

**Town of Halifax Other  
Postemployment Benefits Plan**

**GASB 45 Actuarial Valuation**

*as of*

July 1, 2011

For the fiscal years ending

June 30, 2012

June 30, 2013

June 30, 2014

Delivered November 2011

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November 16, 2011

*Personal and Confidential*

Ms. Linda Cole  
Assistant Town Treasurer  
Halifax Town Hall  
499 Plymouth Street  
Halifax, MA 02338

Dear Ms. Cole:

We have performed an actuarial valuation of the Town of Halifax Other Postemployment Benefits Plan for the fiscal year ending June 30, 2012. The figures presented in this report reflect the adoption, by the Town of Halifax, 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

## SECTION I

### PRINCIPAL RESULTS OF THE VALUATION

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

	<u>July 1, 2011</u>	<u>July 1, 2008</u>
I. Actuarial Accrued Liability (Projected Unit Credit)		
A. Actives	5,987,550	5,533,484
B. Retirees/Disabled	<u>5,256,662</u>	<u>4,713,708</u>
C. Total	11,244,212	10,247,192
II. Plan Assets	30,000	0
III. Unfunded Actuarial Accrued Liability ("UAAL")	11,214,212	10,247,192
IV. Funded Ratio	0.27%	0.00%
V. Unrecognized Transition Obligation	9,677,869	10,247,192
VI. Annual Covered Payroll	N/A	7,334,100
VII. UAAL as % of Covered Payroll	N/A	139.7%
VIII. Net OPEB Obligation	2,264,706	0
IX. Number of Covered Participants		
A. Actives	125	123
B. Retirees/Disabled	61	54
C. Total	186	177
	<u>June 30, 2012</u>	<u>June 30, 2009</u>
X. Normal Cost	509,189	405,582
XI. Amortization of UAAL - 30 year flat dollar	569,864	569,864
XII. Annual Required Contribution ('ARC') [ X. + XI.]	1,079,053	975,446
XIII. Interest on Net OPEB Obligation	90,588	39,016
XIV. Adjustment to Annual Required Contribution	(195,856)	0
XV. Amortization of Actuarial (Gains) / Losses	124,534	0
XVI. Annual OPEB Cost [XII. + XIII. + XIV. + XV.]	1,098,319	1,014,462
XVII. Expected Employer Contribution	336,970	249,036
XVIII. Percentage of Annual OPEB Cost Contributed	30.7%	24.5%
XIX. Net OPEB Obligation at Beginning of Year (VIII.)	2,264,706	0
XX. Increase in Net OPEB Obligations (XVI. - XVII.)	761,349	765,426
XXI. Net OPEB Obligation at End of Year (XIX. + XX.)	3,026,055	765,426

SECTION I  
PRINCIPAL RESULTS OF THE VALUATION  
(continued)

**Town of Halifax**  
**Plan Liabilities as of July 1, 2011**

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Total</u>
I. Actuarial Accrued Liability (Projected Unit Credit)				
A. Actives	5,951,931	0	35,619	5,987,550
B. Retirees/Disabled	<u>5,160,131</u>	<u>0</u>	<u>96,531</u>	<u>5,256,662</u>
C. Total	11,112,062	0	132,150	11,244,212
II. Plan Assets	29,648	0	352	30,000
III. Unfunded Actuarial Accrued Liability ("UAAL")	11,082,414	0	131,798	11,214,212
IV. Unrecognized Transition Obligation	9,564,128	0	113,741	9,677,869
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	2,238,090	0	26,616	2,264,706
VIII. Number of Covered Participants				
A. Actives	125	0	125	
B. Retirees/Disabled	<u>61</u>	<u>0</u>	<u>68</u>	
C. Total	186	0	193	
<b>For Fiscal Year Ending June 30, 2012</b>				
IX. Normal Cost	506,579	0	2,610	509,189
X. Amortization of UAAL - 30 year flat dollar	563,167	0	6,697	569,864
XI. Annual Required Contribution ('ARC') [ IX. + X.]	1,069,746	0	9,307	1,079,053
XII. Interest on Net OPEB Obligation	89,524	0	1,064	90,588
XIII. Adjustment to Annual Required Contribution	(193,554)	0	(2,302)	(195,856)
XIV. Amortization of Actuarial (Gains) / Losses	123,070	0	1,464	124,534
XV. Annual OPEB Cost [XI. + XII. + XIII. + XIV.]	1,088,786	0	9,533	1,098,319
XVI. Expected Employer Contribution	332,842	0	4,128	336,970
XVII. Percentage of Annual OPEB Cost Contributed	30.6%	0.0%	43.3%	30.7%
XVIII. Net OPEB Obligation at Beginning of Year (VII.)	2,238,090	0	26,616	2,264,706
XIX. Increase in Net OPEB Obligations (XV. - XVI.)	755,944	0	5,405	761,349
XX. Net OPEB Obligation at End of Year (XVIII. + XIX.)	2,994,034	0	32,021	3,026,055

SECTION I  
PRINCIPAL RESULTS OF THE VALUATION  
(continued)

