

Nashoba Regional School District

Actuarial Valuation and Review of Other
Postemployment Benefits (OPEB) as of
December 31, 2013 in accordance with GASB
Statements No. 43 and No. 45





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March 25, 2014

*Mr. George P. King
Assistant Superintendent for Finance
Nashoba Regional School District
Central Office
50 Mechanic Street
Bolton, MA 01740*

Dear Mr. King:


We are pleased to submit this report on our actuarial valuation of postemployment welfare benefits as of December 31, 2013 under Governmental Accounting Standards Board (GASB) Statements Number 43 and 45. It establishes the liabilities of the postemployment welfare benefit plan in accordance with GASB Statements Number 43 and 45 for the fiscal year beginning July 1, 2013 and summarizes the actuarial data.

This report is based on information received from the Nashoba Regional School District. The actuarial projections were based on the assumptions and methods described in Exhibit II and on the plan of benefits as summarized in Exhibit III.

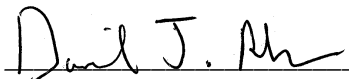
We look forward to discussing this with you at your convenience.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By: 
Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President and Actuary

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Daniel J. Rhodes, FSA, MAAA
Vice President and Consulting Actuary

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**SECTION 1: Executive Summary for Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

PURPOSE

This report presents the results of our actuarial valuation of the Nashoba Regional School District (the “Employer”) postemployment welfare benefit plan as of December 31, 2013. The results are in accordance with the Governmental Accounting Standards, which prescribe an accrual methodology for accumulating the value of other postemployment benefits (OPEB) over participants’ active working lifetimes. The accounting standard supplements cash accounting, under which the expense for postemployment benefits is equal to benefit and administrative costs paid on behalf of retirees and their dependents (*i.e.*, a pay-as-you-go basis).

HIGHLIGHTS OF THE VALUATION

During the fiscal year ending June 30, 2014, we project the School District will pay benefits (net of retiree contributions) on behalf of retired employees of about \$1,007,000. This amount is less than the annual “cost” (the “Annual Required Contribution,” or ARC) of approximately \$3,764,000.

The GASB statements provide the method for selecting the investment return assumption (discount rate). If the benefits are funded, the discount rate should be based on the estimated long-term investment yield on the investments expected to be used to finance the payment of benefits. If financing continues to be pay-as-you-go, the discount rate should be based on the expected yield on the assets of the employer. If the benefits are partially funded, a blended discount rate can be used that reflects the proportionate amounts of plan and employer assets expected to be used.

For the purpose of this valuation, we have used 7.75% and 4.50%, respectively, for funded and pay-as-you-go. In the prior valuation, the funded discount rate was 8.0%.

The GASB statements allow the use of one of six funding methods to determine the actuarial liabilities. We have used the projected unit credit cost method.

To determine the amortization payment on the unfunded actuarial accrued liability (UAAL), an amortization period and amortization method must be selected. We have used a 30-year open amortization of the UAAL (the maximum permitted by the GASB statements), with payments increasing at 4.5% per year. The GASB statements allow for either an open or closed amortization period. In open amortization, the period is reset to the initial value every year and the UAAL is reamortized, while under a closed amortization, the remaining period decreases and the UAAL is eventually “paid off.”

To be considered a funded plan, the “contribution in relation to the ARC” must equal the ARC. For example, if the ARC is \$2,514,000, and the employer pays benefits to retirees of \$1,007,000, then an additional contribution of the difference, or approximately \$1,507,000 will need to be added to an OPEB trust fund during the fiscal year ending June 30, 2014.

Assets set aside to fund OPEB liabilities must be held in a trust or equivalent arrangement, through which assets are accumulated and benefits are paid as they come due. Employer contributions to the plan are irrevocable, plan assets are dedicated to providing benefits to retirees and their spouses in accordance with the terms of the plan, and plan assets are legally protected from creditors of the employer.

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Chapter 68 of the Acts of 2011 permits municipalities, authorities and certain other government entities of the Commonwealth to establish a liability trust fund for funding retiree benefits (other than pension), also known as Other Post-Employment Benefits (OPEB). The legislation also ensures that these entities have access to the state's investment trust, the State Retiree Benefits Trust Fund (SRBTF) for purposes of investment OPEB funds.

GASB guidelines prohibit the offset of OPEB obligations by the future value of Medicare Part D subsidies. Therefore, these calculations do not include an estimate for retiree prescription drug plan federal subsidies that the Employer may be eligible to receive for plan years beginning in 2006.

Employer decisions regarding plan design, cost sharing between the Employer and its retirees, actuarial cost method, amortization techniques, and integration with Medicare are just some of the decisions that affect the magnitude of OPEB obligations. We are available to assist you with any investigation of such options you may wish to undertake.

This valuation does not include the potential impact of any future changes due to the Patient Protection and Affordable Care Act (PPACA) and the Health Care and Education Reconciliation Act (HCERA) of 2010 other than the excise tax on high cost health plans beginning in 2018 (reflected in this valuation) and those previously adopted as of the valuation date.

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KEY VALUATION RESULTS

- The **unfunded actuarial accrued liability (UAAL)** as of December 31, 2013 is \$45,407,000. Going forward, net unfunded plan obligations will be expected to change due to normal plan operations, which consist of continuing accruals for active members, plus interest on the total actuarial accrued liability, less expected benefit payments and contributions. Future valuations will analyze the difference between actual and expected unfunded actuarial accrued liabilities.
 - As of December 31, 2013 the ratio of assets to the AAL (the funded ratio) is 0.00%.
- The **Annual Required Contribution (ARC)** for fiscal year 2014 is \$3,764,000. The ARC is expected to remain relatively level as a percentage of payroll, as long as the ARC is funded each year. If the ARC is not funded, it may be expected to increase as a percentage of payroll over time.

Plan obligations of \$45,407,000 as of December 31, 2013 represent an increase of \$4,704,000 from \$40,703,000 as shown in the December 31, 2011 valuation.

