

**Town of Ipswich Other
Postemployment Benefits Plan**

GASB 45 Actuarial Valuation

as of

July 1, 2015

For the fiscal years ending

June 30, 2016

June 30, 2017

Delivered February 2016

TABLE OF CONTENTSLETTER

<u>SECTION</u>		<u>PAGE</u>
I	PRINCIPAL RESULTS OF THE VALUATION	1
II	SUMMARY OF PLAN PROVISIONS	13
III	ACTUARIAL COST METHOD, ASSET VALUATION METHOD AND ACTUARIAL ASSUMPTIONS	14

EXHIBITS

A	FINANCIAL STATEMENT DISCLOSURES	22
B	RECONCILIATION OF PLAN PARTICIPANTS	34
C	PROJECTED CASH FLOWS (OPEN GROUP)	35
D	PROJECTED CASH FLOWS (OPEN GROUP) – FUNDING	36
E	GLOSSARY OF TERMS	40

February 3, 2016

Personal and Confidential

Ms. Stephanie Frontiera
Town Accountant
Town of Ipswich
25 Green Street
Ipswich, MA 01938

Dear Ms. Frontiera:

We have performed an actuarial valuation of the Town of Ipswich Other Postemployment Benefits Plan for the fiscal year ending June 30, 2016. The figures presented in this report reflect the adoption, by the Town of Ipswich, 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,

A handwritten signature in black ink, appearing to read 'P. Elmore', written in a cursive style.

Parker E. Elmore, ASA, EA, FCA, MAAA
President, CEO & Actuary

February 3, 2016

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Ipswich other postemployment benefit programs as of July 1, 2015 for the fiscal year ending June 30, 2016 in accordance with generally accepted actuarial principles and practices. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statements Number 43 and 45 for the determination of the liability for postemployment benefits other than pensions.

The actuarial data is based on the plan of benefits verified by the Town and on participant claims or premium data provided by the Town and/or vendors employed by the Town.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may yield results significantly different than those reported here. As such, additional determinations may be needed for other purposes including determining the benefit security at termination and/or adequacy of the funding of an ongoing plan.

To the best of our knowledge, this report is complete and accurate and in our opinion represents the information necessary to comply with GASB Statements Number 43 and 45 with respect to the benefit obligations addressed. The signing actuaries are members of the Society of Actuaries, the American Academy of Actuaries and other professional actuarial organizations and meet their "General Qualification Standards for Statements of Actuarial Opinion" to render the actuarial opinion contained herein. Further, in our opinion, the assumptions as approved by the Town are reasonably related to the experience and expectations of the postemployment benefits programs.



Parker E. Elmore, ASA, EA, FCA, MAAA
President, CEO & Actuary

SECTION I
PRINCIPAL RESULTS OF THE VALUATION

Town of Ipswich
Assuming partial funding - 4.00% discount rate
Comparison of Plan Liabilities to Prior Valuation

	<u>July 1, 2015</u>	<u>July 1, 2013</u>
I. Present Value of Future Benefits		
A. Actives	34,235,110	40,368,238
B. Retirees/Disabled	<u>14,194,839</u>	<u>16,988,569</u>
C. Total	48,429,949	57,356,807
II. Present Value of Future Normal Cost	16,304,105	21,214,551
III. Actuarial Accrued Liability (Entry Age Normal)		
A. Actives	17,931,005	19,153,687
B. Retirees/Disabled	<u>14,194,839</u>	<u>16,988,569</u>
C. Total	32,125,844	36,142,256
IV. Plan Assets	2,351,427	1,393,277
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	29,774,417	34,748,979
VI. Funded Ratio [IV. / III.]	7.32%	3.85%
VII. Annual Covered Payroll	24,930,848	23,637,130
VIII. UAAL as % of Covered Payroll	119.40%	147.0%
IX. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	12,195,584	7,502,832
X. Number of Eligible Participants		
A. Actives	449	446
B. Retirees/Disabled	<u>281</u>	<u>250</u>
C. Total	730	696
	<u>June 30, 2016</u>	<u>June 30, 2014</u>
XI. Normal Cost	1,383,030	1,651,755
XII. Amortization of UAAL - 30 year flat dollar	1,121,178	1,121,178
XIII. Annual Required Contribution ('ARC') [XI. + XII.]	2,504,208	2,772,933
XIV. Interest on Net OPEB Obligation (Asset)	487,825	300,110
XV. Adjustment to Annual Required Contribution	(678,149)	(417,202)
XVI. Amortization of Actuarial (Gains) / Losses	692,346	919,345
XVII. Annual OPEB Expense [XIII. + XIV. + XV. + XVI.]	3,006,230	3,575,186
XVIII. Employer Share of Costs	935,600	991,196
XIX. Employer Payments (Withdrawals) to/from OPEB Trust	294,080	340,401
XX. Total Employer Contribution [XVIII. + XIX.]	1,229,680	1,331,597
XXI. Percentage of Annual OPEB Expense Contributed	40.9%	37.2%
XXII. Net OPEB Obligation (Asset) at Beginning of Year [IX.]	12,195,584	7,502,832
XXIII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVII. - XX.]	1,776,550	2,243,589
XXIV. Net OPEB Obligation (Asset) at End of Year [XXII. + XXIII.]	13,972,134	9,746,421
XXV. Discount Rate	4.00%	4.00%

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Town of Ipswich Comparison of Plan Funding vs. Pay-as-you-go Funding

	<u>partial funding - 4.00%</u> <u>discount rate</u>	<u>Plan Funding -7.00%</u> <u>discount rate</u>
I. Present Value of Future Benefits		
A. Actives	34,235,110	16,496,769
B. Retirees/Disabled	<u>14,194,839</u>	<u>10,578,040</u>
C. Total	48,429,949	27,074,809
II. Present Value of Future Normal Cost	16,304,105	5,851,879
III. Actuarial Accrued Liability (Entry Age Normal)		
A. Actives	17,931,005	10,644,890
B. Retirees/Disabled	<u>14,194,839</u>	<u>10,578,040</u>
C. Total	32,125,844	21,222,930
IV. Plan Assets	2,351,427	2,351,427
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	29,774,417	18,871,503
VI. Funded Ratio [IV. / III.]	7.32%	11.08%
VII. Annual Covered Payroll	24,930,848	24,930,848
VIII. UAAL as % of Covered Payroll	119.40%	75.70%
IX. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	12,195,584	12,195,584
X. Number of Eligible Participants		
A. Actives	449	449
B. Retirees/Disabled	<u>281</u>	<u>281</u>
C. Total	730	730
For Fiscal Year Ending June 30, 2016		
XI. Normal Cost	1,383,030	649,449
XII. Amortization of UAAL - 30 year flat dollar	1,121,178	1,436,291
XIII. Annual Required Contribution ('ARC') [XI. + XII.]	2,504,208	2,085,740
XIV. Interest on Net OPEB Obligation (Asset)	487,825	853,691
XV. Adjustment to Annual Required Contribution	(678,149)	(918,504)
XVI. Amortization of Actuarial (Gains) / Losses	692,346	116,591
XVII. Annual OPEB Expense [XIII. + XIV. + XV. + XVI.]	3,006,230	2,137,518
XVIII. Employer Share of Costs	935,600	935,600
XIX. Employer Payments (Withdrawals) to/from OPEB Trust	294,080	741,177
XX. Total Employer Contribution [XVIII. + XIX.]	1,229,680	1,676,777
XXI. Percentage of Annual OPEB Expense Contributed	40.9%	78.4%
XXII. Net OPEB Obligation (Asset) at Beginning of Year [IX.]	12,195,584	12,195,584
XXIII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVII. - XX.]	1,776,550	460,741
XXIV. Net OPEB Obligation (Asset) at End of Year [XXII. + XXIII.]	13,972,134	12,656,325
XXV. Discount Rate	4.00%	7.00%

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Town of Ipswich
Assuming partial - 4.00% discount rate
Plan Liabilities as of July 1, 2015

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Excise Tax</u>	<u>Total</u>
I. Present Value of Future Benefits					
A. Actives	31,766,558	0	28,309	2,440,243	34,235,110
B. Retirees/Disabled	<u>14,111,270</u>	<u>0</u>	<u>12,333</u>	<u>71,236</u>	<u>14,194,839</u>
C. Total	45,877,828	0	40,642	2,511,479	48,429,949
II. Present Value of Future Normal Cost	14,729,796	0	10,042	1,564,267	16,304,105
III. Actuarial Accrued Liability (Entry Age Normal)					
A. Actives	17,036,762	0	18,267	875,976	17,931,005
B. Retirees/Disabled	<u>14,111,270</u>	<u>0</u>	<u>12,333</u>	<u>71,236</u>	<u>14,194,839</u>
C. Total	31,148,032	0	30,600	947,212	32,125,844
IV. Plan Assets	2,274,476	0	1,637	75,314	2,351,427
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	28,873,556	0	28,963	871,898	29,774,417
VI. Annual Covered Payroll	24,930,848	24,930,848	24,930,848	24,930,848	24,930,848
VII. UAAL as % of Covered Payroll	115.8%	0.0%	0.1%	3.5%	119.4%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	11,824,387	0	11,617	359,580	12,195,584
IX. Number of Eligible Participants					
A. Actives	449	449	449	449	
B. Retirees/Disabled	<u>281</u>	<u>0</u>	<u>43</u>	<u>281</u>	
C. Total	730	449	492	730	
For Fiscal Year Ending June 30, 2016					
X. Normal Cost	1,275,648	0	1,098	106,284	1,383,030
XI. Amortization of UAAL - 30 year flat dollar	1,087,054	0	1,067	33,057	1,121,178
XII. Annual Required Contribution ('ARC') [X. + XI.]	2,362,702	0	2,165	139,341	2,504,208
XIII. Interest on Net OPEB Obligation (Asset)	472,976	0	466	14,383	487,825
XIV. Adjustment to Annual Required Contribution	(657,507)	0	(647)	(19,995)	(678,149)
XV. Amortization of Actuarial (Gains) / Losses	671,275	0	659	20,412	692,346
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	2,849,446	0	2,643	154,141	3,006,230
XVII. Employer Share of Costs	934,992	0	608	0	935,600
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	285,129	0	280	8,671	294,080
XIX. Total Employer Contribution [XVII. + XVIII.]	1,220,121	0	888	8,671	1,229,680
XX. Percentage of Annual OPEB Expense Contributed	42.8%	0.0%	33.6%	5.6%	40.9%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	11,824,387	0	11,617	359,580	12,195,584
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	1,629,325	0	1,755	145,470	1,776,550
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	13,453,712	0	13,372	505,050	13,972,134

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Town of Ipswich
Plan Liabilities as of July 1, 2015
Assuming maintain partial funding method