**Town of Halifax**  
**Town Employees & Retirees**  
**Plan Liabilities as of July 1, 2011**

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Total</u>
I. Actuarial Accrued Liability (Projected Unit Credit)				
A. Actives	3,048,204	0	18,525	3,066,729
B. Retirees/Disabled	<u>2,969,645</u>	<u>0</u>	<u>48,381</u>	<u>3,018,026</u>
C. Total	6,017,849	0	66,906	6,084,755
II. Plan Assets	16,056	0	177	16,233
III. Unfunded Actuarial Accrued Liability ("UAAL")	6,001,793	0	66,729	6,068,522
IV. Unrecognized Transition Obligation	5,179,550	0	57,586	5,237,136
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	<b>1,205,653</b>	0	13,477	1,219,130
VIII. Number of Covered Participants				
A. Actives	57	0	57	
B. Retirees/Disabled	<u>34</u>	<u>0</u>	<u>34</u>	
C. Total	91	0	91	
<b>For Fiscal Year Ending June 30, 2012</b>				
IX. Normal Cost	275,793	0	1,383	277,176
X. Amortization of UAAL - 30 year flat dollar	296,719	0	3,367	300,086
XI. Annual Required Contribution ('ARC') [ IX. + X.]	572,512	0	4,750	577,262
XII. Interest on Net OPEB Obligation	48,226	0	539	48,765
XIII. Adjustment to Annual Required Contribution	(104,267)	0	(1,166)	(105,433)
XIV. Amortization of Actuarial (Gains) / Losses	66,650	0	741	67,391
XV. Annual OPEB Cost [XI. + XII. + XIII. + XIV.]	583,121	0	4,864	587,985
XVI. Expected Employer Contribution	183,377	0	2,086	185,463
XVII. Percentage of Annual OPEB Cost Contributed	31.4%	0.0%	42.9%	31.5%
XVIII. Net OPEB Obligation at Beginning of Year (VII.)	1,205,653	0	13,477	1,219,130
XIX. Increase in Net OPEB Obligations (XV. - XVI.)	399,744	0	2,778	402,522
XX. Net OPEB Obligation at End of Year (XVIII. + XIX.)	1,605,397	0	16,255	1,621,652

SECTION I  
PRINCIPAL RESULTS OF THE VALUATION  
(continued)

**Town of Halifax**  
**School Employees & Retirees**  
**Plan Liabilities as of July 1, 2011**

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Total</u>
I. Actuarial Accrued Liability (Projected Unit Credit)				
A. Actives	2,604,027	0	15,401	2,619,428
B. Retirees/Disabled	<u>2,190,486</u>	<u>0</u>	<u>48,150</u>	<u>2,238,636</u>
C. Total	4,794,513	0	63,551	4,858,064
II. Plan Assets	12,792	0	170	12,962
III. Unfunded Actuarial Accrued Liability ("UAAL")	4,781,721	0	63,381	4,845,102
IV. Unrecognized Transition Obligation	4,126,627	0	54,698	4,181,325
V. Annual Covered Payroll	N/A	N/A	N/A	N/A
VI. UAAL as % of Covered Payroll	N/A	N/A	N/A	0.0%
VII. Net OPEB Obligation	960,619	0	12,733	973,352
VIII. Number of Covered Participants				
A. Actives	63	0	63	
B. Retirees/Disabled	<u>27</u>	<u>0</u>	<u>34</u>	
C. Total	90	0	97	

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

IX. Normal Cost	210,907	0	1,130	212,037
X. Amortization of UAAL - 30 year flat dollar	255,354	0	3,270	258,624
XI. Annual Required Contribution ("ARC") [ IX. + X.]	466,261	0	4,400	470,661
XII. Interest on Net OPEB Obligation	38,425	0	509	38,934
XIII. Adjustment to Annual Required Contribution	(83,076)	0	(1,101)	(84,177)
XIV. Amortization of Actuarial (Gains) / Losses	53,101	0	704	53,805
XV. Annual OPEB Cost [XI. + XII. + XIII. + XIV.]	474,711	0	4,512	479,223
XVI. Expected Employer Contribution	149,465	0	2,042	151,507
XVII. Percentage of Annual OPEB Cost Contributed	31.5%	0.0%	45.3%	31.6%
XVIII. Net OPEB Obligation at Beginning of Year (VII.)	960,619	0	12,733	973,352
XIX. Increase in Net OPEB Obligations (XV. - XVI.)	325,246	0	2,470	327,716
XX. Net OPEB Obligation at End of Year (XVIII. + XIX.)	1,285,865	0	15,203	1,301,068

SECTION I  
PRINCIPAL RESULTS OF THE VALUATION  
(continued)

**Town of Halifax**  
**Water Employees & Retirees**  
**Plan Liabilities as of July 1, 2011**

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Total</u>
I. Actuarial Accrued Liability (Projected Unit Credit)				
A. Actives	299,700	0	1,693	301,393
B. Retirees/Disabled	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
C. Total	299,700	0	1,693	301,393
II. Plan Assets	800	0	5	805
III. Unfunded Actuarial Accrued Liability ("UAAL")	298,900	0	1,688	300,588
IV. Unrecognized Transition Obligation	257,951	0	1,457	259,408
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	<b>71,818</b>	0	406	72,224
VIII. Number of Covered Participants				
A. Actives	5	0	5	
B. Retirees/Disabled	<u>0</u>	<u>0</u>	<u>0</u>	
C. Total	5	0	5	
<b>For Fiscal Year Ending June 30, 2012</b>				
IX. Normal Cost	19,879	0	97	19,976
X. Amortization of UAAL - 30 year flat dollar	11,094	0	60	11,154
XI. Annual Required Contribution ("ARC") [ IX. + X.]	30,973	0	157	31,130
XII. Interest on Net OPEB Obligation	2,873	0	16	2,889
XIII. Adjustment to Annual Required Contribution	(6,211)	0	(35)	(6,246)
XIV. Amortization of Actuarial (Gains) / Losses	3,319	0	19	3,338
XV. Annual OPEB Cost [XI. + XII. + XIII. + XIV.]	30,954	0	157	31,111
XVI. Expected Employer Contribution	0	0	0	0
XVII. Percentage of Annual OPEB Cost Contributed	0.0%	0.0%	0.0%	0.0%
XVIII. Net OPEB Obligation at Beginning of Year (VII.)	71,818	0	406	72,224
XIX. Increase in Net OPEB Obligations (XV. - XVI.)	30,954	0	157	31,111
XX. Net OPEB Obligation at End of Year (XVIII. + XIX.)	102,772	0	563	103,335



## 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, 2009. 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 at transition was amortized over a 30 year period and a flat dollar amortization of the Unfunded Actuarial Accrued Liability at transition. This approach yields an amortization charge of \$569,864. 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 2012 fiscal year is \$509,189. The combined amortization charge and normal cost represent the Annual Required Contribution ("ARC") for the plan for the 2012 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 2012 fiscal year beyond the "pay-as-you-go" costs is \$761,349.

