

**Town of Sterling 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 January 2017

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January 6, 2017

Personal and Confidential

Ms. Anne Cervantes
Treasurer / Collector
Town of Sterling
1 Park Street
Sterling, MA 01564

Dear Ms. Cervantes:

We have performed an actuarial valuation of the Town of Sterling 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 Sterling, of Statement No. 45 of the Governmental Accounting Standards Board ("GASB 45") effective July 1, 2009.

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, reflecting 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

January 6, 2017

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Sterling 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 Sterling
Assuming Pay-as-you-go Funding - 3.50% discount rate
Comparison of Plan Liabilities to Prior Valuation

	<u>July 1, 2015</u>	<u>July 1, 2012</u>
I. Present Value of Future Benefits		
A. Actives	12,182,171	N/A
B. Retirees/Disabled	<u>4,603,490</u>	N/A
C. Total	16,785,661	N/A
II. Present Value of Future Normal Cost	5,615,499	N/A
III. Actuarial Accrued Liability (Individual Entry Age Normal)		
A. Actives	6,566,672	7,200,051
B. Retirees/Disabled	<u>4,603,490</u>	<u>4,263,150</u>
C. Total	11,170,162	11,463,201
IV. Plan Assets	26,144	0
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	11,144,018	11,463,201
VI. Funded Ratio [IV. / III.]	0.23%	0.00%
VII. Annual Covered Payroll	3,432,144	3,240,255
VIII. UAAL as % of Covered Payroll	324.70%	353.8%
IX. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	3,742,463	929,538
X. Number of Eligible Participants		
A. Actives	56	61
B. Retirees/Disabled	49	42
C. Total	105	103
For Fiscal Year Ending June 30, 2016		
	<u>June 30, 2016</u>	<u>June 30, 2013</u>
XI. Normal Cost	458,868	515,192
XII. Amortization of UAAL - 30 year flat dollar	367,030	384,704
XIII. Annual Required Contribution ('ARC') [XI. + XII.]	825,898	899,896
XIV. Interest on Net OPEB Obligation (Asset)	130,987	37,182
XV. Adjustment to Annual Required Contribution	(196,601)	53,762
XVI. Amortization of Actuarial (Gains) / Losses	264,966	183,365
XVII. Annual OPEB Expense [XIII. + XIV. + XV. + XVI.]	1,025,250	1,174,205
XVIII. Employer Share of Costs	301,184	270,565
XIX. Employer Payments (Withdrawals) to/from OPEB Trust	0	0
XX. Total Employer Contribution [XVIII. + XIX.]	301,184	270,565
XXI. Percentage of Annual OPEB Expense Contributed	29.4%	23.0%
XXII. Net OPEB Obligation (Asset) at Beginning of Year [IX.]	3,742,463	929,538
XXIII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVII. - XX.]	724,066	903,640
XXIV. Net OPEB Obligation (Asset) at End of Year [XXII. + XXIII.]	4,466,529	1,833,178
XXV. Discount Rate	3.50%	4.00%

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

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

	<u>Pay-as-you-go Funding - 3.50% discount rate</u>	<u>Plan Funding -7.00% discount rate</u>
I. Present Value of Future Benefits		
A. Actives	12,182,171	5,319,756
B. Retirees/Disabled	4,603,490	3,224,755
C. Total	16,785,661	8,544,511
II. Present Value of Future Normal Cost	5,615,499	1,746,885
III. Actuarial Accrued Liability (Individual Entry Age Normal)		
A. Actives	6,566,672	3,572,871
B. Retirees/Disabled	4,603,490	3,224,755
C. Total	11,170,162	6,797,626
IV. Plan Assets	26,144	26,144
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	11,144,018	6,771,482
VI. Funded Ratio [IV. / III.]	0.23%	0.38%
VII. Annual Covered Payroll	3,432,144	3,432,144
VIII. UAAL as % of Covered Payroll	324.70%	197.30%
IX. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	3,742,463	3,742,463
X. Number of Eligible Participants		
A. Actives	56	56
B. Retirees/Disabled	49	49
C. Total	105	105
For Fiscal Year Ending June 30, 2016		
XI. Normal Cost	458,868	180,319
XII. Amortization of UAAL - 30 year flat dollar	367,030	476,139
XIII. Annual Required Contribution ('ARC') [XI. + XII.]	825,898	656,458
XIV. Interest on Net OPEB Obligation (Asset)	130,987	261,973
XV. Adjustment to Annual Required Contribution	(196,601)	(281,862)
XVI. Amortization of Actuarial (Gains) / Losses	264,966	50,558
XVII. Annual OPEB Expense [XIII. + XIV. + XV. + XVI.]	1,025,250	687,127
XVIII. Employer Share of Costs	301,184	301,184
XIX. Employer Payments (Withdrawals) to/from OPEB Trust	0	0
XX. Total Employer Contribution [XVIII. + XIX.]	301,184	301,184
XXI. Percentage of Annual OPEB Expense Contributed	29.4%	43.8%
XXII. Net OPEB Obligation (Asset) at Beginning of Year [IX.]	3,742,463	3,742,463
XXIII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVII. - XX.]	724,066	385,943
XXIV. Net OPEB Obligation (Asset) at End of Year [XXII. + XXIII.]	4,466,529	4,128,406
XXV. Discount Rate	3.50%	7.00%

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Town of Sterling
Assuming Pay-as-you-go Funding - 3.50% 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	10,592,100	1,021,812	44,361	523,898	12,182,171
B. Retirees/Disabled	<u>4,034,937</u>	<u>442,776</u>	<u>53,647</u>	<u>72,130</u>	<u>4,603,490</u>
C. Total	14,627,037	1,464,588	98,008	596,028	16,785,661
II. Present Value of Future Normal Cost	4,891,776	408,186	14,814	300,723	5,615,499
III. Actuarial Accrued Liability (Individual Entry Age Normal)					
A. Actives	5,700,324	613,626	29,547	223,175	6,566,672
B. Retirees/Disabled	<u>4,034,937</u>	<u>442,776</u>	<u>53,647</u>	<u>72,130</u>	<u>4,603,490</u>
C. Total	9,735,261	1,056,402	83,194	295,305	11,170,162
IV. Plan Assets	24,471	792	201	680	26,144
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	9,710,790	1,055,610	82,993	294,625	11,144,018
VI. Annual Covered Payroll	3,432,144	3,432,144	3,432,144	3,432,144	3,432,144
VII. UAAL as % of Covered Payroll	282.9%	30.8%	2.4%	8.6%	324.7%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	3,261,713	353,938	27,873	98,939	3,742,463
IX. Number of Eligible Participants					
A. Actives	56	56	56	56	
B. Retirees/Disabled	<u>49</u>	<u>26</u>	<u>22</u>	<u>49</u>	
C. Total	105	82	78	105	
For Fiscal Year Ending June 30, 2016					
X. Normal Cost	395,925	42,716	1,709	18,518	458,868
XI. Amortization of UAAL - 30 year flat dollar	319,882	34,711	2,734	9,703	367,030
XII. Annual Required Contribution ('ARC') [X. + XI.]	715,807	77,427	4,443	28,221	825,898
XIII. Interest on Net OPEB Obligation (Asset)	114,160	12,388	976	3,463	130,987
XIV. Adjustment to Annual Required Contribution	(171,346)	(18,594)	(1,464)	(5,197)	(196,601)
XV. Amortization of Actuarial (Gains) / Losses	230,982	25,075	2,017	6,892	264,966
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	889,603	96,296	5,972	33,379	1,025,250
XVII. Employer Share of Costs	276,734	21,007	3,443	0	301,184
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	0	0	0	0	0
XIX. Total Employer Contribution [XVII. + XVIII.]	276,734	21,007	3,443	0	301,184
XX. Percentage of Annual OPEB Expense Contributed	31.1%	21.8%	57.7%	0.0%	29.4%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	3,261,713	353,938	27,873	98,939	3,742,463
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	612,869	75,289	2,529	33,379	724,066
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	3,874,582	429,227	30,402	132,318	4,466,529