Plan obligations had been expected to increase \$6,366,000 due to normal plan operations, which consist of continuing accruals for active members, plus interest on the total obligation, less expected benefit payments. The decrease was the net effect of the following:

- An **actuarial experience gain** decreased obligations by \$99,000. This was the net result of gains and losses due to demographic changes.

- **Valuation assumption and plan changes** decreased obligations by \$1,563,000. This was the net result of *decreases* in obligations due to 1) valuation year per capita health costs not increasing as much as projected, 2) a change in the retirement eligibility requirements for members hired on or after April 2, 2012, and 3) a change in the non-Medicare and Medicare enrollment assumption for current and future retirees, partially offset by *increases* in obligations due to 4) a change in the future trend on per capita health care costs based on what is likely to occur in the marketplace, 5) changes in the demographic assumptions as described in Exhibit II, Section 4, and 6) reflecting the excise tax on high cost health plans beginning in 2018. The addition of the excise tax in this valuation resulted in a 0.84% increase in the actuarial accrued liability and a 1.42% increase in the normal cost. The complete set of assumptions is shown in Exhibit II.

**SECTION 1: Executive Summary for Nashoba Regional School District December 31, 2013
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ACCOUNTING REQUIREMENTS

The Governmental Accounting Standards Board (GASB) issued Statement Number 43 -- *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, and Statement Number 45 – *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. Under these statements, all state and local governmental entities that provide other post employment benefits (OPEB) are required to report the cost of these benefits on their financial statements.

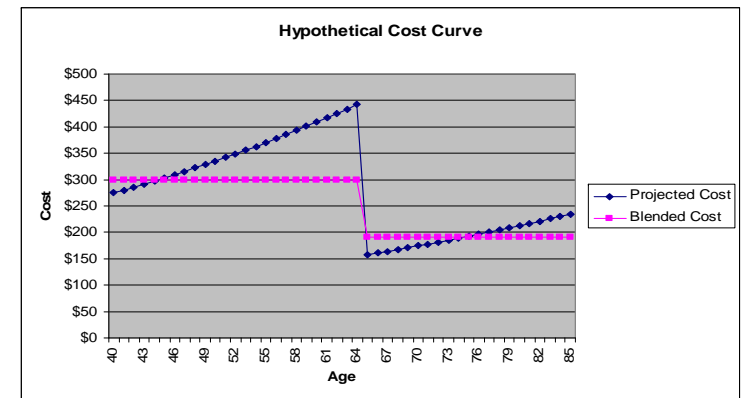
The statements cover postemployment benefits of health, prescription drug, dental, vision and life insurance coverage for retirees; long-term care coverage, life insurance and death benefits that are *not* offered as part of a pension plan; and long-term disability insurance for employees. These benefits, referred to as OPEB, are typically financed on a pay-as-you-go basis. The new standard introduces an accrual-basis accounting requirement; thereby recognizing the employer cost of postemployment benefits over an employee’s career. The standards also introduce a consistent accounting requirement for both pension and non-pension benefits.

The total cost of providing postemployment benefits is projected, taking into account assumptions about demographics, turnover, mortality, disability, retirement, health care trends, and other actuarial assumptions. This amount is then discounted to determine the actuarial present value of the total projected benefits (APB). The actuarial accrued liability (AAL) is the portion of the present value of the total projected benefits allocated to years of employment prior to the measurement date. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and actuarial value of assets in the Plan.

Once the UAAL is determined, the Annual Required Contribution (ARC) is determined as the normal cost (the APB allocated to the current year of service) and the amortization of the UAAL. This ARC is compared to actual contributions made and any difference is reported as the net OPEB obligation (NOO). In addition, required supplementary information (RSI) must be reported, including historical information about the UAAL and the progress in funding the Plan.

The benefits valued in this report are limited to those described in Exhibit III of Section 4.

The following graph illustrates why a significant accounting obligation may exist even though the retiree contributes most or all of the blended premium cost of the plan. The average cost for retirees is likely to exceed the average cost for the whole group, leading to an implicit subsidy for these retirees. The accounting standard requires the employer to identify and account for this implicit subsidy as well as any explicit subsidies the employer may provide.

