

**Town of Manchester-by-the-Sea,  
Massachusetts Health and Life  
Insurance Program**

**Financial Disclosure Information**

**in accordance with Statement of  
Governmental Accounting Standards  
Board No. 45**

**for the period beginning July 1, 2007 and  
ending June 30, 2008**

**DRAFT**

Prepared By:

**The Angell Pension Group, Inc.  
10 Hemingway Drive  
East Providence, RI 02915  
Telephone (401) 438-9250**

September, 2008

## TABLE OF CONTENTS

		Page
SECTION I	Introduction	1
SECTION II	Descriptive Information	2 - 3
SECTION III	Actuarial Methods	4
SECTION IV	Actuarial Assumptions	5 - 7
SECTION V	Calculation of Annual Required Contribution	8
SECTION VI	Development of Net OPEB Obligation	9
SECTION VII	Schedule of Funding Progress	10 - 11
SECTION VIII	Amortization of Unfunded Actuarial Accrued Liability	12
SECTION IX	Breakout of Liability by Group	13
SECTION X	Cash Flow Projections	14 - 16
SECTION XI	Assumption Sensitivity Analysis	17
SECTION XII	Per Capita Medical Costs	18 - 19
SECTION XIII	Participant Data	20 - 21
SECTION XIV	Glossary for OPEB and GASB 45	22 - 25

## I. INTRODUCTION

The purpose of this report is to present certain financial information relative to the Town of Manchester-by-the-Sea, Massachusetts Health and Life Insurance Program in accordance with the Statement of Governmental Accounting Standards Board No. 45 (GASB45), as if the plan sponsor were required to adopt GASB45 as of July 1, 2007.

The report presents information regarding the Town of Manchester-by-the-Sea, Massachusetts Health and Life Insurance Program for the period beginning July 1, 2007 and ending June 30, 2008. This information includes the determination of Annual Required Contribution (ARC) and OPEB cost, disclosure of the Net OPEB Obligation and Funding Progress as well as other Required Supplementary Information. Sensitivity analysis on various financial and demographic assumptions is also provided.

This report was based on information submitted to our firm in the form of census data, medical insurance premiums and rates, and other plan claims information and descriptions of Plan benefits. Although the data has been reviewed for reasonableness, an audit of the data was not performed. We have relied on the information provided, including plan provisions and participant data, as complete and accurate. The information provided to us is the basis of the valuation report that has been prepared. If the substantive plan is different than the benefits described then the report should be changed to reflect this fact.

Actuarial computations under GASB45 are for purposes of fulfilling employer accounting requirements and require assumptions about future events. We believe that the calculations and assumptions reported herein have been made on a basis consistent with our understanding of GASB45 and are reasonable for this purpose. In addition, no relationship exists with the plan or plan sponsor that impairs the objectivity of our work.

---

David Pratt Ward, A.S.A., E.A., M.A.A.A.  
Consulting Actuary

---

Date

## II. DESCRIPTIVE INFORMATION

*Plan Description:* Single-employer, defined benefit postretirement health insurance program

*Groups Covered:* Employees of the Town of Manchester-by-the-Sea, Massachusetts that work 20 or more hours per week and currently receive health benefits will be eligible to receive postretirement medical and upon attaining 10 years of service with the Town. Spouses and surviving spouses of eligible employees are eligible for health insurance benefits.

Eligible members of the Essex Retirement System are eligible for retirement at age 55 with 10 years of service or at any age with 20 years of service.

*Benefit Formula:* Individual and family medical coverage is available through either HMO Blue, Blue Choice, or Blue Care Elect prior to age 65. At age 65, eligible members will be covered under Medex, a Medicare supplement plan. The Town will contribute the following percentage to the premium:

HMO Blue:	85%
Blue Choice:	70%
Blue Care Elect:	70%
Medex:	74% (75% as of January 2008)

Individual and family dental insurance coverage is available with the entire premium paid by the employee. No OPEB liability presently exists for dental benefits since the Town of Manchester does not currently (and does not expect in future years to) pay any part of the dental insurance coverage for active or retired members. Please note that if the Town at any point begins to pay a portion of either the active or retired members' dental insurance that an implicit subsidy for retiree dental benefits (as presented later in this report) should be included in the calculation of the OPEB liability for the town.

Eligible members may elect to continue coverage of \$5,000 life insurance; coverage decreases to \$2,000 at age 70. The Town pays for 50% of the premium.

