13,633 | 12,762 |
| 85 to 89 | 0 | 0 | 2.864 | 3.059 | 13,418 | 14,331 | 0 |
| 90 & Over | 0 | 0 | 3.010 | 3.215 | 14,102 | 15,062 | 0 |
| Total | 24 | 14 | | | | | 354,401 |

ALL RETIREES AND SPOUSES - MEDICARE ELIGIBLE (non-GIC)

| Age Bracket | Number of Females | Number of Males | Female Aging Factor | Male Aging Factor | Aged (F) Average Claims | Aged (M) Average Claims | Age Related Claims |
|--------------|-------------------|-----------------|---------------------|-------------------|-------------------------|-------------------------|--------------------|
| 65 to 69 | 15 | 11 | 2.168 | 2.316 | 2,996 | 2,996 | 77,896 |
| 70 to 74 | 11 | 8 | 2.396 | 2.557 | 2,996 | 2,996 | 56,924 |
| 75 to 79 | 6 | 1 | 2.593 | 2.769 | 2,996 | 2,996 | 20,972 |
| 80 to 84 | 10 | 3 | 2.724 | 2.910 | 2,996 | 2,996 | 38,948 |
| 85 to 89 | 2 | 4 | 2.864 | 3.059 | 2,996 | 2,996 | 17,976 |
| 90 & Over | 1 | 1 | 3.010 | 3.215 | 2,996 | 2,996 | 5,992 |
| Total | 45 | 28 | | | | | 218,708 |
| Grand Totals | 188 | 139 | | | | | 2,164,410 |

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

E. DEVELOPMENT OF REPRESENTATIVE DENTAL PER CAPITA CLAIMS COSTS

I. CLAIMS COSTS DEVELOPMENT - with Active & Retiree Incurred Premiums

| | Per Contract Costs (monthly) - FY 2015 | | |
|----------------------------------|--|------------|--------|
| | Single | Two-Person | Family |
| Dental Plan | N/A | | N/A |
| FY 2015 Expected Per Person Rate | | N/A | |

EXHIBIT A

Financial Statement Disclosure (As of July 1, 2013)

The GASB Standards for accounting and financial reporting for postemployment benefits other than pensions requires the following disclosures in the financial statements with regard to the retiree medical and life insurance benefits;

1. A DESCRIPTION OF THE RETIREE MEDICAL INSURANCE PROGRAM:

- a. Plan Type: Comprehensive Medical Insurance offered through Blue Cross Blue Shield of Massachusetts.
- b. Administrator: Town of Boxford
- c. Eligibility: An employee hired before April 2, 2012 shall become eligible to retire under this plan upon attainment of age 55 as an active member and completion of 10 years of service or an employee shall be able to retire with 20 years of service regardless of age. Those hired on or after April 2, 2012 shall be eligible to retire upon attainment of age 60 with 10 years of creditable service.
- d. Cost Sharing: Varies by coverage level & plan – ranges from 21% to 50% of premiums

2. A DESCRIPTION OF THE DENTAL INSURANCE PROGRAM:

- a. Plan Type: Not offered
- b. Administrator: N/A
- c. Eligibility: N/A
- d. Cost sharing: N/A

3. A DESCRIPTION OF THE RETIREE LIFE INSURANCE PROGRAM:

- a. Plan Type: Not offered
- b. Administrator: N/A
- c. Eligibility: N/A
- d. Cost sharing: N/A

EXHIBIT A

Financial Statement Disclosure (As of July 1, 2013) (continued)

4. RETIREE MEDICAL AND LIFE INSURANCE CONTRIBUTIONS:

| Group | Individual | Family |
|---------|--|--|
| Medical | Varies by coverage level & plan - ranges from 21% to 50% of premiums | Varies by coverage level & plan - ranges from 21% to 50% of premiums |
| Dental | N/A | N/A |
| Life | N/A | N/A |

5. FUNDING POLICY

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The Town expects to contribute \$200,000 beyond the pay-as-you-go. For the 2014 fiscal year, total Town premiums plus implicit costs for the retiree medical program are \$416,723. The Town is also projected to make a contribution to an OPEB Trust of \$270,563 for the 2014 fiscal year for a total contribution of \$687,286 .

EXHIBIT A

Financial Statement Disclosure (As of July 1, 2013) (continued)

6. ANNUAL OPEB COST AND NET OPEB OBLIGATION

The Town's annual other postemployment benefit ("OPEB") cost (expense) is calculated based on the annual required contribution of the employer ("ARC"), an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty (30) years. The following table shows the components of the Town's annual OPEB costs for the fiscal year, the amount actually contributed to the plan and changes in the Town's net OPEB obligation to the plan:

| | |
|--|-------------|
| Annual Required Contribution | \$1,271,447 |
| Interest on net OPEB obligation | \$262,686 |
| Adjustment to annual required contribution | (\$365,172) |
| Amortization of Actuarial (Gains) / Losses | (\$496,977) |
| Annual OPEB cost (expense) | \$671,984 |
| Contributions made to pay benefits | \$416,723 |
| Contributions made to OPEB Trust | \$270,563 |
| Increase in net OPEB obligation | (\$15,302) |
| Net OPEB Obligation – beginning of year | \$6,567,154 |
| Net OPEB Obligation – end of year | \$6,551,852 |

EXHIBIT A

Financial Statement Disclosure (As of July 1, 2013) (continued)

The Town's annual OPEB cost, the percentage of the annual OPEB cost contributed to the plan, and the net OPEB obligation for the 2014 fiscal year and the three preceding years were as follows:

| Fiscal Year Ended | Annual OPEB Cost | Expected Employer Payments | Percentage of OPEB Cost Contributed | Increase in OPEB Obligation | Net OPEB Obligation |
|----------------------|------------------|----------------------------|-------------------------------------|-----------------------------|---------------------|
| 06/30/2016 (est.) | \$796,554 | \$658,862 | 82.7% | \$137,692 | \$6,784,881 |
| 06/30/2015 (est.) | \$732,516 | \$637,179 | 87.0% | \$95,337 | \$6,647,189 |
| 06/30/2014 | \$671,984 | \$687,286 | 102.3% | (\$15,302) | \$6,551,852 |
| 06/30/2013 | \$1,660,693 | \$506,084 | 30.5% | \$1,154,609 | \$6,567,154 |
| 06/30/2012 | \$1,546,937 | \$474,154 | 30.7% | \$1,072,783 | \$5,412,545 |
| 06/30/2011 | \$1,464,772 | \$344,644 | 23.5% | \$1,120,128 | \$4,339,762 |

Schedule of Funding Progress:

| Actuarial Valuation Date | Actuarial Value of Assets | Actuarial Accrued Liability | Unfunded Actuarial Accrued Liability | Funded Ratio | Covered Payroll | UAAL as a % of Covered Payroll |
|--------------------------|---------------------------|-----------------------------|--------------------------------------|--------------|-----------------|--------------------------------|
| 07/01/2015 (est.) | \$873,987 | \$11,983,295 | \$11,108,196 | 7.3% | \$10,567,655 | 105.1% |
| 07/01/2014 (est.) | \$648,064 | \$11,432,656 | \$10,783,766 | 5.7% | \$10,259,859 | 105.1% |
| 07/01/2013 | \$283,207 | \$10,909,192 | \$10,625,985 | 2.6% | \$9,961,028 | 106.7% |
| 07/01/2012 | \$0 | \$17,284,082 | \$17,284,082 | 0.0% | \$35,423,835 | 48.8% |
| 07/01/2011 | \$0 | \$16,318,054 | \$16,318,054 | 0.0% | \$34,392,073 | 47.4% |
| 07/01/2010 | \$0 | \$17,033,111 | \$17,033,111 | 0.0% | N/A | N/A |

