



CONSULTING GROUP



# **A POSTRETIREMENT WELFARE BENEFIT GASB 45 ACTUARIAL VALUATION**

*For:*

**Town of East Longmeadow, MA**

*As of:*

**July 1, 2013**

*Prepared by:*  
**USI Consulting Group**



USI Consulting Group  
95 Glastonbury Boulevard, Suite 102  
Glastonbury, CT 06033  
www.usi.biz  
Phone: 860.633.5283  
Fax: 860.368.2112

June 17, 2015

Town of East Longmeadow  
60 Center Square  
East Longmeadow, MA 01028

**RE: July 1, 2013 Actuarial Valuation of Postretirement Welfare Benefits**

We enclose the report covering the actuarial valuation of the postretirement medical and life insurance plans for the employees of the Town of East Longmeadow, MA as of July 1, 2013. The numbers presented in this report reflect the adoption, by the Town of East Longmeadow, MA, of the Statement of Governmental Accounting Standard No. 45 (GASB 45).

The financial results of the actuarial valuation are summarized in the report. The Executive Summary highlights the results of the valuation, including the calculation of the Annual OPEB Cost (expense) for the fiscal year beginning July 1, 2013, which is based on a 30 year amortization of the UAAL as of July 1, 2013.

Additional information summarizing census information, actuarial assumptions, and the methodology for developing them, as well as a glossary of selected terms used in this study, are also included in the report.

All calculations are made in accordance with our understanding of the provisions of the Statement of Governmental Accounting Standards Board No. 45 (GASB 45). We believe this report provides all of the information your auditor requires. We would appreciate a copy of the footnote to your financial statement related to the postretirement benefits.

Respectfully submitted,

**USI Consulting Group**

A handwritten signature in blue ink that reads "Robert W. Webb".

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Robert W. Webb, FSA, EA, MAAA  
Vice President and Actuary

A handwritten signature in blue ink that reads "John Sheaves".

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John Sheaves  
Senior Actuarial Consultant

## **TABLE OF CONTENTS**

	<u>Page</u>
<b>I. Executive Summary</b>	<b>1</b>
<b>II. Census Information</b>	<b>6</b>
<b>III. Financial Statement Disclosure</b>	<b>9</b>
<b>IV. Actuarial Assumptions And Methodology</b>	<b>12</b>
<b>V. Appendices</b>	<b>18</b>

## Section I

# Executive Summary

The section presents the results of the July 1, 2013 valuation. The first section provides a brief summary of the valuation results. The Executive Summary Detail provides a more detailed development of the expenses and liabilities. Items I through IV show the development of the Annual Required Contribution (ARC). Items V through VIII show the calculation of the Annual OPEB Cost. Item X provides a brief summary of the key assumptions used in developing the plan's costs and liabilities.

**EXECUTIVE SUMMARY**

**Introduction**

This report details the development of the Annual OPEB Cost for the Fiscal Year ending June 30, 2014. Estimated June 30, 2014 and June 30, 2015 disclosures are included in Section III.

The liabilities developed in this report are only valid for purposes of meeting employer accounting requirements as required by Statement of Governmental Accounting Standards Number 45 (GASB 45). Liabilities developed for other purposes could be significantly different than those shown in this report.

**Summary of Results**

The Actuarial Accrued Liability and Normal Cost are calculated as of the valuation date. The Annual OPEB Cost and Expected Benefit Payments are for the year beginning on the valuation date. Additional detail is developed in the exhibits included in this actuarial valuation report.

**Fiscal Year Ending June 30, 2014**

<i>Beginning of Year Net OPEB Obligation (NOO)</i>	\$21,641,833
<i>Actuarial Accrued Liability (AAL)</i>	\$50,129,040
<i>Actuarial Value of Assets</i>	\$0
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	\$50,129,040
<i>Annual Required Contribution (30 year amortization)</i>	\$5,148,006
<i>Annual OPEB Cost</i>	\$4,937,120
<i>Expected Benefit Payments</i>	\$1,050,735

**Fiscal Year Ending June 30, 2015**

<i>Beginning of Year Net OPEB Obligation (NOO)</i>	\$25,528,218
<i>Actuarial Accrued Liability (AAL)</i>	\$53,737,836
<i>Actuarial Value of Assets</i>	\$0
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	\$53,737,836
<i>Annual Required Contribution (30 year amortization)</i>	\$5,447,678
<i>Annual OPEB Cost</i>	\$5,171,944
<i>Expected Benefit Payments</i>	\$1,226,751

**Economic Assumptions**

The employer, with the approval of the auditor, is responsible for selecting the economic assumptions as of the disclosure date. The following table details the selected economic assumptions for the current fiscal year:

<b><u>Assumption Selection Date</u></b>	<b><u>July 1, 2013</u></b>
<i>Funding Interest Rate*</i>	4.00%
<i>2013 Medical Trend Rates</i>	8.25%
<i>Ultimate Medical Trend Rate</i>	5.00%
<i>Year Ultimate Trend Rates Reached</i>	2020
<i>Annual Payroll Increase</i>	2.50%

\* Reflects current funding policy (assumes no funding).

