LINCOLN-SUDBURY REGIONAL SCHOOL DISTRICT

OTHER POSTEMPLOYMENT BENEFITS PROGRAM

ACTUARIAL VALUATION

July 1, 2013

Prepared by:

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October 15, 2014

Mr. Patrick Collins
Business Manager
Lincoln-Sudbury Regional School District
390 Lincoln Road
Sudbury, MA 01776

Dear Patrick:

Enclosed is our report summarizing the results of an actuarial valuation of the Lincoln-Sudbury Regional School District's Other Postemployment Benefits (OPEB) as of July 1, 2013. Our valuation was performed in accordance with the provisions contained in the GASB Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions (GASB 45).

A summary of the valuation results is shown in Section 1. The principal results of our valuation are summarized in Section 2. The Plan Provisions and Actuarial Assumptions and Methods are shown in Sections 6 and 7, respectively. Section 8 summarizes the demographic profile of active employees and retirees.

The required disclosures under GASB 45 are presented in Section 3.

Our best estimate health care cost trend assumptions are based on recent experience and anticipated future cost increases under the Lincoln-Sudbury Regional School District medical plans. Section 5 illustrates the sensitivity of actuarial accrued liability and normal cost to a one percentage increase and decrease in the health care cost trend assumption for each future year.

Our actuarial valuation is based on a discount rate of 3.5% compounded annually. To illustrate the impact on cost of fully prefunding the District's benefit liabilities, our report also includes valuation results based on an alternative 7.5% discount rate.

We also provide a 30-year forecast of the Annual Required Contribution as well as a 10-year forecast of the Annual OPEB Cost and the Net OPEB Obligation in Section 4.

Our calculations were based on participant census data and other information provided by the Lincoln-Sudbury Regional School District and the benefit provisions of the medical plans as described in the benefit summaries. Our valuation is also based on medical plan rates provided by the Minuteman Nashoba Health Group.

Our valuation follows generally accepted actuarial methods and we perform such tests as we consider necessary to assure the accuracy of the results. The amounts presented in this report have been appropriately determined according to the actuarial assumptions and methods stated herein.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We appreciate this opportunity to be of service to the Lincoln-Sudbury Regional School District. We are available to answer any questions with respect to our valuation.

Respectfully submitted,

Linda Bournival

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ACTUARIAL CERTIFICATION

This report presents the results of the Actuarial Valuation for the Lincoln-Sudbury Regional School District Postemployment Benefits Other Than Pensions as of July 1, 2013. The report presents the accounting and financial reporting information in accordance with Statement Number 45 of the Governmental Accounting Standards Board (GASB 45).

This valuation was performed using employee data and financial information provided to us by the District. Although we did not audit the data used in the valuation, we believe that the information is complete and reliable.

This report was completed in accordance with generally accepted actuarial standards and procedures, and conforms to the Code of Professional Conduct of the American Academy of Actuaries. The actuarial assumptions other than those explicitly applicable to the postemployment benefit plans are consistent with those used by the Middlesex County Retirement System and Massachusetts Teachers Retirement System's actuaries for the Retirement System pension valuations.

Future actuarial valuation results may differ significantly from the current results presented in this report. Examples of potential sources of volatility include plan experience differing from that anticipated by the economic or demographic assumptions, the effect of new entrants, changes in economic or demographic assumptions, the effect of law changes and the delayed effect of smoothing techniques.

This report is intended for the sole use of the Lincoln-Sudbury Regional School District and is intended to provide information to comply with the stated purpose of the report. It may not be appropriate for other purposes.

The undersigned credentialed actuaries are Members of the American Academy of Actuaries and together meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein. They are available to answer any questions with regard to this report.

Respectfully submitted,

Linda Bournival Christopher E. Bean

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SECTION 1 - SUMMARY

BACKGROUND

The Lincoln-Sudbury Regional School District provides postemployment medical benefits to District retirees and their covered dependents. The District provides benefits as follows:

- Employees hired before April 2, 2012: retire after attaining age 55 with 10 or more years of service or any age with 20 or more years of service
- Employees hired after April 1, 2012: retire after attaining age 60 with 10 or more years of service

Medical coverage continues to the spouse after the death of the retiree provided the spouse makes the required contributions.

GASB 45

The Governmental Accounting Standards Board (GASB) is responsible for establishing accounting standards for governmental entities. Calculations developed in accordance with GASB standards are required when providing financial statements.

GASB believes that postemployment benefits are a form of deferred compensation whose cost should be recognized while the employee actually renders services rather than when the actual benefits are paid, many years later. Ideally under the GASB standard the entire postemployment liability is recognized by the time an active participant begins to receive postemployment benefits. GASB 45's focus is on postemployment benefits other than pensions, such as medical, dental and life insurance benefits. Unlike pensions where sponsors are pre-funding for benefits due in the future, the impact of GASB 45 will be to significantly increase cash pay-as-you-go expense.

The effective date for GASB 45 is a function of the District's total annual revenues in the first fiscal year ending after June 15, 1999. We understand that this is your fiscal year that ended June 30, 1999, and that your related revenues were greater than $10 million and less than $100 million. As a result, the District was required to comply with GASB 45 for the fiscal year ending June 30, 2009.

ACTUARIAL VALUATION

As of July 1, 2013, there are 207 active employees who may be eligible for benefits in the future and 171 retired employees, covered spouses and survivors who are currently receiving benefits. Coverage is for individuals and families or individuals and spouses depending on the coverage selected.