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Town of Sterling
Plan Liabilities as of July 1, 2015
Assuming Pay-as-you-go Funding Method

	Town Employees and Retirees	DPW Employees and Retirees	Water Enterprise Fund Employees and Retirees	Fire Employees and Retirees	Police Employees and Retirees	Total
I. Present Value of Future Benefits						
A. Actives	2,246,954	2,452,908	630,909	1,824,414	5,026,986	12,182,171
B. Retirees/Disabled	<u>2,274,602</u>	<u>1,117,087</u>	<u>360,887</u>	<u>86,741</u>	<u>764,173</u>	<u>4,603,490</u>
C. Total	4,521,556	3,569,995	991,796	1,911,155	5,791,159	16,785,661
II. Present Value of Future Normal Cost	991,186	826,244	333,723	1,060,631	2,403,715	5,615,499
III. Actuarial Accrued Liability (Individual Entry Age Normal)						
A. Actives	1,255,768	1,626,664	297,186	763,783	2,623,271	6,566,672
B. Retirees/Disabled	<u>2,274,602</u>	<u>1,117,087</u>	<u>360,887</u>	<u>86,741</u>	<u>764,173</u>	<u>4,603,490</u>
C. Total	3,530,370	2,743,751	658,073	850,524	3,387,444	11,170,162
IV. Plan Assets	8,380	6,507	1,563	1,900	7,794	26,144
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	3,521,990	2,737,244	656,510	848,624	3,379,650	11,144,018
VI. Annual Covered Payroll	800,301	619,148	202,393	355,138	1,455,164	3,432,144
VII. UAAL as % of Covered Payroll	440.1%	442.1%	324.4%	239.0%	232.3%	324.7%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	1,556,288	1,227,304	270,352	370,333	318,186	3,742,463
IX. Number of Eligible Participants						
A. Actives	17	12	4	5	18	56
B. Retirees/Disabled	<u>24</u>	<u>11</u>	<u>5</u>	<u>2</u>	<u>7</u>	<u>49</u>
C. Total	41	23	9	7	25	105
For Fiscal Year Ending June 30, 2016						
X. Normal Cost	114,365	76,451	37,643	69,264	161,145	458,868
XI. Amortization of UAAL - 30 year flat dollar	33,823	121,207	30,885	36,493	144,622	367,030
XII. Annual Required Contribution ('ARC') [X. + XI.]	148,188	197,658	68,528	105,757	305,767	825,898
XIII. Interest on Net OPEB Obligation (Asset)	54,470	42,955	9,462	12,962	11,137	130,986
XIV. Adjustment to Annual Required Contribution	(81,756)	(64,474)	(14,202)	(19,454)	(16,715)	(196,601)
XV. Amortization of Actuarial (Gains) / Losses	85,611	65,053	15,814	19,574	78,914	264,966
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	206,513	241,192	79,602	118,839	379,103	1,025,249
XVII. Employer Share of Costs	159,766	57,715	31,849	6,342	45,512	301,184
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	0	0	0	0	0	0
XIX. Total Employer Contribution [XVII. + XVIII.]	159,766	57,715	31,849	6,342	45,512	301,184
XX. Percentage of Annual OPEB Expense Contributed	77.4%	23.9%	40.0%	5.3%	12.0%	29.4%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	1,556,288	1,227,304	270,352	370,333	318,186	3,742,463
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	46,747	183,477	47,753	112,497	333,591	724,065
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	1,603,035	1,410,781	318,105	482,830	651,777	4,466,528

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Town of Sterling
Detail of Plan Liabilities by Group and Dependency Status
Assuming Pay-as-you-go Funding - 3.50% discount rate
Plan Liabilities as of July 1, 2015

	<u>Present Value of Future Benefits</u>	<u>Actuarial Accrued Liability (Individual Entry Age Normal)</u>	<u>Normal Cost</u>
Actives			
Under Age 65			
A. Participants	2,319,167	1,147,086	83,310
B. Spouses	<u>1,990,897</u>	<u>1,028,926</u>	<u>69,318</u>
C. Total	4,310,064	2,176,012	152,628
Age 65 and Over			
A. Participants	4,242,467	2,413,030	169,239
B. Spouses	<u>3,629,640</u>	<u>1,977,630</u>	<u>137,001</u>
C. Total	7,872,107	4,390,660	306,240
Actives Total			
A. Participants	6,561,634	3,560,116	252,549
B. Spouses	<u>5,620,537</u>	<u>3,006,556</u>	<u>206,319</u>
C. Total	12,182,171	6,566,672	458,868
Retirees/Disabled			
Under Age 65			
A. Participants	583,370	583,370	0
B. Spouses	<u>391,306</u>	<u>391,306</u>	<u>0</u>
C. Total	974,676	974,676	0
Age 65 and Over			
A. Participants	2,853,664	2,853,664	<u>0</u>
B. Spouses	<u>775,150</u>	<u>775,150</u>	<u>0</u>
C. Total	3,628,814	3,628,814	0
Retirees/Disabled Total			
A. Participants	3,437,034	3,437,034	0
B. Spouses	<u>1,166,456</u>	<u>1,166,456</u>	<u>0</u>
C. Total	4,603,490	4,603,490	0
Total Population			
A. Participants	9,998,668	6,997,150	252,549
B. Spouses	<u>6,786,993</u>	<u>4,173,012</u>	<u>206,319</u>
C. Total	16,785,661	11,170,162	458,868

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Town of Sterling
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	4,664,365	403,932	17,128	234,331	5,319,756
B. Retirees/Disabled	<u>2,841,611</u>	<u>300,192</u>	<u>38,518</u>	<u>44,434</u>	<u>3,224,755</u>
C. Total	7,505,976	704,124	55,646	278,765	8,544,511
II. Present Value of Future Normal Cost	1,514,930	127,431	3,877	100,647	1,746,885
III. Actuarial Accrued Liability (Individual Entry Age Normal)					
A. Actives	3,149,435	276,501	13,251	133,684	3,572,871
B. Retirees/Disabled	<u>2,841,611</u>	<u>300,192</u>	<u>38,518</u>	<u>44,434</u>	<u>3,224,755</u>
C. Total	5,991,046	576,693	51,769	178,118	6,797,626
IV. Plan Assets	23,042	2,218	199	685	26,144
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	5,968,004	574,475	51,570	177,433	6,771,482
VI. Annual Covered Payroll	3,432,144	3,432,144	3,432,144	3,432,144	3,432,144
VII. UAAL as % of Covered Payroll	173.9%	16.7%	1.5%	5.2%	197.3%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	3,261,713	353,938	27,873	98,939	3,742,463
IX. Number of Eligible Participants					
A. Actives	56	56	56	56	
B. Retirees/Disabled	<u>49</u>	<u>26</u>	<u>22</u>	<u>49</u>	
C. Total	105	82	78	105	
For Fiscal Year Ending June 30, 2016					
X. Normal Cost	155,756	15,101	592	8,870	180,319
XI. Amortization of UAAL - 30 year flat dollar	417,157	42,171	3,786	13,025	476,139
XII. Annual Required Contribution ('ARC') [X. + XI.]	572,913	57,272	4,378	21,895	656,458
XIII. Interest on Net OPEB Obligation (Asset)	228,320	24,776	1,951	6,926	261,973
XIV. Adjustment to Annual Required Contribution	(245,654)	(26,657)	(2,099)	(7,452)	(281,862)
XV. Amortization of Actuarial (Gains) / Losses	44,559	4,289	385	1,325	50,558
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	600,138	59,680	4,615	22,694	687,127
XVII. Employer Share of Costs	276,734	21,007	3,443	0	301,184
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	0	0	0	0	0
XIX. Total Employer Contribution [XVII. + XVIII.]	276,734	21,007	3,443	0	301,184
XX. Percentage of Annual OPEB Expense Contributed	46.1%	35.2%	74.6%	0.0%	43.8%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	3,261,713	353,938	27,873	98,939	3,742,463
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	323,404	38,673	1,172	22,694	385,943
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	3,585,117	392,611	29,045	121,633	4,128,406

