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May 19, 2009

Mr. Chris Bradley  
Town Treasurer  
Town of Natick, MA  
13 East Central Street  
Natick, MA 01760

**RE: July 1, 2008 Actuarial Valuation of Postretirement Welfare Benefits**

Dear Chris,

Enclosed are five copies of the report covering the July 1, 2008 valuation of postretirement benefits offered to current and future retirees of the Town of Natick, MA.

The financial results of the actuarial valuation are summarized in the report. The Executive Summary highlights the results of the valuation. 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, is 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 Number 45 (GASB 45).

Please call me if you have any questions.

Sincerely,

**USI CONSULTING GROUP**

A handwritten signature in black ink, appearing to read "R. Webb".

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

Enclosures



**A Postretirement Welfare Benefit  
GASB 45 Actuarial Valuation  
As of July 1, 2008**

For:

**Town of Natick, MA**

Prepared by:  
The USI Consulting Group

May 19, 2009



May 19, 2009

Town of Natick, MA  
13 East Central Street  
Natick, MA 01760

**RE: July 1, 2008 Actuarial Valuation of Postretirement Welfare Benefits**

We enclose the report covering the actuarial valuation of the postretirement medical insurance plan for the employees of the Town of Natick, MA as of July 1, 2008. The numbers presented in this report reflect the adoption, by the Town of Natick, 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, 2008, \$11,319,252 which is based on a 30 year amortization of the UAAL as of July 1, 2008. The 30 year calculation represents the *maximum* amortization period allowed under the parameters of GASB 45 and produces the *minimum* Annual OPEB Cost under GASB 45. This valuation provides financial information that may be used to meet the requirements of GASB 45 for fiscal years ending June 30, 2009, and June 30, 2010.

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 Number 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 black ink, appearing to read "Robert W. Webb".

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

**USI Consulting Group**

A handwritten signature in black ink, appearing to read "Adeniyi Olaiya".

Adeniyi Olaiya, ASA, MAAA  
OPEB Manager and Actuary



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## Section I

# Executive Summary

The section presents the results of the July 1, 2008 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 V show the development of the Annual Required Contribution (ARC). Items V through IX show the calculation of the Annual OPEB Cost. Item IX shows the expected benefits payable to retirees during the fiscal year.

## EXECUTIVE SUMMARY

### Introduction

This report details the development of the Annual OPEB Cost for the Fiscal Year ending June 30, 2009. Estimated June 30, 2009 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.

<u>Valuation Date</u>	<u>July 1, 2008</u>
<i>Present Value of Future Benefit Payments</i>	\$190,128,956
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	\$118,478,809
<i>Annual Required Contribution (30 year amortization)</i>	\$11,319,252
<i>Expected Benefit Payment</i>	\$3,548,085
<i>Net OPEB Obligation (NOO)</i>	\$0

### 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, 2008</u>
<i>Funding Interest Rate*</i>	4.00%
<i>2008 Trend Rates (Medical/Rx)</i>	10%/11%
<i>Ultimate Medical/Rx Cost Trend Rate</i>	5%/5%
<i>Year Ultimate Medical/Rx Trend Rate Reached</i>	2013/2014
<i>Annual Salary Increases</i>	3.5%
<i>Projected annual increase in payroll</i>	2.5%

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

### Changes included in current valuation

A fresh start approach was used.

### Accounting for Postretirement Benefits

Government Accounting Standard No. 45 (GAS 45) addresses the accounting and financial reporting requirements by Employers for Postemployment Benefits Other than Pensions (OPEB). Employers that are required to follow Government Accounting Standards are subject to this standard. The statement does not require that the benefits be pre-funded, however, it defines a financial framework for assessing the costs, design, and sustainability of OPEBs offered by employers.

This report presents the annual expense required to be recognized by the plan sponsor for purposes of complying with the accounting requirements of Governmental Accounting Standards Board Statement No. 45. This report also provides the information needed to prepare the footnote in your financial statements related to your postretirement benefit plans.

The Annual Required Contribution (ARC) and Annual OPEB Cost are developed in the Executive Summary Detail included in this section. Section III presents the disclosure information, including the development of the Net OPEB obligation based on expected contributions / benefits to be paid during the fiscal year.

### Actuarial Certification

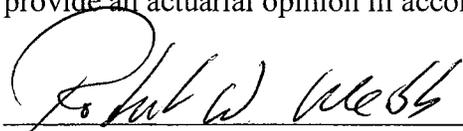
The financial results of the actuarial valuation are summarized in this report. The valuation has been prepared as of July 1, 2008. The detail charts included in this Executive Summary highlight the results of the valuation. Additional information summarizing the census, actuarial assumptions, plan provisions, and a glossary of selected terms used in this study are also included in this report.