SECTION 1 - SUMMARY

Prior to GASB 45, the annual cost recognized was the annual premiums or benefits paid plus administrative expenses less any participant contributions paid towards the coverage. Under GASB 45, an annual cost for postemployment coverage is developed for any person who is currently receiving or who is currently actively employed and may be eligible to receive benefits in the future. In developing the GASB 45 cost for the Lincoln-Sudbury Regional School District, the payment of future benefits is determined using the current schedule of premiums under the Minuteman Nashoba Health Group plans. We have used a single unadjusted premium rate applicable to both active employees and non-Medicare-eligible retirees because the Minuteman Nashoba Health Group would offer the same premium rates if only non-Medicare-eligible retirees from the Lincoln-Sudbury Regional School District were covered. This is a change from the previous valuation, where we modified the premiums to reflect the population and to reflect the fact that actual healthcare expenses are higher as individuals age. These premiums are increased in the future under the annual healthcare cost trend rate assumptions. The per capita costs utilized in this valuation are detailed in Section 7, Actuarial Assumptions and Methods.

SUMMARY OF PRINCIPAL RESULTS

Valuation Date	July 1, 2013	July 1, 2011
Summary of Member Data		
Active Members*	207	157
Average Age	45.9	45.7
Average Service	10.5	11.2
Retired Employees, Covered Spouses and Survivors	171	178
Average Age	73.1	73.2
Discount rate	3.50%	3.50%
Actuarial Accrued Liability	$27,234,223	$46,124,163
Normal Cost	$1,012,132	$1,884,473
Assets	$0	$0
Unfunded Actuarial Accrued Liability	$27,234,223	$46,124,163
Annual Required Contribution	$2,527,989	$4,457,705
Expected Employer Premiums	$742,709	$1,098,665

* Active members as of July 1, 2011 include only those covered under health insurance. Active members as of July 1, 2013 include all active employees.

SECTION 1 - SUMMARY

ACTUARIAL ASSUMPTIONS

The most important assumption for GASB 45 is the discount rate, which is used to discount future benefits to current age. GASB 45 requires that the discount rate accurately reflects the rate of return on assets dedicated to paying the retiree medical benefits. This means that a traditional pay-as-you-go system, which pays benefits from the District's annual budget and not a dedicated trust, must use a discount rate close to the rate of return on cash. Full pre-funding by use of a dedicated trust with a mixture of stocks and bonds can employ a higher discount rate that accurately reflects the expected return on trust assets dedicated to pay retiree medical benefits. For the Lincoln-Sudbury Regional School District, we selected a 3.5% discount rate to reflect a pay-as-you-go system with an expected return close to the rate of return on cash.

CHANGES

Some assumptions used in this valuation have changed from those used in the July 1, 2011 valuation and are detailed in Section 7. The major assumption changes are summarized below:

- Health plans provided by the Minuteman Nashoba Health Group are considered "community-rated", therefore the claims cost does not include an implicit subsidy.
- disability rates were incorporated into this valuation to be consistent with the demographic assumptions used by the Middlesex County and Massachusetts Teachers Retirement Systems.
- the mortality table was changed from the RP-2000 Mortality Table projected to 2011 using Scale AA to the RP-2000 Mortality Table projected to 2013 using Scale AA.
- Medical and life insurance participation rates were revised to 90% (from 100%) to reflect the change in active employee data submitted. Previously, the District submitted only active employees covered under health insurance. For this valuation, the District submitted all active employees.

RESULTS

We have provided results based on a discount rate of 3.5%. As shown in Table 4.2 of Section 4, the Annual OPEB Cost for the fiscal year ending June 30, 2014 under GASB 45 is $2,349,271 and the estimated Annual OPEB Cost for the fiscal year ending June 30, 2015 under GASB 45 is $2,427,727.

The accumulated Net OPEB Obligation as of June 30, 2014 is $10,829,588 and the estimated Net OPEB Obligation as of June 30, 2015 is $12,474,776.

The Actuarial Accrued Liability (AAL) as of July 1, 2013 is $27,234,223. The AAL by status breakdown is shown below:

Actives:	$15,433,007
Retirees, Beneficiaries and Surviving Spouses:	11,801,216
Total:	$27,234,223

SECTION 1 - SUMMARY

ACTUARIAL GAIN/LOSS ANALYSIS

In performing the actuarial valuation, various assumptions are made regarding future premium rates, mortality, retirement, disability and withdrawal rates as well as investment returns. A comparison of the results of the current valuation and the prior valuation is made to determine how closely actual experience relates to expected. Below is the development of the estimated Actuarial Gain or Loss for the current 2-year period:

	July 1, 2011	July 1, 2012
Actuarial Accrued Liability, beginning of year	$46,124,163	$48,571,212
Normal Cost	1,884,473	1,959,852
Expected Benefit Payments	(1,098,665)	(1,175,178)
Interest	1,661,241	1,748,198
Expected Actuarial Accrued Liability, end of year	$48,571,212	$51,104,084
Actual Actuarial Accrued Liability		$27,234,223
(Gain)/Loss		($23,869,861)

The actuarial gain of $23,869,861 was mostly comprised of the following:

♦ gain as a result of favorable demographic experience	(4,301,889)
♦ gain as a result of premium rates less than expected from the prior valuation	(9,080,449)
♦ gain as a result of reduction in initial claims cost due to removal of implicit subsidy	(11,070,463)
♦ loss as a result of the valuation of the excise tax imposed by the Patient Protection and Affordable Care Act, effective 2018	582,940
♦ Total (Gain)/Loss	(23,869,861)

SECTION 1 - SUMMARY

REIMBURSEMENT FOR HEALTHCARE PREMIUM CONTRIBUTIONS

Whenever the service of a retired employee is attributable to service in more than one Massachusetts governmental unit and the retired employee receives a healthcare premium contribution, Section 9A1/2 of M.G.L. Section 32B provides for reimbursement by other governmental units for the portion of healthcare premium contributions that corresponds to the percentage of the retiree's creditable service that is attributable for each governmental unit. The other governmental units shall be charged based on the Lincoln-Sudbury Regional School District's contribution rate or the contribution rate of the first employer, whichever is lower.

