

**Hamilton-Wenham Regional  
School District Other  
Postemployment Benefits Plan**

**GASB 74/75 Actuarial Valuation**

With a Valuation Date of June 30, 2017

& a Measurement Date of June 30, 2017

For the Reporting Dates of

June 30, 2018

June 30, 2019

Delivered May 2018

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May 11, 2018

*Personal and Confidential*

Mr. Vincent Leone  
Director of Accounting & Payroll  
Hamilton-Wenham Regional School District  
5 School Street  
Wenham, MA 01984

Dear Mr. Leone:

We have performed an actuarial valuation of the Hamilton-Wenham Regional School District Other Postemployment Benefits Plan for the Reporting Date & fiscal year ending June 30, 2018 with a Measurement Date of June 30, 2017 and a Valuation Date of June 30, 2017. The figures presented in this report reflect the adoption, by the Hamilton-Wenham Regional School District, of Statement Nos. 74 and 75 of the Governmental Accounting Standards Board ("GASB 74/75") effective for the fiscal year ending June 30, 2017 and June 30, 2018 respectively.

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,



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

May 11, 2018

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 with a Valuation Date of June 30, 2017 with a Measurement Date of June 30, 2017 for the Reporting Date & fiscal year ending June 30, 2018 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 Numbers 74 & 75 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 74 and 75 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.



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

## Executive Summary

### **GASB 74 and 75 Impact**

The District adopted GASB 74 for the fiscal year ending June 30, 2017 and GASB 75 for the fiscal year ending June 30, 2018. The adoption of GASB 74/75 introduces a new actuarial cost method and discount rate as well as new disclosures and methodologies for reporting plan liabilities and OPEB expenses. Significant changes have been made to the recognition of OPEB expenses, which makes the comparison of Net OPEB Expense in the current valuation to the expenses reported under GASB 45 misleading. The liability reported on the District's balance sheet is likely to increase dramatically as GASB 74/75 require the recognition of liabilities immediately rather than over a 30 year period as GASB 45 allowed.

### **What caused plan liabilities to change from FY 16 to FY 18?**

Plan experience was less favorable than expected - for the year ending on the Measurement Date of June 30, 2017, the Plan saw an experience loss of \$5,568,629 or 20.02% of the Total OPEB Liability ("TOL"). This was mainly due to premiums increasing more than the expected 10% increase and due to updated teacher retirement assumptions (increasing liability by \$5 million). The experience loss on TOL is amortized into the net OPEB expense over time until fully recognized. Changes in assumptions increased disclosed liabilities by \$1.37 million.

Over the two year period, the TOL went from \$25,337,907 as of June 30, 2015 to \$34,952,280 as of June 30, 2017 for an increase of \$9,614,373. The Net OPEB Expense was \$1,563,806 for the fiscal year June 30, 2018. As this is the first year using GASB 75 methodology, there is no baseline for comparison. For a projection of future costs and liabilities refer to Exhibit D.

## Executive Summary

(continued)

### Assumption changes

A key assumption has changed since the prior valuation - the impact is detailed below.

- ✓ Due to the GASB 75 standards the discount rate was changed from 3.50% to 3.25% increasing the disclosed liability by \$1.37 million.
- ✓ Assumption changes caused Normal Cost to increase by \$86 thousand.

It is important to remember that actuarial assumptions or changes in such do not impact the actual cost of the Plan. Rather, they impact the timing of the recognition of such costs.

### Key Drivers of Plan Liabilities

Several key drivers of plan costs and liabilities are:

- ✓ Premiums for Post 65 (Medicare Integrated) plans - represent 79% of the total plan liabilities
- ✓ Age at which plan participants retire
- ✓ Percentage of plan participants who elect coverage for themselves and/or a spouse
- ✓ Medical care cost inflation rate – We currently assume medical costs increase at 5.0% per year
- ✓ Discount Rate (3.25%) – Higher discount rates yield lower liabilities and vice versa
- ✓ Cost Sharing - Under Massachusetts law you may charge retirees up to 50% of premiums for health insurance.

Executive Summary  
(continued)

**What is Implicit Subsidy? How does it impact us?**

The implicit subsidy arises because retirees who are not eligible for Medicare are charged the same premium as active employees, even though their actual medical costs are higher on average. Consequently, a portion of the premiums being paid for active employees are being used to “subsidize” the premiums of retirees. Actuarial Standards of Practice and GASB standards require the liability associated with this implicit subsidy to be valued. The chart below shows a breakdown of how implicit cost impacts reported cash flows and liabilities.

<b>Impact of Implicit Subsidy</b>		
<b>Impact on Liability</b>	<b>As Of The Measurement Date</b>	
	<b><u>June 30, 2017</u></b>	<b><u>June 30, 2015</u></b>
I. Actuarial Accrued Liability	34,952,280	25,337,907
II. Actuarial Accrued Liability (Excluding Implicit Subsidy)	<u>32,216,476</u>	<u>N/A</u>
III. Liability from Implicit Subsidy [I. - II.]	2,735,804	N/A

  

<b>Impact on Payments</b>	<b>For The Fiscal Year Ending</b>	
	<b><u>June 30, 2018</u></b>	<b><u>June 30, 2016</u></b>
IV. Employer Payments (Including Implicit Subsidy)	748,115	694,549
V. Actual Employer Payments	<u>N/A</u>	<u>N/A</u>
VI. Implicit Subsidy [IV. - V.]	N/A	N/A



Executive Summary  
(continued)

**What are some key plan metrics?**

While an actuarial valuation under GASB 74/75 can be very complex with many variables, we find it helpful to look at several key metrics shown below to better allow you to manage your plan.

**Representative Plan Statistics**

	<u>June 30, 2017</u>	<u>June 30, 2015</u>
Total OPEB Liability	34,952,280	25,337,907
Per Eligible Active Plan Participant	64,886	43,383
Per Retiree/Spouse Plan Participant	76,818	61,822
Total Annual Service Cost (annual benefit accrual)	1,375,144	1,221,307
Per Eligible Active Plan Participant	4,450	3,829
Expected Employer Share of Retiree Costs	748,115	694,549
Per Retiree/Spouse Plan Participant	3,856	3,734
Net OPEB Liability as a % of Payroll	186.00%	137.10%
Average Annual Medical Plan Premium (Single Coverage)	6,183	5,962
Average Annual Medical Plan Premium (Family Coverage)	24,688	22,674
<b><u>Projected 2022 Excise Tax Thresholds</u></b>		
Annual Medical Plan Premium (Single Coverage)	12,511	
Annual Medical Plan Premium (Family Coverage)	32,676	

Executive Summary  
(continued)

**Liabilities & Benefit Payments in today’s dollars**

With the growth of medical care costs over time, the nominal accrued liabilities (“TOL”) and benefit payments can appear daunting. However, it is important to remember that a dollar paid in the future is worth less than a dollar paid today.

Measurement Date	Number of Retirees, Spouses & Surviving Spouses	Present Value at 3.00% of Total OPEB Liability	Present Value at 3.00% of Employer Share of Premiums / Claims including "implicit cost"
June 30, 2017	194	34,952,280	748,115
June 30, 2022	240	39,354,418	983,739
June 30, 2027	266	43,434,504	1,206,359
June 30, 2032	288	47,685,551	1,366,125
June 30, 2037	298	51,829,489	1,495,622
June 30, 2042	301	56,856,083	1,625,702
June 30, 2047	308	62,401,225	1,760,346

A full projection of plan costs and liabilities in today’s dollars is shown in Exhibit E of this report.

**We have an “unfunded liability”. How do we fund it? Can we fund it?**

If you’re looking to fund your OPEB liability, there are a variety of manner to do so. The amount of funding in combination with your Investment Policy will impact the discount rate and disclosed liabilities. Below are a few sample funding options, but it’s important to develop a funding policy that fits your organization as each situation is different.

	Pay-as-you-go Funding	Full Funding Level Dollar	Full Funding increasing at 3.00% per year
<b>Net OPEB Liability</b>	\$34,952,280	\$21,722,024	\$21,722,024
<b>Required Trust Contribution</b>	\$0	\$1,094,000	\$813,600
<b>Discount Rate</b>	3.25%	6.50%	6.50%

## SECTION I

### PRINCIPAL RESULTS OF THE VALUATION

**Hamilton-Wenham Regional School District**  
**Assuming Pay-as-you-go Funding - 3.25% discount rate**  
**Comparison of Plan Liabilities to Prior Valuation**

	As of the Measurement Date	
	<u>June 30, 2017</u>	<u>June 30, 2015</u>
I. Present Value of Future Benefits		
A. Actives	35,050,726	27,630,867
B. Retirees/Disabled	<u>14,902,645</u>	<u>11,498,844</u>
C. Total	49,953,371	39,129,711
II. Present Value of Future Normal Cost	15,001,091	13,791,804
III. Total OPEB Liability (Individual Entry Age Normal)		
A. Actives	20,049,635	13,839,063
B. Retirees/Disabled	<u>14,902,645</u>	<u>11,498,844</u>
C. Total	34,952,280	25,337,907
IV. Fiduciary Net Position [Plan Assets]	0	0
V. Net OPEB Liability (Asset) [III. - IV.]	34,952,280	25,337,907
VI. Funded Ratio [IV. / III.]	0.00%	0.00%
VII. Annual Covered Payroll	18,795,232	18,483,408
VIII. Net OPEB Liability (Asset) as % of Covered Payroll	186.0%	137.1%
IX. Number of Eligible Participants		
A. Actives	309	319
B. Retirees/Disabled	<u>194</u>	<u>186</u>
C. Total	503	505
	<b><u>For the Reporting Date and Fiscal Year Ending</u></b>	<b><u>June 30, 2018</u></b>
X. Service Cost	1,375,144	1,221,307
XI. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	936,777	N/A
XII. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	0	N/A
XIII. Recognition of Deferred (Inflows)/Outflows from Expected & Actual Experience	0	N/A
XIV. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	0	N/A
XV. Projected Earnings on OPEB Plan Investments	0	N/A
XVI. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	<u>0</u>	<u>N/A</u>
XVII. Financial Statement Expense [X.+XI.+XII.+XIII.+XIV.+XV.+XVI.]	2,311,921	N/A
XVII. Employer Share of Costs	(748,115)	(694,549)
XVIII. Employer (Payments)/Withdrawals to/from OPEB Trust	0	0
XIX. Total Employer Contribution [XVII. + XVIII.]	(748,115)	(694,549)
XX. Other Changes	<u>0</u>	<u>N/A</u>
XXI. Net OPEB Expense [XVII.+XIX.+XX.]	1,563,806	N/A
XXII. Discount Rate	3.25%	3.50%

SECTION I

PRINCIPAL RESULTS OF THE VALUATION  
(continued)

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

As of the June 30, 2017 Measurement Date

	<u>Pay-as-you-go Funding -</u> <u>3.25% discount rate</u>	<u>Funding - 6.50%</u> <u>discount rate</u>
I. Present Value of Future Benefits		
A. Actives	35,050,726	16,886,933
B. Retirees/Disabled	<u>14,902,645</u>	<u>9,925,862</u>
C. Total	49,953,371	26,812,795
II. Present Value of Future Normal Cost	15,001,091	5,090,771
III. Total OPEB Liability (Individual Entry Age Normal)		
A. Actives	20,049,635	11,796,162
B. Retirees/Disabled	<u>14,902,645</u>	<u>9,925,862</u>
C. Total	34,952,280	21,722,024
IV. Fiduciary Net Position [Plan Assets]	0	0
V. Net OPEB Liability (Asset) [III. - IV.]	34,952,280	21,722,024
VI. Funded Ratio [IV. / III.]	0.00%	0.00%
VII. Annual Covered Payroll	18,795,232	18,795,232
VIII. Net OPEB Liability (Asset) as % of Covered Payroll	186.0%	115.6%
IX. Number of Eligible Participants		
A. Actives	309	309
B. Retirees/Disabled	<u>194</u>	<u>194</u>
C. Total	503	503

**For the Reporting Date and Fiscal Year Ending June 30, 2018**

X. Service Cost	1,375,144	608,491
XI. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	936,777	1,139,431
XII. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	0	0
XIII. Recognition of Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0
XIV. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	0	0
XV. Projected Earnings on OPEB Plan Investments	0	(34,996)
XVI. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	<u>0</u>	<u>0</u>
XVII. Financial Statement Expense [X.+XI.+XII.+XIII.+XIV.+XV.+XVI.]	2,311,921	1,712,926
XVIII. Employer Share of Costs	(748,115)	(748,115)
XIX. Employer (Payments)/Withdrawals to/from OPEB Trust	0	(1,094,000)
XX. Total Employer Contribution [XVIII. + XIX.]	(748,115)	(1,842,115)
XXI. Other Changes	0	0
XXII. Net OPEB Expense [XVII.+XX.+XXI.]	1,563,806	(129,189)

SECTION I  
PRINCIPAL RESULTS OF THE VALUATION  
(continued)

**Hamilton-Wenham Regional School District**  
**Assuming Pay-as-you-go Funding - 3.25% discount rate**  
**Plan Liabilities as of the June 30, 2017 Measurement Date**

