



**A Postretirement Welfare Benefit  
GASB 45 Actuarial Valuation  
As of July 1, 2010**

For:

**Manchester-Essex  
Regional School District**

Prepared by:  
The USI Consulting Group

February 2, 2012



February 2, 2012  
Manchester-Essex Regional School District  
PO Box 1407  
Manchester-by-the-Sea, MA 01944

**RE: July 1, 2010 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 Manchester-Essex Regional School District as of July 1, 2010. The numbers presented in this report reflect the adoption, by the Manchester-Essex Regional School District, 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 Costs for the fiscal years beginning July 1, 2010 and July 1, 2011.

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 cursive script, reading "Robert W. Webb".

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



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## Section I

# Executive Summary

The section presents the results of the July 1, 2010 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, 2011. Estimated June 30, 2011 and June 30, 2012 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, 2011**

	<b><u>Total</u></b>
<i>Beginning of Year Net OPEB Obligation (NOO)</i>	\$3,754,223
<i>Actuarial Accrued Liability (AAL)</i>	\$18,148,331
<i>Actuarial Value of Assets</i>	\$0
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	\$18,148,331
<i>Annual Required Contribution (30 year amortization)</i>	\$2,103,399
<i>Annual OPEB Cost</i>	\$2,084,574
<i>Expected Benefit Payments</i>	\$410,917

#### **Fiscal Year Ending June 30, 2012**

<i>Beginning of Year Net OPEB Obligation (NOO)</i>	\$5,427,880
<i>Actuarial Accrued Liability (AAL)</i>	\$19,749,807
<i>Actuarial Value of Assets</i>	\$0
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	\$19,749,807
<i>Annual Required Contribution (30 year amortization)</i>	\$2,227,041
<i>Annual OPEB Cost</i>	\$2,194,272
<i>Expected Benefit Payments</i>	\$461,382

### **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, 2010</u></b>
<i>Funding Interest Rate*</i>	4.00%
<i>2010 Medical Trend Rates</i>	9.00%
<i>Ultimate Medical Trend Rate</i>	5.00%
<i>Year Ultimate Trend Rates Reached</i>	2016
<i>Annual Payroll Increase</i>	2.50%

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

## **EXECUTIVE SUMMARY (cont.)**

### **Changes included in current valuation**

The plan experienced a sizeable gain due to medical costs increasing less than assumed since the last valuation. The gain was slightly offset by an update adjustment to the future medical trend rate assumption. More detail is provided 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, 2010. 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 November 1, 2011 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. Actuarial adjustments were made to the data to produce appropriate results for the July 1, 2010 valuation.

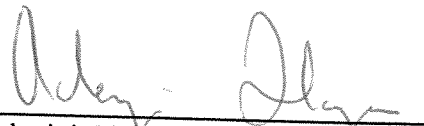
All costs, liabilities, and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. The calculations are consistent and undertaken with our understanding of Statement of Governmental Accounting Standards Number 45 (GAS 45). In our opinion,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