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

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

	Town Employees and Retirees	DPW Employees and Retirees	Water Enterprise Fund Employees and Retirees	Fire Employees and Retirees	Police Employees and Retirees	Total
I. Present Value of Future Benefits						
A. Actives	981,208	1,071,145	275,508	796,692	2,195,203	5,319,756
B. Retirees/Disabled	<u>1,593,364</u>	<u>782,522</u>	<u>252,802</u>	<u>60,762</u>	<u>535,305</u>	<u>3,224,755</u>
C. Total	2,574,572	1,853,667	528,310	857,454	2,730,508	8,544,511
II. Present Value of Future Normal Cost	308,342	257,030	103,815	329,944	747,754	1,746,885
III. Actuarial Accrued Liability (Individual Entry Age Normal)						
A. Actives	683,253	885,054	161,696	415,568	1,427,300	3,572,871
B. Retirees/Disabled	<u>1,593,364</u>	<u>782,522</u>	<u>252,802</u>	<u>60,762</u>	<u>535,305</u>	<u>3,224,755</u>
C. Total	2,276,617	1,667,576	414,498	476,330	1,962,605	6,797,626
IV. Plan Assets	8,380	6,507	1,563	1,900	7,794	26,144
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	2,268,237	1,661,069	412,935	474,430	1,954,811	6,771,482
VI. Annual Covered Payroll	800,301	619,148	202,393	355,138	1,455,164	3,432,144
VII. UAAL as % of Covered Payroll	283.4%	268.3%	204.0%	133.6%	134.3%	197.3%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	1,556,288	1,227,304	270,352	370,333	318,186	3,742,463
IX. Number of Eligible Participants						
A. Actives	17	12	4	5	18	56
B. Retirees/Disabled	<u>24</u>	<u>11</u>	<u>5</u>	<u>2</u>	<u>7</u>	<u>49</u>
C. Total	41	23	9	7	25	105
For Fiscal Year Ending June 30, 2016						
X. Normal Cost	44,942	30,043	14,792	27,218	63,324	180,319
XI. Amortization of UAAL - 30 year flat dollar	43,878	157,239	40,066	47,341	187,615	476,139
XII. Annual Required Contribution ("ARC") [X. + XI.]	88,820	187,282	54,858	74,559	250,939	656,458
XIII. Interest on Net OPEB Obligation (Asset)	108,941	85,910	18,924	25,924	22,274	261,973
XIV. Adjustment to Annual Required Contribution	(117,211)	(92,435)	(20,361)	(27,891)	(23,964)	(281,862)
XV. Amortization of Actuarial (Gains) / Losses	16,335	12,413	3,017	3,735	15,058	50,558
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	96,885	193,170	56,438	76,327	264,307	687,127
XVII. Employer Share of Costs	159,766	57,715	31,849	6,342	45,512	301,184
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	0	0	0	0	0	0
XIX. Total Employer Contribution [XVII. + XVIII.]	159,766	57,715	31,849	6,342	45,512	301,184
XX. Percentage of Annual OPEB Expense Contributed	164.9%	29.9%	56.4%	8.3%	17.2%	43.8%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	1,556,288	1,227,304	270,352	370,333	318,186	3,742,463
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	(62,881)	135,455	24,589	69,985	218,795	385,943
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	1,493,407	1,362,759	294,941	440,318	536,981	4,128,406

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, 2010. 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 \$2,495,375 or 18.30%. Plan experience was more favorable than expected. This was mainly due to premiums for Medicare integrated plans decreasing and premiums for Non-Medicare integrated plans increasing less than the expected 26% increase. This was somewhat offset by the preparations for GASB 75 including the introduction of a new Actuarial Cost Method and a decrease in the discount rate from 4.0% to 3.5% (increasing disclosed liabilities by \$700K and \$750K respectively) and a more conservative mortality table as recommended by PERAC. 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.

Commentary on Plan Experience and Contribution Amounts
(continued)

3. **Balance Sheet Items**

	July 1, 2015	July 1, 2012
Actuarial Accrued Liability	\$11,170,162	\$11,463,201
Plan Assets	\$26,144	\$0
Unfunded Actuarial Accrued Liability	\$11,144,018	\$11,463,201
Funded %	0.23%	0.00%
Net OPEB Obligation	\$3,742,463	\$929,538

4. **Income Statement Items**

	June 30, 2016	June 30, 2013
Normal Cost	\$458,868	\$515,192
Amortization of UAAL	\$367,030	\$384,704
Interest on Net OPEB Obligation	\$130,987	\$37,182
Adjustment to Annual Required Contribution	\$(196,601)	\$53,762
Amortization of Actuarial (Gains)/Losses	\$264,966	\$183,365
Annual OPEB Expense	\$1,025,250	\$1,174,205
Employer Share of Costs	\$301,184	\$270,565
Employer Contributions/(Withdrawals) to/from OPEB Trust	\$0	\$0
Total Employer Contribution	\$301,184	\$270,565
Discount Rate	3.50%	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 largely mirrors the GASB 68 standard for pension plans. The new standards require increased disclosures 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. For more information, please review our white papers at www.GASB75.com or on our website.

SECTION II

SUMMARY OF PLAN PROVISIONS

<u>Effective Date</u>	July 1, 2009; 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>	10-25% of premiums for Medical (based on plan and retirement date), 25% of premiums for Dental & 25% of premiums for Life insurance.
<u>Benefits Offered</u>	Comprehensive Medical Insurance offered through Fallon Healthcare, Dental offered through Blue Cross Blue Shield, and Life insurance through Boston Mutual.
<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 Normal 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

3.50% 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>Non Public</u>	<u>Public</u>
	<u>Safety Male</u>	<u>Safety Female</u>	<u>Safety</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 95% of employees eligible to receive retirement benefits would enroll in the retiree medical and 80% of eligible employees would enroll in 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 male participants and 70% of female 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			
	Single	Two-Person	Family	Total
Fallon Direct	2		2	4
Fallon Select	18		36	54
Fallon PPO In-State				0
Fallon PPO Out-of-State	2			2
Fallon Companioncare	30			30
Total	52	0	38	90

	Per Contract Costs (monthly) - FY 2017		
	Single	Two-Person	Family
Fallon Direct	773.69	0.00	2,069.44
Fallon Select	859.65	0.00	2,299.38
Fallon PPO In-State	1,087.16	0.00	2,908.00
Fallon PPO Out-of-State	859.65		2,299.38
Fallon Companioncare	301.60	603.20	

Gross Expected FY 2017 Incurred Premiums	1,376,459
Adjustment to reflect children's claims	(263,124)
Total Expected FY 2017 Incurred Premiums (adults only)	1,113,335

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

	Employer Primary	Medicare Primary
Age 65	14,691	3,619
Average Age	12,274	3,619

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

1,113,335 Active and Retired Claims (No Children)