**Changes included in current valuation**

The plan experienced an actuarial gain due primarily to post-65 plan costs decreasing relative to our assumptions as well as changes in the demographics. The impact of the gain is shown in appendix II.

**Accounting for Postretirement Benefits**

This report provides the information needed to prepare the footnote in your financial statements related to your postretirement benefit plans. The unfunded actuarial accrued liability and the ARC are developed in the Executive Summary Detail included in this section. For this Fiscal Year / Valuation Report, Section III presents the disclosure information based on estimated contributions made.

**Actuarial Certification**

The financial results of the actuarial valuation are summarized in this report. The valuation has been prepared as of July 1, 2013. The detail charts included in this Executive Summary highlight the results of the valuation. Additional information summarizing the census, actuarial assumptions, plan provisions, and a glossary of selected terms used in this study are also included in this report.

The valuation is based on the July 1, 2013 census data and plan information as provided by the employer. We have reviewed both the census and financial data for reasonableness, but have not completed an independent audit of the information.

All costs, liabilities, and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. The calculations are consistent and undertaken with our understanding of Statement of Governmental Accounting Standards Number 45 (GAS 45). In our opinion, the actuarial assumptions are reasonable, taking in account the experience of the plan and reasonable expectations and, individually represent our best estimate of the anticipated experience under the plan.

We have no relationship with the employer or the plan that would objectively impair, or appear to impair, our ability to perform the work detailed in this report.

We certify that we are members of the American Academy of Actuaries and meet its Qualification Standards to provide an actuarial opinion in accordance with GASB 45.



Robert W. Webb, FSA, EA, MAAA  
Vice President and Actuary



Adeniyi Olaiya, ASA, MAAA  
Associate Vice President and Actuary

**EXECUTIVE SUMMARY DETAIL**  
**GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION AND ANNUAL OPEB COST**  
**JULY 1, 2013 RESULTS**

<b><i>I. Present value of Future benefits</i></b>	
A. Retirees/Disableds	\$17,540,514
B. Active Employees	<u>\$62,802,765</u>
C. Total	\$80,343,279
<b><i>II. Actuarial Accrued Liability</i></b>	
A. Retirees/Disableds	\$17,540,514
B. Active Employees	<u>\$32,588,526</u>
C. Total	\$50,129,040
<b><i>III. Actuarial Assets</i></b>	\$0
<b><i>IV. Unfunded Actuarial Accrued Liability (UAAL)</i></b>	\$50,129,040
<b><i>V. Annual Required Contribution (ARC)</i></b>	
A. Normal Cost	\$2,572,485
B. Supplemental Cost	\$2,397,727
C. Compound Interest to Year End	<u>\$177,794</u>
D. Annual Required Contribution	\$5,148,006
[A. + B. + C.]	
<b><i>VI. Net OPEB Obligation</i></b>	\$21,641,833
<b><i>VII. Interest on net OPEB Obligation</i></b>	\$865,673
<b><i>VIII. Adjustment to ARC</i></b>	(\$1,076,559)
<b><i>IX. Annual OPEB Cost (Expense)</i></b>	\$4,937,120
[V.D. + VII. + VIII.]	
<b><i>X. Expected Benefit Payments</i></b>	
A. Retirees/Disableds	\$950,504
B. Active Employees	<u>\$100,231</u>
C. Total	\$1,050,735

**EXECUTIVE SUMMARY DETAIL**  
**GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION AND ANNUAL OPEB COST**  
**JULY 1, 2014 RESULTS**

