

**POST RETIREMENT BENEFITS ACTUARIAL VALUATION
OF
THE MANCHESTER-ESSEX REGIONAL SCHOOL
DISTRICT**

June 30, 2017 Actuarial Valuation Report

GASB 74 & 75

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Introduction

This report presents the Governmental Accounting Standards Statements 74 & 75 based on the findings of an actuarial valuation as of July 1, 2015, of the Manchester-Essex Regional School District OPEB Plan.

The actuarial valuation is based on:

- Plan Provisions as of July 1, 2015.
- Employee data provided by the District
- Asset provided by the District
- Actuarial assumptions approved by the Sherman Actuarial Services and the District

The valuation and forecast do not account for any subsequent changes in the plan.

GASB Statements No. 74 and No. 75

Effective for periods beginning after June 15, 2015, the Governmental Accounting Standards Board (GASB) requires the disclosure of Other Post Employment Benefits (OPEB) related liabilities for public employer financial statements in accordance with Statements 74 and 75. These statements, which amend GASB Statements No. 43 and No. 45, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

The statement requires the system to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position. The statement of fiduciary net position presents the following items as of the end of the plan's reporting period, as applicable:

- Assets
- Deferred outflows of resources (consumption of net assets by the employers that is applicable to a future reporting period)
- Liabilities
- Deferred inflows of resources (acquisition of net assets by the employers that is applicable to a future reporting period)
- Fiduciary net position (Assets + Deferred outflows – Liabilities – Deferred inflows)

The system is considered a single employer OPEB plan since obligations exist for employees of one employer and plan assets can be used to pay the benefits of the employees the employer.

This report does not include all items required under GASB Statements No. 74 and No. 75. Rather, it provides all items required that are not readily available from other sources and investment reports prepared by the plan's investment consultant.

Discount Rate

The discount rate, and all other actuarial assumptions, are the as those described in Exhibit 4. The discount rate was selected based on a projection of employer and employee contributions, benefit payments (with and without subsidy), expenses and the long term expected rate of return on trust assets.

Based on these laws and assumptions, the OPEBs plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

The District selected 4.4% as the long term expectation of investment returns.

Net Position Restricted for OPEB

The Net Position Restricted for OPEB Plan Benefits as of June 30, 2017 is \$843,812. The 2017 Annual Statement of the Financial Condition contains the values for previous years and the changes in Net Position Restricted for OPEB Plan Benefits. Investments are reported at fair value.

June 30, 2016 Net Position	399,544
Employer Contributions	1,157,348
Employee Contributions	0
Other Payments	0
Benefit Payments	(740,289)
Expenses	(1,101)
Investment Income	<u>28,310</u>
June 30, 2017 Net Position	843,812

OPEB Liability as of June 30, 2017

The following presents the changes in the OPEB liability during FYE 2017.

June 30, 2016 Liability	24,003,228
Service Cost	1,175,114
Interest on Liability and Service Cost	1,091,736
Change in Plan Provisions	0
Experience (Gain) and Loss	0
Change in Assumptions	0
Benefit Payments	(740,289)
Other	<u>0</u>
June 30, 2017 Liability	25,529,789

Net OPEB Liability as of June 30, 2017

The following presents the net OPEB liability of the system calculated using the discount rate of 4.4%, as well as what the system's net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (3.4%) or 1-percentage-point higher (5.4%) than the current rate. The Plan Fiduciary Net Position as a percentage of the Total OPEB Liability is 3.3%.

	1% Decrease (3.4%)	Current Discount Rate (4.4%)	1% Increase (5.4%)
Total OPEB Liability	\$29,507,828	\$25,529,789	\$22,177,986
Plan Fiduciary Net Position	<u>\$ 843,812</u>	<u>\$ 843,812</u>	<u>\$ 843,812</u>
Net OPEB Liability	\$28,664,016	\$24,685,977	\$21,334,174

The following presents the net OPEB liability of the system calculated using the current trend rates, as well as what the system's net OPEB liability would be if it were calculated using trend rates 1-percentage-point lower for all years or 1-percentage-point higher than the current rates.