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	0	0	1.312	0.549	9,013	3,772	0
25 to 29	2	0	1.312	0.591	9,013	4,060	18,026
30 to 34	1	6	1.312	0.712	9,013	4,891	38,359
35 to 39	6	3	1.312	0.850	9,013	5,840	71,598
40 to 44	3	7	1.312	1.000	9,013	6,870	75,129
45 to 49	3	5	1.456	1.193	10,003	8,196	70,989
50 to 54	7	6	1.599	1.441	10,985	9,900	136,295
55 to 59	7	4	1.740	1.753	11,954	12,043	131,850
60 to 64	2	4	1.968	2.102	13,520	14,441	84,804
65 to 69	6	2	2.168	2.316	14,894	15,911	121,186
70 & Over	0	1	2.396	2.557	16,461	17,567	17,567
Total	37	38					765,803

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	2	1	1.312	1.000	9,013	6,870	24,896
45 to 49	1	1	1.456	1.193	10,003	8,196	18,199
50 to 54	0	1	1.599	1.441	10,985	9,900	9,900
55 to 59	2	0	1.740	1.753	11,954	12,043	23,908
60 to 64	6	2	1.968	2.102	13,520	14,441	110,002
65 to 69	0	0	2.168	2.316	14,894	15,911	0
70 to 74	1	1	2.396	2.557	16,461	17,567	34,028
75 to 79	0	0	2.593	2.769	17,814	19,023	0
80 to 84	0	0	2.724	2.910	18,714	19,992	0
85 to 89	0	0	2.864	3.059	19,676	21,015	0
90 & Over	0	0	3.010	3.215	20,679	22,087	0
Total	12	6					220,933

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	3	7	2.168	2.316	3,619	3,619	36,190
70 to 74	5	4	2.396	2.557	3,619	3,619	32,571
75 to 79	6	4	2.593	2.769	3,619	3,619	36,190
80 to 84	0	1	2.724	2.910	3,619	3,619	3,619
85 to 89	1	3	2.864	3.059	3,619	3,619	14,476
90 & Over	0	1	3.010	3.215	3,619	3,619	3,619
Total	15	20					126,665
Grand Totals	64	64					1,113,401

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 2017		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Dental Plan	50.02		105.18
	FY 2017 Expected Per Person Rate		600

EXHIBIT AFinancial Statement Disclosure

(As of July 1, 2015)

The GASB Standards for accounting and financial reporting for postemployment benefits other than pensions require 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 & Medicare Supplement coverages through Fallon Healthcare.
- b. Administrator: Town of Sterling
- 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: For Non-Medicare integrated plans, employees who retired before 7/1/2009 pay 10-25% of premiums and all other employees pay 20-25% of premiums upon retirement. Retirees pay 25% of premiums for Medicare integrated plans.

2. A DESCRIPTION OF THE DENTAL INSURANCE PROGRAM:

- a. Plan Type: Comprehensive Dental via Blue Cross Blue Shield
- b. Administrator: Town of Sterling
- c. Eligibility: Same as above
- d. Cost sharing: Employees pay 25% of premiums in retirement.

3. A DESCRIPTION OF THE RETIREE LIFE INSURANCE PROGRAM:

- a. Plan Type: Group Term Life Insurance - \$5,000
- b. Administrator: Town of Sterling
- c. Eligibility: Same as above
- d. Cost sharing: Employees pay 25% of premiums in retirement.

EXHIBIT A

Financial Statement Disclosure

(As of July 1, 2015)

(continued)

4. RETIREE MEDICAL AND LIFE INSURANCE CONTRIBUTIONS:

Group	Individual	Family
Medical	10%-25%	10%-25%
Dental	25%	25%
Life	25%	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 2016 fiscal year, total Town premiums plus implicit costs for the retiree medical program are \$301,184. The Town is also projected to make a contribution to an OPEB Trust of \$0 for the 2016 fiscal year for a total contribution of \$301,184 .

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	\$825,898
Interest on net OPEB Obligation (Asset)	\$130,987
Adjustment to annual required contribution	(\$196,601)
Amortization of Actuarial (Gains) / Losses	\$264,966
Annual OPEB expense	\$1,025,250
Contributions made to pay benefits	\$301,184
Contributions made to OPEB Trust	\$0
Increase (Decrease) in net OPEB Obligation (Asset)	\$724,066
Net OPEB Obligation (Asset) – beginning of year	\$3,742,463
Net OPEB Obligation (Asset) – end of year	\$4,466,529

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.)	\$1,094,418	\$339,880	31.1%	\$754,538	\$5,872,472
06/30/2017 (est.)	\$1,060,764	\$409,357	38.6%	\$651,407	\$5,117,934
06/30/2016	\$1,025,248	\$301,184	29.4%	\$724,064	\$4,466,527
06/30/2015	\$1,277,669	\$366,189	28.7%	\$911,480	\$3,742,463
06/30/2014	\$1,222,778	\$224,973	18.4%	\$997,805	\$2,830,983
06/30/2013	\$1,174,205	\$270,565	23.0%	\$903,640	\$1,833,178

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.)	\$129,621	\$11,924,864	\$11,795,243	1.1%	\$3,641,162	323.9%
07/01/2016 (est.)	\$26,943	\$11,504,854	\$11,477,911	0.2%	\$3,535,108	324.7%
07/01/2015	\$26,144	\$11,170,162	\$11,144,018	0.2%	\$3,432,144	324.7%
07/01/2014	\$14,150	\$12,925,916	\$12,911,766	0.1%	N/A	N/A
07/01/2013	\$0	\$12,173,375	\$12,173,375	0.0%	N/A	N/A
07/01/2012	\$0	\$11,463,201	\$11,463,201	0.0%	\$3,240,255	353.8%

EXHIBIT A

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

Fiscal Year Ending June 30, 2016						
	Town Employees and Retirees	DPW Employees and Retirees	Water Enterprise Fund Employees and Retirees	Fire Employees and Retirees	Police Employees and Retirees	Total
OPEB Obligation (Asset) at beginning of year	1,556,288	1,227,304	270,352	370,333	318,186	3,742,463
Annual Required Contribution	148,188	197,658	68,528	105,757	305,767	825,898
Interest on Net OPEB Obligation	54,471	42,955	9,462	12,962	11,137	130,987
Adjustment to the ARC	(81,756)	(64,474)	(14,202)	(19,454)	(16,715)	(196,601)
Amortization of Actuarial (Gains)/Losses	85,611	65,053	15,814	19,574	78,914	264,966
Annual OPEB Cost	206,513	241,192	79,602	118,839	379,103	1,025,249
Expected Employer Contribution	159,766	57,715	31,849	6,342	45,512	301,184
Contribution (Withdrawal) to/from Trust Fund over 30 Years	-	-	-	-	-	-
Total Expected Employer Payments	159,766	57,715	31,849	6,342	45,512	301,184
Increase (Decrease) in OPEB Obligation (Asset)	46,747	183,477	47,753	112,497	333,591	724,065
OPEB Obligation (Asset) at end of year	1,603,035	1,410,781	318,105	482,830	651,777	4,466,528
AAL as of July 1, 2015	3,530,370	2,743,751	658,073	850,524	3,387,444	11,170,162
Plan Assets as of July 1, 2015	8,380	6,507	1,563	1,900	7,794	26,144
Unfunded Actuarial Liability as of July 1, 2015	3,521,990	2,737,244	656,510	848,624	3,379,650	11,144,018

