

**Nashoba Regional School District**

*Actuarial Valuation and Review of Other Postemployment  
Benefits (OPEB) as of December 31, 2009  
In Accordance with GASB Statements Number 43 and 45*

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THE SEGAL COMPANY  
116 Huntington Ave., 8th Floor Boston, MA 02116  
T 617.424.7300 F 617.424.7390 www.segalco.com

*October 14, 2010*

*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, 2009 under 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, 2010 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 material with you at your convenience.*

*Sincerely,*

*THE SEGAL COMPANY*

By:   
Kathleen A. Riley, FSA, MAAA, EA

*Senior Vice President and Actuary*

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## SECTION 1: Introduction for the Nashoba Regional School District December 31, 2009 Measurement under GASB

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### 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, 2009. 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, 2010, we project the School District will pay benefits (net of retiree contributions) on behalf of retired employees of about \$1,042,000. This amount is less than the annual “cost” (the “Annual Required Contribution”, or ARC) under the new accounting rules of approximately \$6,353,000.

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 is on a pay-as-you-go basis, the discount rate should be based on the expected yield on the assets of the employer.

Because the benefits are not being funded, we have used a 5.0% discount rate (referred to as the pay-as-you-go interest rate). For illustrative purposes, we have also shown what the obligations would be on a fully funded basis, assuming an interest rate of 8.5%.

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% 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.”

If the benefits are funded in the future, assets set aside to fund OPEB liabilities would have to 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 trust will be irrevocable, trust assets will be dedicated to providing benefits to retirees and their spouses in accordance with the terms of the plan, and trust assets will be legally protected from creditors of the employer.

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.

The Patient Protection and Affordable Care Act (PPACA) and the Health Care and Education Reconciliation Act (HCERA) of 2010 creates a temporary reinsurance program for eligible health care coverage for pre-Medicare retirees

**SECTION 1: Introduction for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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over age 55. The program will reimburse the plan sponsor for 80% of the retiree claims between \$15,000 and \$90,000. Due to the short nature of this program, the limited financing, and uncertainty of qualifying and receiving payment (the program will be on a first come first served basis until financing runs out), we have not reflected the value of this program in the valuation.

**SECTION 1: Introduction for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

**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.

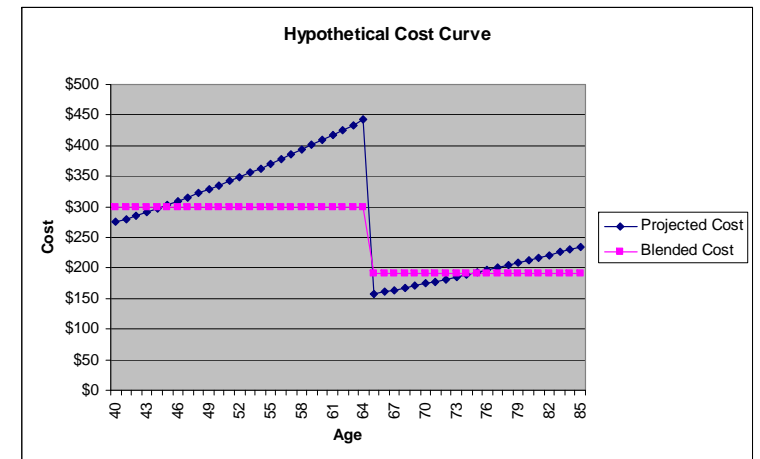
The statements cover postemployment benefits of health, prescription drug, dental, vision and life insurance coverage for retirees; long-term care coverage, life insurance and death benefits that are *not* offered as part of a pension plan; and long-term disability insurance for employees. These benefits, 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.

