## Town of Georgetown Other Postemployment Benefits Plan

## **GASB 45 Actuarial Valuation**

as of

## <u>July 1, 2010</u>

For the fiscal year ending

## June 30, 2011

Delivered July 2010

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July 14, 2010

Personal and Confidential

Mr. Michael Farrell Interim Town Administrator Town of Georgetown 1 Library Street Georgetown, MA 01833

Dear Mr. Farrell:

We have performed an actuarial valuation of the Town of Georgetown Other Postemployment Benefits Plan for the fiscal year ending June 30, 2011. The figures presented in this report reflect the adoption, by the Town of Georgetown, of Statement No. 45 of the Governmental Accounting Standards Board ("GASB 45") effective July 1, 2008.

The financial results of the actuarial valuation are summarized in the report. The Executive Summaries highlight the results of the valuation. Additional information summarizing census data, actuarial assumptions, claim rates 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 costs, liabilities and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the plan and reasonable expectations and, in combination, represent our best estimate of the anticipated experience under the plan.

We refer you to Section I of this report for a detailed summary and commentary on the results of the valuation and a comparison with the prior valuation. Section II is a summary of the plan provisions, and Section III describes the actuarial cost method and assumptions. Details for cost calculations, supporting data, and disclosures are provided in Exhibits A through C.

We will be pleased to answer any questions that you may have regarding this actuarial valuation report.

Very truly yours,

Parker E. Elmore, A.S.A., E.A., M.A.A.A. President & CEO

Enclosure

#### PRINCIPAL RESULTS OF THE VALUATION

### Town of Georgetown **Comparison of Plan Liabilities to Prior Valuation**

		<u>July 1, 2010</u>	<u>July 1, 2008</u>
I.	<ul><li>Actuarial Accrued Liability (Projected Unit Credit)</li><li>A. Actives</li><li>B. Retirees</li><li>C. Total</li></ul>	5,513,715 <u>12,987,738</u> 18,501,453	14,154,333 <u>16,894,256</u> 31,048,589
II.	Plan Assets	0	0
III.	Unfunded Actuarial Accrued Liability ("UAAL")	18,501,453	31,048,589
IV.	Unrecognized Transition Obligation	33,321,764	31,048,589
V.	Annual Covered Payroll	N/A	N/A
VI.	UAAL as % of Covered Payroll	N/A	N/A
VII.	Net OPEB Obligation	3,114,748	0
VIII.	<ul><li>Number of Covered Participants</li><li>A. Actives</li><li>B. Retirees</li><li>C. Total</li></ul>	159 <u>130</u> 289	157 <u>170</u> 327
	For the Fiscal Year Ending:	<u>June 30, 2011</u>	<u>June 30, 2009</u>
IX.	For the Fiscal Year Ending: Normal Cost	<u>June 30, 2011</u> 496,399	<b>June 30, 2009</b> 1,378,846
IX. X.	-		
	Normal Cost	496,399	1,378,846
X.	Normal Cost Amortization of UAAL (30 years - increasing 4.5% per year)	496,399 1,190,063	1,378,846 1,089,776
X. XI.	Normal Cost Amortization of UAAL (30 years - increasing 4.5% per year) Annual Required Contribution ("ARC") [ IX. + X.]	496,399 1,190,063 1,686,462	1,378,846 1,089,776 2,468,622
X. XI. XII. XIII.	Normal Cost Amortization of UAAL (30 years - increasing 4.5% per year) Annual Required Contribution ("ARC") [ IX. + X.] Interest on Net OPEB Obligation	496,399 1,190,063 1,686,462 124,589	1,378,846 1,089,776 2,468,622 0
X. XI. XII. XIII. XIV.	Normal Cost Amortization of UAAL (30 years - increasing 4.5% per year) Annual Required Contribution ("ARC") [ IX. + X.] Interest on Net OPEB Obligation Adjustment to Annual Required Contribution	496,399 1,190,063 1,686,462 124,589 (179,735)	1,378,846 1,089,776 2,468,622 0 0
X. XI. XII. XIII. XIV. XV.	Normal Cost Amortization of UAAL (30 years - increasing 4.5% per year) Annual Required Contribution ("ARC") [ IX. + X.] Interest on Net OPEB Obligation Adjustment to Annual Required Contribution Annual OPEB Cost [XI. + XII. + XIII.]	496,399 1,190,063 1,686,462 124,589 (179,735) 1,631,316	1,378,846 1,089,776 2,468,622 0 0 2,468,622
X. XI. XII. XIII. XIV. XV. XVI.	Normal Cost Amortization of UAAL (30 years - increasing 4.5% per year) Annual Required Contribution ("ARC") [ IX. + X.] Interest on Net OPEB Obligation Adjustment to Annual Required Contribution Annual OPEB Cost [XI. + XII. + XIII.] Expected Employer Contribution	496,399 1,190,063 1,686,462 124,589 (179,735) 1,631,316 726,693	1,378,846 1,089,776 2,468,622 0 0 2,468,622 911,248
X. XI. XII. XIII. XIV. XV. XVI. XVII	Normal Cost Amortization of UAAL (30 years - increasing 4.5% per year) Annual Required Contribution ("ARC") [ IX. + X.] Interest on Net OPEB Obligation Adjustment to Annual Required Contribution Annual OPEB Cost [XI. + XII. + XIII.] Expected Employer Contribution Percentage of Annual OPEB Cost Contributed	496,399 1,190,063 1,686,462 124,589 (179,735) 1,631,316 726,693 44.5%	1,378,846 1,089,776 2,468,622 0 2,468,622 911,248 36.9%

Town of Georgetown Other Postemployment Benefits Plan Actuarial Valuation as of July 1, 2010 July 2010 Page 1