Fiscal Year Ending June 30, 2017						
	Town Employees and Retirees	DPW Employees and Retirees	Water Enterprise Fund Employees and Retirees	Fire Employees and Retirees	Police Employees and Retirees	Total
OPEB Obligation (Asset) at beginning of year	1,603,035	1,410,781	318,105	482,830	651,777	4,466,528
Annual Required Contribution	150,013	200,093	69,372	107,060	309,533	836,071
Interest on Net OPEB Obligation	65,008	51,265	11,293	15,470	13,292	156,328
Adjustment to the ARC	(97,573)	(76,948)	(16,950)	(23,218)	(19,949)	(234,638)
Amortization of Actuarial (Gains)/Losses	96,219	75,137	18,644	23,644	89,359	303,003
Annual OPEB Cost	213,667	249,547	82,359	122,956	392,235	1,060,764
Expected Employer Contribution	117,147	78,444	43,288	8,620	61,858	309,357
Contribution (Withdrawal) to/from Trust Fund over 30 Years	100,000	-	-	-	-	100,000
Total Expected Employer Payments	217,147	78,444	43,288	8,620	61,858	409,357
Increase (Decrease) in OPEB Obligation (Asset)	(3,480)	171,103	39,071	114,336	330,377	651,407
OPEB Obligation (Asset) at end of year	1,599,555	1,581,884	357,176	597,166	982,154	5,117,935
AAL as of July 1, 2016	3,636,151	2,825,962	677,791	876,008	3,488,942	11,504,854
Plan Assets as of July 1, 2016	8,556	6,735	1,618	1,967	8,067	26,943
Unfunded Actuarial Liability as of July 1, 2016	3,627,595	2,819,227	676,173	874,041	3,480,875	11,477,911

Fiscal Year Ending June 30, 2018						
	Town Employees and Retirees	DPW Employees and Retirees	Water Enterprise Fund Employees and Retirees	Fire Employees and Retirees	Police Employees and Retirees	Total
OPEB Obligation (Asset) at beginning of year	1,599,555	1,581,884	357,176	597,166	982,154	5,117,935
Annual Required Contribution	151,960	202,691	70,273	108,450	313,551	846,925
Interest on Net OPEB Obligation	74,489	58,742	12,940	17,726	15,231	179,128
Adjustment to the ARC	(111,804)	(88,171)	(19,422)	(26,604)	(22,858)	(268,859)
Amortization of Actuarial (Gains)/Losses	105,801	84,202	21,181	27,285	98,755	337,224
Annual OPEB Cost	220,446	257,464	84,972	126,857	404,679	1,094,418
Expected Employer Contribution	180,293	65,130	35,941	7,157	51,359	339,880
Contribution (Withdrawal) to/from Trust Fund over 30 Years	-	-	-	-	-	-
Total Expected Employer Payments	180,293	65,130	35,941	7,157	51,359	339,880
Increase (Decrease) in OPEB Obligation (Asset)	40,153	192,334	49,031	119,700	353,320	754,538
OPEB Obligation (Asset) at end of year	1,639,708	1,774,218	406,207	716,866	1,335,474	5,872,473
AAL as of July 1, 2017	3,768,896	2,929,130	702,535	907,989	3,616,314	11,924,864
Plan Assets as of July 1, 2017	110,590	6,971	1,675	2,036	8,349	129,621
Unfunded Actuarial Liability as of July 1, 2017	3,658,306	2,922,159	700,860	905,953	3,607,965	11,795,243

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 0.23% funded. The actuarial liability for benefits was \$11,170,162, and the actuarial value of assets was \$26,144, resulting in an unfunded actuarial accrued liability (UAAL) of \$11,144,018. The covered payroll (annual payroll of active employees covered by the plan) was \$ 3,432,144 and the ratio of the UAAL to the covered payroll was 324.7%.

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 \$14,298,474 or by 28.0% and the corresponding Normal Cost would increase to \$638,236 or by 39.1%. If such healthcare trend rates were 1% less than forecast and employee contributions were to increase at the forecast rate, the Actuarial Accrued Liability would decrease to \$8,966,089 or by 19.7% and the corresponding Normal Cost would decrease to \$324,121 or by 29.4%.

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: Individual Entry Age Normal
Investment Rate of Return: 3.50% 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: 2.75% 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: 24 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	11,463,201
2. Actuarial Value of Assets at prior valuation date	<u>0</u>
3. Unfunded Actuarial Accrued Liability at prior valuation date [1. - 2.]	11,463,201
4. Normal Cost for prior periods	1,545,576
5. Employer Contributions for prior periods	(861,727)
6. Interest to current valuation date	<u>1,492,343</u>
7. Expected Unfunded Actuarial Accrued Liability [3. + 4. + 5. + 6.]	13,639,393

Actual Unfunded Actuarial Liability

8. Actuarial Accrued Liability at current valuation date	11,170,162
9. Actuarial Value of Assets at current valuation date	<u>26,144</u>
10. Unfunded Actuarial Accrued Liability at current valuation date [8. - 9.]	11,144,018

Net Actuarial (Gain) / Loss from Plan Experience [10. - 7.] **(2,495,375)**

11. Unfunded Actuarial Accrued Liability at current valuation date [10.]	11,144,018
12. Remaining Initial Unfunded to be amortized	<u>6,100,190</u>
13. Actuarial (Gain) / Loss to be amortized: [11. - 12.]	5,043,828

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, 2009	GASB 45 Liability	6,918,399	30	6,100,190	24	367,030
July 1, 2015	Cumulative (Gain) / Loss	5,043,828	30	5,043,828	30	264,966
July 1, 2015	Adjustment to ARC	(3,742,463)	30	(3,742,463)	30	(196,602)
Total				7,401,555		435,394

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 Sterling 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, 2019 (formerly December 31, 2017, but amended by Consolidated Appropriations Act) 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 threshold amounts for 2018 (original legislation) were \$10,200 for single coverage and \$27,500 for family coverage and a "kicker" amount of \$1,650 for single coverage and \$3,450 for family coverage. These threshold and kicker amounts are expected to be updated because of the Consolidated Appropriations Act before the tax takes effect in 2020, but currently the updated amounts have not been released.

The excise tax liability will vary significantly over time as it is highly leveraged with the basic threshold 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 \$295,305 and the increase in annual OPEB Cost is \$33,379. Given your premiums through the 2017 fiscal year and the excise tax threshold, your single premiums are within 59.05% of the excise tax and your family premiums are within 0.19% 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 Sterling nor have we attempted to value the impact of prior Town of Sterling 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, 2012</u>
A. Average Age at Hire	36.72	37.70
B. Average Service	11.98	9.80
C. Average Current Age	48.70	47.50

RETIRED EMPLOYEES & DEPENDENTS

	<u>July 1, 2015</u>	<u>July 1, 2012</u>
I. Retirees		
A. Under Age 65	9	N/A
B. Age 65 & Over	<u>32</u>	<u>N/A</u>
C. Total Retirees	41	N/A
II. Dependents of Retirees		
A. Under Age 65	6	N/A
B. Age 65 & Over	<u>2</u>	<u>N/A</u>
C. Total Retirees	8	N/A
III. Retirees & Dependents		
A. Under Age 65	15	N/A
B. Age 65 & Over	<u>34</u>	<u>N/A</u>
C. Total Retirees	49	N/A

EXHIBIT C

Projected Cash Flows (Open Group) - Pay-as-you-go Funding Approach

Total Medical, Dental & Life Insurance - Pay-as-you-go Funding - 3.50% discount rate