For purposes of this valuation, we have not taken into account any prior service rendered at other Massachusetts entities for current or future retirees for the Lincoln-Sudbury Regional School District nor have we taken into account any service rendered by former Lincoln-Sudbury Regional School District employees currently working at or retired from other Massachusetts entities that may notify the Lincoln-Sudbury Regional School District of reimbursement due for former Lincoln-Sudbury Regional School District employees.

SECTION 2 - PRINCIPAL VALUATION RESULTS

Section 20 of M.G.L. Chapter 32B allows municipal entities to establish an OPEB trust for purposes of accumulating assets to prefund the OPEB liabilities. We understand that the Lincoln-Sudbury Regional School District has not established an irrevocable trust for the purpose of prefunding OPEB liabilities.

The Actuarial Value of Plan Assets is equal to the market value. The asset activity during the 2-year period July 1, 2012 through June 30, 2013 follows:

TABLE 2.1 - OPEB TRUST ASSETS

Market Value of Assets		
Fiscal Year Ending	6/30/2013	6/30/2012
Assets as of Beginning of Year	$0	$0
Contributions Receivable	$0	$0
Assets as of Beginning of Year	$0	$0
Employer Contributions		
Paid Premiums*	$687,928	$851,766
OPEB Trust Deposits	0	0
Total Employer Contributions	$687,928	$851,766
Benefits Paid	(687,928)	($851,766)
Expenses	0	0
Investment Earnings	0	0
Assets as of End of Year	$0	$0

* Paid premiums for the fiscal years ending June 30, 2013 and June 30, 2012 were provided by the Lincoln-Sudbury Regional School District.

SECTION 2 - PRINCIPAL VALUATION RESULTS

The Actuarial Accrued Liability is the portion of the Actuarial Present Value of Future Benefits which is allocated to all periods prior to a valuation year and therefore is not provided for by future Normal Costs. Below is the Actuarial Accrued Liability assuming a discount rate of 3.5%, the rate of return on cash, and 7.5%, the rate of return on a dedicated trust if the District were to fully pre-fund benefits:

TABLE 2.2 - ACTUARIAL ACCRUED LIABILITY

	Pay-As-You-Go	Full Pre-Funding
Discount Rate	**3.5%**	**7.5%**
Current Active Employees		
Pre-Medicare Gross Benefit	$5,416,922	$3,120,944
Pre-Medicare Participant Contributions	1,549,234	903,948
Net Pre-Medicare Benefit	$3,867,688	$2,216,996
Post - Medicare Gross Benefit	$16,510,326	$6,326,998
Post - Medicare Participant Contributions	4,945,007	1,897,000
Net Post - Medicare Benefit	$11,565,319	$4,429,998
Total Current Active Employees	$15,433,007	$6,646,994
Current Retirees		
Pre-Medicare Gross Benefit	$1,433,198	$1,251,193
Pre-Medicare Participant Contributions	400,604	349,332
Net Pre-Medicare Benefit	$1,032,594	$901,861
Post - Medicare Gross Benefit	$13,980,137	$9,184,652
Post - Medicare Participant Contributions	3,211,515	2,075,962
Net Post - Medicare Benefit	$10,768,622	$7,108,690
Total Current Retirees	$11,801,216	$8,010,551
Total Actuarial Accrued Liability (AAL)	$27,234,223	$14,657,545

SECTION 2 - PRINCIPAL VALUATION RESULTS

The Normal Cost is the portion of the Actuarial Present Value of Future Benefits which is attributed to services rendered by active employees in the current year. Below is the Normal Cost assuming a discount rate of 3.5%, the rate of return on cash, and 7.5%, the rate of return on a dedicated trust if the District were to fully pre-fund benefits:

TABLE 2.3 - NORMAL COST

	Pay-As-You-Go	Full Pre-Funding
Discount Rate	**3.5%**	**7.5%**
Current Active Employees		
Pre-Medicare Gross Benefit	$377,543	$177,195
Pre-Medicare Participant Contributions	105,070	50,000
Net Pre-Medicare Benefit	$272,473	$127,195
Post - Medicare Gross Benefit	$1,054,904	$330,541
Post - Medicare Participant Contributions	315,245	99,029
Net Post - Medicare Benefit	$739,659	$231,512
Total Current Active Employees	$1,012,132	$358,707
Current Retirees		
Pre-Medicare Gross Benefit	$0	$0
Pre-Medicare Participant Contributions	0	0
Net Pre-Medicare Benefit	$0	$0
Post - Medicare Gross Benefit	$0	$0
Post - Medicare Participant Contributions	0	0
Net Post - Medicare Benefit	$0	$0
Total Current Retirees	$0	$0
Total Normal Cost (NC)	$1,012,132	$358,707