	General Government Employees and Retirees	Education Employees and Retirees	Public Safety Employees and Retirees	Finance Employees and Retirees	Human Services Employees and Retirees	Library Employees and Retirees	Code Enforcement Employees and Retirees	Planning and Development Employees and Retirees	Public Works Employees and Retirees	Sewer Enterprise Employees and Retirees	Water Enterprise Employees and Retirees	Electric Enterprise Employees and Retirees	Total
I. Present Value of Future Benefits													
A. Actives	956,135	20,864,931	6,754,226	866,311	40,296	312,023	234,916	263,006	1,473,396	334,503	884,054	1,251,313	34,235,110
B. Retirees/Disabled	2,419,506	7,089,051	2,098,802	368,432	112,415	151,478	61,990	0	459,296	260,910	143,115	1,029,844	14,194,839
C. Total	3,375,641	27,953,982	8,853,028	1,234,743	152,711	463,501	296,906	263,006	1,932,692	595,413	1,027,169	2,281,157	48,429,949
II. Present Value of Future Normal Cost	617,626	9,962,442	3,734,552	268,164	30,841	71,947	91,712	57,301	612,405	141,914	283,793	431,408	16,304,105
III. Actuarial Accrued Liability (Entry Age Normal)													
A. Actives	338,509	10,902,489	3,019,674	598,147	9,455	240,076	143,204	205,705	860,991	192,589	600,261	819,905	17,931,005
B. Retirees/Disabled	2,419,506	7,089,051	2,098,802	368,432	112,415	151,478	61,990	0	459,296	260,910	143,115	1,029,844	14,194,839
C. Total	2,758,015	17,991,540	5,118,476	966,579	121,870	391,554	205,194	205,705	1,320,287	453,499	743,376	1,849,749	32,125,844
IV. Plan Assets	32,633	1,159,458	223,727	44,566	7,971	22,003	8,213	12,496	65,140	101,136	192,586	481,498	2,351,427
V. Unfunded Actuarial Accrued Liability ("UAAL") [III - IV.]	2,725,382	16,832,082	4,894,749	922,013	113,899	369,551	196,981	193,209	1,255,147	352,363	550,790	1,368,251	29,774,417
VI. Annual Covered Payroll	567,126	16,702,878	3,059,971	855,516	N/A	140,506	180,943	173,436	1,202,604	318,343	666,111	1,063,414	24,930,848
VII. UAAL as % of Covered Payroll	480.6%	100.8%	160.0%	107.8%	N/A	263.0%	108.9%	111.4%	104.4%	110.7%	82.7%	128.7%	119.4%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	40,615	8,321,507	1,772,261	394,621	79,435	198,241	179,767	207,226	679,918	83,162	183,689	55,142	12,195,584
IX. Number of Eligible Participants													
A. Actives	18	311	46	13	1	5	3	4	20	4	10	14	449
B. Retirees/Disabled	27	153	40	13	3	4	1	0	11	6	4	19	281
C. Total	45	464	86	26	4	9	4	4	31	10	14	33	730
For Fiscal Year Ending June 30, 2016													
X. Normal Cost	58,182	904,561	219,427	33,737	3,701	9,379	7,683	9,435	59,260	11,012	27,779	38,874	1,383,030
XI. Amortization of UAAL - 30 year flat dollar	30,797	649,578	177,939	42,218	5,814	19,599	10,871	13,066	59,605	21,287	24,411	65,993	1,121,178
XII. Annual Required Contribution (ARC) [X. + XI.]	88,979	1,554,139	397,366	75,955	9,515	28,978	18,554	22,501	118,865	32,299	52,190	104,867	2,504,208
XIII. Interest on Net OPEB Obligation (Asset)	1,625	332,860	70,891	15,784	3,178	7,930	7,191	8,289	27,197	3,326	7,348	2,206	487,825
XIV. Adjustment to Annual Required Contribution	(2,259)	(462,725)	(98,549)	(21,943)	(4,417)	(11,024)	(9,997)	(11,523)	(37,808)	(4,624)	(10,214)	(3,066)	(678,149)
XV. Amortization of Actuarial (Gains) / Losses	59,438	387,737	110,309	20,831	2,626	8,438	4,422	4,433	28,454	9,773	16,021	39,864	692,346
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	147,783	1,812,011	480,017	90,627	10,902	34,322	20,170	23,700	136,708	40,774	65,345	143,871	3,006,230
XVII. Employer Share of Costs	127,928	477,765	139,292	37,392	6,088	10,632	7,840	1,632	37,865	17,282	11,313	60,571	935,600
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	3,105	110,340	21,291	4,241	759	2,094	782	1,189	6,199	22,672	41,408	80,000	294,080
XIX. Total Employer Contribution [XVII. + XVIII.]	131,033	588,105	160,583	41,633	6,847	12,726	8,622	2,821	44,064	39,954	52,721	140,571	1,229,680
XX. Percentage of Annual OPEB Expense Contributed	86.6%	26.4%	29.0%	41.3%	55.8%	31.0%	38.9%	6.9%	27.7%	42.4%	17.3%	42.1%	31.1%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	40,615	8,321,507	1,772,261	394,621	79,435	198,241	179,767	207,226	679,918	83,162	183,689	55,142	12,195,584
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	16,750	1,223,906	319,434	48,994	4,055	21,596	11,548	20,879	92,644	820	12,624	3,300	1,776,550
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	57,365	9,545,413	2,091,695	443,615	83,490	219,837	191,315	228,105	772,562	83,982	196,313	58,442	13,972,134

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Town of Ipswich
Detail of Plan Liabilities by Group and Dependency Status
Assuming partial funding - 4.00% discount rate
Plan Liabilities as of July 1, 2015

	<u>Present Value of Future Benefits</u>	<u>Actuarial Accrued Liability (Entry Age Normal)</u>	<u>Normal Cost</u>
Actives			
Under Age 65			
A. Participants	5,506,941	2,833,791	209,611
B. Spouses	<u>3,179,908</u>	<u>1,654,759</u>	<u>117,765</u>
C. Total	8,686,849	4,488,550	327,376
Age 65 and Over			
A. Participants	15,407,414	7,941,017	641,512
B. Spouses	<u>10,140,847</u>	<u>5,501,438</u>	<u>414,142</u>
C. Total	25,548,261	13,442,455	1,055,654
Actives Total			
A. Participants	20,914,355	10,774,808	851,123
B. Spouses	<u>13,320,755</u>	<u>7,156,197</u>	<u>531,907</u>
C. Total	34,235,110	17,931,005	1,383,030
Retirees/Disabled			
Under Age 65			
A. Participants	1,938,199	1,938,199	0
B. Spouses	<u>589,864</u>	<u>589,864</u>	<u>0</u>
C. Total	2,528,063	2,528,063	0
Age 65 and Over			
A. Participants	10,732,274	10,732,274	0
B. Spouses	<u>934,502</u>	<u>934,502</u>	<u>0</u>
C. Total	11,666,776	11,666,776	0
Retirees/Disabled Total			
A. Participants	12,670,473	12,670,473	0
B. Spouses	<u>1,524,366</u>	<u>1,524,366</u>	<u>0</u>
C. Total	14,194,839	14,194,839	0
Total Population			
A. Participants	33,584,828	23,445,281	851,123
B. Spouses	<u>14,845,121</u>	<u>8,680,563</u>	<u>531,907</u>
C. Total	48,429,949	32,125,844	1,383,030

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Town of Ipswich

Assuming Funding over 30 years at 7.00% discount rate

Plan Liabilities as of July 1, 2015

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Excise Tax</u>	<u>Total</u>
I. Present Value of Future Benefits					
A. Actives	15,444,009	0	13,009	1,039,751	16,496,769
B. Retirees/Disabled	<u>10,526,192</u>	<u>0</u>	<u>8,908</u>	<u>42,940</u>	<u>10,578,040</u>
C. Total	25,970,201	0	21,917	1,082,691	27,074,809
II. Present Value of Future Normal Cost	5,321,382	0	3,373	527,124	5,851,879
III. Actuarial Accrued Liability (Entry Age Normal)					
A. Actives	10,122,627	0	9,636	512,627	10,644,890
B. Retirees/Disabled	<u>10,526,192</u>	<u>0</u>	<u>8,908</u>	<u>42,940</u>	<u>10,578,040</u>
C. Total	20,648,819	0	18,544	555,567	21,222,930
IV. Plan Assets	2,287,817	0	2,055	61,555	2,351,427
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	18,361,002	0	16,489	494,012	18,871,503
VI. Annual Covered Payroll	24,930,848	24,930,848	24,930,848	24,930,848	24,930,848
VII. UAAL as % of Covered Payroll	73.6%	0.0%	0.1%	2.0%	75.7%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	11,824,387	0	11,617	359,580	12,195,584
IX. Number of Eligible Participants					
A. Actives	449	449	449	449	
B. Retirees/Disabled	<u>281</u>	<u>0</u>	<u>43</u>	<u>281</u>	
C. Total	730	449	492	730	
For Fiscal Year Ending June 30, 2016					
X. Normal Cost	600,701	0	464	48,284	649,449
XI. Amortization of UAAL - 30 year flat dollar	1,397,437	0	1,255	37,599	1,436,291
XII. Annual Required Contribution ('ARC') [X. + XI.]	1,998,138	0	1,719	85,883	2,085,740
XIII. Interest on Net OPEB Obligation (Asset)	827,707	0	813	25,171	853,691
XIV. Adjustment to Annual Required Contribution	(890,547)	0	(875)	(27,082)	(918,504)
XV. Amortization of Actuarial (Gains) / Losses	113,437	0	102	3,052	116,591
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	2,048,735	0	1,759	87,024	2,137,518
XVII. Employer Share of Costs	934,992	0	608	0	935,600
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	653,002	0	1,151	87,024	741,177
XIX. Total Employer Contribution [XVII. + XVIII.]	1,587,994	0	1,759	87,024	1,676,777
XX. Percentage of Annual OPEB Expense Contributed	77.5%	0.0%	100.0%	100.0%	78.4%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	11,824,387	0	11,617	359,580	12,195,584
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	460,741	0	0	0	460,741
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	12,285,128	0	11,617	359,580	12,656,325

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Plan Liabilities as of July 1, 2015
Assuming Funding over 30 years at 7.00% discount rate