Fiscal Year	I. Total Actuarial Accrued Liability ("AAL") as of July 1	II. Plan Assets as of July 1	III. Unfunded Accrued Actuarial Liability ("UAAAL") [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. Excess Employer Payments (beyond claims)
2016	11,170,162	26,144	11,144,018	458,868	367,030	130,987	(196,601)	264,966	1,025,248	3,742,463	301,184	0
2017	11,504,854	26,943	11,477,911	469,041	367,030	156,328	(234,638)	303,003	1,060,764	4,466,527	309,357	100,000
2018	11,924,864	129,621	11,795,243	479,895	367,030	179,128	(268,859)	337,224	1,094,418	5,117,934	339,880	0
2019	12,339,688	134,158	12,205,530	497,637	367,030	205,536	(308,497)	376,862	1,138,568	5,872,472	365,397	0
2020	12,762,629	138,854	12,623,775	518,448	367,030	232,597	(349,114)	417,479	1,186,440	6,645,643	379,463	0
2021	13,218,335	143,714	13,074,621	525,489	367,030	260,842	(391,507)	459,872	1,221,726	7,452,620	405,450	0
2022	13,805,217	148,744	13,656,473	538,002	367,030	289,410	(434,387)	502,752	1,262,807	8,268,896	438,825	0
2023	14,391,046	153,950	14,237,096	564,693	367,030	318,251	(477,673)	546,038	1,318,339	9,092,878	456,958	0
2024	15,006,238	159,338	14,846,900	583,512	367,030	348,399	(522,925)	591,290	1,367,306	9,954,259	489,496	0
2025	15,628,762	164,915	15,463,847	606,365	367,030	379,121	(569,038)	637,403	1,420,881	10,832,069	501,508	0
2026	16,284,293	170,687	16,113,606	627,995	367,030	411,300	(617,336)	685,701	1,474,690	11,751,442	501,835	0
2027	16,984,819	176,661	16,808,158	653,021	367,030	445,351	(668,441)	736,806	1,533,767	12,724,297	544,793	0
2028	17,663,771	182,844	17,480,927	675,772	367,030	479,964	(720,394)	788,759	1,591,131	13,713,271	562,694	0
2029	18,375,187	189,244	18,185,943	707,532	367,030	515,959	(774,422)	842,787	1,658,886	14,741,708	582,224	0
2030	19,103,060	195,868	18,907,192	734,685	367,030	553,643	(830,982)	899,347	1,723,723	15,818,370	639,579	0
2031	19,870,101	202,723	19,667,378	768,816	367,030	591,588	(887,935)	956,300	1,795,799	16,902,514	654,147	0
2032	20,684,239	209,818	20,474,421	807,028	367,030	631,546	(947,908)	1,016,273	1,873,969	18,044,166	658,942	0
2033	21,561,458	217,162	21,344,296	840,633	367,030	674,071	(1,011,738)	1,080,103	1,950,099	19,259,193	726,796	0
2034	22,400,934	224,763	22,176,171	882,314	367,030	716,887	(1,076,001)	1,144,366	2,034,596	20,482,496	739,768	0
2035	23,332,503	232,630	23,099,873	922,955	367,030	762,206	(1,144,022)	1,212,387	2,120,556	21,777,324	757,142	0
2036	24,320,756	240,772	24,079,984	965,054	367,030	809,926	(1,215,644)	1,284,009	2,210,375	23,140,738	804,011	0
2037	25,338,663	249,199	25,089,464	1,009,742	367,030	859,150	(1,289,525)	1,357,890	2,304,287	24,547,102	856,522	0
2038	26,384,101	257,921	26,126,180	1,061,717	367,030	909,820	(1,365,580)	1,433,945	2,406,932	25,994,867	931,581	0
2039	27,442,235	266,948	27,175,287	1,111,087	367,030	961,457	(1,443,085)	1,511,450	2,507,939	27,470,218	976,724	0
2040	28,541,779	276,291	28,265,488	1,166,985	0	1,015,050	(1,523,524)	1,591,889	2,250,400	29,001,433	1,032,405	0
2041	29,680,031	285,961	29,394,070	1,223,882	0	1,057,680	(1,587,507)	1,655,872	2,349,927	30,219,428	1,076,603	0
2042	30,871,267	295,970	30,575,297	1,283,509	0	1,102,246	(1,654,399)	1,722,764	2,454,120	31,492,752	1,118,289	0
2043	32,122,766	306,329	31,816,437	1,349,074	0	1,149,000	(1,724,573)	1,792,938	2,566,439	32,828,583	1,125,663	0
2044	33,541,317	317,051	33,224,266	1,415,903	0	1,199,427	(1,800,261)	1,868,626	2,683,695	34,269,359	1,149,209	0
2045	34,846,391	328,148	34,518,243	1,486,508	0	1,253,135	(1,880,872)	1,949,237	2,808,008	35,803,845	1,216,176	0
2046	36,628,256	339,633	36,288,623	1,562,145	0	1,308,848	(1,964,495)	1,964,495	2,870,993	37,395,677	1,209,974	0
2047	38,274,742	351,520	37,923,222	1,643,360	0	1,366,985	(2,051,753)	2,051,753	3,010,345	39,056,696	1,303,668	0

EXHIBIT D

Projected Cash Flows (Open Group) - Funded Approach

Total Medical, Dental & Life Insurance - Funding over 30 years at 7.00% discount rate using current funding schedule

Fiscal Year	I. Total Actuarial Accrued Liability ("AAL") as of		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	II. Plan Assets as of July 1																				
2016	6,797,626	26,144	6,771,482	198,351	476,139	261,973	(281,862)	50,558	705,159	4,146,438	301,184	0										
2017	7,083,659	26,943	7,056,716	201,943	476,139	290,250	(312,287)	80,983	737,028	4,321,809	309,357	252,300										
2018	7,377,914	281,129	7,096,785	205,752	476,139	302,527	(325,495)	94,911	753,114	4,482,743	339,880	252,300										
2019	7,664,867	553,108	7,111,759	211,970	476,139	313,792	(337,616)	106,312	770,597	4,635,643	365,397	252,300										
2020	7,953,100	844,126	7,108,974	219,861	476,139	324,495	(349,131)	117,827	789,191	4,793,071	379,463	252,300										
2021	8,263,566	1,155,515	7,108,051	221,765	476,139	335,516	(360,986)	129,682	802,116	4,937,437	405,450	252,300										
2022	8,645,471	1,488,701	7,156,770	224,912	476,139	345,621	(371,859)	140,555	815,368	5,061,680	438,825	252,300										
2023	9,021,768	1,845,210	7,176,558	234,653	476,139	354,318	(381,218)	149,914	833,806	5,186,228	456,958	252,300										
2024	9,415,424	2,226,675	7,188,749	241,017	476,139	363,036	(390,598)	159,294	848,888	5,293,320	489,496	252,300										
2025	9,808,630	2,634,842	7,173,788	249,102	476,139	370,532	(398,664)	167,360	864,469	5,403,981	501,508	252,300										
2026	10,225,157	3,071,581	7,153,576	256,743	476,139	378,279	(406,997)	175,693	879,857	5,529,703	501,835	252,300										
2027	10,678,669	3,538,892	7,139,777	265,622	476,139	387,080	(416,466)	185,162	897,537	5,630,147	544,793	252,300										
2028	11,109,859	4,038,914	7,070,945	273,318	476,139	394,110	(424,031)	192,727	912,263	5,727,416	562,694	252,300										
2029	11,561,339	4,573,938	6,987,401	285,149	476,139	400,919	(431,357)	200,053	930,903	5,823,795	582,224	252,300										
2030	12,022,270	5,146,414	6,875,856	294,841	476,139	407,666	(438,615)	207,311	947,342	5,879,258	639,579	252,300										
2031	12,494,960	5,758,963	6,735,997	307,848	476,139	411,548	(442,792)	211,488	964,231	5,937,042	654,147	252,300										
2032	12,999,068	6,414,390	6,584,678	322,842	476,139	415,593	(447,144)	215,840	983,270	6,009,070	658,942	252,300										
2033	13,549,374	7,115,697	6,433,677	335,593	476,139	420,634	(452,569)	221,265	1,001,062	6,031,036	726,796	252,300										
2034	14,059,981	7,866,096	6,193,885	351,871	476,139	422,172	(454,223)	222,919	1,018,878	6,057,846	739,768	252,300										
2035	14,629,131	8,669,023	5,960,108	367,673	476,139	424,049	(456,244)	224,940	1,036,557	6,084,961	757,142	252,300										
2036	15,236,438	9,528,155	5,708,283	384,103	476,139	425,947	(458,286)	226,982	1,054,885	6,083,535	804,011	252,300										
2037	15,853,686	10,447,426	5,406,260	401,522	476,139	425,847	(458,178)	226,874	1,072,204	6,046,917	856,522	252,300										
2038	16,476,596	11,431,046	5,045,550	421,805	476,139	423,285	(455,420)	224,116	1,089,925	5,952,961	931,581	252,300										
2039	17,084,497	12,483,519	4,600,978	440,787	476,139	416,707	(448,343)	217,230	1,102,520	5,826,457	976,724	252,300										
2040	17,706,962	13,609,665	4,097,297	462,464	0	407,852	(438,816)	207,923	639,423	5,181,175	1,032,405	252,300										
2041	18,336,613	14,814,642	3,521,971	484,345	0	362,682	(390,217)	161,973	618,783	4,471,055	1,076,603	252,300										
2042	18,986,460	16,103,967	2,882,493	507,169	0	312,973	(336,735)	113,686	597,093	3,697,559	1,118,289	252,300										
2043	19,661,614	17,483,545	2,178,069	532,378	0	258,829	(278,480)	60,714	573,441	2,893,037	1,125,663	252,300										
2044	20,366,658	18,959,693	1,406,965	558,067	0	202,513	(217,887)	4,712	547,405	2,038,933	1,149,209	252,300										
2045	21,159,803	20,539,172	620,631	585,154	0	142,725	(153,560)	(54,856)	519,463	1,089,920	1,216,176	252,300										
2046	22,228,220	22,229,214	(994)	614,235	0	76,294	(82,087)	110,406	718,848	599,788	1,209,974	(994)										
2047	23,146,754	23,784,265	(637,511)	645,660	0	41,985	(45,172)	76,804	719,277	652,908	1,303,668	(637,511)										