SECTION 2 - PRINCIPAL VALUATION RESULTS

Under GASB 45, the Annual Required Contribution (ARC) of the employer equals the Normal Cost plus a provision for amortizing the Unfunded Actuarial Accrued Liability. We have assumed level dollar amortization over the maximum acceptable amortization period of 30 years. For the period beginning July 1, 2013, the ARC, calculated under the parameters of this actuarial valuation, would be:

TABLE 2.4 - ANNUAL REQUIRED CONTRIBUTION and ANNUAL OPEB COST

	Pay-As-You-Go	Full Pre-Funding
Discount Rate	**3.5%**	**7.5%**
1. Normal Cost	$1,012,132	$358,707
2. Unfunded Actuarial Accrued Liability		
a. Actuarial Accrued Liability	$27,234,223	$14,657,545
b. Actuarial Value of Plan Assets	$0	$0
c. Unfunded Actuarial Accrued Liability	$27,234,223	$14,657,545
3. Amortization of Unfunded Actuarial Accrued Liability		
a. Unfunded Actuarial Accrued Liability	$27,234,223	$14,657,545
b. Amortization Period in years	30	30
c. Factor Increasing Rate	0.0%	0.0%
d. Amortization Factor	19.04	12.70
e. Amortization Amount (3.a. / 3.d.)	$1,430,369	$1,154,137
4. Interest on 1. and 3.e.	$85,488	$113,463
5. Annual Required Contribution (1. + 3.e. + 4.)	$2,527,989	$1,626,307
6. Net OPEB Obligation / (Asset) beginning of year	$9,223,026	Not Applicable
7. Interest on Net OPEB Obligation at 3.50%	$322,806	Not Applicable
8. Adjustment to Annual Required Contribution at 3.50%	($501,524)	Not Applicable
9. Annual OPEB Cost (5. + 7. - 8.)	$2,349,271	Not Applicable

SECTION 3 - GASB 45 ACCOUNTING DISCLOSURE

GASB 45 requires disclosure of the annual OPEB cost, the Net OPEB Obligation and the Schedule of Funding Progress. In addition, information about the Actuarial Methods and Assumptions used in the valuation and a summary of the Substantive Plan Provisions are disclosed, which are provided in Section 6 and Section 7, respectively.

Annual OPEB Cost and Net OPEB Obligation*

Fiscal Year Ending	6/30/2014	6/30/2013	6/30/2012
Discount rate	3.50%	3.50%	3.50%
Annual Required Contribution	$2,527,989	$4,668,741	$4,457,705
Interest on Net OPEB Obligation	322,806	204,494	126,081
Adjustment to Annual Required Contribution	(501,524)	(317,710)	(164,061)
Annual OPEB Cost	$2,349,271	$4,555,525	$4,419,725
Expected Benefit Payments	(742,709)	(1,175,178)	(1,098,665)
Employer Contributions to OPEB Trust	-	-	-
Total Employer Contributions	(742,709)	(1,175,178)	(1,098,665)
Change in Net OPEB Obligation	$1,606,562	$3,380,347	$3,321,060
Net OPEB Obligation (Asset) - beginning of year	$9,223,026	$5,842,679	$2,521,619
Net OPEB Obligation (Asset) - end of year	$10,829,588	$9,223,026	$5,842,679

* Entries for fiscal years June 30, 2013 and June 30, 2012 are based on information provided in the District's audited financial statements.

Plan History

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
6/30/2014	2,349,271	31.6%	10,829,588
6/30/2013	4,555,525	25.8%	9,223,026
6/30/2012	4,419,725	24.9%	5,842,679

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) / c)
7/1/2013	0	27,234,223	27,234,223	0.00%	15,208,353	179.1%
7/1/2011	0	46,124,163	46,124,163	0.00%	15,479,452	298.0%
6/30/2009	0	29,430,886	29,430,886	0.00%	Not available	Not available

SECTION 4 - FORECASTS

OVERVIEW

In Section 4, we have provided a 30-year forecast of the Annual Required Contribution, Actuarial Accrued Liability, Assets and Unfunded Actuarial Accrued Liability. The entries in Table 4.1 are based on the assumptions stated below:

- Expected Benefit Payments are developed in the actuarial valuation and are based on the assumptions detailed in Section 7.

- Normal Cost with interest is assumed to increase annually by 4.%.

- Assets are assumed to grow annually at the selected discount rate plus OPEB Trust Contributions made at the end of each fiscal year.

- Actuarial Accrued Liability (AAL), end of year, equals AAL, beginning of year, plus Normal Cost less Expected Benefit Payments plus interest on these items.

- Unfunded Actuarial Accrued Liability (UAAL) equals the AAL less Assets.

- the Annual Required Contribution (ARC) is the sum of the Normal Cost, the Amortization Amount and Interest.

Table 4.1 is based on funding the Expected Benefit Payments.

- The assumed discount rate is 3.5%.

- Amortization Amount is the amount necessary to amortize the Unfunded Actuarial Accrued Liability over 30 years at a discount rate of 3.5% on an open amortization basis. The open amortization period is 30 years, recalculated each year.