	General Government Employees and Retirees	Education Employees and Retirees	Public Safety Employees and Retirees	Finance Employees and Retirees	Human Services Employees and Retirees	Library Employees and Retirees	Code Enforcement Employees and Retirees	Planning and Development Employees and Retirees	Public Works Employees and Retirees	Sewer Enterprise Employees and Retirees	Water Enterprise Employees and Retirees	Electric Enterprise Employees and Retirees	Total
I. Present Value of Future Benefits													
A. Actives	460,731	10,054,121	3,254,638	417,447	19,417	150,354	113,198	126,734	709,981	161,186	425,996	602,966	16,496,769
B. Retirees/Disabled	<u>1,803,023</u>	<u>5,282,784</u>	<u>1,564,034</u>	<u>274,557</u>	<u>83,772</u>	<u>112,882</u>	<u>46,195</u>	<u>0</u>	<u>342,269</u>	<u>194,431</u>	<u>106,650</u>	<u>767,443</u>	<u>10,578,040</u>
C. Total	2,263,754	15,336,905	4,818,672	692,004	103,189	263,236	159,393	126,734	1,052,250	355,617	532,646	1,370,409	27,074,809
II. Present Value of Future Normal Cost	221,678	3,575,726	1,340,408	96,250	11,069	25,823	32,917	20,567	219,805	50,936	101,859	154,841	5,851,879
III. Actuarial Accrued Liability (Entry Age Normal)													
A. Actives	200,960	6,472,353	1,792,655	355,095	5,613	142,523	85,014	122,118	511,134	114,332	356,350	486,743	10,644,890
B. Retirees/Disabled	<u>1,803,023</u>	<u>5,282,784</u>	<u>1,564,034</u>	<u>274,557</u>	<u>83,772</u>	<u>112,882</u>	<u>46,195</u>	<u>0</u>	<u>342,269</u>	<u>194,431</u>	<u>106,650</u>	<u>767,443</u>	<u>10,578,040</u>
C. Total	2,003,983	11,755,137	3,356,689	629,652	89,385	255,405	131,209	122,118	853,403	308,763	463,000	1,254,186	21,222,930
IV. Plan Assets	32,633	1,159,458	223,727	44,566	7,971	22,003	8,213	12,496	65,140	101,136	192,586	481,498	2,351,427
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	1,971,350	10,595,679	3,132,962	585,086	81,414	233,402	122,996	109,622	788,263	207,627	270,414	772,688	18,871,503
VI. Annual Covered Payroll	567,126	16,702,878	3,059,971	855,516	N/A	140,506	180,943	173,436	1,202,604	318,343	666,111	1,063,414	24,930,848
VII. UAAL as % of Covered Payroll	347.6%	63.4%	102.4%	68.4%	N/A	166.1%	68.0%	63.2%	65.5%	65.2%	40.6%	72.7%	75.7%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	40,615	8,321,507	1,772,261	394,621	79,435	198,241	179,767	207,226	679,918	83,162	183,689	55,142	12,195,584
IX. Number of Eligible Participants													
A. Actives	18	311	46	13	1	5	3	4	20	4	10	14	449
B. Retirees/Disabled	<u>27</u>	<u>153</u>	<u>40</u>	<u>13</u>	<u>3</u>	<u>4</u>	<u>1</u>	<u>0</u>	<u>11</u>	<u>6</u>	<u>4</u>	<u>19</u>	<u>281</u>
C. Total	45	464	86	26	4	9	4	4	31	10	14	33	730
For Fiscal Year Ending June 30, 2016													
X. Normal Cost	27,320	424,768	103,039	15,842	1,738	4,404	3,608	4,431	27,828	5,171	13,045	18,255	649,449
XI. Amortization of UAAL - 30 year flat dollar	39,453	832,145	227,950	54,084	7,448	25,107	13,926	16,738	76,357	27,270	31,272	84,541	1,436,291
XII. Annual Required Contribution (ARC) [X. + XI.]	66,773	1,256,913	330,989	69,926	9,186	29,511	17,534	21,169	104,185	32,441	44,317	102,796	2,085,740
XIII. Interest on Net OPEB Obligation (Asset)	2,845	582,503	124,059	27,622	5,561	13,877	12,584	14,506	47,595	5,820	12,859	3,860	853,691
XIV. Adjustment to Annual Required Contribution	(3,059)	(626,728)	(133,478)	(29,720)	(5,983)	(14,931)	(13,540)	(15,607)	(51,208)	(6,263)	(13,834)	(4,153)	(918,504)
XV. Amortization of Actuarial (Gains) / Losses	10,008	65,295	18,576	3,508	442	1,421	745	747	4,792	1,646	2,698	6,713	116,591
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	76,567	1,277,983	340,146	71,336	9,206	29,878	17,323	20,815	105,364	33,644	46,040	109,216	2,137,518
XVII. Employer Share of Costs	127,928	477,765	139,292	37,392	6,088	10,632	7,840	1,632	37,865	17,282	11,313	60,571	935,600
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	69,985	410,529	117,227	21,990	3,122	8,920	4,582	4,265	29,804	10,783	16,170	43,800	741,177
XIX. Total Employer Contribution [XVII. + XVIII.]	197,913	888,294	256,519	59,382	9,210	19,552	12,422	5,897	67,669	28,065	27,483	104,371	1,676,777
XX. Percentage of Annual OPEB Expense Contributed	258.5%	69.5%	75.4%	83.2%	100.0%	65.4%	71.7%	28.3%	64.2%	83.4%	59.7%	95.6%	78.4%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	40,615	8,321,507	1,772,261	394,621	79,435	198,241	179,767	207,226	679,918	83,162	183,689	55,142	12,195,584
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	(121,346)	389,689	83,627	11,954	(4)	10,326	4,901	14,918	37,695	5,579	18,557	4,845	460,741
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	(80,731)	8,711,196	1,855,888	406,575	79,431	208,567	184,668	222,144	717,613	88,741	202,246	59,987	12,656,325

Overview of GASB 43 and 45

GASB 43 requires retiree medical plans to disclose information about asset and liability levels and show historical contribution information. GASB 43 only applies in situations where a separate trust is established to prefund these benefits. GASB 45 requires employers to perform periodic actuarial valuations to determine annual accounting costs, and to keep a running tally of the extent to which these amounts are over or under funded.

GASB 43 and 45 apply to those benefits provided after retirement except for pension benefits such as medical insurance, dental and life insurance. The philosophy behind the accounting standard is that these post-employment benefits are part of the compensation earned by employees in return for their services, and the cost of these benefits should be recognized while employees are providing those services, rather than after they have retired. This philosophy has already been applied for years to defined benefit pensions; GASB 43 and 45 extend this practice to all other post-employment benefits.

Overview of GASB 43 and 45

(continued)

The process of determining the liability for OPEB benefits is based on many assumptions about future events. The key actuarial assumptions are:

Turnover and retirement rates: How likely is it that an employee will qualify for post-employment benefits and when will they start?

Medical inflation and claims cost assumptions: When an employee starts receiving post-employment benefits many years from now, how much will be paid each year for the benefits and how rapidly will the costs grow?

Mortality assumption: How long is a retiree likely to receive benefits?

Discount rate assumption: What is the present value of those future benefit payments in terms of today's dollars?

Since the liability is being recognized over the employee's whole career with the Town, the present value is divided into three pieces: the part that is attributed to past years (the "Accrued Liability" or "Past Service Liability"), the part that is being earned this year (the "Normal Cost"), and the part that will be earned in future years (the "Future Service Liability").

Once the Accrued Liability and the Normal Cost have been calculated, the next step is to determine an annual contribution. This consists of two pieces:

- ✓ Normal Cost - because the benefits earned each year should be paid for each year
- ✓ Past Service Cost - a catch-up payment to fund the Accrued Liability over the next 10-30 years

The final step is to keep track going forward of how much of the contribution is actually paid. There is no requirement to actually fund these benefits, but the cumulative deficiency must be disclosed on the Town's financial statements as the Net OPEB Obligation. If you decide to fully fund the OPEB obligation this will appear in the financial statement as a Net OPEB Asset. In addition, the Discount Rate used to calculate the liabilities must reflect the expected investment income of whatever funds are set aside to prefund the benefits; if there is no prefunding then the Discount Rate will be much lower and the liabilities significantly higher than if the benefits are prefunded.

Commentary on Plan Experience and Contribution Amounts

1. GASB 45 – How we got here:

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. GASB 45 is designed to recognize the Other Postemployment Benefits (“OPEB”) earned by employees throughout their working career vs. when they are actually paid in retirement – accrual accounting vs. “pay-as-you-go” accounting. When GASB 45 was adopted, there was an Unfunded Actuarial Accrued Liability (“UAAL”) or “past service liability” which reflected all benefits earned until the date of such adoption. To smooth the impact of transitioning to GASB 45 on your financial statement, the UAAL was amortized over a 30 year period using a flat dollar amortization. Additionally, each eligible active employee earns benefits each year representing benefits to be paid in retirement or a “Normal Cost”. These amounts are reflected in your financial statement each year so that OPEB benefits for an eligible employee shall be fully charged to the financial statement when that eligible employee terminates employment.

2. Summary of Results:

During the fiscal year ending June 30, 2016, the Plan saw an experience gain of \$8,629,464 or 22.47%. Plan experience was more favorable than expected. This was mainly due to premiums decreasing as a result of switching from Medex 3 to Medex 2 vs. an expected 11% increase. This was somewhat offset by the introduction of a new Actuarial Cost Method in preparation for GASB 75 (increasing disclosed liabilities by \$2.2 million), a more conservative mortality table as recommended by PERAC (increasing disclosed liabilities by \$3.5 million) and 16 more covered retirees/spouses than expected. The actuarial experience gain is amortized into the annual OPEB costs over a 30-year period. The net impact of plan experience is a decrease in the annual OPEB cost. Please note there was a change in methodology to include spouses of retirees in the count.

Commentary on Plan Experience and Contribution Amounts
(continued)

3. **Balance Sheet Items**

	July 1, 2015	July 1, 2013
Actuarial Accrued Liability	\$32,125,844	\$36,142,256
Plan Assets	\$2,351,427	\$1,393,277
Unfunded Actuarial Accrued Liability	\$29,774,417	\$34,748,979
Funded %	7.32%	3.85%
Net OPEB Obligation	\$12,195,584	\$7,502,832

4. **Income Statement Items**

	June 30, 2016	June 30, 2014
Normal Cost	\$1,383,030	\$1,651,755
Amortization of UAAL	\$1,121,178	\$1,121,178
Interest on Net OPEB Obligation	\$487,825	\$300,110
Adjustment to Annual Required Contribution	\$(678,149)	\$(417,202)
Amortization of Actuarial (Gains)/Losses	\$692,346	\$919,345
Annual OPEB Expense	\$3,006,230	\$3,575,186
Employer Share of Costs Employer Contributions/(Withdrawals) to/from OPEB Trust	\$935,600 \$294,080	\$991,196 \$340,401
Total Employer Contribution	\$1,229,680	\$1,331,597
Discount Rate	4.00%	4.00%

Commentary on Plan Experience and Contribution Amounts
(continued)

5. **GASB 75 – Where we’re going:**

The Governmental Accounting Standards Board (“GASB”) issued GASB 75 “Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions” on June 2, 2015 which will become effective for your 2018 fiscal year. This standard will largely mirror the GASB 68 standard for pension plans. The new standards will require increased disclosure and will tie interest rates used in the valuation to the plan’s underlying investment and funding policy. This may increase the pressure on many entities to begin funding their OPEB liabilities. The final text of the GASB 75 was released on July 2, 2015 and we will be communicating more information about the new standard and the impact as more information becomes available.