<b><i>I. Present value of Future benefits</i></b>	
A. Retirees/Disableds	\$17,272,840
B. Active Employees	<u>\$68,558,021</u>
C. Total	\$85,830,861
<b><i>II. Actuarial Accrued Liability</i></b>	
A. Retirees/Disableds	\$17,272,840
B. Active Employees	<u>\$36,464,996</u>
C. Total	\$53,737,836
<b><i>III. Actuarial Assets</i></b>	\$0
<b><i>IV. Unfunded Actuarial Accrued Liability (UAAL)</i></b>	\$53,737,836
<b><i>V. Annual Required Contribution (ARC)</i></b>	
A. Normal Cost	\$2,636,797
B. Supplemental Cost	\$2,624,946
C. Compound Interest to Year End	<u>\$185,935</u>
D. Annual Required Contribution [A. + B. + C.]	\$5,447,678
<b><i>VI. Net OPEB Obligation</i></b>	\$25,528,218
<b><i>VII. Interest on net OPEB Obligation</i></b>	\$1,021,129
<b><i>VIII. Adjustment to ARC</i></b>	(\$1,296,863)
<b><i>IX. Annual OPEB Cost (Expense)</i></b> <b><i>[V.D. + VII. + VIII.]</i></b>	\$5,171,944
<b><i>X. Expected Benefit Payments</i></b>	
A. Retirees/Disableds	\$980,746
B. Active Employees	<u>\$246,005</u>
C. Total	\$1,226,751



## Section II

# Census Information

**This section details statistics related to the participants in the postretirement benefit plan.**

**CENSUS INFORMATION – A.**

**EMPLOYEE COUNTS**

*As of July 1, 2013*

	<u>Actives</u>	<u>Retirees*</u>	<u>Total</u>
<b>Male</b>	148	84	232
<b>Female</b>	<u>263</u>	<u>138</u>	<u>401</u>
<b>Total</b>	411	222	633

**COUNTS BY AGE AND ELIGIBILITY STATUS**

**ACTIVE EMPLOYEES :**

<u>Age</u>	<u>Currently Eligible to Retire</u>	<u>Not Currently Eligible to Retire</u>	<u>Total</u>
29 and under	0	24	24
30 - 34	0	35	35
35 - 39	0	48	48
40 - 44	1	43	44
45 - 49	22	25	47
50 - 54	44	30	74
55 - 59	45	20	65
60 - 64	39	8	47
65 and over	25	2	27
<b>Total</b>	175	235	411

**CURRENT RETIREES:**

<u>Age</u>	<u>Retirees*</u>	<u>Spouse</u>	<u>Total</u>
54 and under	3	0	3
55 - 59	12	0	12
60 - 64	28	7	35
65 - 69	45	22	67
70 - 74	43	18	61
75 - 79	29	11	40
80 and over	62	11	73
<b>Total</b>	222	69	291

*\*There are an additional 65 retirees with Life Insurance only.*

**CENSUS INFORMATION – B.**

**AVERAGE AGE AND SERVICE**

As of July 1, 2013

ACTIVE EMPLOYEES:

A. Average Age at Hire

Males	33.4
Females	38.3
Total	36.5

B. Average Service

Males	12.7
Females	12.2
Total	12.4

C. Average Current Age

Males	46.1
Females	50.5
Total	48.9

CURRENT RETIREES

D. Average Current Age

Males	73.2
Females	74.0
Total	73.7

### Section III

## Financial Statement Disclosure

**This section provides the required information and notes to the Financial Statements for the fiscal years ending June 30, 2014 and June 30, 2015.**

**FINANCIAL STATEMENT DISCLOSURE**

The GASB standard on accounting for postretirement benefits other than pensions requires the following disclosures in the financial statements with regard to the retiree benefit liability:

**1.) A BRIEF DESCRIPTION OF THE RETIREE MEDICAL/DRUG, LIFE and DENTAL INSURANCE PLANS:**

**a. Plan Types:**

**Medical**

The Town participates in the Scantic Valley Regional Health Trust. Medical and prescription drug benefits are provided to eligible retirees. Retirees have their choice of a variety of plans offered by Blue Cross Blue Shield of Massachusetts, Health New England, Tufts Health Plan.

**b. Eligibility:**

Police and Fire: Age 45 with 10 years of service, or any age with 20 years of service.

All Others: Age 55 with 10 years of service, or any age with 20 years of service.

**c. Benefit/Cost Sharing:**

The Town covers 70% of the health premium for all plans except the Blue Care Elect PPO and the Medicare plans, for which they pay 50%.

**d. Spouse Benefit:**

Yes, the Town provides medical coverage for spouses. Spouses pay the same percentage as retirees.

**e. Surviving Spouse Benefit:**

Yes, the Town provides medical coverage for surviving spouses. Surviving spouses pay the same percentage of the medical premium as they would if the retiree were still alive.