## II. DESCRIPTIVE INFORMATION (cont'd)

*Significant Events:* This report presents results as if the Town of Manchester-by-the-Sea, Massachusetts was required to disclose financial information under GASB45 for the Fiscal Year beginning July 1, 2007.

### III. ACTUARIAL METHODS

*Measurement Date:* July 1, 2007 for all purposes.

*Actuarial Cost Method:* The Annual Required Contribution has been determined utilizing the projected unit credit funding method (with service proration). Under this funding method, projected benefits are assumed to accrue on a straight line basis from date of hire to the date of retirement for each participant. Normal cost for a participant is the present value of the projected benefit which accrues in the current plan year. Normal cost for the Plan is the sum of the normal costs for all participants.

*Asset Valuation Method:* Not applicable - plan is unfunded. Plan benefits are paid out of Town of Manchester-by-the-Sea, Massachusetts's general assets.

*Amortization of Unfunded Liabilities:* The portion of unfunded actuarial liabilities included in the ARC is determined using the level dollar thirty year open amortization basis.

*Census Information:* Census data and premium information as of July 1, 2007 were used to calculate the ARC, OPEB cost and Net Obligation.

## IV. ACTUARIAL ASSUMPTIONS

The actuarial assumptions given below are used to calculate the liabilities and cost included in this valuation report. They represent estimates of the occurrence of future events impacting the costs of the plan such as discount rates, mortality rates, withdrawal rates, medical trend rates, rates of retirement at given ages, rates of coverage elections, etc. The assumptions chosen reflect the current expectations of the long-term experience for this plan.

### Assumptions for the Current Valuation

*Discount Rate:* 4.00%

*Long Term Rate of Return  
on Assets:* Not applicable - there are no plan assets

*Healthy Mortality:* RP-2000 Male/Female Combined Healthy Table

*Disabled Mortality:* None

*Turnover:* School and Town:  
Sarason Crocker Straight Table T-3.  
Sample rates below:

Age	Rate
20	6.6%
25	5.3%
35	4.5%
45	3.2%
55	0.3%
60	0.0%

Fire and Police:  
Sarason Crocker Straight Table T-3.  
Sample rates below:

Age	Rate
20	6.6%
25	5.3%
35	4.5%
45	3.2%
55	0.3%
60	0.0%

#### IV. ACTUARIAL ASSUMPTIONS (cont'd)

*Retirement:* School and Town:

Age	Rate
50-54	2%
55	10%
56-61	5%
62	25%
63-64	15%
65	40%
66-69	25%
70	100%

Police and Fire:

Age	Rate
50	10%
51-54	5%
55	15%
56-61	10%
62-63	25%
64	50%
65	100%

*Participation:* It is assumed that 100% of future retirees elect medical and life insurance coverage.

*Plan Election:* Eligible members that retire prior to age 65 are assumed to elect medical coverage under one of the active plans offered. 100% are assumed to elect HMO Blue, as this is the Plan predominately elected by members, and continue coverage until age 65.

All future retirees are assumed to be Medicare eligible at age 65 and will elect medical coverage from the Town under Medex, the post-65 plan. Current post-65 retirees are assumed to remain in their elected Plan.

## IV. ACTUARIAL ASSUMPTIONS (cont'd)

### *Health Care Monthly*

#### *Premium Rates:*

Plan - Single Rate / Family Rate per month

HMO Blue - \$528.07 / \$1,425.84

Blue Choice - \$581.64 / \$1,547.95

Blue Care Elect - \$639.24 / \$1726.03

Medex - \$422.38

### *Health Care Cost Trend Rates -*

#### *Medical Costs:*

10.00% per year graded off 0.50% per year to an ultimate rate of 5.00% per year.

#### *Marital Status:*

80% of future retirees are assumed to be married and elect family medical coverage. Female spouses are assumed to be 3 years younger than males.

Actual spousal information is used for current retirees if available.

#### *Aging Assumption:*

Claims costs are assumed to increase by the following chart to reflect higher healthcare costs for older individuals:

Age	Rate
45-69	3.0%
70-74	2.5%
75-79	2.0%
80-84	1.0%
85-89	0.5%
90+	0%

In addition, Medex premiums are community rated and do not include aging assumptions.