#### PRINCIPAL RESULTS OF THE VALUATION (continued)

# Town of Georgetown

## Plan Liabilities as of July 1, 2010 <u>Medical Dental</u>

Life

Total

I.	Actuarial Accrued Liability (Projected Unit Credit) A. Actives B. Retirees C. Total	4,910,921 <u>12,176,751</u> 17,087,672	587,770 <u>717,356</u> 1,305,126		5,513,715 <u>12,987,738</u> 18,501,453
II.	Plan Assets	0	0	0	0
III.	Unfunded Actuarial Accrued Liability ("UAAL")	17,087,672	1,305,126	108,655	18,501,453
IV.	Unrecognized Transition Obligation	30,766,204	2,362,080	193,480	33,321,764
V.	Annual Covered Payroll	N/A	N/A	N/A	N/A
VI.	UAAL as % of Covered Payroll	N/A	N/A	N/A	N/A
VII.	Net OPEB Obligation	2,876,736	219,720	18,292	3,114,748
VIII.	Number of Covered Participants A. Actives B. Retirees C. Total For Fiscal Year Ending June 30, 2011	159 <u>130</u> 289	159 <u>94</u> 253	159 <u>128</u> 287	
IX.	Normal Cost	421,174	74,243	982	496,399
X.	Amortization of UAAL - 30 year increase 4.5% per yr	1,098,793	84,360	6,910	1,190,063
XI.	Annual Required Contribution ("ARC") [ IX. + X.]	1,519,967	158,603	7,892	1,686,462
XII.	Interest on Net OPEB Obligation	115,069	8,789	731	124,589
XIII.	Adjustment to Annual Required Contribution	(166,001)	(12,679)	(1,055)	(179,735)
XIV.	Annual OPEB Cost [XI. + XII. + XIII.]	1,469,035	154,713	7,568	1,631,316
XV.	Expected Employer Contribution	674,278	45,911	6,504	726,693
XVI.	Percentage of Annual OPEB Cost Contributed	45.9%	29.7%	85.9%	44.5%
XVII	. Net OPEB Obligation at Beginning of Year (VII.)	2,876,736	219,720	18,292	3,114,748
XVII	I. Increase in Net OPEB Obligations (XIV XV.)	794,757	108,802	1,064	904,623
XIX.	Net OPEB Obligation at End of Year (XVII. + XVIII.)	3,671,493	328,522	19,356	4,019,371

### PRINCIPAL RESULTS OF THE VALUATION

(continued)

#### Town of Georgetown Education Department Plan Liabilities as of July 1, 2010

		Medical	<u>Dental</u>	<u>Life</u>	<u>Total</u>
I.	<ul><li>Actuarial Accrued Liability (Projected Unit Credit)</li><li>A. Actives</li><li>B. Retirees</li><li>C. Total</li></ul>	2,982,716 <u>8,790,479</u> 11,773,195	373,645 <u>552,816</u> 926,461	9,717 <u>69,792</u> 79,509	3,366,078 <u>9,413,087</u> 12,779,165
II.	Plan Assets	0	0	0	0
III.	Unfunded Actuarial Accrued Liability ("UAAL")	11,773,195	926,461	79,509	12,779,165
IV.	Unrecognized Transition Obligation	20,146,028	1,585,332	136,052	21,867,412
V.	Annual Covered Payroll	N/A	N/A	N/A	N/A
VI.	UAAL as % of Covered Payroll	N/A	N/A	N/A	N/A
VII.	Net OPEB Obligation	1,986,994	151,763	12,635	2,151,392
VIII.	Number of Covered Participants A. Actives B. Retirees C. Total	113 <u>93</u> 206	113 <u>75</u> 188	113 <u>110</u> 223	
	For Fiscal Year Ending June 30, 2011				
IX.	Normal Cost	270,205	52,716	664	323,585
Х.	Amortization of UAAL - 30 year increase 4.5% per yr	719,501	56,619	4,859	780,979
XI.	Annual Required Contribution ("ARC") [ IX. + X.]	989,706	109,335	5,523	1,104,564
XII.	Interest on OPEB Obligation	79,480	6,071	505	86,056
XIII.	Adjustment to Annual Required Contribution	(114,659)	(8,757)	(729)	(124,145)
XIV.	Annual OPEB Cost [XI. + XII. + XIII.]	954,527	106,649	5,299	1,066,475
XV.	Expected Employer Contribution	477,943	35,927	4,815	518,685
XVI.	Percentage of Annual OPEB Cost Contributed	50.1%	33.7%	90.9%	48.6%
XVII.	Net OPEB Obligation at Beginning of Year (VII.)	1,986,994	151,763	12,635	2,151,392
XVIII	. Increase in Net OPEB Obligations (XIV XV.)	476,584	70,722	484	547,790
XIX.	Net OPEB Obligation at End of Year (XVII. + XVIII.)	2,463,578	222,485	13,119	2,699,182

## PRINCIPAL RESULTS OF THE VALUATION

(continued)

### Town of Georgetown General Government Employees Plan Liabilities as of July 1, 2010

		Medical	Dental	Life	<u>Total</u>
I.	<ul><li>Actuarial Accrued Liability (Projected Unit Credit)</li><li>A. Actives</li><li>B. Retirees</li><li>C. Total</li></ul>	1,440,493 <u>1,776,253</u> 3,216,746	152,846 <u>87,945</u> 240,791	4,206 <u>12,000</u> 16,206	1,597,545 <u>1,876,198</u> 3,473,743
II.	Plan Assets	0	0	0	0
III.	Unfunded Actuarial Accrued Liability ("UAAL")	3,216,746	240,791	16,206	3,473,743
IV.	Unrecognized Transition Obligation	7,125,720	533,400	35,896	7,695,016
V.	Annual Covered Payroll	N/A	N/A	N/A	N/A
VI.	UAAL as % of Covered Payroll	N/A	N/A	N/A	N/A
VII.	Net OPEB Obligation	540,122	41,254	3,434	584,810
VIII.	Number of Covered Participants A. Actives B. Retirees C. Total	32 <u>19</u> 51	32 <u>10</u> 42	32 <u>19</u> 51	
	For Fiscal Year Ending June 30, 2011				
IX.	Normal Cost	106,621	14,196	223	121,040
X.	Amortization of UAAL - 30 year increase 4.5% per yr	254,490	19,050	1,282	274,822
XI.	Annual Required Contribution ("ARC") [ IX. + X.]	361,111	33,246	1,505	395,862
XII.	Interest on OPEB Obligation	21,605	1,650	137	23,392
XIII.	Adjustment to Annual Required Contribution	(31,168)	(2,381)	(198)	(33,747)
XIII.	Annual OPEB Cost [XI. + XII. + XIII.]	351,548	32,515	1,444	385,507
XIV.	Expected Employer Contribution	107,233	5,833	800	113,866
XVI.	Percentage of Annual OPEB Cost Contributed	30.5%	17.9%	55.4%	29.5%
XVII	Net OPEB Obligation at Beginning of Year (VII.)	540,122	41,254	3,434	584,810
XVII	I. Increase in Net OPEB Obligations (XIV XV.)	244,315	26,682	644	271,641
XIX.	Net OPEB Obligation at End of Year (XVII. + XVIII.)	784,437	67,936	4,078	856,451
Town	of Georgetown Other Postemployment Benefits Plan				