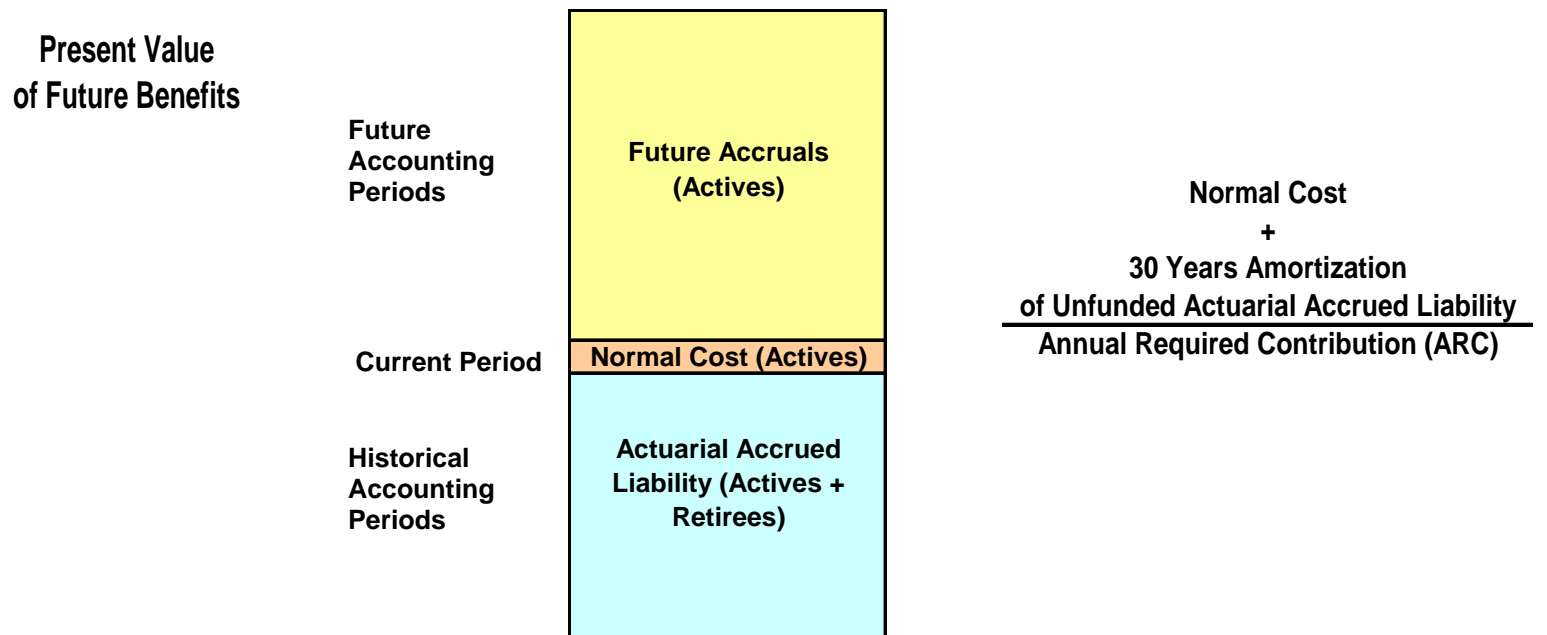
The following graph illustrates why a significant accounting obligation may exist even though the retiree contributes most or all of the blended premium cost of the plan. The average cost for retirees is likely to exceed the average cost for the whole group, leading to an implicit subsidy for these retirees.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



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: Introduction for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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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, 2009 Measurement under GASB**

**SUMMARY OF VALUATION RESULTS**

**ALL DEPARTMENTS**

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

	<b>Funded (8.5% interest rate)</b>	<b>Pay-as-you-go (5.0% interest rate)</b>
<b>Actuarial Accrued Liability by Participant Category</b>		
1. Current retirees, beneficiaries and dependents	\$16,001,072	\$23,372,259
2. Current active employees	<u>25,485,592</u>	<u>51,747,816</u>
3. Total as of December 31, 2009: (1) + (2)	\$41,486,664	\$75,120,075
4. Actuarial value of assets as of December 31, 2009	<u>0</u>	<u>0</u>
5. Unfunded actuarial accrued liability (UAAL) as of December 31, 2009: (3) - (4)	\$41,486,664	\$75,120,075
<b>Annual Required Contribution for Fiscal Year Ending June 30, 2010</b>		
6. Normal cost as of December 31, 2009	\$1,558,274	\$3,671,853
7. 30-year amortization (increasing at 4.5% per year) of the unfunded actuarial accrued liability (UAAL) as of December 31, 2009	<u>2,262,647</u>	<u>2,681,161</u>
8. Total Annual Required Contribution (ARC): (6) + (7)	\$3,820,921	\$6,353,014
9. Projected net benefit payments for fiscal year ending June 30, 2010	1,041,641	1,041,641