SECTION 4 - FORECASTS

TABLE 4.1 - ANNUAL REQUIRED CONTRIBUTIONS

FYE June 30	(1) Normal Cost	(2) Actuarial Accrued Liability	(3) Expected Benefit Payments	(4) Actuarial Value of Assets	(5) Unfunded Actuarial Accrued Liability (2) - (3)	(6) Amortization Amount	(7) Interest	(8) ARC (1) + (6) + (7)	(9) OPEB Trust Contributions
2014	1,012,132	27,234,223	742,709	-	27,234,223	1,430,369	85,488	2,527,989	-
2015	1,052,617	28,479,383	782,539	-	28,479,383	1,495,766	89,193	2,637,576	-
2016	1,094,722	29,769,504	829,661	-	29,769,504	1,563,524	93,039	2,751,285	-
2017	1,138,511	31,100,419	872,314	-	31,100,419	1,633,425	97,018	2,868,954	-
2018	1,184,051	32,479,844	929,775	-	32,479,844	1,705,874	101,147	2,991,072	-
2019	1,231,413	33,896,225	982,298	-	33,896,225	1,780,264	105,409	3,117,086	-
2020	1,280,670	35,357,765	1,031,403	-	35,357,765	1,857,025	109,819	3,247,514	-
2021	1,331,897	36,871,483	1,080,169	-	36,871,483	1,936,527	114,395	3,382,819	-
2022	1,385,173	38,441,589	1,111,226	-	38,441,589	2,018,991	119,146	3,523,310	-
2023	1,440,580	40,090,193	1,159,889	-	40,090,193	2,105,577	124,115	3,670,272	-
2024	1,498,203	41,804,338	1,211,081	-	41,804,338	2,195,606	129,283	3,823,092	-
2025	1,558,131	43,586,037	1,282,561	-	43,586,037	2,289,183	134,656	3,981,970	-
2026	1,620,456	45,419,401	1,342,086	-	45,419,401	2,385,473	140,208	4,146,137	-
2027	1,685,274	47,320,881	1,407,840	-	47,320,881	2,485,340	145,971	4,316,585	-
2028	1,752,685	49,289,105	1,457,411	-	49,289,105	2,588,713	151,949	4,493,347	-
2029	1,822,792	51,345,556	1,490,156	-	51,345,556	2,696,720	158,183	4,677,695	-
2030	1,895,704	53,513,231	1,564,586	-	53,513,231	2,810,569	164,720	4,870,993	-
2031	1,971,532	55,756,517	1,611,430	-	55,756,517	2,928,388	171,497	5,071,417	-
2032	2,050,393	58,109,143	1,668,270	-	58,109,143	3,051,951	178,582	5,280,926	-
2033	2,132,409	60,567,906	1,728,080	-	60,567,906	3,181,088	185,972	5,499,469	-
2034	2,217,705	63,136,765	1,780,917	-	63,136,765	3,316,007	193,680	5,727,392	-
2035	2,306,413	65,830,061	1,846,459	-	65,830,061	3,457,461	201,736	5,965,610	-
2036	2,398,670	68,642,756	1,886,349	-	68,642,756	3,605,187	210,135	6,213,992	-
2037	2,494,617	71,608,800	1,904,277	-	71,608,800	3,760,966	218,945	6,474,528	-
2038	2,594,402	74,759,721	1,947,399	-	74,759,721	3,926,456	228,230	6,749,088	-
2039	2,698,178	78,080,332	1,993,984	-	78,080,332	4,100,858	237,966	7,037,002	-
2040	2,806,105	81,577,179	2,045,585	-	81,577,179	4,284,516	248,172	7,338,793	-
2041	2,918,349	85,255,624	2,081,552	-	85,255,624	4,477,711	258,862	7,654,922	-
2042	3,035,083	89,142,396	2,059,165	-	89,142,396	4,681,849	270,093	7,987,025	-
2043	3,156,486	93,308,800	2,045,696	-	93,308,800	4,900,672	282,001	8,339,159	-

30 years open, 3.5% discount rate.

SECTION 4 - FORECASTS

TABLE 4.2 - ANNUAL OPEB COST and NET OPEB OBLIGATION

FYE June 30	ARC	Interest on Net OPEB Obligation	ARC Adjustment	Amortization Factor	Annual OPEB Cost	Expected Employer Contributions	Change in Net OPEB Obligation	Net OPEB Obligation Balance
								9,223,026
2014	2,527,989	322,806	(501,524)	18.39	2,349,271	742,709	1,606,562	10,829,588
2015	2,637,576	379,036	(588,885)	18.39	2,427,727	782,539	1,645,188	12,474,776
2016	2,751,285	436,617	(678,346)	18.39	2,509,556	829,661	1,679,895	14,154,671
2017	2,868,954	495,413	(769,694)	18.39	2,594,673	872,314	1,722,359	15,877,030
2018	2,991,072	555,696	(863,351)	18.39	2,683,417	929,775	1,753,642	17,630,672
2019	3,117,086	617,074	(958,710)	18.39	2,775,450	982,298	1,793,152	19,423,824
2020	3,247,514	679,834	(1,056,217)	18.39	2,871,131	1,031,403	1,839,728	21,263,552
2021	3,382,819	744,224	(1,156,256)	18.39	2,970,787	1,080,169	1,890,618	23,154,170
2022	3,523,310	810,396	(1,259,063)	18.39	3,074,643	1,111,226	1,963,417	25,117,587
2023	3,670,272	879,116	(1,365,829)	18.39	3,183,559	1,159,889	2,023,670	27,141,257

Notes:

1. ARC and Expected Employer Contributions are from 30-Year Forecast of Annual Required Contributions (Table 4.1).
2. Interest on Net OPEB Obligation is computed on the prior year Net OPEB Obligation Balance.
3. ARC Adjustment is the prior year Net OPEB Obligation Balance amortized over 30 years.
4. OPEB Cost is the ARC plus Interest on Net OPEB Obligation less ARC Adjustment.
5. Change in Net OPEB Obligation is the difference between the Annual OPEB Cost and Expected Employer Contributions.
6. Net OPEB Obligation is the prior year Net OPEB Obligation Balance plus Change in Net OPEB Obligation.
7. Year one Interest on Net OPEB Obligation and ARC Adjustment computed at prior discount rate of 3.50%.
8. Subsequent years' Interest on Net OPEB Obligation and ARC Adjustment computed at current discount rate of 3.50%.