### 2. Plan Experience:

Plan experience was slightly more favorable than expected. This is due to slightly lower than expected increases in medical costs (premiums went up by approximately 24.6% from FY09 to FY12 versus an expected 29.5% increase), demographics were generally in line with expectation. These net actuarial gains are amortized into the annual OPEB costs over a 15-year period (the segment of the actuarial loss reflecting OPEB costs in excess of employer contributions is offset by the ARC Adjustment). The net impact of the plan experience is a slight increase in the annual OPEB cost.

SECTION II  
SUMMARY OF PLAN PROVISIONS

<u>Effective Date</u>	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 or an employee shall be able to retire with 20 years of service regardless of age.
<u>Credited Service</u>	Elapsed time from date of hire to termination of service date.
<u>Participant Contributions</u>	50% of premiums for Medical & 50% of premiums for Life Insurance
<u>Benefits Offered</u>	Comprehensive Medical Insurance offered through Blue Cross of Massachusetts and Harvard Pilgrim Health Group as well as Group Term Life Insurance.
<u>Normal Retirement Date</u>	The normal retirement date is the first day of the month following a participant's 65th birthday.
<u>Early Retirement</u>	Early retirement is available for any participant who has attained benefit eligibility.

### SECTION III

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

##### A. ACTUARIAL COST METHOD

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 expected total service at retirement/ termination.

Actuarial gains and losses are calculated each year and amortized over a 15 year period.

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.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD  
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS

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

Pre- and Post-Retirement Mortality

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 (previously 4.00%)

Employee Termination

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

<u>Service</u>	<u>Non Public Safety Male</u>	<u>Non Public</u>	
		<u>Safety Female</u>	<u>Public Safety</u>
0	15.00%	15.00%	1.50%
5	10.20%	10.20%	1.50%
10	5.40%	5.40%	1.50%
15	3.70%	3.70%	0.00%
20	2.00%	2.00%	0.00%
25	1.00%	1.00%	0.00%
30	0.00%	0.00%	0.00%

### SECTION III

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

(continued)

#### C. ACTUARIAL ASSUMPTIONS (continued)

##### Retirement Rates

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

<u>Age</u>	<u>Non Public Safety Male</u>	<u>Non Public Safety Female</u>	<u>Public Safety</u>
45	0.00%	0.00%	1.00%
46	0.00%	0.00%	1.00%
47	0.00%	0.00%	1.00%
48	0.00%	0.00%	1.00%
49	0.00%	0.00%	1.00%
50	1.00%	1.50%	2.00%
51	1.00%	1.50%	2.00%
52	1.00%	2.50%	2.00%
53	1.00%	2.50%	5.00%
54	2.00%	2.50%	7.50%
55	2.00%	5.50%	15.00%
56	2.50%	6.50%	10.00%
57	2.50%	6.50%	10.00%
58	5.00%	6.50%	10.00%
59	6.50%	6.50%	15.00%
60	12.00%	5.00%	20.00%
61	20.00%	13.00%	20.00%
62	30.00%	15.00%	25.00%
63	25.00%	12.50%	25.00%
64	22.00%	18.00%	30.00%
65	40.00%	15.00%	100.00%
66	25.00%	20.00%	100.00%
67	25.00%	20.00%	100.00%
68	30.00%	25.00%	100.00%
69	30.00%	20.00%	100.00%
70	100.00%	100.00%	100.00%
71	100.00%	100.00%	100.00%
72	100.00%	100.00%	100.00%

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD  
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Healthcare Trend

It was assumed that healthcare costs would increase in accordance with the trend rates in the following table:

<u>Year</u>	<u>Medical</u>	<u>Dental</u>
FY 2008	11.0%	8.5%
FY 2009	10.0%	8.0%
FY 2010	9.0%	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

It was assumed that 80% of the employees eligible to receive retirement benefits would enroll in the retiree medical and dental plans upon retirement. For life insurance plans, it was assumed that 80% of eligible employees would elect coverage upon retirement.

Percent Married

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.

SECTION III

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.

### SECTION III

#### 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 (pre-65 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 Halifax'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.



SECTION III

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	Two-Person	Family	Total
Network Blue	15		32	47
Network Blue Rate Saver			2	2
Blue Care PPO	2		5	7
Harvard Pilgrim HMO	13		14	27
Harvard Pilgrim HMO Rate Saver				0
Carve Out A				0
Harvard Pilgrim Enhanced	7	6		13
Medex	14	19		33
<b>Total</b>	51	25	53	129

	Per Contract Costs (monthly) - FY 2012		
	Single	Two-Person	Family
Network Blue	635.00		1,693.00
Network Blue Rate Saver	593.00		1,582.00
Blue Care PPO	901.00		2,136.00
Harvard Pilgrim HMO	672.00		1,790.00
Harvard Pilgrim HMO Rate Saver	625.00		1,665.00
Harvard Pilgrim Enhanced	546.00		
Harvard Pilgrim Enhanced	546.00	1,092.00	
Medex	439.00	878.00	
Medex	439.00	878.00	
Medex	439.00	878.00	

Gross Expected FY 2012 Non Medicare Incurred Premiums	1,357,716
Adjustment to reflect children's claims	(266,904)
Total Expected FY 2012 Non Medicare Incurred Premiums (adults only)	1,090,812

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

	<u>Employer Primary</u>	<u>Medicare Primary</u>
Age 65	11,099	5,612
Average Age	9,715	5,612