Town of Georgetown Other Postemployment Benefits Plan Actuarial Valuation as of July 1, 2010 July 2010

### PRINCIPAL RESULTS OF THE VALUATION

(continued)

#### Town of Georgetown Light Department Plan Liabilities as of July 1, 2010

		Medical	Dental	<u>Life</u>	<u>Total</u>
I.	<ul><li>Actuarial Accrued Liability (Projected Unit Credit)</li><li>A. Actives</li><li>B. Retirees</li><li>C. Total</li></ul>	274,946 <u>1,316,568</u> 1,591,514	31,006 <u>57,860</u> 88,866	664 <u>9,193</u> 9,857	306,616 <u>1,383,621</u> 1,690,237
II.	Plan Assets	0	0	0	0
III.	Unfunded Actuarial Accrued Liability ("UAAL")	1,591,514	88,866	9,857	1,690,237
IV.	Unrecognized Transition Obligation	2,317,700	129,416	14,364	2,461,480
V.	Annual Covered Payroll	N/A	N/A	N/A	N/A
VI.	UAAL as % of Covered Payroll	N/A	N/A	N/A	N/A
VII.	Net OPEB Obligation	262,810	20,073	1,671	284,554
VIII.	<ul><li>Number of Covered Participants</li><li>A. Actives</li><li>B. Retirees</li><li>C. Total</li></ul>	7 <u>14</u> 21	7 <u>6</u> 13	7 <u>14</u> 21	
	For Fiscal Year Ending June 30, 2011				
IX.	Normal Cost	17,917	3,182	40	21,139
X.	Amortization of UAAL - 30 year increase 4.5% per yr	82,775	4,622	513	87,910
XI.	Annual Required Contribution ("ARC") [ IX. + X.]	100,692	7,804	553	109,049
XII.	Interest on OPEB Obligation	10,512	803	67	11,382
XIII.	Adjustment to Annual Required Contribution	(15,165)	(1,158)	(96)	(16,419)
XIII.	Annual OPEB Cost [XI. + XII. + XIII.]	96,039	7,449	524	104,012
XIV.	Expected Employer Contribution	71,401	2,925	723	75,049
XVI.	Percentage of Annual OPEB Cost Contributed	74.3%	39.3%	138.0%	72.2%
XVII	Net OPEB Obligation at Beginning of Year (VII.)	262,810	20,073	1,671	284,554
XVII	I. Increase in Net OPEB Obligations (XIV XV.)	24,638	4,524	(199)	28,963
XIX.	Net OPEB Obligation at End of Year (XVII. + XVIII.)	287,448	24,597	1,472	313,517

### PRINCIPAL RESULTS OF THE VALUATION

(continued)

#### Town of Georgetown Water Department Plan Liabilities as of July 1, 2010

		Medical	Dental	Life	<u>Total</u>
I.	<ul><li>Actuarial Accrued Liability (Projected Unit Credit)</li><li>A. Actives</li><li>B. Retirees</li><li>C. Total</li></ul>	212,766 <u>293,451</u> 506,217	30,273 <u>18,735</u> 49,008	437 <u>2,646</u> 3,083	243,476 <u>314,832</u> 558,308
II.	Plan Assets	0	0	0	0
III.	Unfunded Actuarial Accrued Liability ("UAAL")	506,217	49,008	3,083	558,308
IV.	Unrecognized Transition Obligation	1,176,756	113,932	7,168	1,297,856
V.	Annual Covered Payroll	N/A	N/A	N/A	N/A
VI.	UAAL as % of Covered Payroll	N/A	N/A	N/A	N/A
VII.	Net OPEB Obligation	86,810	6,630	552	93,992
VIII.	A. Actives B. Retirees C. Total	7 <u>4</u> 11	7 <u>3</u> 10	7 <u>4</u> 11	
	For Fiscal Year Ending June 30, 2011				
IX.	Normal Cost	26,431	4,149	55	30,635
Х.	Amortization of UAAL - 30 year increase 4.5% per yr	42,027	4,069	256	46,352
XI.	Annual Required Contribution ("ARC") [ IX. + X.]	68,458	8,218	311	76,987
XII.	Interest on OPEB Obligation	3,472	265	22	3,759
XIII.	Adjustment to Annual Required Contribution	(5,009)	(383)	(32)	(5,424)
XIII.	Annual OPEB Cost [XI. + XII. + XIII.]	66,921	8,100	301	75,322
XIV.	Expected Employer Contribution	17,701	1,226	166	19,093
XVI.	Percentage of Annual OPEB Cost Contributed	26.5%	15.1%	55.1%	25.3%
XVII	Net OPEB Obligation at Beginning of Year (VII.)	86,810	6,630	552	93,992
XVII	I. Increase in Net OPEB Obligations (XIV XV.)	49,220	6,874	135	56,229
XIX.	Net OPEB Obligation at End of Year (XVII. + XVIII.)	136,030	13,504	687	150,221

Town of Georgetown Other Postemployment Benefits Plan Actuarial Valuation as of July 1, 2010 July 2010 Page 6

#### Commentary on Plan Experience and Contribution Amounts

#### 1. Transition to GASB 45:

The Plan adopted and implemented GASB 45 ("Accounting and Financial Reporting by Employers for Postemployment Benefits other than Pensions") effective for the fiscal year ending June 30, 2008. As part of this implementation, the Employer must recognize the Actuarial Accrued Liability for past service. Under GASB 45, this amount may be amortized over a period not to exceed thirty (30) years. The Unfunded Actuarial Accrued Liability ("UAAL") at transition was amortized over a 30 year period with amortization payments increasing at 4.50% per year. This approach yields an amortization charge of \$1,190,063. Additionally the Employer must recognize a "normal cost" which represents the annual accrual of benefits for current active employees toward their ultimate postemployment benefits. The normal cost for the 2011 fiscal year is \$496,399. The combined amortization charge and normal cost represent the Annual Required Contribution ("ARC") for the plan for the 2011 fiscal year. As the Employer has chosen to continue their "pay-as-you-go" funding policy, this valuation must utilize a discount rate which represents earnings on short term investments. For this discount rate, we have used 4.00% per annum. The incremental cost of GASB 45 for the 2011 fiscal year beyond the "pay-as-you-go" costs is \$904,623.

