



**A Postretirement Welfare Benefit
GASB 45 Actuarial Valuation
As of July 1, 2011**

For:

Town of Longmeadow

Prepared by:
The USI Consulting Group

January 24, 2013



USI Consulting Group
95 Glastonbury Boulevard, Suite 102
Glastonbury, CT 06033-6503
www.usi.biz
Phone: 860.633.5283
Fax: 860.368.2112

January 24, 2013

Town of Longmeadow
735 Longmeadow Street Suite 101
Longmeadow, MA 01106

RE: July 1, 2011 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 Longmeadow as of July 1, 2011. The numbers presented in this report reflect the adoption, by the Town of Longmeadow, 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, 2011, and July 1, 2012.

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 cursive script that reads "Robert W. Webb".

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



TABLE OF CONTENTS

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

Section I

Executive Summary

The section presents the results of the July 1, 2011 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, 2012. Estimated June 30, 2012 and June 30, 2013 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, 2012

<i>Beginning of Year Net OPEB Obligation (NOO)</i>	\$3,620,391
<i>Actuarial Accrued Liability (AAL)</i>	\$36,252,329
<i>Actuarial Value of Assets</i>	\$151,648
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	\$36,100,681
<i>Annual Required Contribution (30 year amortization)</i>	\$3,436,600
<i>Annual OPEB Cost</i>	\$3,417,852
<i>Expected Benefit Payments</i>	\$1,098,479

Fiscal Year Ending June 30, 2013

<i>Beginning of Year Net OPEB Obligation (NOO)</i>	\$5,681,300
<i>Actuarial Accrued Liability (AAL)</i>	\$38,409,564
<i>Actuarial Value of Assets</i>	\$412,512
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	\$37,997,052
<i>Annual Required Contribution (30 year amortization)</i>	\$3,638,667
<i>Annual OPEB Cost</i>	\$3,605,558
<i>Expected Benefit Payments</i>	\$1,111,884

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:

<u>Assumption Selection Date</u>	<u>July 1, 2011</u>
<i>Funding Interest Rate*</i>	4.00%
<i>2011 Medical Trend Rates</i>	9.00%
<i>Ultimate Medical Trend Rate</i>	5.00%
<i>Year Ultimate Trend Rates Reached (Pre-65 / Post-65)</i>	2019
<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 to favorable demographic changes and health care cost increases less than assumed. The gain was offset partially by a loss due to changes in actuarial assumptions, which included a decrease in the interest rate to 4.0% and an update to the mortality assumption to reflect future anticipated improvements in mortality. The impact of these gains and losses are 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, 2011. 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 October 1, 2012 census data and July 1, 2012 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, 2011 RESULTS