	1% Decrease	Current Trend	1% Increase
Total OPEB Liability	\$22,160,023	\$25,529,789	\$30,658,276
Plan Fiduciary Net Position	<u>\$ 843,812</u>	<u>\$ 843,812</u>	<u>\$ 843,812</u>
Net OPEB Liability	\$21,316,211	\$24,685,977	\$29,814,464

OPEB Expense for FYE 2017

Service Cost	1,175,114
Interest	1,091,736
Difference in Experience - Amortization	0
Change in Assumptions - Amortization	0
Changes in Plan Provisions	0
Employee Contributions	0
Projected Earnings	(26,633)
Administration Expense	1,101
Other Changes in Fiduciary Net Position	0
Asset (Gain) / Loss Amortization	<u>(335)</u>
Total Expense	2,240,983

Schedules of Required Supplementary Information

	<u>2017</u>
Total OPEB Liability – Beginning	24,003,228
Total OPEB Liability – Ending (a)	25,529,789
Plan Fiduciary Net Position – Beginning	399,544
Plan Fiduciary Net Position – Ending (b)	843,812
Net OPEB Liability – Ending (a) – (b)	24,685,977
Plan Fiduciary Net Positions as a percentage of the Total OPEB Liability	3.3%
Covered-employee payroll	15,510,239
Net OPEB Liability as a percentage of Covered-employee Payroll	159.2%

Schedule of Net Position Restricted for OPEB Plan Benefits Amortization Recognition

Below is the schedule of amortization adjustments to the OPEB Expense for the coming years. A positive number indicates that the actual return was less than the expected return and will be added to the OPEB Expense.

Investment Return

			<u>Increase (Decrease) arising from (Gains) or Losses</u>				
<u>FYE</u>	<u>(Gain) / Loss</u>	<u>Period</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
2017	-1,677	5	-355	-355	-355	-355	-355

Reconciliation of Net OPEB Liability for 2017

NOL Beginning of Year	23,603,684
OPEB Expense	2,240,983
Employer Contributions	(1,157,348)
Deferred Outflows	0
Deferred Inflows	(1,342)
Revenue	<u>0</u>
NOL End of Year	24,685,978

EXHIBITS

EXHIBIT 1 – MEDICAL PREMIUM

Monthly Premiums effective July 1, 2015

Health and dental benefits are available to employees and retirees through a number of plans. The following are gross monthly rates per subscriber for plans in which current MERSD employees and/or retirees are enrolled:

Tufts HMO (individual)	\$693.82
Tufts HMO (family)	\$1,873.39
Tufts PPO (individual)	\$866.57
Tufts PPO (family)	\$2,339.45
Medex (individual)	\$306.00

Retirees contribute towards their coverage in the amount of 20% of the stated premiums for the MEDEX and HMO plans. Those electing the PPO pay the difference between the PPO cost and the portion the MERSD pays for the HMO plan. As of July 1, 2015 this represents 35.9%.

EXHIBIT 2 – MEMBERSHIP DATA

Number of Participants

Actives:	231
Retirees and Beneficiaries:	<u>126</u>
Total:	357

EXHIBIT 3 – SUMMARY OF PLAN PROVISIONS:

Retirement Medical Insurance: All retirees and beneficiaries pay a 20% share of their post-retirement medical costs for MEDEX and HMO plans. Participants electing the PPO plan pay the difference between 80% of the HMO plan and the full cost of the PPO plan.

Life Insurance: Manchester-Essex Regional School District provides \$5,000 of basic life insurance.

Spousal Coverage: Current and future retirees may elect to include their spouses as part of their post-retirement benefits. Spousal coverage for medical insurance ends at the earlier of the retiree's death, and the spouse's death.

Administrative Costs: The MERSD pays administrative costs for each member of the plan as part of the monthly premium.

Section 18 Coverage: The MERSD has elected to adopt Section 18 under Chapter 32B of the General Laws of Massachusetts, which requires that an employee or retiree must participate in the Medicare program as the primary payer once one reaches age 65 and is Medicare eligible.

Retirement Eligibility: Age 55 with 10 years of service, or 20 years of service.

Ordinary Disability Eligibility: 10 years of service and under age 55.

Termination Eligibility: 10 years of service.

EXHIBIT 4 – ACTUARIAL METHODS AND ASSUMPTIONS:**All Groups**

Interest: Partial Prefunding: 4.4%, net of investment expenses

Actuarial Cost Method: Entry Age Normal

Medical Care Inflation:

<u>Year</u>	<u>Inflation Rate</u>
2015	7.0%
2016	6.5%
2017	6.0%
2018	5.5%
2019	5.0%
2020 & after	4.5%

Participation: 85% of future retirees are assumed to participate in the retiree medical plan and 75% of future retirees are expected to elect life insurance.

Marital status: 80% of male District employees and 60% of female District employees are assumed to have a covered spouse at retirement. Wives are assumed to be three years younger than their husbands.

Termination Benefit: 85% of current actives over age 50 with at least 10 years of service are expected to elect medical coverage starting at age 65.