## V. CALCULATION OF ANNUAL REQUIRED CONTRIBUTION

The Annual Required Contribution (ARC) of the employer is the portion of the present value of future benefits that is to be recognized in the current fiscal year. It is made of the following components:

A.	Normal cost, or the portion of the APV attributable to service in the current year		
B.	Amortization of the unfunded AAL-PUC resulting from plan amendments, actuarial (gains)/losses or initial adoption(s) of the plan		
C.	Interest Cost, or the expected increase in the AAL attributable to the passage of time (during the year)		
D.	Expected return on OPEB liability/asset, if any, (may reduce the other costs)		
<b>A.</b>	<b>Normal cost as of July 1, 2007</b>	\$	327,125
<b>B.</b>	<b>Amortization of Unfunded Liability</b>		
1.	Amortization of initial unfunded liability	\$	593,201
2.	Amortization of UAAL: plan amendments		0
3.	Amortization of UAAL: (gains)/losses		0
4.	Amortization of UAAL, [(1) + (2) + (3)]	\$	593,201
<b>C.</b>	<b>Interest on Normal Cost and Unfunded Liability</b>		
1.	Normal Cost + Amortization of UAAL, [(A) + (B.4)]	\$	920,326
2.	Interest to end of period at 4.00%	\$	36,813
<b>D.</b>	<b>Interest Cost on OPEB liability/(asset)</b>		
1.	OPEB liability/(asset)	\$	0
2.	Interest to end of period at 4.00%	\$	0
<b>E.</b>	<b>Annual Required Contribution [(A) + (B.4) + (C.2) + (D.2)]</b>	\$	957,139
<b>F.</b>	<b>Expected Benefit Payments</b>	\$	410,870
<b>G.</b>	<b>Increase in ARC over Pay-as-you-go [(E) - (F)]</b>	\$	546,269

## VI. DEVELOPMENT OF NET OPEB OBLIGATION

### A. Fiscal Year Ending June 30, 2008

1.	Annual Required Contribution	\$	957,139
2.	Interest on net OPEB obligation		0
3.	Adjustment to ARC (amortization of OPEB obligation)		0
4.	Annual OPEB cost [(1) + (2) + (3)]		957,139
5.	Plan Contributions* during fiscal year		410,870
6.	Increase in net OPEB obligation [(4) - (5)]		546,269
7.	Net OPEB obligation as of July 1, 2007		0
8.	Net OPEB obligation as of June 30, 2008 [(6) + (7)]	\$	546,269

### B. Recent OPEB Obligation History

Fiscal Year End	Annual OPEB Cost	Plan Contributions*	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
6/30/2007	957,139	410,870	42.9%	546,269

\* Assumes pay-as-you-go funding for Fiscal Year Ending June 30, 2008

## VII. SCHEDULE OF FUNDING PROGRESS

### A. Actuarial Present Value of Total Projected Benefits

Actuarial Present Value of Total Projected Benefits (APV) is the actuarial present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Set forth below are the results of the valuation of the present value of future benefits as of the valuation date, July 1, 2007.

### B. Actuarial Accrued Liability

Actuarial Accrued Liability (AAL-PUC) is defined as the actuarial present value of benefits allocated to all periods prior to the valuation date. The Projected Unit Credit (PUC) Actuarial Cost Method was used to allocate costs to various years. Set forth below are the results of the valuation of the AAL-PUC as of the valuation date, July 1, 2007.

1.	Actuarial Present Value of total projected benefits		
	a. APV, Active participants total	\$	8,066,152
	b. APV, Retirees		6,251,236
	c. Total APV, [(a) + (b)]	\$	14,317,388
2.	Actuarial Accrued Liability		
	a. AAL-PUC, Active participants total	\$	4,416,730
	b. AAL-PUC, Retirees		6,251,236
	c. Total AAL-PUC, [(a) + (b)]	\$	10,667,966
3.	Fair Value of Assets	\$	0
4.	Statement of Funded Status as of July 1, 2007		
	a. Actuarial Present Value - total projected benefits, [(1.c)]	\$	14,317,388
	b. Future accruals for active participants		3,649,422
	c. Actuarial Accrued Liability, [(2.c)]		10,667,966
	d. Fair Value of Assets, [(3)]		0
	e. Funded status, [(d) - (c)]	\$	(10,667,966)
	f. Unfunded Actuarial Accrued Liability (UAAL)		10,667,966

## VII. SCHEDULE OF FUNDING PROGRESS (cont'd)

### C. Fair Value of Assets - Reconciliation of Plan Assets through June 30, 2008

The following table projects the reconciliation of the change in the market value of assets over the past plan year based upon financial information provided by Town of Manchester-by-the-Sea, Massachusetts:

1.	Market Value of Assets July 1, 2007	\$	0
2.	Additions during the year		
	a. Town's contributions expected to fund	\$	327,627
	b. Town's allocation for implicit rate subsidy		83,243
	c. Retiree contributions		82,435
	d. Medicare Part D Subsidy payment		0
	e. Interest earned		0
	f. Total additions	\$	493,305
3.	Disbursements during the year		
	a. Actual benefit payments		N/A
	b. Allocation for expected benefit payments	\$	(410,062)
	c. Allocation for implicit rate subsidy		(83,243)
	d. Other disbursements from fund		0
	e. Total disbursements	\$	(493,305)
4.	Market Value of Assets June 30, 2008	\$	0
5.	Estimated investment rate of return (net of expenses)		N/A

### D. Funded Ratio and UAAL as a Percentage of Covered Payroll

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
7/1/2007	N/A	10,667,966	10,667,966	N/A	3,195,687	333.8%

## VIII. AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

Actuarial Accrued Liability is amortized over 30 or fewer years. The 30 year level dollar amortization is presumed to be established on an open amortization basis. This means that the period of amortization is reset each year to be 30 years.

	Initial Amount	Date of First Charge or (Credit)	Amort. Period (years)	Amort. Interest Rate	Outstanding Balance (beg. of year)	Amort. Charge or (Credit)
Initial UAAL	10,667,966	7/1/2007	30.00	4.00%	10,667,966	593,201
UAAL from amendments	0	N/A	N/A	N/A	0	0
UAAL (gain)/loss	0	N/A	N/A	N/A	0	0

## IX. BREAKOUT OF LIABILITY BY GROUP

<b>A. Headcounts</b>	<b>Police</b>	<b>Fire</b>	<b>Town</b>	<b>School</b>	<b>Total</b>
1. Actives	18	13	39	0	70
2. Retirees	9	7	21	16	53
3. Total	27	20	60	16	123
4. Payroll for Actives	\$ 734,844	\$ 620,802	\$ 1,840,041	\$ 0	\$ 3,195,687
5. UAAL as a Percentage of Payroll	466.2%	246.9%	243.4%	N/A	333.8%
 <b>B. Actuarial Accrued Liability</b>					
<b>Medical:</b>					
1. Actives	\$ 1,290,973	\$ 671,497	\$ 2,438,456	\$ 0	\$ 4,400,926
2. Retirees	\$ 2,122,881	\$ 853,491	\$ 2,009,044	\$ 1,212,277	\$ 6,197,693
3. Total	\$ 3,413,854	\$ 1,524,988	\$ 4,447,500	\$ 1,212,277	\$ 10,598,619
4. Normal Cost	\$ 66,618	\$ 64,227	\$ 195,264	\$ 0	\$ 326,109
 <b>Life:</b>					
1. Actives	\$ 4,733	\$ 1,870	\$ 9,201	\$ 0	\$ 15,804
2. Retirees	\$ 7,010	\$ 6,045	\$ 22,043	\$ 18,445	\$ 53,543
3. Total	\$ 11,743	\$ 7,915	\$ 31,244	\$ 18,445	\$ 69,347
4. Normal Cost	\$ 220	\$ 146	\$ 650	\$ 0	\$ 1,016
 <b>Total:</b>					
1. Actives	\$ 1,295,706	\$ 673,367	\$ 2,447,657	\$ 0	\$ 4,416,730
2. Retirees	\$ 2,129,891	\$ 859,536	\$ 2,031,087	\$ 1,230,722	\$ 6,251,236
3. Total	\$ 3,425,597	\$ 1,532,903	\$ 4,478,744	\$ 1,230,722	\$ 10,667,966
4. Normal Cost	\$ 66,838	\$ 64,373	\$ 195,914	\$ 0	\$ 327,125
 <b>C. Annual Required Contribution</b>					
1. Normal Cost with interest	\$ 69,512	\$ 66,948	\$ 203,751	\$ 0	\$ 340,210
2. Amortization of UAAL	\$ 198,102	\$ 88,648	\$ 259,007	\$ 71,172	\$ 616,929
3. Total	\$ 267,614	\$ 155,595	\$ 462,757	\$ 71,172	\$ 957,139
<b>D. Expected Benefit Payments</b>	\$ 131,465	\$ 41,316	\$ 134,797	\$ 103,292	\$ 410,870

## **X. CASH FLOW PROJECTIONS**

The Plan liability will be satisfied through the payment of benefits for current and future retirees. Using the same assumptions for retirement, mortality, and increases in claims costs that were used to perform the valuation, the cash requirements are projected for each of the next fifteen years. The cash requirements are based on projected claims costs, less retiree contributions, if applicable, for both current and future retirees.