#### 2. <u>Plan Experience</u>

Plan experience was much more favorable than expected. The change from the Medex 3 plan to the Medex 2 plan alone was responsible for nearly a 35% reduction in expected future liabilities under the Plan. Additionally, plan experience in terms of expected increases in medical costs was far more favorable than expected. As an example, based on the prior valuation and expected medical inflation, we would have expected HMO Blue monthly individual premium rates of \$751.61 as of July 1, 2010 vs. the current rates of \$669.35. The Medex 3 rate was expected to be \$738.88 per month vs. the current Medex 2 rate of \$397.45 per month. The lower than expected increase in medical premiums plus the change in the post-65 medical plan from Medex 3 to Medex 2 resulted in nearly a 45% reduction in future medical costs from that which would have been expected.

#### SUMMARY OF PLAN PROVISIONS

Effective Date	July 1, 2008; GASB 45 is adopted.
<u>Plan Year</u>	July 1 through June 30.
<u>Eligibility</u>	An employee shall become eligible to retire under this plan upon attainment of age 55 as an active member and completion of 10 years of service.
Credited Service	Elapsed time from date of hire to termination of service date.
Participant Contributions	Premiums for Medical insurance vary by plan selected ranging from 31% to 40% of underlying gross premiums. Retirees contribute 50% of premiums for both Dental insurance and Life Insurance.
Benefits Offered	Various Medical Insurance offerings via the Blue Cross Blue Shield of Massachusetts, Comprehensive Dental Insurance and Group Term Life Insurance through Boston Mutual.
Normal Retirement Date	The normal retirement date is the first day of the month following a participant's 65th birthday.
Early Retirement	Early retirement is available for any participant who has attained benefit eligibility.

#### ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

#### A. <u>ACTUARIAL COST METHOD</u>

The actuarial cost method used to calculate the costs and liabilities of the plan is the Projected Unit Credit Actuarial Cost Method. Under this method, the normal cost and actuarial accrued liability are both based on an accrual of projected benefits over the period for which benefits are accrued. The normal cost is the actuarial present value of one year's benefit accrual on this basis. The actuarial accrued liability is the actuarial present value of the projected benefit times the ratio of past service to total service.

Actuarial gains and losses are calculated each year and amortized over the minimum and maximum periods allowed by law from the year of such gain or loss.

All employees who are plan participants on a valuation date are included in the actuarial valuation.

#### B. ASSET VALUATION METHOD

The actuarial value of assets is equal to the Market Value of the Plan's assets.

#### ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

#### C. ACTUARIAL ASSUMPTIONS

**Employee Termination** 

We used the following assumptions in this year's actuarial valuation:

<u>Pre- and Post-Retirement Mortality</u>	It is assumed that both pre-retirement and post-retirement mortality are represented by the RP-2000 Mortality Table for males and females.
Discount Rate	4.00% per annum.

It was assumed that employees would terminate employment in accordance with the sample rates shown in the following table:

Age	Male	<u>Female</u>
25	8.78%	8.78%
30	5.55%	5.55%
35	3.93%	3.93%
40	2.31%	2.31%
45	1.89%	1.89%
50	1.46%	1.46%
55	0.00%	0.00%
60	0.00%	0.00%

### ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

(continued)

**Retirement Rates** 

It was assumed that the following percentage of eligible employees would retire each year:

Age	Male	<u>Female</u>
55	5.0%	5.0%
56	3.0%	3.0%
57	3.0%	3.0%
58	3.0%	3.0%
59	3.0%	3.0%
60	5.0%	5.0%
61	5.0%	5.0%
62	15.0%	15.0%
63	15.0%	15.0%
64	15.0%	15.0%
65	25.0%	25.0%
66	15.0%	15.0%
67	15.0%	15.0%
68	15.0%	15.0%
69	15.0%	15.0%
70	50.0%	50.0%
71	50.0%	50.0%
72	100.0%	100.0%

#### ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

#### C. ACTUARIAL ASSUMPTIONS (continued)

lt	was	assumed	that	healthcar	e costs
w	ould	increase i	n acc	ordance w	vith the
tr€	end ra	ates in the	follov	ving table:	

<u>Year</u>	<u>Medical</u>	<u>Dental</u>
FY 2008	11.0%	8.5%
FY 2009	10.0%	8.0%
FY 2010	11.3%	7.5%
FY 2011	8.0%	7.0%
FY 2012	7.0%	6.5%
FY 2013	6.0%	6.0%
FY 2014	5.0%	5.5%
FY 2015	5.0%	5.0%

#### Participation Rate

Percent Married

It was assumed that 80% of the employees covered under the active plan on the day before retirement would enroll in the retiree medical plans upon retirement. All eligible employees were assumed to be covered under the retiree life insurance program.

It was assumed that 80% of the participants who elect retiree healthcare coverage for themselves would also elect coverage for a spouse upon retirement. It was further assumed that husbands are three years older than their wives. For current retirees, the actual census information was used.

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#### ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

#### C. ACTUARIAL ASSUMPTIONS (continued)

**Compensation Increases** 

4.50% per year.

Additional Comments

The values in this report reflect a closed group and do not reflect any new entrants after the valuation date.

For purposes of this valuation, retiree contributions were assumed to increase with the same trend rate as health care claims.

#### ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

#### D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

Initial premiums were developed for the two classes of retirees (pre65 and post-65). These premiums were developed using fully insured premium rates in conjunction with census data for the retired participants of the Town of Georgetown's medical benefit program.

The pre-65 fully insured premiums are blended rates based on the combined experience of active and pre-65 retired members. Therefore, there is an implicit employer subsidy for the non-Medicare eligible retirees as the average costs of providing healthcare benefits to retirees under age 65 is higher than the average cost of providing healthcare benefits to active employees. The true per-capita cost for the non-Medicare retirees is developed by adjusting the demographic differences between the actives and retirees to reflect this implicit rate subsidy for the retirees. For the Medicare eligible retirees, the premium rate will be used as the basis of the initial pre-capita cost without adjustment as the rate reflects the actual claim experience of the post-65 retiree group.

Age graded and sex distinct premiums are utilized in this valuation. The premiums developed by the preceding process are appropriate for the existing unique age and sex distribution. Over the future years covered by this valuation, the age and sex distribution will likely change. Therefore, the process "distributes" the average premium over all age/sex combinations and assigns a unique premium for each specific age/sex combination. The age/sex specific premiums more accurately reflect the healthcare utilization and cost at that age.