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 hired before April 2, 2012 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. Those hired on or after April 2, 2012 shall be eligible to retire upon attainment of age 60 with 10 years of creditable service.
<u>Creditable Service</u>	Elapsed time from date of hire to termination of service date.
<u>Participant Contributions</u>	Retirees shall pay 50% of premiums for Medical & Life Insurance and 100% for Dental Insurance.
<u>Benefits Offered</u>	Various Medical offerings via Blue Cross Blue Shield of Massachusetts as well as Dental and 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 Individual Entry Age Actuarial Cost Method. Under this method, the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement, each individual's annual normal cost is a level dollar amount. 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 30 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 as of the valuation date.

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 projected generationally with scale BB and a base year 2009 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</u>		<u>Public</u> <u>Safety</u>
	<u>Safety Male</u>	<u>Safety Female</u>	
0	15.00%	15.00%	1.50%
5	7.60%	7.60%	1.50%
10	5.40%	5.40%	1.50%
15	3.30%	3.30%	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 for non-teachers

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 2013	6.0%	5.5%
FY 2014	5.0%	5.0%
FY 2015	5.0%	5.0%
FY 2016	5.0%	5.0%
FY 2017	5.0%	5.0%
FY 2018	5.0%	5.0%
FY 2019	5.0%	5.0%
FY 2020+	5.0%	5.0%

Participation Rate

It was assumed that 70% of 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 70% of eligible employees would elect coverage upon retirement.

Percent Married

It was assumed that 80% of participants who elect retiree healthcare coverage for themselves would also elect coverage for a spouse upon retirement. It was further assumed that a male spouse is three years older than a female spouse and same sex spouses are assumed to be the same age. 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

3.00% per year.

Open Group Forecast

It was assumed for projecting plan liabilities in future years that the active population would remain unchanged and that those who terminate employment or retire will be replaced with new employees with the demographics below:

Open Group Forecast Population Demographics

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	8.0%	5.0%
30	7.0%	14.0%
40	20.0%	19.0%
50	10.0%	10.0%
60	<u>3.0%</u>	<u>4.0%</u>
Total	48.0%	52.0%

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

As part of the Other Post-Employment Benefits Program, there are situations where the cost is borne partly or entirely on the retirees. In most cases, the premium that is used to split the cost is lower than the true cost of providing the medical benefits, for two reasons:

- ✓ The cost sharing program is usually a fixed amount such as a COBRA premium that does not take into account the age of the retiree and his/her dependents. Since medical costs generally increase with age, the cost sharing premium is often lower than the true cost of the medical benefits:
- ✓ The cost sharing premium is usually a blended rate that takes into account the cost of medical benefits for active employees as well as retirees. Medical costs are generally higher for retirees than for active employees of the same age. This means that, again, the cost sharing premium is often lower than the true cost of the medical benefits.

Because of these two factors, a retiree who is paying 100% of the cost sharing premium is most likely not paying 100% of the true cost of the medical benefits. This situation is known as an “implicit subsidy”. GASB 43 and 45 require the plan sponsor to measure the liability for this subsidy; that is, the difference between the true cost of the medical benefits and the cost sharing premiums paid by the retiree. To do this, our valuation consists of several steps:

First, we calculate the liability for the true cost of medical benefits expected to be received by retirees and their dependents. This liability is based factors developed by actuaries that reflect how the cost of medical benefits varies by age and gender, as well as the other assumptions discussed on the prior page.

Next, we calculate the liability for the future premiums expected to be paid by the retiree for their own and their dependents’ coverage. This liability is based on the current premium rates without adjustment for age or gender. It also is based on the terms of the retiree medical program – different retirees pay different percentages based on their union, date of retirement, age at retirement, and other factors.

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			
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>	<u>Total</u>
HMO Blue	135		197	332
Blue Care Elect	9		21	30
Medex 2	204			204
Total	348	0	218	566

	Per Contract Costs (monthly) - FY 2016		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
HMO Blue	718.64	0.00	1,917.16
Blue Care Elect	957.91	0.00	2,456.99
Medex 2	338.23	676.46	

Gross Expected FY 2016 Incurred Premiums	7,246,966
Adjustment to reflect children's claims	(1,270,811)
Total Expected FY 2016 Incurred Premiums (adults only)	5,976,155

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

	<u>Employer</u> <u>Primary</u>	<u>Medicare</u> <u>Primary</u>
Age 65	12,491	4,059
Average Age	11,026	4,059

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

5,976,155 Active and Retired Claims (No Children)

ALL ACTIVE EMPLOYEES AND SPOUSES (non-GIC)

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	6	1	1.312	0.549	7,663	3,207	49,185
25 to 29	19	10	1.312	0.591	7,663	3,452	180,117
30 to 34	29	14	1.312	0.712	7,663	4,159	280,453
35 to 39	24	26	1.312	0.850	7,663	4,965	313,002
40 to 44	40	37	1.312	1.000	7,663	5,841	522,637
45 to 49	39	33	1.456	1.193	8,504	6,968	561,600
50 to 54	39	41	1.599	1.441	9,340	8,417	709,357
55 to 59	43	39	1.740	1.753	10,163	10,239	836,330
60 to 64	20	25	1.968	2.102	11,495	12,278	536,850
65 to 69	6	10	2.168	2.316	12,663	13,528	211,258
70 & Over	1	1	2.396	2.557	13,995	14,935	28,930
Total	266	237					4,229,719

ALL RETIREES AND SPOUSES - NOT MEDICARE ELIGIBLE (non-GIC)

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	0	0	1.312	1.000	7,663	5,841	0
45 to 49	2	1	1.456	1.193	8,504	6,968	23,976
50 to 54	6	0	1.599	1.441	9,340	8,417	56,040
55 to 59	20	17	1.740	1.753	10,163	10,239	377,323
60 to 64	18	17	1.968	2.102	11,495	12,278	415,636
65 to 69	2	0	2.168	2.316	12,663	13,528	25,326
70 to 74	1	0	2.396	2.557	13,995	14,935	13,995
75 to 79	1	0	2.593	2.769	15,146	16,174	15,146
80 to 84	2	0	2.724	2.910	15,911	16,997	31,822
85 to 89	0	0	2.864	3.059	16,729	17,868	0
90 & Over	0	0	3.010	3.215	17,581	18,779	0
Total	52	35					959,264

ALL RETIREES AND SPOUSES - MEDICARE ELIGIBLE (non-GIC)

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	45	29	2.168	2.316	4,059	4,059	300,366
70 to 74	28	30	2.396	2.557	4,059	4,059	235,422
75 to 79	18	17	2.593	2.769	4,059	4,059	142,065
80 to 84	10	6	2.724	2.910	4,059	4,059	64,944
85 to 89	4	4	2.864	3.059	4,059	4,059	32,472
90 & Over	1	2	3.010	3.215	4,059	4,059	12,177
Total	106	88					787,446
Grand Totals	424	360					5,976,429

SECTION III

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

E. DEVELOPMENT OF REPRESENTATIVE DENTAL PER CAPITA CLAIMS COSTS

I. CLAIMS COSTS DEVELOPMENT - with Active & Retiree Incurred Premiums

	Per Contract Costs (monthly) - FY 2016		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Dental Plan	N/A		N/A
	FY 2016 Expected Per Person Rate		N/A

EXHIBIT AFinancial Statement Disclosure

(As of July 1, 2015)

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: Various offerings via Blue Cross Blue Shield of Massachusetts and the MIIA Health Benefits Trust
- b. Administrator: Town of Ipswich
- c. Eligibility: An employee hired before April 2, 2012 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. Those hired on or after April 2, 2012 shall be eligible to retire upon attainment of age 60 with 10 years of creditable service.
- d. Cost Sharing: 50% Participant paid.

2. A DESCRIPTION OF THE DENTAL INSURANCE PROGRAM:

- a. Plan Type: Comprehensive Dental Insurance
- b. Administrator: Town of Ipswich
- c. Eligibility: Same as above
- d. Cost sharing: Retirees shall pay 100% of premiums.

3. A DESCRIPTION OF THE RETIREE LIFE INSURANCE PROGRAM:

- a. Plan Type: Group Term Life Insurance - \$1,000
- b. Administrator: Town of Ipswich
- c. Eligibility: Same as above
- d. Cost sharing: Retirees shall pay 50% of premiums.

EXHIBIT A

Financial Statement Disclosure
(As of July 1, 2015)
(continued)

4. RETIREE MEDICAL AND LIFE INSURANCE CONTRIBUTIONS:

Group	Individual	Family
Medical	50%	50%
Dental	100%	100%
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 \$294,080 beyond the pay-as-you-go. For the 2016 fiscal year, total Town premiums plus implicit costs for the retiree medical program are \$935,600. The Town is also projected to make a contribution to an OPEB Trust of \$294,080 for the 2016 fiscal year for a total contribution of \$1,229,680 .