SECTION 5 - SENSITIVITY TO HEALTH CARE COST TREND RATE

Below we illustrate the sensitivity of Actuarial Accrued Liability to a one percentage increase and decrease in health care cost trend assumption for each future year:

TABLE 5.1 - ACTUARIAL ACCRUED LIABILITY

	Assumed Trend	Trend +1%	Trend -1%
Discount Rate	**3.5%**	**3.5%**	**3.5%**
Current Active Employees			
Pre-Medicare Gross Benefit	$5,416,922	$6,274,634	$4,699,928
Pre-Medicare Participant Contributions	1,549,234	1,790,562	1,347,154
Net Pre-Medicare Benefit	$3,867,688	$4,484,072	$3,352,774
Post - Medicare Gross Benefit	$16,510,326	$21,578,484	$12,779,458
Post - Medicare Participant Contributions	4,945,007	6,461,228	3,828,414
Net Post - Medicare Benefit	$11,565,319	$15,117,256	$8,951,044
Total Current Active Employees	$15,433,007	$19,601,328	$12,303,818
Current Retirees			
Pre-Medicare Gross Benefit	$1,433,198	$1,477,934	$1,390,505
Pre-Medicare Participant Contributions	400,604	413,273	388,520
Net Pre-Medicare Benefit	$1,032,594	$1,064,661	$1,001,985
Post - Medicare Gross Benefit	$13,980,137	$15,691,095	$12,528,023
Post - Medicare Participant Contributions	3,211,515	3,622,390	2,864,261
Net Post - Medicare Benefit	$10,768,622	$12,068,705	$9,663,762
Total Current Retirees	$11,801,216	$13,133,366	$10,665,747
Total Actuarial Accrued Liability (AAL)	$27,234,223	$32,734,694	$22,969,565

SECTION 5 - SENSITIVITY TO HEALTH CARE COST TREND RATE

Below we illustrate the sensitivity of Normal Cost to a one percentage increase and decrease in health care cost trend assumption for each future year:

TABLE 5.2 - NORMAL COST

	Assumed Trend	Trend +1%	Trend -1%
Discount Rate	3.5%	3.5%	3.5%
Current Active Employees			
Pre-Medicare Gross Benefit	$377,543	$460,082	$311,165
Pre-Medicare Participant Contributions	105,070	127,792	86,771
Net Pre-Medicare Benefit	$272,473	$332,290	$224,394
Post - Medicare Gross Benefit	$1,054,904	$1,453,155	$774,925
Post - Medicare Participant Contributions	315,245	433,995	231,699
Net Post - Medicare Benefit	$739,659	$1,019,160	$543,226
Total Current Active Employees	$1,012,132	$1,351,450	$767,620
Current Retirees			
Pre-Medicare Gross Benefit	$0	$0	$0
Pre-Medicare Participant Contributions	0	0	0
Net Pre-Medicare Benefit	$0	$0	$0
Post - Medicare Gross Benefit	$0	$0	$0
Post - Medicare Participant Contributions	0	0	0
Net Post - Medicare Benefit	$0	$0	$0
Total Current Retirees	$0	$0	$0
Total Normal Cost	$1,012,132	$1,351,450	$767,620

SECTION 6 - PLAN PROVISIONS

Eligibility:	Employees hired before April 2, 2012: retire after attaining age 55 with 10 or more years of service or any age with 20 or more years of service Employees hired after April 1, 2012: retire after attaining age 60 with 10 or more years of service
Medical Premium Rates:	The total monthly costs by plan are shown below:

Non-Medicare Plans - June 1, 2014	Individual	Family
Tufts HMO	$581.00	$1,577.00
Tufts POS	$1,604.00	$4,232.00
Harvard Pilgrim HMO	$592.00	$1,554.00
Harvard Pilgrim PPO	$1,350.00	$3,565.00
Fallon Select Care HMO	$523.00	$1,396.00
Fallon Direct Care HMO	$493.00	$1,319.00

Medicare Plans - January 1, 2014	
Tufts Medicare Prime Supplement	$349.00
Tufts Medicare Preferred HMO	$252.00
Fallon Senior Plan	$278.00

Medicare Part B:	The District reimburses retirees for the Medicare Part B penalty as indicated in the submitted data.
Participant Contributions:	Retired employees contribute based on their date of retirement* as follows:

Retired prior to 9/1995	10%
Retired after 9/1995 and on or before 9/1996	20%
Retired after 9/1996 and on or before 9/2010	25%
Retired after 9/2010	30%

* Certain exceptions apply based on the coverage elected.

Continuation of Coverage to Spouse After Death of Retiree:	Surviving spouse may continue coverage for lifetime by paying the required medical premium rates.