The valuation is based on the April 1, 2009 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.

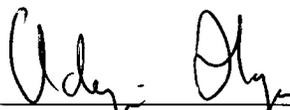
All costs, liabilities, and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. The calculations are consistent and undertaken with our understanding of Statement of Governmental Accounting Standards Number 45 (GAS 45). In our opinion, 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.

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

I certify that I am a member 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 Olatiya, ASA, MAAA  
OPEB Manager and Actuary

**EXECUTIVE SUMMARY DETAIL - A**

**GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION AND ANNUAL OPEB COST**  
**July 1, 2008 COMBINED RESULTS**

**ACTUARIAL COST METHOD – Entry Age Normal**

<b><i>I.</i></b>	<b><i>Present value of Future benefits</i></b>	
	A. Retirees/Disableds	\$58,955,733
	B. Active Employees	\$131,173,223
	C. Total	\$190,128,956
<b><i>II.</i></b>	<b><i>Actuarial Accrued Liability</i></b>	
	A. Retirees/Disableds	\$58,955,733
	B. Active Employees	\$59,523,076
	C. Total	\$118,478,809
<b><i>III.</i></b>	<b><i>Actuarial Assets</i></b>	\$0
<b><i>IV.</i></b>	<b><i>Unfunded Actuarial Accrued Liability (UAAL)</i></b>	\$118,478,809
<b><i>V.</i></b>	<b><i>Annual Required Contribution (ARC)</i></b>	
	A. Normal Cost	\$6,115,101
	B. Supplemental Cost [XI.]	\$4,837,028
	C. Compound Interest to Year End	\$367,123
	E. Annual Required Contribution [A. + B. + C. + D.]	\$11,319,252
<b><i>VI.</i></b>	<b><i>Net OPEB Obligation</i></b>	\$0
<b><i>VII.</i></b>	<b><i>Interest on net OPEB Obligation</i></b>	\$0
<b><i>VIII.</i></b>	<b><i>Adjustment to ARC</i></b>	(\$0)
<b><i>IX.</i></b>	<b><i>Annual OPEB Cost (Expense)</i></b> <b><i>[IV. + VII. - VIII.]</i></b>	\$11,319,252
<b><i>X.</i></b>	<b><i>Expected Benefit Payments</i></b>	
	A. Retirees/Disableds	\$3,475,690
	B. Active Employees	\$72,395
	C. Total	\$3,548,085
<b><i>XI.</i></b>	<b><i>Supplemental Cost</i></b>	
	A. Unfunded Actuarial Accrued Liability [IV.]	\$118,478,809
	B. Amortization Period	30
	B. Supplemental Cost	\$4,837,028
<b><i>XII.</i></b>	<b><i>Key Actuarial Assumptions</i></b>	
	A. Interest Rate	4.00%
	B. 2008 Medical / Rx Trend Rate	10%/11%
	C. Ultimate Medical / Rx Trend Rate	5%/5%

**EXECUTIVE SUMMARY DETAIL - B**

**GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION AND ANNUAL OPEB COST**  
**July 1, 2008 BY BENEFIT**

**ACTUARIAL COST METHOD – Entry Age Normal**

	<u>Medical Plan</u>	<u>Medicare Part B Reimbursement</u>	<u>Life Insurance</u>	<u>Total</u>
<b><i>I. Present value of Future benefits</i></b>				
A. Retirees/Disableds	\$50,577,342	\$7,154,363	\$1,224,028	\$58,955,733
B. Active Employees	\$111,425,535	\$18,985,885	\$761,803	\$131,173,223
C. Total	\$162,002,877	\$26,140,248	\$1,985,831	\$190,128,956
<b><i>II. Actuarial Accrued Liability</i></b>				
A. Retirees/Disableds	\$50,577,342	\$7,154,363	\$1,224,028	\$58,955,733
B. Active Employees	\$50,396,816	\$8,696,385	\$429,875	\$59,523,076
C. Total	\$100,974,158	\$15,850,748	\$1,653,903	\$118,478,809
<b><i>III. Actuarial Assets</i></b>	\$0	\$0	\$0	\$0
<b><i>IV. Unfunded Actuarial Accrued Liability (UAAL)</i></b>	\$100,974,158	\$15,850,748	\$1,653,903	\$118,478,809
<b><i>V. Annual Required Contribution (ARC)</i></b>				
A. Normal Cost	\$5,188,067	\$891,926	\$35,108	\$6,115,101
B. Supplemental Cost [XI.]	\$4,122,381	\$647,124	\$67,522	\$4,837,028
C. Compound Interest to Year End	\$309,134	\$55,383	\$2,606	\$367,123
E. Annual Required Contribution [A. + B. + C. + D.]	\$9,619,582	\$1,594,433	\$105,236	\$11,319,252
<b><i>VI. Net OPEB Obligation</i></b>	\$0	\$0	\$0	\$0
<b><i>VII. Interest on net OPEB Obligation</i></b>	\$0	\$0	\$0	\$0
<b><i>VIII. Adjustment to ARC</i></b>	(\$0)	(\$0)	(\$0)	(\$0)
<b><i>IX. Annual OPEB Cost (Expense)</i></b> <b><i>[V. + VII. - VIII.]</i></b>	\$9,619,582	\$1,594,433	\$105,236	\$11,319,252
<b><i>X. Expected Benefit Payments</i></b>				
A. Retirees/Disableds	\$3,094,490	\$306,269	\$74,931	\$3,475,690
B. Active Employees	\$69,698	\$2,686	\$11	\$72,395
C. Total	\$3,164,188	\$308,955	\$74,942	\$3,548,085
<b><i>XI. Supplemental Cost</i></b>				
A. Unfunded Actuarial Accrued Liability [IV.]	\$100,974,158	\$15,850,748	\$1,653,903	\$118,478,809
B. Amortization Period	30	30	30	30
B. Supplemental Cost	\$4,122,381	\$647,124	\$67,522	\$4,837,028