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Excise Tax</u>	<u>Total</u>
I. Present Value of Future Benefits					
A. Actives	34,348,080	0	141,041	561,605	35,050,726
B. Retirees/Disabled	<u>14,471,051</u>	<u>0</u>	<u>258,949</u>	<u>172,645</u>	<u>14,902,645</u>
C. Total	48,819,131	0	399,990	734,250	49,953,371
II. Present Value of Future Normal Cost	14,627,740	0	47,879	325,472	15,001,091
III. Total OPEB Liability					
A. Actives	19,720,340	0	93,162	236,133	20,049,635
B. Retirees/Disabled	<u>14,471,051</u>	<u>0</u>	<u>258,949</u>	<u>172,645</u>	<u>14,902,645</u>
C. Total	34,191,391	0	352,111	408,778	34,952,280
IV. Fiduciary Net Position [Plan Assets]	0	0	0	0	0
V. Net OPEB Liability (Asset) [III. - IV.]	34,191,391	0	352,111	408,778	34,952,280
VI. Annual Covered Payroll	18,795,232	18,795,232	18,795,232	18,795,232	18,795,232
VII. Net OPEB Liability (Asset) as % of Covered Payroll	181.9%	0.0%	1.9%	2.2%	186.0%
VIII. Number of Eligible Participants					
IX. A. Actives	309	0	309	309	
B. Retirees/Disabled	<u>194</u>	<u>0</u>	<u>123</u>	<u>194</u>	
C. Total	503	0	432	503	
<b>For the Reporting Date and Fiscal Year Ending June 30, 2018</b>					
X. Service Cost	1,341,899	0	5,323	27,922	1,375,144
XI. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	916,189	0	9,152	11,436	936,777
XII. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0
XIII. Recognition of Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0	0	0	0
XIV. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	0	0	0	0	0
XV. Projected Earnings on OPEB Plan Investments	0	0	0	0	0
XVI. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
XVII. Financial Statement Expense [X.+XI.+XII.+XIII.+XIV.+XV.+XVI.]	2,258,088	0	14,475	39,358	2,311,921
XVIII. Employer Share of Costs	(738,350)	0	(9,765)	0	(748,115)
XIX. Employer (Payments)/Withdrawals to/from OPEB Trust	0	0	0	0	0
XX. Total Employer Contribution [XVIII. + XIX.]	(738,350)	0	(9,765)	0	(748,115)
XXI. Other Changes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
XXII. Net OPEB Expense [XVII.+XX.+XXI.]	1,519,738	0	4,710	39,358	1,563,806

## SECTION I

### PRINCIPAL RESULTS OF THE VALUATION

(continued)

**Hamilton-Wenham Regional School District  
 Plan Liabilities as of the June 30, 2017 Measurement Date  
 Assuming Pay-as-you-go Funding**

	<b>District Employees and Retirees</b>	<b>Total</b>
I. Present Value of Future Benefits		
A. Actives	35,050,726	35,050,726
B. Retirees/Disabled	<u>14,902,645</u>	<u>14,902,645</u>
C. Total	49,953,371	49,953,371
II. Present Value of Future Normal Cost	15,001,091	15,001,091
III. Total OPEB Liability		
A. Actives	20,049,635	20,049,635
B. Retirees/Disabled	<u>14,902,645</u>	<u>14,902,645</u>
C. Total	34,952,280	34,952,280
IV. Fiduciary Net Position [Plan Assets]	0	0
V. Net OPEB Liability (Asset) [III. - IV.]	34,952,280	34,952,280
VI. Annual Covered Payroll	18,795,232	18,795,232
VII. Net OPEB Liability (Asset) as % of Covered Payroll	186.0%	186.0%
VIII. Number of Eligible Participants		
A. Actives	309	309
B. Retirees/Disabled	<u>194</u>	<u>194</u>
C. Total	503	503
<b>For the Reporting Date and Fiscal Year Ending June 30, 2018</b>		
IX. Service Cost	1,375,144	1,375,144
X. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	936,777	936,777
XI. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	0	0
XII. Recognition of Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0
XIII. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	0	0
XIV. Projected Earnings on OPEB Plan Investments	0	0
XV. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	<u>0</u>	<u>0</u>
XVI. Financial Statement Expense [IX.+X.+XI.+XII.+XIII.+XIV.+XV.]	2,311,921	2,311,921
XVII. Employer Share of Costs	<span style="color: red;">(748,115)</span>	<span style="color: red;">(748,115)</span>
XVIII. Employer (Payments)/Withdrawals to/from OPEB Trust	0	0
XIX. Total Employer Contribution [XVII. + XVIII.]	<span style="color: red;">(748,115)</span>	<span style="color: red;">(748,115)</span>
XX. Other Changes	<u>0</u>	<u>0</u>
XXI. Net OPEB Expense [XVI.+XIX.+XX.]	1,563,806	1,563,806

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 - 3.25% discount rate  
 Plan Liabilities as of the June 30, 2017 Measurement Date**

	<u>Present Value of Future Benefits</u>	<u>Total OPEB Liability (Individual Entry Age Normal)</u>	<u>Service Cost</u>
<b>Actives</b>			
Under Age 65			
A. Participants	5,204,789	4,605,732	273,146
B. Spouses	<u>2,105,782</u>	<u>1,900,635</u>	<u>108,376</u>
C. Total	7,310,571	6,506,367	381,522
Age 65 and Over			
A. Participants	21,310,479	8,166,734	598,732
B. Spouses	<u>6,429,676</u>	<u>5,376,534</u>	<u>394,890</u>
C. Total	27,740,155	13,543,268	993,622
Actives Total			
A. Participants	26,515,268	12,772,466	871,878
B. Spouses	<u>8,535,458</u>	<u>7,277,169</u>	<u>503,266</u>
C. Total	35,050,726	20,049,635	1,375,144
<b>Retirees/Disabled</b>			
Under Age 65			
A. Participants	796,248	796,248	0
B. Spouses	<u>11,849</u>	<u>11,849</u>	<u>0</u>
C. Total	808,097	808,097	0
Age 65 and Over			
A. Participants	13,509,342	13,509,342	0
B. Spouses	<u>585,206</u>	<u>585,206</u>	<u>0</u>
C. Total	14,094,548	14,094,548	0
Retirees/Disabled Total			
A. Participants	14,305,590	14,305,590	0
B. Spouses	<u>597,055</u>	<u>597,055</u>	<u>0</u>
C. Total	14,902,645	14,902,645	0
<b>Total Population</b>			
A. Participants	40,820,858	27,078,056	871,878
B. Spouses	<u>9,132,513</u>	<u>7,874,224</u>	<u>503,266</u>
C. Total	49,953,371	34,952,280	1,375,144

SECTION I  
PRINCIPAL RESULTS OF THE VALUATION  
(continued)

**Hamilton-Wenham Regional School District**  
**Assuming Funding over 30 years at 6.50% discount rate**  
**Plan Liabilities as of the June 30, 2017 Measurement Date**

	<u>Medical</u>	<u>Dental</u>	<u>Life</u>	<u>Excise Tax</u>	<u>Total</u>
I. Present Value of Future Benefits					
A. Actives	16,570,582	0	66,467	249,884	16,886,933
B. Retirees/Disabled	<u>9,665,015</u>	<u>0</u>	<u>176,147</u>	<u>84,700</u>	<u>9,925,862</u>
C. Total	26,235,597	0	242,614	334,584	26,812,795
II. Present Value of Future Normal Cost	4,950,275	0	19,325	121,171	5,090,771
III. Total OPEB Liability (Individual Entry Age Normal)					
A. Actives	11,620,307	0	47,142	128,713	11,796,162
B. Retirees/Disabled	<u>9,665,015</u>	<u>0</u>	<u>176,147</u>	<u>84,700</u>	<u>9,925,862</u>
C. Total	21,285,322	0	223,289	213,413	21,722,024
IV. Fiduciary Net Position [Plan Assets]	0	0	0	0	0
V. Net OPEB Liability (Asset) [III. - IV.]	21,285,322	0	223,289	213,413	21,722,024
VI. Annual Covered Payroll	18,795,232	18,795,232	18,795,232	18,795,232	18,795,232
VII. Net OPEB Liability (Asset) as % of Covered Payroll	113.2%	0.0%	1.2%	1.1%	115.6%
VIII. Number of Eligible Participants					
A. Actives	309	0	309	309	
B. Retirees/Disabled	<u>194</u>	<u>0</u>	<u>123</u>	<u>194</u>	
C. Total	503	0	432	503	
<b>For the Reporting Date and Fiscal Year Ending June 30, 2018</b>					
IX. Service Cost	593,781	0	2,355	12,355	608,491
X. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	1,116,523	0	11,713	11,195	1,139,431
XI. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	0	0	0	0	0
XII. Recognition of Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0	0	0	0
XIII. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	0	0	0	0	0
XIV. Projected Earnings on OPEB Plan Investments	(34,292)	0	(360)	(344)	(34,996)
XV. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
XVI. Financial Statement Expense [IX.+X.+XI.+XII.+XIII.+XIV.+XV.]	1,676,012	0	13,708	23,206	1,712,926
XVII. Employer Share of Costs	(738,350)	0	(9,765)	0	(748,115)
XVIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(1,072,006)	0	(11,246)	(10,748)	(1,094,000)
XIX. Total Employer Contribution [XVII. + XVIII.]	(1,810,356)	0	(21,011)	(10,748)	(1,842,115)
XX. Other Changes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
XXI. Net OPEB Expense [XVI.+XIX.+XX.]	(134,344)	0	(7,303)	12,458	(129,189)



SECTION I

PRINCIPAL RESULTS OF THE VALUATION

(continued)

**Hamilton-Wenham Regional School District  
Plan Liabilities as of the June 30, 2017 Measurement Date  
Assuming Funding over 30 years at 6.50% discount rate**

	District Employees and Retirees	Total
I. Present Value of Future Benefits		
A. Actives	16,886,933	16,886,933
B. Retirees/Disabled	<u>9,925,862</u>	<u>9,925,862</u>
C. Total	26,812,795	26,812,795
II. Present Value of Future Normal Cost	5,090,771	5,090,771
III. Total OPEB Liability		
A. Actives	11,796,162	11,796,162
B. Retirees/Disabled	<u>9,925,862</u>	<u>9,925,862</u>
C. Total	21,722,024	21,722,024
IV. Fiduciary Net Position [Plan Assets]	0	0
V. Net OPEB Liability (Asset) [III. - IV.]	21,722,024	21,722,024
VI. Annual Covered Payroll	18,795,232	18,795,232
VII. Net OPEB Liability (Asset) as % of Covered Payroll	115.6%	115.6%
VIII. Number of Eligible Participants		
A. Actives	309	309
B. Retirees/Disabled	<u>194</u>	<u>194</u>
C. Total	503	503
<b>For the Reporting Date and Fiscal Year Ending June 30, 2018</b>		
IX. Service Cost	608,491	608,491
X. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	1,139,431	1,139,431
XI. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	0	0
XII. Recognition of Deferred (Inflows)/Outflows from Expected & Actual Experience	0	0
XIII. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	0	0
XIV. Projected Earnings on OPEB Plan Investments	(34,996)	(34,996)
XV. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	<u>0</u>	<u>0</u>
XVI. Financial Statement Expense [IX.+X.+XI.+XII.+XIII.+XIV.+XV.]	1,712,926	1,712,926
XVII. Employer Share of Costs	(748,115)	(748,115)
XVIII. Employer (Payments)/Withdrawals to/from OPEB Trust	(1,094,000)	(1,094,000)
XIX. Total Employer Contribution [XVII. + XVIII.]	(1,842,115)	(1,842,115)
XX. Other Changes	<u>0</u>	<u>0</u>
XXI. Net OPEB Expense [XVI.+XIX.+XX.]	(129,189)	(129,189)

## Overview of GASB 74 and 75

Before Statements 74 and 75, GASB statement 45 established the reporting standards for Other Postemployment Benefit (“OPEB”) plans. It was designed to recognize the Other Postemployment Benefits earned by employees throughout their working career vs. when they are paid in retirement – accrual accounting vs. “pay-as-you-go” accounting. Additionally, each eligible active employee earns benefits each year representing benefits to be paid in retirement or a “Service 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.

In 2012 GASB issued GASB Statements 67 and 68 to update and standardize the financial reporting of pension liabilities. This increased the transparency of pension liabilities by moving them to the balance sheet and made financial statement disclosures of pension liabilities more comparable between municipal entities. GASB Statements 74 and 75 are designed to have the same effect on OPEB plans.

GASB 74 and 75 require retiree medical plans to disclose information about asset and liability levels and show historical contribution information. GASB 74 only applies in situations where a separate trust is established to prefund these benefits. GASB 75 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 74 and 75 apply to those benefits provided after retirement, except for pension benefits, such as medical, 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 74 and 75 extend this practice to all other post-employment benefits.

## Overview of GASB 74 and 75

(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 "Total OPEB Liability" or "Past Service Liability"), the part that is being earned this year (the "Service Cost"), and the part that will be earned in future years (the "Future Service Liability").

Once the Accrued Liability and the Service Cost have been calculated, the next step is to determine an actuarially determined contribution. This is an amount that if paid annually would fully prefund the benefits for current active and retired employees. This consists of two pieces:

- ✓ Service Cost – because the benefits earned by active employees each year should be paid for each year
- ✓ Past Service Cost – a catch-up payment to fund the Accrued Liability over a period of time determined by an actuary

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 Liability (NOL). If you decide to fully fund the NOL 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 74/75 – How we got here:

GASB 74 and 75 were designed to recognize the Other Postemployment Benefits (“OPEB”) earned by employees throughout their working career vs. when they are paid in retirement – accrual accounting vs. “pay-as-you-go” accounting while increasing disclosures to better reflect the plan’s liabilities and future funding requirements. Additionally, each eligible active employee earns benefits each year representing benefits to be paid in retirement or a “Service 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. Additionally, GASB 74 and 75 require increased disclosures comparable to those required under GASB 67 and 68 and interest rates used in the valuation are more closely tied to the plan’s underlying investment and funding policy.

### 2. GASB 74 and 75 Impact

The District has adopted GASB 74 for the fiscal year ending June 30, 2017 and GASB 75 for the fiscal year ending June 30, 2018. The adoption of GASB 74/75 introduces a new actuarial cost method and discount rate as well as new disclosures and methodologies for reporting plan liabilities and OPEB expenses. Significant changes have been made to the recognition of OPEB expenses, making the comparison of Net OPEB Expense in the current valuation to the expenses reported under GASB 45 misleading. The liability reported on the District’s balance sheet will increase dramatically as GASB 74/75 require the recognition of liabilities immediately rather than recognizing liabilities (Net OPEB Obligation) over a 30 year period as GASB 45 allowed. Please keep these changes in mind when considering any comparison to previously reported liabilities and expenses.