EXHIBIT A

Financial Statement Disclosure

(As of July 1, 2015)

(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	\$2,504,208
Interest on net OPEB Obligation (Asset)	\$487,825
Adjustment to annual required contribution	(\$678,149)
Amortization of Actuarial (Gains) / Losses	\$692,346
Annual OPEB expense	\$3,006,230
Contributions made to pay benefits	\$935,600
Contributions made to OPEB Trust	\$294,080
Increase (Decrease) in net OPEB Obligation (Asset)	\$1,776,550
Net OPEB Obligation (Asset) – beginning of year	\$12,195,584
Net OPEB Obligation (Asset) – end of year	\$13,972,134

EXHIBIT A

Financial Statement Disclosure

(As of July 1, 2015)

(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 2016 fiscal year and the three preceding years were as follows:

Fiscal Year Ended	Annual OPEB Cost	Expected Employer Payments	Percentage of OPEB Cost Contributed	Increase (Decrease) in Net OPEB Obligation (Asset)	Net OPEB Obligation (Asset)
06/30/2018 (est.)	\$3,325,485	\$1,355,720	40.8%	\$1,969,765	\$17,819,657
06/30/2017 (est.)	\$3,169,461	\$1,291,703	40.8%	\$1,877,758	\$15,849,892
06/30/2016	\$3,006,230	\$1,229,680	40.9%	\$1,776,550	\$13,972,134
06/30/2015	\$3,747,567	\$1,298,404	34.6%	\$2,449,163	\$12,195,584
06/30/2014	\$3,575,186	\$1,331,597	37.2%	\$2,243,589	\$9,746,421
06/30/2013	\$3,007,811	\$1,443,044	48.0%	\$1,564,767	\$7,502,832

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
07/01/2017 (est.)	\$3,174,293	\$35,747,507	\$32,573,214	8.9%	\$26,449,137	123.2%
07/01/2016 (est.)	\$2,745,388	\$33,876,212	\$31,130,824	8.1%	\$25,678,773	121.2%
07/01/2015	\$2,351,427	\$32,125,844	\$29,774,417	7.3%	\$24,930,848	119.4%
07/01/2014	\$1,985,100	\$38,274,929	\$36,289,829	5.2%	\$24,346,244	157.2%
07/01/2013	\$1,393,277	\$36,142,256	\$34,748,979	3.9%	\$23,637,130	152.9%
07/01/2012	\$786,000	\$31,659,479	\$30,873,479	2.5%	\$24,128,974	131.2%

EXHIBIT A

Financial Statement Disclosure
(As of July 1, 2015)
(continued)

Fiscal Year Ending June 30, 2016													
	General Government Employees and Retirees	Education Employees and Retirees	Public Safety Employees and Retirees	Finance Employees and Retirees	Human Services Employees and Retirees	Library Employees and Retirees	Code Enforcement Employees and Retirees	Planning and Development Employees and Retirees	Public Works Employees and Retirees	Sewer Enterprise Employees and Retirees	Water Enterprise Employees and Retirees	Electric Enterprise Employees and Retirees	Total
OPEB Obligation (Asset) at beginning of year	40,615	8,321,507	1,772,261	394,621	79,435	198,241	179,767	207,226	679,918	83,162	183,689	55,142	12,195,584
Annual Required Contribution	88,979	1,554,139	397,366	75,955	9,515	28,978	18,554	22,501	118,865	32,299	52,190	104,867	2,504,208
Interest on Net OPEB Obligation	1,625	332,860	70,891	15,784	3,178	7,930	7,191	8,289	27,197	3,326	7,348	2,206	487,825
Adjustment to the ARC	(2,259)	(462,725)	(98,549)	(21,943)	(4,417)	(11,024)	(9,997)	(11,523)	(37,808)	(4,624)	(10,214)	(3,066)	(678,149)
Amortization of Actuarial (Gains)/Losses	59,438	387,737	110,309	20,831	2,626	8,438	4,422	4,433	28,454	9,773	16,021	39,864	692,346
Annual OPEB Cost	147,783	1,812,011	480,017	90,627	10,902	34,322	20,170	23,700	136,708	40,774	65,345	143,871	3,006,230
Expected Employer Contribution	127,928	477,765	139,292	37,392	6,088	10,632	7,840	1,632	37,865	17,282	11,313	60,571	935,600
Contribution (Withdrawal) to/from Trust Fund over 30 Years	3,105	110,340	21,291	4,241	759	2,094	782	1,189	6,199	22,672	41,408	80,000	294,080
Total Expected Employer Payments	131,033	588,105	160,583	41,633	6,847	12,726	8,622	2,821	44,064	39,954	52,721	140,571	1,229,680
Increase (Decrease) in OPEB Obligation (Asset)	16,750	1,223,906	319,434	48,994	4,055	21,596	11,548	20,879	92,644	820	12,624	3,300	1,776,550
OPEB Obligation (Asset) at end of year	57,365	9,545,413	2,091,695	443,615	83,490	219,837	191,315	228,105	772,562	83,982	196,313	58,442	13,972,134
AAL as of July 1, 2015	2,758,015	17,991,540	5,118,476	966,579	121,870	391,554	205,194	205,705	1,320,287	453,499	743,376	1,849,749	32,125,844
Plan Assets as of July 1, 2015	32,633	1,159,458	223,727	44,566	7,971	22,003	8,213	12,496	65,140	101,136	192,586	481,498	2,351,427
Unfunded Actuarial Liability as of July 1, 2015	2,725,382	16,832,082	4,894,749	922,013	113,899	369,551	196,981	193,209	1,255,147	352,363	550,790	1,368,251	29,774,417

Fiscal Year Ending June 30, 2017													
	General Government Employees and Retirees	Education Employees and Retirees	Public Safety Employees and Retirees	Finance Employees and Retirees	Human Services Employees and Retirees	Library Employees and Retirees	Code Enforcement Employees and Retirees	Planning and Development Employees and Retirees	Public Works Employees and Retirees	Sewer Enterprise Employees and Retirees	Water Enterprise Employees and Retirees	Electric Enterprise Employees and Retirees	Total
OPEB Obligation (Asset) at beginning of year	57,365	9,545,413	2,091,695	443,615	83,490	219,837	191,315	228,105	772,562	83,982	196,313	58,442	13,972,134
Annual Required Contribution	92,253	1,611,341	411,992	78,751	9,865	30,045	19,237	23,329	123,240	33,488	54,111	108,727	2,596,379
Interest on Net OPEB Obligation	1,864	381,347	81,217	18,083	3,641	9,085	8,238	9,496	31,159	3,810	8,418	2,527	558,885
Adjustment to the ARC	(2,588)	(530,129)	(112,904)	(25,139)	(5,060)	(12,630)	(11,453)	(13,202)	(43,315)	(5,298)	(11,702)	(3,513)	(776,933)
Amortization of Actuarial (Gains)/Losses	64,277	447,840	125,776	23,853	3,048	9,686	5,243	5,364	33,047	10,988	18,066	43,942	791,130
Annual OPEB Cost	155,806	1,910,399	506,081	95,548	11,494	36,186	21,265	24,987	144,131	42,988	68,893	151,683	3,169,461
Expected Employer Contribution	134,537	507,428	147,392	39,492	6,433	11,274	8,275	1,774	40,088	3,780	10,676	67,661	978,810
Contribution (Withdrawal) to/from Trust Fund over 30 Years	3,105	110,340	21,291	4,241	759	2,094	782	1,189	6,199	38,189	44,704	80,000	312,893
Total Expected Employer Payments	137,642	617,768	168,683	43,733	7,192	13,368	9,057	2,963	46,287	41,969	55,380	147,661	1,291,703
Increase (Decrease) in OPEB Obligation (Asset)	18,164	1,292,631	337,398	51,815	4,302	22,818	12,208	22,024	97,844	1,019	13,513	4,022	1,877,758
OPEB Obligation (Asset) at end of year	75,529	10,838,044	2,429,093	495,430	87,792	242,655	203,523	250,129	870,406	85,001	209,826	62,464	15,849,892
AAL as of July 1, 2016	2,908,284	18,971,804	5,397,355	1,019,243	128,510	412,888	216,374	216,913	1,392,222	478,208	783,879	1,950,532	33,876,212
Plan Assets as of July 1, 2016	37,106	1,318,361	254,389	50,674	9,064	25,019	9,339	14,208	74,067	128,302	242,517	582,342	2,745,388
Unfunded Actuarial Liability as of July 1, 2016	2,871,178	17,653,443	5,142,966	968,569	119,446	387,869	207,035	202,705	1,318,155	349,906	541,362	1,368,190	31,130,824

EXHIBIT AFinancial Statement Disclosure

(As of July 1, 2015)

(continued)

7. FUNDED STATUS AND FUNDING PROGRESS

As of July 1, 2015, the most recent valuation date, the plan was 7.32% funded. The actuarial liability for benefits was \$32,125,844, and the actuarial value of assets was \$2,351,427, resulting in an unfunded actuarial accrued liability (UAAL) of \$29,774,417. The covered payroll (annual payroll of active employees covered by the plan) was \$ 24,930,848 and the ratio of the UAAL to the covered payroll was 119.4%.

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 \$44,635,202 or by 38.9% and the corresponding Normal Cost would increase to \$2,233,303 or by 61.5%. 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 \$22,514,444 or by 29.9% and the corresponding Normal Cost would decrease to \$779,576 or by 43.6%.

EXHIBIT A

Financial Statement Disclosure

(As of July 1, 2015)

(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: Entry Age Normal
 Investment Rate of Return: 4.00% per annum (previously 4.00%)
 Healthcare Trend Rates

<u>Year</u>	<u>Medical</u>	<u>Dental</u>
FY 2013	6.0%	5.5%
FY 2014	5.0%	5.0%
FY 2015	5.0%	5.0%
FY 2016	5.0%	5.0%
FY 2017	5.0%	5.0%
FY 2018	5.0%	5.0%
FY 2019	5.0%	5.0%
FY 2020+	5.0%	5.0%

General Inflation Assumption: 2.50% per annum
 Annual Compensation Increases: 3.00% per annum
 Actuarial Value of Assets: Market Value
 Amortization of UAAL: Level dollar amortization over 30 years at the last valuation
 Remaining Amortization Period: 23 years at July 1, 2015

EXHIBIT A

Financial Statement Disclosure

(As of July 1, 2015)

(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 30-year period. Gains and losses arise from experience and contribution deficiencies and excess contributions in relation to each year's ARC under GASB 45.

Changes in Unfunded Actuarial Liability Since Prior Valuation
--

Expected Unfunded Actuarial Liability

1. Actuarial Accrued Liability at prior valuation date	36,142,256
2. Actuarial Value of Assets at prior valuation date	<u>1,393,277</u>
3. Unfunded Actuarial Accrued Liability at prior valuation date [1. - 2.]	34,748,979
4. Normal Cost for prior periods	3,303,510
5. Employer Contributions for prior periods	(2,630,001)
6. Interest to current valuation date	<u>2,981,393</u>
7. Expected Unfunded Actuarial Accrued Liability [3. + 4. + 5. + 6.]	38,403,881

Actual Unfunded Actuarial Liability

8. Actuarial Accrued Liability at current valuation date	32,125,844
9. Actuarial Value of Assets at current valuation date	<u>2,351,427</u>
10. Unfunded Actuarial Accrued Liability at current valuation date [8. - 9.]	29,774,417

Net Actuarial (Gain) / Loss from Plan Experience [10. - 7.] **(8,629,464)**

11. Unfunded Actuarial Accrued Liability at current valuation date [10.]	29,774,417
12. Remaining Initial Unfunded to be amortized	<u>17,323,451</u>
13. Actuarial (Gain) / Loss to be amortized: [11. - 12.]	12,450,966

EXHIBIT A

Financial Statement Disclosure
(As of July 1, 2015)
(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 Liability	20,162,942	30	17,323,451	23	1,121,178
July 1, 2015	Cumulative (Gain) / Loss	12,450,966	30	12,450,966	30	692,346
July 1, 2015	Adjustment to ARC	(12,195,584)	30	(12,195,584)	30	(678,146)
Total				17,578,833		1,135,378

11. Recognition of OPEB trust assets

The State of Massachusetts has recently passed legislation allowing municipal entities to establish a trust for Other 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 Ipswich has established an irrevocable trust for the purposes of prefunding liabilities under GASB 45.