The cash flow projections show costs under the current funding (Pay-as-You-Go), compared to the Annual Required Contribution (ARC). The Total ARC equals the sum of the Normal Cost, Interest Cost, and Amortization Payment. The projections show total cash flows for the thirty year open amortization method. This means that the period of amortization is reset each year to be 30 years. Amortization may also be allowed as a percent of payroll under the GASB standards, or may be on a closed basis amortization. This means that the period of amortization decreases each year by one year. The first year amortization period being 30 years, the second being 29 years and so forth until in the thirtieth year the amortization period is 1 year.

The projections below are prepared on a closed group basis, meaning no new employees are added to the existing population for future years.

The cost projection in subsection A below, Projection with No Prefunding, applies only if the plan is not prefunded and contributions are only the Pay-As-You-Go (PAYGO) costs. The ARC for years after June 30, 2008 increases since the plan is not pre-funded.

The cost projection in subsection B below, Projection with Prefunding, applies only if the Plan is prefunded and the employer makes annual contributions to the plan equal to the ARC. If the employer does not make annual contributions or makes partial annual contributions, the ARC for years after June 30, 2008 will be higher than those shown in subsection B.

## X. CASH FLOW PROJECTIONS (cont'd)

### A. Projection with No Prefunding (4.00% discount rate)

Plan Year Ending	PAYGO	Normal Cost	Amort. Payment	Interest Cost	Annual Required Contribution
6/30/2008	\$410,870	\$327,125	\$593,202	\$36,813	\$957,140
6/30/2009	454,000	325,000	612,087	37,483	974,571
6/30/2010	473,000	321,000	629,032	38,001	988,033
6/30/2011	519,000	319,000	645,265	38,571	1,002,836
6/30/2012	539,000	318,000	659,212	39,088	1,016,300
6/30/2013	555,000	307,000	672,275	39,171	1,018,446
6/30/2014	601,000	289,000	683,992	38,920	1,011,912
6/30/2015	581,000	280,000	691,821	38,873	1,010,694
6/30/2016	565,000	263,000	700,157	38,526	1,001,684
6/30/2017	585,000	236,000	708,167	37,767	981,934
6/30/2018	591,000	218,000	712,681	37,227	967,908
6/30/2019	569,000	201,000	715,122	36,645	952,767
6/30/2020	576,000	184,000	716,807	36,032	936,839
6/30/2021	590,000	172,000	716,147	35,526	923,673
6/30/2022	599,000	158,000	712,691	34,828	905,519

## X. CASH FLOW PROJECTIONS (cont'd)

### B. Projection with Prefunding (7.50% discount rate)

Plan Year Ending	PAYGO	Normal Cost	Amort. Payment	Interest Cost	Annual Required Contribution
6/30/2008	\$410,870	\$163,164	\$557,530	\$54,052	\$774,747
6/30/2009	454,000	165,000	552,139	53,785	770,924
6/30/2010	473,000	166,000	546,685	53,451	766,137
6/30/2011	519,000	168,000	541,159	53,187	762,346
6/30/2012	539,000	170,000	535,461	52,910	758,370
6/30/2013	555,000	167,000	529,573	52,243	748,815
6/30/2014	601,000	158,000	523,222	51,092	732,313
6/30/2015	581,000	155,000	515,974	50,323	721,297
6/30/2016	565,000	147,000	508,168	49,138	704,306
6/30/2017	585,000	132,000	499,555	47,367	678,922
6/30/2018	591,000	123,000	489,420	45,931	658,351
6/30/2019	569,000	114,000	478,080	44,406	636,486
6/30/2020	576,000	104,000	465,160	42,687	611,847
6/30/2021	590,000	98,000	450,906	41,168	590,074
6/30/2022	599,000	90,000	434,946	39,371	564,317

## XI. ASSUMPTION SENSITIVITY ANALYSIS

### A. Discount Rate of 4.00% (ARC Not Contributed to Trust)

Normal Cost	\$327,125
Actuarial Accrued Liability	\$10,667,966
Annual Required Contribution	\$957,139

### B. Discount Rate of 7.50% (ARC Contributed to Trust)

Normal Cost	\$163,164
Actuarial Accrued Liability	\$7,078,518
Annual Required Contribution	\$774,747
Increase/(Decrease) to ARC in Section V	(182,392)

### C. Increase Medical Trend by 1%

Normal Cost	\$408,425
Actuarial Accrued Liability	\$12,227,280
Annual Required Contribution	\$1,131,867
Increase/(Decrease) to ARC in Section V	174,728