EXHIBIT D

Projected Cash Flows (Open Group) - Funded Approach

Total Medical, Dental & Life Insurance - Funding over 30 years at 7.00% discount rate using current funding schedule

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	6,797,626	26,144	6,771,482	198,351	476,139	261,973	(281,862)	50,558	705,159	3,742,463	301,184	0
2017	7,083,659	26,943	7,056,716	201,943	476,139	290,250	(312,287)	80,983	737,028	4,146,438	309,357	195,700
2018	7,377,914	224,529	7,153,385	205,752	476,139	302,527	(325,495)	94,191	753,114	4,378,409	339,880	200,593
2019	7,664,867	440,839	7,224,028	211,970	476,139	313,792	(337,616)	106,312	770,597	4,591,050	365,397	205,608
2020	7,953,100	677,306	7,275,794	219,861	476,139	324,495	(349,131)	117,827	789,191	4,790,642	379,463	210,748
2021	8,263,566	935,465	7,328,101	221,765	476,139	335,516	(360,986)	129,682	802,116	4,989,622	405,450	216,017
2022	8,645,471	1,216,965	7,428,506	224,912	476,139	345,621	(371,859)	140,555	815,368	5,170,271	438,825	221,417
2023	9,021,768	1,523,570	7,498,198	234,653	476,139	354,318	(381,218)	149,914	833,806	5,325,397	456,958	226,952
2024	9,415,424	1,857,172	7,558,252	241,017	476,139	363,036	(390,598)	159,294	848,888	5,475,293	489,496	232,626
2025	9,808,630	2,219,800	7,588,830	249,102	476,139	370,532	(398,664)	167,360	864,469	5,602,059	501,508	238,442
2026	10,225,157	2,613,628	7,611,529	256,743	476,139	378,279	(406,997)	175,693	879,857	5,726,578	501,835	244,403
2027	10,678,669	3,040,985	7,637,684	265,622	476,139	387,080	(416,466)	185,162	897,537	5,860,197	544,793	250,513
2028	11,109,859	3,504,367	7,605,492	273,318	476,139	394,110	(424,031)	192,727	912,263	5,962,428	562,694	256,776
2029	11,561,339	4,006,449	7,554,890	285,149	476,139	400,919	(431,357)	200,053	930,903	6,055,221	582,224	263,195
2030	12,022,270	4,550,095	7,472,175	294,841	476,139	407,666	(438,615)	207,311	947,342	6,140,705	639,579	269,775
2031	12,494,960	5,138,377	7,356,583	307,848	476,139	411,548	(442,792)	211,488	964,231	6,178,693	654,147	276,519
2032	12,999,068	5,774,582	7,224,486	322,842	476,139	415,593	(447,144)	215,840	983,270	6,212,258	658,942	283,432
2033	13,549,374	6,462,235	7,087,139	335,593	476,139	420,634	(452,569)	221,265	1,001,062	6,253,154	726,796	290,518
2034	14,059,981	7,205,109	6,854,872	351,871	476,139	422,172	(454,223)	222,919	1,018,878	6,236,902	739,768	297,781
2035	14,629,131	8,007,248	6,621,883	367,673	476,139	424,049	(456,244)	224,940	1,036,557	6,218,231	757,142	305,226
2036	15,236,438	8,872,981	6,363,457	384,103	476,139	425,947	(458,286)	226,982	1,054,885	6,192,420	804,011	312,857
2037	15,853,686	9,806,947	6,046,739	401,522	476,139	425,847	(458,178)	226,874	1,072,204	6,130,437	856,522	320,678
2038	16,476,596	10,814,111	5,662,485	421,805	476,139	423,285	(455,420)	224,116	1,089,925	6,025,441	931,581	328,695
2039	17,084,497	11,899,794	5,184,703	440,787	476,139	416,707	(448,343)	217,230	1,102,520	5,855,090	976,724	336,912
2040	17,706,962	13,069,692	4,637,270	462,464	0	407,852	(438,816)	207,923	639,423	1,102,520	1,032,405	345,335
2041	18,336,613	14,329,905	4,006,708	484,345	0	362,682	(390,217)	161,973	618,783	4,905,657	1,076,603	353,968
2042	18,986,460	15,686,966	3,299,494	507,169	0	312,973	(336,735)	113,686	597,093	6,192,420	1,118,289	362,817
2043	19,661,614	17,147,871	2,513,743	532,378	0	258,829	(278,480)	60,714	573,441	5,643,974	1,125,663	371,887
2044	20,366,658	18,720,109	1,646,549	558,067	0	202,513	(217,887)	4,712	547,405	5,235,574	1,149,209	381,184
2045	21,159,803	20,411,701	748,102	585,154	0	142,725	(153,560)	(54,856)	519,463	4,905,657	1,216,176	390,714
2046	22,228,220	22,231,234	(3,014)	614,235	0	76,294	(82,087)	110,406	718,848	4,093,869	1,209,974	(3,014)

EXHIBIT D

Projected Cash Flows (Open Group) - Funded Approach

Total Medical, Dental & Life Insurance - Funding Annual Normal Cost - 3.50% discount rate