EXHIBIT A

Financial Statement Disclosure (As of July 1, 2013) (continued)

| | Fiscal Year Ending June 30, 2014 | | |
|---|--|---|--------------|
| | General Government Employees and Retirees | Schools Employees and Retirees | Total |
| OPEB obligation at beginning of year | 2,028,291 | 4,538,863 | 6,567,154 |
| Annual Required Contribution | 372,861 | 898,586 | 1,271,447 |
| Interest on Net OPEB Obligation | 81,132 | 181,554 | 262,686 |
| Adjustment to the ARC | (112,785) | (252,387) | (365,172) |
| Amortization of Actuarial (Gains)/Losses | (153,493) | (343,484) | (496,977) |
| Annual OPEB Cost | 187,715 | 484,269 | 671,984 |
| Expected Employer Contribution | 119,060 | 297,663 | 416,723 |
| Contribution to Trust Fund over 30 Years | 83,564 | 186,999 | 270,563 |
| Total Expected Employer Payments | 202,624 | 484,662 | 687,286 |
| Increase in OPEB Obligation | (14,909) | (393) | (15,302) |
| OPEB obligation at end of year | 2,013,382 | 4,538,470 | 6,551,852 |
| APBO as of July 1, 2013 | 3,369,346 | 7,539,846 | 10,909,192 |
| Plan Assets as of July 1, 2013 | 87,470 | 195,737 | 283,207 |
| Unfunded Actuarial Liability as of July 1, 2013 | 3,281,876 | 7,344,109 | 10,625,985 |

| | Fiscal Year Ending June 30, 2015 | | |
|---|--|---|--------------|
| | General Government Employees and Retirees | Schools Employees and Retirees | Total |
| OPEB obligation at beginning of year | 2,013,382 | 4,538,470 | 6,551,852 |
| Annual Required Contribution | 390,792 | 941,799 | 1,332,591 |
| Interest on Net OPEB Obligation | 80,943 | 181,131 | 262,074 |
| Adjustment to the ARC | (112,522) | (251,799) | (364,321) |
| Amortization of Actuarial (Gains)/Losses | (154,589) | (343,239) | (497,828) |
| Annual OPEB Cost | 204,624 | 527,892 | 732,516 |
| Expected Employer Contribution | 126,082 | 311,097 | 437,179 |
| Contribution to Trust Fund over 30 Years | 61,770 | 138,230 | 200,000 |
| Total Expected Employer Payments | 187,852 | 449,327 | 637,179 |
| Increase in OPEB Obligation | 16,772 | 78,565 | 95,337 |
| OPEB obligation at end of year | 2,030,154 | 4,617,035 | 6,647,189 |
| APBO as of July 1, 2014 | 3,531,020 | 7,901,636 | 11,432,656 |
| Plan Assets as of July 1, 2014 | 200,157 | 447,907 | 648,064 |
| Unfunded Actuarial Liability as of July 1, 2014 | 3,330,863 | 7,453,729 | 10,784,592 |

EXHIBIT A

Financial Statement Disclosure (As of July 1, 2013) (continued)

7. FUNDED STATUS AND FUNDING PROGRESS

As of July 1, 2013, the most recent valuation date, the plan was 2.60% funded. The actuarial liability for benefits was \$10,909,192, and the actuarial value of assets was \$283,207, resulting in an unfunded actuarial accrued liability (UAAL) of \$10,625,985. The covered payroll (annual payroll of active employees covered by the plan) was \$ 9,961,028 and the ratio of the UAAL to the covered payroll was 106.7%.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contribution of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented in the required supplementary information following the financial statements, presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

8. EFFECT OF 1% CHANGE IN HEALTHCARE TREND RATES

In the event that healthcare trend rates were 1% higher than forecast and employee contributions were to increase at the forecast rates, the Actuarial Accrued Liability would increase to \$13,900,010 or by 27.4% and the corresponding Normal Cost would increase to \$703,392 or by 40.5%. If such healthcare trend rates were 1% less than forecast and employee contributions were to increase at the forecast rate, the Actuarial Accrued Liability would decrease to \$8,531,426 or by 21.8% and the corresponding Normal Cost would decrease to \$346,302 or by 30.8%.

EXHIBIT A

Financial Statement Disclosure (As of July 1, 2013) (continued)

9. ACTUARIAL METHODS AND ASSUMPTIONS

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

| | |
|----------------------------|------------------------------------|
| Actuarial Cost Method: | Projected Unit Credit |
| Investment Rate of Return: | 4.00% per annum (previously 4.00%) |
| Healthcare Trend Rates | |

| <u>Year</u> | <u>Medical</u> | <u>Dental</u> |
|-------------|----------------|---------------|
| FY 2008 | 11.0% | 8.0% |
| FY 2009 | 10.0% | 7.5% |
| FY 2010 | 9.0% | 7.0% |
| FY 2011 | 8.0% | 6.5% |
| FY 2012 | 7.0% | 6.0% |
| FY 2013 | 6.0% | 5.5% |
| FY 2014 | 5.0% | 5.0% |
| FY 2015 | 5.0% | 5.0% |

| | |
|--------------------------------|---|
| General Inflation Assumption: | 2.50% per annum |
| Annual Compensation Increases: | 3.00% per annum |
| Actuarial Value of Assets: | Market Value |
| Amortization of UAAL: | Amortized increasing at 4.50% per year over 30 years at transition |
| Remaining Amortization Period: | 24 years at July 1, 2013 |

EXHIBIT A

Financial Statement Disclosure (As of July 1, 2013) (continued)

10. Remaining Amortization Bases

The initial Actuarial Accrued Liability as of the date GASB 45 was adopted is amortized as a component of the Annual Required Contribution ("ARC"). The Unfunded Actuarial Accrued Liability at transition was amortized over a 30 year period with amortization payments increasing at 4.50% per year. For years subsequent to the initial adoption of GASB 45, cumulative gains/losses are amortized on a level dollar basis over a 30 year period. Gains and losses arise from experience and contribution deficiencies and excess contributions in relation to each year's ARC under GASB 45.

| |
|--|
| Changes in Unfunded Actuarial Liability Since Prior Valuation |
|--|

Expected Unfunded Actuarial Liability

| | |
|---|--|
| 1. Actuarial Accrued Liability at prior valuation date | 16,318,053 |
| 2. Actuarial Value of Assets at prior valuation date | <u>0</u> |
| 3. Unfunded Actuarial Accrued Liability at prior valuation date [1. - 2.] | 16,318,053 |
| 4. Normal Cost for prior periods | 1,550,826 |
| 5. Employer Contributions for prior periods | (980,238) |
| 6. Interest to current valuation date | <u>1,407,134</u> |
| 7. Expected Unfunded Actuarial Accrued Liability [3. + 4. + 5. + 6.] | 18,295,775 |