**EXECUTIVE SUMMARY DETAIL**

**GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION AND ANNUAL OPEB COST**  
**JULY 1, 2010**

**ACTUARIAL COST METHOD – Entry Age Normal**

	<u>Teachers</u>	<u>Non-Teachers</u>	<u>Retirees</u>	<u>Total</u>
<b><i>I. Present value of Future benefits</i></b>				
A. Retirees/Disableds	\$0	\$0	\$8,109,080	\$8,109,080
B. Active Employees	<u>\$16,259,065</u>	<u>\$10,374,425</u>	<u>\$0</u>	<u>\$26,633,490</u>
C. Total	\$16,259,065	\$10,374,425	\$8,109,080	\$34,742,570
<b><i>II. Actuarial Accrued Liability</i></b>				
A. Retirees/Disableds	\$0	\$0	\$8,109,080	\$8,109,080
B. Active Employees	<u>\$6,058,067</u>	<u>\$3,981,184</u>	<u>\$0</u>	<u>\$10,039,251</u>
C. Total	\$6,058,067	\$3,981,184	\$8,109,080	\$18,148,331
<b><i>III. Actuarial Assets</i></b>	\$0	\$0	\$0	\$0
<b><i>IV. Unfunded Actuarial Accrued Liability (UAAL)</i></b>	\$6,058,067	\$3,981,184	\$8,109,080	\$18,148,331
<b><i>V. Annual Required Contribution (ARC)</i></b>				
A. Normal Cost	\$694,044	\$550,839	\$0	\$1,244,883
B. Supplemental Cost	\$264,484	\$170,000	\$351,034	\$785,518
C. Compound Interest to Year End	<u>\$38,341</u>	<u>\$28,834</u>	<u>\$5,823</u>	<u>\$72,998</u>
E. Annual Required Contribution [A. + B. + C. + D.]	\$996,869	\$749,673	\$356,857	\$2,103,399
<b><i>VI. Net OPEB Obligation</i></b>	\$2,137,091	\$1,664,024	(\$46,892)	\$3,754,223
<b><i>VII. Interest on net OPEB Obligation</i></b>	\$85,484	\$66,561	(\$1,876)	\$150,169
<b><i>VIII. Adjustment to ARC</i></b>	(\$96,200)	(\$74,905)	\$2,111	(\$168,995)
<b><i>IX. Annual OPEB Cost (Expense)</i></b> <b><i>[V.E. + VII. + VIII.]</i></b>	\$986,153	\$741,328	\$357,093	\$2,084,574
<b><i>X. Expected Benefit Payments</i></b>				
A. Retirees/Disableds	\$0	\$0	\$410,917	\$410,917
B. Active Employees	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
C. Total	\$0	\$0	\$410,917	\$410,917

**EXECUTIVE SUMMARY DETAIL**

**GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION AND ANNUAL OPEB COST**  
**JULY 1, 2011**

**ACTUARIAL COST METHOD – Entry Age Normal**

	<u>Teachers</u>	<u>Non-Teachers</u>	<u>Retirees</u>	<u>Total</u>
<b>I. Present value of Future benefits</b>				
A. Retirees/Disableds	\$0	\$0	\$8,014,308	\$8,014,308
B. Active Employees	<u>\$16,909,428</u>	<u>\$10,789,402</u>	<u>\$0</u>	<u>\$27,698,830</u>
C. Total	\$16,909,428	\$10,789,402	\$8,014,308	\$35,713,138
<b>II. Actuarial Accrued Liability</b>				
A. Retirees/Disableds	\$0	\$0	\$8,014,308	\$8,014,308
B. Active Employees	<u>\$7,022,195</u>	<u>\$4,713,304</u>	<u>\$0</u>	<u>\$11,735,499</u>
C. Total	\$7,022,195	\$4,713,304	\$8,014,308	\$19,749,807
<b>III. Actuarial Assets</b>	\$0	\$0	\$0	\$0
<b>IV. Unfunded Actuarial Accrued Liability (UAAL)</b>	\$7,022,195	\$4,713,304	\$8,014,308	\$19,749,807
<b>V. Annual Required Contribution (ARC)</b>				
A. Normal Cost	\$711,395	\$564,610	\$0	\$1,276,005
B. Supplemental Cost	\$311,794	\$204,856	\$357,603	\$874,253
C. Compound Interest to Year End	<u>\$40,829</u>	<u>\$30,690</u>	<u>\$5,264</u>	<u>\$76,783</u>
E. Annual Required Contribution [A. + B. + C. + D.]	\$1,064,018	\$800,156	\$362,867	\$2,227,041
<b>VI. Net OPEB Obligation</b>	\$3,123,244	\$2,405,352	(\$100,716)	\$5,427,880
<b>VII. Interest on net OPEB Obligation</b>	\$124,930	\$96,214	(\$4,029)	\$217,115
<b>VIII. Adjustment to ARC</b>	(\$143,785)	(\$110,735)	\$4,637	(\$249,884)
<b>IX. Annual OPEB Cost (Expense)</b> [V.E. + VII. + VIII.]	\$1,045,163	\$785,634	\$363,475	\$2,194,272
<b>X. Expected Benefit Payments</b>				
A. Retirees/Disableds	\$0	\$0	\$452,009	\$452,009
B. Active Employees	<u>\$4,935</u>	<u>\$4,438</u>	<u>\$0</u>	<u>\$9,373</u>
C. Total	\$4,935	\$4,438	\$452,009	\$461,382