EXHIBIT AFinancial Statement Disclosure

(As of July 1, 2015)

(continued)

12. Impact of Patient Protection and Affordable Care Act ("PPACA") Excise Tax

Under the Patient Protection and Affordable Care Act ("PPACA"), an excise tax will be imposed for tax years beginning after December 31, 2017 for high cost employer sponsored health coverage. The law specifies a 40% excise tax to be paid by the provider of such coverage of the excess value beyond a basic dollar amount plus an additional "kicker" for qualified retirees or those engaged in a high risk profession. The basic dollar amount for 2018 is \$10,200 for single coverage and \$27,500 for family coverage and the "kicker" amount for 2018 is \$1,650 for single coverage and \$3,450 for family coverage.

The excise tax liability will vary significantly over time as it is highly leveraged with the basic amount increased with general CPI and medical costs increasing with medical trend (generally higher). For purposes of the fiscal year ending June 30, 2016, the AAL for the excise tax is \$947,212 and the increase in annual OPEB Cost is \$154,141. Given your premiums through the 2016 fiscal year and the excise tax threshold, your single premiums are within 69.38% of the excise tax and your family premiums are within 16.38% of the excise tax. As more regulatory guidance becomes available, the calculation of the excise tax liability will evolve.

EXHIBIT AFinancial Statement Disclosure

(As of July 1, 2015)

(continued)

13. Impact of Section 9A 1/2 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 Ipswich nor have we attempted to value the impact of prior Town of Ipswich employees currently working at other governmental entities in the State of Massachusetts.

EXHIBIT B

Reconciliation of Plan Participation
(As of July 1, 2015)

ACTIVE EMPLOYEES

	<u>July 1, 2015</u>	<u>July 1, 2013</u>
A. Average Age at Hire	36.66	36.77
B. Average Service	10.19	10.47
C. Average Current Age	46.85	47.24

RETIRED EMPLOYEES & DEPENDENTS

	<u>July 1, 2015</u>	<u>July 1, 2013</u>
I. Retirees		
A. Under Age 65	53	41
B. Age 65 & Over	<u>210</u>	<u>179</u>
C. Total Retirees	263	220
II. Dependents of Retirees		
A. Under Age 65	18	10
B. Age 65 & Over	<u>0</u>	<u>20</u>
C. Total Retirees	18	30
III. Retirees & Dependents		
A. Under Age 65	71	51
B. Age 65 & Over	<u>210</u>	<u>199</u>
C. Total Retirees	281	250

EXHIBIT C

Projected Cash Flows (Open Group) - partial Approach

Total Medical, Dental & Life Insurance - partial funding - 4.00% discount rate

Fiscal Year	I. Total Actuarial Accrued Liability ("AAL") as of		III. Unfunded Accrued Actuarial Liability ("UAAAL")	IV. Normal Cost	V. Expected Amortization	VI. Interest on Net OPEB Obligation (Asset)	VII. Adjustment to ARC	VIII. Amortization of Actuarial (Gain) / Loss	IX. Expected	X. OPEB Obligation (Asset) as of June 30	XI. Employer Share of Premiums / Claims	XII. Excess Employer Payments (beyond claims)
	July 1	II. Plan Assets as of July 1	[I. - II.]						Annual OPEB Expense [IV. + V. + VI. + VII. + VIII.]			
2016	32,125,844	2,351,427	29,774,417	1,383,030	1,121,178	487,825	(678,149)	692,346	3,006,230	12,195,584	935,600	294,080
2017	33,876,212	2,745,388	31,130,824	1,475,201	1,121,178	558,885	(776,933)	791,130	3,169,461	13,972,134	978,810	312,893
2018	35,747,507	3,174,293	32,573,214	1,556,115	1,121,178	633,995	(881,347)	895,544	3,325,485	15,849,892	1,042,827	312,893
2019	37,711,226	3,620,354	34,090,872	1,646,806	1,121,178	712,787	(990,878)	1,005,075	3,494,968	17,819,657	1,127,408	312,893
2020	39,759,850	4,084,258	35,675,592	1,730,989	1,121,178	794,973	(1,105,129)	1,119,326	3,661,337	19,874,324	1,215,117	312,893
2021	41,884,694	4,566,718	37,317,976	1,831,008	1,121,178	880,306	(1,223,754)	1,237,951	3,846,689	22,007,651	1,264,277	312,893
2022	44,147,766	5,068,476	39,079,290	1,923,540	1,121,178	971,087	(1,349,953)	1,364,150	4,030,002	24,277,170	1,326,386	312,893
2023	46,533,774	5,590,305	40,943,469	2,024,528	1,121,178	1,066,715	(1,482,892)	1,497,089	4,226,618	26,667,893	1,408,976	312,893
2024	49,035,299	6,133,007	42,902,292	2,133,812	1,121,178	1,166,905	(1,622,170)	1,636,367	4,436,092	29,172,642	1,541,828	312,893
2025	51,708,756	6,697,417	45,011,339	2,240,175	1,121,178	1,273,867	(1,770,863)	1,785,060	4,649,417	31,846,687	1,640,107	312,893
2026	54,503,386	7,284,403	47,218,983	2,356,456	1,121,178	1,385,655	(1,926,264)	1,940,461	4,877,486	34,641,383	1,736,357	312,893
2027	57,428,524	7,894,869	49,533,655	2,468,179	1,121,178	1,502,635	(2,088,883)	2,103,080	5,106,189	37,565,869	1,846,656	312,893
2028	60,486,761	8,529,753	51,957,008	2,600,225	1,121,178	1,624,913	(2,258,866)	2,273,063	5,360,513	40,622,808	2,001,926	312,893
2029	63,689,944	9,190,033	54,499,911	2,731,353	1,121,178	1,752,950	(2,436,860)	2,451,057	5,619,678	43,823,772	2,242,223	312,893
2030	66,996,146	9,876,724	57,119,422	2,874,457	1,121,178	1,885,145	(2,620,629)	2,634,826	5,894,977	47,128,631	2,362,113	312,893
2031	70,462,720	10,590,882	59,871,838	3,016,233	1,121,178	2,024,185	(2,813,914)	2,828,111	6,175,793	50,604,630	2,486,404	312,893
2032	74,047,023	11,333,607	62,713,416	3,172,352	1,121,178	2,169,012	(3,015,246)	3,029,443	6,476,739	54,225,307	2,618,990	312,893
2033	77,836,907	12,106,041	65,730,866	3,332,358	1,121,178	2,321,082	(3,226,644)	3,240,841	6,788,815	58,027,040	2,809,694	312,893
2034	81,815,711	12,909,372	68,906,339	3,502,024	1,121,178	2,480,662	(3,448,484)	3,462,681	7,118,061	62,016,558	2,976,510	312,893
2035	86,006,693	13,744,836	72,261,857	3,675,696	1,121,178	2,648,109	(3,681,261)	3,695,458	7,459,180	66,202,736	3,067,173	312,893
2036	90,347,604	14,613,719	75,733,885	3,862,329	1,121,178	2,821,573	(3,922,401)	3,936,598	7,819,277	70,539,329	3,268,068	312,893
2037	94,882,759	15,517,357	79,365,402	4,052,028	1,121,178	3,002,769	(4,174,288)	4,188,485	8,190,172	75,069,204	3,425,052	312,893
2038	99,681,161	16,457,141	83,224,020	4,257,551	1,121,178	3,195,172	(4,441,757)	4,455,954	8,588,098	79,879,310	3,578,045	312,893
2039	104,655,458	17,434,516	87,220,942	4,474,222	0	3,395,457	(4,720,184)	4,734,381	7,883,876	84,886,447	3,799,100	312,893
2040	109,909,226	18,450,986	91,458,240	4,702,712	0	3,561,295	(4,950,722)	4,964,919	8,278,204	89,032,377	3,942,680	312,893
2041	115,514,117	19,508,115	96,006,002	4,934,053	0	3,736,786	(5,194,681)	5,208,878	8,685,036	93,419,643	4,164,514	312,893
2042	121,336,166	20,607,529	100,728,637	5,181,594	0	3,919,707	(5,448,969)	5,463,166	9,115,498	97,992,686	4,337,666	312,893
2043	127,478,083	21,750,920	105,727,163	5,449,517	0	4,114,104	(5,719,208)	5,733,405	9,577,818	102,852,611	4,556,156	312,893
2044	133,916,112	22,940,046	110,976,066	5,723,787	0	4,318,121	(6,002,820)	6,017,017	10,056,105	107,953,022	4,734,918	312,893
2045	140,714,323	24,176,737	116,537,586	6,016,689	0	4,534,343	(6,303,401)	6,317,598	10,565,229	113,358,568	4,925,113	312,893
2046	148,096,867	25,462,896	122,633,971	6,322,289	0	4,762,189	(6,620,142)	6,620,142	11,084,478	118,497,812		312,893
2047	155,730,394	26,800,501	128,929,893	6,640,747	0	5,003,657	(6,955,817)	6,955,817	11,644,404	123,149,781		312,893

EXHIBIT D

Projected Cash Flows (Open Group) – Funded Approach

Total Medical, Dental & Life Insurance - Funding over 30 years at 7.00% discount rate increasing at 0.00% per year