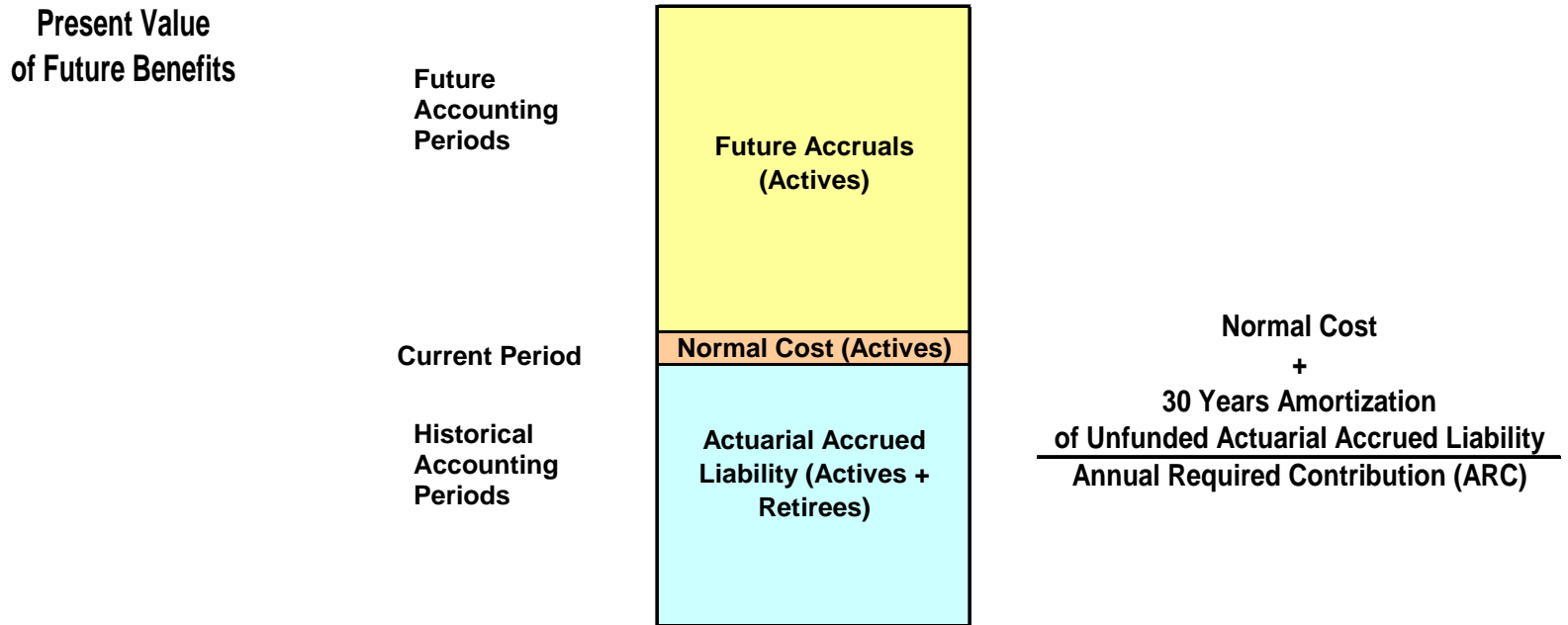


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This graph shows how the actuarial present value of the total projected benefits (APB) is broken down and allocated to various accounting periods.

The exact breakdown depends on the actuarial cost method and amortization methods selected by the employer.

GASB 43/45 Measurement



$$\text{Net OPEB Obligation} = \text{ARC}_1 + \text{ARC}_2 + \text{ARC}_3 + \dots - \text{Contribution}_1 - \text{Contribution}_2 - \text{Contribution}_3 - \dots$$

**SECTION 1: Executive Summary for Nashoba Regional School District December 31, 2013
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Actuarial computations under GASB statements are for purposes of fulfilling certain welfare plan accounting requirements. The calculations shown in this report have been made on a basis consistent with our understanding of GASB. Determinations for purposes other than meeting the financial accounting requirements of GASB may differ significantly from the results reported here.

Calculations are based on the benefits provided under the terms of the substantive plan in effect at the time of the valuation and on the pattern of sharing costs between the employer and plan members. The projection of benefits does not incorporate the potential effect of legal or contractual funding limitations on the pattern of cost sharing between the employer and plan members in the future.

Actuarial calculations reflect a long-term perspective, and the methods and assumptions use techniques designed to reduce short term volatility in accrued liabilities and the actuarial value of assets, if any.

The calculation of an accounting obligation does not, in and of itself, imply that there is any legal liability to provide the benefits valued, nor is there any implication that the Employer is required to implement a funding policy to satisfy the projected expense.

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and the actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

**SECTION 2: Valuation Results for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

**SUMMARY OF VALUATION RESULTS
ALL DEPARTMENTS**

The key results for the current year are shown on a funded basis and a pay-as-you-go basis.

	Funded (7.75% interest rate)	Pay-as-you-go (4.50% interest rate)
Actuarial Accrued Liability by Participant Category		
1. Current retirees, beneficiaries and dependents	\$12,475,608	\$17,705,599
2. Current active members	<u>15,067,211</u>	<u>27,701,489</u>
3. Total as of December 31, 2013: (1) + (2)	\$27,542,819	\$45,407,088
4. Actuarial value of assets as of December 31, 2013	<u>0</u>	<u>0</u>
5. Unfunded actuarial accrued liability (UAAL) as of December 31, 2013: (3) – (4)	\$27,542,819	\$45,407,088
Annual Required Contribution for Fiscal Year Ending June 30, 2014		
6. Normal cost as of January 1, 2014	\$1,131,329	\$2,250,239
7. 30-year increasing amortization (increasing 4.50% per year) of the UAAL as of December 31, 2013	<u>1,382,287</u>	<u>1,513,570</u>
8. Total Annual Required Contribution (ARC): (6) + (7)	\$2,513,616	\$3,763,809
9. Projected benefit payments	1,006,538	1,006,538

Note: Assumes payment in the middle of the fiscal year.

**SECTION 2: Valuation Results for the Nashoba Regional School District December 31, 2013
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FUNDING SCHEDULE