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD  
AND ACTUARIAL ASSUMPTIONS

(continued)

D. DEVELOPMENT OF REPRESENTATIVE MEDICAL PER CAPITA CLAIMS COSTS

**III. BREAKDOWN OF CLAIM COSTS**

1,090,812 Active and Retired Claims (No Children) - Including Administrative fees & trend

5,190 Average Per-Capita Claim (including Retention & Pooling)

**ALL ACTIVE EMPLOYEES AND SPOUSES**

Age Bracket	Number of Females	Number of Males	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
24 & Under	1	0	1.312	0.549	6,809	2,849	6,809
25 to 29	2	4	1.312	0.591	6,809	3,067	25,886
30 to 34	4	3	1.312	0.712	6,809	3,695	38,321
35 to 39	4	1	1.312	0.850	6,809	4,412	31,648
40 to 44	4	4	1.312	1.000	6,809	5,190	47,996
45 to 49	10	11	1.456	1.193	7,557	6,192	143,682
50 to 54	11	8	1.599	1.441	8,299	7,479	151,121
55 to 59	12	9	1.740	1.753	9,031	9,098	190,254
60 to 64	7	10	1.968	2.102	10,214	10,909	180,588
65 to 69	2	4	2.168	2.316	11,252	12,020	70,584
70 & Over	0	0	2.396	2.557	12,435	13,271	0
Total	57	54					886,889

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

Age Bracket	Number of Females	Number of Males	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
44 & Under			1.312	1.000	6,809	5,190	0
45 to 49	2	1	1.456	1.193	7,557	6,192	21,306
50 to 54	0	1	1.599	1.441	8,299	7,479	7,479
55 to 59	1	0	1.740	1.753	9,031	9,098	9,031
60 to 64	12	4	1.968	2.102	10,214	10,909	166,204
Total	15	6					204,020

**ALL RETIREES AND SPOUSES - MEDICARE ELIGIBLE**

Age Bracket	Number of Females	Number of Males	Female Aging Factor	Male Aging Factor	Aged (F) Average Claims	Aged (M) Average Claims	Age Related Claims
65 to 69	13	15	2.168	2.316	5,612	5,612	0
70 to 74	12	10	2.396	2.557	5,612	5,612	0
75 to 79	8	4	2.593	2.769	5,612	5,612	0
80 to 84	4	5	2.724	2.910	5,612	5,612	0
85 to 89	1	2	2.864	3.059	5,612	5,612	0
90 & Over	1	0	3.010	3.215	5,612	5,612	0
Total	39	36					0
Grand Totals	111	96					1,090,909

EXHIBIT A

Financial Statement Disclosure  
(As of July 1, 2011)

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 Insurance offered through Blue Cross of Massachusetts and Harvard Pilgrim Health Group
- b. Administrator: Town of Halifax
- c. Eligibility: 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 or an employee shall be able to retire with 20 years of service regardless of age.
- d. Cost Sharing: Retirees shall pay 50% of premiums.

**2. A DESCRIPTION OF THE DENTAL INSURANCE PROGRAM:**

- a. Plan Type: Not offered
- b. Administrator: N/A
- c. Eligibility: N/A
- d. Cost sharing: N/A

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

- a. Plan Type: Group Term Life Insurance - \$5,000
- b. Administrator: Town of Halifax
- c. Eligibility: Same as above
- d. Cost sharing: Retirees shall pay 50% of premiums.

EXHIBIT A

Financial Statement Disclosure  
(As of July 1, 2011)  
(continued)

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

Group	Individual	Family
Medical	50%	50%
Dental	N/A	N/A
Life	50%	N/A

**5. FUNDING POLICY**

The contribution requirements of plan members and the Town are established and may be amended through Town ordinances. The Town expects to contribute \$0 beyond the pay-as-you-go. For the 2012 fiscal year, total Town premiums plus implicit costs for the retiree medical program are \$336,970.

EXHIBIT A

Financial Statement Disclosure  
(As of July 1, 2011)  
(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	\$1,079,053
Interest on net OPEB obligation	\$90,588
Adjustment to annual required contribution	(\$195,856)
Amortization of Actuarial (Gains) / Losses	\$124,534
Annual OPEB cost (expense)	\$1,098,319
Contributions made	\$336,970
Increase in net OPEB obligation	\$761,349
Net OPEB Obligation – beginning of year	\$2,264,706
Net OPEB Obligation – end of year	\$3,026,055

EXHIBIT A

Financial Statement Disclosure

(As of July 1, 2011)

(continued)

The Town's annual OPEB cost, the percentage of the annual OPEB cost contributed to the plan, and the net OPEB obligation for the 2012 fiscal year and the three preceding years were as follows:

Fiscal Year Ended	Annual OPEB Cost	Expected Employer Payments	Increase in OPEB Obligation
06/30/2009	\$1,014,402	\$249,036	\$765,366
06/30/2010	\$986,664	\$242,226	\$744,438
06/30/2011	\$1,044,503	\$289,601	\$754,902
06/30/2012	\$1,098,319	\$336,970	\$761,349
06/30/2013 (est.)	\$1,146,663	\$367,231	\$779,432
06/30/2014 (est.)	\$1,195,452	\$391,624	\$803,828

**Schedule of Funding Progress:**

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	UAAL as a % of Covered Payroll
07/01/2008	\$0	\$10,247,192	\$10,247,192	0.00%	\$7,334,100	139.72%
07/01/2009	\$0	\$10,711,202	\$10,711,202	0.00%	\$7,664,000	139.76%
07/01/2010	\$0	\$10,977,707	\$10,977,707	0.00%	\$8,009,000	137.07%
07/01/2011	\$30,000	\$11,244,212	\$11,214,212	0.27%	N/A	N/A
07/01/2012 (est.)	\$31,200	\$11,870,902	\$11,839,702	0.27%	N/A	N/A
07/01/2013 (est.)	\$32,448	\$12,511,980	\$12,479,532	0.26%	N/A	N/A