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

**SECTION 2: Valuation Results for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

**PROJECTION OF ARC**

**30 Years Open (5.0% discount rate), payments increasing at 4.5%**

(1) Fiscal Year Ended June 30	(2) Projected Benefit Payments	(3) Normal Cost	(4) Amortization of UAAL	(5) ARC: (3) + (4)	(6) Additional Funding: (5) – (2)	(7) Assets at End of Year	(8) AAL at End of Year	(9) UAAL at End of Year: (8) – (7)
2010	\$1,041,641	\$3,671,853	\$2,681,161	\$6,353,014	\$0	\$0	\$79,670,337	\$79,670,337
2011	1,198,680	3,855,446	2,913,789	6,769,235	-	-	86,376,228	86,376,228
2012	1,423,807	4,048,218	3,159,044	7,207,262	-	-	93,384,261	93,384,261
2013	1,671,153	4,250,629	3,415,349	7,665,978	-	-	100,696,651	100,696,651
2014	1,937,304	4,463,160	3,682,786	8,145,946	-	-	108,319,716	108,319,716
2015	2,225,163	4,686,318	3,961,585	8,647,903	-	-	116,257,636	116,257,636
2016	2,537,190	4,920,634	4,251,899	9,172,533	-	-	124,512,821	124,512,821
2017	2,865,572	5,166,666	4,553,816	9,720,482	-	-	133,096,382	133,096,382
2018	3,202,477	5,424,999	4,867,743	10,292,742	-	-	142,028,609	142,028,609
2019	3,548,481	5,696,249	5,194,422	10,890,671	-	-	151,330,847	151,330,847
2020	3,819,645	5,981,062	5,534,634	11,515,696	-	-	161,112,182	161,112,182
2021	4,010,627	6,280,115	5,892,367	12,172,482	-	-	171,493,323	171,493,323
2022	4,211,159	6,594,120	6,272,038	12,866,158	-	-	182,509,799	182,509,799
2023	4,421,717	6,923,826	6,674,944	13,598,770	-	-	194,199,188	194,199,188
2024	4,642,802	7,270,018	7,102,461	14,372,479	-	-	206,601,242	206,601,242
2025	4,874,943	7,633,519	7,556,042	15,189,561	-	-	219,758,004	219,758,004
2026	5,118,690	8,015,195	8,037,225	16,052,420	-	-	233,713,938	233,713,938
2027	5,374,624	8,415,954	8,547,636	16,963,590	-	-	248,516,071	248,516,071
2028	5,643,355	8,836,752	9,088,996	17,925,748	-	-	264,214,133	264,214,133
2029	5,925,523	9,278,590	9,663,122	18,941,712	-	-	280,860,710	280,860,710
2030	6,221,799	9,742,519	10,271,939	20,014,458	-	-	298,511,410	298,511,410
2031	6,532,889	10,229,645	10,917,479	21,147,124	-	-	317,225,028	317,225,028
2032	6,859,534	10,741,127	11,601,894	22,343,021	-	-	337,063,729	337,063,729
2033	7,202,510	11,278,184	12,327,456	23,605,640	-	-	358,093,238	358,093,238
2034	7,562,636	11,842,093	13,096,569	24,938,662	-	-	380,383,038	380,383,038
2035	7,940,768	12,434,198	13,911,776	26,345,974	-	-	404,006,585	404,006,585
2036	8,337,806	13,055,907	14,775,762	27,831,669	-	-	429,041,530	429,041,530
2037	8,754,696	13,708,703	15,691,366	29,400,069	-	-	455,569,952	455,569,952
2038	9,192,431	14,394,138	16,661,592	31,055,730	-	-	483,678,613	483,678,613
2039	9,652,053	15,113,845	17,689,612	32,803,457	-	-	513,459,215	513,459,215