**f. Annual Medical Premiums:**

**As of July 1, 2013:**

**Blue Cross Blue Shield**

Individual: \$ 7,332.00

Family: \$ 18,168.00

**Health New England**

Individual: \$ 6,180.00

Family: \$ 15,432.00

**Tufts HMO**

Individual: \$ 7,884.00

Family: \$ 19,704.00

**Blue Care Elect PPO**

Individual: \$ 18,828.00

Family: \$ 45,936.00

**As of January 1, 2014:**

**Medicare Plans**

Medex III: \$ 3,744.00 per person covered

Managed Blue for Seniors: \$ 3,366.96 per person covered

HNE Mediwrap: \$ 4,536.00 per person covered

Tufts Medicare Supplement: \$ 4,008.00 per person covered

Tufts Preferred HMO: \$ 3,024.00 per person covered

**FINANCIAL STATEMENT DISCLOSURE (cont.)**

**2.) GASB 45 DISCLOSURE REQUIREMENTS – ESTIMATED**

<b>A. Annual OPEB Cost and Net OPEB Obligation</b>	<u>7/1/2013 - 6/30/2014</u>	<u>7/1/2014 - 6/30/2015</u>
1. Annual Required Contribution (ARC)	\$5,148,006	\$5,447,678
2. Interest on net OPEB Obligation	\$865,673	\$1,021,129
3. Adjustment to ARC	<u>(\$1,076,559)</u>	<u>(\$1,296,863)</u>
4. Annual OPEB Cost (Expense)	\$4,937,120	\$5,171,944
5. Contribution made (assumed middle of year) *	<u>(\$1,050,735)</u>	<u>(\$1,226,751)</u>
6. Increase in net OPEB Obligation	\$3,886,385	\$3,945,193
7. Net OPEB Obligation - beginning of year	<u>\$21,641,833</u>	<u>\$25,528,218</u>
8. Net OPEB Obligation - end of year	\$25,528,218	\$29,473,411

\* Contribution made was assumed to equal Expected Benefit Payments

The annual OPEB Cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB obligation for fiscal years ending 2014 / 2015 are as follows:

<u>Fiscal Year Ending</u>	<u>Annual OPEB Cost</u>	<u>Percentage of Annual OPEB Cost Contributed</u>	<u>Net OPEB Obligation</u>	<u>Covered Payroll</u>	<u>OPEB Cost % of Pay</u>
6/30/2014	\$4,937,120	21.3%	\$25,528,218	\$23,530,428	20.98%
6/30/2015	\$5,171,944	23.7%	\$29,473,411	\$24,118,689	21.44%

**B. Funded Status and Funding Progress**

<u>Actuarial Valuation Date</u>	<u>Actuarial Value of Assets (a)</u>	<u>Actuarial Accrued Liability (AAL) (b)</u>	<u>Unfunded AAL (UAAL) (b - a)</u>	<u>Funded Ratio (a/b)</u>	<u>Covered Payroll (c)</u>	<u>UAAL as a Percentage of Covered Payroll (AAL) (b - a) / c)</u>
12/31/2009	\$0	\$93,937,482	\$93,937,482	0.0%	N/A	N/A
7/1/2011	\$0	\$44,362,650	\$44,362,650	0.0%	N/A	N/A
7/1/2013	\$0	\$50,129,040	\$50,129,040	0.0%	\$23,530,428	213.0%

**C. Methods and Assumptions**

- Interest Rate	4.00%
- 2013 Medical Trend Rates	8.25%
- Ultimate Medical Trend Rate	5.00%
- Year Ultimate Trend Rates Reached	2020
- Actuarial Cost Method	Projected Unit Credit
- The remaining amortization period at 06/30/2014	23.09
- Annual Payroll Increase	2.50%

## Section IV

# Actuarial Assumptions And Methodology

The following pages detail the assumptions used in the calculations.

**ACTUARIAL ASSUMPTIONS AND METHODOLOGY**

1. **Funding Interest Rate:** An interest rate of 4.00% was used.
  
2. **Mortality:** For healthy participants: the mortality rates are from the RP-2000 Combined Fully Generational mortality table with projection scale AA.  
 For disabled participants: the mortality rates are from the RP-2000 Combined mortality table set forward 3 years for males.

3. <b><u>Retirement Rates:</u></b>	<b><u>Group 1</u></b>		<b><u>Group 4</u></b>
	<b><u>Age</u></b>	<b><u>Male</u></b>	<b><u>Female</u></b>
	45-49	0%	0%
	50-51	1.0%	1.5%
	52	1.0%	2.0%
	53	1.0%	2.5%
	54	2.0%	2.5%
	55	2.0%	5.5%
	56-57	2.5%	6.5%
	58	5.0%	6.5%
	59	6.5%	6.5%
	60	12.0%	5.0%
	61	20.0%	13.0%
	62	30.0%	15.0%
	63	25.0%	12.5%
	64	22.0%	18.0%
	65	40.0%	15.0%
	66-67	25.0%	20.0%
	68	30.0%	25.0%
	69	30.0%	20.0%
	70+	100.0%	100.0%