EXHIBIT A

Financial Statement Disclosure  
(As of July 1, 2011)  
(continued)

	<b>Fiscal Year Ending June 30, 2012</b>			
	<u>Town Employees &amp; Retirees</u>	<u>School Employees &amp; Retirees</u>	<u>Water Employees &amp; Retirees</u>	<u>Total</u>
OPEB obligation at beginning of year	1,219,130	973,352	72,224	2,264,706
Annual OPEB Cost	587,985	479,223	31,111	1,098,319
Expected Employer Payments	185,463	151,507	-	336,970
Increase in OPEB Obligation	402,522	327,716	31,111	761,349
OPEB obligation at end of year	1,621,652	1,301,068	103,335	3,026,055
APBO at beginning of year	6,084,755	4,858,064	301,393	11,244,212

	<b>Fiscal Year Ending June 30, 2013</b>			
	<u>Town Employees &amp; Retirees</u>	<u>School Employees &amp; Retirees</u>	<u>Water Employees &amp; Retirees</u>	<u>Total</u>
OPEB obligation at beginning of year	1,621,652	1,301,068	103,335	3,026,055
Annual OPEB Cost	613,866	500,317	32,480	1,146,663
Expected Employer Payments	202,118	165,113	-	367,231
Increase in OPEB Obligation	411,748	335,204	32,480	779,432
OPEB obligation at end of year	2,033,400	1,636,272	135,815	3,805,487
APBO at beginning of year	6,423,885	5,128,826	318,191	11,870,902

	<b>Fiscal Year Ending June 30, 2014</b>			
	<u>Town Employees &amp; Retirees</u>	<u>School Employees &amp; Retirees</u>	<u>Water Employees &amp; Retirees</u>	<u>Total</u>
OPEB obligation at beginning of year	2,033,400	1,636,272	135,815	3,805,487
Annual OPEB Cost	639,985	521,605	33,862	1,195,452
Expected Employer Payments	215,544	176,080	-	391,624
Increase in OPEB Obligation	424,441	345,525	33,862	803,828
OPEB obligation at end of year	2,457,841	1,981,797	169,677	4,609,315
APBO at beginning of year	6,770,801	5,405,804	335,375	12,511,980

## EXHIBIT A

### Financial Statement Disclosure

(As of July 1, 2011)

(continued)

#### **7. FUNDED STATUS AND FUNDING PROGRESS**

As of July 1, 2011, the most recent valuation date, the plan was 0.27% funded. The actuarial liability for benefits was \$11,244,212, and the actuarial value of assets was \$30,000, resulting in an unfunded actuarial accrued liability (UAAL) of \$11,214,212. 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 \$15,170,479 or by 35.3% and the corresponding Normal Cost would increase to \$790,829 or by 55.3%. 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 \$8,126,014 or by 27.5% and the corresponding Normal Cost would decrease to \$301,018 or by 40.9%.



EXHIBIT A

Financial Statement Disclosure  
(As of July 1, 2011)  
(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: Projected Unit Credit  
Investment Rate of Return: 4.00% per annum (previously 4.00%)  
Healthcare Trend Rates

<u>Year</u>	<u>Medical</u>	<u>Dental</u>
FY 2008	11.0%	8.5%
FY 2009	10.0%	8.0%
FY 2010	9.0%	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%

General Inflation Assumption: 3.50% per annum  
Annual Compensation Increases: 4.50% per annum  
Actuarial Value of Assets: Market Value  
Amortization of UAAL: Level dollar amortization over 30 years at transition  
Remaining Amortization Period: 27 years at July 1, 2011

EXHIBIT A

Financial Statement Disclosure

(As of July 1, 2011)

(continued)

**10. Remaining Amortization Bases**

The initial Actuarial Accrued Liability as of the date GASB 45 was adopted is amortized as a component of the Annual Required Contribution ("ARC"). The Unfunded Actuarial Accrued Liability at transition was amortized over a 30 year period and a flat dollar amortization of the Unfunded Actuarial Accrued Liability at transition. For years subsequent to the initial adoption of GASB 45, cumulative gains/losses are amortized on a level dollar basis over a 15 year period. Gains and losses arise from experience and contribution deficiencies and excess contributions in relation to each year's ARC under GASB 45.

<b>Changes in Unfunded Actuarial Liability Since Prior Valuation</b>
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*Expected Unfunded Actuarial Liability*

1. Actuarial Accrued Liability at prior valuation date	10,247,192
2. Actuarial Value of Assets at prior valuation date	<u>0</u>
3. Unfunded Actuarial Accrued Liability at prior valuation date [1. - 2.]	10,247,192
4. Normal Cost for prior periods	1,216,746
5. Employer Contributions for prior periods	<b>(780,863)</b>
6. Interest to current valuation date	<u>1,355,838</u>
7. Expected Actuarial Accrued Liability [3. + 4. + 5. + 6.]	12,038,913

*Actual Unfunded Actuarial Liability*

8. Actuarial Accrued Liability at current valuation date	11,244,212
9. Actuarial Value of Assets at current valuation date	<u>30,000</u>
10. Unfunded Actuarial Accrued Liability at current valuation date [8. - 9.]	11,214,212

*Net Actuarial (Gain) / Loss from Plan Experience [10. - 7.]* **(824,701)**

*Contribution Deficiency or Excess Contributions* 2,264,706

*Total (Gain) or Loss to be amortized* 1,440,005

EXHIBIT A

Financial Statement Disclosure  
(As of July 1, 2011)  
(continued)

Amortization of Initial Unfunded and Plan Experience under GASB 45						
Date Established	Description	Initial Amount	Initial Amortization Period	Remaining Balance at Valuation Date	Remaining Amortization Period	Annual Amortization Payment
July 1, 2008	GASB 45 Adoption	10,247,192	30	9,677,869	27	569,864
July 1, 2011	Cumulative (Gain) / Loss	1,440,005	15	1,440,005	15	124,534
Total				11,117,874		694,398

**11. Recognition of OPEB trust assets**

The State of Massachusetts has recently passed legislation allowing municipal entities to establish a trust for Other Than Postemployment Benefits (“OPEB”) under M.G.L. Chapter 32B, Section 20 for purposes of accumulating assets to pre-fund the liabilities under GASB 45. To the best of our knowledge Town of Halifax has established an irrevocable trust for the purposes of prefunding liabilities under GASB 45.