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

**SECTION 2: Valuation Results for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

**FUNDING SCHEDULE**

**30 Years Closed (8.50% discount rate), payments increasing at 4.5%**

(1) Fiscal Year Ended June 30	(2) Projected Benefit Payments	(3) Normal Cost	(4) Amortization of UAAL	(5) Total Funding Requirement: (3) + (4)	(6) Additional Funding: (5) – (2)	(7) Assets at End of Year	(8) AAL at End of Year	(9) UAAL at End of Year: (8) – (7)
2010	\$1,041,641	\$1,558,274	\$2,262,647	\$3,820,921	\$2,779,281	\$2,894,991	\$43,752,035	\$40,857,044
2011	1,198,680	1,636,188	2,364,466	4,000,654	2,801,974	6,059,695	47,926,680	41,866,986
2012	1,423,807	1,717,997	2,470,867	4,188,864	2,765,058	9,454,945	52,306,887	42,851,942
2013	1,671,153	1,803,897	2,582,056	4,385,953	2,714,800	13,086,442	56,891,243	43,804,801
2014	1,937,304	1,894,092	2,698,249	4,592,341	2,655,037	16,964,364	61,681,988	44,717,624
2015	2,225,163	1,988,796	2,819,670	4,808,466	2,583,303	21,097,190	66,678,749	45,581,559
2016	2,537,190	2,088,236	2,946,555	5,034,791	2,497,602	25,492,036	71,878,798	46,386,762
2017	2,865,572	2,192,648	3,079,150	5,271,798	2,406,226	30,165,265	77,287,556	47,122,291
2018	3,202,477	2,302,280	3,217,712	5,519,992	2,317,515	35,143,313	82,919,324	47,776,010
2019	3,548,481	2,417,394	3,362,509	5,779,903	2,231,422	40,454,819	88,789,289	48,334,469
2020	3,819,645	2,538,264	3,513,822	6,052,086	2,232,441	46,218,864	95,001,649	48,782,785
2021	4,010,627	2,665,177	3,671,944	6,337,121	2,326,494	52,570,821	101,675,324	49,104,503
2022	4,211,159	2,798,436	3,837,181	6,635,617	2,424,459	59,564,737	108,846,187	49,281,450
2023	4,421,717	2,938,358	4,009,854	6,948,212	2,526,495	67,259,422	116,552,997	49,293,575
2024	4,642,802	3,085,276	4,190,297	7,275,573	2,632,770	75,718,854	124,837,631	49,118,776
2025	4,874,943	3,239,540	4,378,860	7,618,400	2,743,457	85,012,633	133,745,339	48,732,706
2026	5,118,690	3,401,517	4,575,909	7,977,426	2,858,736	95,216,462	143,325,028	48,108,566
2027	5,374,624	3,571,593	4,781,825	8,353,418	2,978,793	106,412,672	153,629,558	47,216,886
2028	5,643,355	3,750,172	4,997,007	8,747,179	3,103,824	118,690,795	164,716,068	46,025,273
2029	5,925,523	3,937,681	5,221,872	9,159,553	3,234,030	132,148,186	176,646,330	44,498,145
2030	6,221,799	4,134,565	5,456,856	9,591,421	3,369,621	146,890,691	189,487,135	42,596,444
2031	6,532,889	4,341,293	5,702,415	10,043,708	3,510,819	163,033,386	203,310,702	40,277,316
2032	6,859,534	4,558,358	5,959,024	10,517,382	3,657,848	180,701,360	218,195,130	37,493,770
2033	7,202,510	4,786,276	6,227,180	11,013,456	3,810,945	200,030,583	234,224,886	34,194,302
2034	7,562,636	5,025,589	6,507,403	11,532,992	3,970,356	221,168,838	251,491,329	30,322,490
2035	7,940,768	5,276,869	6,800,236	12,077,105	4,136,337	244,276,736	270,093,286	25,816,549
2036	8,337,806	5,540,712	7,106,247	12,646,959	4,309,153	269,528,816	290,137,669	20,608,852
2037	8,754,696	5,817,748	7,426,028	13,243,776	4,489,079	297,114,741	311,740,147	14,625,406
2038	9,192,431	6,108,635	7,760,199	13,868,834	4,676,403	327,240,591	335,025,875	7,785,284
2039	9,652,053	6,414,067	8,109,408	14,523,475	4,871,422	360,130,277	360,130,277	-

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

**SECTION 2: Valuation Results for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

**DEPARTMENT RESULTS**

**Actuarial Accrued Liability (AAL) and Annual Required Contribution – Funded (8.50%)**

	<b>All Other</b>	<b>Teachers</b>	<b>Total</b>
<b>Actuarial Accrued Liability by Participant Category</b>			
1. Current retirees, beneficiaries and dependents	\$8,465,929	\$7,535,143	\$16,001,072
2. Current active employees	<u>8,398,274</u>	<u>17,087,318</u>	<u>25,485,592</u>
3. Total as of December 31, 2009: (1) + (2)	\$16,864,203	\$24,622,461	\$41,486,664
4. Actuarial value of assets as of December 31, 2009	<u>0</u>	<u>0</u>	<u>0</u>
5. Unfunded actuarial accrued liability (UAAL) as of December 31, 2009: (3) - (4)	\$16,864,203	\$24,622,461	\$41,486,664
<b>Annual Required Contribution for Fiscal Year Ending June 30, 2010</b>			
6. Normal cost as of December 31, 2009	\$635,385	\$922,889	\$1,558,274
7. 30-year amortization (increasing at 4.5% per year) of the unfunded actuarial accrued liability (UAAL) as of December 31, 2009	<u>919,759</u>	<u>1,342,888</u>	<u>2,262,647</u>
8. Total Annual Required Contribution (ARC): (6) + (7)	\$1,555,144	\$2,265,777	\$3,820,921
9. Projected net benefit payments for fiscal year ending June 30, 2010	539,586	502,055	1,041,641