Actual Unfunded Actuarial Liability

| | |
|--|----------------|
| 8. Actuarial Accrued Liability at current valuation date | 10,909,192 |
| 9. Actuarial Value of Assets at current valuation date | <u>283,207</u> |
| 10. Unfunded Actuarial Accrued Liability at current valuation date [8. - 9.] | 10,625,985 |

Net Actuarial (Gain) / Loss from Plan Experience [10. - 7.] (7,669,790)

| | |
|--|--|
| 11. Unfunded Actuarial Accrued Liability at current valuation date [10.] | 10,625,985 |
| 12. Remaining Initial Unfunded to be amortized | <u>19,563,472</u> |
| 13. Actuarial (Gain) / Loss to be amortized: [11. - 12.] | (8,937,487) |

EXHIBIT A

Financial Statement Disclosure (As of July 1, 2013) (continued)

| Amortization of Initial Unfunded and Plan Experience under GASB 45 | | | | | | |
|--|--------------------------|----------------|-----------------------------|-------------------------------------|-------------------------------|-----------------------------|
| Date Established | Description | Initial Amount | Initial Amortization Period | Remaining Balance at Valuation Date | Remaining Amortization Period | Annual Amortization Payment |
| July 1, 2007 | GASB 45 Liability | 16,187,619 | 30 | 19,563,472 | 24 | 770,977 |
| July 1, 2013 | Cumulative (Gain) / Loss | (8,937,487) | 30 | (8,937,487) | 30 | (496,977) |
| July 1, 2013 | Adjustment to ARC | (6,567,154) | 30 | (6,567,154) | 30 | (365,172) |
| Total | | | | 4,058,831 | | (91,172) |

11. Recognition of OPEB trust assets

The State of Massachusetts has recently passed legislation allowing municipal entities to establish a trust for Other Than Postemployment Benefits ("OPEB") under M.G.L. Chapter 32B, Section 20 for purposes of accumulating assets to pre-fund the liabilities under GASB 45. To the best of our knowledge, Town of Boxford has established an irrevocable trust for the purposes of prefunding liabilities under GASB 45.

EXHIBIT AFinancial Statement Disclosure
(As of July 1, 2013)
(continued)**12. Impact of Patient Protection and Affordable Care Act ("PPACA") Excise Tax**

Under the Patient Protection and Affordable Care Act ("PPACA"), an excise tax will be imposed for tax years beginning after December 31, 2017 for high cost employer sponsored health coverage. The law specifies a 40% excise tax to be paid by the provider of such coverage of the excess value beyond a basic dollar amount plus an additional "kicker" for qualified retirees or those engaged in a high risk profession. The basic dollar amount for 2018 is \$10,200 for single coverage and \$27,500 for family coverage and the "kicker" amount for 2018 is \$1,650 for single coverage and \$3,450 for family coverage.

The excise tax liability will vary significantly over time as it is highly leveraged with the basic amount increased with general CPI and medical costs increasing with medical trend (generally higher). For purposes of the fiscal year ending June 30, 2014, the APBO for the excise tax is \$13,958 and the increase in annual OPEB Cost is \$275. As more regulatory guidance becomes available, the calculation of the excise tax liability will evolve.

EXHIBIT A

Financial Statement Disclosure
(As of July 1, 2013)
(continued)

13. Impact of Section 9A1/2 of M.G.L. Chapter 32B

For employees who retire on or after January 1, 2011 whenever a retired employee or beneficiary receives a healthcare premium contribution from a governmental unit in a case where a portion of the retiree's creditable service is attributable to service in 1 or more other governmental units, the first governmental unit shall be reimbursed in full, in accordance with this paragraph, by the other governmental units for the portion of the premium contributions that corresponds to the percentage of the retiree's creditable service that is attributable to each governmental unit. The other governmental units shall be charged based on their own contribution rate or the contribution rate of the first employer, whichever is lower.

For purposes of the valuation we have not attempted to value the impact of prior governmental service at other entities in the State of Massachusetts for current employees of the Town of Boxford nor have we attempted to value the impact of prior Town of Boxford employees currently working at other governmental entities in the State of Massachusetts.

EXHIBIT B

Reconciliation of Plan Participation
(As of July 1, 2013)

ACTIVE EMPLOYEES

| | <u>July 1, 2013</u> | <u>July 1, 2011</u> |
|------------------------|---------------------|---------------------|
| | | |
| A. Average Age at Hire | 38.03 | 38.75 |
| | | |
| B. Average Service | 10.32 | 10.48 |
| | | |
| C. Average Current Age | 48.35 | 49.23 |