EXHIBIT A

Financial Statement Disclosure

(As of July 1, 2011)

(continued)

**12. Impact of Section 9A1/2 of M.G.L. Chapter 32B**

For employees who retire on or after January 1, 2011 whenever a retired employee or beneficiary receives a healthcare premium contribution from a governmental unit in a case where a portion of the retiree's creditable service is attributable to service in 1 or more other governmental units, the first governmental unit shall be reimbursed in full, in accordance with this paragraph, by the other governmental units for the portion of the premium contributions that corresponds to the percentage of the retiree's creditable service that is attributable to each governmental unit. The other governmental units shall be charged based on their own contribution rate or the contribution rate of the first employer, whichever is lower.

For purposes of the valuation we have not attempted to value the impact of prior governmental service at other entities in the State of Massachusetts for current employees of the Town of Halifax nor have we attempted to value the impact of prior Town of Halifax employees currently working at other governmental entities in the State of Massachusetts.

EXHIBIT B

Reconciliation of Plan Participation  
(As of July 1, 2011)

**ACTIVE EMPLOYEES**

	<u>July 1, 2011</u>	<u>July 1, 2008</u>
<b>A. Average Age at Hire</b>	36.88	36.83
<b>B. Average Service</b>	11.16	11.50
<b>C. Average Current Age</b>	48.04	48.33

EXHIBIT C

Projected Cash Flows (Open Group)

<b>Total Medical, Dental &amp; Life Insurance</b>											
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Fiscal Year	Total APBO	Normal Cost	Employer Share of Premiums / Claims	Expected Amortization	Interest on Net OPEB Obligation	Net Amortizations	Expected Annual OPEB Cost	Expected OPEB Obligation	Excess Employer Payments (beyond claims)	Plan Assets at Beginning of year	Unfunded Accrued Actuarial Liability ("UAAL")
2012	11,244,212	509,189	336,970	569,864	90,588	(71,322)	1,098,319	2,264,706	0	30,000	11,214,212
2013	11,870,902	527,079	367,231	569,864	121,042	(71,322)	1,146,663	3,026,055	0	31,200	11,839,702
2014	12,511,980	544,691	391,624	569,864	152,219	(71,322)	1,195,452	4,609,315	0	32,448	12,479,532
2015	13,171,648	561,092	430,423	569,864	184,372	(71,322)	1,244,006	5,422,898	0	33,746	13,137,902
2016	13,834,410	587,573	455,640	569,864	216,916	(71,322)	1,303,031	6,270,289	0	35,096	13,799,314
2017	14,525,396	614,984	478,239	569,864	250,812	(71,322)	1,364,338	7,156,388	0	36,500	14,488,896
2018	15,248,626	632,938	514,792	569,864	286,255	(71,322)	1,417,735	8,059,331	0	37,960	15,210,666
2019	15,981,442	658,119	547,503	569,864	322,373	(71,322)	1,479,034	8,990,862	0	39,478	15,941,964
2020	16,735,742	682,555	596,976	569,864	359,635	(71,322)	1,540,732	9,934,618	0	41,057	16,694,685
2021	17,494,175	712,504	636,934	569,864	397,385	(71,322)	1,608,431	10,906,115	0	42,699	17,451,476
2022	18,272,533	744,903	679,168	569,864	436,244	(71,322)	1,679,689	11,906,636	0	44,407	18,228,126
2023	19,071,797	780,652	722,896	569,864	476,265	(71,322)	1,755,459	12,939,199	0	46,183	19,025,614
2024	19,894,737	813,487	772,837	569,864	517,568	(71,322)	1,829,597	13,995,959	0	48,030	19,846,707
2025	20,732,802	855,449	810,015	569,864	559,839	(71,322)	1,913,830	15,099,774	0	49,951	20,682,851
2026	21,609,678	897,586	867,284	569,864	603,991	(71,322)	2,000,119	16,232,609	0	51,949	21,557,729
2027	22,505,579	945,071	913,162	569,864	649,304	0	2,164,239	17,483,686	0	54,027	22,451,552
2028	23,438,987	995,762	944,981	569,864	699,347	0	2,264,973	18,803,678	0	56,188	23,382,799
2029	24,429,676	1,052,150	981,104	569,864	752,147	0	2,374,161	20,196,735	0	58,436	24,371,240
2030	25,480,752	1,112,037	1,020,583	569,864	807,869	0	2,489,770	21,665,922	0	60,773	25,419,979
2031	26,595,094	1,173,252	1,041,769	569,864	866,637	0	2,609,753	23,233,906	0	63,204	26,531,890
2032	27,795,639	1,235,829	1,077,621	569,864	929,356	0	2,735,049	24,891,334	0	65,732	27,729,907
2033	29,072,183	1,296,076	1,120,909	569,864	995,653	0	2,861,593	26,632,018	0	68,361	29,003,822
2034	30,417,243	1,360,126	1,172,072	569,864	1,065,280	0	2,995,270	28,455,216	0	71,095	30,346,148
2035	31,829,575	1,423,337	1,234,896	569,864	1,138,208	0	3,131,409	30,351,729	0	73,939	31,755,636
2036	33,298,986	1,487,161	1,282,045	569,864	1,214,069	0	3,271,094	32,340,778	0	76,897	33,222,089
2037	34,844,268	1,554,884	1,337,579	569,864	1,293,631	0	3,418,379	34,421,578	0	79,973	34,764,295
2038	36,464,036	1,628,186	1,394,424	569,864	1,376,863	0	3,574,913	36,602,067	0	83,172	36,380,864
2039	38,165,711	1,701,570	1,450,116	0	1,464,083	0	3,165,653	38,317,604	0	86,499	38,079,212
2040	39,953,852	1,774,167	1,509,330	0	1,532,704	0	3,306,871	40,115,145	0	89,959	39,863,893
2041	41,827,436	1,849,727	1,589,312	0	1,604,606	0	3,454,333	41,980,166	0	93,557	41,733,879