## Section II

# Census Information

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

**CENSUS INFORMATION – A.**

**EMPLOYEE COUNTS**

	<i>As of November 1, 2011</i>		
	<i><u>Actives</u></i>	<i><u>Retirees</u></i>	<i><u>Total</u></i>
Male	49	21	70
Female	<u>163</u>	<u>33</u>	<u>196</u>
Total	212	54	266

**COUNTS BY AGE AND ELIGIBILITY STATUS**

**ACTIVE EMPLOYEES :**

<i><u>Age</u></i>	<i><u>Currently Eligible to Retire</u></i>	<i><u>Not Currently Eligible to Retire</u></i>	<i><u>Total</u></i>
29 and under	N/A	22	22
30 - 34	N/A	16	16
35 - 39	N/A	20	20
40 - 44	0	29	29
45 - 49	0	34	34
50 - 54	0	41	41
55 - 59	16	9	25
60 - 64	11	12	23
65 and over	0	2	2
Total	27	185	212

**CURRENT RETIREES:**

<i><u>Age</u></i>	<i><u>Retirees</u></i>	<i><u>Spouses</u></i>	<i><u>Total</u></i>
55 and under	0	0	0
55-59	4	2	6
60-64	20	11	31
65-69	20	10	30
70-74	8	7	15
75-79	1	0	1
80+	1	0	1
Total	54	30	84

CENSUS INFORMATION – B.

AVERAGE AGE AND SERVICE

As of November 1, 2011

ACTIVE EMPLOYEES:

A. Average Age at Hire

Males	34.3
Females	38.4
Total	37.4

B. Average Service

Males	8.9
Females	9.1
Total	9.0

C. Average Current Age

Males	43.2
Females	47.4
Total	46.5

CURRENT RETIREES

D. Average Current Age

Males	67.2
Females	65.0
Total	65.9

### Section III

## Financial Statement Disclosure

This section provides the required information and notes to the Financial Statements for the fiscal year ending June 30, 2011.

**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 INSURANCE PLAN:**

<b>Type of Coverage:</b>	Blue Cross Blue Shield HMO, PPO Post 65 Plan -Blue Cross Managed Blue for Seniors		
<b>Eligibility:</b>	Ten and twelve month employees must have completed ten years of service and be at least 55 years old. Teachers must have completed at least 15 years of service and be at least 55 years old.		
<b>Cost Sharing:</b>	The retiree pays the 20% of the medical premium. Participants electing to participate in the PPO plan pay the excess of the medical premium over 80% of the HMO medical premium.		
<b>Spouse Coverage:</b>	Yes		
<b>Surviving Spouse Coverage:</b>	No		
<b>Annual Medical Premiums:</b>	July 1, 2011 through June 30, 2012		
		<u>Single</u>	<u>Family</u>
	HMO	\$7,176.12	\$19,376.28
	PPO	\$8,962.92	\$24,196.68
	Managed Blue	\$4,764.00	

