

Nashoba Regional School District

Governmental Accounting Standards Board (GASB) Statements No. 74 and 75 Accounting Valuation Report

Measured at June 30, 2020



This report has been prepared at the request of the Nashoba Regional School District to assist in administering the Plan. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Nashoba Regional School District and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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Segal



30 Waterside Drive, Suite 300
Farmington, CT 06032-3069
segalco.com

August 28, 2020

Ms. Patricia Marone
Business and Operations Manager
Nashoba Regional School District
Central Office
50 Mechanic Street
Bolton, MA 01740

Dear Ms. Marone:

We are pleased to submit this Governmental Accounting Standards Board (GASB) Statements No. 74 and 75 Accounting Valuation as of June 30, 2020 for the Nashoba Regional School District. It contains the actuarial information that will need to be disclosed in order to comply with GASB 74 and 75. Except as otherwise noted, please refer to the Nashoba Regional School District Actuarial Valuation and Review of Other Postretirement Benefits (OPEB) as of December 31, 2019, dated August 28, 2020, for the data, assumptions and plan of benefits underlying these calculations.

This report is based on information received from the Nashoba Regional School District and vendors employed by the Nashoba Regional School District. Segal 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 measurements shown in this actuarial valuation may not be applicable for other purposes. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security at termination of the plan, or determining short-term cash flow requirements.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: retiree group benefits program experience or rates of return on assets differing from that anticipated by the assumptions; changes in assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements.

August 28, 2020

The actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. The actuarial calculations were directed under my supervision. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in my opinion, the assumptions as approved by the Nashoba Regional School District are reasonably related to the experience of and the expectations for the Plan.

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

Sincerely,
Segal

S. Boustani

Samuel Boustani, ASA, MAAA
Consulting Actuary

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Section 1: Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present certain disclosure information for the Nashoba Regional School District (the “Employer”) Other Postemployment Benefits (OPEB) plan and the Nashoba Regional School District OPEB Trust (the “Plan”) as of June 30, 2020, required by Governmental Accounting Standards Board (GASB) Statements No. 74 and 75. 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. This report is based on financial information as of June 30, 2020 provided by the Nashoba Regional School District and the Nashoba Regional School District Actuarial Valuation and Review as of December 31, 2019, which reflects:

- The benefit provisions of the OPEB plan;
- The characteristics of covered active participants, retired participants and beneficiaries as of December 31, 2019;
- The assets as of December 31, 2019;
- Economic assumptions regarding future salary increases and investment earnings;
- Health care assumptions regarding per capita costs, trend rates and participation; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant issues

Accounting and Financial Reporting

1. The Net OPEB Liability (NOL) is equal to the difference between the Total OPEB Liability (TOL) and the Plan’s Fiduciary Net Position. The Plan’s Fiduciary Net Position is equal to the market value of assets. The NOL increased from \$47,970,269 as of June 30, 2019 to \$60,255,077 as of June 30, 2020 and the Plan’s Fiduciary Net Position as a percent of the TOL increased from 0.71% to 0.74%.
2. The NOL measured as of June 30, 2020 and June 30, 2019 was determined based upon the results of the actuarial valuation as of December 31, 2019 and December 31, 2017, respectively.
3. The discount rate used to measure the TOL and NOL as of June 30, 2020 and June 30, 2019 was 2.21% and 3.50%, respectively.

Section 1: Actuarial Valuation Summary

4. The Annual OPEB Expense increased from \$3,866,276 for the year ending June 30, 2019 to \$5,847,339 for the year ending June 30, 2020.
5. The Coronavirus (COVID-19) pandemic is rapidly evolving and is having a significant impact on the US economy in 2020, including most retiree health plans, and will likely continue to have an impact in the future. Our results do not include the impact of the following:
 - Short-term increases in health plan costs related to the testing or treatment of COVID-19;
 - Changes in the market value of plan assets since June 30, 2020;
 - Changes in interest rates since June 30, 2020;
 - Short-term or long-term impacts on mortality of the covered population; and
 - The potential for federal or state fiscal relief.

Section 1: Actuarial Valuation Summary

Important information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to defining future uncertain obligations of a postretirement health plan. As such, it will never forecast the precise future stream of benefit payments. It is an estimated forecast – the actual cost of the plan will be determined by the benefits and expenses paid, not by the actuarial valuation.

