

**Hamilton-Wenham Regional School
District 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 May 2016

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May 23, 2016

Personal and Confidential

Mr. Jeffrey Sands
Assistant Superintendent for Finance and Administration
Hamilton-Wenham Regional School District
5 School Street
Wenham, MA 01984

Dear Mr. Sands:

We have performed an actuarial valuation of the Hamilton-Wenham Regional School District Other Postemployment Benefits Plan for the fiscal year ending June 30, 2016. The figures presented in this report reflect the adoption, by the Hamilton-Wenham Regional School District, 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', with a long horizontal flourish extending to the right.

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

May 23, 2016

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Hamilton-Wenham Regional School District 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 District and on participant claims or premium data provided by the District and/or vendors employed by the District.

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 District 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

**Hamilton-Wenham Regional School District
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	27,630,867	26,897,620
B. Retirees/Disabled	<u>11,498,844</u>	<u>11,091,410</u>
C. Total	39,129,711	37,989,030
II. Present Value of Future Normal Cost	13,791,804	13,913,814
III. Actuarial Accrued Liability (Entry Age Normal)		
A. Actives	13,839,063	12,983,806
B. Retirees/Disabled	<u>11,498,844</u>	<u>11,091,410</u>
C. Total	25,337,907	24,075,216
IV. Plan Assets	0	0
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	25,337,907	24,075,216
VI. Funded Ratio [IV. / III.]	0.00%	0.00%
VII. Annual Covered Payroll	18,483,408	17,372,188
VIII. UAAL as % of Covered Payroll	137.10%	138.6%
IX. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	15,797,291	10,572,819
X. Number of Eligible Participants		
A. Actives	319	316
B. Retirees/Disabled	<u>186</u>	<u>183</u>
C. Total	505	499
	<u>June 30, 2016</u>	<u>June 30, 2013</u>
XI. Normal Cost	1,221,307	1,187,163
XII. Amortization of UAAL - 30 year flat dollar	1,331,385	1,393,082
XIII. Annual Required Contribution ("ARC") [XI. + XII.]	2,552,692	2,580,245
XIV. Interest on Net OPEB Obligation (Asset)	552,905	422,912
XV. Adjustment to Annual Required Contribution	(878,421)	(587,911)
XVI. Amortization of Actuarial (Gains) / Losses	200,320	80,176
XVII. Annual OPEB Expense [XIII. + XIV. + XV. + XVI.]	2,427,496	2,495,422
XVIII. Employer Share of Costs	694,549	896,395
XIX. Employer Payments (Withdrawals) to/from OPEB Trust	0	0
XX. Total Employer Contribution [XVIII. + XIX.]	694,549	896,395
XXI. Percentage of Annual OPEB Expense Contributed	28.6%	35.9%
XXII. Net OPEB Obligation (Asset) at Beginning of Year [IX.]	15,797,291	10,572,819
XXIII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVII. - XX.]	1,732,947	1,599,027
XXIV. Net OPEB Obligation (Asset) at End of Year [XXII. + XXIII.]	17,530,238	12,171,846
XXV. Discount Rate	3.50%	4.00%

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Hamilton-Wenham Regional School District
Comparison of Plan Funding vs. Pay-as-you-go Funding

	<u>pay-as-you-go funding -</u> <u>3.50% discount rate</u>	<u>Plan Funding -7.00%</u> <u>discount rate</u>
I. Present Value of Future Benefits		
A. Actives	27,630,867	11,551,630
B. Retirees/Disabled	<u>11,498,844</u>	<u>8,082,702</u>
C. Total	39,129,711	19,634,332
II. Present Value of Future Normal Cost	13,791,804	4,043,092
III. Actuarial Accrued Liability (Entry Age Normal)		
A. Actives	13,839,063	7,508,538
B. Retirees/Disabled	<u>11,498,844</u>	<u>8,082,702</u>
C. Total	25,337,907	15,591,240
IV. Plan Assets	0	0
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	25,337,907	15,591,240
VI. Funded Ratio [IV. / III.]	0.00%	0.00%
VII. Annual Covered Payroll	18,483,408	18,483,408
VIII. UAAL as % of Covered Payroll	137.10%	84.40%
IX. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	15,797,291	15,797,291
X. Number of Eligible Participants		
A. Actives	319	319
B. Retirees/Disabled	<u>186</u>	<u>186</u>
C. Total	505	505
For Fiscal Year Ending June 30, 2016		
XI. Normal Cost	1,221,307	492,476
XII. Amortization of UAAL - 30 year flat dollar	1,331,385	1,784,616
XIII. Annual Required Contribution ('ARC') [XI. + XII.]	2,552,692	2,277,092
XIV. Interest on Net OPEB Obligation (Asset)	552,905	1,105,810
XV. Adjustment to Annual Required Contribution	(878,421)	(1,189,763)
XVI. Amortization of Actuarial (Gains) / Losses	200,320	(446,873)
XVII. Annual OPEB Expense [XIII. + XIV. + XV. + XVI.]	2,427,496	1,746,266
XVIII. Employer Share of Costs	694,549	694,549
XIX. Employer Payments (Withdrawals) to/from OPEB Trust	0	764,800
XX. Total Employer Contribution [XVIII. + XIX.]	694,549	1,459,349
XXI. Percentage of Annual OPEB Expense Contributed	28.6%	83.6%
XXII. Net OPEB Obligation (Asset) at Beginning of Year [IX.]	15,797,291	15,797,291
XXIII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVII. - XX.]	1,732,947	286,917
XXIV. Net OPEB Obligation (Asset) at End of Year [XXII. + XXIII.]	17,530,238	16,084,208
XXV. Discount Rate	3.50%	7.00%

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

**Hamilton-Wenham Regional School District
Assuming pay-as-you-go - 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	26,517,685	0	148,208	964,974	27,630,867
B. Retirees/Disabled	<u>11,159,632</u>	<u>0</u>	<u>241,526</u>	<u>97,686</u>	<u>11,498,844</u>
C. Total	37,677,317	0	389,734	1,062,660	39,129,711
II. Present Value of Future Normal Cost	13,033,090	0	53,910	704,804	13,791,804
III. Actuarial Accrued Liability (Entry Age Normal)					
A. Actives	13,484,595	0	94,298	260,170	13,839,063
B. Retirees/Disabled	<u>11,159,632</u>	<u>0</u>	<u>241,526</u>	<u>97,686</u>	<u>11,498,844</u>
C. Total	24,644,227	0	335,824	357,856	25,337,907
IV. Plan Assets	0	0	0	0	0
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	24,644,227	0	335,824	357,856	25,337,907
VI. Annual Covered Payroll	18,483,408	18,483,408	18,483,408	18,483,408	18,483,408
VII. UAAL as % of Covered Payroll	133.3%	0.0%	1.8%	1.9%	137.1%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	15,364,806	0	209,374	223,111	15,797,291
IX. Number of Eligible Participants					
A. Actives	319	319	319	319	
B. Retirees/Disabled	<u>186</u>	<u>0</u>	<u>127</u>	<u>186</u>	
C. Total	505	319	446	505	
For Fiscal Year Ending June 30, 2016					
X. Normal Cost	1,167,538	0	6,049	47,720	1,221,307
XI. Amortization of UAAL - 30 year flat dollar	1,294,935	0	17,646	18,804	1,331,385
XII. Annual Required Contribution ('ARC') [X. + XI.]	2,462,473	0	23,695	66,524	2,552,692
XIII. Interest on Net OPEB Obligation (Asset)	537,768	0	7,328	7,809	552,905
XIV. Adjustment to Annual Required Contribution	(854,373)	0	(11,642)	(12,406)	(878,421)
XV. Amortization of Actuarial (Gains) / Losses	194,836	0	2,655	2,829	200,320
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	2,340,704	0	22,036	64,756	2,427,496
XVII. Employer Share of Costs	681,510	0	13,039	0	694,549
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	0	0	0	0	0
XIX. Total Employer Contribution [XVII. + XVIII.]	681,510	0	13,039	0	694,549
XX. Percentage of Annual OPEB Expense Contributed	29.1%	0.0%	59.2%	0.0%	28.6%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	15,364,806	0	209,374	223,111	15,797,291
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	1,659,194	0	8,997	64,756	1,732,947
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	17,024,000	0	218,371	287,867	17,530,238