**FINANCIAL STATEMENT DISCLOSURE (cont.)**

**2.) GASB 45 DISCLOSURE REQUIREMENTS**

<b>A. Annual OPEB Cost and Net OPEB Obligation</b>	<b>7/1/2010 - 6/30/2011</b>	<b>7/1/2011 - 6/30/2012</b>
1. Annual Required Contribution (ARC)	\$2,103,399	\$2,227,041
2. Interest on net OPEB Obligation	\$150,169	\$217,115
3. Adjustment to ARC	(\$168,995)	(\$249,884)
4. Annual OPEB Cost (Expense)	\$2,084,574	\$2,194,272
5. Contribution made (assumed middle of year) *	(\$410,917)	(\$461,382)
6. Increase in net OPEB Obligation	\$1,673,657	\$1,732,890
7. Net OPEB Obligation - beginning of year	\$3,754,223	\$5,427,880
8. Net OPEB Obligation - end of year	\$5,427,880	\$7,160,770

\* 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 2011 / 2012 are as follows:

<b>Fiscal Year Ending</b>	<b>Annual OPEB Cost</b>	<b>Percentage of Annual OPEB Cost Contributed</b>	<b>Net OPEB Obligation</b>	<b>Covered Payroll</b>	<b>OPEB Cost % of Pay</b>
6/30/2011	\$2,084,574	19.7%	\$5,427,880	\$12,198,757	17.1%
6/30/2012	\$2,198,353	21.0%	\$7,160,770	\$12,503,726	17.5%

**B. Funded Status and Funding Progress**

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded AAL (UAAL) (b - a)</b>	<b>Funded Ratio (a/b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll (AAL) ((b - a) / c)</b>
7/1/2008	\$0	\$19,340,378	\$19,340,378	0.0%	\$10,526,801	183.7%
7/1/2010	\$0	\$18,148,331	\$18,148,331	0.0%	\$12,198,757	148.8%

**C. Methods and Assumptions**

- Interest Rate	4.00%
- 2010 Medical Trend Rates	9.00%
- Ultimate Medical Trend Rate	5.00%
- Year Ultimate Trend Rates Reached	2016
- Actuarial Cost Method	Entry Age Normal
- The remaining amortization period at 06/30/2011	26.90
- 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:** The mortality rates are from the RP-2000 Combined Mortality Table projected to 2010 with projection scale AA.

3. **Disability Rates:** None assumed

4. **Termination Rates:** Non Teachers

<u>Age</u>	<u>Rates</u>
20	7.0%
30	5.5%
40	4.0%
50	3.0%

**Teachers**

<u>Age</u>	<u>Male/Female Rate</u>
20	1.0% / 5.0%
30	1.0% / 5.0%
40	1.7% / 2.9%
50	2.2% / 2.1%

5. **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>Rates</u>
2009	9.0%
2010	8.0%
2011	7.0%
2012	6.0%
2013	5.0%
2014+	5.0%

6. **Retirement Rates:** Non Teachers

<u>Age</u>	<u>Male</u>	<u>Female</u>
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%



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

**6. Retirement Rates (cont.):**

**Teachers-Males/ Females**

	<u>Years of Service</u>		
<u>Age</u>	10	20	30+
50	0% / 0%	1% / 1.5%	2% / 2%
55	3% / 2%	3% / 3%	6% / 6%
60	15% / 20%	15% / 16%	50% / 35%
65	40% / 30%	40% / 30%	50% / 35%
70	100% / 100%	100% / 100%	100% / 100%

**7. Participation Rate:**

It was assumed that 90% of the current active school employees covered under the districts plan on the day before retirement would enroll in the retirement plan upon retirement.

**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 husbands would be three years older than their wives. For current retirees, actual census information was used.

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

**10. Per Capita Claims Cost:**

Are based on the premiums levels of the plans utilized. The premium levels are summarized in the plan provisions in Section III. Actual premiums were used as an approximation to claims experience. Aging factors were then introduced to allow for the calculation of age-related per-capita claim rates.