## EXHIBIT C

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

Medical Insurance												
Fiscal Year	Total APBO	Normal Cost	Employer Share of Premiums / Claims	Expected Amortization	Interest on Net OPEB Obligation	Net Amortizations	Expected Annual OPEB Cost	Expected OPEB Obligation	Excess Employer Payments (beyond claims)	Plan Assets at Beginning of year	Unfunded Accrued Actuarial Liability ("UAAL")	
								2,238,090				
2012	11,112,062	506,579	332,842	563,167	89,524	(70,484)	1,088,786	2,994,034	0	29,648	11,082,414	
2013	11,735,051	524,490	362,792	563,167	119,761	(70,484)	1,136,934	3,768,176	0	30,843	11,704,208	
2014	12,372,619	542,122	386,902	563,167	150,727	(70,484)	1,185,532	4,566,806	0	32,087	12,340,532	
2015	13,028,952	558,586	425,390	563,167	182,672	(70,484)	1,233,941	5,375,357	0	33,380	12,995,572	
2016	13,688,634	585,039	450,329	563,167	215,014	(70,484)	1,292,736	6,217,764	0	34,726	13,653,908	
2017	14,376,671	612,420	472,648	563,167	248,711	(70,484)	1,353,814	7,098,930	0	36,126	14,340,545	
2018	15,097,100	630,441	508,887	563,167	283,957	(70,484)	1,407,081	7,997,124	0	37,583	15,059,517	
2019	15,827,400	655,640	541,290	563,167	319,885	(70,484)	1,468,208	8,924,042	0	39,097	15,788,303	
2020	16,579,421	680,133	590,431	563,167	356,962	(70,484)	1,529,778	9,863,389	0	40,674	16,538,747	
2021	17,335,888	710,114	630,067	563,167	394,536	(70,484)	1,597,333	10,830,655	0	42,313	17,293,575	
2022	18,112,571	742,540	671,972	563,167	433,226	(70,484)	1,668,449	11,827,132	0	44,018	18,068,553	
2023	18,910,464	778,314	715,385	563,167	473,085	(70,484)	1,744,082	12,855,829	0	45,792	18,864,672	
2024	19,732,329	811,196	765,001	563,167	514,233	(70,484)	1,818,112	13,908,940	0	47,638	19,684,691	
2025	20,569,665	853,161	801,885	563,167	556,358	(70,484)	1,902,202	15,009,257	0	49,558	20,520,107	
2026	21,446,088	895,315	858,864	563,167	600,370	(70,484)	1,988,368	16,138,761	0	51,556	21,394,532	
2027	22,341,840	942,807	904,476	563,167	645,550	0	2,151,524	17,385,809	0	53,634	22,288,206	
2028	23,275,379	993,496	936,050	563,167	695,432	0	2,252,095	18,701,854	0	55,796	23,219,583	
2029	24,266,452	1,049,872	971,956	563,167	748,074	0	2,361,113	20,091,011	0	58,046	24,208,406	
2030	25,318,143	1,109,737	1,011,246	563,167	803,640	0	2,476,544	21,556,309	0	60,385	25,257,758	
2031	26,433,299	1,170,930	1,032,261	563,167	862,252	0	2,596,349	23,120,397	0	62,819	26,370,480	
2032	27,634,847	1,233,487	1,067,966	563,167	924,816	0	2,721,470	24,773,901	0	65,352	27,569,495	
2033	28,912,564	1,293,733	1,111,122	563,167	990,956	0	2,847,856	26,510,635	0	67,986	28,844,578	
2034	30,258,981	1,357,770	1,162,188	563,167	1,060,425	0	2,981,362	28,329,809	0	70,725	30,188,256	
2035	31,672,812	1,420,979	1,224,945	563,167	1,133,192	0	3,117,338	30,222,202	0	73,575	31,599,237	
2036	33,143,849	1,484,807	1,272,059	563,167	1,208,888	0	3,256,862	32,207,005	0	76,539	33,067,310	
2037	34,690,862	1,552,533	1,327,593	563,167	1,288,280	0	3,403,980	34,283,392	0	79,621	34,611,241	
2038	36,312,434	1,625,831	1,384,474	563,167	1,371,336	0	3,560,334	36,459,252	0	82,826	36,229,608	
2039	38,015,943	1,699,215	1,440,234	0	1,458,370	0	3,157,585	38,176,603	0	86,160	37,929,783	
2040	39,805,921	1,771,818	1,499,537	0	1,527,064	0	3,298,882	39,975,948	0	89,626	39,716,295	
2041	41,681,329	1,847,387	1,579,631	0	1,599,038	0	3,446,425	41,842,742	0	93,230	41,588,099	

EXHIBIT C

Projected Cash Flows (Open Group)  
(continued)