Commentary on Plan Experience and Contribution Amounts  
(continued)

3. **Balance Sheet Items as of the Measurement Date**

	<b>June 30, 2017</b>	<b>June 30, 2015</b>
Total OPEB Liability	\$34,952,280	\$25,337,907
Fiduciary Net Position	\$0	\$0
Net OPEB Liability	\$34,952,280	\$25,337,907
Funded Ratio	0.00%	0.00%

4. **Income Statement Items as of the Fiscal Year Ending**

	<b>June 30, 2018</b>	<b>June 30, 2016</b>
Service Cost	\$1,375,144	\$1,221,307
Interest Expense	\$936,777	N/A
Recognition of (Inflow)/Outflow from Plan Design Changes	\$0	N/A
Recognition of (Inflow)/Outflow from Plan Experience	\$0	N/A
Recognition of (Inflow)/Outflow from Changes in Assumptions	\$0	N/A
Projected Investment Earnings	\$0	N/A
Recognition of (Inflow)/Outflow from Earnings on Investments	\$0	N/A
Financial Statement Expense	2,311,921	N/A
Employer Share of Costs	\$(748,115)	\$(694,549)
Employer Payments (Withdrawals) to/from Trust	\$0	\$0
Total Employer Payments	\$(748,115)	\$(694,549)
Other Changes	\$0	N/A
Net OPEB Expense	\$1,563,806	N/A
Interest Rate	3.25%	3.50%

## SECTION II

### SUMMARY OF PLAN PROVISIONS

<u>Effective Date</u>	GASB 45 is adopted July 1, 2008 GASB 74 is adopted for the fiscal year ending June 30, 2017 GASB 75 is adopted for the fiscal year ending June 30, 2018
<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 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. The annual normal cost for each active member is a level percent of payroll. 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 into the OPEB expense. Gains and losses arising from plan design changes are recognized immediately. Gains and losses arising from differences between expected and actual investment returns are amortized over a five (5) year period. Gain and losses arising from differences between expected and actual plan experience and changes in actuarial assumptions are amortized over the remaining lifetime of all active and retired plan participants (5.00 years for the District for the 2018 fiscal year).

All employees who are plan participants on the 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 measurement date.



SECTION IIIACTUARIAL COST METHOD, ASSET VALUATION METHOD  
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS

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

Pre-Retirement Mortality

It is assumed that pre-retirement mortality is represented by the RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females

Post-Retirement Mortality

It is assumed that post-retirement mortality is represented by the RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females

Disabled Mortality

It is assumed that disabled mortality is represented by the RP-2000 Healthy Annuitant Table projected generationally with Scale BB and a base year 2012 for males and females

Mortality Experience Study

The mortality assumptions reflect PERAC's recent experience analysis published in 2014 (based on the years 2006-2011), updated to reflect data through January 1, 2015 for post-retirement mortality, and professional judgement. As such, mortality assumptions reflect observed current mortality as well as expected mortality improvements.

Discount Rate

3.25% per annum (previously 3.50%)

Long Term Rate of Return

6.50% (based on sample investment policy)



SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD  
AND ACTUARIAL ASSUMPTIONS

(continued)

C. ACTUARIAL ASSUMPTIONS (continued)

Municipal Bond Rate

3.13% as of June 30, 2017 (source: S&P Municipal Bond 20-Year High Grade Index - SAPIHG)

Employee Termination

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

<b>Non-Public Safety Employees</b>						
<u>Age</u>	<u>0-4 Years of Service (Males)</u>	<u>0-4 Years of Service (Females)</u>	<u>5-9 Years of Service (Males)</u>	<u>5-9 Years of Service (Females)</u>	<u>10+ Years of Service (Males)</u>	<u>10+ Years of Service (Females)</u>
	20	27.00%	27.00%	12.00%	12.00%	6.00%
30	23.00%	23.00%	10.00%	10.00%	5.50%	5.50%
40	16.00%	16.00%	8.00%	8.00%	3.50%	3.50%
50	18.00%	18.00%	6.00%	6.00%	3.00%	3.00%
60	18.00%	18.00%	5.00%	5.00%	3.50%	3.50%

<b>Public Safety Employees</b>		
<u>Service</u>	<u>Public Safety Male</u>	<u>Public Safety Female</u>
0	9.00%	9.00%
5	6.00%	6.00%
10	3.50%	3.50%
15	2.00%	2.00%
20	1.50%	1.50%
25	1.50%	1.50%
30	1.50%	1.50%

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)

Retirement Rates for teachers

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

<u>Age</u>	<u>Male Teachers</u>	<u>Female Teachers</u>
45	0.00%	0.00%
46	0.00%	0.00%
47	0.00%	0.00%
48	0.00%	0.00%
49	0.00%	0.00%
50	2.00%	1.50%
51	2.00%	1.50%
52	2.00%	1.50%
53	2.00%	1.50%
54	2.00%	2.00%
55	6.00%	5.00%
56	20.00%	15.00%
57	40.00%	35.00%
58	50.00%	35.00%
59	50.00%	35.00%
60	40.00%	35.00%
61	40.00%	35.00%
62	35.00%	35.00%
63	35.00%	35.00%
64	35.00%	35.00%
65	35.00%	35.00%
66	40.00%	35.00%
67	40.00%	30.00%
68	40.00%	30.00%
69	40.00%	30.00%
70	100.00%	100.00%
71	100.00%	100.00%
72	100.00%	100.00%

In the absence of census data specifying which employees are teachers it was assumed that two thirds of school employees are teachers. If available, actual census data was used.

SECTION III

ACTUARIAL COST METHOD, ASSET VALUATION METHOD  
AND ACTUARIAL ASSUMPTIONS

(continued)

Disability rates

It was assumed that the following percentage of eligible employees would become permanently disabled each year:

<u>Age</u>	<u>Standard</u>	<u>Teachers</u>	<u>Public Safety</u>
20	0.01%	0.05%	0.20%
25	0.01%	0.06%	0.20%
30	0.01%	0.07%	0.21%
35	0.03%	0.10%	0.40%
40	0.07%	0.21%	0.71%
45	0.10%	0.30%	1.00%
50	0.13%	0.42%	1.10%
55	0.14%	0.50%	0.80%
60	0.12%	0.50%	0.80%

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.

Medicare Part B Penalties are not reflected

Medicare Part B Reimbursement is not reflected

### 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 74 and 75 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. Actuarial Standard of Practice No. 6 ("ASOP 6") requires us to recognize this implicit subsidy while the plan sponsor may only pay the premiums billed by an insurance provider. 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			
	Single	Two-Person	Family	Total
Harvard Pilgrim HMO	86		87	173
Harvard Pilgrim POS	7		10	17
Harvard Pilgrim PPO			3	3
Harvard Senior	152			152
<b>Total</b>	245	0	100	345

	Per Contract Costs (monthly) - FY 2019		
	Single	Two-Person	Family
Harvard Pilgrim HMO	769.80		2,063.08
Harvard Pilgrim POS	1,002.40		2,686.44
Harvard Pilgrim PPO	1,201.76		3,220.78
Harvard Senior	390.27	780.54	

Gross Expected FY 2019 Incurred Premiums	4,182,664
Adjustment to reflect children's claims	(657,731)
<b>Total Expected FY 2019 Incurred Premiums (adults only)</b>	<b>3,524,933</b>

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

	<u>Employer</u> <u>Primary</u>	<u>Medicare</u> <u>Primary</u>
Age 65	13,578	4,240
Average Age	10,081	4,683



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**

**ALL ACTIVE EMPLOYEES AND SPOUSES**

Age Bracket	Aged (F) Average Claims	Aged (M) Average Claims
24 & Under	7,945	3,325
25 to 29	7,945	3,579
30 to 34	7,945	4,312
35 to 39	7,945	5,148
40 to 44	7,945	6,056
45 to 49	8,818	7,225
50 to 54	9,684	8,727
55 to 59	10,537	10,616
60 to 64	11,918	12,730
65 to 69	13,129	14,026
70 & Over	14,510	15,485
Total		

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

Age Bracket	Aged (F) Average Claims	Aged (M) Average Claims
44 & Under	7,945	6,056
45 to 49	8,818	7,225
50 to 54	9,684	8,727
55 to 59	10,537	10,616
60 to 64	11,918	12,730
65 to 69	13,129	14,026
70 to 74	14,510	15,485
75 to 79	15,703	16,769
80 to 84	16,497	17,623
85 to 89	17,344	18,525
90 & Over	18,229	19,470
Total		

**ALL RETIREES AND SPOUSES - MEDICARE  
ELIGIBLE**

Age Bracket	Aged (F) Average Claims	Aged (M) Average Claims
65 to 69	4,100	4,380
70 to 74	4,531	4,836
75 to 79	4,904	5,236
80 to 84	5,151	5,503
85 to 89	5,416	5,785
90 & Over	5,692	6,080



## EXHIBIT A

### Financial Statement Disclosure (As of the June 30, 2017 Measurement Date)

The GASB Standards for accounting and financial reporting for postemployment benefits other than pensions require the following disclosures in the financial statements related to the retiree medical, dental 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 RETIREE 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 the June 30, 2017 Measurement Date)  
(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. For the year ending on the June 30, 2017 Measurement Date total District premiums plus implicit costs for the retiree medical program were \$748,115. The District also made a contribution to an OPEB Trust of \$0 for a total contribution during the period of \$748,115.

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**6. INVESTMENT POLICY**

The District has not established a formal Investment Policy. The chart below shows the development of a long-term rate of return on assets that could be used for funded periods if the Investment Policy below were adopted.

<b>Investment Target Allocation &amp; Expected Long-Term Real Rate of Return</b>			
<b>Asset Class</b>	<b>Target Allocation</b>	<b>Asset Class</b>	<b>Long-Term Expected Real Rate of Return</b>
Domestic Equity - Large Cap	20.00%	Domestic Equity - Large Cap	4.00%
Domestic Equity - Small/Mid Cap	10.00%	Domestic Equity - Small/Mid Cap	6.00%
International Equity - Developed Market	15.00%	International Equity - Developed Market	4.50%
International Equity-Emerging Market	10.00%	International Equity-Emerging Market	7.00%
Domestic Fixed Income	30.00%	Domestic Fixed Income	2.00%
International Fixed Income	10.00%	International Fixed Income	3.00%
Alternatives	5.00%	Alternatives	6.50%
Real Estate	0.00%	Real Estate	6.25%
Cash	0.00%	Cash	0.00%
<b>Total</b>	<b>100.00%</b>		
		I. Real Rate of Return	4.00%
		II. Inflation Assumption	2.75%
		III. Total Nominal Return [I. + II.]	6.75%
		IV. Investment Expense	0.25%
		V. Net Investment Return [III.-IV.]	6.50%

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**7. ACTUARIALLY DETERMINED CONTRIBUTION (ADC)**

The District's Actuarially Determined Contribution (ADC) is an amount actuarially determined in accordance with the parameters of GASB Statement No. 74/75 which represents a level of funding that, if paid on an ongoing basis, is projected to cover the service cost each year and amortize any unfunded actuarial liabilities (or funding excess). The following table shows the components of the District's annual ADC for the fiscal year and the amount actually contributed to the plan:

<b>Actuarially Determined Contribution - Deficiency / (Excess)</b>	
<b><u>For the Fiscal Year Ending June 30, 2018</u></b>	
I. Service Cost	1,375,144
II. 30 year level flat dollar amortization of NOL at 3.25%	<u>1,783,386</u>
III. Actuarial Determined Contribution [I. + II.]	3,158,530
IV. Contributions in relation to the actuarially determined contribution	<u>(748,115)</u>
V. Contribution deficiency / (excess) [III. + IV.]	<u>2,410,415</u>
Covered employee payroll	18,795,232
Contributions as a % of covered employee payroll	3.98%

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**8. FUNDED STATUS AND FUNDING PROGRESS**

As of the June 30, 2017 Measurement Date, the plan was 0.00% funded. The Total OPEB Liability (TOL) for benefits was \$34,952,280, and the Fiduciary Net Position was \$ 0, resulting in a Net OPEB Liability (NOL) of \$34,952,280. The covered payroll (annual payroll of active employees covered by the plan) was \$ 18,795,232 and the ratio of the NOL to the covered payroll was 186.0%.

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 actuarially determined 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 Total OPEB Liabilities for benefits.