	<u>Ambulance</u>	<u>School Non-Teacher</u>	<u>School Teacher</u>	<u>Day Care</u>	<u>Water</u>	<u>Sewer</u>	<u>Solid Waste / Recycling</u>	<u>All Other</u>	<u>Total</u>
I. Present value of Future benefits									
A. Retirees/Disableds	\$455,937	\$3,739,614	\$11,848,569	\$0	\$123,996	\$123,996	\$0	\$2,736,247	\$19,028,359
B. Active Employees	<u>\$1,408,824</u>	<u>\$5,527,949</u>	<u>\$11,140,467</u>	<u>\$465,372</u>	<u>\$368,070</u>	<u>\$252,317</u>	<u>\$34,461</u>	<u>\$18,352,938</u>	<u>\$37,550,398</u>
C. Total	\$1,864,761	\$9,267,563	\$22,989,036	\$465,372	\$492,066	\$376,313	\$34,461	\$21,089,185	\$56,578,757
II. Actuarial Accrued Liability									
A. Retirees/Disableds	\$455,937	\$3,739,614	\$11,848,569	\$0	\$123,996	\$123,996	\$0	\$2,736,247	\$19,028,359
B. Active Employees	<u>\$580,026</u>	<u>\$2,831,010</u>	<u>\$5,002,920</u>	<u>\$187,903</u>	<u>\$183,615</u>	<u>\$121,632</u>	<u>\$8,119</u>	<u>\$8,308,745</u>	<u>\$17,223,970</u>
C. Total	\$1,035,963	\$6,570,624	\$16,851,489	\$187,903	\$307,611	\$245,628	\$8,119	\$11,044,992	\$36,252,329
III. Actuarial Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$151,648	\$151,648
IV. Unfunded Actuarial Accrued Liability (UAAL)	\$1,035,963	\$6,570,624	\$16,851,489	\$187,903	\$307,611	\$245,628	\$8,119	\$10,893,344	\$36,100,681
V. Annual Required Contribution (ARC)									
A. Normal Cost	\$58,146	\$283,660	\$493,593	\$19,620	\$17,399	\$11,336	\$2,082	\$871,463	\$1,757,299
B. Supplemental Cost	\$43,089	\$287,001	\$736,750	\$8,366	\$13,826	\$10,988	\$381	\$467,848	\$1,568,249
C. Compound Interest to Year End	<u>\$3,629</u>	<u>\$18,318</u>	<u>\$36,214</u>	<u>\$1,115</u>	<u>\$1,094</u>	<u>\$738</u>	<u>\$99</u>	<u>\$49,845</u>	<u>\$111,052</u>
D. Annual Required Contribution [A. + B. + C.]	\$104,864	\$588,979	\$1,266,557	\$29,101	\$32,319	\$23,062	\$2,562	\$1,389,156	\$3,436,600
VI. Net OPEB Obligation	\$99,792	\$924,171	\$1,306,458	\$63,839	\$45,799	\$31,218	\$15,231	\$1,133,883	\$3,620,391
VII. Interest on net OPEB Obligation	\$3,992	\$36,967	\$52,258	\$2,554	\$1,832	\$1,249	\$609	\$45,355	\$144,816
VIII. Adjustment to ARC	(\$4,508)	(\$41,753)	(\$59,024)	(\$2,884)	(\$2,069)	(\$1,410)	(\$688)	(\$51,228)	(\$163,564)
IX. Annual OPEB Cost (Expense) [V.D. + VII. + VIII.]	\$104,348	\$584,193	\$1,259,791	\$28,771	\$32,082	\$22,901	\$2,483	\$1,383,283	\$3,417,852
X. Expected Benefit Payments									
A. Retirees/Disableds	\$20,158	\$202,285	\$589,437	\$0	\$6,979	\$6,979	\$0	\$150,713	\$976,551
B. Active Employees	<u>\$884</u>	<u>\$23,142</u>	<u>\$60,545</u>	<u>\$239</u>	<u>\$777</u>	<u>\$749</u>	<u>\$0</u>	<u>\$35,592</u>	<u>\$121,928</u>
C. Total	\$21,042	\$225,427	\$649,982	\$239	\$7,756	\$7,728	\$0	\$186,305	\$1,098,479

EXECUTIVE SUMMARY DETAIL
GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION AND ANNUAL OPEB COST
July 1, 2012 RESULTS