30 Years Closed (7.75% discount rate)

Fiscal Year Ended June 30	(1) Projected Benefit Payments	(2) Normal Cost	(3) Amortization of UAAL	(4) Total Funding Requirement (3) + (2)	(5) Additional Funding (4) - (1)	(6) Assets at End of Year	(7) AAL at End of Year	(8) UAAL at End of Year (7) - (6)
2014	\$1,006,538	\$1,131,329	\$1,382,287	\$2,513,616	\$1,507,078	\$1,564,388	\$28,719,726	\$27,155,338
2015	1,126,521	1,187,895	1,444,490	2,632,385	1,505,864	3,248,756	31,009,213	27,760,457
2016	1,280,419	1,247,290	1,509,492	2,756,782	1,476,363	5,033,039	33,378,038	28,344,999
2017	1,440,203	1,309,655	1,577,419	2,887,074	1,446,871	6,924,991	35,829,324	28,904,333
2018	1,609,741	1,375,138	1,648,403	3,023,541	1,413,800	8,929,240	38,362,572	29,433,332
2019	1,784,938	1,443,895	1,722,581	3,166,476	1,381,538	11,055,330	40,981,659	29,926,329
2020	1,938,655	1,516,090	1,800,097	3,316,187	1,377,532	13,342,033	43,719,104	30,377,071
2021	2,106,881	1,591,895	1,881,101	3,472,996	1,366,115	15,794,105	46,572,765	30,778,660
2022	2,303,842	1,671,490	1,965,751	3,637,241	1,333,399	18,402,252	49,525,756	31,123,504
2023	2,473,245	1,755,065	2,054,210	3,809,275	1,336,030	21,215,262	52,618,512	31,403,250
2024	2,619,227	1,842,818	2,146,649	3,989,467	1,370,240	24,281,791	55,890,513	31,608,722
2025	2,750,188	1,934,959	2,243,248	4,178,207	1,428,019	27,645,952	59,375,798	31,729,846
2026	2,887,697	2,031,707	2,344,194	4,375,901	1,488,204	31,333,309	63,088,882	31,755,573
2027	3,032,082	2,133,292	2,449,683	4,582,975	1,550,893	35,371,509	67,045,302	31,673,793
2028	3,183,686	2,239,957	2,559,919	4,799,876	1,616,190	39,790,450	71,261,697	31,471,247
2029	3,342,871	2,351,955	2,675,115	5,027,070	1,684,199	44,622,454	75,755,881	31,133,427
2030	3,510,014	2,469,553	2,795,495	5,265,048	1,755,034	49,902,467	80,546,935	30,644,468
2031	3,685,515	2,593,031	2,921,292	5,514,323	1,828,808	55,668,260	85,655,295	29,987,035
2032	3,869,791	2,722,683	3,052,750	5,775,433	1,905,642	61,960,658	91,102,851	29,142,193
2033	4,063,280	2,858,817	3,190,124	6,048,941	1,985,661	68,823,779	96,913,057	28,089,278
2034	4,266,444	3,001,758	3,333,680	6,335,438	2,068,994	76,305,293	103,111,041	26,805,748
2035	4,479,766	3,151,846	3,483,696	6,635,542	2,155,776	84,456,707	109,723,730	25,267,023
2036	4,703,755	3,309,438	3,640,462	6,949,900	2,246,145	93,333,661	116,779,980	23,446,319
2037	4,938,942	3,474,910	3,804,283	7,279,193	2,340,251	102,996,263	124,310,724	21,314,461
2038	5,185,889	3,648,656	3,975,476	7,624,132	2,438,243	113,509,435	132,349,116	18,839,681
2039	5,445,184	3,831,089	4,154,372	7,985,461	2,540,277	124,943,292	140,930,698	15,987,406
2040	5,717,443	4,022,643	4,341,319	8,363,962	2,646,519	137,373,555	150,093,579	12,720,024
2041	6,003,315	4,223,775	4,536,678	8,760,453	2,757,138	150,881,989	159,878,621	8,996,632
2042	6,303,481	4,434,964	4,740,829	9,175,793	2,872,312	165,556,880	170,329,643	4,772,763
2043	6,618,655	4,656,712	4,954,166	9,610,878	2,992,223	181,493,546	181,493,546	-

*Notes: Assumes payment in the middle of the fiscal year.
Amortization payments calculated to increase 4.5% per year.
The return on assets is assumed to be 7.75%.*

**SECTION 2: Valuation Results for the Nashoba Regional School District December 31, 2013
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PROJECTION OF ARC

30 Years Open (4.5% discount rate)

Fiscal Year Ended June 30	(1) Projected Benefit Payments	(2) Normal Cost	(3) Amortization of UAAL	(4) ARC (3) + (2)	(5) Additional Funding	(6) Assets at End of Year	(7) AAL at End of Year	(8) UAAL at End of Year (7) – (6)
2014	\$1,006,538	\$2,250,239	\$1,513,570	\$3,763,809	\$0	\$0	\$47,688,881	\$47,688,881
2015	1,126,521	2,362,751	1,625,002	3,987,753	-	-	51,098,620	51,098,620
2016	1,280,419	2,480,888	1,741,190	4,222,078	-	-	54,625,241	54,625,241
2017	1,440,203	2,604,933	1,861,359	4,466,292	-	-	58,274,025	58,274,025
2018	1,609,741	2,735,180	1,985,692	4,720,872	-	-	62,046,838	62,046,838
2019	1,784,938	2,871,939	2,114,251	4,986,190	-	-	65,950,135	65,950,135
2020	1,938,655	3,015,535	2,247,256	5,262,791	-	-	70,018,735	70,018,735
2021	2,106,881	3,166,312	2,385,894	5,552,206	-	-	74,252,584	74,252,584
2022	2,303,842	3,324,628	2,530,163	5,854,791	-	-	78,637,451	78,637,451
2023	2,473,245	3,490,859	2,679,577	6,170,436	-	-	83,216,395	83,216,395
2024	2,619,227	3,665,402	2,835,605	6,501,007	-	-	88,030,588	88,030,588
2025	2,750,188	3,848,672	2,999,649	6,848,321	-	-	93,114,892	93,114,892
2026	2,887,697	4,041,106	3,172,897	7,214,003	-	-	98,484,138	98,484,138
2027	3,032,082	4,243,161	3,355,855	7,599,016	-	-	104,153,952	104,153,952
2028	3,183,686	4,455,319	3,549,054	8,004,373	-	-	110,140,811	110,140,811
2029	3,342,871	4,678,085	3,753,057	8,431,142	-	-	116,462,073	116,462,073
2030	3,510,014	4,911,990	3,968,455	8,880,445	-	-	123,136,039	123,136,039
2031	3,685,515	5,157,589	4,195,870	9,353,459	-	-	130,181,992	130,181,992
2032	3,869,791	5,415,468	4,435,962	9,851,430	-	-	137,620,254	137,620,254
2033	4,063,280	5,686,242	4,689,421	10,375,663	-	-	145,472,242	145,472,242
2034	4,266,444	5,970,554	4,956,978	10,927,532	-	-	153,760,524	153,760,524
2035	4,479,766	6,269,082	5,239,402	11,508,484	-	-	162,508,880	162,508,880
2036	4,703,755	6,582,536	5,537,503	12,120,039	-	-	171,742,368	171,742,368
2037	4,938,942	6,911,663	5,852,135	12,763,798	-	-	181,487,392	181,487,392
2038	5,185,889	7,257,246	6,184,198	13,441,444	-	-	191,771,774	191,771,774
2039	5,445,184	7,620,108	6,534,639	14,154,747	-	-	202,624,826	202,624,826
2040	5,717,443	8,001,113	6,904,457	14,905,570	-	-	214,077,430	214,077,430
2041	6,003,315	8,401,169	7,294,706	15,695,875	-	-	226,162,127	226,162,127
2042	6,303,481	8,821,227	7,706,493	16,527,720	-	-	238,913,195	238,913,195
2043	6,618,655	9,262,289	8,140,986	17,403,275	-	-	252,366,750	252,366,750