**Teachers**

<b><u>Age</u></b>	<b><u>&lt;20</u></b>	<b><u>20-29</u></b>	<b><u>30+</u></b>
50	0.0% / 0.0%	1.0% / 1.5%	2.0% / 2.0%
55	3.0% / 2.0%	3.0% / 3.0%	6.0% / 6.0%
60	15.0% / 20.0%	20.0% / 16.0%	50.0% / 35.0%
62	20.0% / 25.0%	30.0% / 30.0%	40.0% / 35.0%
65	40.0% / 30.0%	40.0% / 30.0%	50.0% / 35.0%
70	100.0% / 100.0%	100.0% / 100.0%	100.0% / 100.0%



**ACTUARIAL ASSUMPTIONS AND METHODOLOGY (cont.)**

4.	<b><u>Disability Rates:</u></b>	<b><u>Group 1 and 2</u></b>		<b><u>Group 4</u></b>	<b><u>Teachers</u></b>
		<b><u>Age</u></b>	<b><u>Rate</u></b>	<b><u>Rate</u></b>	<b><u>Rate</u></b>
		20	0.01%	0.10%	0.00%
		25	0.02%	0.20%	0.01%
		30	0.03%	0.30%	0.01%
		35	0.06%	0.30%	0.01%
		40	0.10%	0.30%	0.01%
		45	0.15%	1.00%	0.03%
		50	0.19%	1.25%	0.05%
		55	0.24%	1.20%	0.08%
	60	0.28%	0.85%	0.10%	

5. **Termination Rates:**

	<b><u>Service</u></b>	<b><u>Group 1 &amp; 2</u></b>	<b><u>Group 4</u></b>
	0	15.0%	1.50%
	1	12.0%	1.5%
	2	10.0%	1.5%
	3	9.0%	1.5%
	4	8.0%	1.5%
	5	7.6%	1.5%
	6	7.5%	1.5%
	7	6.7%	1.5%
	8	6.3%	1.5%
	9	5.9%	1.5%
	10	5.4%	1.5%
	11	5.0%	0.0%
	12	4.6%	0.0%
	13	4.1%	0.0%
	14	3.7%	0.0%
	15	3.3%	0.0%
	16-20	2.0%	0.0%
	21-29	1.0%	0.0%
	30+	0.0%	0.0%

**Teachers (Male / Female)**

		<b><u>Years of Service</u></b>		
<b><u>Age</u></b>	<b><u>0</u></b>	<b><u>5</u></b>	<b><u>10+</u></b>	
20	12.0% / 10.0%	4.5% / 9.0%	1.0% / 5.0%	
30	11.4% / 12.0%	4.5% / 9.0%	1.0% / 5.0%	
40	9.7% / 11.0%	5.4% / 6.5%	1.7% / 2.9%	
50	10.0% / 8.2%	4.8% / 4.2%	2.2% / 2.1%	

**ACTUARIAL ASSUMPTIONS AND METHODOLOGY (cont.)**

6. **Health Care Trend Rates:** It was assumed that health care costs would increase in accordance with the trend rates in the following table:

<u>Year</u>	<u>Medical Rates</u>
2013	8.25%
2014	7.75%
2015	7.25%
2016	6.75%
2017	6.25%
2018	5.75%
2019	5.25%
2020+	5.00%

7. **Participation Rate:** It was assumed that 100% of the current active employees covered under the active plan on the day before retirement would enroll in the retiree medical plan upon retirement.
8. **Medicare Election:** It was assumed that 85% of the current active employees and current retirees under age 65 will be eligible for Medicare and will elect a Medicare Plan.
9. **Percent Married:** It was assumed that 65% of the male and female employees who elect retiree health care coverage for themselves would also elect coverage for their spouse upon retirement. It was assumed that male spouses are three years older than their wives and female spouses are three years younger than the retiree. For current retirees, actual census information was used.
10. **Actuarial Value of Assets:** N/A
11. **Administrative Expenses:** Included in premiums used.
12. **Participant Salary Increases:** 3.00% annually
13. **Payroll Growth Rate:** 2.50% annually

**ACTUARIAL ASSUMPTIONS AND METHODOLOGY (cont.)**

14. **Per Capita Claims Cost:** Per Capita Claim Costs were developed by applying morbidity aging factors to the average premium rates reflecting the demographic characteristics of the insured group. Below are the annual per capita claim costs used:

<u>Age</u>	<u>Male</u>	<u>Female</u>
45	4,799.99	6,025.89
50	5,762.58	6,647.47
55	6,997.11	7,260.42
60	8,438.84	8,089.20
64	9,423.01	8,823.01
65	3,450.79	3,230.66
70	3,810.44	3,570.16
75	4,207.30	3,942.21
80	4,422.78	4,140.64

15. **High Cost Plan Excise Tax:**

Effective in 2018. The law apply a 40% tax to the cost of plan benefits in excess of statutory thresholds, which are \$10,200 for single coverage and \$27,500 for family coverage for Medicare eligible retirees. An additional \$1,650 and \$3,450 are added for single and family coverage respectively, for retirees who are between ages 55 and 65. We assume the thresholds will start to increase in 2018 at the rate of 3.4%. The plan costs for pre 65 and post 65 benefits are based on the plans' premium costs adjusted for aging and trended at the health care trend rates shown above.