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
 (continued)

Hamilton-Wenham Regional School District
Plan Liabilities as of July 1, 2015
Assuming maintain pay-as-you-go funding method

	District Employees and Retirees	Total
I. Present Value of Future Benefits		
A. Actives	27,630,867	27,630,867
B. Retirees/Disabled	<u>11,498,844</u>	<u>11,498,844</u>
C. Total	39,129,711	39,129,711
II. Present Value of Future Normal Cost	13,791,804	13,791,804
III. Actuarial Accrued Liability (Entry Age Normal)		
A. Actives	13,839,063	13,839,063
B. Retirees/Disabled	<u>11,498,844</u>	<u>11,498,844</u>
C. Total	25,337,907	25,337,907
IV. Plan Assets	0	0
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	25,337,907	25,337,907
VI. Annual Covered Payroll	18,483,408	18,483,408
VII. UAAL as % of Covered Payroll	137.1%	137.1%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	15,797,291	15,797,291
IX. Number of Eligible Participants		
A. Actives	319	319
B. Retirees/Disabled	<u>186</u>	<u>186</u>
C. Total	505	505
For Fiscal Year Ending June 30, 2016		
X. Normal Cost	1,221,307	1,221,307
XI. Amortization of UAAL - 30 year flat dollar	1,331,385	1,331,385
XII. Annual Required Contribution ('ARC') [X. + XI.]	2,552,692	2,552,692
XIII. Interest on Net OPEB Obligation (Asset)	552,905	552,905
XIV. Adjustment to Annual Required Contribution	(878,421)	(878,421)
XV. Amortization of Actuarial (Gains) / Losses	200,320	200,320
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	2,427,496	2,427,496
XVII. Employer Share of Costs	694,549	694,549
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	0	0
XIX. Total Employer Contribution [XVII. + XVIII.]	694,549	694,549
XX. Percentage of Annual OPEB Expense Contributed	28.6%	28.6%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	15,797,291	15,797,291
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	1,732,947	1,732,947
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	17,530,238	17,530,238

SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

Hamilton-Wenham Regional School District
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 (Entry Age Normal)</u>	<u>Normal Cost</u>
Actives			
Under Age 65			
A. Participants	3,574,090	1,754,402	145,490
B. Spouses	<u>1,466,580</u>	<u>781,169</u>	<u>56,996</u>
C. Total	5,040,670	2,535,571	202,486
Age 65 and Over			
A. Participants	13,783,140	6,846,801	624,386
B. Spouses	<u>8,807,057</u>	<u>4,456,691</u>	<u>394,435</u>
C. Total	22,590,197	11,303,492	1,018,821
Actives Total			
A. Participants	17,357,230	8,601,203	769,876
B. Spouses	<u>10,273,637</u>	<u>5,237,860</u>	<u>451,431</u>
C. Total	27,630,867	13,839,063	1,221,307
Retirees/Disabled			
Under Age 65			
A. Participants	567,751	567,751	0
B. Spouses	<u>101,958</u>	<u>101,958</u>	<u>0</u>
C. Total	669,709	669,709	0
Age 65 and Over			
A. Participants	9,931,213	9,931,213	<u>0</u>
B. Spouses	<u>897,922</u>	<u>897,922</u>	<u>0</u>
C. Total	10,829,135	10,829,135	0
Retirees/Disabled Total			
A. Participants	10,498,964	10,498,964	0
B. Spouses	<u>999,880</u>	<u>999,880</u>	<u>0</u>
C. Total	11,498,844	11,498,844	0
Total Population			
A. Participants	27,856,194	19,100,167	769,876
B. Spouses	<u>11,273,517</u>	<u>6,237,740</u>	<u>451,431</u>
C. Total	39,129,711	25,337,907	1,221,307

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
(continued)

Hamilton-Wenham Regional School District
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	11,187,708	0	60,906	303,016	11,551,630
B. Retirees/Disabled	<u>7,863,391</u>	<u>0</u>	<u>169,799</u>	<u>49,512</u>	<u>8,082,702</u>
C. Total	19,051,099	0	230,705	352,528	19,634,332
II. Present Value of Future Normal Cost	3,856,768	0	15,056	171,268	4,043,092
III. Actuarial Accrued Liability (Entry Age Normal)					
A. Actives	7,330,940	0	45,850	131,748	7,508,538
B. Retirees/Disabled	<u>7,863,391</u>	<u>0</u>	<u>169,799</u>	<u>49,512</u>	<u>8,082,702</u>
C. Total	15,194,331	0	215,649	181,260	15,591,240
IV. Plan Assets	0	0	0	0	0
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	15,194,331	0	215,649	181,260	15,591,240
VI. Annual Covered Payroll	18,483,408	18,483,408	18,483,408	18,483,408	18,483,408
VII. UAAL as % of Covered Payroll	82.2%	0.0%	1.2%	1.0%	84.4%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	15,364,806	0	209,374	223,111	15,797,291
IX. Number of Eligible Participants					
A. Actives	319	319	319	319	
B. Retirees/Disabled	<u>186</u>	<u>0</u>	<u>127</u>	<u>186</u>	
C. Total	505	319	446	505	
For Fiscal Year Ending June 30, 2016					
X. Normal Cost	473,534	0	2,208	16,734	492,476
XI. Amortization of UAAL - 30 year flat dollar	1,739,184	0	24,684	20,748	1,784,616
XII. Annual Required Contribution ('ARC') [X. + XI.]	2,212,718	0	26,892	37,482	2,277,092
XIII. Interest on Net OPEB Obligation (Asset)	1,075,536	0	14,656	15,618	1,105,810
XIV. Adjustment to Annual Required Contribution	(1,157,191)	0	(15,769)	(16,803)	(1,189,763)
XV. Amortization of Actuarial (Gains) / Losses	(435,497)	0	(6,181)	(5,195)	(446,873)
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	1,695,566	0	19,598	31,102	1,746,266
XVII. Employer Share of Costs	681,510	0	13,039	0	694,549
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	745,331	0	10,578	8,891	764,800
XIX. Total Employer Contribution [XVII. + XVIII.]	1,426,841	0	23,617	8,891	1,459,349
XX. Percentage of Annual OPEB Expense Contributed	84.2%	0.0%	120.5%	28.6%	83.6%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	15,364,806	0	209,374	223,111	15,797,291
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	268,725	0	(4,019)	22,211	286,917
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	15,633,531	0	205,355	245,322	16,084,208