**EXECUTIVE SUMMARY DETAIL - B**

**GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION AND ANNUAL OPEB COST**  
**July 1, 2008 BY GROUP**

**ACTUARIAL COST METHOD – Entry Age Normal**

	<u>Teachers</u>	<u>NonTeachers</u>	<u>Police and Firefighters</u>	<u>Retirees</u>	<u>Total</u>
<b><i>I. Present value of Future benefits</i></b>					
A. Retirees/Disableds	\$0	\$0	\$0	\$58,955,733	\$58,955,733
B. Active Employees	<u>\$58,416,566</u>	<u>\$45,492,287</u>	<u>\$27,264,370</u>	\$0	<u>\$131,173,223</u>
C. Total	\$58,416,566	\$45,492,287	\$27,264,370	\$58,955,733	\$190,128,956
<b><i>II. Actuarial Accrued Liability</i></b>					
A. Retirees/Disableds	\$0	\$0	\$0	\$58,955,733	\$58,955,733
B. Active Employees	<u>\$21,180,117</u>	<u>\$23,476,398</u>	<u>\$14,866,561</u>	\$0	<u>\$59,523,076</u>
C. Total	\$21,180,117	\$23,476,398	\$14,866,561	\$58,955,733	\$118,478,809
<b><i>III. Actuarial Assets</i></b>					
	\$0	\$0	\$0	\$0	\$0
<b><i>IV. Unfunded Actuarial Accrued Liability (UAAL)</i></b>					
	\$21,180,117	\$23,476,398	\$14,866,561	\$58,955,733	\$118,478,809
<b><i>V. Annual Required Contribution (ARC)</i></b>					
A. Normal Cost	\$2,861,845	\$2,148,442	\$1,104,814	\$0	\$6,115,101
B. Supplemental Cost [XI.]	\$864,702	\$958,450	\$606,944	\$2,406,933	\$4,837,028
C. Compound Interest to Year End	<u>\$148,552</u>	<u>\$123,659</u>	<u>\$68,148</u>	<u>\$26,764</u>	<u>\$367,123</u>
E. Annual Required Contribution [A. + B. + C. + D.]	\$3,875,099	\$3,230,551	\$1,779,906	\$2,433,697	\$11,319,252
<b><i>VI. Net OPEB Obligation</i></b>					
	\$0	\$0	\$0	\$0	\$0
<b><i>VII. Interest on net OPEB Obligation</i></b>					
	\$0	\$0	\$0	\$0	\$0
<b><i>VIII. Adjustment to ARC</i></b>					
	(\$0)	(\$0)	(\$0)	(\$0)	(\$0)
<b><i>IX. Annual OPEB Cost (Expense)</i></b>					
[V. + VII. - VIII.]	\$3,875,099	\$3,230,551	\$1,779,906	\$2,433,697	\$11,319,252
<b><i>X. Expected Benefit Payments</i></b>					
A. Retirees/Disableds	\$0	\$0	\$0	\$3,475,690	\$3,475,690
B. Active Employees	<u>\$25,448</u>	<u>\$30,845</u>	<u>\$16,102</u>	\$0	<u>\$72,395</u>
C. Total	\$25,448	\$30,845	\$16,102	\$3,475,690	\$3,548,085
<b><i>XI. Supplemental Cost</i></b>					
A. Unfunded Actuarial Accrued Liability [IV.]	\$21,180,117	\$23,476,398	\$14,866,561	\$58,955,733	\$118,478,809
B. Amortization Period	30	30	30		30
B. Supplemental Cost	\$864,702	\$958,450	\$606,944	\$2,406,933	\$4,837,028