<u>Age</u>	<u>Male</u>	<u>Female</u>
40	\$4,060	\$5,684
45	\$4,818	\$6,048
50	\$5,784	\$6,672
55	\$7,023	\$7,288
60	\$8,470	\$8,119
64	\$9,458	\$8,856
65	\$4,059	\$3,800
70	\$4,482	\$4,200
75	\$4,949	\$4,637
80	\$5,203	\$4,871

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

**12. 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.

The Entry Age Actuarial Cost Method is used in this valuation. Under this method, the Actuarial Present Value of Projected Benefits of each individual included in the Actuarial Valuation is allocated on a level basis over future earnings of the individual between entry age and assumed exit age(s). The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the Actuarial Present Value of future Normal Costs is called the Actuarial Accrued Liability.

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**

**Plan Provisions**

**BRIEF DESCRIPTION OF BLUE CROSS BLUE SHIELD MEDICAL PLANS**

**Tufts HMO Premium**

Most services covered in full with a \$10 copayment for non-routine office visits and other miscellaneous office visits.

Emergency Room Visits: \$50 per visit  
Prescription Drugs (Retail and Mail Order)  
Tier 1: \$10 copayment  
Tier 2: \$15 copayment  
Tier 3: \$30 copayment

**Carelink PPO Premium**

Deductible: \$250 individual / \$500 family  
Out of Pocket Maximum: \$1,000 individual / \$2,000 family  
Most in network services covered in full with a \$10 copayment for non-routine office visits and other miscellaneous office visits. Out of network services covered at 80% after deductible.  
Emergency Room Visits: \$50 per visit  
Prescription Drugs (Retail and Mail Order)  
Tier 1: \$10 copayment  
Tier 2: \$15 copayment  
Tier 3: \$30 copayment

**Tufts Medicare Preferred**

Most services covered in full with dollar limits on hearing and vision..  
Prescription Drugs Copayments

	<u>30-day supply</u>	<u>60-day supply</u>	<u>90-day supply</u>
<b><u>Retail</u></b>			
Tier 1:	\$10	\$20	\$30
Tier 2:	\$15	\$30	\$45
Tier 3:	\$30	\$60	\$90
<b><u>Mail Order</u></b>			
Tier 1:	\$10	\$10	\$10
Tier 2:	\$15	\$15	\$15
Tier 3:	\$30	\$30	\$30

## **Section VII**

# **Appendices**

APPENDIX - I.

ACTIVE EMPLOYEE BY AGE AND SERVICE

AS OF NOVEMBER 1, 2011

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	3	0	0	0	0	0	0	0	0	3
25 - 29	11	8	0	0	0	0	0	0	0	19
30 - 34	6	8	2	0	0	0	0	0	0	16
35 - 39	8	9	2	1	0	0	0	0	0	20
40 - 44	12	2	14	1	0	0	0	0	0	29
45 - 49	11	9	8	3	3	0	0	0	0	34
50 - 54	10	9	12	5	0	5	0	0	0	41
55 - 59	1	4	6	8	4	2	0	0	0	25
60 - 64	3	8	7	1	2	2	0	0	0	23
65 - 69	0	1	0	0	0	0	0	0	0	1
70 - 74	0	0	0	0	0	0	0	0	0	0
75 - 79	1	0	0	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	66	58	51	19	9	9	0	0	0	212

APPENDIX – II.