### D. Decrease Medical Trend by 1%

Normal Cost	\$264,725
Actuarial Accrued Liability	\$9,394,325
Annual Required Contribution	\$818,589
Increase/(Decrease) to ARC in Section V	(138,550)

## XII. PER CAPITA MEDICAL COSTS

### A. Under Age 65 Per Capita Medical Costs, July 1, 2007

1.	Annual cost for HMO Blue	
	a. Single coverage premium	6,336.84
	b. Family coverage premium	17,110.08
	c. Assumed spousal coverage premium, [(a) - (b)]	10,773.24
2.	Estimate fiscal 2008 premium cost adjusted to age 65 basis	
	a. Average age of covered participants	50.00
	b. Factor to adjust to age 65 per assumptions [1.030 ^ (65.00 - (a))]	155.80%
	c. Annual cost adjusted to fiscal 2008 age 65 basis - single coverage [(1.a) x (2.b)]	9,872.59
	d. Annual cost adjusted to fiscal 2008 age 65 basis - spousal coverage [(1.c) x (2.b)]	16,784.36

### B. Historical Medical Premiums - Monthly

		<u>7/1/2005</u>	<u>7/1/2006</u>	<u>7/1/2007</u>
1.	HMO Blue			
	a. Single Coverage	422.85	474.02	528.07
	b. Family Coverage	1,141.75	1,279.91	1,425.84
2.	Blue Choice			
	a. Single Coverage	465.75	522.11	581.64
	b. Family Coverage	1,239.53	1,549.37	1,547.95
3.	Blue Care Elect			
	a. Single Coverage	N/A	N/A	639.24
	b. Family Coverage	N/A	N/A	1,726.03
4.	Medex 3	338.22	379.15	422.38

## XII. PER CAPITA MEDICAL COSTS (cont'd)

### C. Projected Per Capita Medical Costs

		Pre-65 Medical	Post-65 Medical
1.	Annual single coverage premium cost, July 1, 2007:	6,336.84	5,068.56
2.	Annual single coverage claims cost at 65, July 1, 2007:	9,872.59	5,068.56
3.	Average age of participants :	50.00	78.16
4.	Expected annual claims costs by age:		
	<u>Age</u>	<u>Aging Assumption</u>	
	50	3.00%	6,336.84
	51	3.00%	6,526.95
	52	3.00%	6,722.75
	53	3.00%	6,924.44
	54	3.00%	7,132.17
	55	3.00%	7,346.13
	56	3.00%	7,566.52
	57	3.00%	7,793.51
	58	3.00%	8,027.32
	59	3.00%	8,268.14
	60	3.00%	8,516.18
	61	3.00%	8,771.67
	62	3.00%	9,034.82
	63	3.00%	9,305.86
	64	3.00%	9,585.04
	<b>65</b>	3.00%	<b>9,872.59</b>
	66	3.00%	10,168.77
	67	3.00%	10,473.83
	68	3.00%	10,788.05
	69	3.00%	11,111.69
	70	2.50%	11,445.04
	...		5,068.56
	75	2.00%	12,949.01
	...		5,068.56
	80	1.00%	14,296.75
	...		5,068.56
	85	0.50%	15,026.03
	...		5,068.56
	90+	0.00%	15,405.46
			5,068.56

### XIII. PARTICIPANT DATA

**A. Reconciliation of Participant Data**

	<u>Actives</u>	<u>Retirees &amp; Spouses</u>	<u>Total</u>
Total as of July 1, 2007	70	53	123

**B. Age and Service Distribution of Members**

1. Eligible Active Members:

Complete Years of Service as of July 1, 2007

<u>Attained Age</u>	<u>0-1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-29</u>	<u>30+</u>	<u>Total</u>
Under 30	-	5	-	-	-	-	-	5
30-34	1	2	1	1	-	-	-	5
35-39	-	-	1	1	1	-	-	3
40-44	-	1	1	2	1	1	-	6
45-49	3	3	5	3	3	3	-	20
50-54	1	-	1	1	2	1	-	6
55-59	1	2	2	1	2	6	3	17
60-64	-	1	-	-	2	1	1	5
65-69	-	-	-	-	1	1	-	2
70+	-	-	-	-	-	1	-	1
<b>Total</b>	<b>6</b>	<b>14</b>	<b>11</b>	<b>9</b>	<b>12</b>	<b>14</b>	<b>4</b>	<b>70</b>