In order to prepare a valuation, Segal relies on a number of input items. These include:

Plan of benefits	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. For example, a plan may provide health benefits to post-65 retirees that coordinates with Medicare. If so, changes in the Medicare law or administration may change the plan's costs without any change in the terms of the plan itself. It is important for the Nashoba Regional School District to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Participant data	An actuarial valuation for a plan is based on data provided to the actuary by the plan. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is not necessary to have perfect data for an actuarial valuation: the valuation is an estimated forecast, not a prediction. The uncertainties in other factors are such that even perfect data does not produce a "perfect" result. Notwithstanding the above, it is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Assets	The valuation is based on the market value of assets as of the valuation date, as provided by the Nashoba Regional School District.
Actuarial assumptions	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. To determine the future costs of benefits, Segal collects claims, premiums, and enrollment data in order to establish a baseline cost for the valuation measurement, and then develops short- and long-term health care cost trend rates to project increases in costs in future years. This forecast also requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year, as well as forecasts of the plan's benefits for each of those events. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets or, if there are no assets, a rate of return based on a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions the actuary selects within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model necessarily uses approximations and estimates that may lead to significant changes in our results but will have no impact on the actual cost of the plan. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

Section 1: Actuarial Valuation Summary

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

The actuarial valuation is prepared for use by the Nashoba Regional School District. It includes information for compliance with accounting standards and for the plan's auditor. Segal is not responsible for the use or misuse of its report, particularly by any other party.

If the Nashoba Regional School District is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.

An actuarial valuation is a measurement at a specific date – it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

Sections of this report include actuarial results that are not rounded, but that does not imply precision.

Critical events for a plan include, but are not limited to, decisions about changes in benefits and contributions. The basis for such decisions needs to consider many factors such as the risk of changes in plan enrollment, emerging claims experience, health care cost trend, and investment losses, not just the current valuation results.

Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Nashoba Regional School District should look to their other advisors for expertise in these areas.

While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.

Segal's report shall be deemed to be final and accepted by the Nashoba Regional School District upon delivery and review. The Nashoba Regional School District should notify Segal immediately of any questions or concerns about the final content.

As Segal has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

Section 2: GASB Information

Exhibit 1 – General Information About the OPEB Plan

Plan Description

Plan membership. At December 31, 2019, the Nashoba Regional School District’s plan membership consisted of the following:

	December 31, 2019
Retired members or beneficiaries currently receiving benefits	339
Active members	<u>377</u>
Total	716

We have assumed other general information about the Plan will be provided by the Nashoba Regional School District’s auditors.

Exhibit 2 – Net OPEB Liability

The components of the net OPEB liability of the Nashoba Regional School District are as follows:

Components of the Net OPEB Liability	June 30, 2020	June 30, 2019
Total OPEB Liability	\$60,705,679	\$48,312,046
Plan Fiduciary Net Position	450,602	341,777
Net OPEB Liability	60,255,077	47,970,269
Plan Fiduciary Net Position as a percentage of the Total OPEB Liability*	0.74%	0.71%

* These funded percentages are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.

Actuarial assumptions. The Total OPEB Liability as of June 30, 2020 was measured by an actuarial valuation as of December 31, 2019, using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Wage inflation	3.25% (used for normal cost projection)
Salary increases	6.00% decreasing to 4.25% based on service for Non-Teachers 7.50% decreasing to 4.00% based on service for Teachers
Discount rate	2.21% as of June 30, 2020 and 3.50% as of June 30, 2019
Health care cost trend rates	Medical/Prescription Drug: 7.00% decreasing by 0.25% down to 4.50% Dental: 3.50% Medicare Part B: 4.50% Contributions: Retiree contributions are expected to increase with medical trends.
Mortality rates	Pre-Retirement (Non-Teachers): RP-2000 Employee Mortality Table projected generationally with Scale BB2D from 2009 Healthy (Non-Teachers): RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2009 Disabled (Non-Teachers): RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2012 Pre-Retirement (Teachers): RP-2014 White Collar Employee Mortality Table projected generationally with Scale MP2016 Healthy (Teachers): RP-2014 White Collar Annuitant Mortality Table projected generationally with Scale MP2016 Disabled (Teachers): RP-2014 White Collar Annuitant Mortality Table projected generationally with Scale MP2016

Exhibit 3 – Determination of Discount Rate and Investment Rate of Return

Development of long-term rate

The long-term expected rate of return on OPEB plan investments was determined using a building block method in which expected future rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target allocation as of June 30, 2020 and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	21.00%	6.15%
International developed markets equity	13.00%	6.78%
International emerging markets equity	5.00%	8.65%
Core fixed income	15.00%	1.11%
High-yield fixed income	8.00%	3.51%
Real estate	10.00%	4.33%
Commodities	4.00%	4.13%
Hedge fund, GTAA, Risk parity	11.00%	3.19%
Private equity	<u>13.00%</u>	9.99%
Total	100.00%	

Note: Some asset classes included in the pension plan's target asset allocation have been combined.