EXHIBIT C

Projected Cash Flows (Open Group) – pay-as-you-go Approach

| Total Medical & Life Insurance - pay-as-you-go - 4.00% discount rate | | | | | | | | | | | | |
|--|-------------------------|-------------|-----------------------|---------------------------------|-------------------|---|---------------------------|-------------------------------|-------------------------------------|--|--------------------------|---|
| Fiscal Year | Total APBO as of July 1 | Normal Cost | Expected Amortization | Interest on Net OPEB Obligation | Adjustment to ARC | Amortization of Actuarial (Gain) / Loss | Expected Annual OPEB Cost | OPEB Obligation as of June 30 | Employer Share of Premiums / Claims | Excess Employer Payments (beyond claims) | Plan Assets as of July 1 | Unfunded Accrued Actuarial Liability ("UAAL") |
| 2014 | 10,909,192 | 500,470 | 770,977 | 262,686 | (365,172) | (496,977) | 671,984 | 6,567,154 | 416,723 | 270,563 | 283,207 | 10,625,985 |
| 2015 | 11,432,656 | 526,920 | 805,671 | 262,074 | (364,321) | (497,828) | 732,516 | 6,551,852 | 437,179 | 200,000 | 648,064 | 10,783,766 |
| 2016 | 11,983,295 | 550,889 | 841,926 | 265,888 | (369,623) | (492,526) | 796,554 | 6,784,881 | 458,862 | 200,000 | 873,987 | 11,108,196 |
| 2017 | 12,558,335 | 568,531 | 879,812 | 271,395 | (377,279) | (484,870) | 857,589 | 6,971,700 | 470,770 | 200,000 | 1,108,946 | 11,447,980 |
| 2018 | 13,162,340 | 592,788 | 919,404 | 278,868 | (387,668) | (474,481) | 928,911 | 7,225,887 | 474,724 | 200,000 | 1,353,304 | 11,807,317 |
| 2019 | 13,811,918 | 614,128 | 960,777 | 289,036 | (401,802) | (460,347) | 1,001,792 | 7,543,752 | 483,927 | 200,000 | 1,607,436 | 12,202,442 |
| 2020 | 14,499,804 | 636,805 | 1,004,012 | 301,750 | (419,477) | (442,672) | 1,080,418 | 7,917,512 | 506,658 | 200,000 | 1,871,733 | 12,625,699 |
| 2021 | 15,215,148 | 663,729 | 1,049,193 | 316,700 | (440,260) | (421,889) | 1,167,473 | 8,338,826 | 546,159 | 200,000 | 2,146,602 | 13,065,827 |
| 2022 | 15,946,027 | 694,764 | 1,096,406 | 333,553 | (463,688) | (398,461) | 1,262,574 | 8,816,680 | 584,720 | 200,000 | 2,432,466 | 13,510,515 |
| 2023 | 16,698,540 | 728,614 | 1,145,744 | 352,667 | (490,260) | (371,889) | 1,364,876 | 9,358,360 | 623,196 | 200,000 | 2,729,765 | 13,965,447 |
| 2024 | 17,476,116 | 765,960 | 1,197,303 | 374,335 | (520,380) | (341,769) | 1,475,449 | 9,967,175 | 666,634 | 200,000 | 3,038,956 | 14,433,655 |
| 2025 | 18,278,460 | 801,989 | 1,251,182 | 398,687 | (554,234) | (307,915) | 1,589,709 | 10,644,042 | 712,842 | 200,000 | 3,360,514 | 14,914,151 |
| 2026 | 19,102,311 | 841,240 | 1,307,485 | 425,762 | (591,871) | (270,278) | 1,712,338 | 11,404,431 | 751,949 | 200,000 | 3,694,935 | 15,403,331 |
| 2027 | 19,959,266 | 885,940 | 1,366,322 | 456,177 | (634,153) | (227,996) | 1,846,290 | 12,227,485 | 823,236 | 200,000 | 4,042,732 | 15,912,283 |
| 2028 | 20,822,850 | 935,624 | 1,427,807 | 489,099 | (679,920) | (182,229) | 1,990,381 | 13,160,653 | 857,213 | 200,000 | 4,404,441 | 16,413,994 |
| 2029 | 21,737,310 | 991,447 | 1,492,058 | 526,426 | (731,809) | (130,340) | 2,147,782 | 14,227,885 | 880,550 | 200,000 | 4,780,619 | 16,952,165 |
| 2030 | 22,722,289 | 1,049,174 | 1,559,201 | 569,115 | (791,154) | (70,995) | 2,315,341 | 15,419,343 | 923,883 | 200,000 | 5,171,844 | 17,545,862 |
| 2031 | 23,761,645 | 1,108,526 | 1,629,365 | 616,773 | (857,406) | (4,743) | 2,492,515 | 16,737,992 | 973,866 | 200,000 | 5,578,718 | 18,178,335 |
| 2032 | 24,852,158 | 1,171,926 | 1,702,687 | 669,519 | (930,731) | 68,582 | 2,681,983 | 18,206,388 | 1,013,587 | 200,000 | 6,001,867 | 18,845,731 |
| 2033 | 26,011,026 | 1,234,673 | 1,779,308 | 728,255 | (1,012,382) | 150,233 | 2,880,087 | 19,814,580 | 1,071,895 | 200,000 | 6,441,942 | 19,564,595 |
| 2034 | 27,220,756 | 1,304,247 | 1,859,376 | 792,583 | (1,101,806) | 239,657 | 3,094,057 | 21,584,062 | 1,124,575 | 200,000 | 6,899,620 | 20,316,744 |
| 2035 | 28,496,502 | 1,374,082 | 1,943,048 | 863,362 | (1,200,201) | 338,052 | 3,318,343 | 23,524,231 | 1,178,174 | 200,000 | 7,375,605 | 21,116,621 |
| 2036 | 29,840,106 | 1,449,396 | 2,030,485 | 940,969 | (1,308,085) | 445,936 | 3,558,701 | 25,678,595 | 1,204,337 | 200,000 | 7,870,629 | 21,965,328 |
| 2037 | 31,288,572 | 1,523,246 | 2,121,857 | 1,027,144 | (1,427,880) | 565,731 | 3,810,098 | 28,012,507 | 1,276,186 | 200,000 | 8,385,454 | 22,899,100 |
| 2038 | 32,797,111 | 1,600,264 | 0 | 1,120,500 | (1,557,660) | 695,511 | 1,858,615 | 28,348,104 | 1,323,018 | 200,000 | 8,920,872 | 23,872,338 |
| 2039 | 34,397,449 | 1,678,273 | 0 | 1,133,924 | (1,576,321) | 714,172 | 1,950,048 | 28,690,965 | 1,407,187 | 200,000 | 9,477,707 | 24,915,940 |
| 2040 | 36,055,425 | 1,763,509 | 0 | 1,147,639 | (1,595,386) | 733,237 | 2,048,999 | 29,044,757 | 1,495,207 | 200,000 | 10,056,815 | 25,994,877 |
| 2041 | 37,776,841 | 1,851,313 | 0 | 1,161,790 | (1,615,059) | 752,910 | 2,150,954 | 29,433,581 | 1,562,130 | 200,000 | 10,659,088 | 27,114,053 |
| 2042 | 39,588,664 | 1,946,680 | 0 | 1,177,344 | (1,636,680) | 774,531 | 2,261,875 | 29,867,752 | 1,627,704 | 200,000 | 11,285,452 | 28,299,515 |
| 2043 | 41,503,946 | 2,045,716 | 0 | 1,194,710 | (1,660,822) | 798,673 | 2,378,277 | 30,339,754 | 1,706,275 | 200,000 | 11,936,870 | 29,563,356 |
| 2044 | 43,517,123 | 2,148,836 | 0 | 1,213,590 | (1,687,068) | 1,687,068 | 3,362,426 | 31,730,063 | 1,772,117 | 200,000 | 12,614,345 | 30,898,996 |
| 2045 | 45,649,596 | 2,255,214 | 0 | 1,269,202 | (1,764,378) | 1,764,378 | 3,524,416 | 33,221,071 | 1,833,408 | 200,000 | 13,318,919 | 32,326,799 |

EXHIBIT D

Projected Cash Flows (Open Group) – Funded Approach

Total Medical & Life Insurance - Funding over 30 years at 7.00% discount rate increasing at 0.00% per year