**ACTUARIAL ASSUMPTIONS AND METHODOLOGY (cont.)**

**ACTUARIAL COST METHOD**

An Actuarial Cost Method develops an orderly allocation of the actuarial present value of benefits payments over the working lifetime of the participants in the plan. The actuarial present value of benefits allocated to a particular fiscal year is called the Normal Cost. The actuarial present value of benefits allocated to all periods prior to a valuation date is called the Actuarial Accrued Liability. The Unfunded Actuarial Accrued Liability is amortized over future years in accordance with the employer's established accounting policy.

**Projected Unit Credit Actuarial Cost Method:** The projected benefits of each individual included in the actuarial valuation are allocated by a consistent formula to valuation years. The actuarial present value of benefits allocated to a valuation year is called the Normal Cost. The Actuarial Percent Value of benefits allocated to all periods prior to a valuation year is called the Actuarial Accrued Liability. Projected benefits are calculated by projecting the current per capita claims cost into the future based on the applicable health care trend rates. The projected benefits are allocated to valuation years by a straight pro-ratio based on expected years of employment. The Unfunded Actuarial Accrued Liability is amortized over future years in accordance with the employer's established accounting policy.

The amortization of the unfunded actuarial accrued liability may be determined in level dollar amounts or as a level percentage of projected payroll of active plan members. The total unfunded actuarial accrued liability may be amortized as one amount, or components of the total may be separately amortized. The equivalent single amortization period for all components combined may not exceed the maximum acceptable period of 30 years.

**ADDITIONAL COMMENTS**

The values in this GASB 45 valuation represent a closed group and do not reflect new entrants after the census collection date.

**Section V**  
**Appendices**

**APPENDIX - I.**

**ACTIVE EMPLOYEE BY AGE AND SERVICE**

**AS OF JULY 1, 2013**

<b>Age</b>	<b>Service</b>									<b>Total</b>
	<b>0 - 4</b>	<b>5 - 9</b>	<b>10 - 14</b>	<b>15 - 19</b>	<b>20 - 24</b>	<b>25 - 29</b>	<b>30 - 34</b>	<b>35 - 39</b>	<b>40+</b>	
0 - 19	0	0	0	0	0	0	0	0	0	0
20 - 24	4	1	0	0	0	0	0	0	0	5
25 - 29	17	1	1	0	0	0	0	0	0	19
30 - 34	16	12	7	0	0	0	0	0	0	35
35 - 39	16	20	9	3	0	0	0	0	0	48
40 - 44	14	14	7	8	1	0	0	0	0	44
45 - 49	10	15	5	8	9	0	0	0	0	47
50 - 54	12	18	14	11	7	10	2	0	0	74
55 - 59	9	11	16	11	6	5	6	1	0	65
60 - 64	2	6	11	13	8	1	1	3	2	47
65 - 69	1	1	4	7	3	4	0	0	1	21
70 - 74	0	0	0	0	0	0	2	0	0	2
75 - 79	0	0	1	0	0	0	0	0	1	2
80 - 84	0	0	0	0	0	0	0	1	1	2
85 and Over	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>101</b>	<b>99</b>	<b>75</b>	<b>61</b>	<b>34</b>	<b>20</b>	<b>11</b>	<b>5</b>	<b>5</b>	<b>411</b>

APPENDIX – II

RECONCILIATION OF ACTUARIAL ACCRUED LIABILITY

a.	7/1/2011 Actuarial Accrued Liability	\$44,362,650
b.	2011 Normal Cost	\$2,565,677
c.	Interest Rate	4.00%
d.	Interest on (b. + c.)	\$1,877,133
e.	2011 Expected Benefit Payments	(\$922,693)
f.	Interest on f.	<u>(\$18,273)</u>
g.	7/1/2012 Expected Actuarial Accrued Liability (a. + b. + d. + e. + f.)	\$47,864,494
h.	2012 Normal Cost	\$2,629,819
i.	Interest Rate	4.00%
j.	Interest on (g. + h.)	\$2,019,773
k.	2012 Expected Benefit Payments	(\$1,020,939)
l.	Interest on l.	<u>(\$20,219)</u>
m.	7/1/2013 Expected Actuarial Accrued Liability (g. + h. + j. + k. + l.)	\$51,472,928
n.	Change in Actuarial Accrued Liability due to	
i.	Medical cost changes	(\$669,204)
ii.	Demographics changes	(\$674,684)
iii.	Plan Change	<u>\$0</u>
iv.	Total	(\$1,343,888)
o.	7/1/2013 Actuarial Accrued Liability (m. + n. iv.)	\$50,129,040