Fiscal Year	I. Total Actuarial Accrued Liability ("AAL") as of	II. Plan Assets as of July 1	III. Unfunded Accrued Actuarial Liability ("UAAL") [I. - II.]	IV. Normal Cost	V. Expected Amortization	VI. Interest on Net OPEB Obligation (Asset)	VII. Adjustment to ARC	VIII. Amortization of Actuarial (Gain) / Loss	IX. Expected Annual OPEB Expense [IV. + V. + VI. + VII. + VIII.]	X. OPEB Obligation (Asset) as of June 30	XI. Employer Share of Premiums / Claims	XII. Annual Funding / (Payments)
	July 1	as of July 1	[I. - II.]	Cost	Amortization	Obligation (Asset)	ARC	(Gain) / Loss	+ V. + VI. + VII. + VIII.]	June 30	Premiums / Claims	Funding / (Payments)
2016	21,222,930	2,351,427	18,871,503	649,449	1,436,291	853,691	(918,504)	116,591	2,137,518	12,195,584	935,600	741,177
2017	21,756,232	3,257,204	18,499,028	641,011	1,436,291	885,943	(953,204)	151,291	2,213,618	12,656,325	978,810	741,177
2018	22,917,723	4,226,385	18,691,338	676,131	1,436,291	920,497	(990,382)	188,469	2,286,341	13,149,956	1,042,827	741,177
2019	24,129,598	5,263,409	18,866,189	715,729	1,436,291	955,661	(1,028,215)	226,302	2,364,043	13,652,293	1,127,408	741,177
2020	25,378,864	6,373,025	19,005,839	752,525	1,436,291	990,343	(1,065,530)	263,617	2,437,821	14,147,751	1,215,117	741,177
2021	26,661,134	7,560,314	19,100,820	796,071	1,436,291	1,024,050	(1,101,796)	299,883	2,517,533	14,629,278	1,264,277	741,177
2022	28,033,258	8,830,713	19,202,545	836,568	1,436,291	1,059,895	(1,140,363)	338,450	2,595,740	15,141,357	1,326,386	741,177
2023	29,487,526	10,190,040	19,297,486	880,522	1,436,291	1,096,868	(1,180,142)	378,229	2,678,372	15,669,534	1,408,976	741,177
2024	31,013,132	11,644,520	19,368,612	929,398	1,436,291	1,133,843	(1,219,925)	418,012	2,765,624	16,197,753	1,449,153	741,177
2025	32,662,902	13,200,813	19,462,089	976,955	1,436,291	1,174,114	(1,263,252)	461,339	2,854,495	16,773,047	1,541,828	741,177
2026	34,392,773	14,866,047	19,526,726	1,029,322	1,436,291	1,214,118	(1,306,294)	504,381	2,947,746	17,344,537	1,640,107	741,177
2027	36,204,840	16,647,847	19,556,993	1,077,877	1,436,291	1,253,770	(1,348,957)	547,044	3,036,613	17,910,999	1,736,357	741,177
2028	38,101,520	18,554,373	19,547,147	1,136,993	1,436,291	1,292,906	(1,391,063)	589,150	3,135,359	18,470,078	1,846,656	741,177
2029	40,087,840	20,594,356	19,493,484	1,196,057	1,436,291	1,331,232	(1,432,300)	630,387	3,232,892	19,017,604	2,001,926	741,177
2030	42,127,384	22,777,138	19,350,246	1,260,813	1,436,291	1,365,518	(1,469,188)	667,275	3,331,808	19,507,393	2,106,085	741,177
2031	44,276,828	25,112,715	19,164,113	1,325,024	1,436,291	1,399,436	(1,505,681)	703,768	3,429,497	19,991,939	2,242,223	741,177
2032	46,504,407	27,611,782	18,892,625	1,396,454	1,436,291	1,430,663	(1,539,279)	737,366	3,531,562	20,438,036	2,362,113	741,177
2033	48,856,261	30,285,784	18,570,477	1,469,919	1,436,291	1,460,642	(1,571,534)	769,621	3,634,163	20,866,308	2,486,404	741,177
2034	51,329,984	33,146,966	18,183,018	1,547,978	1,436,291	1,489,103	(1,602,155)	800,242	3,739,632	21,272,890	2,618,990	741,177
2035	53,929,603	36,208,431	17,721,172	1,627,986	1,436,291	1,515,665	(1,630,735)	828,822	3,844,904	21,652,355	2,809,694	741,177
2036	56,623,232	39,484,198	17,139,034	1,713,888	1,436,291	1,536,247	(1,652,879)	850,966	3,950,126	21,946,388	2,976,510	741,177
2037	59,433,445	42,989,269	16,444,176	1,801,005	1,436,291	1,552,518	(1,670,385)	868,472	4,052,055	22,178,827	3,067,173	741,177
2038	62,411,922	46,739,695	15,672,227	1,895,613	1,436,291	1,569,577	(1,688,740)	886,827	4,162,143	22,422,532	3,268,068	741,177
2039	65,495,563	50,752,651	14,742,912	1,995,367	0	1,580,280	(1,700,255)	898,342	4,283,684	22,575,430	3,425,052	741,177
2040	68,748,045	55,046,514	13,701,531	2,100,594	0	1,487,072	(1,599,971)	798,058	4,418,908	21,243,885	3,578,045	741,177
2041	72,250,320	59,640,947	12,609,373	2,207,066	0	1,383,870	(1,488,934)	687,021	4,556,204	19,769,571	3,799,100	741,177
2042	75,886,512	64,556,990	11,329,522	2,320,960	0	1,265,285	(1,361,346)	559,433	4,700,325	18,075,498	3,942,680	741,177
2043	79,699,943	69,817,156	9,882,787	2,444,076	0	1,136,168	(1,222,426)	420,513	4,839,325	16,230,966	4,164,514	741,177
2044	83,705,135	75,445,534	8,259,601	2,569,767	0	990,953	(1,066,187)	264,274	4,983,498	14,156,472	4,337,666	741,177
2045	87,911,871	81,467,898	6,443,973	2,703,717	0	832,099	(895,272)	93,359	5,148,455	11,887,127	4,556,156	741,177
2046	92,525,107	87,911,828	4,613,279	2,843,279	0	656,058	(705,866)	705,866	5,345,731	9,372,249	4,734,918	741,177
2047	97,271,230	94,806,833	2,464,397	2,988,472	0	520,932	(560,482)	560,482	5,553,531	7,441,885	4,925,113	741,177

EXHIBIT D

Projected Cash Flows (Open Group) - Funded Approach

Total Medical, Dental & Life Insurance - Funding over 30 years at 7.00% discount rate and increasing at 2.50% per year

Fiscal Year	I. Total Actuarial Accrued Liability ("AAL") as of July 1	II. Plan Assets as of July 1	III. Unfunded Accrued Actuarial Liability ("UAAL") [I. - II.]	IV. Normal Cost	V. Expected Amortization	VI. Interest on Net OPEB Obligation (Asset)	VII. Adjustment to ARC	VIII. Amortization of Actuarial (Gain) / Loss	IX. Expected Annual OPEB Expense [IV. + V. + VI. + VII. + VIII.]	X. OPEB Obligation (Asset) as of June 30	XI. Employer Share of Premiums / Claims	XII. Annual Funding / (Payments)
2016	21,222,930	2,351,427	18,871,503	649,449	1,436,291	853,691	(918,504)	116,591	2,137,518	12,195,584	935,600	574,864
2017	21,756,232	3,090,891	18,665,341	641,011	1,436,291	885,943	(953,204)	151,291	2,213,618	12,822,638	978,810	589,236
2018	22,917,723	3,896,489	19,021,234	676,131	1,436,291	920,497	(990,382)	188,469	2,286,341	14,107,757	1,042,827	603,967
2019	24,129,598	4,773,210	19,356,388	715,729	1,436,291	955,661	(1,028,215)	226,302	2,364,043	14,725,326	1,127,408	619,066
2020	25,378,864	5,726,401	19,652,463	752,525	1,436,291	990,343	(1,065,530)	263,617	2,437,821	15,313,487	1,215,117	634,543
2021	26,661,134	6,761,792	19,899,342	796,071	1,436,291	1,024,050	(1,101,796)	299,883	2,517,533	15,916,336	1,264,277	650,407
2022	28,033,258	7,885,524	20,147,734	836,568	1,436,291	1,059,895	(1,140,363)	338,450	2,595,740	16,519,023	1,326,386	666,667
2023	29,487,526	9,104,178	20,383,348	880,522	1,436,291	1,096,868	(1,180,142)	378,229	2,678,372	17,105,085	1,408,976	683,334
2024	31,013,132	10,424,804	20,588,328	929,398	1,436,291	1,133,843	(1,219,925)	418,012	2,765,624	17,721,139	1,449,153	700,417
2025	32,662,902	11,854,957	20,807,945	976,955	1,436,291	1,174,114	(1,263,252)	461,339	2,854,495	18,315,879	1,541,828	717,927
2026	34,392,773	13,402,731	20,990,042	1,029,322	1,436,291	1,214,118	(1,306,294)	504,381	2,947,746	18,887,643	1,640,107	735,875
2027	36,204,840	15,076,797	21,128,043	1,077,877	1,436,291	1,253,770	(1,348,957)	547,044	3,036,613	19,433,627	1,736,357	754,272
2028	38,101,520	16,886,445	21,215,075	1,136,993	1,436,291	1,292,906	(1,391,063)	589,150	3,135,359	19,949,201	1,846,656	773,129
2029	40,087,840	18,841,625	21,246,215	1,196,057	1,436,291	1,331,232	(1,432,300)	630,387	3,232,892	20,387,710	2,001,926	792,457
2030	42,127,384	20,952,996	21,174,388	1,260,813	1,436,291	1,365,518	(1,469,188)	667,275	3,331,808	20,801,165	2,106,085	812,268
2031	44,276,828	23,231,974	21,044,854	1,325,024	1,436,291	1,399,436	(1,505,681)	703,768	3,429,497	21,155,864	2,242,223	832,575
2032	46,504,407	25,690,787	20,813,620	1,396,454	1,436,291	1,430,663	(1,539,279)	737,366	3,531,562	21,471,924	2,362,113	853,389
2033	48,856,261	28,342,531	20,513,730	1,469,919	1,436,291	1,460,642	(1,571,534)	769,621	3,634,163	21,744,959	2,486,404	874,724
2034	51,329,984	31,201,232	20,128,752	1,547,978	1,436,291	1,489,103	(1,602,155)	800,242	3,739,632	21,969,009	2,618,990	896,592
2035	53,929,603	34,281,910	19,647,693	1,627,986	1,436,291	1,515,665	(1,630,735)	828,822	3,844,904	22,085,212	2,809,694	919,007
2036	56,623,232	37,600,651	19,022,581	1,713,888	1,436,291	1,536,247	(1,652,879)	850,966	3,950,126	22,116,846	2,976,510	941,982
2037	59,433,445	41,174,679	18,258,766	1,801,005	1,436,291	1,552,518	(1,670,385)	868,472	4,052,055	22,136,196	3,067,173	965,532
2038	62,411,922	45,022,439	17,389,483	1,895,613	1,436,291	1,569,577	(1,688,740)	886,827	4,162,143	22,040,601	3,268,068	989,670
2039	65,495,563	49,163,680	16,331,883	1,995,367	0	1,580,280	(1,700,255)	898,342	4,284,684	20,435,821	3,425,052	1,014,412
2040	68,748,045	53,619,550	15,128,495	2,100,594	0	1,487,072	(1,599,971)	798,058	2,844,908	18,662,912	3,578,045	1,039,772
2041	72,250,320	58,412,691	13,837,629	2,207,066	0	1,383,870	(1,488,934)	687,021	2,846,204	16,644,250	3,799,100	1,065,766
2042	75,886,512	63,567,345	12,319,167	2,320,960	0	1,265,285	(1,361,346)	559,433	2,839,325	14,448,485	3,942,680	1,092,410
2043	79,699,943	69,109,469	10,590,474	2,444,076	0	1,136,168	(1,222,426)	420,513	2,831,197	11,995,448	4,164,514	1,119,720
2044	83,705,135	75,066,852	8,638,283	2,569,767	0	990,953	(1,066,187)	264,274	2,809,498	9,319,567	4,337,666	1,147,713
2045	87,911,871	81,469,245	6,442,626	2,703,717	0	832,099	(895,272)	93,359	2,782,455	6,369,460	4,556,156	1,176,406
2046	92,525,107	88,348,498	4,176,609	2,843,279	0	656,058	(705,866)	705,866	3,545,731	3,974,457	4,734,918	1,205,816