Based on guidance provided by GASB on issues related to Medicare Part D payments to State and Local Governments effective as of June 30, 2006, an employer should apply the measurement requirements of GASB Statement No. 45 to determine the actuarial accrued liabilities, the annual required contribution of the employer, and the annual OPEB cost without reduction for Retiree Drug Subsidy (RDS) payments. Therefore, the impact of the RDS that is part of Medicare Prescription Drug Improvement and Modernization Act of 2003 is not reflected in this report.

#### ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS (continued)

#### D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

#### I. CLAIMS COSTS DEVELOPMENT - Based on Active & Retiree Incurred Claims & Premiums

	Number of Participants			
	Single <u>Two-Person</u> <u>Family</u> <u>Total</u>			<u>Total</u>
Blue Care Elect PPO	11		11	22
HMO Blue New England	77		71	148
Blue Choice	21		8	29
VIP 2000	3			3
Medex 2	<u>87</u>			<u>87</u>
Total	199	0	90	289

	Per Contract Costs (monthly) - FY 2011		
	<u>Single Tr</u>	wo-Person <u>Family</u>	
Blue Care Elect PPO	803.78	1,990.29	
HMO Blue New England	669.35	1,657.49	
Blue Choice	729.47	1,806.47	
VIP 2000	937.34	2,321.90	
Medex 2	397.45	794.90	

Gross Expected FY 2011 Incurred Premiums	3,205,408
Adjustment to reflect children's claims	<u>(355,492)</u>
Total Expected FY 2011 Incurred Premiums (adults only)	2,849,915

#### II. PRE-65 AND POST-65 PER CAPITA RETIREE CLAIM COSTS

	Employer	Medicare
	<b>Primary</b>	<u>Primary</u>
Age 65	10,953	3,834
Average Age	10,978	4,668

#### ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS

(continued)

#### D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

#### **III. BREAKDOWN OF CLAIM COSTS**

2,849,915 Active and Retired Claims (No Children) - Including Administrative fees & trend 65.00% Medicare Integration Percentage

#### ALL ACTIVE EMPLOYEES AND SPOUSES

	Number of	Number	Female Aging	Male Aging	Aged (F) Average	Aged (M) Average	Age Related
Age Bracket	Females	of Males	Factor	Factor	Claims	Claims	Claims
24 & Under	0	0	1.312	0.549	6,720	2,812	0
25 to 29	11	3	1.312	0.591	6,720	3,027	83,001
30 to 34	11	7	1.312	0.712	6,720	3,647	99,449
35 to 39	13	11	1.312	0.850	6,720	4,354	135,254
40 to 44	16	7	1.312	1.000	6,720	5,122	143,374
45 to 49	17	15	1.456	1.193	7,458	6,111	218,451
50 to 54	16	15	1.599	1.441	8,190	7,381	241,755
55 to 59	26	21	1.740	1.753	8,912	8,979	420,271
60 to 64	14	14	1.968	2.102	10,080	10,766	291,844
65 to 69	6	4	2.168	2.316	11,104	11,863	114,076
70 & Over	<u>6</u>	<u>3</u>	2.396	2.557	12,272	13,097	<u>112,923</u>
Total	136	100					1,860,398

#### ALL RETIREES AND SPOUSES - NOT MEDICARE ELIGIBLE

	Number		Female	Male	Aged (F)	Aged (M)	
	of	Number	Aging	Aging	Average	Average	Age Related
Age Bracket	Females	of Males	Factor	Factor	Claims	Claims	Claims
44 & Under	0	0	1.312	1.000	6,720	5,122	0
45 to 49	0	0	1.456	1.193	7,458	6,111	0
50 to 54	0	0	1.599	1.441	8,190	7,381	0
55 to 59	3	3	1.740	1.753	8,912	8,979	53,673
60 to 64	9	4	1.968	2.102	10,080	10,766	133,784
65 to 69	17	10	2.168	2.316	11,104	11,863	307,398
70 to 74	1	2	2.396	2.557	12,272	13,097	38,466
75 to 79	2	0	2.593	2.769	13,281	14,183	26,562
80 to 84	0	0	2.724	2.910	13,952	14,905	0
85 to 89	0	0	2.864	3.059	14,669	15,668	0
90 & Over	0	0	3.010	3.215	15,417	16,467	<u>0</u>
Total	32	19					559,883

#### ALL RETIREES AND SPOUSES - MEDICARE ELIGIBLE

	Number		Female	Male	Aged (F)	Aged (M)	
	of	Number	Aging	Aging	Average	Average	Age Related
Age Bracket	Females	of Males	Factor	Factor	Claims	Claims	Claims
65 to 69	9	7	2.168	2.316	3,887	4,152	64,047
70 to 74	15	17	2.396	2.557	4,295	4,584	142,353
75 to 79	9	10	2.593	2.769	4,648	4,964	91,472
80 to 84	6	4	2.724	2.910	4,883	5,217	50,166
85 to 89	3	2	2.864	3.059	5,134	5,484	26,370
90 & Over	Z	<u>3</u>	3.010	3.215	5,396	5,764	55,064
Total	49	43					429,472

2,849,753

Grand Totals 217 162 Town of Georgetown Other Postemployment Benefits Plan Actuarial Valuation as of July 1, 2010 July 2010 Page 16

#### <u>Financial Statement Disclosure</u> (As of July 1, 2010)

The GASB Standards for accounting and financial reporting for postemployment benefits other than pensions requires the following disclosures in the financial statements with regard to the retiree medical and life insurance benefits;

#### 1. A DESCRIPTION OF THE RETIREE MEDICAL INSURANCE PROGRAM:

- a. Plan Type: Comprehensive Medical via Blue Cross Blue Shield of Massachusetts
- b. Administrator: Town of Georgetown
- c. Eligibility: An employee shall become eligible to retire under this plan upon meeting attainment of age 55 as an active member and completion of 10 years of service.
- d. Cost Sharing: Varies by plan ranges from 31% to 40% of premiums

#### 2. A DESCRIPTION OF THE DENTAL LIFE INSURANCE PROGRAM:

- a. Plan Type: Comprehensive Dental
- b. Administrator: Town of Georgetown
- c. Eligibility: Same as above
- d. Cost sharing: 50% of premiums

#### 3. A DESCRIPTION OF THE RETIREE LIFE INSURANCE PROGRAM:

- a. Plan Type: Group Term Life Insurance \$2,000
- b. Administrator: Boston Mutual
- c. Eligibility: Same as above
- d. Cost sharing: 50% of premiums

#### <u>Financial Statement Disclosure</u> (As of July 1, 2010) (continued)

#### 4. RETIREE MEDICAL, DENTAL AND LIFE INSURANCE CONTRIBUTIONS:

Group	Individual	Family
Medical	Varies by plan – ranges	Varies by plan – ranges
	from 31% to 40% of	from 31% to 40% of
	premiums	premiums
Dental	50%	50%
Life	50%	50%

#### 5. FUNDING POLICY

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The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The required contribution is based on the projected pay-as-you-go financing requirements. For the 2011 fiscal year, total Town premiums plus implicit costs for the retiree medical program are \$726,693.