| Fiscal Year | Total APBO as of July 1 | Normal Cost | Expected Amortization | Interest on Net OPEB Obligation | Adjustment to ARC | Amortization of Actuarial (Gain) / Loss | Expected Annual OPEB Cost | OPEB Obligation as of June 30 | Employer Share of Premiums / Claims | Annual Funding / (Payments) | Plan Assets as of July 1 | Unfunded Accrued Actuarial Liability ("UAAL") |
|-------------|-------------------------|-------------|-----------------------|---------------------------------|-------------------|---|---------------------------|-------------------------------|-------------------------------------|-----------------------------|--------------------------|---|
| 2014 | 7,306,504 | 277,120 | 1,594,131 | 459,701 | (494,601) | (944,456) | 891,895 | 6,567,154 | 416,723 | 276,241 | 283,207 | 7,023,297 |
| 2015 | 7,659,551 | 292,579 | 1,594,131 | 473,626 | (509,584) | (929,473) | 921,307 | 6,973,972 | 437,179 | 276,241 | 648,064 | 7,011,487 |
| 2016 | 8,040,998 | 306,371 | 1,594,131 | 488,178 | (525,241) | (913,816) | 949,658 | 7,188,527 | 458,862 | 276,241 | 969,669 | 7,071,329 |
| 2017 | 8,440,703 | 315,356 | 1,594,131 | 503,197 | (541,400) | (897,657) | 973,668 | 7,415,184 | 470,770 | 276,241 | 1,313,787 | 7,126,916 |
| 2018 | 8,865,260 | 328,626 | 1,594,131 | 519,063 | (558,470) | (880,587) | 1,002,810 | 7,667,029 | 474,724 | 276,241 | 1,681,993 | 7,183,267 |
| 2019 | 9,329,734 | 339,719 | 1,594,131 | 536,692 | (577,438) | (861,619) | 1,031,536 | 7,938,397 | 483,927 | 276,241 | 2,075,974 | 7,253,760 |
| 2020 | 9,828,513 | 350,951 | 1,594,131 | 555,688 | (597,876) | (841,181) | 1,061,768 | 8,217,266 | 506,658 | 276,241 | 2,497,533 | 7,330,980 |
| 2021 | 10,349,901 | 364,737 | 1,594,131 | 575,208 | (618,879) | (820,178) | 1,095,078 | 8,489,944 | 546,159 | 276,241 | 2,948,601 | 7,401,300 |
| 2022 | 10,880,515 | 380,711 | 1,594,131 | 594,296 | (639,415) | (799,642) | 1,130,144 | 8,759,127 | 584,720 | 276,241 | 3,431,244 | 7,449,271 |
| 2023 | 11,424,628 | 398,078 | 1,594,131 | 613,139 | (659,689) | (779,368) | 1,166,359 | 9,026,049 | 623,196 | 276,241 | 3,947,672 | 7,476,956 |
| 2024 | 11,984,699 | 417,050 | 1,594,131 | 631,823 | (679,792) | (759,265) | 1,204,019 | 9,287,193 | 666,634 | 276,241 | 4,500,250 | 7,484,449 |
| 2025 | 12,557,095 | 434,756 | 1,594,131 | 650,103 | (699,460) | (739,597) | 1,240,010 | 9,538,120 | 712,842 | 276,241 | 5,091,509 | 7,465,586 |
| 2026 | 13,139,302 | 453,911 | 1,594,131 | 667,668 | (718,358) | (720,699) | 1,276,736 | 9,786,666 | 751,949 | 276,241 | 5,724,156 | 7,415,146 |
| 2027 | 13,741,141 | 476,249 | 1,594,131 | 685,066 | (737,077) | (701,980) | 1,316,478 | 10,003,667 | 823,236 | 276,241 | 6,401,088 | 7,340,053 |
| 2028 | 14,332,939 | 501,775 | 1,594,131 | 700,257 | (753,420) | (685,637) | 1,357,201 | 10,227,414 | 857,213 | 276,241 | 7,125,405 | 7,207,534 |
| 2029 | 14,957,303 | 531,508 | 1,594,131 | 715,919 | (770,272) | (668,785) | 1,402,602 | 10,473,225 | 880,550 | 276,241 | 7,900,424 | 7,056,879 |
| 2030 | 15,632,491 | 562,793 | 1,594,131 | 733,126 | (788,785) | (650,272) | 1,451,102 | 10,724,203 | 923,883 | 276,241 | 8,729,695 | 6,902,796 |
| 2031 | 16,342,183 | 595,138 | 1,594,131 | 750,694 | (807,687) | (631,370) | 1,501,022 | 10,975,118 | 973,866 | 276,241 | 9,617,015 | 6,725,168 |
| 2032 | 17,082,648 | 629,886 | 1,594,131 | 768,258 | (826,585) | (612,472) | 1,553,342 | 11,238,632 | 1,013,587 | 276,241 | 10,566,447 | 6,516,201 |
| 2033 | 17,869,768 | 664,004 | 1,594,131 | 786,704 | (846,431) | (592,626) | 1,605,915 | 11,496,411 | 1,071,895 | 276,241 | 11,582,339 | 6,287,429 |
| 2034 | 18,686,041 | 702,116 | 1,594,131 | 804,749 | (865,845) | (573,212) | 1,662,081 | 11,757,676 | 1,124,575 | 276,241 | 12,669,344 | 6,016,697 |
| 2035 | 19,543,898 | 740,445 | 1,594,131 | 823,037 | (885,522) | (553,535) | 1,718,708 | 12,021,969 | 1,178,174 | 276,241 | 13,832,439 | 5,711,459 |
| 2036 | 20,445,379 | 781,954 | 1,594,131 | 841,538 | (905,428) | (533,629) | 1,778,729 | 12,320,120 | 1,204,337 | 276,241 | 15,076,951 | 5,368,428 |
| 2037 | 21,426,312 | 822,230 | 1,594,131 | 862,408 | (927,883) | (511,174) | 1,839,886 | 12,607,579 | 1,276,186 | 276,241 | 16,408,579 | 5,017,733 |
| 2038 | 22,442,061 | 863,884 | 0 | 882,530 | (949,532) | (489,525) | 307,542 | 11,315,862 | 1,323,018 | 276,241 | 17,833,421 | 4,608,640 |
| 2039 | 23,523,295 | 905,444 | 0 | 792,110 | (852,248) | (586,809) | 258,693 | 9,891,127 | 1,407,187 | 276,241 | 19,358,001 | 4,165,294 |
| 2040 | 24,634,503 | 950,937 | 0 | 692,379 | (744,944) | (694,113) | 204,465 | 8,324,144 | 1,495,207 | 276,241 | 20,989,302 | 3,645,201 |
| 2041 | 25,777,848 | 997,820 | 0 | 582,690 | (626,928) | (812,129) | 141,669 | 6,627,442 | 1,562,130 | 276,241 | 22,734,794 | 3,043,054 |
| 2042 | 26,979,519 | 1,048,964 | 0 | 463,921 | (499,142) | (939,915) | 74,052 | 4,797,549 | 1,627,704 | 276,241 | 24,602,471 | 2,377,048 |
| 2043 | 28,249,756 | 1,102,514 | 0 | 335,828 | (361,325) | (1,077,732) | (484) | 2,814,549 | 1,706,275 | 276,241 | 26,600,885 | 1,648,871 |
| 2044 | 29,581,989 | 1,158,342 | 0 | 197,018 | (211,976) | 211,976 | 1,355,597 | 2,121,788 | 1,772,117 | 276,241 | 28,739,188 | 842,801 |
| 2045 | 30,996,631 | 1,215,859 | 0 | 148,525 | (159,801) | 159,801 | 1,364,624 | 1,683,545 | 1,833,408 | (30,541) | 31,027,172 | (30,541) |