SECTION I
PRINCIPAL RESULTS OF THE VALUATION
 (continued)

Hamilton-Wenham Regional School District
Plan Liabilities as of July 1, 2015
Assuming Funding over 30 years at 7.00% discount rate

	District Employees and Retirees	Total
I. Present Value of Future Benefits		
A. Actives	11,551,630	11,551,630
B. Retirees/Disabled	<u>8,082,702</u>	<u>8,082,702</u>
C. Total	19,634,332	19,634,332
II. Present Value of Future Normal Cost	4,043,092	4,043,092
III. Actuarial Accrued Liability (Entry Age Normal)		
A. Actives	7,508,538	7,508,538
B. Retirees/Disabled	<u>8,082,702</u>	<u>8,082,702</u>
C. Total	15,591,240	15,591,240
IV. Plan Assets	0	0
V. Unfunded Actuarial Accrued Liability ("UAAL") [III. - IV.]	15,591,240	15,591,240
VI. Annual Covered Payroll	18,483,408	18,483,408
VII. UAAL as % of Covered Payroll	84.4%	84.4%
VIII. Net OPEB Obligation (Asset) @ Beginning of Fiscal Year	15,797,291	15,797,291
IX. Number of Eligible Participants		
A. Actives	319	319
B. Retirees/Disabled	<u>186</u>	<u>186</u>
C. Total	505	505
For Fiscal Year Ending June 30, 2016		
X. Normal Cost	492,476	492,476
XI. Amortization of UAAL - 30 year flat dollar	1,784,616	1,784,616
XII. Annual Required Contribution ("ARC") [X. + XI.]	2,277,092	2,277,092
XIII. Interest on Net OPEB Obligation (Asset)	1,105,810	1,105,810
XIV. Adjustment to Annual Required Contribution	(1,189,763)	(1,189,763)
XV. Amortization of Actuarial (Gains) / Losses	(446,873)	(446,873)
XVI. Annual OPEB Expense [XII. + XIII. + XIV. + XV.]	1,746,266	1,746,266
XVII. Employer Share of Costs	694,549	694,549
XVIII. Employer Payments (Withdrawals) to/from OPEB Trust	764,800	764,800
XIX. Total Employer Contribution [XVII. + XVIII.]	1,459,349	1,459,349
XX. Percentage of Annual OPEB Expense Contributed	83.6%	83.6%
XXI. Net OPEB Obligation (Asset) at Beginning of Year [VIII.]	15,797,291	15,797,291
XXII. Increase (Decrease) in Net OPEB Obligations (Asset) [XVI. - XIX.]	286,917	286,917
XXIII. Net OPEB Obligation (Asset) at End of Year [XXI. + XXII.]	16,084,208	16,084,208

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 District, 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 District'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 \$3,042,392 or 10.72%. Plan experience was more favorable than expected. This was mainly due to premiums for Medicare integrated plans decreasing vs. an expected 11% increase as well as a decrease in average service. 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% to 3.5% (increasing disclosed liabilities by \$1.7 million and \$1.8 million respectively), a more conservative mortality table as recommended by PERAC, and the ACA excise tax. 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	\$25,337,907	\$24,075,216
Plan Assets	\$0	\$0
Unfunded Actuarial Accrued Liability	\$25,337,907	\$24,075,216
Funded %	0.00%	0.00%
Net OPEB Obligation	\$15,797,291	\$10,572,819

4. **Income Statement Items**

	June 30, 2016	June 30, 2014
Normal Cost	\$1,221,307	\$1,187,163
Amortization of UAAL	\$1,331,385	\$1,393,082
Interest on Net OPEB Obligation	\$552,905	\$422,912
Adjustment to Annual Required Contribution	\$(878,421)	\$(587,911)
Amortization of Actuarial (Gains)/Losses	\$200,320	\$80,176
Annual OPEB Expense	\$2,427,496	\$2,495,422
Employer Share of Costs	\$694,549	\$896,395
Employer Contributions/(Withdrawals) to/from OPEB Trust	\$0	\$0
Total Employer Contribution	\$694,549	\$896,395
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 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. 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, 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>	Medical Insurance is 40% participant paid. Life Insurance is 40% Participant paid.
<u>Benefits Offered</u>	Comprehensive Medical Insurance offered through Harvard Pilgrim 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

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>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 80% of employees eligible to receive retirement benefits would enroll in the retiree medical 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 on 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>
Harvard Pilgrim HMO	86		88	174
Harvard Pilgrim POS	12		7	19
Harvard Pilgrim PPO				0
Harvard Senior	140			140
Total	238	0	95	333

	Per Contract Costs (monthly) - FY 2017		
	<u>Single</u>	<u>Two-Person</u>	<u>Family</u>
Harvard Pilgrim HMO	689.68	0.00	1,848.34
Harvard Pilgrim POS	898.06	0.00	2,406.82
Harvard Pilgrim PPO	1,076.68	0.00	2,885.54
Harvard Senior	344.02	688.04	

Gross Expected FY 2017 Incurred Premiums	3,573,044
Adjustment to reflect children's claims	(546,542)
Total Expected FY 2017 Incurred Premiums (adults only)	3,026,502

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

	<u>Employer Primary</u>	<u>Medicare Primary</u>
Age 65	11,266	4,128
Average Age	11,130	4,128

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

3,026,502 Active and Retired Claims (No Children)

ALL ACTIVE EMPLOYEES AND SPOUSES

Age Bracket	Number of		Female	Male	Aged (F)	Aged (M)	Age Related
	Females	Males	Aging Factor	Aging Factor	Average Claims	Average Claims	
24 & Under	0	0	1.312	0.549	6,912	2,892	0
25 to 29	15	0	1.312	0.591	6,912	3,113	103,680
30 to 34	18	5	1.312	0.712	6,912	3,751	143,171
35 to 39	9	6	1.312	0.850	6,912	4,478	89,076
40 to 44	17	6	1.312	1.000	6,912	5,268	149,112
45 to 49	20	19	1.456	1.193	7,670	6,285	272,815
50 to 54	20	16	1.599	1.441	8,424	7,591	289,936
55 to 59	18	16	1.740	1.753	9,166	9,235	312,748
60 to 64	23	12	1.968	2.102	10,367	11,073	371,317
65 to 69	6	11	2.168	2.316	11,421	12,201	202,737
70 & Over	3	2	2.396	2.557	12,622	13,470	64,806
Total	149	93					1,999,398

ALL RETIREES AND SPOUSES - NOT MEDICARE ELIGIBLE

Age Bracket	Number of		Female	Male	Aged (F)	Aged (M)	Age Related
	Females	Males	Aging Factor	Aging Factor	Average Claims	Average Claims	
44 & Under	0	0	1.312	1.000	6,912	5,268	0
45 to 49	0	0	1.456	1.193	7,670	6,285	0
50 to 54	0	0	1.599	1.441	8,424	7,591	0
55 to 59	3	0	1.740	1.753	9,166	9,235	27,498
60 to 64	16	6	1.968	2.102	10,367	11,073	232,310
65 to 69	4	1	2.168	2.316	11,421	12,201	57,885
70 to 74	3	3	2.396	2.557	12,622	13,470	78,276
75 to 79	0	0	2.593	2.769	13,660	14,587	0
80 to 84	0	0	2.724	2.910	14,350	15,330	0
85 to 89	0	0	2.864	3.059	15,088	16,115	0
90 & Over	1	0	3.010	3.215	15,857	16,937	15,857
Total	27	10					411,826