#### <u>Financial Statement Disclosure</u> (As of July 1, 2010) (continued)

#### 6. ANNUAL OPEB COST AND NET OPEB OBLIGATION

The Town's annual other postemployment benefit ("OPEB") cost (expense) is calculated based on the annual required contribution of the employer ("ARC"), an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty (30) years. The following table shows the components of the Town's annual OPEB costs for the fiscal year, the amount actually contributed to the plan and changes in the Town's net OPEB obligation to the plan:

Annual Required Contribution	\$1,686,462
Interest on net OPEB obligation	\$124,589
Adjustment to annual required contribution	\$(179,735)
Annual OPEB cost (expense)	\$1,631,316
Contributions made	<u>\$726,693</u>
Increase in net OPEB obligation	\$904,623
Net OPEB Obligation – beginning of year	\$3,114,748
Net OPEB Obligation – end of year	\$4,019,371

The Town's annual OPEB cost, the percentage of the annual OPEB cost contributed to the plan, and the net OPEB obligation for the 2011 fiscal year and the two preceding years were as follows:

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Increase in OPEB Obligation
06/30/2009	\$2,468,622	36.9%	\$1,557,374
06/30/2010	\$2,468,622	36.9%	\$1,557,374
06/30/2011	\$1,631,316	44.5%	\$904,623

#### Financial Statement Disclosure (As of July 1, 2010) (continued)

#### 7. FUNDED STATUS AND FUNDING PROGRESS

As of July 1, 2010, the most recent valuation date, the plan was 0.0% funded. The actuarial liability for benefits was \$18,501,453, and the actuarial value of assets was \$0.0 million, resulting in an unfunded actuarial accrued liability (UAAL) of \$18,501,453. The covered payroll (annual payroll of active employees covered by the plan) was N/A and the ratio of the UAAL to the covered payroll was N/A.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contribution of the employer are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress, presented in the required supplementary information following the financial statements, presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

#### 8. EFFECT OF 1% CHANGE IN HEALTHCARE TREND RATES

In the event that healthcare trend rates were 1% higher than forecast and employee contributions were to increase at the forecast rates, the Actuarial Accrued Liability would increase to \$22,464,687 or by 21.4% and the corresponding Normal Cost would increase to \$710,434 or by 43.1%. If such healthcare trend rates were 1% less than forecast and employee contributions were to increase at the forecast rate, the Actuarial Accrued Liability would decrease to \$15,224,238 or by 17.7% and the corresponding Normal Cost would decrease to \$334,129 or by 32.7%.

#### <u>Financial Statement Disclosure</u> (As of July 1, 2010) (continued)

#### 9. ACTUARIAL METHODS AND ASSUMPTIONS

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

Actuarial Cost Method: Investment Rate of Return: Healthcare Trend Rates Projected Unit Credit 4.00% per annum

Year	Medical	<u>Dental</u>
FY 2008	11.0%	8.5%
FY 2009	10.0%	8.0%
FY 2010	11.3%	2.1%
FY 2011	8.0%	7.0%
FY 2012	7.0%	6.5%
FY 2013	6.0%	6.0%
FY 2014	5.0%	5.5%
FY 2015	5.0%	5.0%

General Inflation Assumption: Annual Compensation Increases: Actuarial Value of Assets: Amortization of UAAL:

**Remaining Amortization Period:** 

3.5% per annum4.5% per annumMarket ValueAmortized increasing at 4.50% per yearover 30 years at transition28 years at July 1, 2010

#### <u>EXHIBIT B</u>

### Reconciliation of Plan Participation (As of July 1, 2010)

#### **ACTIVE EMPLOYEES**

	July 1, 2010	July 1, 2007
A. Average Age at Hire	40.52	37.4
B. Average Service	8.56	7.4
C. Average Current Age	49.08	44.8

### Projected Cash Flows (Closed Group)

## Total Medical, Dental & Life Insurance

			Employer		Expected Annual OPEB	Expected OPEB
Fiscal Year	Total APBO	Normal Cost	Payments	Active APBO	Cost	Obligation
						3,114,748
2011	18,501,453	496,399	726,693	5,513,715	1,631,316	4,019,371
2012	19,002,003	490,693	772,670	5,377,702	1,663,147	4,909,848
2013	19,468,828	477,709	844,031	5,641,717	1,690,360	5,756,177
2014	19,867,102	459,847	916,362	5,773,927	1,715,996	6,555,811
2015	20,187,011	442,477	954,453	5,877,194	1,745,581	7,346,939
2016	20,462,035	425,209	1,013,073	5,942,445	1,778,169	8,112,036
2017	20,669,761	403,538	1,045,316	6,009,108	1,809,691	8,876,411
2018	20,829,102	383,880	1,100,146	5,996,269	1,846,239	9,622,504
2019	20,917,348	354,608	1,149,131	5,997,102	1,876,636	10,350,009
2020	20,927,737	328,111	1,173,972	5,827,786	1,913,417	11,089,455
2021	20,885,152	297,166	1,207,333	5,657,958	1,948,964	11,831,086
2022	20,774,886	271,546	1,247,827	5,421,891	1,993,380	12,576,638
2023	20,590,549	252,314	1,291,089	5,188,058	2,047,857	13,333,406
2024	20,333,930	235,794	1,314,388	5,036,959	2,108,759	14,127,777
2025	20,025,916	218,873	1,329,321	4,892,945	2,172,680	14,971,136
2026	19,672,088	204,838	1,341,410	4,712,222	2,242,891	15,872,617
2027	19,276,937	193,310	1,346,374	4,561,965	2,319,042	16,845,285
2028	18,848,827	184,336	1,333,870	4,455,821	2,401,150	17,912,565
2029	18,407,263	174,030	1,328,965	4,404,002	2,485,126	19,068,726
2030	17,942,421	165,834	1,314,842	4,300,041	2,574,731	20,328,615
2031	17,465,149	156,974	1,297,124	4,232,423	2,667,158	21,698,649
2032	16,977,997	146,107	1,279,547	4,133,108	2,761,189	23,180,290
2033	16,478,340	134,637	1,255,108	3,959,715	2,858,453	24,783,635
2034	15,972,182	124,831	1,242,518	3,745,584	2,961,301	26,502,417
2035	15,448,675	117,089	1,212,685	3,566,592	3,070,515	28,360,247
2036	14,927,204	109,183	1,181,127	3,434,468	3,183,735	30,362,855
2037	14,409,469	100,772	1,135,364	3,300,283	3,300,819	32,528,310
2038	13,909,871	91,735	1,091,738	3,136,966	3,421,635	34,858,207
2039	13,426,263	82,045	1,064,307	2,934,550	(535,112)	33,258,787
2040	12,941,761	71,496	1,024,485	2,693,754	(517,343)	31,716,959
2041	12,468,323	61,137	995,257	2,407,975	(500,404)	30,221,298