RECONCILIATION OF ACTUARIAL ACCRUED LIABILITY

a. 7/1/2008 Actuarial Accrued Liability	\$19,340,378
b. 2008 Normal Cost	\$1,339,210
c. Interest Rate	4.00%
d. Interest on (a. + b.)	\$827,184
e. 2008 Expected Benefit Payments	(\$389,167)
f. Interest on f.	<u>(\$7,784)</u>
g. 7/1/2009 Expected Actuarial Accrued Liability (a. + b. + d. + e. + f.)	\$21,109,821
h. 2009 Normal Cost	\$1,372,690
i. Interest Rate	0.00%
j. Interest on (g. + h.)	\$899,300
k. 2009 Expected Benefit Payments	(\$398,051)
l. Interest on k.	<u>(\$7,961)</u>
m. 7/1/2010 Expected Actuarial Accrued Liability (g. + h. + j. + k. + l.)	\$22,975,799
n. Change in Actuarial Accrued Liability due to	
i. Demographic and plan cost changes	(\$5,533,838)
ii. Change in Actuarial Assumptions	\$706,370
iii. Plan Change	<u>\$0</u>
iv. Total	(\$4,827,468)
o. 7/1/2010 Actuarial Accrued Liability (m. + n. iv.)	\$18,148,331

APPENDIX - III.

DEVELOPMENT OF AMORTIZATION PAYMENT

**A. Prior Bases**

1. Amortization Base Balance as of 7/1/2008	\$19,340,378
2. 2008 Amortization Payment	(\$789,592)
3. Interest	4.00%
4. Interest on (1) + (2)	<u>\$742,031</u>
5. Amortization Base Balance as of 7/1/2009 (1) + (2) + (4)	\$19,292,817
6. 2009 Amortization Payment	(\$883,513)
7. Interest	4.00%
8. Interest on (5) + (6)	<u>\$736,372</u>
9. Amortization Base Balance as of 7/1/2010 (5) + (6) + (8)	\$19,145,676
10. Remaining Amortization Period	0
11. Valuation Interest rate	4.00%
12. Assumed payroll growth	2.50%
13. 2010 Adjusted Amortization Amount	\$826,236

**B. New Amortization Base**

1. Experience (Gain)/Loss	(\$5,533,838)
2. Assumption Changes	\$706,370
3. Plan Change	\$0
4. Loss due to Funding timing	<u>\$3,830,123</u>
5. Total (1) + (2) + (3) + (4)	(\$997,345)
6. Remaining Amortization Period	30
7. Valuation Interest rate	4.00%
8. Assumed payroll growth	2.50%
9. Amortization Amount	(\$40,718)

**C. Combined Bases**

1. Amortization Base Balance as of 7/1/2010 (A.9. + B.5.)	\$18,148,331
2. 2010 Preliminary Total Amortization Amount (A.13. + B.9.)	\$785,518
3. 2010 Minimum Total Amortization Amount (30 year)	\$740,926
4. 2010 Total Amortization Amount (greater of 2. and 3.)	\$785,518



**APPENDIX - IV.**  
**PROJECTED BENEFIT PAYMENTS**

<u>Year</u>	<u>Amount</u>	<u>Accumulated</u>
2010	\$ 410,917	\$ 410,917
2011	\$ 461,382	\$ 872,299
2012	\$ 496,280	\$ 1,368,579
2013	\$ 545,263	\$ 1,913,842
2014	\$ 595,559	\$ 2,509,401
2015	\$ 638,646	\$ 3,148,047
2016	\$ 699,940	\$ 3,847,987
2017	\$ 776,503	\$ 4,624,490
2018	\$ 869,469	\$ 5,493,959
2019	\$ 961,488	\$ 6,455,447
2020	\$ 1,054,045	\$ 7,509,492
2021	\$ 1,144,810	\$ 8,654,302
2022	\$ 1,236,757	\$ 9,891,059
2023	\$ 1,335,221	\$ 11,226,280
2024	\$ 1,437,549	\$ 12,663,829
2025	\$ 1,547,525	\$ 14,211,354
2026	\$ 1,652,581	\$ 15,863,935
2027	\$ 1,741,373	\$ 17,605,308
2028	\$ 1,860,353	\$ 19,465,661
2029	\$ 1,957,774	\$ 21,423,435
2030	\$ 2,069,819	\$ 23,493,254
2031	\$ 2,199,962	\$ 25,693,216
2032	\$ 2,304,140	\$ 27,997,356
2033	\$ 2,383,209	\$ 30,380,565
2034	\$ 2,452,462	\$ 32,833,027
2035	\$ 2,503,709	\$ 35,336,736
2036	\$ 2,552,734	\$ 37,889,470
2037	\$ 2,632,708	\$ 40,522,178
2038	\$ 2,701,932	\$ 43,224,110
2039	\$ 2,738,777	\$ 45,962,887
2040	\$ 2,783,739	\$ 48,746,626