ALL RETIREES AND SPOUSES - MEDICARE ELIGIBLE

Age Bracket	Number of		Female	Male	Aged (F)	Aged (M)	Age Related
	Females	Males	Aging Factor	Aging Factor	Average Claims	Average Claims	
65 to 69	26	21	2.168	2.316	4,128	4,128	194,016
70 to 74	25	20	2.396	2.557	4,128	4,128	185,760
75 to 79	15	9	2.593	2.769	4,128	4,128	99,072
80 to 84	11	6	2.724	2.910	4,128	4,128	70,176
85 to 89	7	3	2.864	3.059	4,128	4,128	41,280
90 & Over	4	2	3.010	3.215	4,128	4,128	24,768
Total	88	61					615,072
Grand Totals	264	164					3,026,296

EXHIBIT A

Financial 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 from Harvard Pilgrim.
- b. Administrator: Hamilton-Wenham Regional School District
- 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: 40% Participant paid.

2. A DESCRIPTION OF THE DENTAL INSURANCE PROGRAM:

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

3. A DESCRIPTION OF THE RETIREE LIFE INSURANCE PROGRAM:

- a. Plan Type: Group Term Life Insurance - \$5,000
- b. Administrator: Hamilton-Wenham Regional School District
- c. Eligibility: Same as above
- d. Cost sharing: 40% Participant paid.

EXHIBIT A

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

4. RETIREE MEDICAL AND LIFE INSURANCE CONTRIBUTIONS:

Group	Individual	Family
Medical	40%	40%
Dental	N/A	N/A
Life	40%	N/A

5. FUNDING POLICY

The contribution requirements of plan members and the District are established and may be amended through District ordinances. The required contribution is based on the projected pay-as-you-go financing requirements. For the 2016 fiscal year, total District premiums plus implicit costs for the retiree medical program are \$694,549. The District is also projected to make a contribution to an OPEB Trust of \$0 for the 2016 fiscal year for a total contribution of \$694,549 .

EXHIBIT A

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

6. ANNUAL OPEB COST AND NET OPEB OBLIGATION

The District'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 District's annual OPEB costs for the fiscal year, the amount actually contributed to the plan and changes in the District's net OPEB obligation to the plan:

Annual Required Contribution	\$2,552,692
Interest on net OPEB Obligation (Asset)	\$552,905
Adjustment to annual required contribution	(\$878,421)
Amortization of Actuarial (Gains) / Losses	\$200,320
Annual OPEB expense	\$2,427,496
Contributions made to pay benefits	\$694,549
Contributions made to OPEB Trust	\$0
Increase (Decrease) in net OPEB Obligation (Asset)	\$1,732,947
Net OPEB Obligation (Asset) – beginning of year	\$15,797,291
Net OPEB Obligation (Asset) – end of year	\$17,530,238

EXHIBIT A

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

The District'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.)	\$2,717,759	\$793,846	29.2%	\$1,923,913	\$21,275,852
06/30/2017 (est.)	\$2,569,816	\$748,115	29.1%	\$1,821,701	\$19,351,939
06/30/2016	\$2,427,496	\$694,549	28.6%	\$1,732,947	\$17,530,238
06/30/2015	\$2,361,813	\$766,529	32.5%	\$1,595,284	\$15,797,291
06/30/2014	\$2,256,184	\$723,711	32.1%	\$1,532,473	\$14,202,007
06/30/2013	\$2,993,110	\$896,395	29.9%	\$2,096,715	\$12,669,534

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.)	\$0	\$28,281,154	\$28,281,154	0.0%	\$19,609,048	144.2%
07/01/2016 (est.)	\$0	\$26,769,929	\$26,769,929	0.0%	\$19,037,910	140.6%
07/01/2015	\$0	\$25,337,907	\$25,337,907	0.0%	\$18,483,408	137.1%
07/01/2014	\$0	\$26,986,951	\$26,986,951	0.0%	\$18,430,154	146.4%
07/01/2013	\$0	\$25,509,972	\$25,509,972	0.0%	\$17,893,353	142.6%
07/01/2012	\$0	\$22,865,995	\$22,865,995	0.0%	\$17,372,188	131.6%

EXHIBIT A

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

	Fiscal Year Ending June 30, 2016	
	District Employees and Retirees	Total
OPEB Obligation (Asset) at beginning of year	15,797,291	15,797,291
Annual Required Contribution	2,552,692	2,552,692
Interest on Net OPEB Obligation	552,905	552,905
Adjustment to the ARC	(878,421)	(878,421)
Amortization of Actuarial (Gains)/Losses	200,320	200,320
Annual OPEB Cost	2,427,496	2,427,496
Expected Employer Contribution	694,549	694,549
Contribution (Withdrawal) to/from Trust Fund over 30 Years	-	-
Total Expected Employer Payments	694,549	694,549
Increase (Decrease) in OPEB Obligation (Asset)	1,732,947	1,732,947
OPEB Obligation (Asset) at end of year	17,530,238	17,530,238
AAL as of July 1, 2015	25,337,907	25,337,907
Plan Assets as of July 1, 2015	-	-
Unfunded Actuarial Liability as of July 1, 2015	25,337,907	25,337,907

	Fiscal Year Ending June 30, 2017	
	District Employees and Retirees	Total
OPEB Obligation (Asset) at beginning of year	17,530,238	17,530,238
Annual Required Contribution	2,634,359	2,634,359
Interest on Net OPEB Obligation	613,558	613,558
Adjustment to the ARC	(920,910)	(920,910)
Amortization of Actuarial (Gains)/Losses	242,809	242,809
Annual OPEB Cost	2,569,816	2,569,816
Expected Employer Contribution	748,115	748,115
Contribution (Withdrawal) to/from Trust Fund over 30 Years	-	-
Total Expected Employer Payments	748,115	748,115
Increase (Decrease) in OPEB Obligation (Asset)	1,821,701	1,821,701
OPEB Obligation (Asset) at end of year	19,351,939	19,351,939
AAL as of July 1, 2016	26,769,929	26,769,929
Plan Assets as of July 1, 2016	-	-
Unfunded Actuarial Liability as of July 1, 2016	26,769,929	26,769,929

EXHIBIT A

Financial 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 0.00% funded. The actuarial liability for benefits was \$25,337,907, and the actuarial value of assets was \$ 0, resulting in an unfunded actuarial accrued liability (UAAL) of \$25,337,907. The covered payroll (annual payroll of active employees covered by the plan) was \$ 18,483,408 and the ratio of the UAAL to the covered payroll was 137.1%.

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 \$33,634,262 or by 32.7% and the corresponding Normal Cost would increase to \$1,923,792 or by 57.5%. 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 \$18,948,251 or by 25.2% and the corresponding Normal Cost would decrease to \$732,425 or by 40.0%.