2. Retired Members:

<u>Attained Age</u>	<u>Retirees</u>
Under 55	2
55-59	4
60-64	5
65-69	9
70-74	10
75-79	5
80-84	6
85-89	8
90+	4
<b>Total</b>	<b>53</b>

### XIII. PARTICIPANT DATA (cont'd)

**C. Participant Statistics**

1. Eligible Active Members:

	<b>Police</b>	<b>Fire</b>	<b>Town</b>	<b>School</b>	<b>Total</b>
Count:	18	13	39	0.0	70
Average age:	46.9	41.6	51.7	N/A	48.6
Average past service:	16.8	9.9	12.9	N/A	13.4
Average future service until retirement:	10.7	15.0	11.3	N/A	11.8
Average age of retirement:	57.6	56.6	63.0	N/A	60.4

2. Retired Members and Spouses:

	<b>Police</b>	<b>Fire</b>	<b>Town</b>	<b>School</b>	<b>Total</b>
Member count under 65:	4	1	4	2	11
Average age under 65:	59.8	54.2	55.2	63.2	58.2
Member count over 65:	5	6	17	14	42
Average age over 65:	67.7	70.9	80.2	82.6	78.2
Average age of all members:	64.2	68.5	75.4	80.2	74.0

3. All Active and Retired Members Participating in Non-Medex Coverage:

Average age of all divisions: 50.0

## XIV. GLOSSARY FOR OPEB AND GASB 45

Actuarial Accrued Liability (AAL) – That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value (APV) of plan benefits and expenses allocated to all periods prior to the valuation date. This is the amount of the APV not provided by future Normal Costs. For example, AAL-PUC references the fact that the Projected Unit Credit Actuarial Cost Method was used to allocate costs to various years.

- a) 100% of the actuarial present value of benefits expected to be paid (APV) to:
  - i) Retirees and their dependants
  - ii) Active employees who have attained their expected retirement date and their dependants
- b) Proportionate amount, based on employee service recognized up to the valuation date, of the actuarial present value of benefits expected to be paid (AAL) for active employees who have not yet attained their expected retirement date.

The AAL is the benefit obligation disclosed in the financial statements representing current plan liability.

Active Plan Participant – Any active employee who has rendered service during the credited service period and is expected to receive benefits, including benefits to or for any beneficiaries and covered dependents, under the Postemployment benefit plan.

Actuarial Cost Method or Funding Method – A procedure for determining the Actuarial Present Value of OPEB plan benefits and expenses and for developing an actuarial equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

Actuarial Present Value of Total Projected Benefits (APV) – The actuarial present value of the cost to finance, as of a specified date, all future benefit costs or a series of benefit costs, with each amount adjusted to reflect (a) the time value of money (through discounts for interest) and (b) the probability of payment (for example, by means of decrements for events such as death, disability, withdrawal or retirement) between the specified date and the expected date of payment. This includes benefits to current active members, terminated employees entitled to benefits but not yet receiving them, if any, retirees, their beneficiaries and any covered dependents pursuant to the terms of the OPEB plan. Expressed another way, 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.

Amortization Payment – That portion of the plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability (UAAL).

Annual Required Contribution of the Employer (ARC) – The amount recognized in an employer's financial statement as the required annual contribution to a defined benefit OPEB plan. Components include normal cost, interest cost, actual return on OPEB liability/asset, gain and loss, amortization of gains and losses.

Attribution Period – The period of an employee's service to which the actuarial present value of total projected benefits for that employee is assigned. The beginning of that period is generally the employee's date of hire and the end of the attribution period is the full eligibility date.

## XIV. GLOSSARY FOR OPEB AND GASB 45

Discount Rate – The interest rate used in developing present values to reflect the time value of money.

The discount rate is used to determine the present value, as of the valuation date, of future cash flows currently expected to be required to satisfy the OPEB obligation.

Determined as the rate of investment return used to discount future cash flows currently expected to be required to satisfy the Postemployment obligation. The discount rate assumption should be based on the rates of return on high quality, fixed-income investments currently available whose cash flows match the timing and amount of expected payments.

Full Eligibility Date – The date at which an employee has rendered all service necessary to receive full benefits under the plan.

Gains and Losses – Changes in the Unfunded Actuarial Accrued Liability (UAAL) that is the result of actual experience of the plan being different than what was expected.