<b>Dental Insurance</b>												
Fiscal Year	Total APBO	Normal Cost	Employer Share of Premiums / Claims	Expected Amortization	Interest on Net OPEB Obligation	Net Amortizations	Expected Annual OPEB Cost	Expected OPEB Obligation	Excess Employer Payments (beyond claims)	Plan Assets at Beginning of year	Unfunded Accrued Actuarial Liability ("UAAL")	
2012	0	0	0	0	0	0	0	0	0	0	0	
2013	0	0	0	0	0	0	0	0	0	0	0	
2014	0	0	0	0	0	0	0	0	0	0	0	
2015	0	0	0	0	0	0	0	0	0	0	0	
2016	0	0	0	0	0	0	0	0	0	0	0	
2017	0	0	0	0	0	0	0	0	0	0	0	
2018	0	0	0	0	0	0	0	0	0	0	0	
2019	0	0	0	0	0	0	0	0	0	0	0	
2020	0	0	0	0	0	0	0	0	0	0	0	
2021	0	0	0	0	0	0	0	0	0	0	0	
2022	0	0	0	0	0	0	0	0	0	0	0	
2023	0	0	0	0	0	0	0	0	0	0	0	
2024	0	0	0	0	0	0	0	0	0	0	0	
2025	0	0	0	0	0	0	0	0	0	0	0	
2026	0	0	0	0	0	0	0	0	0	0	0	
2027	0	0	0	0	0	0	0	0	0	0	0	
2028	0	0	0	0	0	0	0	0	0	0	0	
2029	0	0	0	0	0	0	0	0	0	0	0	
2030	0	0	0	0	0	0	0	0	0	0	0	
2031	0	0	0	0	0	0	0	0	0	0	0	
2032	0	0	0	0	0	0	0	0	0	0	0	
2033	0	0	0	0	0	0	0	0	0	0	0	
2034	0	0	0	0	0	0	0	0	0	0	0	
2035	0	0	0	0	0	0	0	0	0	0	0	
2036	0	0	0	0	0	0	0	0	0	0	0	
2037	0	0	0	0	0	0	0	0	0	0	0	
2038	0	0	0	0	0	0	0	0	0	0	0	
2039	0	0	0	0	0	0	0	0	0	0	0	
2040	0	0	0	0	0	0	0	0	0	0	0	
2041	0	0	0	0	0	0	0	0	0	0	0	



EXHIBIT C

Projected Cash Flows (Open Group)  
(continued)

<b>Life Insurance</b>												
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Fiscal Year	Total APBO	Normal Cost	Employer Share of Premiums / Claims	Expected Amortization	Interest on Net OPEB Obligation	Net Amortizations	Expected Annual OPEB Cost	Expected OPEB Obligation	Excess Employer Payments (beyond claims)	Plan Assets at Beginning of year	Unfunded Accrued Actuarial Liability ("UAAL")
								26,616			
2012	132,150	2,610	4,128	6,697	1,064	(838)	9,533	32,021	0	352	131,798
2013	135,851	2,589	4,439	6,697	1,281	(838)	9,729	37,311	0	357	135,494
2014	139,361	2,569	4,722	6,697	1,492	(838)	9,920	42,509	0	361	139,000
2015	142,696	2,506	5,033	6,697	1,700	(838)	10,065	47,541	0	366	142,330
2016	145,776	2,534	5,311	6,697	1,902	(838)	10,295	52,525	0	370	145,406
2017	148,725	2,564	5,591	6,697	2,101	(838)	10,524	57,458	0	374	148,351
2018	151,526	2,497	5,905	6,697	2,298	(838)	10,654	62,207	0	377	151,149
2019	154,042	2,479	6,213	6,697	2,488	(838)	10,826	66,820	0	381	153,661
2020	156,321	2,422	6,545	6,697	2,673	(838)	10,954	71,229	0	383	155,938
2021	158,287	2,390	6,867	6,697	2,849	(838)	11,098	75,460	0	386	157,901
2022	159,962	2,363	7,196	6,697	3,018	(838)	11,240	79,504	0	389	159,573
2023	161,333	2,338	7,511	6,697	3,180	(838)	11,377	83,370	0	391	160,942
2024	162,408	2,291	7,836	6,697	3,335	(838)	11,485	87,019	0	392	162,016
2025	163,137	2,288	8,130	6,697	3,481	(838)	11,628	90,517	0	393	162,744
2026	163,590	2,271	8,420	6,697	3,621	(838)	11,751	93,848	0	393	163,197
2027	163,739	2,264	8,686	6,697	3,754	0	12,715	97,877	0	393	163,346
2028	163,608	2,266	8,931	6,697	3,915	0	12,878	101,824	0	392	163,216
2029	163,224	2,278	9,148	6,697	4,073	0	13,048	105,724	0	390	162,834
2030	162,609	2,300	9,337	6,697	4,229	0	13,226	109,613	0	388	162,221
2031	161,795	2,322	9,508	6,697	4,385	0	13,404	113,509	0	385	161,410
2032	160,792	2,342	9,655	6,697	4,540	0	13,579	117,433	0	380	160,412
2033	159,619	2,343	9,787	6,697	4,697	0	13,737	121,383	0	375	159,244
2034	158,262	2,356	9,884	6,697	4,855	0	13,908	125,407	0	370	157,892
2035	156,763	2,358	9,951	6,697	5,016	0	14,071	129,527	0	364	156,399
2036	155,137	2,354	9,986	6,697	5,181	0	14,232	133,773	0	358	154,779
2037	153,406	2,351	9,986	6,697	5,351	0	14,399	138,186	0	352	153,054
2038	151,602	2,355	9,950	6,697	5,527	0	14,579	142,815	0	346	151,256
2039	149,768	2,355	9,882	0	5,713	0	8,068	141,001	0	339	149,429
2040	147,931	2,349	9,793	0	5,640	0	7,989	139,197	0	333	147,598
2041	146,107	2,340	9,681	0	5,568	0	7,908	137,424	0	327	145,780

## EXHIBIT D

### **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 been 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 unfunded 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 unfunded 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.