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: 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: 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
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Expected Unfunded Actuarial Liability

1. Actuarial Accrued Liability at prior valuation date	24,075,216
2. Actuarial Value of Assets at prior valuation date	<u>0</u>
3. Unfunded Actuarial Accrued Liability at prior valuation date [1. - 2.]	24,075,216
4. Normal Cost for prior periods	3,561,489
5. Employer Contributions for prior periods	(2,386,635)
6. Interest to current valuation date	<u>3,130,229</u>
7. Expected Unfunded Actuarial Accrued Liability [3. + 4. + 5. + 6.]	28,380,299

Actual Unfunded Actuarial Liability

8. Actuarial Accrued Liability at current valuation date	25,337,907
9. Actuarial Value of Assets at current valuation date	<u>0</u>
10. Unfunded Actuarial Accrued Liability at current valuation date [8. - 9.]	25,337,907

Net Actuarial (Gain) / Loss from Plan Experience [10. - 7.] **(3,042,392)**

11. Unfunded Actuarial Accrued Liability at current valuation date [10.]	25,337,907
12. Remaining Initial Unfunded to be amortized	<u>21,524,671</u>
13. Actuarial (Gain) / Loss to be amortized: [11. - 12.]	3,813,236

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	25,052,786	30	21,524,671	23	1,331,385
July 1, 2015	Cumulative (Gain) / Loss	3,813,236	30	3,813,236	30	200,320
July 1, 2015	Adjustment to ARC	(15,797,291)	30	(15,797,291)	30	(878,422)
Total				9,540,616		653,283

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, Hamilton-Wenham Regional School District has not 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 \$357,856 and the increase in annual OPEB Cost is \$64,756. Given your premiums through the 2017 fiscal year and the excise tax threshold, your single premiums are within 71.08% of the excise tax and your family premiums are within 21.28% 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 Hamilton-Wenham Regional School District nor have we attempted to value the impact of prior Hamilton-Wenham Regional School District 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	37.70	37.34
B. Average Service	8.57	9.11
C. Average Current Age	46.27	46.45

RETIRED EMPLOYEES & DEPENDENTS

	<u>July 1, 2015</u>	<u>July 1, 2012</u>
I. Retirees		
A. Under Age 65	24	25
B. Age 65 & Over	<u>151</u>	<u>144</u>
C. Total Retirees	175	169
II. Dependents of Retirees		
A. Under Age 65	5	9
B. Age 65 & Over	<u>6</u>	<u>5</u>
C. Total Retirees	11	14
III. Retirees & Dependents		
A. Under Age 65	29	34
B. Age 65 & Over	<u>157</u>	<u>149</u>
C. Total Retirees	186	183

EXHIBIT C

Projected Cash Flows (Open Group) – pay-as-you-go Approach

Total Medical & Life Insurance - pay-as-you-go funding - 3.50% discount rate

Fiscal Year	I. Total Actuarial Accrued Liability ("AAL") as of		III. Unfunded Accrued Actuarial Liability ("UAAL")		VI. Interest on Net OPEB Obligation		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)
	July 1	II. Plan Assets as of July 1	[I. - II.]	IV. Normal Cost	V. Expected Amortization	(Asset)						
2016	25,337,907	0	25,337,907	1,221,307	1,331,385	552,905	(878,421)	200,320	2,427,496	17,530,238	694,549	0
2017	26,769,929	0	26,769,929	1,302,974	1,331,385	613,558	(920,910)	242,809	2,569,816	19,351,939	748,115	0
2018	28,281,154	0	28,281,154	1,387,157	1,331,385	677,318	(1,016,609)	338,508	2,717,759	21,275,852	793,846	0
2019	29,885,072	0	29,885,072	1,462,262	1,331,385	744,655	(1,117,678)	439,577	2,860,201	23,309,759	826,294	0
2020	31,589,276	0	31,589,276	1,538,824	1,331,385	815,842	(1,224,524)	546,423	3,007,950	25,460,293	857,416	0
2021	33,400,157	0	33,400,157	1,612,951	1,331,385	891,110	(1,337,498)	659,397	3,157,345	27,713,692	903,946	0
2022	35,302,984	0	35,302,984	1,695,010	1,331,385	969,979	(1,455,875)	777,774	3,318,273	30,074,051	957,914	0
2023	37,301,482	0	37,301,482	1,788,484	1,331,385	1,052,592	(1,579,871)	901,770	3,494,360	32,549,537	1,018,874	0
2024	39,403,581	0	39,403,581	1,879,279	1,331,385	1,139,234	(1,709,915)	1,031,814	3,671,797	35,115,608	1,105,726	0
2025	41,583,334	0	41,583,334	1,972,518	1,331,385	1,229,047	(1,844,717)	1,166,616	3,854,849	37,791,462	1,178,995	0
2026	43,860,044	0	43,860,044	2,069,296	1,331,385	1,322,701	(1,985,288)	1,307,187	4,045,281	40,582,024	1,254,719	0
2027	46,238,234	0	46,238,234	2,173,069	1,331,385	1,420,371	(2,131,882)	1,453,781	4,246,724	43,493,574	1,335,174	0
2028	48,723,793	0	48,723,793	2,280,881	1,331,385	1,522,275	(2,284,834)	1,606,733	4,456,440	46,533,262	1,416,752	0
2029	51,323,499	0	51,323,499	2,394,731	1,331,385	1,628,664	(2,444,518)	1,766,417	4,676,679	49,718,364	1,491,577	0
2030	54,054,585	0	54,054,585	2,511,900	1,331,385	1,740,143	(2,611,839)	1,933,738	4,905,327	53,033,657	1,590,034	0
2031	56,900,626	0	56,900,626	2,636,817	1,331,385	1,856,178	(2,786,000)	2,107,899	5,146,279	56,515,161	1,664,775	0
2032	59,898,210	0	59,898,210	2,768,188	1,331,385	1,978,030	(2,968,893)	2,290,792	5,399,502	60,147,043	1,767,620	0
2033	63,030,235	0	63,030,235	2,910,759	1,331,385	2,105,146	(3,159,686)	2,481,585	5,669,189	63,961,535	1,854,697	0
2034	66,329,318	0	66,329,318	3,055,274	1,331,385	2,238,654	(3,360,071)	2,681,970	5,947,212	67,952,107	1,956,640	0
2035	69,787,930	0	69,787,930	3,208,448	1,331,385	2,378,324	(3,569,706)	2,891,605	6,240,056	72,171,847	2,020,316	0
2036	73,460,223	0	73,460,223	3,362,859	1,331,385	2,526,015	(3,791,381)	3,113,280	6,542,158	76,597,095	2,116,910	0
2037	77,320,890	0	77,320,890	3,536,068	1,331,385	2,680,899	(4,023,852)	3,345,751	6,870,251	81,289,391	2,177,955	0
2038	81,432,768	0	81,432,768	3,709,883	1,331,385	2,845,129	(4,270,350)	3,592,249	7,208,296	86,206,633	2,291,054	0
2039	85,751,403	0	85,751,403	3,901,482	0	3,017,231	(4,528,666)	3,850,565	6,240,612	90,026,153	2,421,092	0
2040	90,284,907	0	90,284,907	4,093,733	0	3,150,916	(4,729,316)	4,051,215	6,566,548	94,075,450	2,517,251	0
2041	95,076,537	0	95,076,537	4,306,887	0	3,292,640	(4,942,036)	4,263,935	6,921,426	98,358,966	2,637,910	0
2042	100,131,608	0	100,131,608	4,525,304	0	3,442,564	(5,167,061)	4,488,960	7,289,767	102,887,747	2,760,986	0
2043	105,462,284	0	105,462,284	4,758,440	0	3,601,071	(5,404,970)	4,726,869	7,681,410	107,685,924	2,883,233	0
2044	111,094,304	0	111,094,304	5,001,132	0	3,769,008	(5,657,032)	4,978,931	8,092,039	112,781,216	2,996,747	0
2045	117,057,143	0	117,057,143	5,251,381	0	3,947,342	(5,924,700)	5,246,599	8,520,622	118,197,850	3,103,988	0
2046	123,376,696	0	123,376,696	5,520,680	0	4,136,925	(6,209,252)	6,209,252	9,657,605	124,643,343	3,212,112	0
2047	130,084,249	0	130,084,249	5,802,818	0	4,362,516	(6,547,850)	6,547,850	10,165,334	131,455,335	3,353,342	0