Medical Plan Costs: The MERSD participants in Tufts plans, and is considered fully insured. The estimated gross per capita incurred claim costs for all retirees and beneficiaries for 2015-16 at age 64 and 65 are \$8,701 and \$4,944, respectively. Medicare eligible retirees' per capita claims costs at age 65 is \$4,944. It is assumed that future retirees participate in the same manner as current retirees. Employee cost sharing is based on current rates. Future cost sharing is based on the weighted average of the current cost sharing of retirees and beneficiaries.

Pre-Age 65 Retirees:

Current retirees who are under age 65 are assumed to remain in their current medical plan until age 65.

Current active employees who are assumed to retire prior to age 65 are valued with a weighted-average premium. This weighted-average premium is based on the medical plan coverage of current retirees under age 65.

Post-Age 65 Retirees:

Current retirees over age 65 remain in their current medical plan until death for purposes of measuring their contributions. It is assumed that future retirees are Medicare eligible. It is furthermore assumed that all current retirees under 65 will participate in the Medex plan in the same proportion as current retirees over 65. Per capita costs were developed from the MERSD developed monthly costs. Amounts to be received in the future for the Medicare Part D Retiree Drug Subsidy are not reflected in the valuation.

MANCHESTER-ESSEX REGIONAL SCHOOL DISTRICT, NON-TEACHERS

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of withdrawal and vesting, disability, death and service retirement are as follows:

Age	Disability	Service Retirement	
		Male	Female
25	0.0002		
30	0.0003		
35	0.0006		
40	0.0010		
45	0.0015		
50	0.0019	0.010	0.015
55	0.0024	0.020	0.055
60	0.0028	0.120	0.050
62	0.0030	0.300	0.150
65	0.0030	0.400	0.150
69		0.300	0.200

Years of Service	Rates of Withdrawal
0	0.150
1	0.120
2	0.100
3	0.090
4	0.080
5	0.076
10	0.054
15	0.033
20	0.020
25	0.010
30+	0.000

Mortality: RP2000 Mortality Table with Scale AA improvement to 2015. For the period after disability retirement, the RP-2000 Combined Healthy Table set forward 2 years is used.

MANCHESTER-ESSEX REGIONAL SCHOOL DISTRICT, TEACHERS

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of withdrawal and vesting, disability, death and service retirement are as follows:

Age	Disability	Years of Service	Rates of Withdrawal
25	0.0002	0	0.150
30	0.0003	1	0.120
35	0.0006	2	0.100
40	0.0010	3	0.090
45	0.0015	4	0.080
50	0.0019	5	0.076
55	0.0024	10	0.054
60	0.0028	15	0.033
62	0.0030	20	0.020
65	0.0030	25	0.010
69		30+	0.000

Age	Male Service Retirement		Female Service Retirement	
	<20	20+	<20	20+
50	0.00	0.01	0.00	0.01
55	0.02	0.03	0.02	0.04
60	0.12	0.20	0.12	0.16
61	0.15	0.30	0.15	0.20
62	0.18	0.35	0.18	0.25
63	0.15	0.35	0.15	0.25
64	0.25	0.30	0.25	0.30
65	0.40	0.50	0.40	0.40
66	0.40	0.30	0.40	0.30
67	0.40	0.30	0.40	0.25
68	0.40	0.30	0.40	0.35
69	0.40	0.40	0.40	0.35
70	1.00	1.00	1.00	1.00

Teachers electing the increased benefit under Chapter 114 of the Acts of 2000 were assumed to have higher rates of retirement from ages 54 to 62 if their service was greater than 30 years. These rates are the same for males and females. The rate at age 54 is 0.035. The rate increases to 0.06 at age 55, 0.18 at age 56 and 0.30 at age 57. The rate for ages 58, 59 and 62 is 0.40. The rate for ages 60 and 61 is 0.35.

Mortality: RP2000 Mortality Table with Scale AA improvement to 2015. For the period after disability retirement, the RP-2000 Combined Healthy Table set forward 2 years is used.

CERTIFICATION:

This report fairly represents the actuarial position of the Manchester-Essex Regional School District OPEB Plan as of June 30, 2017, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost are reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

The funded status measure is appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations. The funded status measure is appropriate for assessing the need for or the amount of future contributions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic 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 or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of such future measurements.

The report was prepared under the supervision of Daniel Sherman, an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries, who takes responsibility for the overall appropriateness of the analysis, assumptions and results. Daniel Sherman is deemed to meet the General Qualification Standard and the basic education and experience requirement in the OPEB area. Based on over thirty years of performing valuations of similar complexity, Mr. Sherman is qualified by experience. Daniel Sherman has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sherman Actuarial Services, LLC

Daniel W. Sherman, ASA, MAAA

November, 2017