Measurement Date	Fiduciary Net Position	Total OPEB Liability	Net OPEB Liability	Funded Ratio	Covered Payroll	NOL as a % of Covered Payroll
06/30/2019 (est.)	\$0	\$38,907,851	\$38,907,851	0.0%	\$19,939,862	195.1%
06/30/2018 (est.)	\$0	\$36,822,416	\$36,822,416	0.0%	\$19,359,089	190.2%
06/30/2017	\$0	\$34,952,280	\$34,952,280	0.0%	\$18,795,232	186.0%
06/30/2016	\$0	\$26,769,929	\$26,769,929	0.0%	\$19,037,910	140.6%
06/30/2015	\$0	\$25,337,907	\$25,337,907	0.0%	\$18,483,408	137.1%
06/30/2014	\$0	\$26,986,951	\$26,986,951	0.0%	\$18,430,154	146.4%

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

9. **FIDUCIARY NET POSITION**

<b>Statement of Fiduciary Net Position</b>		
<b>June 30, 2017 and June 30, 2018</b>		
	<u>June 30, 2018 (Projected)</u>	<u>June 30, 2017</u>
<b>Assets</b>		
I. Cash and cash equivalents	0	0
<u>Receivables &amp; Prepaid expenses:</u>		
II. Contributions	0	0
III. Investment Income	0	0
IV. Receivables from brokers for unsettled trades	0	0
V. Prepaid expenses	<u>0</u>	<u>0</u>
VI. Total Receivables [II.+III.+IV.+V.]	<u>0</u>	<u>0</u>
<u>OPEB Trust Investments:</u>		
VII. Fixed Income	0	0
VIII. Stocks	0	0
IX. Cash and cash equivalents	0	0
X. Real estate	0	0
XI. Alternative investments	<u>0</u>	<u>0</u>
XII. Total Investments [VII.+VIII.+IX.+X.+XI.]	<u>0</u>	<u>0</u>
Invested securities lending cash collateral	0	0
Capital assets, net of accumulated depreciation	0	0
<b>Total Assets</b>	0	0
<b>Liabilities</b>		
XIII. Accrued expenses and benefits payable	0	0
XIV. Securities lending cash collateral	0	0
XV. Payable to brokers for unsettled trades	<u>0</u>	<u>0</u>
<b>XVI. Total liabilities [XIII.+XIV.+XV.]</b>	<u>0</u>	<u>0</u>
<b>XVII. Net Position restricted for OPEB [XII.-XVI.]</b>	0	0



EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

9. **FIDUCIARY NET POSITION (CONTINUED)**

Statement of Changes in Fiduciary Net Position for the Year ended June 30, 2018 (Projected)	
<u>June 30, 2017</u>	
<b>Additions</b>	
<u>Contributions</u>	
Employer Contributions to OPEB Trust	0
Total Contributions	0
<u>Investment Income / (loss)</u>	
Interest	0
Dividends	0
Equity fund income, net	0
Net increase in fair value of investments	0
Securities lending income	0
Less investment expenses:	
Direct investment expense	0
Securities lending management fees	0
Securities lending borrower rebates	0
Net investment income	0
Other income	0
<b>Total Additions</b>	<u>0</u>
<b>Deductions</b>	
Service benefits	0
Disability benefits	0
Death benefits	0
Refunds	0
Administrative expenses	0
<b>Total deductions</b>	<u>0</u>
<b>Net increase (decrease)</b>	0
<b>Net Position restricted for OPEB</b>	
Beginning of year	0
End of year	0

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**10. OPEB LIABILITY, OPEB EXPENSE AND ADC**

	Fiscal Year Ending June 30, 2018	
	District Employees and Retirees	Total
I. Total OPEB Liability	34,952,280	34,952,280
II. Fiduciary Net Position as of June 30, 2017	-	-
III. Net OPEB Liability (Asset) [I. - II.]	34,952,280	34,952,280
IV. Service Cost	1,375,144	1,375,144
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	936,777	936,777
VI. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	-	-
VII. Recognition of Deferred (Inflows)/Outflows from Plan Experience	-	-
VIII. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	-	-
IX. Projected Earnings on OPEB Plan Investments	-	-
X. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	-	-
XI. Financial Statement Expense [IV. + V. + VI. + VII. + VIII. + IX. + X.]	2,311,921	2,311,921
XII. Employer Share of Costs	(748,115)	(748,115)
XIII. Employer Payments (Withdrawals) to/from OPEB Trust	-	-
XIV. Total Employer Contribution [XII. + XIII.]	(748,115)	(748,115)
XV. Net OPEB Expense [XI. + XIV.]	1,563,806	1,563,806
XVI. Actuarial Determined Contribution (ADC)	3,158,530	3,158,530
XVII. Total Expected Contribution	748,115	748,115
XVIII. Percentage of ADC Contributed [XVII. / XVI.]	24%	24%

	Fiscal Year Ending June 30, 2019	
	District Employees and Retirees	Total
I. Total OPEB Liability	36,822,416	36,822,416
II. Fiduciary Net Position as of June 30, 2018	-	-
III. Net OPEB Liability (Asset) [I. - II.]	36,822,416	36,822,416
IV. Service Cost	1,565,986	1,565,986
V. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	1,172,841	1,172,841
VI. Recognition of Deferred (Inflows)/Outflows from Plan Design Changes	-	-
VII. Recognition of Deferred (Inflows)/Outflows from Plan Experience	1,113,726	1,113,726
VIII. Recognition of Deferred (Inflows)/Outflows from Changes in Assumptions	-	-
IX. Projected Earnings on OPEB plan investments	-	-
X. Recognition of Deferred (Inflows)/Outflows from Earnings on Investments	-	-
XI. Financial Statement Expense [IV. + V. + VI. + VII. + VIII. + IX. + X.]	3,852,553	3,852,553
XII. Employer Share of Costs	(868,691)	(868,691)
XIII. Employer Payments (Withdrawals) to/from OPEB Trust	-	-
XIV. Total Employer Contribution [XII. + XIII.]	(868,691)	(868,691)
XV. Net OPEB Expense [XI. + XIV.]	2,983,862	2,983,862
XVI. Actuarial Determined Contribution (ADC)	3,444,793	3,444,793
XVII. Total Expected Contribution	868,691	868,691
XVIII. Percentage of ADC Contributed [XVII. / XVI.]	25%	25%

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**11. OPEB LIABILITY, OPEB EXPENSE AND DEFERRED INFLOW/OUTFLOW**

	For the Reporting Date	
	June 30, 2018	June 30, 2019
<b>I. Deferred (Inflow)/Outflow from Actual vs. Expected Experience</b>	5,568,629	4,454,903
<b>II. Deferred (Inflow)/Outflow from Investment Experience</b>	0	0
<b>III. Deferred (Inflow)/Outflow from Changes in Benefit Terms</b>	0	0
<b>IV. Deferred (Inflow)/Outflow from Changes in Assumptions</b>	0	0

	For the period ending on the Measurement Date	
	June 30, 2017	June 30, 2018
<b>I. Deferred Outflow at the beginning of the period</b>	0	5,568,629
<b>II. Deferred Outflow created during the period</b>	5,568,629	0
<b>III. Deferred Outflow recognized during the period</b>	0	1,113,726
<b>IV. Change in Deferred Outflow (II. + III.)</b>	5,568,629	1,113,726
<b>V. Deferred Outflow at end of the period (I. - IV.)</b>	5,568,629	4,454,903
<b>VI. Deferred Inflow at the beginning of the period</b>	0	0
<b>VII. Deferred Inflow created during the period</b>	0	0
<b>VIII. Deferred Inflow recognized during the period</b>	0	0
<b>IX. Change in Deferred Inflow (VIII. - VII.)</b>	0	0
<b>X. Deferred Inflow at end of the period (VI. - IX.)</b>	0	0

	For the Reporting Date	
	June 30, 2018	June 30, 2019
<b>I. Net OPEB Liability at beginning of period</b>	27,819,845	34,952,280
<b>II. Net OPEB Expense - Excluding Payments</b>	2,311,921	3,852,553
<b>III. Total Employer Contributions</b>	(748,115)	(868,691)
<b>IV. Net OPEB Expense - Before Recognition of Deferred (Inflow)/Outflow (II. + III.)</b>	1,563,806	2,983,862
<b>V. Deferred Outflow created during the period</b>	5,568,629	0
<b>VI. Deferred Inflow created during the period</b>	0	0
<b>VII. Net OPEB Liability at end of period (I. + IV. + V + VI)</b>	34,952,280	37,936,142

	For the period ending on the Measurement Date	
	June 30, 2017	June 30, 2018
<b>I. Service Cost</b>	1,375,144	1,565,986
<b>II. Interest on Total OPEB Liability, Service Cost, and Payments</b>	936,777	1,172,841
<b>III. Projected Investment Income</b>	0	0
<b>IV. Recognition of Deferred (Inflow)/Outflow</b>	0	1,113,726
<b>V. Financial Statement Expense [I. + II. + III. + IV.]</b>	2,311,921	3,852,553
<b>VI. Benefit Payments</b>	(748,115)	(868,691)
<b>VII. Contributions to Trust</b>	0	0
<b>VIII. Total Employer Payments [VI. + VII.]</b>	(748,115)	(868,691)
<b>IX. Total Net OPEB Expense under GASB 75 (V. + VIII.)</b>	1,563,806	2,983,862

Measurement Date June 30, 2017 June 30, 2018

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**12. EFFECT OF 1% CHANGE IN HEALTHCARE TREND**

In the event that healthcare trend rates were 1% higher than forecast and employee contributions were to increase at the forecast rates, the Total OPEB Liability would increase to \$47,066,739 or by 34.7% and the Net OPEB Liability would increase to \$47,066,739 or by 34.7%. The corresponding Service Cost would increase to \$2,124,583 or by 54.5%. If such healthcare trend rates were 1% less than forecast and employee contributions were to increase at the forecast rate, the Total OPEB Liability would decrease to \$25,699,674 or by 26.5% and the Net OPEB Liability would decrease to \$25,699,674 or by 26.5%. The corresponding Service Cost would decrease to \$840,220 or by 38.9%.

**Impact of a 1% Change in the Healthcare Trend Rate as of the June 30, 2017 Measurement Date**

	<u>1% Decrease (4.00%)</u>	<u>Current Trend Rate (5.00%)</u>	<u>1% Increase (6.00%)</u>
I. Total OPEB Liability	25,699,674	34,952,280	47,066,739
II. Fiduciary Net Position	0	0	0
III. Net OPEB Liability (Asset) [I-II.]	25,699,674	34,952,280	47,066,739
IV. Service Cost	840,220	1,375,144	2,124,583

**13. EFFECT OF 1% CHANGE IN DISCOUNT RATES**

As of the June 30, 2017 Measurement Date, if the discount rate were 1% higher than what was used in this valuation, the Total OPEB Liability would decrease to \$29,776,421 or by 14.8% and the Net OPEB Liability would decrease to \$29,776,421 or by 14.8%. The corresponding Service Cost would decrease to \$1,054,745 or by 23.3%. If the discount rate were 1% lower than was used in this valuation, the Total OPEB Liability would increase to \$41,617,426 or by 19.1% and the Net OPEB Liability would increase to \$41,617,426 or by 19.1%. The corresponding Service Cost would increase to \$1,816,081 or by 32.1%.

**Impact of a 1% Change in the Discount Rate as of the June 30, 2017 Measurement Date**

	<u>1% Decrease (2.25%)</u>	<u>Current Discount Rate (3.25%)</u>	<u>1% Increase (4.25%)</u>
I. Total OPEB Liability	41,617,426	34,952,280	29,776,421
II. Fiduciary Net Position	0	0	0
III. Net OPEB Liability (Asset) [I-II.]	41,617,426	34,952,280	29,776,421
IV. Service Cost	1,816,081	1,375,144	1,054,745

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**14. 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  
Discount Rate: 3.25% per annum (previously 3.50%)  
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

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**15. RECOGNITION OF OPEB TRUST ASSETS**

The State of Massachusetts has 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 75. This legislation was amended effective November 9, 2016 to clarify who may adopt such a Trust and provide guidance on the ongoing operation of such a Trust. 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 74/75.

**16. OPEB EXPENSE DEVELOPMENT**

<b>Components of the District's OPEB Expenses for the Fiscal Year Ending June 30, 2018</b>	
<b>Description</b>	<b>Amount</b>
I. Service Cost	1,375,144
II. Interest on Total OPEB Liability (Asset), Service Cost, and Benefit Payments	936,777
III. Deferred (Inflows)/Outflows from Plan Design Changes*	0
IV. Deferred (Inflows)/Outflows from Plan Experience**	0
V. Deferred (Inflows)/Outflows from Changes of Assumptions**	0
VI. Projected earnings on OPEB plan investments	0
VII. Deferred (Inflows)/Outflows from Earnings on Plan Investments***	0
VIII. Total Employer Contributions	(748,115)
IX. OPEB Plan administrative expense	0
X. Other changes in fiduciary net position	0
<b>XI. Net OPEB expense [I.+II.+III.+IV.+V.+VI.+VII.+VIII.+IX.+ X.]</b>	<b>1,563,806</b>

\* Recognized Immediately

\*\* Amortized over 5 years

\*\*\* Amortized over 5 years

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**17. CHANGES IN NET OPEB LIABILITY**

Changes in Net OPEB Liability			
	Increase (Decrease)		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
<b>I. Balances at June 30, 2016 GASB 45</b>	26,769,929	0	26,769,929
<b>II. Change in Assumptions for GASB 75</b>	<u>1,049,916</u>	<u>0</u>	<u>1,049,916</u>
<b>III. Balances at June 30, 2016 GASB 75 [I. + II.]</b>	<b>27,819,845</b>	0	27,819,845
<b>Changes for the year:</b>			
IV. Service Cost	1,375,144	0	1,375,144
V. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	936,777	0	936,777
VI. Changes in Benefit terms *	0	0	0
VII. Change in assumptions **	0	0	0
VIII. Differences between actual and expected experience **	5,568,629	0	5,568,629
IX. Net Investment Income	0	0	0
X. Employer Contributions to Trust	0	748,115	(748,115)
XI. Benefit Payments Withdrawn from Trust	0	(748,115)	748,115
XII. Benefit payments excluding Implicit Cost	N/A	0	N/A
XIII. Implicit Cost amount	N/A	0	N/A
XIV. Total Benefit payments including Implicit Cost [XII. + XIII.]	(748,115)	0	(748,115)
XV. Administrative expense	0	0	0
XVI. Other Charges	0	0	0
<b>XVII. Net Changes [IV.+V.+VI.+VII.+VIII.+IX.+X.+XI.+XIV.+XV.+XVI.]</b>	<u>7,132,435</u>	<u>0</u>	<u>7,132,435</u>
<b>XVII. Balances at June 30, 2017 [III.+XVII.]</b>	34,952,280	0	34,952,280

\* Recognized Immediately

\*\* Amortized over 5 years

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**18. MONEY WEIGHTED RATE OF RETURN**