## Section II

# Census Information

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

**CENSUS INFORMATION – A.**

**EMPLOYEE COUNTS**

*As of April 1, 2009*

	<u>Actives</u>	<u>Retirees*</u>	<u>Total</u>
Male	433	247	680
Female	746	304	1,050
<b>Total</b>	<b>1,179</b>	<b>551</b>	<b>1,730</b>

**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	146	146
30 - 34	0	156	156
35 - 39	0	135	135
40 - 44	6	110	116
45 - 49	27	132	159
50 - 54	29	132	161
55 - 59	113	62	175
60 - 64	73	28	101
65 and over	24	6	30
<b>Total</b>	<b>272</b>	<b>907</b>	<b>1,179</b>

**CURRENT RETIREES:**

<u>Age</u>	<u>Retirees*</u>	<u>Spouses</u>	<u>Total</u>
54 and under	3	12	15
55 - 59	24	19	43
60 - 64	76	49	125
65 - 69	106	36	142
70 - 74	92	43	135
75 - 79	89	38	127
80 and over	161	40	201
<b>Total</b>	<b>551</b>	<b>237</b>	<b>788</b>

\* Retirees includes surviving spouses

CENSUS INFORMATION – B.

AVERAGE AGE AND SERVICE

As of April 1, 2009

ACTIVE EMPLOYEES:

A. Average Age at Hire

Males	32.0
Females	36.8
Total	35.0

B. Average Service

Males	11.7
Females	8.7
Total	9.8

C. Average Current Age

Males	43.7
Females	45.5
Total	44.8

CURRENT RETIREES:

D. Average Current Age

Males	72.2
Females	74.8
Total	73.7

**Section III**

**Financial Statement Disclosure**

**This section provides the required information and notes to the Financial Statements for the fiscal year ending June 30, 2009.**

**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 AND LIFE INSURANCE PLANS:**

**a. Plan Types:**

**Medical**

Insured through the West Suburban Health Group. Pre Medicare Options: Harvard Pilgrim PPO, Tufts Point of Service, Harvard Pilgrim EPO, Network Blue, Tufts EPO, Fallon Direct Care, Fallon Select Care

Post Medicare Options: Medex III, HPHC Medicare Enhanced, Tufts Medicare Compliment, Managed Blue for Seniors, Tufts Medicare Preferred HMO, Blue Medicare PFFS, Fallon Senior Plan, HP 1<sup>st</sup> Sen. Freedom PFFS, Medicare HMO Blue, Tufts Medicare Preferred PFFS

**Life Insurance**

Insured through Boston Mutual

**b. Eligibility:**

Age 55 or older with 10 years of service or any age with at least 20 years of service

**c. Benefit/Cost Sharing:**

The town covers 50% of the health and life insurance premium and reimburses 50% of the Medicare Part B premium.

**d. Spouse Benefit:**

The town covers 50% of the spouse's medical premium and reimburses 50% of the Medicare Part B premium.

**e. Surviving Spouse Benefit:**

Yes. The town covers 50% of the surviving spouse's medical premium.

**f. Annual Medical Premiums:**

**Non-Medicare Plans:**

	Individual	Family
Harvard Pilgrim PPO:	\$ 13,464.00	\$ 29,916.00
Tufts POS:	\$ 13,464.00	\$ 29,916.00
HP EPO:	\$ 6,756.00	\$ 17,604.00
Network Blue:	\$ 7,296.00	\$ 19,596.00
Tufts EPO:	\$ 6,948.00	\$ 18,192.00
Fallon Direct Care:	\$ 5,568.00	\$ 15,036.00
Fallon Select Care:	\$ 6,000.00	\$ 16,176.00

**Medicare Plans**

Medex III	\$ 4,956.00
HPHC Medicare Enhance:	\$ 4,800.00
Tufts Medicare Compliment:	\$ 3,876.00
Managed Blue for Seniors:	\$ 4,474.92
Tufts Medicare Preferred HMO:	\$ 1,836.00
Blue Medicare PFFS:	\$ 2,100.00
Fallon Senior Plan:	\$ 2,484.00
HP 1 <sup>st</sup> Seniority Freedom PFFS:	\$ 2,676.00
Medicare HMO Blue:	\$ 2,592.00
Tufts Medicare Preferred PFFS:	\$ 1,980.00