	<u>Ambulance</u>	<u>School Non-Teacher</u>	<u>School Teacher</u>	<u>Day Care</u>	<u>Water</u>	<u>Sewer</u>	<u>Solid Waste/Recycling</u>	<u>All Other</u>	<u>Total</u>
I. Present value of Future benefits									
A. Retirees/Disableds	\$453,613	\$3,682,868	\$11,721,287	\$0	\$121,837	\$121,837	\$0	\$2,691,970	\$18,793,412
B. Active Employees	\$1,464,275	\$5,725,462	\$11,524,328	\$483,743	\$382,000	\$261,646	\$35,839	\$19,050,755	\$38,928,048
C. Total	\$1,917,888	\$9,408,330	\$23,245,615	\$483,743	\$503,837	\$383,483	\$35,839	\$21,742,725	\$57,721,460
II. Actuarial Accrued Liability									
A. Retirees/Disableds	\$453,613	\$3,682,868	\$11,721,287	\$0	\$121,837	\$121,837	\$0	\$2,691,970	\$18,793,412
B. Active Employees	\$662,798	\$3,215,652	\$5,654,617	\$215,580	\$208,262	\$137,523	\$10,609	\$9,511,111	\$19,616,152
C. Total	\$1,116,411	\$6,898,520	\$17,375,904	\$215,580	\$330,099	\$259,360	\$10,609	\$12,203,081	\$38,409,564
III. Actuarial Assets	\$2,187	\$0	\$0	\$0	\$3,490	\$2,657	\$130	\$404,048	\$412,512
IV. Unfunded Actuarial Accrued Liability (UAAL)	\$1,114,224	\$6,898,520	\$17,375,904	\$215,580	\$326,609	\$256,703	\$10,479	\$11,799,033	\$37,997,052
V. Annual Required Contribution (ARC)									
A. Normal Cost	\$60,472	\$295,006	\$513,337	\$20,405	\$18,095	\$11,789	\$2,165	\$906,322	\$1,827,591
B. Supplemental Cost	\$47,499	\$309,018	\$780,341	\$9,753	\$15,032	\$11,781	\$490	\$518,595	\$1,692,509
C. Compound Interest to Year End	\$3,878	\$19,554	\$38,662	\$1,199	\$1,164	\$782	\$106	\$33,222	\$118,567
D. Annual Required Contribution [A. + B. + C.]	\$111,849	\$623,578	\$1,332,340	\$31,357	\$34,291	\$24,352	\$2,761	\$1,478,139	\$3,638,667
VI. Net OPEB Obligation	\$180,911	\$1,282,937	\$1,916,267	\$92,371	\$66,635	\$43,734	\$17,584	\$2,080,861	\$5,681,300
VII. Interest on net OPEB Obligation	\$7,236	\$51,317	\$76,651	\$3,695	\$2,665	\$1,749	\$703	\$83,234	\$227,250
VIII. Adjustment to ARC	(\$8,291)	(\$58,794)	(\$87,817)	(\$4,233)	(\$3,054)	(\$2,004)	(\$806)	(\$95,360)	(\$260,359)
IX. Annual OPEB Cost (Expense) [V.D. + VII. + VIII.]	\$110,794	\$616,101	\$1,321,174	\$30,819	\$33,902	\$24,097	\$2,658	\$1,466,013	\$3,605,558
X. Expected Benefit Payments									
A. Retirees/Disableds	\$21,975	\$220,527	\$642,635	\$0	\$7,608	\$7,608	\$0	\$164,323	\$1,064,676
B. Active Employees	\$68	\$9,820	\$11,598	\$353	\$471	\$433	\$0	\$24,465	\$47,208
C. Total	\$22,043	\$230,347	\$654,233	\$353	\$8,079	\$8,041	\$0	\$188,788	\$1,111,884

Section II

Census Information

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

CENSUS INFORMATION – A.

EMPLOYEE COUNTS

As of October 1, 2012

	<u>Actives</u>	<u>Retirees</u>	<u>Total</u>
Male	177	122	299
Female	396	164	560
Total	573	286	859

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	39	39
30 - 34	0	49	49
35 - 39	0	49	49
40 - 44	1	71	72
45 - 49	3	93	96
50 - 54	4	75	79
55 - 59	63	34	97
60 - 64	54	13	67
65 and over	22	3	25
Total	146	426	573

CURRENT RETIREES:

<u>Age</u>	<u>Retirees</u>	<u>Spouse</u>	<u>Total</u>
54 and under	0	5	5
55 - 59	8	6	14
60 - 64	34	11	45
65 - 69	63	31	94
70 - 74	47	33	80
75 - 79	48	20	68
80 and over	86	19	105
Total	286	125	411

CENSUS INFORMATION – B.

AVERAGE AGE AND SERVICE

ACTIVE EMPLOYEES:

A. Average Age at Hire

Males	34.1
Females	38.5
Total	37.2

B. Average Service

Males	11.0
Females	10.7
Total	10.7

C. Average Current Age

Males	45.1
Females	49.2
Total	47.9

CURRENT RETIREES

D. Average Current Age

Males	74.4
Females	73.4
Total	73.8

Section III

Financial Statement Disclosure

This section provides the required information and notes to the Financial Statements for the fiscal year ending June 30, 2012.