SECTION 6 - PLAN PROVISIONS

Life Insurance Benefit:	Retirees are eligible for a $1,000 life insurance benefit.
Life Insurance Premium:	The total monthly cost is $.245.
Life Insurance Contributions:	The District contributes 100% of the premium for life insurance coverage.
PPACA Excise Tax:	The Patient Protection and Affordable Care Act (PPACA) applies a 40% excise tax to the cost of plan benefits in excess of statutory thresholds beginning in 2018. The 2018 thresholds are assumed to be $10,200 for individual and $27,500 for family coverage and increase by CPI in future years. The annual limits are increased by $1,650 for individual and $3,450 for family coverage for retirees not eligible for Medicare benefits.

SECTION 7 - ACTUARIAL ASSUMPTIONS AND METHODS

Valuation Date: July 1, 2013

Discount Rates:
3.50% pay-as-you-go.
7.50% full pre-funding.

Amortization Method:
Level dollar amount over 30 years on an open amortization period for pay-as-you-go.

Level dollar amount over 30 years on a closed amortization period for full pre-funding.

Health Care Cost Trend Rates:

Year	Current	Prior
1	7.00%	9.00%
2	6.50%	8.00%
3	6.00%	7.00%
4	5.50%	6.00%
5	5.00%	5.00%
Ultimate	5.00%	5.00%

CPI: 3% per year.

Mortality Table: RP-2000 Mortality Table, projected to 2013, using Scale AA.

Turnover Rates: *Non-Teachers:*

Service	Rate
0	15.00%
1	12.00%
2	10.00%
3	9.00%
4	8.00%
5-9	7.60%
10-14	5.40%
15-19	3.30%
20-24	2.00%
25-29	1.00%
30+	0.00%

SECTION 7 - ACTUARIAL ASSUMPTIONS AND METHODS

Turnover Rates (continued): *Teachers:*

	Service					
	0		5		10+	
Age	Male	Female	Male	Female	Male	Female
20	13.0%	10.0%	5.5%	7.0%	1.5%	5.0%
30	15.0%	15.0%	5.4%	8.8%	1.5%	4.5%
40	13.3%	10.5%	5.2%	5.5%	1.7%	2.2%
50	16.2%	9.8%	7.0%	5.0%	2.3%	2.0%

Disability Rates:

Non-Teachers		*Teachers*	
Age	Rate	Age	Rate
20	0.01%	20	0.004%
30	0.03%	30	0.006%
40	0.10%	40	0.010%
50	0.19%	50	0.050%
60	0.28%	60	0.100%

Retirement Rates:

Non-Teachers:

Age	Male	Female
45-49	0.00%	0.00%
50-54	0.00%	0.00%
55-59	2.00%	5.50%
60-61	12.00%	5.00%
62-64	30.00%	15.00%
65-68	40.00%	15.00%
69	50.00%	20.00%
70	100.00%	100.00%

Retirement Rates (continued): *Teachers:*

	Years of Service			
	Less than 20		20+	
Age	Male	Female	Male	Female
50	0.0%	0.0%	2.0%	1.0%
51	0.0%	0.0%	2.0%	1.0%
52	0.0%	0.0%	2.0%	1.5%
53	0.0%	0.0%	2.0%	2.0%
54	0.0%	0.0%	3.0%	2.0%
55	3.5%	3.5%	3.0%	4.0%
56	3.5%	3.5%	3.5%	4.0%
57	5.0%	3.5%	4.0%	4.0%
58	5.5%	5.0%	5.0%	6.0%
59	6.0%	6.5%	6.0%	8.0%
60	7.5%	8.5%	15.0%	15.0%
61	12.0%	10.0%	25.0%	20.0%
62	14.0%	12.0%	30.0%	25.0%
63	14.0%	12.0%	30.0%	25.0%
64	14.0%	20.0%	30.0%	30.0%
65	30.0%	30.0%	30.0%	40.0%
66	30.0%	30.0%	25.0%	30.0%
67	30.0%	30.0%	25.0%	30.0%
68	30.0%	30.0%	25.0%	30.0%
69	30.0%	30.0%	25.0%	30.0%
70	100.0%	100.0%	100.0%	100.0%

SECTION 7 - ACTUARIAL ASSUMPTIONS AND METHODS

Medical Plan Participation: 90% of eligible retirees will elect to participate.

Life Insurance Participation: 90% of eligible retirees will elect to participate.

Dependent Status: Male spouses are assumed to be three years older and female spouses are assumed to be three years younger than the retired employee.

65% of employees are assumed to retire with a covered spouse.

For current retirees, the actual census information provided is used.

Medical Per Capita Costs: Annual per capita costs for the fiscal year beginning July 1, 2013 are shown below:

Age	Cost
Under 65	$9,796
65 and Older	$3,792

Retiree Contributions: Annual per capita participant contributions for the fiscal year beginning July 1, 2013 are shown below:

	Participant Contribution Rates			
Age	10%	20%	25%	30%
Under 65	$980	$1,959	$2,449	$2,939
65 and older	$379	$758	$948	$1,138

Excise Tax: For purposes of estimating the excise tax, per capita plan costs are developed for individual and family coverage for both Medicare and non-Medicare members. These plan costs are compared to the thresholds stipulated in the Patient Protection and Affordable Care Act (PPACA). Beginning in 2018, a 40% excise tax is applied on the excess of the plan costs over the thresholds, which increase annually by CPI.

Actuarial Cost Method: Projected Unit Credit. The costs of each employee's postemployment benefits are allocated on a pro rata basis from the employee's date of hire to the date the employee is fully eligible for benefits.

Employee Data: Employee and retiree data were submitted by the District. We made reasonable adjustments for missing or invalid data.