EXHIBIT D

Projected Cash Flows (Open Group) – Funded Approach

| Total Medical & Life Insurance - Funding over 30 years at 7.00% discount rate and increasing at 2.50% per year | | | | | | | | | | | | |
|--|-------------------------|-------------|-----------------------|---------------------------------|-------------------|---|---------------------------|-------------------------------|-------------------------------------|-----------------------------|--------------------------|---|
| Fiscal Year | Total APBO as of July 1 | Normal Cost | Expected Amortization | Interest on Net OPEB Obligation | Adjustment to ARC | Amortization of Actuarial (Gain) / Loss | Expected Annual OPEB Cost | OPEB Obligation as of June 30 | Employer Share of Premiums / Claims | Annual Funding / (Payments) | Plan Assets as of July 1 | Unfunded Accrued Actuarial Liability ("UAAL") |
| 2014 | 7,306,504 | 277,120 | 1,594,131 | 459,701 | (494,601) | (944,456) | 891,895 | 6,567,154 | 416,723 | 270,563 | 283,207 | 7,023,297 |
| 2015 | 7,659,551 | 292,579 | 1,594,131 | 473,626 | (509,584) | (929,473) | 921,307 | 6,978,564 | 437,179 | 277,327 | 648,064 | 7,011,487 |
| 2016 | 8,040,998 | 306,371 | 1,594,131 | 488,178 | (525,241) | (913,816) | 949,658 | 7,185,100 | 458,862 | 284,260 | 970,755 | 7,070,243 |
| 2017 | 8,440,703 | 315,356 | 1,594,131 | 503,197 | (541,400) | (897,657) | 973,668 | 7,396,631 | 470,770 | 291,367 | 1,322,968 | 7,117,735 |
| 2018 | 8,865,260 | 328,626 | 1,594,131 | 519,063 | (558,470) | (880,587) | 1,002,810 | 7,626,066 | 474,724 | 298,651 | 1,706,943 | 7,158,317 |
| 2019 | 9,329,734 | 339,719 | 1,594,131 | 536,692 | (577,438) | (861,619) | 1,031,536 | 7,867,558 | 483,927 | 306,117 | 2,125,080 | 7,204,654 |
| 2020 | 9,828,513 | 350,951 | 1,594,131 | 555,688 | (597,876) | (841,181) | 1,061,768 | 8,108,898 | 506,658 | 313,770 | 2,579,953 | 7,248,560 |
| 2021 | 10,349,901 | 364,737 | 1,594,131 | 575,208 | (618,879) | (820,178) | 1,095,078 | 8,336,203 | 546,159 | 321,614 | 3,074,320 | 7,275,581 |
| 2022 | 10,880,515 | 380,711 | 1,594,131 | 594,296 | (639,415) | (799,642) | 1,130,144 | 8,551,973 | 584,720 | 329,654 | 3,611,136 | 7,269,379 |
| 2023 | 11,424,628 | 398,078 | 1,594,131 | 613,139 | (659,689) | (779,368) | 1,166,359 | 8,757,241 | 623,196 | 337,895 | 4,193,570 | 7,231,058 |
| 2024 | 11,984,699 | 417,050 | 1,594,131 | 631,823 | (679,792) | (759,265) | 1,204,019 | 8,948,284 | 666,634 | 346,342 | 4,825,015 | 7,159,684 |
| 2025 | 12,557,095 | 434,756 | 1,594,131 | 650,103 | (699,460) | (739,597) | 1,240,010 | 9,120,451 | 712,842 | 355,001 | 5,509,108 | 7,047,987 |
| 2026 | 13,139,302 | 453,911 | 1,594,131 | 667,668 | (718,358) | (720,699) | 1,276,736 | 9,281,362 | 751,949 | 363,876 | 6,249,747 | 6,889,555 |
| 2027 | 13,741,141 | 476,249 | 1,594,131 | 685,066 | (737,077) | (701,980) | 1,316,478 | 9,401,631 | 823,236 | 372,973 | 7,051,105 | 6,690,036 |
| 2028 | 14,332,939 | 501,775 | 1,594,131 | 700,257 | (753,420) | (685,637) | 1,357,201 | 9,519,322 | 857,213 | 382,297 | 7,917,655 | 6,415,284 |
| 2029 | 14,957,303 | 531,508 | 1,594,131 | 715,919 | (770,272) | (668,785) | 1,402,602 | 9,649,520 | 880,550 | 391,854 | 8,854,188 | 6,103,115 |
| 2030 | 15,632,491 | 562,793 | 1,594,131 | 733,126 | (788,785) | (650,272) | 1,451,102 | 9,775,089 | 923,883 | 401,650 | 9,865,835 | 5,766,656 |
| 2031 | 16,342,183 | 595,138 | 1,594,131 | 750,694 | (807,687) | (631,370) | 1,501,022 | 9,890,554 | 973,866 | 411,691 | 10,958,093 | 5,384,090 |
| 2032 | 17,082,648 | 629,886 | 1,594,131 | 768,258 | (826,585) | (612,472) | 1,553,342 | 10,008,326 | 1,013,587 | 421,983 | 12,136,851 | 4,945,797 |
| 2033 | 17,869,768 | 664,004 | 1,594,131 | 786,704 | (846,431) | (592,626) | 1,605,915 | 10,109,813 | 1,071,895 | 432,533 | 13,408,414 | 4,461,354 |
| 2034 | 18,686,041 | 702,116 | 1,594,131 | 804,749 | (865,845) | (573,212) | 1,662,081 | 10,203,973 | 1,124,575 | 443,346 | 14,779,536 | 3,906,505 |
| 2035 | 19,543,898 | 740,445 | 1,594,131 | 823,037 | (885,522) | (553,535) | 1,718,708 | 10,290,077 | 1,178,174 | 454,430 | 16,257,450 | 3,286,448 |
| 2036 | 20,445,379 | 781,954 | 1,594,131 | 841,538 | (905,428) | (533,629) | 1,778,729 | 10,398,678 | 1,204,337 | 465,791 | 17,849,902 | 2,595,477 |
| 2037 | 21,426,312 | 822,230 | 1,594,131 | 862,408 | (927,883) | (511,174) | 1,839,886 | 10,484,942 | 1,276,186 | 477,436 | 19,565,186 | 1,861,126 |
| 2038 | 22,442,061 | 863,884 | 0 | 882,530 | (949,532) | (489,525) | 307,542 | 8,980,094 | 1,323,018 | 489,372 | 21,412,185 | 1,029,876 |
| 2039 | 23,523,295 | 905,444 | 0 | 792,110 | (852,248) | (586,809) | 258,693 | 7,708,715 | 1,407,187 | 122,885 | 23,400,410 | 122,885 |
| 2040 | 24,634,503 | 950,937 | 0 | 692,379 | (744,944) | (694,113) | 204,465 | 6,944,794 | 1,495,207 | (526,821) | 25,161,324 | (526,821) |
| 2041 | 25,777,848 | 997,820 | 0 | 582,690 | (626,928) | (812,129) | 141,669 | 6,142,281 | 1,562,130 | (617,948) | 26,395,796 | (617,948) |
| 2042 | 26,979,519 | 1,048,964 | 0 | 463,921 | (499,142) | (939,915) | 74,052 | 5,234,664 | 1,627,704 | (646,035) | 27,625,554 | (646,035) |
| 2043 | 28,249,756 | 1,102,514 | 0 | 335,828 | (361,325) | (1,077,732) | (484) | 4,191,457 | 1,706,275 | (663,552) | 28,913,308 | (663,552) |
| 2044 | 29,581,989 | 1,158,342 | 0 | 197,018 | (211,976) | 211,976 | 1,355,597 | 4,466,636 | 1,772,117 | (691,699) | 30,273,688 | (691,699) |