Health Care Cost Trend Rate (HCCTR) – An assumption about the annual rate(s) of change in the cost of health care benefits which are currently provided by the Postemployment benefit plan, due to factors other than changes in the composition of the plan population by age and dependency status, for each year from the measurement date until the end of the period in which benefits are expected to be paid. The Health Care Cost Trend Rate implicitly considers estimates of health care inflation, changes in health care utilization or delivery patterns, technological advances, and changes in the health status of the plan participants.

Differing types of service, such as hospital care and dental care, may have different trend rates as may service for different portions of the plan population, such as Medicare eligible and non-Medicare eligible members.

Implicit Rate Subsidy – It is a common practice in to permit retired employees to continue in the town's group health insurance plan at their own cost once eligibility for town paid benefits is exhausted. This practice creates an OPEB liability based on the theory that retirees have higher utilization of health care benefits than active employees. Therefore, unless the premium rate for retirees is set to fully recover their health costs, the premium for active employees is implicitly overstated to subsidize utilization by retirees. This is called implicit rate subsidy. This rate subsidy is considered a benefit subject to OPEB valuation, included in GASB45.

The OPEB liability normally includes the cost of the implicit rate subsidy for the years in which the retiree is paying the insurance costs for continued coverage. When the retiree is eligible for Medicare, the cost of coverage is generally much closer to the premium cost. Therefore, there is no OPEB liability assumed for Medicare-eligible retirees paying 100% of the premium.

Interest Cost (component of Annual Required Contribution (ARC)) – The accrual of interest on the Normal Cost and Amortization of UAAL for the year of the valuation. It is calculated by applying the beginning of year Discount Rate to the sum of the NC and UAAL as of the beginning of year.

Market Value (or Fair Value) of Plan Assets – The amount that a plan could reasonable expect to receive for an investment in a current sale between a willing buyer and a willing seller.

## XIV. GLOSSARY FOR OPEB AND GASB 45

Market-Related Value of Plan Assets – A balance used to calculate the Expected Return of Plan Assets. Market-related value can be either fair value or a calculated value that recognizes changes in fair value in a systematic and rational manner over not more than five years.

Normal Cost (component of Annual Required Contribution (ARC)) – The portion of the Actuarial Present Value of Total Projected Benefits (APV) attributed to employee service during a valuation year by the Actuarial Cost Method.

OPEB Assets – The amount recognized by an employer for contributions to an OPEB plan greater than the OPEB expense.

OPEB Expenditures – The amount recognized by an employer in each accounting period for contributions to an OPEB plan on the modified accrual basis of accounting.

OPEB Expense – The amount recognized by an employer in each accounting period for contributions to an OPEB plan on the accrual basis of accounting.

OPEB Liabilities – The amount recognized by an employer in each accounting period for contributions to an OPEB plan less than OPEB expense/expenditures.

Open Group/Closed Group – Terms used to distinguish between two classes of Actuarial Cost Methods. Under an Open Group Actuarial Cost Method, Actuarial Present Values associated with expected future entrants are considered; under a Closed Group Actuarial Cost Method, Actuarial Present Values associated with expected future entrants are not considered.

Pay-As-You-Go (PAYGO) – A method of expensing retiree medical benefits recognizing as an expense the cash currently paid as benefits to retirees, spouses and covered dependents. The minimum method of financing a plan, having no pre-funding until benefits actually become payable.

Per Capita Benefit Cost by Age – The current cost of providing OPEB health care benefits for one year at each age from the youngest age to the oldest age at which plan participants are expected to receive benefits under the plan.

Plan Assets – Assets which have been irrevocably dedicated to the payment of benefits under the plan.

Postemployment – The period between termination of employment and retirement as well as the period after retirement.

Postemployment Benefits – All forms of benefits, other than retirement income (pensions), provided by the employer to the retiree, including, but not limited to, health care, life insurance and legal assistance.

## **XIV. GLOSSARY FOR OPEB AND GASB 45**

Projected Unit Credit Actuarial Cost Method -- A method under which the projected benefits of each individual included in an 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 Present Value of benefits allocated to all periods prior to a valuation year is called the Actuarial Accrued Liability.

Substantive Plan – The terms of a postemployment benefit plan as understood by an employer and plan members that provides postemployment benefits to the employees who render services in exchange for those benefits. The substantive plan is the basis for the accounting for this transaction. In some situations an employer’s cost-sharing policy, as evidenced by past practice or by communication of intended changes to a plan’s cost-sharing provisions, or a past practice of regular increases in certain monetary benefits may indicate that the substantive plan differs from the existing written plan.

Unfunded Actuarial Accrued Liability (UAAL) -- The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

Valuation Date – The date as of which the plan assets and OPEB obligations are measured.