EXHIBIT D

Projected Cash Flows (Open Group) – Funded Approach

Total Medical & 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 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. Annual Funding / (Payments)
2016	15,591,240	0	15,591,240	492,476	1,784,616	1,105,810	(1,189,763)	(446,873)	1,746,266	15,797,291	694,549	764,800
2017	16,466,409	764,800	15,701,609	525,037	1,784,616	1,125,895	(1,211,372)	(425,264)	1,798,912	16,370,205	748,115	764,800
2018	17,380,363	1,583,136	15,797,227	557,989	1,784,616	1,145,914	(1,232,912)	(403,724)	1,851,883	16,663,442	793,846	764,800
2019	18,344,623	2,458,756	15,885,867	587,428	1,784,616	1,166,441	(1,254,997)	(381,639)	1,901,849	16,974,197	826,294	764,800
2020	19,373,162	3,395,669	15,977,493	617,177	1,784,616	1,188,194	(1,278,401)	(358,235)	1,953,351	17,305,332	857,416	764,800
2021	20,472,227	4,398,166	16,074,061	645,588	1,784,616	1,211,373	(1,303,341)	(333,295)	2,004,941	17,641,527	903,946	764,800
2022	21,628,841	5,470,838	16,158,003	677,322	1,784,616	1,234,907	(1,328,661)	(307,975)	2,060,209	17,979,022	957,914	764,800
2023	22,842,627	6,618,597	16,224,030	712,960	1,784,616	1,258,531	(1,354,080)	(282,556)	2,119,471	18,314,819	1,018,874	764,800
2024	24,114,283	7,846,699	16,267,584	747,278	1,784,616	1,282,038	(1,379,369)	(257,267)	2,177,296	18,621,589	1,105,726	764,800
2025	25,418,743	9,160,768	16,257,975	782,196	1,784,616	1,303,512	(1,402,474)	(234,162)	2,233,688	18,911,482	1,178,995	764,800
2026	26,773,480	10,566,822	16,206,658	818,143	1,784,616	1,323,804	(1,424,307)	(212,329)	2,289,927	19,181,890	1,254,719	764,800
2027	28,180,486	12,071,300	16,109,186	856,503	1,784,616	1,342,732	(1,444,672)	(191,964)	2,347,215	19,429,131	1,335,174	764,800
2028	29,640,942	13,681,091	15,959,851	896,419	1,784,616	1,360,039	(1,463,294)	(173,342)	2,404,438	19,652,017	1,416,752	764,800
2029	31,159,052	15,403,567	15,755,485	938,891	1,784,616	1,375,641	(1,480,079)	(156,557)	2,462,512	19,858,152	1,491,577	764,800
2030	32,748,811	17,246,617	15,502,194	982,529	1,784,616	1,390,071	(1,495,605)	(141,031)	2,520,580	20,023,898	1,590,034	764,800
2031	34,391,195	19,218,680	15,172,515	1,028,538	1,784,616	1,401,673	(1,508,087)	(128,549)	2,578,191	20,172,514	1,664,775	764,800
2032	36,117,806	21,328,788	14,789,018	1,077,143	1,784,616	1,412,076	(1,519,281)	(117,355)	2,637,199	20,277,293	1,767,620	764,800
2033	37,907,242	23,586,603	14,320,639	1,130,302	1,784,616	1,419,410	(1,527,172)	(109,464)	2,697,692	20,355,488	1,854,697	764,800
2034	39,785,647	26,002,465	13,783,182	1,184,076	1,784,616	1,424,883	(1,533,061)	(103,575)	2,756,939	20,390,987	1,956,640	764,800
2035	41,743,997	28,587,438	13,156,559	1,240,897	1,784,616	1,427,369	(1,535,735)	(100,901)	2,816,246	20,422,117	2,020,316	764,800
2036	43,832,098	31,353,359	12,478,739	1,297,813	1,784,616	1,429,549	(1,538,079)	(98,557)	2,875,342	20,415,749	2,116,910	764,800
2037	46,023,910	34,312,894	11,711,016	1,362,209	1,784,616	1,429,102	(1,537,600)	(99,036)	2,939,291	20,412,285	2,177,955	764,800
2038	48,372,737	37,479,597	10,893,140	1,426,520	1,784,616	1,428,859	(1,537,339)	(99,297)	3,003,359	20,359,790	2,291,054	764,800
2039	50,833,777	40,867,969	9,965,808	1,497,795	0	1,425,185	(1,533,385)	(103,251)	3,066,610	18,460,242	2,421,092	764,800
2040	53,404,214	44,493,527	8,910,687	1,569,050	0	1,292,216	(1,390,322)	(243,562)	3,129,862	16,405,573	2,517,251	764,800
2041	56,127,934	48,372,874	7,755,060	1,648,164	0	1,148,391	(1,235,576)	(395,085)	3,194,777	14,168,757	2,637,910	764,800
2042	58,997,863	52,523,775	6,474,088	1,729,049	0	991,813	(1,067,111)	(560,357)	3,265,134	11,736,365	2,760,986	764,800
2043	62,023,541	56,965,239	5,058,302	1,815,203	0	821,546	(883,918)	(740,387)	3,335,521	9,100,776	2,883,233	764,800
2044	65,222,397	61,717,606	3,504,791	1,904,661	0	637,054	(685,419)	(935,755)	3,406,276	6,259,770	2,996,747	764,800
2045	68,619,434	66,802,638	1,816,796	1,996,711	0	438,184	(471,451)	(1,146,627)	3,477,603	3,207,799	3,103,988	764,800
2046	72,238,008	72,243,623	(5,615)	2,095,810	0	224,545	(241,594)	269,192	3,548,795	2,349,255	3,212,112	(5,615)
2047	76,100,227	77,295,062	(1,194,835)	2,199,457	0	164,448	(176,933)	209,121	3,617,916	2,586,841	3,353,342	(1,194,835)