SECTION 8 - PLAN MEMBER INFORMATION

TABLE 8.1 - ACTIVE EMPLOYEES BY AGE and YEARS OF SERVICE AS OF JULY 1, 2013

	Years of Service										
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	Total	Percent
Under 25	3	0	0	0	0	0	0	0	0	3	1%
25 to 29	14	1	0	0	0	0	0	0	0	15	7%
30 to 34	10	10	3	0	0	0	0	0	0	23	11%
35 to 39	8	9	9	1	0	0	0	0	0	27	13%
40 to 44	4	7	12	5	0	0	0	0	0	28	14%
45 to 49	5	6	7	4	3	1	0	0	0	26	13%
50 to 54	2	8	8	4	2	5	0	0	0	29	14%
55 to 59	5	11	10	4	1	2	1	0	0	34	16%
60 to 64	2	5	3	5	1	1	0	1	0	18	9%
65 to 69	0	1	2	0	1	0	0	0	0	4	2%
70 & up	0	0	0	0	0	0	0	0	0	0	0%
Total	53	58	54	23	8	9	1	1	0	207	
Percent	26%	29%	26%	11%	4%	4%	0%	0%	0%		100%

Average Age: 45.9 Average Service: 10.5

SECTION 8 - PLAN MEMBER INFORMATION

TABLE 8.2 - RETIRED EMPLOYEES, COVERED SPOUSES and SURVIVORS AS OF JULY 1, 2013

Age	Tufts HMO	Tufts POS	Harvard Pilgrim HMO	Harvard Pilgrim PPO	Fallon Select Care HMO	Tufts Medicare Prime Supplement	Tufts Medicare Preferred HMO	Fallon Senior Plan	Life Only	Total
Under 40	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	0	0
45 to 49	0	0	0	0	0	0	0	0	0	0
50 to 54	0	0	0	1	0	0	0	0	0	1
55 to 59	1	3	0	3	0	0	0	0	1	8
60 to 64	5	5	1	2	0	2	1	0	3	19
65 to 69	0	2	0	4	2	21	9	0	1	39
70 to 74	0	1	1	0	0	20	4	0	1	27
75 to 79	0	1	0	1	1	12	5	0	3	23
80 to 84	0	1	0	1	0	13	4	0	3	22
85 to 89	0	1	0	1	0	6	0	0	4	12
90+	0	0	0	0	0	4	0	0	1	5
Total	6	14	2	13	3	78	23	0	17	156
Covered Spouses	3	5	1	4	2	0	0	0		15

SECTION 9 - GASB 45 GLOSSARY OF TERMS

Actuarial Accrued Liability – The portion of the Actuarial Present Value of future benefits which is allocated to all periods prior to a valuation year and therefore is not provided by future Normal Costs.

Actuarial Assumptions – Assumptions as to the occurrence of future events affecting OPEB costs, such as mortality, withdrawal, disablement and retirement; changes in compensation and Government provided pension benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.

Actuarial Present Value of Future Benefits – The present value of the cost to finance all benefits payable in the future, discounted to reflect the probability of payment and the time value of money.

Actuarial Valuation – the determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets and related Actuarial Present Values for an OPEB plan.

Actuarial Value of Assets – The value of plan assets used in an actuarial valuation. The Actuarial Value of Assets may reflect smoothing techniques intended to dampen year-to-year fluctuations in the market value of assets.

Annual OPEB Cost - The accrual basis annual cost for the OPEB plan sponsored by the employer. In the year of implementation of GASB 45, the Annual OPEB Cost equals the ARC. In subsequent years, if an employer has a Net OPEB Obligation, Annual OPEB Cost equals the ARC plus one year's interest on the Net OPEB Obligation plus an adjustment to the ARC.

Annual Required Contribution (ARC) – Includes the employer's Normal Cost and a provision for amortizing the Unfunded Actuarial Accrued Liability.

Explicit Subsidy – The difference between (a) the blended rates based on combined active and retired member experience and (b) actual cash contributions made by the employer.

Funded Ratio – The Actuarial Value of Assets expressed as a percentage of the Actuarial Accrued Liability.

Health Cost Trend Rate – The rate of change in per capita health claims cost over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

Implicit Subsidy – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group and (b) the blended rates based on combined active and retired member experience.

SECTION 9 - GASB 45 GLOSSARY OF TERMS

Net OPEB Obligation – The cumulative excess since adoption of GASB 45 of Annual OPEB Cost over the employer's contributions to the plan.

Normal Cost – The portion of the Actuarial Present Value of Future Benefits which is allocated to a valuation year.

OPEB – Other Postemployment Benefits including medical, dental, vision, hearing and life insurance benefits.

Plan Assets – Investments segregated and restricted in a trust or similar arrangement under which:

- employer contributions to the trust are irrevocable,
- assets are dedicated to providing plan benefits, and
- assets are legally protected from creditors.

Pay-As-You-Go – A method of financing an OPEB plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

Present Value of Future Benefits – The actuarial present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value of money and the probabilities of payment.

Projected Unit Credit Actuarial Cost Method – A method under which the projected benefits of each individual included in an Actuarial Valuation are allocated by a consistent formula to valuation years. Projected Unit Credit is one of the actuarial cost methods allowed and most often used for developing liabilities under GASB 45.

Substantive Plan – The terms of an OPEB plan as understood by the employer and plan members.

Unfunded Actuarial Accrued Liability – The excess of Actuarial Accrued Liability over the Actuarial Value of Assets.