EXHIBIT D

Projected Cash Flows (Open Group) – Funded Approach

Total Medical, Dental & Life Insurance - Funding Annual Normal Cost - 4.00% discount rate

| Fiscal Year | Total APBO | Normal Cost | Employer Share of Premiums / Claims including "implicit cost" | Funding Normal Cost beyond claims | Total Funding Costs | Present Value of Employer Share of Premiums / Claims including "implicit cost" | Present Value of Funding Normal Cost beyond claims | Present Value of Total Funding Costs | Plan Assets at Beginning of year | Unfunded Accrued Actuarial Liability ("UAAL") | Present Value of Unfunded Accrued Actuarial Liability ("UAAL") |
|-------------|------------|-------------|---|-----------------------------------|---------------------|--|--|--------------------------------------|----------------------------------|---|--|
| 2014 | 10,909,192 | 500,470 | 416,723 | 83,747 | 500,470 | 416,723 | 83,747 | 500,470 | 283,207 | 10,625,985 | 10,625,985 |
| 2015 | 11,432,656 | 526,920 | 437,179 | 89,741 | 526,920 | 420,364 | 86,289 | 510,105 | 378,282 | 11,054,374 | 10,629,206 |
| 2016 | 11,983,295 | 550,889 | 458,862 | 92,027 | 550,889 | 424,244 | 85,084 | 516,271 | 483,154 | 11,500,141 | 10,632,527 |
| 2017 | 12,558,335 | 568,531 | 470,770 | 97,761 | 568,531 | 418,513 | 86,909 | 516,274 | 594,507 | 11,963,828 | 10,635,800 |
| 2018 | 13,162,340 | 592,788 | 474,724 | 118,064 | 592,788 | 405,796 | 100,922 | 523,860 | 716,048 | 12,446,292 | 10,639,143 |
| 2019 | 13,811,918 | 614,128 | 483,927 | 130,201 | 614,128 | 397,753 | 107,016 | 527,954 | 862,754 | 12,949,164 | 10,643,269 |
| 2020 | 14,499,804 | 636,805 | 506,658 | 130,147 | 636,805 | 400,419 | 102,857 | 530,566 | 1,027,465 | 13,472,339 | 10,647,385 |
| 2021 | 15,215,148 | 663,729 | 546,159 | 117,570 | 663,729 | 415,036 | 89,344 | 532,606 | 1,198,711 | 14,016,437 | 10,651,340 |
| 2022 | 15,946,027 | 694,764 | 584,720 | 110,044 | 694,764 | 427,249 | 80,408 | 537,293 | 1,364,229 | 14,581,798 | 10,654,777 |
| 2023 | 16,698,540 | 728,614 | 623,196 | 105,418 | 728,614 | 437,849 | 74,065 | 543,267 | 1,528,842 | 15,169,698 | 10,658,029 |
| 2024 | 17,476,116 | 765,960 | 666,634 | 99,326 | 765,960 | 450,354 | 67,101 | 549,680 | 1,695,414 | 15,780,702 | 10,660,877 |
| 2025 | 18,278,460 | 801,989 | 712,842 | 89,147 | 801,989 | 463,049 | 57,908 | 552,196 | 1,862,557 | 16,415,903 | 10,663,458 |
| 2026 | 19,102,311 | 841,240 | 751,949 | 89,291 | 841,240 | 469,665 | 55,771 | 558,956 | 2,026,206 | 17,076,105 | 10,665,685 |
| 2027 | 19,959,266 | 885,940 | 823,236 | 62,704 | 885,940 | 494,414 | 37,658 | 557,118 | 2,196,545 | 17,762,721 | 10,667,830 |
| 2028 | 20,822,850 | 935,624 | 857,213 | 78,411 | 935,624 | 495,019 | 45,280 | 573,430 | 2,347,111 | 18,475,739 | 10,669,279 |
| 2029 | 21,737,310 | 991,447 | 880,550 | 110,897 | 991,447 | 488,938 | 61,577 | 599,835 | 2,519,406 | 19,217,904 | 10,671,020 |
| 2030 | 22,722,289 | 1,049,174 | 923,883 | 125,291 | 1,049,174 | 493,269 | 66,894 | 618,560 | 2,731,079 | 19,991,210 | 10,673,470 |
| 2031 | 23,761,645 | 1,108,526 | 973,866 | 134,660 | 1,108,526 | 499,957 | 69,131 | 634,617 | 2,965,613 | 20,796,032 | 10,676,126 |
| 2032 | 24,852,158 | 1,171,926 | 1,013,587 | 158,339 | 1,171,926 | 500,335 | 78,161 | 658,674 | 3,218,898 | 21,633,260 | 10,678,785 |
| 2033 | 26,011,026 | 1,234,673 | 1,071,895 | 162,778 | 1,234,673 | 508,767 | 77,261 | 671,545 | 3,505,993 | 22,505,033 | 10,681,843 |
| 2034 | 27,220,756 | 1,304,247 | 1,124,575 | 179,672 | 1,304,247 | 513,241 | 82,000 | 692,913 | 3,809,011 | 23,411,745 | 10,684,815 |
| 2035 | 28,496,502 | 1,374,082 | 1,178,174 | 195,908 | 1,374,082 | 517,022 | 85,971 | 712,930 | 4,141,043 | 24,355,459 | 10,687,994 |
| 2036 | 29,840,106 | 1,449,396 | 1,204,337 | 245,059 | 1,449,396 | 508,176 | 103,404 | 753,235 | 4,502,593 | 25,337,513 | 10,691,300 |
| 2037 | 31,288,572 | 1,523,246 | 1,276,186 | 247,060 | 1,523,246 | 517,782 | 100,239 | 764,842 | 4,927,756 | 26,360,816 | 10,695,277 |
| 2038 | 32,797,111 | 1,600,264 | 1,323,018 | 277,246 | 1,600,264 | 516,138 | 108,160 | 793,384 | 5,371,926 | 27,425,185 | 10,699,154 |
| 2039 | 34,397,449 | 1,678,273 | 1,407,187 | 271,086 | 1,678,273 | 527,859 | 101,689 | 798,945 | 5,864,049 | 28,533,400 | 10,703,358 |
| 2040 | 36,055,425 | 1,763,509 | 1,495,207 | 268,302 | 1,763,509 | 539,305 | 96,774 | 807,607 | 6,369,697 | 29,685,728 | 10,707,322 |
| 2041 | 37,776,841 | 1,851,313 | 1,562,130 | 289,183 | 1,851,313 | 541,773 | 100,293 | 830,956 | 6,892,787 | 30,884,054 | 10,711,102 |
| 2042 | 39,588,664 | 1,946,680 | 1,627,704 | 318,976 | 1,946,680 | 542,803 | 106,371 | 861,779 | 7,457,681 | 32,130,983 | 10,714,959 |
| 2043 | 41,503,946 | 2,045,716 | 1,706,275 | 339,441 | 2,045,716 | 547,119 | 108,842 | 886,560 | 8,074,964 | 33,428,982 | 10,719,050 |
| 2044 | 43,517,123 | 2,148,836 | 1,772,117 | 376,719 | 2,148,836 | 546,377 | 116,150 | 923,096 | 8,737,404 | 34,779,719 | 10,723,237 |