**g. Annual Life Insurance Premium**

\$4.20 per \$5,000 of life insurance per annum

**FINANCIAL STATEMENT DISCLOSURE (cont.)**

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

A. Annual OPEB Cost and Net OPEB Obligation	<u>7/1/2008 - 6/30/2009</u>	<u>7/1/2009 - 6/30/2010</u>
1. Annual Required Contribution (ARC)	\$11,319,252	\$11,924,125
2. Interest on net OPEB Obligation	\$0	\$310,847
3. Adjustment to ARC	<u>\$0</u>	<u>(\$325,454)</u>
4. Annual OPEB Cost (Expense)	\$11,319,252	\$11,909,518
5. Contribution made (assumed middle of year) *	\$3,548,085	\$4,040,121
6. Increase in net OPEB Obligation	\$7,771,167	\$7,869,397
7. Net OPEB Obligation - beginning of year	<u>\$0</u>	<u>\$7,771,167</u>
8. Net OPEB Obligation - end of year	\$7,771,167	\$15,640,565

\* 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 2009 / 2010 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>
6/30/2009	\$11,319,252	31.3%	\$7,771,167	\$20,466,951	55.3%
6/30/2010	\$11,909,518	33.9%	\$15,640,565	\$20,978,625	56.8%

**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>
7/1/2008	\$ -	\$118,478,809	\$118,478,809	0.0%	\$20,466,951	578.9%

**C. Methods and Assumptions**

- Interest Rate 4.00%
- 2008 Medical / Rx Trend Rate 10%/11%
- Ultimate Medical / Rx Trend Rate 5%/5%
- Year Ultimate Medical Trend Rate Reached 2013/2014
- Actuarial Cost Method Entry Age Normal

**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. A 7.00% interest rate was used in Appendix-VI to show the potential impact of advance funding the plan in accordance with GASB 45.

2. **Mortality:** For healthy participants: the mortality rates are from the RP-2000 Combined mortality table projected to 2010 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:**

**Group 1**

<u>Age</u>	<u>Male</u>	<u>Female</u>
45	0%	0%
50	1.5%	3.0%
55	4.0%	5.0%
60	8.0%	8.0%
65	25.0%	25.0%
70+	100.0%	100.0%

**Group 4**

<u>Age</u>	<u>Unisex</u>
45	4.0%
50	5.0%
55	25.0%
60	20.0%
65	65.0%
70+	100.0%

**Teachers**

<u>Age</u>	<u>&lt;20</u>	<u>20-29</u>	<u>30+</u>
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%

4. **Disability Rates:**

**Group 4**

<u>Age</u>	<u>Unisex</u>
20	.410%
30	.504%
40	.608%
50	.712%
60+	.780%

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

**5. Termination Rates:**

**Group 1**

<u>Age</u>	<u>Years of Service</u>		
	0	5	10+
20	27.0%	0.0%	.000%
30	23.0%	10.0%	5.5%
40	16.0%	8.0%	4.0%
50	14.0%	6.0%	3.0%

**Group 4**

<u>Years of Service</u>	<u>Rate</u>
0	8.0%
5	4.5%
10	3.0%
15	2.5%
20+	4.0%

Teachers-Males/ Females

<u>Age</u>	<u>Years of Service</u>		
	0	5	10+
20	12.0% / 10.0%	0%	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%

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>	<u>Drug Rates</u>
2008	10.0%	11.0%
2009	9.0%	10.0%
2010	8.0%	9.0%
2011	7.0%	8.0%
2012	6.0%	7.0%
2013	5.0%	6.0%
2014+	5.0%	5.0%

7. **Participation Rate:**

It is assumed that 100% current active employees will enroll in retiree medical and life insurance coverage.

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

8. **Percent Married:** It was assumed that 65% of the male and 40% of the 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.

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

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 sample annual per capita claim costs used:

<u>Age</u>	<u>Male</u>	<u>Female</u>
55	7,505	7,788
57	8,116	8,056
60	9,052	8,677
62	9,732	9,112
65	3,642	3,410
67	3,790	3,547
70	4,022	3,768
72	4,184	3,920
75	4,441	4,161
77	4,531	4,243
80	4,668	4,370
82	4,762	4,457
85	4,907	4,595
87	5,005	4,686
90	5,156	4,829

11. **Administrative expenses:** Included in premiums used.

12. **Participant Salary Increases:** 3.50% annually

13. **Payroll Growth Rate:** 2.50% annually

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**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.

Six Actuarial Cost Methods are acceptable for use under GASB 45: entry age, frozen entry age, attained age, frozen attained age, projected unit credit, and aggregate. The results in Sections I and III are based on the Entry Age Method. The development of the Annual Required Contribution under all acceptable methods is provided in Appendix II.

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. The results in Sections I and III are based on a 30 year amortization of the unfunded actuarial accrued liability as a level percentage of payroll. The development of the Annual Required Contribution under alternative amortization methods is provided in Appendix II.