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

**SECTION 2: Valuation Results for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

**Actuarial Accrued Liability (AAL) and Annual Required Contribution – Pay-As-You-Go (5.00%)**

	<b>All Other</b>	<b>Teachers</b>	<b>Total</b>
<b>Actuarial Accrued Liability by Participant Category</b>			
1. Current retirees, beneficiaries and dependents	\$12,302,921	\$11,069,338	\$23,372,259
2. Current active employees	<u>16,668,655</u>	<u>35,079,161</u>	<u>51,747,816</u>
3. Total as of December 31, 2009: (1) + (2)	\$28,971,576	\$46,148,499	\$75,120,075
4. Actuarial value of assets as of December 31, 2009	<u>0</u>	<u>0</u>	<u>0</u>
5. Unfunded actuarial accrued liability (UAAL) as of December 31, 2009: (3) - (4)	\$28,971,576	\$46,148,499	\$75,120,075
<b>Annual Required Contribution for Fiscal Year Ending June 30, 2010</b>			
6. Normal cost as of December 31, 2009	\$1,393,492	\$2,278,361	\$3,671,853
7. 30-year amortization (increasing at 4.5% per year) of the unfunded actuarial accrued liability (UAAL) as of December 31, 2009	<u>1,034,044</u>	<u>1,647,117</u>	<u>2,681,161</u>
8. Total Annual Required Contribution (ARC): (6) + (7)	\$2,427,536	\$3,925,478	\$6,353,014
9. Projected net benefit payments for fiscal year ending June 30, 2010	539,586	502,055	1,041,641

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

October 14, 2010

**ACTUARIAL CERTIFICATION**

This is to certify that The Segal Company has conducted an actuarial valuation of certain benefit obligations of the Nashoba Regional School District other postemployment benefit programs as of December 31, 2009, 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, premium and expense data provided by the School District or from vendors employed by the School District.

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.



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



Howard Atkinson, Jr., ASA, MAAA, FCA  
Vice President and Health Actuary

**SECTION 3: Valuation Details for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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**CHART 1**

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

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<b>Fiscal Year Ended June 30,</b>	<b>Annual OPEB Cost</b>	<b>Actual Contributions</b>	<b>Percentage Contributed</b>
2009	\$4,118,287	\$999,497	24.3%
2010	6,394,890	1,041,641	16.3%
2011	6,882,988	1,198,680	17.4%

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*Note: 2011 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, 2009 Measurement under GASB**

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**

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets* (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded AAL (UAAL) (b) - (a)</b>	<b>Funded Ratio (a) / (b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll [(b) - (a) / (c)]</b>
12/31/2006	\$0	\$49,752,457	\$49,752,457	0%	N/A	N/A
12/31/2009	0	75,120,075	75,120,075	0%	--	--

*Note: Entered covered payroll for fiscal 2010.*



**SECTION 3: Valuation Details for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

**CHART 3**

**Required Supplementary Information – Net OPEB Obligation (NOO)**

<b>Fiscal Year Ended June 30,</b>	<b>Annual Required Contribution (a)</b>	<b>Interest on Existing NOO (b)</b>	<b>ARC Adjustment (c)</b>	<b>Annual OPEB Cost (a) + (b) + (c) (d)</b>	<b>Actual Contribution Amount (e)</b>	<b>Net Increase in NOO (d) - (e) (f)</b>	<b>NOO as of Following Date (g)</b>
2009	\$4,118,287	\$0	\$0	\$4,118,287	\$999,497	\$3,118,790	\$3,118,790
2010	6,353,014	155,940	(114,064)	6,394,890	1,041,641	5,353,250	8,472,040
2011	6,769,235	423,602	(309,849)	6,882,988	1,198,680	5,684,308	14,156,348

*Note: 2011 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, 2009 Measurement under GASB**

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**CHART 4**

**Required Supplementary Information**

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<b>Valuation date</b>	December 31, 2009
<b>Actuarial cost method</b>	Projected Unit Credit
<b>Amortization method</b>	Payments increasing at 4.5%
<b>Remaining amortization period</b>	30 years open
<b>Asset valuation method</b>	Market value
<b>Actuarial assumptions:</b>	
Investment rate of return	5.0%, pay-as-you-go scenario
Inflation rate	4.5%
Medicare cost trend rate	9.0% decreasing by 0.75% for 5 years and by 0.25% for 1 year to an ultimate level of 5.0% per year
Part B Premium	6.0%
Dental	5.0%
<b>Plan membership:</b>	
Current retirees, beneficiaries, and dependents	146
Current active members	<u>357</u>
Total	503

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**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

*This exhibit summarizes the participant data used for the current valuation.*

**EXHIBIT I  
Summary of Participant Data**

	As of January 1,	
	2010	2007
<b>Active employees covered for medical benefits</b>		
Number of employees		
Male	89	87
Female	<u>268</u>	<u>250</u>
Total	357	337
Average age	46.4	46.1
Average service	9.9	10.4
<b>Retired employees, spouses and beneficiaries covered for medical benefits</b>		
Number of individuals	146	128
Average age	67.0	67.7
<b>Retired employees with life insurance coverage</b>		
Number of individuals	75	84
Average age	67.9	67.9

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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**EXHIBIT II**

**Actuarial Assumptions and Actuarial Cost Method**

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**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

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**Per Capita Cost Development:**

*Medical and Drug, Dental*

Per capita claims costs were based on the insured premium rates effective September 1, 2010.