<u>Year</u>	<u>Amount</u>	<u>Accumulated</u>
2041	\$2,832,647	\$ 51,579,273
2042	\$2,839,305	\$ 54,418,578
2043	\$2,838,752	\$ 57,257,330
2044	\$2,823,098	\$ 60,080,428
2045	\$2,778,872	\$ 62,859,300
2046	\$2,732,945	\$ 65,592,245
2047	\$2,671,725	\$ 68,263,970
2048	\$2,594,489	\$ 70,858,459
2049	\$2,544,382	\$ 73,402,841
2050	\$2,484,198	\$ 75,887,039
2051	\$2,403,187	\$ 78,290,226
2052	\$2,311,824	\$ 80,602,050
2053	\$2,244,542	\$ 82,846,592
2054	\$2,170,532	\$ 85,017,124
2055	\$2,090,681	\$ 87,107,805
2056	\$2,013,771	\$ 89,121,576
2057	\$1,931,404	\$ 91,052,980
2058	\$1,845,022	\$ 92,898,002
2059	\$1,755,626	\$ 94,653,628
2060	\$1,664,085	\$ 96,317,713
2061	\$1,570,923	\$ 97,888,636
2062	\$1,476,419	\$ 99,365,055
2063	\$1,381,139	\$ 100,746,194
2064	\$1,286,171	\$ 102,032,365
2065	\$1,191,966	\$ 103,224,331
2066	\$1,099,150	\$ 104,323,481
2067	\$1,008,267	\$ 105,331,748
2068	\$ 919,740	\$ 106,251,488
2069	\$ 834,215	\$ 107,085,703
2070	\$ 752,105	\$ 107,837,808
2071	\$ 673,780	\$ 108,511,588

<u>Year</u>	<u>Amount</u>	<u>Accumulated</u>
2072	\$ 599,509	\$ 109,111,097
2073	\$ 529,456	\$ 109,640,553
2074	\$ 463,808	\$ 110,104,361
2075	\$ 402,801	\$ 110,507,162
2076	\$ 346,535	\$ 110,853,697
2077	\$ 295,192	\$ 111,148,889
2078	\$ 248,883	\$ 111,397,772
2079	\$ 207,704	\$ 111,605,476
2080	\$ 171,564	\$ 111,777,040
2081	\$ 140,275	\$ 111,917,315
2082	\$ 113,605	\$ 112,030,920
2083	\$ 91,149	\$ 112,122,069
2084	\$ 72,451	\$ 112,194,520
2085	\$ 57,011	\$ 112,251,531
2086	\$ 44,422	\$ 112,295,953
2087	\$ 34,264	\$ 112,330,217
2088	\$ 26,124	\$ 112,356,341
2089	\$ 19,657	\$ 112,375,998
2090	\$ 14,592	\$ 112,390,590
2091	\$ 10,667	\$ 112,401,257
2092	\$ 7,673	\$ 112,408,930
2093	\$ 5,429	\$ 112,414,359
2094	\$ 3,775	\$ 112,418,134
2095	\$ 2,574	\$ 112,420,708
2096	\$ 1,728	\$ 112,422,436
2097	\$ 1,141	\$ 112,423,577
2098	\$ 744	\$ 112,424,321
2099	\$ 475	\$ 112,424,796
2100	\$ 300	\$ 112,425,096
2101	\$ 188	\$ 112,425,284
2102	\$ 112	\$ 112,425,396

**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.