**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 APRIL 1, 2009

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	20	2	0	0	0	0	0	0	0	22
25 - 29	112	9	3	0	0	0	0	0	0	124
30 - 34	99	52	5	0	0	0	0	0	0	156
35 - 39	52	52	23	8	0	0	0	0	0	135
40 - 44	41	29	27	13	6	0	0	0	0	116
45 - 49	65	31	21	15	24	3	0	0	0	159
50 - 54	52	39	32	9	16	8	3	2	0	161
55 - 59	23	35	30	14	26	20	23	4	0	175
60 - 64	13	15	22	18	11	7	5	9	1	101
65 - 69	1	3	6	3	1	1	1	3	1	20
70 - 74	0	0	0	1	0	1	0	2	1	5
75 - 79	1	1	1	0	0	1	0	0	0	4
80 - 84	0	0	0	0	0	0	0	1	0	1
85 and Over	0	0	0	0	0	0	0	0	0	0
Total	479	268	170	81	84	41	32	21	3	1,179

APPENDIX - II

ALTERNATIVE ACTUARIAL COST AND AMORTIZATION METHODS

(Assumes a 4.00% Return on Supporting Assets)

	Entry Age	Frozen Entry Age	Attained Age	Frozen Attained Age	Projected Unit Credit	Aggregate
1. Projected Benefit Payments	\$ 599,378,047	\$ 599,378,047	\$ 599,378,047	\$ 599,378,047	\$ 599,378,047	\$ 599,378,047
2. Present Value of Projected Benefit Payments	\$ 190,128,956	\$ 190,128,956	\$ 190,128,956	\$ 190,128,956	\$ 190,128,956	\$ 190,128,956
3. Actuarial Accrued Liability (AAL)	\$ 118,478,809	\$ 118,478,809	\$ 131,907,441	\$ 131,907,441	\$ 131,907,441	\$ -
4. Present Value of Future Normal Costs (2.-3.)	\$ 71,650,148	\$ 71,650,148	\$ 58,221,515	\$ 58,221,515	\$ 58,221,515	\$ 190,128,956
5. Assets	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6. Unfunded UAAL	\$ 118,478,809	\$ 118,478,809	\$ 131,907,441	\$ 131,907,441	\$ 131,907,441	\$ -
7. Annual Required Contribution						
a. Normal Cost	\$ 6,115,101	\$ 6,064,321	\$ 4,865,768	\$ 4,865,768	\$ 5,976,738	\$ 16,958,633
b. Amortization of UAAL	\$ 4,837,028	\$ 4,837,028	\$ 5,385,268	\$ 5,385,268	\$ 5,385,268	\$ -
c. Interest	\$ 367,123	\$ 365,092	\$ 339,080	\$ 339,080	\$ 383,519	\$ 607,384
d. Total	\$ 11,319,252	\$ 11,266,441	\$ 10,590,116	\$ 10,590,116	\$ 11,745,525	\$ 17,566,017
8. Current Year Benefit Payment	\$ 3,548,085	\$ 3,548,085	\$ 3,548,085	\$ 3,548,085	\$ 3,548,085	\$ 3,548,085
9. Amortization of UAAL:						
a. 30 Yrs Level Dollar	\$ 6,588,117	\$ 6,588,117	\$ 7,334,827	\$ 7,334,827	\$ 7,334,827	\$ -
b. 30 Yrs Level % of Pay	\$ 4,837,028	\$ 4,837,028	\$ 5,385,268	\$ 5,385,268	\$ 5,385,268	\$ -
c. 15 Yrs Level Dollar	\$ 10,246,264	\$ 10,246,264	\$ 11,407,597	\$ 11,407,597	\$ 11,407,597	\$ -
d. 15 Yrs Level % of Pay	\$ 8,726,911	\$ 8,726,911	\$ 9,716,037	\$ 9,716,037	\$ 9,716,037	\$ -
10. Annual Required Contribution						
a. 30 Yrs Level Dollar	\$ 13,140,385	\$ 13,087,574	\$ 12,617,657	\$ 12,617,657	\$ 13,773,066	\$ 17,566,017
b. 30 Yrs Level % of Pay	\$ 11,319,252	\$ 11,266,441	\$ 10,590,116	\$ 10,590,116	\$ 11,745,525	\$ 17,566,017
c. 15 Yrs Level Dollar	\$ 16,944,858	\$ 16,892,047	\$ 16,853,338	\$ 16,853,338	\$ 18,008,747	\$ 17,566,017

APPENDIX - III

ALTERNATIVE ACTUARIAL COST AND AMORTIZATION METHODS

(Assumes a 7.00% Return on Supporting Assets)