For non-Medicare medical plans, 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.

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

**Measurement Date:** December 31, 2009  
**Discount Rate:** 5.00% pay-as-you-go, 8.50% funded

**Mortality Rates:**

<i>Pre-Retirement (Non-Teachers)</i>	RP-2000 Healthy Employee Mortality Table
<i>Healthy (Non-Teachers)</i>	RP-2000 Healthy Annuitant Mortality Table
<i>Disabled (Non-Teachers)</i>	RP-2000 Healthy Annuitant Mortality Table set forward 2 years
<i>Pre-Retirement (Teachers)</i>	RP-2000 Healthy Employee Mortality Table projected 10 years with Scale AA
<i>Healthy (Teachers)</i>	RP-2000 Healthy Annuitant Mortality Table projected 10 years with Scale AA
<i>Disabled (Teachers)</i>	RP-2000 Healthy Annuitant Mortality Table set forward 3 years for males

Termination Rates before Retirement:	Groups 1 and 2 (excluding Teachers) - Rate (%)			
	Age	Mortality		Disability
		Male	Female	
	20	0.03	0.02	0.02
	25	0.04	0.02	0.02
	30	0.04	0.03	0.03
	35	0.08	0.05	0.06
	40	0.11	0.07	0.10
	45	0.15	0.11	0.15
	50	0.21	0.17	0.19
	55	0.30	0.25	0.24
	60	0.49	0.39	0.28

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

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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<b>Age</b>	<b>Teachers - Rate (%)</b>		<b>Disability</b>
	<b>Mortality</b>		
	<b>Male</b>	<b>Female</b>	
20	0.03	0.02	0.00
25	0.03	0.02	0.01
30	0.04	0.02	0.01
35	0.07	0.04	0.01
40	0.10	0.06	0.01
45	0.13	0.10	0.03
50	0.18	0.14	0.05
55	0.25	0.23	0.08
60	0.42	0.37	0.10

*Note: 35% of the disability 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, 2009 Measurement under GASB**

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**Withdrawal Rates:**

Years of Service	Rate per year (%)	
	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	

Age	Teachers – Rate (%)					
	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, 2009 Measurement under GASB**

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Previous assumption:

Age	Teachers – Withdrawal Rate (%)					
	0 – 4 Years of Service		5 – 9 Years of Service		10+ Years of Service	
	Male	Female	Male	Female	Male	Female
20	9.0	6.0	4.0	9.0	1.0	4.0
30	10.8	11.6	4.3	9.0	1.0	4.0
40	9.3	11.4	4.9	7.0	1.5	3.1
50	5.9	6.8	4.2	4.5	1.9	1.9



**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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**Retirement Rates:**

<b>Age</b>	<b>Rate per year (%)</b>	
	<b>Groups 1 and 2 (excluding Teachers)</b>	
	<b>Male</b>	<b>Female</b>
50 – 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 – 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 - 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, 2009 Measurement under GASB**

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<b>Teachers - Rate (%)</b>						
<b>Years of Service</b>						
<b>Age</b>	<b>Less than 20</b>		<b>20 – 29</b>		<b>30 or more</b>	
	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>	<b>Male</b>	<b>Female</b>
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	30.0
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

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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Previous assumption:

Age	Teachers - Rate (%)				
	Years of Service				
	Less than 20	20 – 29		30 or more	
		Male	Female	Male	Female
50 – 53	0.0	1.0	1.0	1.0	1.0
54	0.0	2.0	1.0	3.5	3.5
55	2.0	3.0	4.0	6.0	6.0
56	4.0	3.0	4.0	18.0	18.0
57	7.0	5.0	5.0	30.0	30.0
58	8.0	7.0	7.0	40.0	40.0
59	9.0	10.0	11.0	40.0	40.0
60	12.0	20.0	16.0	35.0	35.0
61	15.0	30.0	20.0	35.0	35.0
62	18.0	35.0	25.0	40.0	40.0
63	15.0	35.0	25.0	35.0	25.0
64	25.0	30.0	30.0	30.0	30.0
65	40.0	50.0	40.0	50.0	40.0
66	40.0	30.0	30.0	30.0	30.0
67	40.0	30.0	25.0	30.0	25.0
68	40.0	30.0	35.0	30.0	35.0
69	40.0	40.0	35.0	40.0	35.0
70	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, 70% were assumed to have an eligible spouse who also opts for health coverage at that time (previously, 85% of male employees and 45% of female employees).