EXHIBIT D

Projected Cash Flows (Open Group) – Funded Approach

Total Medical, Dental & Life Insurance - Funding Annual Normal Cost - 4.00% discount rate

Fiscal Year	I. Total Actuarial Accrued Liability ("AAL")	II. Normal Cost	III. Employer	IV. Funding Normal Cost beyond claims	V. Total Funding Costs [III. + IV.]	VI. Present	VII. Present	VIII. Present Value at 4.00% of Total Funding Costs + VII.]	IX. Plan Assets at Beginning of year	X. Unfunded Accrued Liability ("UAAL") - IX.]	XI. Present Value at 4.00% of Unfunded Accrued Liability ("UAAL")
			Share of Premiums / Claims including "implicit cost"			Value at 4.00% of Employer Share of Premiums / Claims including "implicit cost"	Value at 4.00% of Funding beyond claims			Value at 4.00% of Unfunded Liability ["UAAL"] [I.]	
2016	32,125,844	1,383,030	935,600	447,430	1,383,030	935,600	447,430	1,383,030	2,351,427	29,774,417	29,774,417
2017	33,876,212	1,475,201	978,810	496,391	1,475,201	941,163	477,299	1,418,462	2,892,914	30,983,298	29,791,633
2018	35,747,507	1,556,115	1,042,827	513,288	1,556,115	964,152	474,564	1,438,716	3,505,022	32,242,485	29,809,990
2019	37,711,226	1,646,806	1,127,408	519,398	1,646,806	1,002,262	461,743	1,464,005	4,158,511	33,552,715	29,828,241
2020	39,759,850	1,730,989	1,215,117	515,872	1,730,989	1,038,687	440,970	1,479,657	4,844,249	34,915,601	29,846,002
2021	41,884,694	1,831,008	1,264,277	566,731	1,831,008	1,039,144	465,812	1,504,956	5,553,891	36,330,803	29,861,272
2022	44,147,766	1,923,540	1,326,386	597,154	1,923,540	1,048,262	471,939	1,520,201	6,342,778	37,804,988	29,877,831
2023	46,533,774	2,024,528	1,408,976	615,552	2,024,528	1,070,706	467,769	1,538,475	7,193,643	39,340,131	29,895,266
2024	49,035,299	2,133,812	1,449,153	684,659	2,133,812	1,058,882	500,274	1,559,156	8,096,941	40,938,358	29,913,257
2025	51,708,756	2,240,175	1,541,828	698,347	2,240,175	1,083,268	490,649	1,573,917	9,105,478	42,603,278	29,932,498
2026	54,503,386	2,356,456	1,640,107	716,349	2,356,456	1,107,998	483,940	1,591,938	10,168,044	44,335,342	29,951,368
2027	57,428,524	2,468,179	1,736,357	731,822	2,468,179	1,127,904	475,378	1,603,282	11,291,115	46,137,409	29,969,981
2028	60,486,761	2,600,225	1,846,656	753,569	2,600,225	1,153,416	470,677	1,624,093	12,474,582	48,012,179	29,988,265
2029	63,689,944	2,731,353	2,001,926	729,427	2,731,353	1,202,305	438,075	1,640,380	13,727,134	49,962,810	30,006,369
2030	66,996,146	2,874,457	2,106,085	768,372	2,874,457	1,216,212	443,716	1,659,928	15,005,646	51,990,500	30,023,218
2031	70,462,720	3,016,233	2,242,223	774,010	3,016,233	1,245,027	429,780	1,674,807	16,374,244	54,088,476	30,033,411
2032	74,047,023	3,172,352	2,362,113	810,239	3,172,352	1,261,151	432,593	1,693,744	17,803,224	56,243,799	30,029,024
2033	77,836,907	3,332,358	2,486,404	845,954	3,332,358	1,276,453	434,290	1,710,743	19,325,592	58,511,315	30,038,144
2034	81,815,711	3,502,024	2,618,990	883,034	3,502,024	1,292,807	435,890	1,728,697	20,944,570	60,871,141	30,047,707
2035	86,006,693	3,675,696	2,809,694	866,002	3,675,696	1,333,600	411,041	1,744,641	22,665,387	63,341,306	30,064,471
2036	90,347,604	3,862,329	2,976,510	885,819	3,862,329	1,358,440	404,276	1,762,716	24,438,004	65,909,600	30,080,281
2037	94,882,759	4,052,028	3,067,173	984,855	4,052,028	1,345,979	432,187	1,778,166	26,301,343	68,581,416	30,095,830
2038	99,681,161	4,257,551	3,268,068	989,483	4,257,551	1,378,979	417,518	1,796,497	28,338,252	71,342,909	30,103,525
2039	104,655,458	4,474,222	3,425,052	1,049,170	4,474,222	1,389,634	425,676	1,815,310	30,461,265	74,194,193	30,102,538
2040	109,909,226	4,702,712	3,578,045	1,124,667	4,702,712	1,395,872	438,757	1,834,629	32,728,886	77,180,340	30,109,708
2041	115,514,117	4,934,053	3,799,100	1,134,953	4,934,053	1,425,106	425,740	1,850,846	35,162,708	80,351,409	30,141,164
2042	121,336,166	5,181,594	3,942,680	1,238,914	5,181,594	1,422,082	446,863	1,868,945	37,704,169	83,631,997	30,165,161
2043	127,478,083	5,449,517	4,164,514	1,285,003	5,449,517	1,444,322	445,660	1,889,982	40,451,250	87,026,833	30,182,348
2044	133,916,112	5,723,787	4,337,666	1,386,121	5,723,787	1,446,514	462,240	1,908,754	43,354,303	90,561,809	30,200,323
2045	140,714,323	6,016,689	4,556,156	1,460,533	6,016,689	1,460,938	468,322	1,929,260	46,474,596	94,239,727	30,218,102
2046	148,096,867	6,322,289	4,734,918	1,587,371	6,322,289	1,459,864	489,416	1,949,280	49,794,113	98,302,754	30,308,574

EXHIBIT D

Projected Cash Flows (Open Group) – Funded Approach

Total Medical, Dental & Life Insurance - partial funding

Fiscal Year	Number of Retirees, Spouses & Surviving Spouses	Total Actuarial Accrued Liability ("AAL")	Present Value at 4.00% of Total Actuarial Liability ("AAL")	Employer Share of Premiums / Claims including "implicit cost"	Present Value at 4.00% of Employer Share of Premiums / Claims including "implicit cost"
2016	281	32,125,844	32,125,844	935,600	935,600
2017	287	33,876,212	32,573,281	978,810	941,163
2018	292	35,747,507	33,050,580	1,042,827	964,152
2019	298	37,711,226	33,525,143	1,127,408	1,002,262
2020	301	39,759,850	33,986,886	1,215,117	1,038,687
2021	308	41,884,694	34,426,165	1,264,277	1,039,144
2022	313	44,147,766	34,890,621	1,326,386	1,048,262
2023	320	46,533,774	35,361,844	1,408,976	1,070,706
2024	327	49,035,299	35,829,613	1,449,153	1,058,882
2025	333	51,708,756	36,329,886	1,541,828	1,083,268
2026	339	54,503,386	36,820,535	1,640,107	1,107,998
2027	346	57,428,524	37,304,474	1,736,357	1,127,904
2028	355	60,486,761	37,779,852	1,846,656	1,153,416
2029	361	63,689,944	38,250,530	2,001,926	1,202,305
2030	367	66,996,146	38,688,605	2,106,085	1,216,212
2031	372	70,462,720	39,125,447	2,242,223	1,245,027
2032	376	74,047,023	39,534,311	2,362,113	1,261,151
2033	380	77,836,907	39,959,386	2,486,404	1,276,453
2034	384	81,815,711	40,386,536	2,618,990	1,292,807
2035	387	86,006,693	40,822,425	2,809,694	1,333,600
2036	390	90,347,604	41,233,467	2,976,510	1,358,440
2037	392	94,882,759	41,637,743	3,067,173	1,345,979
2038	394	99,681,161	42,061,003	3,268,068	1,378,979
2039	396	104,655,458	42,461,475	3,425,052	1,389,634
2040	397	109,909,226	42,877,949	3,578,045	1,395,872
2041	398	115,514,117	43,331,286	3,799,100	1,425,106
2042	399	121,336,166	43,764,649	3,942,680	1,422,082
2043	400	127,478,083	44,211,512	4,164,514	1,444,322
2044	401	133,916,112	44,658,006	4,337,666	1,446,514
2045	402	140,714,323	45,120,247	4,556,156	1,460,938
2046	402	148,096,867	45,661,029	4,734,918	1,459,864
2047	402	155,730,394	46,167,873	4,925,113	1,460,100
2048	403	163,773,386	46,684,904	5,164,434	1,472,163
2049	403	172,376,019	47,247,262	5,355,719	1,467,971
2050	403	181,366,019	47,799,393	5,643,466	1,487,347
2051	403	190,900,590	48,377,163	5,959,792	1,510,303
2052	403	200,890,966	48,950,845	6,152,298	1,499,123
2053	404	211,833,937	49,632,024	6,426,195	1,505,637
2054	404	222,956,744	50,228,906	6,699,607	1,509,324
2055	404	234,719,781	50,845,141	6,934,942	1,502,251

EXHIBIT E

GLOSSARY

AAI – Actuarial Accrued Liability. That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

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.”

EXHIBIT E**GLOSSARY***(continued)*

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.”

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.

EXHIBIT E**GLOSSARY***(continued)*

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.

NOA - Net OPEB Asset. The amount recognized by an employer for contributions to an OPEB plan greater than OPEB expenses.

NOO - Net OPEB Obligation. The cumulative difference since the effective date of GASB Statement number 45 between annual OPEB cost and the employer's contributions to the plan, including the OPEB liability (asset) at transition, if any, and excluding (a) short-term differences and (b) unpaid contributions that have been converted to OPEB-related debt.

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.

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.