**APPENDIX – III**

**DEVELOPMENT OF NORMAL COST AND AMORTIZATION AMOUNT**

**A. Prior Bases**

1. Amortization Base Balance as of 7/1/2011	\$44,362,650
2. 2011 Amortization Payment	(\$2,030,580)
3. Interest	4.00%
4. Interest on (1) + (2)	<u>\$1,693,283</u>
5. Amortization Base Balance as of 7/1/2012 (1) + (2) + (4)	\$44,025,353
6. 2012 Amortization Payment	(\$2,238,075)
7. Interest	4.00%
8. Interest on (5) + (6)	<u>\$1,671,491</u>
9. Amortization Base Balance as of 7/1/2013 (5) + (6) + (8)	\$43,458,769
10. Remaining Amortization Period	24.05
11. Valuation Interest rate	4.00%
12. Assumed payroll growth	2.50%
13. 2013 Adjusted Amortization Amount	\$2,125,406

**B. New Amortization Base**

1. Medical cost changes	(\$669,204)
2. Demographics changes	(\$674,684)
3. Plan Change	\$0
4. Loss due to Funding timing	<u>\$8,014,159</u>
5. Total (1) + (2) + (3) + (4)	\$6,670,271
6. Remaining Amortization Period	30
7. Valuation Interest rate	4.00%
8. Assumed payroll growth	2.50%
9. Amortization Amount	\$272,321

**C. Combined Bases**

1. Amortization Base Balance as of 7/1/2013 (A.9. + B.5.)	\$50,129,040
2. 2013 Preliminary Total Amortization Amount (A.13. + B.9.)	\$2,397,727
3. 2013 Minimum Total Amortization Amount (30 year)	\$2,046,573
4. 2013 Total Amortization Amount (greater of 2. and 3.)	\$2,397,727