	Entry Age	Frozen Entry Age	Attained Age	Frozen Attained Age	Projected Unit Credit	Aggregate
1. Projected Benefit Payments	\$ 599,378,047	\$ 599,378,047	\$ 599,378,047	\$ 599,378,047	\$ 599,378,047	\$ 599,378,047
2. Present Value of Projected Benefit Payments	\$ 105,704,491	\$ 105,704,491	\$ 105,704,491	\$ 105,704,491	\$ 105,704,491	\$ 105,704,491
3. Actuarial Accrued Liability (AAL)	\$ 78,186,753	\$ 78,186,753	\$ 82,475,342	\$ 82,475,342	\$ 82,475,342	\$ -
4. Present Value of Future Normal Costs (2.-3.)	\$ 27,517,737	\$ 27,517,737	\$ 23,229,149	\$ 23,229,149	\$ 23,229,149	\$ 105,704,491
5. Assets	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6. Unfunded UAAL	\$ 78,186,753	\$ 78,186,753	\$ 82,475,342	\$ 82,475,342	\$ 82,475,342	\$ -
7. Annual Required Contribution						
a. Normal Cost	\$ 2,955,479	\$ 2,862,216	\$ 2,397,106	\$ 2,397,106	\$ 2,707,236	\$ 11,699,310
b. Amortization of UAAL	\$ 4,538,939	\$ 4,538,939	\$ 4,787,902	\$ 4,787,902	\$ 4,787,902	\$ -
c. Interest	\$ 400,426	\$ 393,898	\$ 378,768	\$ 378,768	\$ 400,477	\$ 694,769
d. Total	\$ 7,894,844	\$ 7,795,053	\$ 7,563,776	\$ 7,563,776	\$ 7,895,615	\$ 12,394,079
8. Current Year Benefit Payment	\$ 3,548,085	\$ 3,548,085	\$ 3,548,085	\$ 3,548,085	\$ 3,548,085	\$ 3,548,085
9. Amortization of UAAL:						
a. 30 Yrs Level Dollar	\$ 5,888,588	\$ 5,888,588	\$ 6,211,581	\$ 6,211,581	\$ 6,211,581	\$ -
b. 30 Yrs Level % of Pay	\$ 4,538,939	\$ 4,538,939	\$ 4,787,902	\$ 4,787,902	\$ 4,787,902	\$ -
c. 15 Yrs Level Dollar	\$ 8,022,883	\$ 8,022,883	\$ 8,462,943	\$ 8,462,943	\$ 8,462,943	\$ -
d. 15 Yrs Level % of Pay	\$ 6,921,564	\$ 6,921,564	\$ 7,301,216	\$ 7,301,216	\$ 7,301,216	\$ -
10. Annual Required Contribution						
a. 30 Yrs Level Dollar	\$ 9,338,969	\$ 9,239,177	\$ 9,087,112	\$ 9,087,112	\$ 9,418,951	\$ 12,394,079
b. 30 Yrs Level % of Pay	\$ 7,894,844	\$ 7,795,053	\$ 7,563,776	\$ 7,563,776	\$ 7,895,615	\$ 12,394,079
c. 15 Yrs Level Dollar	\$ 11,622,664	\$ 11,522,873	\$ 11,496,069	\$ 11,496,069	\$ 11,827,909	\$ 12,394,079