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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**Per Capita Health Costs:**

Calendar 2010 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			
	Retiree		Spouse	
	Male	Female	Male	Female
45	\$6,068	\$7,612	\$3,764	\$5,682
50	7,202	8,203	5,030	6,586
55	8,553	8,830	6,731	7,624
60	10,157	9,518	9,011	8,842
65	12,063	10,254	12,063	10,254
70	13,981	11,050	13,981	11,050
75	15,067	11,894	15,067	11,894
80	16,225	12,823	16,225	12,823

**Medicare Supplement Plan:**

\$5,856

**Medicare Part B Premium:**

\$578 (portion paid by School District for those who retired before January 1, 2010)

\$663 (portion paid by School District for those who retired after January 1, 2010)

**Annual Dental Cost:**

\$590

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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**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 must be applied to that year’s cost to yield the next year’s projected cost.

<b>Year Ending December 31</b>	<b>Non-Medicare Plans</b>	<b>Dental</b>	<b>Part B</b>
2010	9.00%	5%	6%
2011	8.25%	5%	6%
2012	7.50%	5%	6%
2013	6.75%	5%	6%
2014	6.00%	5%	6%
2015	5.25%	5%	6%
2016 & later	5.00%	5%	6%

**Retiree Contribution Increase Rate:**

Retiree contributions are expected to increase with trend.

**Health Care Reform Assumption:**

The Patient Protection and Affordable Care Act (PPACA) and the Health Care and Education Reconciliation Act (HCERA) of 2010 creates a temporary reinsurance program for eligible health care coverage for pre-Medicare retirees over age 55. The program will reimburse the plan sponsor for 80% of the retiree claims between \$15,000 and \$90,000. Due to the short nature of this program, the limited financing, and uncertainty of qualifying and receiving payment (the program will be on a first come first served basis until financing runs out), we have not reflected the value of this program in the valuation.

**Participation and Coverage Election:**

100% of active employees with coverage are assumed to elect retiree coverage.  
 100% of retirees over age 65 are assumed to remain in their current medical plan for life.  
 For future retirees and current retirees under age 65, 30% are assumed to enroll in the Medicare Supplement plan upon reaching age 65 and 70% are assumed to remain enrolled in a non-Medicare plan.

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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100% of current and future retirees with medical coverage are assumed to have life insurance coverage.

80% of current and future retirees are assumed to have dental coverage.

Life insurance elections were available for current retirees. 75% of future retirees with medical coverage are assumed to have life insurance coverage.

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<b>Plan Design:</b>	Development of plan liabilities was based on the substantive plan of benefits in effect as described in Exhibit III.
<b>Administrative Expenses</b>	Administrative expenses are assumed to be included in the fully insured premium rates.
<b>Annual Maximum Benefits:</b>	No increase in the annual maximum benefit levels was assumed.
<b>Lifetime Maximum Benefits:</b>	No information was available regarding accumulations toward lifetime maximum benefits and no such accumulations were assumed.
<b>Missing Participant Data:</b>	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.
<b>Assumption Changes Since Prior Valuation:</b>	<p>The per capita health care costs were updated to reflect current experience.</p> <p>The medical/drug trends were updated to better reflect current experience and future expectations.</p> <p>The percent married assumption was changed from 80% of males and 45% of females to 70% of all future retirees are assumed to have an eligible spouse who opts for health coverage.</p> <p>Certain demographic assumptions were changed to be consistent with the most recent valuation of the Massachusetts State Teachers Retirement System Actuarial Valuation as of January 1, 2008.</p>

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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**EXHIBIT III**

**Summary of Plan**

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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.

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**Eligibility:** The following groups of retirees receiving a pension from the Worcester Regional Retirement System or the Massachusetts Teachers Retirement System are eligible for postretirement medical benefits:

**Group 1 (including Teachers):**

- 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.

**Disability:** Retirees on Ordinary (non-job-related) or Accidental (job-related) Disability Retirement are eligible at any age. Ordinary disability retirement requires 10 years of creditable service.

**Pre-Retirement Death:** Surviving spouse is eligible.

**Post-Retirement Death:** Surviving spouse is eligible.

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**Benefit Types:** Medical and prescription drug benefits are provided to all eligible retirees through a variety of plans offered through Blue Cross Blue Shield of Massachusetts. An Optional Medicare Extension (OME) plan is available to retirees eligible for Medicare. Dental benefits are provided by Delta Dental. The School District also provides \$5,000 in life insurance and reimburses 50% of the Medicare Part B premium for eligible retirees.