<b>Determination of Beginning &amp; Ending Balances of OPEB Plan Investments for Purposes of Calculating the Annual Money-Weighted Rate of Return</b>		
	<b>Ending OPEB Plan Investments *</b>	<b>Beginning OPEB Plan Investments **</b>
<b>Assets</b>		
Cash and cash equivalents	0	0
Receivables:		
Investment income	0	0
Receivables from brokers for unsettled trades	0	0
Investments		
Fixed income	0	0
Stocks	0	0
Cash and cash equivalents	0	0
Real estate	0	0
Alternative investments	0	0
Invested securities lending cash collateral	0	0
<b>Liabilities</b>		
Securities lending cash collateral	0	0
Payable to brokers for unsettled trades	0	0
<b>Total OPEB plan investments</b>	<b>0</b>	<b>0</b>
* From balances at June 30, 2018 (Projected)		
** From balances at June 30, 2017		



EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**18. MONEY WEIGHTED RATE OF RETURN (CONTINUED)**

	Plan Investments / Net External	Periods Invested	Period Weight
I. Beginning value - July 1, 2016	0	12	1.0000
Monthly net external cash flows:			
July	0	11	0.9167
August	0	10	0.8333
September	0	9	0.7500
October	0	8	0.6667
November	0	7	0.5833
December	0	6	0.5000
January	0	5	0.4167
February	0	4	0.3333
March	0	3	0.2500
April	0	2	0.1667
May	0	1	0.0833
<u>June</u>	<u>0</u>	0	0.0000
II. Total net external cash flow	0		
III. Earnings and increase in fair value	0		
IV. Ending value - June 30, 2017 [I.+II.+III.]	0		
Money Weighted Rate of Return	N/A		
Asset Value - June 30, 2017	0		

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

19. PLAN CASH FLOWS

<b>Aggregate External (Noninvestment Cash Flows)</b>	
<b><u>June 30, 2018</u></b>	
<b>Additions</b>	
<u>Contributions</u>	
Member contributions	0
Employer contributions	0
Other income	0
<b>Deductions</b>	
Service benefits	0
Disability benefits	0
Death benefits	0
Refunds	0
Administrative expenses	0
Beginning balances of noninvestment-related assets and liabilities *	
Contribution receivable	0
Prepaid expenses	0
Accrued expenses & benefits payable	0
Ending balances of noninvestment-related assets and liabilities **	
Contribution receivable	0
Prepaid expenses	0
Accrued expenses & benefits payable	0
Change in capital assets - depreciation	0
Aggregate external cash flows	0
* From balances at June 30, 2018 (Projected)	
** From balances at June 30, 2017	

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**19. PLAN CASH FLOWS (CONTINUED)**

<b>Reconciliation of Beginning &amp; Ending Balances of OPEB Plan Investments, Aggregate External Cash Flows, and Net Investment Income</b>	
	<u><b>June 30, 2018 (Projected)</b></u>
I. Total OPEB plan investments, beginning of year	0
II. Aggregate external cash flows	0
III. Net investment income	<u>0</u>
IV. Total OPEB plan investments, end of year [I.+II.+III.]	<u><u>0</u></u>

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**20. PLAN PROJECTION DISCLOSURES**

**Projection of Contributions using a June 30, 2017 Valuation Date**

Fiscal Year	I. Payroll for current employees	II. Payroll for future employees	III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
2018	18,795,232	0	18,795,232	0	748,115	0	748,115
2019	16,597,374	2,761,715	19,359,089	0	868,691	0	868,691
2020	15,005,607	4,934,255	19,939,862	0	913,041	0	913,041
2021	13,691,796	6,846,262	20,538,058	0	975,651	0	975,651
2022	12,602,880	8,551,320	21,154,200	0	1,052,267	0	1,052,267
2023	11,671,296	10,117,530	21,788,826	0	1,140,423	0	1,140,423
2024	10,838,167	11,604,324	22,442,491	0	1,236,903	0	1,236,903
2025	10,118,529	12,997,237	23,115,766	0	1,352,975	0	1,352,975
2026	9,412,268	14,396,971	23,809,239	0	1,438,428	0	1,438,428
2027	8,766,828	15,756,688	24,523,516	0	1,531,500	0	1,531,500
2028	8,122,524	17,136,697	25,259,221	0	1,621,246	0	1,621,246
2029	7,366,816	18,650,182	26,016,998	0	1,718,317	0	1,718,317
2030	6,758,961	20,038,547	26,797,508	0	1,780,903	16,524	1,797,427
2031	6,255,724	21,345,709	27,601,433	0	1,845,914	42,258	1,888,172
2032	5,746,532	22,682,944	28,429,476	0	1,912,344	78,599	1,990,943
2033	5,213,706	24,068,654	29,282,360	0	2,002,921	125,457	2,128,378
2034	4,711,354	25,449,477	30,160,831	0	2,073,706	181,783	2,255,489
2035	4,287,723	26,777,933	31,065,656	0	2,171,731	228,417	2,400,148
2036	3,937,070	28,060,556	31,997,626	0	2,215,191	280,985	2,496,176
2037	3,590,377	29,367,178	32,957,555	0	2,295,247	339,484	2,634,731
2038	3,235,026	30,711,256	33,946,282	0	2,310,826	390,434	2,701,260
2039	2,936,651	32,028,019	34,964,670	0	2,380,956	445,834	2,826,790
2040	2,668,008	33,345,602	36,013,610	0	2,450,639	522,858	2,973,497
2041	2,433,470	34,660,548	37,094,018	0	2,443,613	628,210	3,071,823
2042	2,160,756	36,046,083	38,206,839	0	2,453,294	760,630	3,213,924
2043	1,907,838	37,445,206	39,353,044	0	2,483,825	920,033	3,403,858
2044	1,665,312	38,868,323	40,533,635	0	2,510,935	1,104,665	3,615,600
2045	1,469,732	40,279,912	41,749,644	0	2,506,090	1,260,335	3,766,425
2046	1,302,357	41,699,776	43,002,133	0	2,500,716	1,430,704	3,931,420
2047	1,140,120	43,152,077	44,292,197	0	2,490,902	1,617,343	4,108,245
2048	946,901	44,674,062	45,620,963	0	2,482,407	1,790,415	4,272,822
2049	786,452	46,203,140	46,989,592	0	2,493,265	1,974,954	4,468,219
2050	652,036	47,747,244	48,399,280	0	2,502,147	2,184,286	4,686,433
2051	516,588	49,334,670	49,851,258	0	2,480,032	2,420,285	4,900,317
2052	408,516	50,938,280	51,346,796	0	2,436,976	2,680,579	5,117,555
2053	326,653	52,560,547	52,887,200	0	2,398,588	2,965,867	5,364,455
2054	244,497	54,229,319	54,473,816	0	2,362,638	3,280,175	5,642,813
2055	178,030	55,930,000	56,108,030	0	2,267,584	3,594,393	5,861,977
2056	127,557	57,663,714	57,791,271	0	2,217,759	3,926,535	6,144,294
2057	84,994	59,440,015	59,525,009	0	2,181,986	4,280,521	6,462,507

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**Projection of Contributions using a June 30, 2017 Valuation Date (Continued)**

Fiscal Year	I. Payroll for current employees	II. Payroll for future employees	III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
2058	51,083	61,259,676	61,310,759	0	2,130,870	4,645,753	6,776,623
2059	29,487	63,120,595	63,150,082	0	2,087,533	5,026,537	7,114,070
2060	18,978	65,025,606	65,044,584	0	2,040,048	5,432,183	7,472,231
2061	11,607	66,984,315	66,995,922	0	1,998,226	5,865,847	7,864,073
2062	5,510	69,000,290	69,005,800	0	1,946,413	6,329,124	8,275,537
2063	3,344	71,072,630	71,075,974	0	1,889,497	6,822,852	8,712,349
2064	1,690	73,206,563	73,208,253	0	1,833,202	7,350,382	9,183,584
2065	403	75,404,098	75,404,501	0	1,772,753	7,899,443	9,672,196
2066	153	77,666,483	77,666,636	0	1,649,682	8,475,653	10,125,335
2067	0	79,996,635	79,996,635	0	1,584,795	9,080,562	10,665,357
2068	0	82,396,534	82,396,534	0	1,518,545	9,708,510	11,227,055
2069	0	84,868,430	84,868,430	0	1,450,875	10,362,501	11,813,376
2070	0	87,414,483	87,414,483	0	1,382,692	11,045,032	12,427,724
2071	0	90,036,917	90,036,917	0	1,313,680	11,760,072	13,073,752
2072	0	92,738,025	92,738,025	0	1,256,566	12,510,189	13,766,755
2073	0	95,520,166	95,520,166	0	1,202,743	13,296,591	14,499,334
2074	0	98,385,771	98,385,771	0	1,147,295	14,123,167	15,270,462
2075	0	101,337,344	101,337,344	0	1,090,177	14,993,603	16,083,780
2076	0	104,377,464	104,377,464	0	1,032,169	15,903,719	16,935,888
2077	0	107,508,788	107,508,788	0	973,199	16,855,286	17,828,485
2078	0	110,734,052	110,734,052	0	913,734	17,850,297	18,764,031
2079	0	114,056,074	114,056,074	0	854,127	18,889,537	19,743,664
2080	0	117,477,756	117,477,756	0	794,649	19,973,408	20,768,057
2081	0	121,002,089	121,002,089	0	735,597	21,107,600	21,843,197
2082	0	124,632,152	124,632,152	0	677,121	22,296,348	22,973,469
2083	0	128,371,117	128,371,117	0	619,530	23,542,801	24,162,331
2084	0	132,222,251	132,222,251	0	563,287	24,851,739	25,415,026
2085	0	136,188,919	136,188,919	0	508,969	26,228,016	26,736,985
2086	0	140,274,587	140,274,587	0	457,102	27,673,627	28,130,729
2087	0	144,482,825	144,482,825	0	408,040	29,190,886	29,598,926
2088	0	148,817,310	148,817,310	0	362,214	30,784,853	31,147,067
2089	0	153,281,829	153,281,829	0	320,368	32,457,651	32,778,019
2090	0	157,880,284	157,880,284	0	282,192	34,212,824	34,495,016
2091	0	162,616,693	162,616,693	0	248,022	36,055,351	36,303,373
2092	0	167,495,194	167,495,194	0	217,150	37,990,729	38,207,879
2093	0	172,520,050	172,520,050	0	189,443	40,024,666	40,214,109
2094	0	177,695,652	177,695,652	0	164,559	42,162,582	42,327,141
2095	0	183,026,522	183,026,522	0	142,248	44,411,397	44,553,645
2096	0	188,517,318	188,517,318	0	122,144	46,776,493	46,898,637

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**20. PLAN PROJECTION DISCLOSURES (CONTINUED)**

Projection of OPEB Plan's Fiduciary Net Position using a June 30, 2017 Valuation Date									
Fiscal Year	I. Projected Beginning Fiduciary Net Position	II. Portion of Employer Contributions for Current Plan Members	III. Total Projected Benefit Payments	IV. Projected Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Projected Investment Earnings	VIII. Projected Ending Fiduciary Net Position for Current Plan Members	
2018	0	748,115	748,115	0	0	0	0	0	0
2019	0	868,691	868,691	0	0	0	0	0	0
2020	0	913,041	913,041	0	0	0	0	0	0
2021	0	975,651	975,651	0	0	0	0	0	0
2022	0	1,052,267	1,052,267	0	0	0	0	0	0
2023	0	1,140,423	1,140,423	0	0	0	0	0	0
2024	0	1,236,903	1,236,903	0	0	0	0	0	0
2025	0	1,352,975	1,352,975	0	0	0	0	0	0
2026	0	1,438,428	1,438,428	0	0	0	0	0	0
2027	0	1,531,500	1,531,500	0	0	0	0	0	0
2028	0	1,621,246	1,621,246	0	0	0	0	0	0
2029	0	1,718,317	1,718,317	0	0	0	0	0	0
2030	0	1,780,903	1,797,427	0	0	0	0	0	0
2031	0	1,845,914	1,888,172	0	0	0	0	0	0
2032	0	1,912,344	1,990,943	0	0	0	0	0	0
2033	0	2,002,921	2,128,378	0	0	0	0	0	0
2034	0	2,073,706	2,255,489	0	0	0	0	0	0
2035	0	2,171,731	2,400,148	0	0	0	0	0	0
2036	0	2,215,191	2,496,176	0	0	0	0	0	0
2037	0	2,295,247	2,634,731	0	0	0	0	0	0
2038	0	2,310,826	2,701,260	0	0	0	0	0	0
2039	0	2,380,956	2,826,790	0	0	0	0	0	0
2040	0	2,450,639	2,973,497	0	0	0	0	0	0
2041	0	2,443,613	3,071,823	0	0	0	0	0	0
2042	0	2,453,294	3,213,924	0	0	0	0	0	0
2043	0	2,483,825	3,403,858	0	0	0	0	0	0
2044	0	2,510,935	3,615,600	0	0	0	0	0	0
2045	0	2,506,090	3,766,425	0	0	0	0	0	0
2046	0	2,500,716	3,931,420	0	0	0	0	0	0
2047	0	2,490,902	4,108,245	0	0	0	0	0	0
2048	0	2,482,407	4,272,822	0	0	0	0	0	0
2049	0	2,493,265	4,468,219	0	0	0	0	0	0
2050	0	2,502,147	4,686,433	0	0	0	0	0	0
2051	0	2,480,032	4,900,317	0	0	0	0	0	0
2052	0	2,436,976	5,117,555	0	0	0	0	0	0
2053	0	2,398,588	5,364,455	0	0	0	0	0	0
2054	0	2,362,638	5,642,813	0	0	0	0	0	0
2055	0	2,267,584	5,861,977	0	0	0	0	0	0
2056	0	2,217,759	6,144,294	0	0	0	0	0	0
2057	0	2,181,986	6,462,507	0	0	0	0	0	0

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**Projection of OPEB Plan's Fiduciary Net Position using a June 30, 2017 Valuation Date (Continued)**