*Notes: Assumes payment in the middle of the fiscal year.
Amortization payments calculated to increase 4.5% per year.*

**SECTION 2: Valuation Results for the Nashoba Regional School District December 31, 2013
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DEPARTMENT RESULTS

Actuarial Accrued Liability (AAL) and Annual Required Contribution – Pay-As-You-Go (4.5%)

	All Others	Teachers	Total
Actuarial Accrued Liability by Participant Category			
1. Current retirees, beneficiaries and dependents	\$3,236,280	\$14,469,319	\$17,705,599
2. Current active members	<u>9,226,861</u>	<u>18,474,628</u>	<u>27,701,489</u>
3. Total as of December 31, 2013: (1) + (2)	\$12,463,141	\$32,943,947	\$45,407,088
4. Actuarial value of assets as of December 31, 2013	<u>0</u>	<u>0</u>	<u>0</u>
5. Unfunded actuarial accrued liability (UAAL) as of December 31, 2013: (3) – (4)	\$12,463,141	\$32,943,947	\$45,407,088
Annual Required Contribution for Fiscal Year Ending June 30, 2014			
6. Normal cost as of January 1, 2014	\$798,773	\$1,451,466	\$2,250,239
7. 30-year increasing amortization (increasing 4.50% per year) of the UAAL as of December 31, 2013	<u>415,438</u>	<u>1,098,132</u>	<u>1,513,570</u>
8. Total Annual Required Contribution (ARC): (6) + (7)	\$1,214,211	\$2,549,598	\$3,763,809
9. Projected benefit payments	229,797	776,741	1,006,538

Note: Assumes payment in the middle of the fiscal year.

**SECTION 2: Valuation Results for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

March 25, 2014

ACTUARIAL CERTIFICATION

This is to certify that Segal Consulting, a Member of The Segal Group, Inc. has conducted an actuarial valuation of certain benefit obligations of the Nashoba Regional School District other postemployment benefit programs as of December 31, 2013, in accordance with generally accepted actuarial principles and practices. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statements Number 43 and 45 for the determination of the liability for postemployment benefits other than pensions.

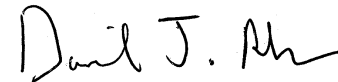
The actuarial valuation is based on the plan of benefits verified by the School District and on participant and September 1, 2013 premium data provided by the School District or from vendors employed by the School District. Segal Consulting does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. Segal, however, does review the data for reasonableness and consistency.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may be significantly different from the results reported here. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security at termination or adequacy of funding an ongoing plan.

To the best of our knowledge, this report is complete and accurate and in our opinion presents the information necessary to comply with GASB Statements Number 43 and 45 with respect to the benefit obligations addressed. The signing actuaries are members of the Society of Actuaries, the American Academy of Actuaries, and other professional actuarial organizations and collectively 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 School District are reasonably related to the experience and expectations of the postemployment benefit programs.



Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President and Actuary



Daniel J. Rhodes, FSA, MAAA
Vice President and Consulting Actuary

**SECTION 3: Valuation Details for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

**CHART 1
Required Supplementary Information – Schedule of Employer Contributions**

Fiscal Year Ended June 30,	Annual OPEB Costs	Actual Contributions	Percentage Contributed
2009	\$4,118,287	\$999,497	24.3%
2010	4,161,462	1,159,649	27.9%
2011	6,882,988	1,198,680	17.4%
2012	3,619,466	797,451	22.0%
2013	3,849,434	888,977	23.1%
2014	3,955,950	1,006,538	25.4%
2015	4,212,116	1,126,521	26.7%

Note: 2015 information assumes there will be no plan changes that need to be reflected.

**SECTION 3: Valuation Details for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

This schedule of funding progress presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

CHART 2
Required Supplementary Information – Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a) / (c)]
12/31/2006	\$0	\$49,752,457	\$49,752,457	0.00%	N/A	N/A
12/31/2009	0	75,120,075	75,120,075	0.00%	N/A	N/A
12/31/2011	0	40,702,993	40,702,993	0.00%	N/A	N/A
12/31/2013	0	45,407,088	45,407,088	0.00%	--	--

Note: Enter covered payroll for fiscal 2104.

**SECTION 3: Valuation Details for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

**CHART 3
Required Supplementary Information – Net OPEB Obligation/(Asset) (NOO/NOA)**

Fiscal Year Ended June 30,	Annual Required Contribution (a)	Interest on Existing NOO (b)	ARC Adjustment (c)	Annual OPEB Cost (a) + (b) + (c) (d)	Actual Contribution Amount (e)	Net Increase in NOO (d) - (e) (f)	NOO as of Following Date (g)
2009	\$4,118,287	\$0	\$0	\$4,118,287	\$999,497	\$3,118,790	\$3,118,790
2010	4,236,507	155,940	(230,985)	4,161,462	1,159,649	3,001,813	6,120,603
2011	6,769,235	423,602	(309,849)	6,882,988	1,198,680	5,684,308	11,804,911
2012	3,490,498	531,221	(402,253)	3,619,466	797,451	2,822,015	14,626,926
2013	3,689,636	658,212	(498,414)	3,849,434	888,977	2,960,457	17,587,383
2014	3,763,809	791,432	(599,291)	3,955,950	1,006,538	2,949,412	20,536,795
2015	3,987,753	924,156	(699,793)	4,212,116	1,126,521	3,085,595	23,622,390

Note: 2015 information assumes there will be no plan changes that need to be reflected.