Fiscal Year	I. Total Actuarial Accrued Liability ("AAL")	II. Normal Cost	III. Employer Share of Premiums / Claims including "implicit cost"	IV. Funding Normal Cost beyond claims	V. Total Funding Costs [III. + IV.]	VI. Present	VII. Present	VIII. Present Value at 3.50% of Total Funding Costs + VII.]	IX. Plan Assets at Beginning of year	X. Unfunded Accrued Liability ("UAAL") [I. - IX.]	XI. Present Value at 3.50% of Unfunded Accrued Actuarial Liability ("UAAL")
						Value at 3.50% of Employer Share of Premiums / Claims including "implicit cost"	Value at 3.50% of Funding beyond claims			Value at 3.50% of Total Funding Costs + VII.]	
2016	11,170,162	458,868	301,184	157,684	458,868	301,184	157,684	458,868	26,144	11,144,018	11,144,018
2017	11,504,854	469,041	309,357	159,684	469,041	298,896	154,284	453,180	184,743	11,320,111	10,937,305
2018	11,924,864	479,895	339,880	140,015	479,895	317,282	130,706	447,988	350,893	11,573,971	10,804,426
2019	12,339,688	497,637	365,397	132,240	497,637	329,567	119,273	448,840	503,189	11,836,499	10,675,844
2020	12,762,629	518,448	379,463	138,985	518,448	330,680	121,117	451,797	653,041	12,109,588	10,552,806
2021	13,218,335	525,489	405,450	120,039	525,489	341,378	101,070	442,448	814,882	12,403,453	10,443,375
2022	13,805,217	538,002	438,825	99,177	538,002	356,984	80,681	437,665	963,442	12,841,775	10,446,792
2023	14,391,046	564,693	456,958	107,735	564,693	359,165	84,679	443,844	1,096,339	13,294,707	10,449,520
2024	15,006,238	583,512	489,496	94,016	583,512	371,729	71,397	443,126	1,242,446	13,763,792	10,452,383
2025	15,628,762	606,365	501,508	104,857	606,365	367,972	76,937	444,909	1,379,948	14,248,814	10,454,796
2026	16,284,293	627,995	501,835	126,160	627,995	355,760	89,437	445,197	1,533,103	14,751,190	10,457,396
2027	16,984,819	653,021	544,793	108,228	653,021	373,154	74,130	447,284	1,712,922	15,271,897	10,460,420
2028	17,663,771	675,772	562,694	113,078	675,772	372,381	74,833	447,214	1,881,102	15,782,669	10,444,707
2029	18,375,187	707,532	582,224	125,308	707,532	372,276	80,122	452,398	2,060,019	16,315,168	10,431,986
2030	19,103,060	734,685	639,579	95,106	734,685	395,120	58,755	453,875	2,257,428	16,845,632	10,406,925
2031	19,870,101	768,816	654,147	114,669	768,816	390,454	68,445	458,899	2,431,544	17,438,557	10,408,911
2032	20,684,239	807,028	658,942	148,086	807,028	380,016	85,402	465,418	2,631,317	18,052,922	10,411,227
2033	21,561,458	840,633	726,796	113,837	840,633	404,973	63,430	468,403	2,871,499	18,689,959	10,414,116
2034	22,400,934	882,314	739,768	142,546	882,314	398,262	76,741	475,003	3,085,838	19,315,096	10,398,497
2035	23,332,503	922,955	757,142	165,813	922,955	393,832	86,249	480,081	3,336,388	19,996,115	10,401,093
2036	24,320,756	965,054	804,011	161,043	965,054	404,068	80,935	485,003	3,618,975	20,701,781	10,404,009
2037	25,338,663	1,009,742	856,522	153,220	1,009,742	415,902	74,399	490,301	3,906,682	21,431,981	10,406,746
2038	26,384,101	1,061,717	931,581	130,136	1,061,717	437,052	61,053	498,105	4,196,636	22,187,465	10,409,263
2039	27,442,235	1,111,087	976,724	134,363	1,111,087	442,735	60,905	503,640	4,473,654	22,968,581	10,411,328
2040	28,541,779	1,166,985	1,032,405	134,580	1,166,985	452,149	58,940	511,089	4,764,595	23,777,184	10,413,387
2041	29,680,031	1,223,882	1,076,603	147,279	1,223,882	455,561	62,321	517,882	5,065,936	24,614,095	10,415,380
2042	30,871,267	1,283,509	1,118,289	165,220	1,283,509	457,199	67,548	524,747	5,390,523	25,480,744	10,417,488
2043	32,122,766	1,349,074	1,125,663	223,411	1,349,074	444,651	88,250	532,901	5,744,411	26,378,355	10,419,773
2044	33,401,317	1,415,903	1,149,209	266,694	1,415,903	438,601	101,785	540,386	6,168,876	27,232,441	10,393,379
2045	34,846,391	1,486,508	1,216,176	270,332	1,486,508	448,463	99,684	548,147	6,651,481	28,194,910	10,396,821
2046	36,628,256	1,562,145	1,209,974	352,171	1,562,145	431,088	125,471	556,559	7,154,615	29,473,641	10,500,822

EXHIBIT D

Projected Cash Flows (Open Group) – Funded Approach

Total Medical, Dental & Life Insurance - Pay-as-you-go Funding

Fiscal Year	Number of Retirees, Spouses & Surviving Spouses	Total Actuarial Accrued Liability ("AAL")	Present Value at 3.50% of Total Actuarial Accrued Liability ("AAL")	Employer Share of Premiums / Claims including "implicit cost"	Present Value at 3.50% of Employer Share of Premiums / Claims including "implicit cost"
2016	49	11,170,162	11,170,162	301,184	301,184
2017	50	11,504,854	11,115,801	309,357	298,896
2018	52	11,924,864	11,131,988	339,880	317,282
2019	54	12,339,688	11,129,692	365,397	329,567
2020	57	12,762,629	11,121,894	379,463	330,680
2021	58	13,218,335	11,129,483	405,450	341,378
2022	59	13,805,217	11,230,553	438,825	356,984
2023	61	14,391,046	11,311,232	456,958	359,165
2024	63	15,006,238	11,395,911	489,496	371,729
2025	64	15,628,762	11,467,307	501,508	367,972
2026	64	16,284,293	11,544,242	501,835	355,760
2027	64	16,984,819	11,633,679	544,793	373,154
2028	64	17,663,771	11,689,589	562,694	372,381
2029	65	18,375,187	11,749,171	582,224	372,276
2030	65	19,103,060	11,801,523	639,579	395,120
2031	65	19,870,101	11,860,277	654,147	390,454
2032	66	20,684,239	11,928,723	658,942	380,016
2033	66	21,561,458	12,014,126	726,796	404,973
2034	66	22,400,934	12,059,792	739,768	398,262
2035	66	23,332,503	12,136,534	757,142	393,832
2036	66	24,320,756	12,222,782	804,011	404,068
2037	66	25,338,663	12,303,717	856,522	415,902
2038	66	26,384,101	12,378,118	931,581	437,052
2039	66	27,442,235	12,439,171	976,724	442,735
2040	67	28,541,779	12,500,076	1,032,405	452,149
2041	67	29,680,031	12,559,016	1,076,603	455,561
2042	67	30,871,267	12,621,337	1,118,289	457,199
2043	67	32,122,766	12,688,886	1,125,663	444,651
2044	67	33,401,317	12,747,758	1,149,209	438,601
2045	67	34,846,391	12,849,542	1,216,176	448,463
2046	67	36,628,256	13,049,857	1,209,974	431,088
2047	67	38,274,742	13,175,328	1,303,668	448,762
2048	67	40,221,130	13,377,134	1,393,658	463,516
2049	67	41,976,336	13,488,790	1,420,846	456,579
2050	67	43,857,780	13,616,790	1,431,983	444,596
2051	67	46,441,138	13,931,267	1,439,415	431,791
2052	67	48,661,454	14,103,681	1,475,452	427,634
2053	66	51,031,539	14,290,444	1,486,624	416,302
2054	66	53,584,440	14,497,910	1,520,294	411,334
2055	66	56,308,613	14,719,776	1,575,124	411,757

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.