EXHIBIT D

Projected Cash Flows (Open Group) – Funded Approach

| Total Medical, Dental & Life Insurance - pay-as-you-go | | | | | |
|---|--|---|--|--|---|
| Fiscal Year | Number of Retirees, Spouses & Surviving Spouses | Total Accumulated Postretirement Benefit Obligation ("APBO") | Present Value of Total Accumulated Postretirement Benefit Obligation ("APBO") | Employer Share of Premiums / Claims including "implicit cost" | Present Value of Employer Share of Premiums / Claims including "implicit cost" |
| 2014 | 111 | 10,909,192 | 10,909,192 | 416,723 | 416,723 |
| 2015 | 114 | 11,432,656 | 10,992,938 | 437,179 | 420,364 |
| 2016 | 118 | 11,983,295 | 11,079,230 | 458,862 | 424,244 |
| 2017 | 122 | 12,558,335 | 11,164,314 | 470,770 | 418,513 |
| 2018 | 127 | 13,162,340 | 11,251,223 | 474,724 | 405,796 |
| 2019 | 131 | 13,811,918 | 11,352,390 | 483,927 | 397,753 |
| 2020 | 136 | 14,499,804 | 11,459,406 | 506,658 | 400,419 |
| 2021 | 141 | 15,215,148 | 11,562,262 | 546,159 | 415,036 |
| 2022 | 145 | 15,946,027 | 11,651,606 | 584,720 | 427,249 |
| 2023 | 151 | 16,698,540 | 11,732,173 | 623,196 | 437,849 |
| 2024 | 156 | 17,476,116 | 11,806,238 | 666,634 | 450,354 |
| 2025 | 161 | 18,278,460 | 11,873,339 | 712,842 | 463,049 |
| 2026 | 165 | 19,102,311 | 11,931,247 | 751,949 | 469,665 |
| 2027 | 170 | 19,959,266 | 11,987,018 | 823,236 | 494,414 |
| 2028 | 174 | 20,822,850 | 12,024,677 | 857,213 | 495,019 |
| 2029 | 177 | 21,737,310 | 12,069,957 | 880,550 | 488,938 |
| 2030 | 179 | 22,722,289 | 12,131,616 | 923,883 | 493,269 |
| 2031 | 180 | 23,761,645 | 12,198,593 | 973,866 | 499,957 |
| 2032 | 181 | 24,852,158 | 12,267,724 | 1,013,587 | 500,335 |
| 2033 | 182 | 26,011,026 | 12,345,936 | 1,071,895 | 508,767 |
| 2034 | 183 | 27,220,756 | 12,423,198 | 1,124,575 | 513,241 |
| 2035 | 183 | 28,496,502 | 12,505,223 | 1,178,174 | 517,022 |
| 2036 | 183 | 29,840,106 | 12,591,193 | 1,204,337 | 508,176 |
| 2037 | 182 | 31,288,572 | 12,694,598 | 1,276,186 | 517,782 |
| 2038 | 182 | 32,797,111 | 12,794,857 | 1,323,018 | 516,138 |
| 2039 | 181 | 34,397,449 | 12,903,061 | 1,407,187 | 527,859 |
| 2040 | 181 | 36,055,425 | 13,004,804 | 1,495,207 | 539,305 |
| 2041 | 180 | 37,776,841 | 13,101,634 | 1,562,130 | 541,773 |
| 2042 | 180 | 39,588,664 | 13,201,928 | 1,627,704 | 542,803 |
| 2043 | 179 | 41,503,946 | 13,308,299 | 1,706,275 | 547,119 |
| 2044 | 177 | 43,517,123 | 13,417,141 | 1,772,117 | 546,377 |
| 2045 | 176 | 45,649,596 | 13,533,291 | 1,833,408 | 543,533 |
| 2046 | 175 | 47,914,516 | 13,658,413 | 1,931,699 | 550,646 |
| 2047 | 173 | 50,282,639 | 13,782,178 | 2,025,896 | 555,286 |
| 2048 | 172 | 52,770,633 | 13,907,811 | 2,110,184 | 556,143 |
| 2049 | 171 | 55,400,349 | 14,039,306 | 2,195,329 | 556,330 |
| 2050 | 170 | 58,181,718 | 14,177,065 | 2,279,029 | 555,328 |
| 2051 | 169 | 61,129,258 | 14,322,392 | 2,384,155 | 558,600 |
| 2052 | 168 | 64,234,367 | 14,471,067 | 2,498,966 | 562,981 |
| 2053 | 168 | 67,499,980 | 14,621,887 | 2,594,463 | 562,014 |

EXHIBIT E

GLOSSARY

Accrual Accounting - A system of accounting in which revenues are recorded when earned and outlays are recorded when goods are received or services performed, even though the actual receipt of revenues and payment for goods or services may occur, in whole or in part, at a different time.

Actuarial Value of Assets - The value of cash, investments, other assets and property belonging to an OPEB trust, pension fund or similar entity, as used by the actuary for the purpose of actuarial valuation. Some funds may be restricted for other purposes, and "smoothing" of investment gains and losses often make the actuarial value of assets different from the market value of assets.

Annual Required Contribution - Normal Cost plus an amortization of the funding shortfall over a period of no more than 30 years.

Cash Basis Accounting - A system of accounting in which revenues are recorded when actually received and outlays are recorded when payment is made.

Discount Rate - The interest rate used to calculate present value of a series of future cash flows. Under GASB 45, the rate should be "long term expected yield on the investments that are expected to be used to pay benefits as they come due. These would be plan investments for a funded plan, the employer's investments for a pay as you go plan [e.g. short term county investment pool], or a weighted average of expected plan and employer investments for a plan that is partially funded".

FASB - Financial Accounting Standards Board. "Since 1973, the Financial Accounting Standards Board (FASB) has been the designated organization in the private sector for establishing standards of financial accounting and reporting".

GASB - Government Accounting Standards Board. "The Governmental Accounting Standards Board (GASB) was organized in 1984 by the Financial Accounting Foundation (FAF) to establish standards of financial accounting and reporting for state and local governmental entities. Its standards guide the preparation of external financial reports of those entities."

EXHIBIT E

GLOSSARY

(continued)

GFOA – Government Finance Officers Association. “GFOA is the professional association of state/provincial and local finance officers in the United States and Canada, and has served the public finance profession since 1906. Approximately 16,000 GFOA members are dedicated to the sound management of government financial resources.”

Implicit Subsidy – “The difference between a premium rate charged to retirees for a particular benefit and the estimated rate that would have been applicable to those retirees if that benefit was acquired for them as a separate group.”

Irrevocable Contribution – “Irrevocably transferred assets to a qualifying trust, or equivalent arrangement, in which plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan and are legally protected from creditors of the employer(s) or plan administrator. The preceding criteria preclude counting as [irrevocable] contributions (a) designations of net assets of a governmental or proprietary fund to be used for OPEB or (b) internal transfers of assets to a separate governmental or proprietary fund for the same purpose. Rather, such actions should be regarded as earmarking of employer assets.”

Level Dollar Amortization – Funding a shortfall in OPEB assets with equal dollar payments over a designated number of years (no more than 30 years). The present value of the level payments equals the present value of unfunded liabilities, the UAAL.

Level Percent of Payroll Amortization – Funding a shortfall in OPEB assets as a level percent of payroll over a designated number of years (no more than 30 years). The present value of the payments equals the present value of unfunded liabilities, the UAAL. Level percent of payroll typically has lower payments in the early years than level dollar amortization. When using level payroll amortization, employee count is assumed to be constant, and the payroll differences arise from overall wage trends.

EXHIBIT E

GLOSSARY

(continued)

Normal Cost - The actuarially determined present value contribution needed to fund benefits which are earned for employee service rendered during the current year. Normal cost depends on many factors, including the interest rate used to discount future cashflows, and expected inflation.

OPEB - Other Post Employment Benefits

OPEB Trust - An entity other than a pension or retirement system which manages OPEB assets. In many respects it is similar to a pension fund for OPEB. For reasons detailed in GASB 45, contributions to an OPEB trust should be irrevocable in order to obtain the most favorable accounting treatment.

Pay-as-you-go funding - Paying benefits (such as pensions or OPEB) on a cash basis, with no money set aside for future liabilities which are already incurred.

POB - Pension Obligation Bond. Generally yielding taxable interest, POBs are issued to help fund a previously unfunded or underfunded pension liability.

UAAL - Unfunded Accrued Actuarial Liability. Actuarial Accrued Liability minus the Actuarial Value of Assets.