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: Town participates in the Scantic Valley Regional Health Trust, which includes plans offered by Blue Cross Blue Shield, Health New England and Tufts Health Plan.

b. Eligibility: Group 1 and Teachers: Age 55 with 10 years of service or 20 years of service.
Group 4: Age 45 with 10 years of service or 20 years of service.
 Job related disability, or non-job related disability with 10 years of service

c. Benefit/Cost Sharing: The Town covers 50% of the health premium and life premium.

d. Spouse Benefit: Yes, the Town covers 50% of the health premium.

e. Surviving Spouse Benefit: Yes, the Town provides medical overage for surviving spouses. Surviving spouses pay the full medical premium.

f. Annual Medical Premiums: As of July 1, 2012:

Blue Care Elect Preferred PPO

Individual: \$ 17,416.08
 Family: \$ 42,399.84

Network Blue NE HMO

Individual: \$ 6,502.80
 Family: \$ 16,126.08

Health New England HMO

Individual: \$ 5,656.56
 Family: \$ 14,132.16

Tufts HMO

Individual: \$ 6,629.04
 Family: \$ 15,169.88

Medicare Plans

HNE Medical Freedom POS	\$2,488.80 per person
Tufts Medicare Preferred HMO	\$2,880.00 per person
Medex Enhanced	\$5,486.88 per person
Tufts Medicare PDP Plus	\$3,972.00 per person
Managed Blue for Seniors	\$4,965.12 per person
HNE Medplus:	\$4,493.76 per person

g. Life Insurance Amount: \$2,000

FINANCIAL STATEMENT DISCLOSURE (cont.)

2.) GASB 45 DISCLOSURE REQUIREMENTS – ESTIMATED

A. Annual OPEB Cost and Net OPEB Obligation	<u>7/1/2011 - 6/30/2012</u>	<u>7/1/2012 - 6/30/2013</u>
1. Annual Required Contribution (ARC)	\$3,436,600	\$3,638,667
2. Interest on net OPEB Obligation	\$144,816	\$227,250
3. Adjustment to ARC	<u>(\$163,564)</u>	<u>(\$260,359)</u>
4. Annual OPEB Cost (Expense)	\$3,417,852	\$3,605,558
5. Contribution made (assumed middle of year) *	<u>(\$1,356,943)</u>	<u>(\$1,111,884)</u>
6. Increase in net OPEB Obligation	\$2,060,909	\$2,493,674
7. Net OPEB Obligation - beginning of year	<u>\$3,620,391</u>	<u>\$5,681,300</u>
8. Net OPEB Obligation - end of year	\$5,681,300	\$8,174,974

* 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 2012 / 2013 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>
6/30/2012	\$3,417,852	39.7%	\$5,681,300	\$38,866,944	8.8%
6/30/2013	\$3,605,558	30.8%	\$8,174,974	\$39,838,618	9.1%

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>
12/31/2007	\$0	\$44,949,997	\$44,949,997	0.0%	\$30,335,248	148.2%
12/31/2009	\$0	\$40,677,304	\$40,677,304	0.0%	N/A	N/A
7/1/2011	\$151,648	\$36,252,329	\$36,100,681	0.4%	\$38,866,944	92.9%

C. Methods and Assumptions

- Interest Rate	4.00%
- 2011 Medical Trend Rates	9.00%
- Ultimate Medical Trend Rate	5.00%
- Year Ultimate Trend Rates Reached (Pre-65 / Post-65)	2019
- Actuarial Cost Method	Projected Unit Credit
- The remaining amortization period at 06/30/2012	26.77
- 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. **Retirement Rates:**

<u>Age</u>	<u>Group 1</u> <u>Male</u>	<u>Female</u>	<u>Group 4</u> <u>Unisex</u>
45-49	0%	0%	1.0%
50-51	1.0%	1.5%	2.0%
52	1.0%	2.0%	2.0%
53	1.0%	2.5%	5.0%
54	2.0%	2.5%	7.5%
55	2.0%	5.5%	15.0%
56-57	2.5%	6.5%	10.0%
58	5.0%	6.5%	10.0%
59	6.5%	6.5%	15.0%
60	12.0%	5.0%	20.0%
61	20.0%	13.0%	20.0%
62	30.0%	15.0%	25.0%
63	25.0%	12.5%	25.0%
64	22.0%	18.0%	30.0%
65	40.0%	15.0%	100.0%
66-67	25.0%	20.0%	100.0%
68	30.0%	25.0%	100.0%
69	30.0%	20.0%	100.0%
70+	100.0%	100.0%	100.0%