Fiscal Year	I. Projected Beginning Fiduciary Net Position	II. Portion of Employer Contributions for Current Plan Members		III. Total Projected Benefit Payments	IV. Projected Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Projected Investment Earnings	VIII. Projected Ending Fiduciary Net Position for Current Plan Members
2058	0	2,130,870		6,776,623	0	0	0	0	0
2059	0	2,087,533		7,114,070	0	0	0	0	0
2060	0	2,040,048		7,472,231	0	0	0	0	0
2061	0	1,998,226		7,864,073	0	0	0	0	0
2062	0	1,946,413		8,275,537	0	0	0	0	0
2063	0	1,889,497		8,712,349	0	0	0	0	0
2064	0	1,833,202		9,183,584	0	0	0	0	0
2065	0	1,772,753		9,672,196	0	0	0	0	0
2066	0	1,649,682		10,125,335	0	0	0	0	0
2067	0	1,584,795		10,665,357	0	0	0	0	0
2068	0	1,518,545		11,227,055	0	0	0	0	0
2069	0	1,450,875		11,813,376	0	0	0	0	0
2070	0	1,382,692		12,427,724	0	0	0	0	0
2071	0	1,313,680		13,073,752	0	0	0	0	0
2072	0	1,256,566		13,766,755	0	0	0	0	0
2073	0	1,202,743		14,499,334	0	0	0	0	0
2074	0	1,147,295		15,270,462	0	0	0	0	0
2075	0	1,090,177		16,083,780	0	0	0	0	0
2076	0	1,032,169		16,935,888	0	0	0	0	0
2077	0	973,199		17,828,485	0	0	0	0	0
2078	0	913,734		18,764,031	0	0	0	0	0
2079	0	854,127		19,743,664	0	0	0	0	0
2080	0	794,649		20,768,057	0	0	0	0	0
2081	0	735,597		21,843,197	0	0	0	0	0
2082	0	677,121		22,973,469	0	0	0	0	0
2083	0	619,530		24,162,331	0	0	0	0	0
2084	0	563,287		25,415,026	0	0	0	0	0
2085	0	508,969		26,736,985	0	0	0	0	0
2086	0	457,102		28,130,729	0	0	0	0	0
2087	0	408,040		29,598,926	0	0	0	0	0
2088	0	362,214		31,147,067	0	0	0	0	0
2089	0	320,368		32,778,019	0	0	0	0	0
2090	0	282,192		34,495,016	0	0	0	0	0
2091	0	248,022		36,303,373	0	0	0	0	0
2092	0	217,150		38,207,879	0	0	0	0	0
2093	0	189,443		40,214,109	0	0	0	0	0
2094	0	164,559		42,327,141	0	0	0	0	0
2095	0	142,248		44,553,645	0	0	0	0	0
2096	0	122,144		46,898,637	0	0	0	0	0

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**20. PLAN PROJECTION DISCLOSURES (CONTINUED)**

**Actuarial Present Values of Projected Benefit Payments using a June 30, 2017 Valuation Date**

Fiscal Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments	Present Value of Unfunded Benefit Payments	Present Value of Benefit Payments using Single Discount Rate
2018	0	748,115	0	748,115	0	748,115	748,115
2019	0	868,691	0	868,691	0	842,343	842,343
2020	0	913,041	0	913,041	0	858,495	858,495
2021	0	975,651	0	975,651	0	889,540	889,540
2022	0	1,052,267	0	1,052,267	0	930,295	930,295
2023	0	1,140,423	0	1,140,423	0	977,652	977,652
2024	0	1,236,903	0	1,236,903	0	1,028,200	1,028,200
2025	0	1,352,975	0	1,352,975	0	1,090,574	1,090,574
2026	0	1,438,428	0	1,438,428	0	1,124,287	1,124,287
2027	0	1,531,500	0	1,531,500	0	1,160,726	1,160,726
2028	0	1,621,246	0	1,621,246	0	1,191,476	1,191,476
2029	0	1,718,317	0	1,718,317	0	1,224,513	1,224,513
2030	0	1,780,903	0	1,780,903	0	1,230,620	1,230,620
2031	0	1,845,914	0	1,845,914	0	1,236,855	1,236,855
2032	0	1,912,344	0	1,912,344	0	1,242,502	1,242,502
2033	0	2,002,921	0	2,002,921	0	1,261,881	1,261,881
2034	0	2,073,706	0	2,073,706	0	1,266,851	1,266,851
2035	0	2,171,731	0	2,171,731	0	1,286,494	1,286,494
2036	0	2,215,191	0	2,215,191	0	1,272,438	1,272,438
2037	0	2,295,247	0	2,295,247	0	1,278,435	1,278,435
2038	0	2,310,826	0	2,310,826	0	1,248,073	1,248,073
2039	0	2,380,956	0	2,380,956	0	1,246,946	1,246,946
2040	0	2,450,639	0	2,450,639	0	1,244,513	1,244,513
2041	0	2,443,613	0	2,443,613	0	1,203,306	1,203,306
2042	0	2,453,294	0	2,453,294	0	1,171,432	1,171,432
2043	0	2,483,825	0	2,483,825	0	1,150,037	1,150,037
2044	0	2,510,935	0	2,510,935	0	1,127,328	1,127,328
2045	0	2,506,090	0	2,506,090	0	1,091,026	1,091,026
2046	0	2,500,716	0	2,500,716	0	1,055,665	1,055,665
2047	0	2,490,902	0	2,490,902	0	1,019,629	1,019,629
2048	0	2,482,407	0	2,482,407	0	985,331	985,331
2049	0	2,493,265	0	2,493,265	0	959,624	959,624
2050	0	2,502,147	0	2,502,147	0	933,833	933,833
2051	0	2,480,032	0	2,480,032	0	897,506	897,506
2052	0	2,436,976	0	2,436,976	0	855,175	855,175
2053	0	2,398,588	0	2,398,588	0	816,175	816,175
2054	0	2,362,638	0	2,362,638	0	779,558	779,558
2055	0	2,267,584	0	2,267,584	0	725,501	725,501
2056	0	2,217,759	0	2,217,759	0	688,038	688,038
2057	0	2,181,986	0	2,181,986	0	656,408	656,408



EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**20. PLAN PROJECTION DISCLOSURES (CONTINUED)**

**Actuarial Present Values of Projected Benefit Payments using a June 30, 2017 Valuation Date (Continued)**

Fiscal Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments	Present Value of Unfunded Benefit Payments	Present Value of Benefit Payments using Single Discount Rate
2058	0	2,130,870	0	2,130,870	0	621,588	621,588
2059	0	2,087,533	0	2,087,533	0	590,476	590,476
2060	0	2,040,048	0	2,040,048	0	559,543	559,543
2061	0	1,998,226	0	1,998,226	0	531,448	531,448
2062	0	1,946,413	0	1,946,413	0	501,967	501,967
2063	0	1,889,497	0	1,889,497	0	472,509	472,509
2064	0	1,833,202	0	1,833,202	0	444,527	444,527
2065	0	1,772,753	0	1,772,753	0	416,830	416,830
2066	0	1,649,682	0	1,649,682	0	376,127	376,127
2067	0	1,584,795	0	1,584,795	0	350,374	350,374
2068	0	1,518,545	0	1,518,545	0	325,544	325,544
2069	0	1,450,875	0	1,450,875	0	301,603	301,603
2070	0	1,382,692	0	1,382,692	0	278,711	278,711
2071	0	1,313,680	0	1,313,680	0	256,769	256,769
2072	0	1,256,566	0	1,256,566	0	238,156	238,156
2073	0	1,202,743	0	1,202,743	0	221,041	221,041
2074	0	1,147,295	0	1,147,295	0	204,456	204,456
2075	0	1,090,177	0	1,090,177	0	188,384	188,384
2076	0	1,032,169	0	1,032,169	0	172,951	172,951
2077	0	973,199	0	973,199	0	158,123	158,123
2078	0	913,734	0	913,734	0	143,959	143,959
2079	0	854,127	0	854,127	0	130,486	130,486
2080	0	794,649	0	794,649	0	117,717	117,717
2081	0	735,597	0	735,597	0	105,665	105,665
2082	0	677,121	0	677,121	0	94,315	94,315
2083	0	619,530	0	619,530	0	83,676	83,676
2084	0	563,287	0	563,287	0	73,772	73,772
2085	0	508,969	0	508,969	0	64,636	64,636
2086	0	457,102	0	457,102	0	56,289	56,289
2087	0	408,040	0	408,040	0	48,723	48,723
2088	0	362,214	0	362,214	0	41,939	41,939
2089	0	320,368	0	320,368	0	35,969	35,969
2090	0	282,192	0	282,192	0	30,722	30,722
2091	0	248,022	0	248,022	0	26,183	26,183
2092	0	217,150	0	217,150	0	22,228	22,228
2093	0	189,443	0	189,443	0	18,804	18,804
2094	0	164,559	0	164,559	0	15,839	15,839
2095	0	142,248	0	142,248	0	13,276	13,276
2096	0	122,144	0	122,144	0	11,054	11,054

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**21. CHANGES TO NET OPEB EXPENSE**

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of the effects of differences between expected & actual experience								
Fiscal Year	Differences between actual & expected		<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
	experience	Recognition Period (years)						
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	5,568,629	5.00	0	1,113,726	1,113,726	1,113,726	1,113,726	1,113,725
2019								
Net increase (decrease) in OPEB expense			0	1,113,726	1,113,726	1,113,726	1,113,726	1,113,725

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**21. CHANGES TO NET OPEB EXPENSE (CONTINUED)**

<b>Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of the effects of Changes in Assumptions</b>								
<b>Fiscal Year</b>	<b>Differences from changes in</b>		<b><u>2018</u></b>	<b><u>2019</u></b>	<b><u>2020</u></b>	<b><u>2021</u></b>	<b><u>2022</u></b>	<b><u>2023</u></b>
	<b><u>Actuarial Assumptions</u></b>	<b><u>Recognition Period (years)</u></b>						
2010								
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	0	5.00	0	0	0	0	0	0
2019								
Net increase (decrease) in OPEB expense			0	0	0	0	0	0

EXHIBIT A

Financial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)

**21. CHANGES TO NET OPEB EXPENSE (CONTINUED)**

Deferred (Inflows)/Outflows in OPEB Expense arising from the recognition of differences between Projected & Actual Earnings on OPEB Plan Investments								
Fiscal Year	Differences between actual & expected experience	Recognition Period (years)	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
			2010					
2011								
2012								
2013								
2014								
2015								
2016								
2017								
2018	0	5.00	0	0	0	0	0	0
2019								
Net increase (decrease) in OPEB expense			0	0	0	0	0	0

EXHIBIT AFinancial Statement Disclosure  
(As of the June 30, 2017 Measurement Date)  
(continued)**22. 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, 2021 (formerly December 31, 2017, but amended by Congressional Legislation) 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 projected 2022 threshold amounts are \$12,511 for single coverage and \$32,676 for family coverage and a "kicker" amount of \$1,650 for single coverage and \$3,450 for family coverage.

For the fiscal year ending June 30, 2018, the TOL for the excise tax is \$408,778 and the increase in OPEB Expense is \$39,358. Given your premiums through the 2019 fiscal year and the excise tax threshold, your average single premiums are \$6,328 below the excise tax threshold and your average family premiums are \$7,988 below the excise tax threshold. As more regulatory guidance becomes available, the calculation of the excise tax liability will evolve.

EXHIBIT B

Required Supplementary Information  
(As of the June 30, 2017 Measurement Date)

Notes to Required Supplementary Information:

Valuation Date:	Actuarially Determined Contribution was calculated as of June 30, 2017.
Actuarial Cost Method:	Individual Entry Age Normal
Asset-Valuation Method:	Market Value of Assets as of the Measurement Date, June 30, 2017.
<u>Actuarial Assumptions:</u>	
Investment Rate of Return:	6.50%, net of OPEB plan investment expense, including inflation.
Municipal Bond Rate	3.13% as of June 30, 2017 (source: S&P Municipal Bond 20-Year High Grade Index – SAPIHG)
Single Equivalent Discount Rate:	3.25%, net of OPEB plan investment expense, including inflation.
Inflation:	2.75% as of June 30, 2017 and for future periods
Salary Increases:	3.00% annually as of June 30, 2017 and for future periods
Cost of Living Adjustment:	Not Applicable
Pre-Retirement Mortality:	RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females
Post-Retirement Mortality:	RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females
Disabled Mortality:	RP-2000 Healthy Annuitant Table projected generationally with Scale BB and a base year 2012 for males and females

EXHIBIT B

Required Supplementary Information  
(As of the June 30, 2017 Measurement Date)  
(continued)

Notes to Required Supplementary Information (Continued):

Plan Membership

Plan Membership: At June 30, 2017, OPEB plan membership consisted of the following

Inactive employees or beneficiaries currently receiving benefits:	194
Active Employees:	<u>309</u>
Total:	503

Changes in Assumptions:                      Effective June 30, 2017

- Discount rate is 3.25% previously 3.50%

EXHIBIT B

Required Supplementary Information  
(As of the June 30, 2017 Measurement Date)  
(continued)

Notes to Required Supplementary Information (Continued):

<b>Deferred Outflows of Resources and Deferred Inflows of Resources Arising between Expected &amp; Actual Experience</b>					
<b>Fiscal Year</b>	<b>Experience Losses</b>	<b>Experience Gains</b>	<b>Amounts recognized in OPEB Expense through June 30, 2018</b>	<b>Balances at June 30, 2018</b>	
				<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	5,568,629	0	0	5,568,629	0
<b>Total</b>				<b>5,568,629</b>	<b>0</b>



EXHIBIT B

Required Supplementary Information  
(As of the June 30, 2017 Measurement Date)  
(continued)

Notes to Required Supplementary Information (Continued):