EXHIBIT D

Projected Cash Flows (Open Group) – Funded Approach

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

Fiscal Year	I. Total Actuarial Accrued Liability ("AAL") as of		III. Unfunded Accrued Actuarial Liability	IV. Normal Cost	V. Expected Amortization	VI. Interest Obligation on Net OPEB (Asset)	VII. Adjustment to ARC	VIII. Amortization of Actuarial (Gain) / Loss	IX. Expected	X. OPEB	XI. Employer	XII. Annual
	July 1	II. Plan Assets as of July 1	("UAAL") [I. - II.]						Annual OPEB Expense [IV. + V. + VI. + VII. + VIII.]	Obligation (Asset) as of June 30	Share of Premiums / Claims	Funding / (Payments)
2016	15,591,240	0	15,591,240	492,476	1,784,616	1,105,810	(1,189,763)	(446,873)	1,746,266	16,244,708	694,549	604,300
2017	16,466,409	604,300	15,862,109	525,037	1,784,616	1,125,895	(1,211,372)	(425,264)	1,798,912	16,676,097	748,115	619,408
2018	17,380,363	1,266,009	16,114,354	557,989	1,784,616	1,145,914	(1,232,912)	(403,724)	1,851,883	17,099,241	793,846	634,893
2019	18,344,623	1,989,523	16,355,100	587,428	1,784,616	1,166,441	(1,254,997)	(381,639)	1,901,849	17,524,031	826,294	650,765
2020	19,373,162	2,779,555	16,593,607	617,177	1,784,616	1,188,194	(1,278,401)	(358,235)	1,953,351	17,952,932	857,416	667,034
2021	20,472,227	3,641,158	16,831,069	645,588	1,784,616	1,211,373	(1,303,341)	(333,295)	2,004,941	18,370,217	903,946	683,710
2022	21,628,841	4,579,749	17,049,092	677,322	1,784,616	1,234,907	(1,328,661)	(307,975)	2,060,209	18,771,709	957,914	700,803
2023	22,842,627	5,601,134	17,241,493	712,960	1,784,616	1,258,531	(1,354,080)	(282,556)	2,119,471	19,153,983	1,018,874	718,323
2024	24,114,283	6,711,536	17,402,747	747,278	1,784,616	1,282,038	(1,379,369)	(257,267)	2,177,296	19,489,272	1,105,726	736,281
2025	25,418,743	7,917,625	17,501,118	782,196	1,784,616	1,303,512	(1,402,474)	(234,162)	2,233,688	19,789,277	1,178,995	754,688
2026	26,773,480	9,226,547	17,546,933	818,143	1,784,616	1,323,804	(1,424,307)	(212,329)	2,289,927	20,050,930	1,254,719	773,555
2027	28,180,486	10,645,960	17,534,526	856,503	1,784,616	1,342,732	(1,444,672)	(191,964)	2,347,215	20,270,077	1,335,174	792,894
2028	29,640,942	12,184,071	17,456,871	896,419	1,784,616	1,360,039	(1,463,294)	(173,342)	2,404,438	20,445,047	1,416,752	812,716
2029	31,159,052	13,849,672	17,309,380	938,891	1,784,616	1,375,641	(1,480,079)	(156,557)	2,462,512	20,582,948	1,491,577	833,034
2030	32,748,811	15,652,183	17,096,628	982,529	1,784,616	1,390,071	(1,495,605)	(141,031)	2,520,580	20,659,634	1,590,034	853,860
2031	34,391,195	17,601,696	16,789,499	1,028,538	1,784,616	1,401,673	(1,508,087)	(128,549)	2,578,191	20,697,843	1,664,775	875,207
2032	36,117,806	19,709,022	16,408,784	1,077,143	1,784,616	1,412,076	(1,519,281)	(117,355)	2,637,199	20,670,335	1,767,620	897,087
2033	37,907,242	21,985,741	15,921,501	1,130,302	1,784,616	1,419,410	(1,527,172)	(109,464)	2,697,692	20,593,816	1,854,697	919,514
2034	39,785,647	24,444,257	15,341,390	1,184,076	1,784,616	1,424,883	(1,533,061)	(103,575)	2,756,939	20,451,613	1,956,640	942,502
2035	41,743,997	27,097,857	14,646,140	1,240,897	1,784,616	1,427,369	(1,535,735)	(100,901)	2,816,246	20,281,478	2,020,316	966,065
2036	43,832,098	29,960,772	13,871,326	1,297,813	1,784,616	1,429,549	(1,538,079)	(98,557)	2,875,342	20,049,693	2,116,910	990,217
2037	46,023,910	33,048,243	12,975,667	1,362,209	1,784,616	1,429,102	(1,537,600)	(99,036)	2,939,291	19,796,057	2,177,955	1,014,972
2038	48,372,737	36,376,592	11,996,145	1,426,520	1,784,616	1,428,859	(1,537,339)	(99,297)	3,003,359	19,468,016	2,291,054	1,040,346
2039	50,833,777	39,963,299	10,870,478	1,497,795	0	1,425,185	(1,533,385)	(103,251)	3,066,618	17,266,913	2,421,092	1,066,355
2040	53,404,214	43,827,085	9,577,129	1,569,050	0	1,292,216	(1,390,322)	(243,562)	3,130,180	14,884,030	2,517,251	1,093,014
2041	56,127,934	47,987,995	8,139,939	1,648,164	0	1,148,391	(1,235,576)	(395,085)	3,195,275	12,291,675	2,637,910	1,120,339
2042	58,997,863	52,467,494	6,530,369	1,729,049	0	991,813	(1,067,111)	(560,357)	3,254,920	9,475,736	2,760,986	1,148,347
2043	62,023,541	57,288,566	4,734,975	1,815,203	0	821,546	(883,918)	(740,387)	3,309,465	6,427,891	2,883,233	1,177,056
2044	65,222,397	62,475,822	2,746,575	1,904,661	0	637,054	(685,419)	(935,755)	3,358,210	3,145,203	2,996,747	1,206,482
2045	68,619,434	68,055,612	563,822	1,996,711	0	438,184	(471,451)	(1,146,627)	3,402,465	294,210	3,103,988	563,822
2046	72,238,008	73,383,327	(1,145,319)	2,095,810	0	224,545	(241,594)	269,192	3,441,657	575,370	3,212,112	(1,145,319)