### Projected Cash Flows (Closed Group) (continued)

#### **Medical Insurance**

			Employer		Expected Annual OPEB	Expected OPEB
Fiscal Year	Total APBO	Normal Cost	Payments	Active APBO	Cost	Obligation
						2,876,736
2011	17,087,672	421,174	674,278	4,910,921	1,469,036	3,671,493
2012	17,507,951	414,676	717,230	4,751,108	1,497,912	4,452,175
2013	17,893,612	401,529	785,034	4,951,328	1,522,614	5,189,755
2014	18,210,960	384,109	853,940	5,028,675	1,546,131	5,881,946
2015	18,450,774	367,281	888,484	5,079,035	1,573,475	6,566,937
2016	18,646,753	350,681	943,880	5,094,466	1,603,711	7,226,768
2017	18,776,262	330,364	972,397	5,110,280	1,633,331	7,887,702
2018	18,859,598	312,231	1,023,540	5,056,726	1,667,887	8,532,049
2019	18,874,220	285,922	1,067,855	5,018,807	1,697,459	9,161,653
2020	18,815,978	262,476	1,088,060	4,831,059	1,733,183	9,806,776
2021	18,710,010	235,773	1,116,220	4,649,018	1,768,539	10,459,095
2022	18,543,468	213,397	1,151,842	4,414,892	1,811,402	11,118,655
2023	18,309,223	196,484	1,191,166	4,181,678	1,863,054	11,790,543
2024	18,007,201	181,782	1,210,994	4,020,765	1,920,311	12,499,860
2025	17,657,431	166,688	1,222,392	3,862,079	1,980,286	13,257,754
2026	17,265,797	154,321	1,231,232	3,671,854	2,046,072	14,072,594
2027	16,836,441	144,051	1,233,574	3,512,208	2,117,067	14,956,087
2028	16,376,795	136,107	1,218,952	3,390,441	2,193,478	15,930,613
2029	15,905,707	127,140	1,211,742	3,317,713	2,271,755	16,990,626
2030	15,413,949	120,120	1,195,834	3,202,765	2,355,168	18,149,960
2031	14,911,765	112,899	1,176,162	3,122,343	2,441,534	19,415,332
2032	14,402,441	104,109	1,156,278	3,023,419	2,529,590	20,788,644
2033	13,884,283	95,046	1,129,334	2,866,883	2,620,829	22,280,139
2034	13,363,994	87,564	1,114,567	2,681,609	2,717,163	23,882,735
2035	12,830,471	81,797	1,082,962	2,532,359	2,819,105	25,618,878
2036	12,302,478	75,865	1,049,706	2,424,063	2,924,642	27,493,814
2037	11,781,782	69,700	1,002,078	2,314,875	3,033,888	29,525,624
2038	11,283,380	63,069	956,215	2,187,641	3,146,577	31,715,986
2039	10,805,843	55,928	926,520	2,032,729	-505,597	30,283,869
2040	10,332,662	48,240	883,947	1,847,814	-487,929	28,911,993
2041	9,876,833	40,860	851,741	1,633,616	-471,020	27,589,232

### Projected Cash Flows (Closed Group) (continued)

#### **Dental Insurance**

			Employer		Expected Annual OPEB	Expected OPEB
Fiscal Year	Total APBO	Service Cost	Payments	Active APBO	Cost	Obligation
						219,720
2011	1,305,126	74,243	45,911	587,770	154,713	328,522
2012	1,386,795	75,068	49,126	614,500	157,408	436,804
2013	1,469,248	75,294	52,785	678,221	159,683	543,702
2014	1,551,472	74,915	56,257	733,562	161,558	649,003
2015	1,632,935	74,439	59,799	786,802	163,549	752,753
2016	1,713,478	73,827	62,987	837,168	165,628	855,394
2017	1,793,345	72,540	66,646	888,411	167,255	956,003
2018	1,871,209	71,067	70,257	929,722	168,944	1,054,690
2019	1,946,899	68,186	74,831	968,843	169,482	1,149,341
2020	2,017,864	65,197	79,380	988,169	170,217	1,240,178
2021	2,083,829	61,028	84,501	1,001,080	170,081	1,325,758
2022	2,142,947	57,842	89,309	999,967	171,274	1,407,723
2023	2,195,940	55,562	93,212	1,000,162	173,705	1,488,216
2024	2,244,629	53,776	96,674	1,010,513	176,932	1,568,474
2025	2,289,843	51,982	100,227	1,025,658	180,445	1,648,692
2026	2,331,262	50,339	103,527	1,035,711	184,412	1,729,577
2027	2,369,198	49,101	106,238	1,045,554	189,088	1,812,427
2028	2,404,542	48,086	108,483	1,061,536	194,283	1,898,227
2029	2,437,911	46,764	110,948	1,082,681	199,465	1,986,744
2030	2,468,676	45,599	112,929	1,093,986	205,117	2,078,932
2031	2,497,399	43,970	115,109	1,106,989	210,617	2,174,440
2032	2,523,310	41,905	117,665	1,106,800	216,016	2,272,791
2033	2,545,452	39,509	120,438	1,090,194	221,446	2,373,799
2034	2,563,104	37,194	122,901	1,061,615	227,340	2,478,238
2035	2,576,493	35,226	124,969	1,032,078	233,972	2,587,241
2036	2,586,221	33,259	126,968	1,008,408	240,993	2,701,266
2037	2,592,212	31,018	129,133	983,561	248,142	2,820,275
2038	2,593,860	28,618	131,664	947,611	255,558	2,944,169
2039	2,590,447	26,075	134,213	900,265	-26,051	2,783,905
2040	2,581,601	23,219	137,235	844,529	-26,070	2,620,600
2041	2,566,289	20,246	140,469	773,106	-26,151	2,453,980