<b>Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Changes of Assumptions</b>					
<b>Fiscal Year</b>	<b>Increase in the Total OPEB Liability</b>	<b>Decrease in the Total OPEB Liability</b>	<b>Amounts recognized in OPEB Expense through June 30, 2018</b>	<b>Balances at June 30, 2018</b>	
				<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	0	0	0	0	0
<b>Total</b>				<b>0</b>	<b>0</b>

EXHIBIT B

Required Supplementary Information  
(As of the June 30, 2017 Measurement Date)  
(continued)

Notes to Required Supplementary Information (Continued):

<b>Deferred Outflows of Resources and Deferred Inflows of Resources between Projected &amp; Actual Earnings on OPEB Plan Investments</b>					
<b>Fiscal Year</b>	<b>Increase in the Total OPEB Liability</b>	<b>Decrease in the Total OPEB Liability</b>	<b>Amounts recognized in OPEB Expense through June 30, 2018</b>	<b>Balances at June 30, 2018</b>	
				<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
2009				0	0
2010				0	0
2011				0	0
2012				0	0
2013				0	0
2014				0	0
2015				0	0
2016				0	0
2017				0	0
2018	0	0	0	0	0
<b>Total</b>				<b>0</b>	<b>0</b>

EXHIBIT B

Required Supplementary Information  
(As of the June 30, 2017 Measurement Date)  
(continued)

Notes to Required Supplementary Information (Continued):

<b>OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources related to OPEB as of June 30, 2018</b>		
	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
I. Differences between actual & expected experience	5,568,629	0
II. Changes of assumptions	0	0
III. Net difference between projected & actual earnings on OPEB plan investments	<u>0</u>	<u>0</u>
IV. Total [I.+II.+III.]	5,568,629	0
<b>Year ended June 30:</b>		
	2019	1,113,726
	2020	1,113,726
	2021	1,113,726
	2022	1,113,726
	2023	1,113,725
	Thereafter	0

EXHIBIT BRequired Supplementary Information  
(As of the June 30, 2017 Measurement Date)  
(continued)Notes to Required Supplementary Information (Continued):Contributions:

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 year ending on the June 30, 2017 Measurement Date total District premiums plus implicit costs for the retiree medical program were \$748,115 .

EXHIBIT C

Reconciliation of Plan Participation  
(As of the June 30, 2017 Valuation Date)

**ACTIVE EMPLOYEES**

	<u>June 30, 2017</u>	<u>June 30, 2015</u>
<b>A. Average Age at Hire</b>	37.14	37.70
<b>B. Average Service</b>	<u>9.32</u>	<u>8.57</u>
<b>C. Average Current Age</b>	46.46	46.27

**RETIRED EMPLOYEES & DEPENDENTS**

	<u>June 30, 2017</u>	<u>June 30, 2015</u>
<b>I. Retirees</b>		
<b>A. Under Age 65</b>	28	24
<b>B. Age 65 &amp; Over</b>	<u>159</u>	<u>151</u>
<b>C. Total Retirees</b>	187	175
<b>II. Dependents of Retirees</b>		
<b>A. Under Age 65</b>	1	5
<b>B. Age 65 &amp; Over</b>	<u>6</u>	<u>6</u>
<b>C. Total Retirees</b>	7	11
<b>III. Retirees &amp; Dependents</b>		
<b>A. Under Age 65</b>	29	29
<b>B. Age 65 &amp; Over</b>	<u>165</u>	<u>157</u>
<b>C. Total Retirees</b>	194	186

EXHIBIT D

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

**Total Medical & Life Insurance - Pay-as-you-go Funding - 3.25% discount rate**

For the Fiscal Year	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Date with expected 6.50% return	III. Net OPEB Liability (Asset) [I. - II.]	IV. Funded Ratio		VI. Employer Share of Premiums / Claims	VII. Excess Employer Payments (beyond claims)	VIII. Total Employer Payments [VI. + VII.]
				Ratio [II. / I.]	V. Service Cost			
2018	34,952,280	0	34,952,280	0.00%	1,375,144	748,115	0	748,115
2019	36,822,416	0	36,822,416	0.00%	1,565,986	868,691	0	868,691
2020	38,907,851	0	38,907,851	0.00%	1,685,696	913,041	0	913,041
2021	41,066,649	0	41,066,649	0.00%	1,792,408	975,651	0	975,651
2022	43,306,539	0	43,306,539	0.00%	1,884,658	1,052,267	0	1,052,267
2023	45,622,557	0	45,622,557	0.00%	1,980,752	1,140,423	0	1,140,423
2024	48,008,966	0	48,008,966	0.00%	2,077,281	1,236,903	0	1,236,903
2025	50,461,884	0	50,461,884	0.00%	2,175,667	1,352,975	0	1,352,975
2026	53,008,009	0	53,008,009	0.00%	2,275,757	1,438,428	0	1,438,428
2027	55,618,442	0	55,618,442	0.00%	2,376,983	1,531,500	0	1,531,500
2028	58,372,341	0	58,372,341	0.00%	2,495,922	1,621,246	0	1,621,246
2029	61,224,731	0	61,224,731	0.00%	2,614,849	1,718,317	0	1,718,317
2030	64,253,721	0	64,253,721	0.00%	2,720,949	1,797,427	0	1,797,427
2031	67,526,647	0	67,526,647	0.00%	2,846,876	1,888,172	0	1,888,172
2032	70,894,125	0	70,894,125	0.00%	2,974,699	1,990,943	0	1,990,943
2033	74,292,534	0	74,292,534	0.00%	3,109,424	2,128,378	0	2,128,378
2034	77,782,705	0	77,782,705	0.00%	3,254,856	2,255,489	0	2,255,489
2035	81,487,754	0	81,487,754	0.00%	3,410,511	2,400,148	0	2,400,148
2036	85,419,196	0	85,419,196	0.00%	3,570,356	2,496,176	0	2,496,176
2037	89,327,509	0	89,327,509	0.00%	3,739,862	2,634,731	0	2,634,731
2038	93,609,823	0	93,609,823	0.00%	3,918,126	2,701,260	0	2,701,260
2039	98,225,174	0	98,225,174	0.00%	4,106,454	2,826,790	0	2,826,790
2040	103,041,066	0	103,041,066	0.00%	4,300,811	2,973,497	0	2,973,497
2041	108,136,276	0	108,136,276	0.00%	4,514,121	3,071,823	0	3,071,823
2042	113,512,391	0	113,512,391	0.00%	4,744,527	3,213,924	0	3,213,924
2043	119,044,011	0	119,044,011	0.00%	4,993,979	3,403,858	0	3,403,858
2044	124,866,632	0	124,866,632	0.00%	5,258,823	3,615,600	0	3,615,600
2045	131,000,376	0	131,000,376	0.00%	5,538,663	3,766,425	0	3,766,425
2046	137,479,719	0	137,479,719	0.00%	5,831,257	3,931,420	0	3,931,420
2047	144,273,892	0	144,273,892	0.00%	6,137,498	4,108,245	0	4,108,245
2048	151,464,151	0	151,464,151	0.00%	6,461,149	4,272,822	0	4,272,822
2049	159,266,571	0	159,266,571	0.00%	6,805,870	4,468,219	0	4,468,219

EXHIBIT E

Projected Cash Flows (Open Group) – Funded Approach

**Total Medical & Life Insurance - 6.50% discount rate increasing at 0.00% per year**

For the Fiscal Year	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with expected 6.50% return	III. Net OPEB Liability (Asset) ("NOL") [I. - II.]	IV Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Premiums / Claims	VII. Annual Funding / (Payments)	VIII. Total Employer Payments [VI. + VII.]
2018	21,722,024	0	21,722,024	0.00%	608,492	748,115	1,094,000	1,842,115
2019	22,950,845	1,128,995	21,821,850	4.92%	692,938	868,691	1,094,000	1,962,691
2020	24,269,335	2,331,375	21,937,960	9.61%	746,656	913,041	1,094,000	2,007,041
2021	25,657,852	3,611,910	22,045,942	14.08%	794,619	975,651	1,094,000	2,069,651
2022	27,096,606	4,975,679	22,120,927	18.36%	835,490	1,052,267	1,094,000	2,146,267
2023	28,580,363	6,428,093	22,152,270	22.49%	878,710	1,140,423	1,094,000	2,234,423
2024	30,103,124	7,974,914	22,128,210	26.49%	921,519	1,236,903	1,094,000	2,330,903
2025	31,656,760	9,622,279	22,034,481	30.40%	965,127	1,352,975	1,094,000	2,446,975
2026	33,268,535	11,376,722	21,891,813	34.20%	1,009,905	1,438,428	1,094,000	2,532,428
2027	34,918,398	13,245,204	21,673,194	37.93%	1,055,015	1,531,500	1,094,000	2,625,500
2028	36,654,763	15,235,138	21,419,625	41.56%	1,108,353	1,621,246	1,094,000	2,715,246
2029	38,450,598	17,354,417	21,096,181	45.13%	1,161,917	1,718,317	1,094,000	2,812,317
2030	40,357,502	19,611,449	20,746,053	48.59%	1,207,200	1,797,427	1,094,000	2,891,427
2031	42,417,309	22,015,188	20,402,121	51.90%	1,261,243	1,888,172	1,094,000	2,982,172
2032	44,536,878	24,575,170	19,961,708	55.18%	1,316,060	1,990,943	1,094,000	3,084,943
2033	46,665,709	27,301,551	19,364,158	58.50%	1,373,775	2,128,378	1,094,000	3,222,378
2034	48,845,539	30,205,147	18,640,392	61.84%	1,436,543	2,255,489	1,094,000	3,349,489
2035	51,142,537	33,297,477	17,845,060	65.11%	1,503,928	2,400,148	1,094,000	3,494,148
2036	53,585,939	36,590,808	16,995,131	68.28%	1,573,093	2,496,176	1,094,000	3,590,176
2037	56,005,725	40,098,206	15,907,519	71.60%	1,646,625	2,634,731	1,094,000	3,728,731
2038	58,665,770	43,833,585	14,832,185	74.72%	1,724,019	2,701,260	1,094,000	3,795,260
2039	61,534,486	47,811,763	13,722,723	77.70%	1,805,821	2,826,790	1,094,000	3,920,790
2040	64,525,004	52,048,523	12,476,481	80.66%	1,890,087	2,973,497	1,094,000	4,067,497
2041	67,695,284	56,560,672	11,134,612	83.55%	1,982,662	3,071,823	1,094,000	4,165,823
2042	71,040,391	61,366,111	9,674,280	86.38%	2,082,640	3,213,924	1,094,000	4,307,924
2043	74,474,724	66,483,903	7,990,821	89.27%	2,191,144	3,403,858	1,094,000	4,497,858
2044	78,068,496	71,934,352	6,134,144	92.14%	2,306,380	3,615,600	1,094,000	4,709,600
2045	81,854,158	77,739,080	4,115,078	94.97%	2,428,128	3,766,425	1,094,000	4,860,425
2046	85,851,921	83,921,115	1,930,806	97.75%	2,555,264	3,931,420	1,094,000	5,025,420
2047	90,046,320	90,504,983	(458,663)	100.51%	2,688,234	4,108,245	1,094,000	5,202,245
2048	94,489,789	97,516,802	(3,027,013)	103.20%	2,828,794	4,272,822	0	4,272,822
2049	99,300,332	103,855,394	(4,555,062)	104.59%	2,978,597	4,468,219	0	4,468,219

EXHIBIT E

Projected Cash Flows (Open Group) – Funded Approach

**Total Medical & Life Insurance - 6.50% discount rate and increasing at 3.00% per year**

For the Fiscal Year	I. Total OPEB Liability ("TOL") as of Measurement Date	II. Fiduciary Net Position as of Measurement Date with expected 6.50% return		III. Net OPEB Liability (Asset) ("NOL") [I. - II.]	IV. Funded Ratio [II. / I.]	V. Service Cost	VI. Employer Share of Premiums / Claims	VII. Annual Funding / (Payments)	VIII. Total Employer Payments [VI. + VII.]
		as of Measurement Date	Measurement Date with expected 6.50% return						
2018	21,722,024	0	21,722,024	0.00%	608,492	748,115	813,600	1,561,715	
2019	22,950,845	839,626	22,111,219	3.66%	692,938	868,691	838,008	1,706,699	
2020	24,269,335	1,759,016	22,510,319	7.25%	746,656	913,041	863,148	1,776,189	
2021	25,657,852	2,764,111	22,893,741	10.77%	794,619	975,651	889,042	1,864,693	
2022	27,096,606	3,861,259	23,235,347	14.25%	835,490	1,052,267	915,713	1,967,980	
2023	28,580,363	5,057,246	23,523,117	17.69%	878,710	1,140,423	943,184	2,083,607	
2024	30,103,124	6,359,322	23,743,802	21.13%	921,519	1,236,903	971,480	2,208,383	
2025	31,656,760	7,775,234	23,881,526	24.56%	965,127	1,352,975	1,000,624	2,353,599	
2026	33,268,535	9,313,257	23,955,278	27.99%	1,009,905	1,438,428	1,030,643	2,469,071	
2027	34,918,398	10,982,230	23,936,168	31.45%	1,055,015	1,531,500	1,061,562	2,593,062	
2028	36,654,763	12,791,595	23,863,168	34.90%	1,108,353	1,621,246	1,093,409	2,714,655	
2029	38,450,598	14,751,434	23,699,164	38.36%	1,161,917	1,718,317	1,126,211	2,844,528	
2030	40,357,502	16,872,514	23,484,988	41.81%	1,207,200	1,797,427	1,159,997	2,957,424	
2031	42,417,309	19,166,331	23,250,978	45.19%	1,261,243	1,888,172	1,194,797	3,082,969	
2032	44,536,878	21,645,159	22,891,719	48.60%	1,316,060	1,990,943	1,230,641	3,221,584	
2033	46,665,709	24,322,102	22,343,607	52.12%	1,373,775	2,128,378	1,267,560	3,395,938	
2034	48,845,539	27,211,146	21,634,393	55.71%	1,436,543	2,255,489	1,305,587	3,561,076	
2035	51,142,537	30,327,221	20,815,316	59.30%	1,503,928	2,400,148	1,344,755	3,744,903	
2036	53,585,939	33,686,262	19,899,677	62.86%	1,573,093	2,496,176	1,385,098	3,881,274	
2037	56,005,725	37,305,274	18,700,451	66.61%	1,646,625	2,634,731	1,426,651	4,061,382	
2038	58,665,770	41,202,404	17,463,366	70.23%	1,724,019	2,701,260	1,469,451	4,170,711	
2039	61,534,486	45,397,017	16,137,469	73.77%	1,805,821	2,826,790	1,513,535	4,340,325	
2040	64,525,004	49,909,774	14,615,230	77.35%	1,890,087	2,973,497	1,558,941	4,532,438	
2041	67,695,284	54,762,718	12,932,566	80.90%	1,982,662	3,071,823	1,605,709	4,677,532	
2042	71,040,391	59,979,368	11,061,023	84.43%	2,082,640	3,213,924	1,653,880	4,867,804	
2043	74,474,724	65,584,812	8,889,912	88.06%	2,191,144	3,403,858	1,703,496	5,107,354	
2044	78,068,496	71,605,813	6,462,683	91.72%	2,306,380	3,615,600	1,754,601	5,370,201	
2045	81,854,158	78,070,919	3,783,239	95.38%	2,428,128	3,766,425	1,807,239	5,573,664	
2046	85,851,921	85,010,578	841,343	99.02%	2,555,264	3,931,420	1,861,456	5,792,876	
2047	90,046,320	92,457,267	(2,410,947)	102.68%	2,688,234	4,108,245	841,343	4,949,588	
2048	94,489,789	99,335,246	(4,845,457)	105.13%	2,828,794	4,272,822	0	4,272,822	
2049	99,300,332	105,792,037	(6,491,705)	106.54%	2,978,597	4,468,219	0	4,468,219	