**SECTION 3: Valuation Details for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

**CHART 4
Summary of Required Supplementary Information**

Valuation date	December 31, 2013
Actuarial cost method	Projected Unit Credit
Amortization method	Payments increasing at 4.5%
Remaining amortization period	30 years open
Asset valuation method	Market value
Actuarial assumptions:	
Investment rate of return	4.50%, pay-as-you-go scenario
Inflation rate	4.5%
Medicare cost trend rate	7.5% decreasing by 0.5% for 5 years to an ultimate level of 5.0% per year
Part B premium	6.0%
Dental	5.0%
Plan membership:	
Current retirees, beneficiaries, and dependents	186
Current active participants	<u>350</u>
Total	536

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

This exhibit summarizes the participant data used for the current and prior valuations.

**EXHIBIT I
Summary of Participant Data**

	2014	2012
Active employees covered for medical benefits		
Number of employees		
Male	88	86
Female	<u>262</u>	<u>271</u>
Total	350	357
Average age	46.5	46.4
Average service	10.8	10.5
Retired employees, spouses and beneficiaries covered for medical benefits		
Number of individuals	186	139
Average age	68.5	67.0
Retired employees with life insurance coverage		
Number of individuals	102	72
Average age	68.0	66.5

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

**EXHIBIT II
Actuarial Assumptions and Actuarial Cost Method**

Data: Detailed census data, premium rates, and summary plan descriptions for postemployment welfare benefits were provided by the School District.

Actuarial Cost Method: Projected Unit Credit

Per Capita Cost Development:

Medical and Drug, Dental

Per capita claims costs were based on the insured premium rates effective September 1, 2013. Premiums were combined by taking a weighted average based on the number of participants in each plan, and were then trended to the midpoint of the valuation year at assumed trend rates. Actuarial factors were then applied to the premium to estimate individual retiree and spouse costs by age and by gender.

Measurement Date: December 31, 2013

Discount Rate: 4.50% pay-as-you-go, 7.75% funded (previously, 8.00% funded)

Mortality Rates:

Pre-Retirement (Non-Teachers)

RP-2000 Healthy Employee Mortality Table projected 20 years with Scale AA (previously, RP-2000 Healthy Employee Mortality Table projected 12 years with Scale AA)

Healthy (Non-Teachers)

RP-2000 Healthy Annuitant Mortality Table projected 15 years with Scale AA (previously, RP-2000 Healthy Annuitant Mortality Table projected 12 years with Scale AA)

Disabled (Non-Teachers)

RP-2000 Healthy Annuitant Mortality Table set forward 2 years

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

<i>Pre-Retirement (Teachers)</i>	RP-2000 Combined Healthy White Collar Mortality Table projected 20 years with Scale AA (previously, RP-2000 Healthy Employee Mortality Table projected 12 years with Scale AA)
<i>Healthy (Teachers)</i>	RP-2000 Healthy Annuitant with Large Benefit Amount Adjustment Mortality Table projected 15 years with Scale AA (previously, RP-2000 Healthy Annuitant Mortality Table projected 12 years with Scale AA)
<i>Disabled (Teachers)</i>	RP-2000 Healthy Annuitant with Large Benefit Amount Adjustment Mortality Table projected 15 years with Scale AA (previously, RP-2000 Healthy Annuitant Mortality Table set forward 3 years for males)

The mortality assumptions were determined to contain provisions appropriate to reflect future mortality improvements.

Termination Rates before Retirement:

Groups 1 and 2 (excluding Teachers) - Rate per year (%)

Age	Mortality					Disability
	Current		Previously			
	Male	Female	Male	Female		
20	0.02	0.01	0.03	0.02	0.01	
25	0.03	0.02	0.03	0.02	0.02	
30	0.04	0.02	0.04	0.02	0.03	
35	0.07	0.04	0.07	0.04	0.05	
40	0.09	0.05	0.10	0.06	0.10	
45	0.12	0.08	0.13	0.09	0.15	
50	0.15	0.12	0.17	0.14	0.19	
55	0.21	0.22	0.24	0.23	0.24	
60	0.35	0.36	0.40	0.37	0.28	

Note: 55% of the rates shown represent accidental disability and death.

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

Teachers - Rate per year (%)						
Mortality						
Age	Current		Previously		Disability	
	Male	Female	Male	Female	Current	Previously
20	0.02	0.01	0.03	0.02	0.00	0.00
25	0.03	0.02	0.03	0.02	0.01	0.01
30	0.03	0.02	0.04	0.02	0.01	0.01
35	0.05	0.04	0.07	0.04	0.01	0.01
40	0.08	0.05	0.10	0.06	0.01	0.01
45	0.10	0.07	0.13	0.10	0.03	0.03
50	0.14	0.11	0.18	0.14	0.05	0.05
55	0.23	0.22	0.25	0.23	0.07	0.08
60	0.40	0.42	0.42	0.37	0.07	0.10

*Notes: 35% of the rates shown represent accidental disability.
55% of the death rates shown represent accidental death.*

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

Withdrawal Rates:

Rate per year (%)

Years of Service	Groups 1 and 2 (excluding teachers)
0	15.0
1	12.0
2	10.0
3	9.0
4	8.0
5	7.6
6	7.5
7	6.7
8	6.3
9	5.9
10	5.4
11	5.0
12	4.6
13	4.1
14	3.7
15	3.3
16 – 20	2.0
21 – 29	1.0
30+	0.0

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

Withdrawal Rates:

Age	Teachers - Rate per year (%)					
	0 Years of Service		5 Years of Service		10+ Years of Service	
	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	5.0	1.7	2.2
50	16.2	9.8	7.0	5.0	2.3	2.0