Teachers

<u>Age</u>	<u><20</u>	<u>20-29</u>	<u>30+</u>
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. <u>Disability Rates:</u>	<u>Group 1 and 2</u>		<u>Group 4</u>	<u>Teachers</u>
	<u>Age</u>	<u>Rate</u>	<u>Rate</u>	<u>Rate</u>
	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:

<u>Service</u>	<u>Group 1 & 2</u>	<u>Group 4</u>
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)

<u>Age</u>	<u>Years of Service</u>		
	<u>0</u>	<u>5</u>	<u>10+</u>
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>
2012	9.0%
2013	8.5%
2014	8.0%
2015	7.5%
2016	7.0%
2017	6.5%
2018	6.0%
2019	5.5%
2020+	5.0%

7. **Participation Rate:** It was assumed that 65% of the current active employees would enroll in the retiree medical plan upon retirement.

8. **Percent Married:** It was assumed that 50% of the 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.

9. **Actuarial Value of Assets:** N/A

ACTUARIAL ASSUMPTIONS AND METHODOLOGY (cont.)

10. **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	\$4,310	\$5,411
50	\$5,174	\$5,969
55	\$6,283	\$6,519
60	\$7,577	\$7,263
65	\$3,872	\$3,625
70	\$4,275	\$4,006
75	\$4,720	\$4,423
80	\$4,962	\$4,646
85	\$5,216	\$4,884

Assumed 100% of participants hired after 1986 are eligible for Medicare and elect a Medicare Plan at age 65; and 75% of participants hired before 1986 are eligible for Medicare and elect a Medicare Plan at age 65. 75% of retirees under age 65 are assumed to elect a Medicare plan at age 65. Retirees over age 65 are assumed to remain in the plan currently elected.

11. **Administrative Expenses:** Included in premiums used.
12. **Participant Salary Increases:** 3.50% annually
13. **Payroll Growth Rate:** 2.50% annually

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 OCTOBER 1, 2012

Age	Service									Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	
0 - 19	0	0	0	0	0	0	0	0	0	0
20 - 24	2	6	0	0	0	0	0	0	0	8
25 - 29	3	25	3	0	0	0	0	0	0	31
30 - 34	11	26	11	1	0	0	0	0	0	49
35 - 39	10	24	12	3	0	0	0	0	0	49
40 - 44	5	32	20	14	1	0	0	0	0	72
45 - 49	10	39	33	11	3	0	0	0	0	96
50 - 54	7	22	27	19	3	0	1	0	0	79
55 - 59	4	22	47	14	6	2	2	0	0	97
60 - 64	2	11	33	13	4	2	0	1	1	67
65 - 69	1	2	10	7	0	1	1	0	0	22
70 - 74	0	0	1	1	0	0	0	0	0	2
75 - 79	0	0	1	0	0	0	0	0	0	1
80 - 84	0	0	0	0	0	0	0	0	0	0
85 and Over	0	0	0	0	0	0	0	0	0	0
Total	55	209	198	83	17	5	4	1	1	573

APPENDIX – II

RECONCILIATION OF ACTUARIAL ACCRUED LIABILITY

a. 1/1/2010 Actuarial Accrued Liability	\$40,677,304
b. 2010 Normal Cost	\$1,066,702
c. Interest Rate	4.50%
d. Interest on (b. + c.)	\$1,878,481
e. 2010 Expected Benefit Payments	(\$1,344,602)
f. Interest on f.	<u>(\$29,919)</u>
g. 1/1/2011 Expected Actuarial Accrued Liability (a. + b. + d. + e. + f.)	\$42,247,966
h. 2011 Normal Cost	\$1,120,037
i. Interest Rate	4.50%
j. Interest on (g. + h.)	\$965,043
k. 2011 Expected Benefit Payments	(\$1,482,711)
l. Interest on k.	<u>(\$16,406)</u>
m. 7/1/2011 Expected Actuarial Accrued Liability (g. + h. + j. + k. + l.)	\$42,833,929
n. Change in Actuarial Accrued Liability due to	
i. Demographic and plan cost changes	(\$7,973,937)
ii. Change in Actuarial Assumptions	\$1,392,337
iii. High Cost Plan Excise Tax	\$0
iv. Plan Changes	<u>\$0</u>
v. Total	(\$6,581,600)
o. 7/1/2011 Actuarial Accrued Liability (m. + n. v.)	\$36,252,329