**APPENDIX – IV**

**PROJECTED BENEFIT PAYMENTS**

<u>Year</u>	<u>Amount</u>	<u>Accumulated</u>	<u>Year</u>	<u>Amount</u>	<u>Accumulated</u>	<u>Year</u>	<u>Amount</u>	<u>Accumulated</u>
2013	\$ 1,050,735	\$ 1,050,735	2046	\$ 5,551,363	\$ 126,597,221	2079	\$ 1,229,096	\$ 250,483,300
2014	\$ 1,226,751	\$ 2,277,486	2047	\$ 5,498,792	\$ 132,096,013	2080	\$ 1,073,432	\$ 251,556,732
2015	\$ 1,410,243	\$ 3,687,729	2048	\$ 5,472,749	\$ 137,568,762	2081	\$ 928,529	\$ 252,485,261
2016	\$ 1,599,516	\$ 5,287,245	2049	\$ 5,499,823	\$ 143,068,585	2082	\$ 795,718	\$ 253,280,979
2017	\$ 1,749,940	\$ 7,037,185	2050	\$ 5,388,242	\$ 148,456,827	2083	\$ 674,153	\$ 253,955,132
2018	\$ 1,931,595	\$ 8,968,780	2051	\$ 5,308,042	\$ 153,764,869	2084	\$ 564,218	\$ 254,519,350
2019	\$ 2,107,545	\$ 11,076,325	2052	\$ 5,202,405	\$ 158,967,274	2085	\$ 467,420	\$ 254,986,770
2020	\$ 2,239,996	\$ 13,316,321	2053	\$ 5,081,381	\$ 164,048,655	2086	\$ 382,743	\$ 255,369,513
2021	\$ 2,411,195	\$ 15,727,516	2054	\$ 4,976,181	\$ 169,024,836	2087	\$ 309,709	\$ 255,679,222
2022	\$ 2,593,342	\$ 18,320,858	2055	\$ 4,850,293	\$ 173,875,129	2088	\$ 247,489	\$ 255,926,711
2023	\$ 2,756,490	\$ 21,077,348	2056	\$ 4,756,502	\$ 178,631,631	2089	\$ 195,843	\$ 256,122,554
2024	\$ 2,907,118	\$ 23,984,466	2057	\$ 4,661,420	\$ 183,293,051	2090	\$ 153,328	\$ 256,275,882
2025	\$ 3,086,456	\$ 27,070,922	2058	\$ 4,570,531	\$ 187,863,582	2091	\$ 118,950	\$ 256,394,832
2026	\$ 3,240,916	\$ 30,311,838	2059	\$ 4,476,588	\$ 192,340,170	2092	\$ 91,068	\$ 256,485,900
2027	\$ 3,380,181	\$ 33,692,019	2060	\$ 4,376,528	\$ 196,716,698	2093	\$ 68,963	\$ 256,554,863
2028	\$ 3,590,553	\$ 37,282,572	2061	\$ 4,267,421	\$ 200,984,119	2094	\$ 51,554	\$ 256,606,417
2029	\$ 3,774,936	\$ 41,057,508	2062	\$ 4,150,466	\$ 205,134,585	2095	\$ 38,053	\$ 256,644,470
2030	\$ 3,913,933	\$ 44,971,441	2063	\$ 4,023,085	\$ 209,157,670	2096	\$ 27,677	\$ 256,672,147
2031	\$ 4,071,879	\$ 49,043,320	2064	\$ 3,887,030	\$ 213,044,700	2097	\$ 19,827	\$ 256,691,974
2032	\$ 4,269,766	\$ 53,313,086	2065	\$ 3,740,489	\$ 216,785,189	2098	\$ 13,942	\$ 256,705,916
2033	\$ 4,405,908	\$ 57,718,994	2066	\$ 3,585,462	\$ 220,370,651	2099	\$ 9,638	\$ 256,715,554
2034	\$ 4,584,106	\$ 62,303,100	2067	\$ 3,420,850	\$ 223,791,501	2100	\$ 6,539	\$ 256,722,093
2035	\$ 4,773,773	\$ 67,076,873	2068	\$ 3,247,754	\$ 227,039,255	2101	\$ 4,357	\$ 256,726,450
2036	\$ 4,953,692	\$ 72,030,565	2069	\$ 3,068,040	\$ 230,107,295	2102	\$ 2,835	\$ 256,729,285
2037	\$ 5,120,825	\$ 77,151,390	2070	\$ 2,882,957	\$ 232,990,252	2103	\$ 1,816	\$ 256,731,101
2038	\$ 5,309,399	\$ 82,460,789	2071	\$ 2,693,036	\$ 235,683,288	2104	\$ 1,146	\$ 256,732,247
2039	\$ 5,380,183	\$ 87,840,972	2072	\$ 2,502,123	\$ 238,185,411	2105	\$ 723	\$ 256,732,970
2040	\$ 5,416,782	\$ 93,257,754	2073	\$ 2,309,791	\$ 240,495,202	2106	\$ 441	\$ 256,733,411
2041	\$ 5,548,958	\$ 98,806,712	2074	\$ 2,119,815	\$ 242,615,017	2107	\$ 269	\$ 256,733,680
2042	\$ 5,553,240	\$ 104,359,952	2075	\$ 1,931,778	\$ 244,546,795	2108	\$ 166	\$ 256,733,846
2043	\$ 5,533,110	\$ 109,893,062	2076	\$ 1,746,338	\$ 246,293,133	2109	\$ 90	\$ 256,733,936
2044	\$ 5,568,225	\$ 115,461,287	2077	\$ 1,566,928	\$ 247,860,061	2110	\$ 47	\$ 256,733,983
2045	\$ 5,584,571	\$ 121,045,858	2078	\$ 1,394,143	\$ 249,254,204	2111	\$ 14	\$ 256,733,997

APPENDIX – V  
GLOSSARY

**Actuarial Accrued Liability.** The portion of the present value of benefits which is not provided for by future Normal Costs.

**Actuarial Present Value of Total Projected Benefits.** The present value, as of the valuation date, of future benefit payments expected to be paid to employees, retirees, and covered dependents.

**Annual OPEB Cost.** The 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 required contributions to a defined benefit OPEB plan, calculated in accordance with the parameters defined in GAS 45.

**Investment Return Assumption (Discount Rate).** The rate used to adjust a series of future benefit payments to reflect the time value of money.

**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 and technological developments.

**Net OPEB Obligation.** The cumulative difference since the effective date of GAS 45 between the annual OPEB cost and the employer's contributions to the plan.

**Normal Cost.** The portion of the Actuarial Present Value of plan benefits which is allocated to a valuation year by the Actuarial Cost Method.

**OPEB.** Postemployment benefits other than pension benefits.

**Pay-As-You-Go.** The amount of the benefits paid out to plan participants during the year.

**Per Capita Claims Cost.** The current average annual cost of providing postretirement health care benefits to one person.