Nature of Assets: The assets are in an irrevocable OPEB Trust and are invested in the State Retiree Benefits Trust Fund.

Development of blended discount rate

The discount rate used to measure the total OPEB liability was 2.21% as of June 30, 2020. The plan was 0.74% funded as of June 30, 2020 and the District's funding policy to contribute \$50,000 per year to the District's OPEB trust, which comprise current and future assets, are projected to be insufficient to pay benefits. Therefore, the discount rates is based on the yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rate of AA/Aa or higher as shown in the Bond Buyer 20-Bond General Obligation Index (2.21 as of June 30, 2020 and 3.50% as of June 30, 2019). This determination is in accordance with GASB Statement No. 75.

Exhibit 4 – Sensitivity

The following presents the NOL of the Nashoba Regional School District as well as what the NOL would be if it were calculated using a discount rate that is 1-percentage-point lower (1.21%) or 1-percentage-point higher (3.21%) than the current rate. Also, shown is the NOL as if it were calculated using health care cost trend rates that were 1-percentage-point lower or 1-percentage-point higher than the current health care cost trend rates.

	1% Decrease (1.21%)	Current Discount Rate (2.21%)	1% Increase (3.21%)
Net OPEB Liability (Asset)	\$72,459,127	\$60,255,077	\$50,759,844
	1% Decrease in Health Care Cost Trend Rates	Current Health Care Cost Trend Rates	1% Increase in Health Care Cost Trend Rates
Net OPEB Liability (Asset)	\$49,476,053	\$60,255,077	\$74,586,391

Exhibit 5 – Schedule of Changes in Net OPEB Liability – Last Two Fiscal Years

Measurement Date	June 30, 2020	June 30, 2019
Total OPEB Liability		
Service cost	\$2,320,516	\$2,041,539
Interest	1,752,222	1,720,586
Changes of benefit terms	0	0
Differences between expected and actual experience	790,973	0
Changes of assumptions	8,668,063	2,718,253
Benefit payments, including refunds of member contributions	<u>-1,138,141</u>	<u>-1,161,686</u>
Net change in Total OPEB Liability	\$12,393,633	\$5,318,692
Total OPEB Liability – beginning	<u>48,312,046</u>	<u>42,993,354</u>
Total OPEB Liability – ending	\$60,705,679	\$48,312,046
Plan Fiduciary Net Position		
Contributions – employer	\$1,238,141	\$1,488,196
Contributions – employee	0	0
Net investment income	8,825	15,267
Benefit payments, including refunds of member contributions	<u>-1,138,141</u>	<u>-1,161,686</u>
Administrative expenses	<u>0</u>	<u>0</u>
Net change in Plan Fiduciary Net Position	\$108,825	\$341,777
Plan Fiduciary Net Position – beginning	<u>341,777</u>	<u>0</u>
Plan Fiduciary Net Position – ending	\$450,602	\$341,777
Net OPEB Liability – ending	\$60,255,077	\$47,970,269
Plan Fiduciary Net Position as a percentage of the Total OPEB Liability	0.74%	0.71%
Covered employee payroll	\$38,329,100	\$36,953,354
Plan Net OPEB Liability as percentage of covered employee payroll	157.20%	129.81%

Notes to schedule:

Changes in Actuarial Assumptions:

Changes as of June 30, 2019:

- The discount rate was changed from 3.87% as of June 30, 2018 to 3.50% as of June 30, 2019

Changes as of June 30, 2020:

- The impact of the excise tax on high cost health plans scheduled to begin in 2022 was repealed effective December 20, 2019 and as such has been removed with this valuation.
 - The disabled mortality assumption was updated for Teachers.
 - The per capita health care costs were updated to reflect recent experience.
 - The trend assumptions were revised to better reflect future expectations.
 - The discount rate was changed from 3.50% as of June 30, 2019 to 2.21% as of June 30, 2020
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Changes in Plan Provisions:

Changes as of June 30, 2019:

- None

Changes as of June 30, 2020:

- None
-

Exhibit 6 – OPEB Expense

Reporting Date for Employer under GASB 75	June 30, 2020	June 30, 2019
Measurement Date for Employer under GASB 75	June 30, 2020	June 30, 2019
Components of OPEB Expense		
Service cost	\$2,320,516	\$2,041,539
Interest on the Total OPEB Liability	1,752,222	1,720,586
Current-period benefit changes	0	0
Expensed portion of current-period difference between expected and actual experience in the Total OPEB Liability	140,743	0
Expensed portion of current-period changes of assumptions	1,542,360	453,042
Member contributions	0	0
Projected earnings on OPEB plan investments	-28,404	-11,836
Expensed portion of current-period differences between actual and projected earnings on OPEB plan investments	3,915	-686
Administrative expenses	0	0
Recognition of beginning of year deferred outflows of resources as OPEB expense	453,042	0
Recognition of beginning of year deferred inflows of resources as OPEB expense	-337,055	-336,369
OPEB Expense	\$5,847,339	\$3,866,276

Deferred Outflows of Resources and Deferred Inflows of Resources

Reporting Date for Employer under GASB 75	June 30, 2020	June 30, 2019
Measurement Date for Employer under GASB 75	June 30, 2020	June 30, 2019
Deferred Outflows of Resources		
Changes of assumptions	\$8,937,872	\$2,265,212
Net difference between projected and actual earnings on OPEB plan investments	13,605	0
Difference between expected and actual experience in the Total OPEB Liability	<u>650,230</u>	<u>0</u>
Total Deferred Outflows of Resources	\$9,601,707	\$2,265,212
Deferred Inflows of Resources		
Changes of assumptions	\$1,009,109	\$1,345,478
Net difference between projected and actual earnings on OPEB plan investments	0	2,745
Difference between expected and actual experience in the Total OPEB Liability	<u>0</u>	<u>0</u>
Total Deferred Inflows of Resources	\$1,009,109	\$1,348,223
Deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized as follows:		
Reporting Date for Employer under GASB 75 Year Ended June 30:		
2020	N/A	\$115,987
2021	\$1,803,006	115,987
2022	1,803,006	115,987
2023	1,803,003	115,984
2024	2,140,062	453,044
2025	1,043,521	0
Thereafter	0	0

Note: Average expected remaining service lives as of December 31, 2019 is 5.62 years.

Exhibit 7 – Schedule of Reconciliation of Net OPEB Liability

Measurement Date	June 30, 2020	June 30, 2019
Beginning Net OPEB Liability	\$47,970,269	\$42,993,354
OPEB expense	5,847,339	3,866,276
Employer contributions	-1,238,141	-1,488,196
New net deferred inflows/outflows	7,791,597	2,262,466
Recognition of prior deferred inflows/outflows	<u>-115,987</u>	<u>336,369</u>
Ending Net OPEB Liability	\$60,255,077	\$47,970,269

Exhibit 8 – Schedule of Contributions – Last Ten Fiscal Years

Year Ended June 30	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency / (Excess)	Covered- Employee Payroll	Contributions as a Percentage of Covered Employee Payroll
2018	\$2,132,734	\$1,093,953	\$1,038,781	\$36,103,698	3.03%
2019	2,217,566	1,488,496	729,070	36,953,354	4.03%
2020	2,286,847	1,238,141	1,048,706	38,329,100	3.23%

Notes to Schedule:

Methods and assumptions used to establish “actuarially determined contribution” rates:

Valuation date	Actuarially determined contribution for fiscal year 2020 was based on the December 31, 2019 actuarial valuation.
Actuarial cost method	Entry Age Normal - Level Percentage of Payroll
Amortization method	Level percent of payroll
Remaining amortization period	30 years from July 1, 2019
Asset valuation method	Market value
Investment rate of return	7.00%
Wage inflation	3.25% (used for normal cost projection)
Health care cost trend rates	Medical/Prescription Drug: 7.00% decreasing by 0.25% down to 4.50% Dental: 3.50% Medicare Part B: 4.50% Contributions: Retiree contributions are expected to increase with medical trends.
Mortality rates	Pre-Retirement (Non-Teachers): RP-2000 Employee Mortality Table projected generationally with Scale BB2D from 2009 Healthy (Non-Teachers): RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2009 Disabled (Non-Teachers): RP-2000 Healthy Annuitant Mortality Table projected generationally with Scale BB2D from 2012 Pre-Retirement (Teachers): RP-2014 White Collar Employee Mortality Table projected generationally with Scale MP2016 Healthy (Teachers): RP-2014 White Collar Annuitant Mortality Table projected generationally with Scale MP2016 Disabled (Teachers): RP-2014 White Collar Annuitant Mortality Table projected generationally with Scale MP2016