APPENDIX – III

DEVELOPMENT OF NORMAL COST AND AMORTIZATION AMOUNT

A. Prior Bases

1. Amortization Base Balance as of 1/1/2010	\$40,677,304
2. 2010 Amortization Payment	(\$1,452,311)
3. Interest	4.50%
4. Interest on (1) + (2)	<u>\$1,961,251</u>
5. Amortization Base Balance as of 1/1/2011 (1) + (2) + (4)	\$41,186,244
6. 2011 Amortization Payment	(\$1,633,182)
7. Interest	4.50%
8. Interest on (5) + (6)	<u>\$976,766</u>
9. Amortization Base Balance as of 7/1/2011 (5) + (6) + (8)	\$40,529,827
10. Remaining Amortization Period	28.00
11. Valuation Interest rate	4.00%
12. Assumed payroll growth	2.50%
13. 2011 Adjusted Amortization Amount	\$1,749,074

B. New Amortization Base

1. Experience (Gain)/Loss	(\$7,973,939)
2. Assumption Changes	\$1,392,339
3. Asset Gain	\$0
4. Plan Change - Retiree Incentive Benefit	\$0
5. Loss due to Funding timing	<u>\$2,152,454</u>
6. Total (1) + (2) + (3) + (4) + (5)	(\$4,429,146)
7. Remaining Amortization Period	30
8. Valuation Interest rate	4.00%
9. Assumed payroll growth	2.50%
10. Amortization Amount	(\$180,825)

C. Combined Bases

1. Amortization Base Balance as of 7/1/2011 (A.9. + B.6.)	\$36,100,681
2. 2011 Preliminary Total Amortization Amount (A.13. + B.10.)	\$1,568,249
3. 2011 Minimum Total Amortization Amount (30 year)	\$1,473,850
4. 2011 Total Amortization Amount (greater of 2. and 3.)	\$1,568,249

APPENDIX – IV

PLAN ASSETS

a. 7/1/2011 Actuarial Assets	\$151,648
b. Contributions	\$258,464
c. Expected Investment Return	\$2,400
d. Benefit Payments	\$0
e. Expenses	<u>\$0</u>
f. 7/1/2012 Actuarial Assets (a. + b. + c. + d. + e.)	\$412,512
g. Contributions receivable	\$0
h. Expected Investment Return	\$16,500
i. Investment Gain / (Loss)	\$0
j. Expected Benefit Payments	\$0
k. Expenses	<u>\$0</u>
l. 7/1/2013 Actuarial Assets (g. + h. + i. + j. + k. + l.)	\$429,012