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		III. Employer Share of Premiums / Claims including "implicit cost"	IV. Funding Normal Cost beyond claims	V. Total Funding Costs [III. + IV.]	VI. Present Value at 3.50% of Employer Share of Premiums / Claims including "implicit cost"	VII. Present Value at 3.50% of Funding Normal Cost beyond claims	VIII. Present Value at 3.50% of Total Funding Costs [VI. + VII.]	IX. Plan Assets at Beginning of year	X. Unfunded Accrued Actuarial Liability ["UAAL"] [I. - IX.]	XI. Present Value at 3.50% of Unfunded Accrued Actuarial Liability ["UAAL"]
	("AAL")	II. Normal Cost									
2016	25,337,907	1,221,307	694,549	526,758	1,221,307	694,549	526,758	1,221,307	0	25,337,907	25,337,907
2017	26,769,929	1,302,974	748,115	554,859	1,302,974	722,816	536,096	1,258,912	526,758	26,243,171	25,355,721
2018	28,281,154	1,387,157	793,846	593,311	1,387,157	741,064	553,862	1,294,926	1,100,054	27,181,100	25,373,848
2019	29,885,072	1,462,262	826,294	635,968	1,462,262	745,270	573,607	1,318,877	1,731,867	28,153,205	25,392,578
2020	31,589,276	1,538,824	857,416	681,408	1,538,824	747,189	593,808	1,340,997	2,428,450	29,160,826	25,411,975
2021	33,400,157	1,612,951	903,946	709,005	1,612,951	761,098	596,963	1,358,061	3,194,854	30,205,303	25,432,055
2022	35,302,984	1,695,010	957,914	737,096	1,695,010	779,264	599,628	1,378,892	4,015,679	31,287,305	25,452,243
2023	37,301,482	1,788,484	1,018,874	769,610	1,788,484	800,826	604,907	1,405,733	4,893,324	32,408,158	25,472,519
2024	39,403,581	1,879,279	1,105,726	773,553	1,879,279	839,701	587,445	1,427,146	5,834,200	33,569,381	25,492,976
2025	41,583,334	1,972,518	1,178,995	793,523	1,972,518	865,065	582,232	1,447,297	6,811,950	34,771,384	25,512,841
2026	43,860,044	2,069,296	1,254,719	814,577	2,069,296	889,494	577,469	1,466,963	7,843,891	36,016,153	25,532,528
2027	46,238,234	2,173,069	1,335,174	837,895	2,173,069	914,522	573,913	1,488,435	8,933,004	37,305,230	25,552,057
2028	48,723,793	2,280,881	1,416,752	864,129	2,280,881	937,583	571,866	1,509,449	10,083,554	38,640,239	25,571,465
2029	51,323,499	2,394,731	1,491,577	903,154	2,394,731	953,721	577,480	1,531,201	11,300,607	40,022,892	25,590,803
2030	54,054,585	2,511,900	1,590,034	921,866	2,511,900	982,294	569,512	1,551,806	12,599,282	41,455,303	25,610,331
2031	56,900,626	2,636,817	1,664,775	972,042	2,636,817	993,689	580,203	1,573,892	13,962,123	42,938,503	25,629,590
2032	59,898,210	2,768,188	1,767,620	1,000,568	2,768,188	1,019,397	577,033	1,596,430	15,422,839	44,475,371	25,649,209
2033	63,030,235	2,910,759	1,854,697	1,056,062	2,910,759	1,033,444	588,442	1,621,886	16,963,206	46,067,029	25,668,723
2034	66,329,318	3,055,274	1,956,640	1,098,634	3,055,274	1,053,379	591,462	1,644,841	18,612,980	47,716,338	25,688,622
2035	69,787,930	3,208,448	2,020,316	1,188,132	3,208,448	1,050,879	618,014	1,668,893	20,363,068	49,424,862	25,708,623
2036	73,460,223	3,362,859	2,116,910	1,245,949	3,362,859	1,063,887	626,171	1,690,058	22,263,907	51,196,316	25,729,522
2037	77,320,890	3,536,068	2,177,955	1,358,113	3,536,068	1,057,552	659,460	1,717,012	24,289,093	53,031,797	25,750,698
2038	81,432,768	3,709,883	2,291,054	1,418,829	3,709,883	1,074,849	665,645	1,740,494	26,497,324	54,935,444	25,772,998
2039	85,751,403	3,901,482	2,421,092	1,480,390	3,901,482	1,097,446	671,040	1,768,486	28,843,559	56,907,844	25,795,508
2040	90,284,907	4,093,733	2,517,251	1,576,482	4,093,733	1,102,448	690,432	1,792,880	31,333,474	58,951,433	25,818,201
2041	95,076,537	4,306,887	2,637,910	1,668,977	4,306,887	1,116,224	706,223	1,822,447	34,006,628	61,069,909	25,841,548
2042	100,131,608	4,525,304	2,760,986	1,764,318	4,525,304	1,128,795	721,320	1,850,115	36,865,837	63,265,771	25,865,430
2043	105,462,284	4,758,440	2,883,233	1,875,207	4,758,440	1,138,912	740,730	1,879,642	39,920,459	65,541,825	25,889,823
2044	111,094,304	5,001,132	2,996,747	2,004,385	5,001,132	1,143,721	764,982	1,908,703	43,192,882	67,901,422	25,914,872
2045	117,057,143	5,251,381	3,103,988	2,147,393	5,251,381	1,144,590	791,847	1,936,437	46,709,018	70,348,125	25,940,741
2046	123,376,696	5,520,680	3,212,112	2,308,568	5,520,680	1,144,406	822,493	1,966,899	50,491,227	72,885,469	25,967,519

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	186	25,337,907	25,337,907	694,549	694,549
2017	192	26,769,929	25,864,666	748,115	722,816
2018	199	28,281,154	26,400,760	793,846	741,064
2019	203	29,885,072	26,954,623	826,294	745,270
2020	207	31,589,276	27,528,229	857,416	747,189
2021	210	33,400,157	28,122,036	903,946	761,098
2022	215	35,302,984	28,719,000	957,914	779,264
2023	220	37,301,482	29,318,628	1,018,874	800,826
2024	225	39,403,581	29,923,535	1,105,726	839,701
2025	229	41,583,334	30,510,980	1,178,995	865,065
2026	233	43,860,044	31,093,210	1,254,719	889,494
2027	237	46,238,234	31,670,680	1,335,174	914,522
2028	241	48,723,793	32,244,592	1,416,752	937,583
2029	244	51,323,499	32,816,458	1,491,577	953,721
2030	247	54,054,585	33,393,938	1,590,034	982,294
2031	250	56,900,626	33,963,450	1,664,775	993,689
2032	252	59,898,210	34,543,652	1,767,620	1,019,397
2033	255	63,030,235	35,120,685	1,854,697	1,033,444
2034	256	66,329,318	35,709,127	1,956,640	1,053,379
2035	257	69,787,930	36,300,589	2,020,316	1,050,879
2036	258	73,460,223	36,918,602	2,116,910	1,063,887
2037	258	77,320,890	37,544,774	2,177,955	1,057,552
2038	258	81,432,768	38,204,234	2,291,054	1,074,849
2039	258	85,751,403	38,869,879	2,421,092	1,097,446
2040	258	90,284,907	39,540,919	2,517,251	1,102,448
2041	258	95,076,537	40,231,350	2,637,910	1,116,224
2042	258	100,131,608	40,937,573	2,760,986	1,128,795
2043	258	105,462,284	41,658,893	2,883,233	1,138,912
2044	258	111,094,304	42,399,623	2,996,747	1,143,721
2045	258	117,057,143	43,164,606	3,103,988	1,144,590
2046	258	123,376,696	43,956,453	3,212,112	1,144,406
2047	258	130,084,249	44,778,946	3,353,342	1,154,322
2048	258	137,172,404	45,622,130	3,543,451	1,178,515
2049	259	144,625,584	46,474,378	3,740,852	1,202,096
2050	260	152,466,983	47,337,347	3,939,581	1,223,146
2051	261	160,730,702	48,215,492	4,147,518	1,244,159
2052	262	169,444,406	49,110,532	4,324,008	1,253,239
2053	263	178,680,899	50,036,300	4,551,672	1,274,612
2054	265	188,422,099	50,979,849	4,748,790	1,284,842
2055	266	198,740,757	51,953,319	4,960,416	1,296,715

EXHIBIT E

GLOSSARY

AAL – 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.