**EXHIBIT E**

**Projected Cash Flows (Open Group) – Funded Approach**

**Hamilton-Wenham Regional School District**

**OPEB Projection of Funding Annual Service Cost and Impact on Unfunded Obligation**

**Total Medical, Dental & Life Insurance - Funding Annual Service Cost - 3.25% discount rate**

Measurement Date	I. Total OPEB Liability	II. Service Cost	III. Employer Share of Premiums / Claims including "implicit cost"	IV. Funding Service Cost beyond claims	V. Total Funding Costs [III. + IV.]	VI. Present Value at 3.00% of Employer Share of Premiums / Claims including "implicit cost"	VII. Present Value at 3.00% of Funding Service Cost beyond claims	VIII. Present Value at 3.00% of Total Funding Costs [VI. + VII.]	IX. Fiduciary Net Position at Beginning of year	X. Net OPEB Liability (Asset) [I. - IX.]	XI. Present Value at 3.00% of Net OPEB Liability (Asset)
June 30, 2017	34,952,280	1,375,144	748,115	627,029	1,375,144	748,115	627,029	1,375,144	0	34,952,280	34,952,280
June 30, 2018	36,822,416	1,565,986	868,691	697,295	1,565,986	843,389	676,985	1,520,374	627,029	36,195,387	35,141,152
June 30, 2019	38,907,851	1,685,696	913,041	772,655	1,685,696	860,629	728,301	1,588,930	1,344,702	37,563,149	35,406,871
June 30, 2020	41,066,649	1,792,408	975,651	816,757	1,792,408	892,859	747,448	1,640,307	2,161,060	38,905,589	35,604,125
June 30, 2021	43,306,539	1,884,658	1,052,267	832,391	1,884,658	934,926	739,569	1,674,495	3,048,051	40,258,488	35,769,145
June 30, 2022	45,622,557	1,980,752	1,140,423	840,329	1,980,752	983,739	724,875	1,708,614	3,979,504	41,643,053	35,921,663
June 30, 2023	48,008,966	2,077,281	1,236,903	840,378	2,077,281	1,035,887	703,803	1,739,690	4,949,167	43,059,799	36,061,904
June 30, 2024	50,461,884	2,175,667	1,352,975	822,692	2,175,667	1,100,092	668,924	1,769,016	5,950,393	44,511,491	36,191,915
June 30, 2025	53,008,009	2,275,757	1,438,428	837,329	2,275,757	1,135,508	660,995	1,796,503	6,966,473	46,041,536	36,345,614
June 30, 2026	55,618,442	2,376,983	1,531,500	845,483	2,376,983	1,173,767	647,992	1,821,759	8,030,212	47,588,230	36,472,416
June 30, 2027	58,372,341	2,495,922	1,621,246	874,676	2,495,922	1,206,359	650,841	1,857,200	9,136,677	49,235,664	36,635,958
June 30, 2028	61,224,731	2,614,849	1,718,317	896,532	2,614,849	1,241,349	647,674	1,889,023	10,308,295	50,916,436	36,783,117
June 30, 2029	64,253,721	2,720,949	1,797,427	923,522	2,720,949	1,260,679	647,740	1,908,419	11,539,847	52,713,874	36,972,451
June 30, 2030	67,526,647	2,846,876	1,888,172	958,704	2,846,876	1,285,753	652,831	1,938,584	12,838,414	54,688,233	37,240,026
June 30, 2031	70,894,125	2,974,699	1,990,943	983,756	2,974,699	1,316,248	650,379	1,966,627	14,214,366	56,679,759	37,471,998
June 30, 2032	74,292,534	3,109,424	2,128,378	981,046	3,109,424	1,366,125	629,696	1,995,821	15,660,089	58,632,445	37,633,935
June 30, 2033	77,782,705	3,254,856	2,255,489	999,367	3,254,856	1,405,546	622,772	2,028,318	17,150,088	60,632,617	37,784,242
June 30, 2034	81,487,754	3,410,511	2,400,148	1,010,363	3,410,511	1,452,129	611,286	2,063,415	18,706,833	62,780,921	37,983,490
June 30, 2035	85,419,196	3,570,356	2,496,176	1,074,180	3,570,356	1,466,240	630,968	2,097,208	20,325,168	65,094,028	38,235,881
June 30, 2036	89,327,509	3,739,862	2,634,731	1,105,131	3,739,862	1,502,550	630,241	2,132,791	22,059,916	67,267,593	38,361,768
June 30, 2037	93,609,823	3,918,126	2,701,260	1,216,866	3,918,126	1,495,622	673,749	2,169,371	23,881,994	69,727,829	38,606,608
June 30, 2038	98,225,174	4,106,454	2,826,790	1,279,664	4,106,454	1,519,539	687,882	2,207,421	25,875,025	72,350,149	38,891,770
June 30, 2039	103,041,066	4,300,811	2,973,497	1,327,314	4,300,811	1,551,846	692,715	2,244,561	27,995,627	75,045,439	39,165,652
June 30, 2040	108,136,276	4,514,121	3,071,823	1,442,298	4,514,121	1,556,467	730,800	2,287,267	30,232,799	77,903,477	39,473,049
June 30, 2041	113,512,391	4,744,527	3,213,924	1,530,603	4,744,527	1,581,038	752,955	2,333,993	32,657,663	80,854,728	39,775,168
June 30, 2042	119,044,011	4,993,979	3,403,858	1,590,121	4,993,979	1,625,702	759,451	2,385,153	35,249,640	83,794,371	40,020,658
June 30, 2043	124,866,632	5,258,823	3,615,600	1,643,223	5,258,823	1,676,535	761,954	2,438,489	37,985,374	86,881,258	40,286,381
June 30, 2044	131,000,376	5,538,663	3,766,425	1,772,238	5,538,663	1,695,603	797,842	2,493,445	40,863,122	90,137,254	40,578,805
June 30, 2045	137,479,719	5,831,257	3,931,420	1,899,837	5,831,257	1,718,332	830,375	2,548,707	43,963,411	93,516,308	40,873,804
June 30, 2046	144,273,892	6,137,498	4,108,245	2,029,253	6,137,498	1,743,319	861,106	2,604,425	47,292,059	96,981,833	41,153,888
June 30, 2047	151,464,151	6,461,149	4,272,822	2,188,327	6,461,149	1,760,346	901,562	2,661,908	50,858,304	100,605,847	41,448,277

EXHIBIT E

Projected Cash Flows (Open Group) – Funded Approach

**Total Medical & Life Insurance - Pay-as-you-go Funding**

Measurement Date	Number of Retirees, Spouses & Surviving Spouses	Total OPEB Liability	Present Value at 3.00% of Total OPEB Liability	Employer Share of Premiums / Claims including "implicit cost"	Present Value at 3.00% of Employer Share of Premiums / Claims including "implicit cost"
June 30, 2017	194	34,952,280	34,952,280	748,115	748,115
June 30, 2018	208	36,822,416	35,749,918	868,691	843,389
June 30, 2019	218	38,907,851	36,674,381	913,041	860,629
June 30, 2020	227	41,066,649	37,581,801	975,651	892,859
June 30, 2021	234	43,306,539	38,477,299	1,052,267	934,926
June 30, 2022	240	45,622,557	39,354,418	1,140,423	983,739
June 30, 2023	247	48,008,966	40,206,753	1,236,903	1,035,887
June 30, 2024	253	50,461,884	41,030,130	1,352,975	1,100,092
June 30, 2025	257	53,008,009	41,845,012	1,438,428	1,135,508
June 30, 2026	263	55,618,442	42,626,905	1,531,500	1,173,767
June 30, 2027	266	58,372,341	43,434,504	1,621,246	1,206,359
June 30, 2028	270	61,224,731	44,230,048	1,718,317	1,241,349
June 30, 2029	275	64,253,721	45,066,267	1,797,427	1,260,679
June 30, 2030	279	67,526,647	45,982,361	1,888,172	1,285,753
June 30, 2031	284	70,894,125	46,869,368	1,990,943	1,316,248
June 30, 2032	288	74,292,534	47,685,551	2,128,378	1,366,125
June 30, 2033	292	77,782,705	48,471,610	2,255,489	1,405,546
June 30, 2034	295	81,487,754	49,301,431	2,400,148	1,452,129
June 30, 2035	297	85,419,196	50,174,775	2,496,176	1,466,240
June 30, 2036	298	89,327,509	50,942,230	2,634,731	1,502,550
June 30, 2037	298	93,609,823	51,829,489	2,701,260	1,495,622
June 30, 2038	298	98,225,174	52,800,871	2,826,790	1,519,539
June 30, 2039	298	103,041,066	53,776,360	2,973,497	1,551,846
June 30, 2040	299	108,136,276	54,791,759	3,071,823	1,556,467
June 30, 2041	300	113,512,391	55,840,575	3,213,924	1,581,038
June 30, 2042	301	119,044,011	56,856,083	3,403,858	1,625,702
June 30, 2043	303	124,866,632	57,899,999	3,615,600	1,676,535
June 30, 2044	305	131,000,376	58,974,936	3,766,425	1,695,603
June 30, 2045	306	137,479,719	60,089,189	3,931,420	1,718,332
June 30, 2046	307	144,273,892	61,222,101	4,108,245	1,743,319
June 30, 2047	308	151,464,151	62,401,225	4,272,822	1,760,346
June 30, 2048	309	159,266,571	63,704,581	4,468,219	1,787,230
June 30, 2049	311	167,490,365	65,042,712	4,686,433	1,819,915
June 30, 2050	312	176,162,009	66,417,701	4,900,317	1,847,548
June 30, 2051	314	185,320,808	67,835,737	5,117,555	1,873,255
June 30, 2052	315	194,995,843	69,298,285	5,364,455	1,906,438
June 30, 2053	316	205,208,662	70,803,642	5,642,813	1,946,953
June 30, 2054	318	216,050,751	72,373,315	5,861,977	1,963,662
June 30, 2055	319	227,477,259	73,981,554	6,144,294	1,998,285
June 30, 2056	320	239,518,057	75,628,676	6,462,507	2,040,560

## EXHIBIT F

### GLOSSARY

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

**Actuarially Determined Contribution** - Amount of funding required annually to fully fund plan benefits. Determined by the actuary using a consistent methodology.

**Amortization** - Allows the recognition of liability over a fixed period of time.

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

**Deferred Inflows/Outflows of Resources** - Amounts arising from experience gains and losses that have not been recognized into the OPEB Expense, but will be recognized in the future.

**Discount Rate** - The interest rate used to calculate the present value of future cash flows. Under GASB 75, the rate should be the expected long term rate of return on investments for a plan that is being fully funded, the 20 year municipal bond index for a pay-as-you-go plan, and a blend of the two rates for a plan that is being partially funded.

**Fiduciary Net Position** - The value of cash, investments, other assets and property belonging to an OPEB trust.

**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."

**Implicit Subsidy** - The liability that arises because retirees who are not eligible for Medicare are charged the same premium as active employees even though their actual medical costs are higher on average.

**Irrevocable Contribution** - The transfer of assets to a qualified trust in which assets may only be withdrawn for the purpose of providing retiree other post employment benefits.

EXHIBIT F**GLOSSARY***(continued)*

**Net OPEB Liability (NOL)** - Total OPEB Liability less the Fiduciary Net Position.

**Other Post Employment Benefits (OPEB)** - Benefits that an employee will begin to receive at the start of retirement. This does not include pension benefits paid to the retired employee.

**OPEB Trust** - An entity which holds assets for the sole purpose of funding OPEB. All contributions and earnings within this entity must be irrevocable and protected from creditors.

**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.

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

**Total OPEB Liability (TOL)** - That portion, as determined by the Individual Entry Age Normal Actuarial Cost Method, of the Actuarial Present Value of benefits and expenses which are not provided for by future Service Costs.