APPENDIX - V

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>
2011	\$ 1,098,478	\$ 1,098,478	2046	\$ 3,831,457	\$ 94,230,448	2081	\$ 608,632	\$ 180,741,737
2012	\$ 1,111,883	\$ 2,210,361	2047	\$ 3,791,270	\$ 98,021,718	2082	\$ 513,942	\$ 181,255,679
2013	\$ 1,151,410	\$ 3,361,771	2048	\$ 3,790,183	\$ 101,811,902	2083	\$ 428,365	\$ 181,684,043
2014	\$ 1,276,977	\$ 4,638,748	2049	\$ 3,667,170	\$ 105,479,072	2084	\$ 353,247	\$ 182,037,291
2015	\$ 1,393,329	\$ 6,032,077	2050	\$ 3,575,083	\$ 109,054,155	2085	\$ 288,651	\$ 182,325,942
2016	\$ 1,473,682	\$ 7,505,759	2051	\$ 3,584,832	\$ 112,638,987	2086	\$ 232,503	\$ 182,558,445
2017	\$ 1,583,045	\$ 9,088,804	2052	\$ 3,489,115	\$ 116,128,102	2087	\$ 185,025	\$ 182,743,470
2018	\$ 1,699,688	\$ 10,788,492	2053	\$ 3,394,778	\$ 119,522,880	2088	\$ 146,231	\$ 182,889,701
2019	\$ 1,795,542	\$ 12,584,034	2054	\$ 3,383,961	\$ 122,906,841	2089	\$ 113,963	\$ 183,003,663
2020	\$ 1,876,352	\$ 14,460,386	2055	\$ 3,325,434	\$ 126,232,275	2090	\$ 87,560	\$ 183,091,224
2021	\$ 1,974,747	\$ 16,435,133	2056	\$ 3,271,848	\$ 129,504,123	2091	\$ 66,680	\$ 183,157,903
2022	\$ 2,052,083	\$ 18,487,216	2057	\$ 3,231,980	\$ 132,736,103	2092	\$ 50,135	\$ 183,208,039
2023	\$ 2,123,828	\$ 20,611,044	2058	\$ 3,173,313	\$ 135,909,416	2093	\$ 37,221	\$ 183,245,260
2024	\$ 2,270,702	\$ 22,881,746	2059	\$ 3,114,252	\$ 139,023,668	2094	\$ 27,326	\$ 183,272,587
2025	\$ 2,377,195	\$ 25,258,941	2060	\$ 3,046,066	\$ 142,069,733	2095	\$ 19,766	\$ 183,292,353
2026	\$ 2,487,133	\$ 27,746,073	2061	\$ 2,969,494	\$ 145,039,227	2096	\$ 14,101	\$ 183,306,454
2027	\$ 2,600,868	\$ 30,346,941	2062	\$ 2,886,863	\$ 147,926,091	2097	\$ 9,919	\$ 183,316,373
2028	\$ 2,715,737	\$ 33,062,678	2063	\$ 2,796,055	\$ 150,722,146	2098	\$ 6,881	\$ 183,323,253
2029	\$ 2,782,266	\$ 35,844,944	2064	\$ 2,698,659	\$ 153,420,805	2099	\$ 4,696	\$ 183,327,949
2030	\$ 2,866,644	\$ 38,711,588	2065	\$ 2,596,551	\$ 156,017,356	2100	\$ 3,151	\$ 183,331,100
2031	\$ 2,967,479	\$ 41,679,067	2066	\$ 2,489,366	\$ 158,506,722	2101	\$ 2,090	\$ 183,333,190
2032	\$ 3,028,572	\$ 44,707,639	2067	\$ 2,376,493	\$ 160,883,214	2102	\$ 1,363	\$ 183,334,553
2033	\$ 3,095,371	\$ 47,803,011	2068	\$ 2,259,795	\$ 163,143,010	2103	\$ 871	\$ 183,335,424
2034	\$ 3,139,290	\$ 50,942,301	2069	\$ 2,138,505	\$ 165,281,515	2104	\$ 553	\$ 183,335,977
2035	\$ 3,214,270	\$ 54,156,571	2070	\$ 2,012,702	\$ 167,294,216	2105	\$ 337	\$ 183,336,314
2036	\$ 3,303,655	\$ 57,460,225	2071	\$ 1,883,503	\$ 169,177,720	2106	\$ 197	\$ 183,336,511
2037	\$ 3,387,008	\$ 60,847,233	2072	\$ 1,750,418	\$ 170,928,138	2107	\$ 122	\$ 183,336,633
2038	\$ 3,468,562	\$ 64,315,796	2073	\$ 1,614,870	\$ 172,543,008	2108	\$ 64	\$ 183,336,697
2039	\$ 3,522,656	\$ 67,838,451	2074	\$ 1,478,744	\$ 174,021,752	2109	\$ 29	\$ 183,336,726
2040	\$ 3,581,103	\$ 71,419,554	2075	\$ 1,341,855	\$ 175,363,607	2110	\$ 18	\$ 183,336,745
2041	\$ 3,669,948	\$ 75,089,502	2076	\$ 1,206,895	\$ 176,570,503	2111	\$ 9	\$ 183,336,754
2042	\$ 3,758,604	\$ 78,848,106	2077	\$ 1,074,910	\$ 177,645,413	2112	\$ 3	\$ 183,336,757
2043	\$ 3,831,299	\$ 82,679,406	2078	\$ 947,394	\$ 178,592,807	2113	\$ 2	\$ 183,336,759
2044	\$ 3,842,926	\$ 86,522,332	2079	\$ 826,731	\$ 179,419,538	2114	\$ -	\$ 183,336,759
2045	\$ 3,876,659	\$ 90,398,991	2080	\$ 713,566	\$ 180,133,104	2115	\$ -	\$ 183,336,759

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.