Previously,

Age	Teachers - Rate per year (%)					
	0 - 4 Years of Service		5 - 9 Years of Service		10+ Years of Service	
	Male	Female	Male	Female	Male	Female
20	12.0	10.0	4.5	9.0	1.0	5.0
30	11.4	12.0	4.5	9.0	1.0	5.0
40	9.7	11.0	5.4	6.5	1.7	2.9
50	10.0	8.2	4.8	4.2	2.2	2.1

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

Retirement Rates:

Age	Rate per year (%)	
	Groups 1 and 2 (excluding Teachers)	
	Male	Female
45 - 49	--	--
50	1.0	1.5
51	1.0	1.5
52	1.0	2.0
53	1.0	2.5
54	2.0	2.5
55	2.0	5.5
56	2.5	6.5
57	2.5	6.5
58	5.0	6.5
59	6.5	6.5
60	12.0	5.0
61	20.0	13.0
62	30.0	15.0
63	25.0	12.5
64	22.0	18.0
65	40.0	15.0
66	25.0	20.0
67	25.0	20.0
68	30.0	25.0
69	30.0	20.0
70	100.0	100.0

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

Age	Teachers - Rate per year (%)					
	Years of Service					
	Less than 20		20 – 29		30 or more	
	Male	Female	Male	Female	Male	Female
50 - 52	--	--	1.0	1.0	2.0	1.5
53	--	--	1.5	1.0	2.0	1.5
54	--	--	2.5	1.0	2.0	2.0
55	5.0	3.0	3.0	3.0	6.0	5.0
56	5.0	3.0	6.0	5.0	20.0	15.0
57	5.0	4.0	10.0	8.0	40.0	35.0
58	5.0	8.0	15.0	10.0	50.0	35.0
59	10.0	8.0	20.0	15.0	50.0	35.0
60	10.0	10.0	25.0	20.0	40.0	35.0
61	20.0	12.0	30.0	25.0	40.0	35.0
62	20.0	12.0	35.0	30.0	35.0	35.0
63	25.0	15.0	40.0	30.0	35.0	35.0
64	25.0	20.0	40.0	30.0	35.0	35.0
65	25.0	25.0	40.0	40.0	35.0	35.0
66	30.0	25.0	30.0	30.0	40.0	35.0
67	30.0	30.0	30.0	30.0	40.0	30.0
68	30.0	30.0	30.0	30.0	40.0	30.0
69	30.0	30.0	30.0	30.0	40.0	30.0
70	100.0	100.0	100.0	100.0	100.0	100.0

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

Previously,

Age	Teachers - Rate per year (%)					
	Years of Service					
	Less than 20		20 – 29		30 or more	
	Male	Female	Male	Female	Male	Female
50 – 53	0.0	0.0	1.0	1.5	2.0	2.0
54	0.0	0.0	1.0	1.5	2.0	2.0
55	3.0	2.0	3.0	3.0	6.0	6.0
56	8.0	2.0	5.0	3.0	20.0	15.0
57	15.0	8.0	8.0	7.0	35.0	30.0
58	15.0	10.0	10.0	7.0	50.0	35.0
59	20.0	15.0	20.0	11.0	50.0	35.0
60	15.0	20.0	20.0	16.0	50.0	35.0
61	30.0	20.0	25.0	20.0	50.0	35.0
62	20.0	25.0	30.0	30.0	40.0	40.0
63	30.0	24.0	30.0	30.0	40.0	35.0
64	40.0	20.0	30.0	30.0	40.0	35.0
65	40.0	30.0	40.0	30.0	50.0	35.0
66	40.0	30.0	30.0	30.0	50.0	35.0
67	40.0	30.0	30.0	30.0	50.0	30.0
68	40.0	30.0	30.0	30.0	50.0	30.0
69	40.0	30.0	30.0	30.0	50.0	30.0
70	100.0	100.0	100.0	100.0	100.0	100.0

Dependents:

Demographic data was available for spouses of current retirees. For future retirees, husbands were assumed to be three years older than their wives. For future retirees who elect to continue their health coverage at retirement, 70% were assumed to have an eligible spouse who also opts for health coverage at that time.

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

Per Capita Health Costs:

Calendar 2014 medical and prescription drug claims costs are shown in the table below for retirees and for spouses at selected ages. These costs are net of deductibles and other benefit plan cost sharing provisions.

Age	Non-Medicare Plans				Medicare Plans			
	Retiree		Spouse		Retiree		Spouse	
	Male	Female	Male	Female	Male	Female	Male	Female
45	\$8,040	\$10,087	\$4,987	\$7,529	N/A	N/A	N/A	N/A
50	9,543	10,870	6,666	8,728	N/A	N/A	N/A	N/A
55	11,333	11,701	8,920	10,103	N/A	N/A	N/A	N/A
60	13,459	12,612	11,941	11,717	N/A	N/A	N/A	N/A
65	15,985	13,587	15,985	13,587	\$5,615	\$4,773	\$5,615	\$4,773
70	18,527	14,642	18,527	14,642	6,508	5,143	6,508	5,143
75	19,965	15,761	19,965	15,761	7,013	5,536	7,013	5,536
80	21,500	16,992	21,500	16,992	7,552	5,969	7,552	5,969

**Weighted Average Annual Retiree
Contribution Amount:**

Non-Medicare: \$5,270

Medicare: \$2,886

Annual Dental Cost: \$691

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

Health Care Cost Trend Rates: Health care trend measures the anticipated overall rate at which health plan costs are expected to increase in future years. The rates shown below are “net” and are applied to the net per capita costs shown above. The trend shown for a particular plan year is the rate that is applied to that year’s cost to yield the next year’s projected cost.

Year Ending December 31	Medical/Drug	Dental	Part B
2014	7.5%	5.0%	6.0%
2015	7.0%	5.0%	6.0%
2016	6.5%	5.0%	6.0%
2017	6.0%	5.0%	6.0%
2018	5.5%	5.0%	6.0%
2019 and later	5.0%	5.0%	6.0%

Retiree Contribution Increase Rate: Retiree contributions for medical and prescription drug coverage are expected to increase with medical trend.