**Duration of Coverage:** Lifetime.

**Dependent Benefits:** Medical, prescription drug, and dental.

**Dependent Coverage:** Benefits are payable to a spouse for their lifetime, regardless of when the retiree dies.

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

**Retiree Contributions:**

Current premium rates and retiree contributions are summarized below:

	Subscribers			<i>Retirees 65 and over*</i>	Monthly Premium (eff. 9/1/2010)	School District Cost	Retiree cost	Retiree Cost %
	Active	Retiree	Total					
<b><u>Non-Medicare Actives and Retirees</u></b>								
HMO Blue								
Individual	79	33	112	23	\$537.12	\$268.56	\$268.56	50.0%
Family	202	23	225	12	\$1,428.91	\$714.46	\$714.46	50.0%
Blue Choice								
Individual	14	11	25	6	\$664.27	\$332.14	\$332.14	50.0%
Family	43	9	52	5	\$1,742.48	\$871.24	\$871.24	50.0%
Blue Care Elect PPO								
Individual	7	11	18	8	\$683.35	\$341.68	\$341.68	50.0%
Family	12	4	16	1	\$1,792.54	\$896.27	\$896.27	50.0%
<b><u>Non-Medicare Total</u></b>	357	91	448	55				
	Subscribers				Monthly Premium (eff. 9/1/2010)	School District Cost	Retiree cost	Retiree Cost %
	Active	Retiree	Total					
<b><u>Medicare Supplement Plans</u></b>								
Optional Medicare Extension	N/A	12	12		\$520.00	\$260.00	\$260.00	50.0%
<b><u>Medicare Total</u></b>			12					
<b><u>Retiree Total***</u></b>							103	

\* 55 of 67 over-65 retirees are in a non-Medicare plan.

\*\* In addition, there are 43 spouses of retirees covered under an individual or family policy.



**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

**Benefit Descriptions:**

<b>BCBS HMO Blue</b>	
<b>Medical</b>	
<i>Annual Deductible</i>	None
<i>Coinsurance</i>	100%
<i>Physicians Office Visit Copay</i>	\$10
<i>Emergency Room Copay</i>	\$25
<i>Maximum Out-Of-Pocket Expense</i>	None
<b>Prescription Drugs</b>	
<i>Retail Copay</i>	\$10 Tier 1/\$20 Tier 2/\$35 Tier 3
<i>Mail Copay</i>	\$10 Tier 1/\$20 Tier 2/\$35 Tier 3

<b>BCBS Blue Care Elect Preferred PPO</b>	<b>In-Network</b>	<b>Out-of-Network</b>
<b>Medical</b>		
<i>Annual Deductible</i>	None	\$250 individual/\$500 family
<i>Coinsurance</i>	100%	80%
<i>Physicians Office Visit Copay</i>	\$15	Coinsurance & deductible
<i>Emergency Room Copay</i>	\$50	\$50 (no deductible)
<i>Coinsurance Maximum</i>	None	\$1,000 individual/\$2,000 family
<b>Prescription Drugs</b>		
<i>Retail Copay</i>	\$10 Tier 1/\$20 Tier 2/\$35 Tier 3	
<i>Mail Copay</i>	\$10 Tier 1/\$20 Tier 2/\$35 Tier 3	

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

<b>BCBS Blue Choice</b>	<b>PCP-Approved</b>	<b>Self-Referred</b>
<b>Medical</b>		
<i>Annual Deductible</i>	None	\$250 individual/\$500 family
<i>Coinsurance</i>	100%	80%
<i>Physicians Office Visit Copay</i>	\$10	Coinsurance & deductible
<i>Emergency Room Copay</i>	\$25	\$25 (no deductible)
<i>Coinsurance Maximum</i>	None	\$1,000 individual/\$2,000 family
<b>Prescription Drugs</b>		
<i>Retail Copay</i>	\$10 Tier 1/\$20 Tier 2/\$35 Tier 3	
<i>Mail Copay</i>	\$10 Tier 1/\$20 Tier 2/\$35 Tier 3	

<b>Optional Medicare Extension (OME)</b>	
<b>Medical</b>	
<i>Inpatient Hospital</i>	Medicare Part A deductible and coinsurance
<i>Outpatient and Physician Services</i>	Medicare Part B deductible and coinsurance
<i>Routine Care and Physical Exams</i>	Not covered
<b>Prescription Drugs</b>	
<i>Generic Drugs Coinsurance</i>	100%
<i>Brand Drug Coinsurance</i>	80%
<i>Annual Deductible</i>	\$50

**SECTION 4: Supporting Information for the Nashoba Regional School District December 31, 2009 Measurement under GASB**

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<b>DeltaPreferred Option USA Plus</b>	
<b>Preventative Benefits</b>	No deductible
<i>Diagnostic/Preventative</i>	Covered in full
<b>Basic and Major Benefits</b>	\$50 individual/\$150 family deductible
<i>Restorative/Periodontics/Endodontics</i>	80% coverage
<i>Prosthodontics/Major Restorative</i>	50% coverage
<b>Benefit Maximum</b>	\$1,000 per calendar year

**Retiree Life:** \$5,000

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