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>
2008	\$ 3,548,085	\$ 3,548,085	2043	\$ 13,327,659	\$ 317,487,643	2078	\$ 1,531,697	\$ 593,065,295
2009	\$ 4,040,121	\$ 7,588,206	2044	\$ 13,090,248	\$ 330,577,891	2079	\$ 1,276,459	\$ 594,341,754
2010	\$ 4,414,907	\$ 12,003,113	2045	\$ 12,822,034	\$ 343,399,925	2080	\$ 1,053,634	\$ 595,395,388
2011	\$ 4,725,653	\$ 16,728,766	2046	\$ 12,554,405	\$ 355,954,330	2081	\$ 861,428	\$ 596,256,816
2012	\$ 4,975,674	\$ 21,704,440	2047	\$ 12,225,741	\$ 368,180,071	2082	\$ 697,634	\$ 596,954,450
2013	\$ 5,160,902	\$ 26,865,342	2048	\$ 11,867,505	\$ 380,047,576	2083	\$ 559,698	\$ 597,514,148
2014	\$ 5,448,485	\$ 32,313,827	2049	\$ 11,574,930	\$ 391,622,506	2084	\$ 444,673	\$ 597,958,821
2015	\$ 5,703,841	\$ 38,017,668	2050	\$ 11,322,179	\$ 402,944,685	2085	\$ 349,716	\$ 598,308,537
2016	\$ 5,987,002	\$ 44,004,670	2051	\$ 11,121,570	\$ 414,066,255	2086	\$ 272,148	\$ 598,580,685
2017	\$ 6,227,398	\$ 50,232,068	2052	\$ 10,948,751	\$ 425,015,006	2087	\$ 209,488	\$ 598,790,173
2018	\$ 6,535,843	\$ 56,767,911	2053	\$ 10,726,380	\$ 435,741,386	2088	\$ 159,443	\$ 598,949,616
2019	\$ 6,899,720	\$ 63,667,631	2054	\$ 10,532,467	\$ 446,273,853	2089	\$ 119,927	\$ 599,069,543
2020	\$ 7,202,553	\$ 70,870,184	2055	\$ 10,325,979	\$ 456,599,832	2090	\$ 89,088	\$ 599,158,631
2021	\$ 7,516,450	\$ 78,386,634	2056	\$ 10,082,650	\$ 466,682,482	2091	\$ 65,352	\$ 599,223,983
2022	\$ 7,802,300	\$ 86,188,934	2057	\$ 9,828,605	\$ 476,511,087	2092	\$ 47,306	\$ 599,271,289
2023	\$ 8,130,902	\$ 94,319,836	2058	\$ 9,551,564	\$ 486,062,651	2093	\$ 33,775	\$ 599,305,064
2024	\$ 8,447,408	\$ 102,767,244	2059	\$ 9,247,729	\$ 495,310,380	2094	\$ 23,779	\$ 599,328,843
2025	\$ 8,695,960	\$ 111,463,204	2060	\$ 8,920,198	\$ 504,230,578	2095	\$ 16,507	\$ 599,345,350
2026	\$ 9,001,620	\$ 120,464,824	2061	\$ 8,569,523	\$ 512,800,101	2096	\$ 11,291	\$ 599,356,641
2027	\$ 9,340,852	\$ 129,805,676	2062	\$ 8,196,289	\$ 520,996,390	2097	\$ 7,621	\$ 599,364,262
2028	\$ 9,693,834	\$ 139,499,510	2063	\$ 7,801,990	\$ 528,798,380	2098	\$ 5,060	\$ 599,369,322
2029	\$ 9,962,550	\$ 149,462,060	2064	\$ 7,387,324	\$ 536,185,704	2099	\$ 3,308	\$ 599,372,630
2030	\$ 10,214,327	\$ 159,676,387	2065	\$ 6,954,904	\$ 543,140,608	2100	\$ 2,121	\$ 599,374,751
2031	\$ 10,462,363	\$ 170,138,750	2066	\$ 6,507,007	\$ 549,647,615	2101	\$ 1,335	\$ 599,376,086
2032	\$ 10,760,216	\$ 180,898,966	2067	\$ 6,046,881	\$ 555,694,496	2102	\$ 825	\$ 599,376,911
2033	\$ 10,951,759	\$ 191,850,725	2068	\$ 5,578,324	\$ 561,272,820	2103	\$ 493	\$ 599,377,404
2034	\$ 11,235,587	\$ 203,086,312	2069	\$ 5,106,192	\$ 566,379,012	2104	\$ 287	\$ 599,377,691
2035	\$ 11,579,213	\$ 214,665,525	2070	\$ 4,635,608	\$ 571,014,620	2105	\$ 164	\$ 599,377,855
2036	\$ 11,854,962	\$ 226,520,487	2071	\$ 4,172,191	\$ 575,186,811	2106	\$ 96	\$ 599,377,951
2037	\$ 12,232,773	\$ 238,753,260	2072	\$ 3,721,610	\$ 578,908,421	2107	\$ 51	\$ 599,378,002
2038	\$ 12,548,010	\$ 251,301,270	2073	\$ 3,288,904	\$ 582,197,325	2108	\$ 27	\$ 599,378,029
2039	\$ 12,853,931	\$ 264,155,201	2074	\$ 2,878,832	\$ 585,076,157	2109	\$ 10	\$ 599,378,039
2040	\$ 13,214,292	\$ 277,369,493	2075	\$ 2,495,449	\$ 587,571,606	2110	\$ 6	\$ 599,378,045
2041	\$ 13,373,410	\$ 290,742,903	2076	\$ 2,141,838	\$ 589,713,444	2111	\$ 2	\$ 599,378,047
2042	\$ 13,417,081	\$ 304,159,984	2077	\$ 1,820,154	\$ 591,533,598	2112	\$ -	\$ 599,378,047

APPENDIX – V  
GLOSSARY

**Actuarial Accrued Liability.** The portion, as determined by a particular Actuarial Cost Method, of the present value of benefits which is not provided for by future Normal Costs.

**Actuarial Cost Method.** A procedure for determining the Actuarial Present Value of Total Projected Benefits and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

**Actuarially Equivalent.** Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

**Actuarial Present Value of Total Projected Benefits.** The present value, as of the valuation date, of the cost of future benefits to be paid to employees, retirees, and covered dependents, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. It is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.

**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 per individual.

**Supplemental Cost.** The amount of the Annual Required Contribution attributable to the amortization of the unfunded Actuarial Accrued Liability.