Participation and Coverage Election: 100% of active employees with coverage are assumed to elect retiree coverage.
80% of retirees are assumed to elect dental coverage.
100% of retirees over age 65 are assumed to remain with their current medical plan for life.
For future retirees hired prior to 1986 and current retirees under age 65, 90% are assumed to enroll in the Medicare Supplement plan upon reaching age 65 and 10% are assumed to remain enrolled in a non-Medicare plan. (Previously, 80% and 20%, respectively)
For future retirees hired in 1986 or later, 100% are assumed to enroll in the Medicare Supplement plan upon reaching age 65.

Plan Design: Development of plan liabilities was based on the substantive plan of benefits in effect as described in Exhibit III.

Administrative Expenses: Administrative expenses are assumed to be included in the fully insured premium rates.

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

Annual Maximum Benefits:	No increase in the annual maximum benefit levels was assumed.
Lifetime Maximum Benefits:	No information was available regarding accumulations toward lifetime maximum benefits and no such accumulations were assumed.
Missing Participant Data:	A missing census item for a given participant was assumed to equal the average value of that item over all other participants of the same status for whom the item is known.
Health Care Reform Assumption:	This valuation does not include the potential impact of any future changes due to the Patient Protection and Affordable Care Act (PPACA) and the Health Care and Education Reconciliation Act (HCERA) of 2010 other than the excise tax on high cost health plans beginning in 2018 (reflected with this valuation) and those previously adopted as of the valuation date. The addition of the excise tax in this valuation increased the actuarial accrued liability by 0.84% and the normal cost by 1.42%.

**Assumption Changes
Since Prior Valuation:**

Per capita health care costs were updated to reflect current experience.

The mortality assumption for non-teachers was changed to reflect future mortality improvement. The retirement, turnover, mortality and disability assumptions for teachers have been changed to reflect the assumptions being used in the January 1, 2013 Commonwealth Actuarial Valuation Report of the Massachusetts Teachers' Retirement System dated October 31, 2013.

The medical trend assumption was revised.

The funded discount rate was decreased from 8.0% to 7.75%.

The excise tax was added to reflect the additional liability for high cost health plans beginning in 2018.

The non-Medicare and Medicare enrollment assumptions for current retirees under age 65 and future retirees hired prior to 1986 were updated to reflect current experience.

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
Measurement Under GASB 43 and 45**

**EXHIBIT III
Summary of Plan**

This exhibit summarizes the major benefit provisions as included in the valuation. To the best of our knowledge, the summary represents the substantive plans as of the measurement date. It is not intended to be, nor should it be interpreted as, a complete statement of all benefit provisions.

Eligibility:	Retired and receiving a pension from the Worcester Regional Retirement System or Massachusetts State Teachers Retirement System.
<i>Members hired before April 2, 2012</i>	Group 1 (including Teachers): <ul style="list-style-type: none">➤ Retirees with at least 10 years of creditable service are eligible at age 55;➤ Retirees with at least 20 years of creditable service are eligible at any age.
<i>Members hired on or after April 2, 2012</i>	Group 1 (including Teachers): <ul style="list-style-type: none">➤ Retirees with at least 10 years of creditable service are eligible at age 60. <p>Disability: Accidental (job-related) Disability has no age or service requirement. Ordinary (non-job related) Disability has no age requirement but requires 10 years of creditable service.</p> <p>Pre-Retirement Death: Surviving spouses of members who die in active service on Accidental (job-related) Death are eligible at any age. Surviving spouses of members who die in active service on Ordinary (non-job related) Death are eligible after two years of service.</p> <p>Post-Retirement Death: Surviving spouse is eligible.</p>

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
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Benefit Types:	Medical and prescription drug benefits are provided to all eligible retirees through plans offered by Blue Cross Blue Shield of Massachusetts. Dental benefits are provided through Delta Dental. The Nashoba Regional School District pays 50% of the retiree life insurance premium and reimburses the Medicare Part B penalty for 28 retirees and spouses.
Duration of Coverage:	Lifetime.
Dependent Benefits:	Medical and Prescription Drugs.
Dependent Coverage:	Benefits are payable to a spouse for their lifetime, regardless of when the retirees dies.
MGL Chapter 32B, Section 18A:	Effective July 1, 2011.

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2013
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Retiree Contributions:

Premium rates and retiree contributions as of September 1, 2013 are summarized below:

	Subscribers			Retirees 65 and over*	Monthly Premium (eff. 9/1/2013)	School District Cost	Retiree cost
	Active	Retiree	Total				
<u>Non-Medicare Plans</u>							
HMO Blue							
Individual	86	18	104	4	\$640.18	\$320.09	\$320.09
Family	214	6	220	0	\$1,693.09	\$846.55	\$846.55
Blue Choice							
Individual	10	4	14	2	\$782.39	\$391.20	\$391.20
Family	17	3	20	0	\$2,052.34	\$1,026.17	\$1,026.17
Blue Care Elect PPO							
Individual	10	11	21	1	\$820.97	\$410.49	\$410.49
Family	13	5	18	1	\$2,153.61	\$1,076.81	\$1,076.81
<u>Non-Medicare Total</u>	350	47	397	8			

	Subscribers			Monthly Premium (eff. 9/1/2013)	School District Cost	Retiree cost
	Active	Retiree	Total			
<u>Medicare Supplement Plans</u>						
Medex	N/A	75	75	\$473.27	\$236.64	\$236.63
MBFS	N/A	5	5	\$363.55	\$181.78	\$181.77
<u>Medicare Total</u>		80	80			
<u>Retiree Total**</u>		127				

* 8 of 88 over-65 retirees are in a non-Medicare plan
 ** In addition, there are 59 spouses of retirees covered under an individual or family policy.

Retiree Life: \$5,000.

Plan Changes Since the Prior Valuation: None

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