### Projected Cash Flows (Closed Group) (continued)

#### Life Insurance

			Employer		Expected Annual OPEB	Expected OPEB
Fiscal Year	Total APBO	Normal Cost	Payments	Active APBO	Cost	Obligation
						18,292
2011	108,655	982	6,504	15,024	7,567	19,356
2012	107,257	949	6,314	12,094	7,827	20,869
2013	105,968	886	6,212	12,168	8,063	22,720
2014	104,670	823	6,165	11,690	8,307	24,862
2015	103,302	757	6,170	11,357	8,557	27,249
2016	101,804	701	6,206	10,811	8,831	29,874
2017	100,154	634	6,273	10,417	9,105	32,706
2018	98,295	582	6,349	9,821	9,408	35,765
2019	96,229	500	6,445	9,452	9,695	39,015
2020	93 <i>,</i> 895	438	6,532	8,558	10,018	42,501
2021	91,313	365	6,612	7,860	10,344	46,233
2022	88,471	307	6,676	7,032	10,703	50,260
2023	85,386	268	6,711	6,218	11,098	54,647
2024	82,100	236	6,720	5,681	11,516	59,443
2025	78,642	203	6,702	5,208	11,949	64,690
2026	75,029	178	6,651	4,657	12,407	70,446
2027	71,298	158	6,562	4,203	12,887	76,771
2028	67,490	143	6,435	3,844	13,389	83,725
2029	63,645	126	6,275	3,608	13,906	91,356
2030	59,796	115	6,079	3,290	14,446	99,723
2031	55 <i>,</i> 985	105	5,853	3,091	15,007	108,877
2032	52,246	93	5,604	2,889	15,582	118,855
2033	48,605	82	5,336	2,638	16,178	129,697
2034	45,084	73	5,050	2,360	16,797	141,444
2035	41,711	66	4,754	2,155	17,438	154,128
2036	38,505	59	4,453	1,997	18,100	167,775
2037	35,475	54	4,153	1,847	18,789	182,411
2038	32,631	48	3,859	1,714	19,500	198,052
2039	29,973	42	3,574	1,556	(3,465)	191,013
2040	27,498	37	3,303	1,411	(3,344)	184,366
2041	25,201	31	3,047	1,253	(3,233)	178,086

### <u>EXHIBIT D</u>

### GLOSSARY

**Accrual Accounting -** A system of accounting in which revenues are recorded when earned and outlays are recorded when goods are received or services performed, even though the actual receipt of revenues and payment for goods or services may occur, in whole or in part, at a different time.

Actuarial Value of Assets – The value of cash, investments, other assets and property belonging to an OPEB trust, pension fund or similar entity, as used by the actuary for the purpose of actuarial valuation. Some funds may be restricted for other purposes, and "smoothing" of investment gains and losses often make the actuarial value of assets different from the market value of assets.

**Annual Required Contribution** – Normal Cost plus an amortization of the funding shortfall over a period of no more than 30 years.

**Cash Basis Accounting -** A system of accounting in which revenues are recorded when actually received and outlays are recorded when payment is made.

**Discount Rate** – The interest rate used to calculate present value of a series of future cash flows. Under GASB 45, the rate should be "long term expected yield on the investments that are expected to be used to pay benefits as they come due. These would be plan investments for a funded plan, the employer's investments for a pay as you go plan [e.g. short term county investment pool], or a weighted average of expected plan and employer investments for a plan that is partially funded".

**FASB – Financial Accounting Standards Board.** "Since 1973, the Financial Accounting Standards Board (FASB) has been the designated organization in the private sector for establishing standards of financial accounting and reporting".

**GASB - Government Accounting Standards Board.** "The Governmental Accounting Standards Board (GASB) was organized in 1984 by the Financial Accounting Foundation (FAF) to establish standards of financial accounting and reporting for state and local governmental entities. Its standards guide the preparation of external financial reports of those entities."

**GFOA – Government Finance Officers Association.** "GFOA is the professional association of state/provincial and local finance officers in the United States and Canada, and has served the public finance profession since 1906. Approximately 16,000 GFOA members are dedicated to the sound management of government financial resources."

#### EXHIBIT D

### GLOSSARY

(continued)

**Implicit Subsidy** – "The difference between a premium rate charged to retirees for a particular benefit and the estimated rate that would have be applicable to those retirees if that benefit was acquired for them as a separate group."

**Irrevocable Contribution** – "Irrevocably transferred assets to a qualifying trust, or equivalent arrangement, in which plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the plan and are legally protected from creditors of the employer(s) or plan administrator. The preceding criteria preclude counting as [irrevocable] contributions (a) designations of net assets of a governmental or proprietary fund to be used for OPEB or (b) internal transfers of assets to a separate governmental or proprietary fund for the same purpose. Rather, such actions should be regarded as earmarking of employer assets."

**Level Dollar Amortization** – Funding a shortfall in OPEB assets with equal dollar payments over a designated number of years (no more than 30 years). The present value of the level payments equals the present value of unfounded liabilities, the UAAL.

**Level Percent of Payroll Amortization** – Funding a shortfall in OPEB assets as a level percent of payroll over a designated number of years (no more than 30 years). The present value of the payments equals the present value of unfounded liabilities, the UAAL. Level percent of payroll typically has lower payments in the early years than level dollar amortization. When using level payroll amortization, employee count is assumed to be constant, and the payroll differences arise from overall wage trends.

**Normal Cost** - The actuarially determined present value contribution needed to fund benefits which are earned for employee service rendered during the current year. Normal cost depends on many factors, including the interest rate used to discount future cashflows, and expected inflation.

**OPEB –** Other Post Employment Benefits

**OPEB Trust** – An entity other than a pension or retirement system which manages OPEB assets. In many respects it is similar to a pension fund for OPEB. For reasons detailed in GASB 45, contributions to an OPEB trust should be irrevocable in order to obtain the most favorable accounting treatment.

#### EXHIBIT D

#### GLOSSARY

(continued)

**Pay-as-you-go funding** – Paying benefits (such as pensions or OPEB) on a cash basis, with no money set aside for future liabilities which are already incurred.

**POB** – Pension Obligation Bond. Generally yielding taxable interest, POBs are issued to help fund a previously unfunded or underfunded pension liability.

**UAAL –** Unfunded Accrued Actuarial Liability. Actuarial Accrued Liability minus the Actuarial Value of Assets.