



GASB 74/75 ACTUARIAL VALUATION

Fiscal Year Ending June 30, 2016

Town of North Providence

Nyhart Actuary & Employee Benefits

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March 7, 2017

**Maria Vallee
Town of North Providence
2000 Smith Street
North Providence, RI 02911**

This report summarizes the GASB actuarial valuation for the Town of North Providence 2015/16 fiscal year. To the best of our knowledge, the report presents a fair position of the funded status of the plan in accordance with GASB Statement No. 74 & 75 (Accounting and Financial Reporting by Employers for Post-Employment Benefits Other Than Pensions).

The information presented herein is based on the actuarial assumptions and substantive plan provisions summarized in this report and participant information furnished to us by the Plan Sponsor. We have reviewed the employee census provided by the Plan Sponsor for reasonableness when compared to the prior information provided but have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based. When relevant data may be missing, we may have made assumptions we feel are neutral or conservative to the purpose of the measurement. We are not aware of any significant issues with and have relied on the data provided.

The discount rate, other economic assumptions, and demographic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. In our opinion, the actuarial assumptions are individually reasonable and in combination represent our estimate of anticipated experience of the Plan. All calculations have been made in accordance with generally accepted actuarial principles and practice.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

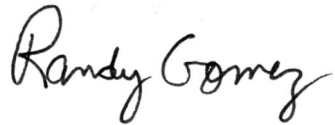
- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement.

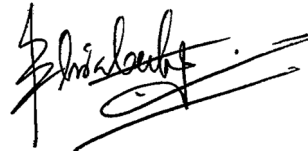
To our knowledge, there have been no significant events prior to the current year's measurement date or as of the date of this report that could materially affect the results contained herein.

Neither Nyhart nor any of its employees has any relationship with the plan or its sponsor that could impair or appear to impair the objectivity of this report. Our professional work is in full compliance with the American Academy of Actuaries "Code of Professional Conduct" Precept 7 regarding conflict of interest. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Should you have any questions please do not hesitate to contact us.



Randy Gomez, FSA, MAAA
Consulting Actuary



Evi Laksana, ASA, MAAA
Valuation Actuary

SECTION A - EXECUTIVE SUMMARY

Summary of Results

Presented below is the summary of GASB 75 results for the fiscal year ending June 30, 2016.

As of June 30, 2016		Town		School
Total OPEB Liability	\$	56,717,102	\$	6,947,102
Actuarial Value of Assets	\$	(764,785)	\$	0
Net OPEB Liability	\$	55,952,317	\$	6,947,102
Funded Ratio		1.3%		0.0%

FY 2015/16		Town		School
OPEB Expense	\$	4,731,784	\$	175,403
Annual Employer Contribution	\$	3,257,830	\$	612,644

As of June 30, 2016		Town		School
Discount Rate		2.92%		2.92%
Expected Return on Assets		7.50%		N/A ¹

As of June 30, 2016		Town		School
Total Active Participants		254		434
Total Retiree Participants		105		42

The active participants' number above may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

¹ North Providence School does not currently have an OPEB Trust for funding the retiree health benefits.

Below is a breakdown of total GASB 75 liabilities as of June 30, 2016 allocated to past and current service compared to the prior year. The table below also provides a breakdown of the Total OPEB Liability as of June 30, 2016 allocated to pre and post Medicare eligibility. The liability shown below includes explicit (if any) and implicit subsidies. Refer to the Substantive Plan Provisions section for complete information on the Plan Sponsor’s GASB subsidies.

Present Value of Future Benefits	Town		School	
Active Employees	\$	73,745,116	\$	9,746,826
Retired Employees		27,703,496		1,634,215
Total Present Value of Future Benefits	\$	101,448,612	\$	11,381,041

Total OPEB Liability	Town		School	
Active Pre-Medicare	\$	28,066,540	\$	4,181,024
Active Post-Medicare		947,066		1,131,863
Active Liability	\$	29,013,606	\$	5,312,887
Retiree Pre-Medicare	\$	27,619,488	\$	1,569,793
Retiree Post-Medicare		84,008		64,422
Retiree Liability	\$	27,703,496	\$	1,634,215
Total OPEB Liability	\$	56,717,102	\$	6,947,102

As of June 30, 2016	Town		School	
Discount Rate		2.92%		2.92%

Present Value of Future Benefits (PVFB) is the amount needed as of June 30, 2016, to fully fund the Town’s and School’s retiree health care subsidies for existing and future retirees and their dependents assuming all actuarial assumptions are met.

Total OPEB Liability is the portion of PVFB considered to be accrued or earned as of June 30, 2016. This amount is a required disclosure in the Required Supplementary Information section.

SECTION B - VALUATION RESULTS FOR TOWN OF NORTH PROVIDENCE

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2015/16
Total OPEB Liability	
Total OPEB liability – beginning of year	\$ 57,198,352
Service cost	2,725,113
Interest	2,233,318
Changes of benefit terms	(2,584)
Changes in assumptions	3,226,250
Differences between expected and actual experience	(5,905,518)
Benefit payments	(2,757,830)
Net change in total OPEB liability	\$ (481,250)
Total OPEB liability – end of year	\$ 56,717,102
Plan Fiduciary Net Position	
Plan fiduciary net position – beginning of year	\$ 250,000
Contributions – employer	3,257,830
Contributions – retired members	0
Net investment income	15,465
Benefit payments	(2,757,830)
Trust administrative expenses	(680)
Net change in plan fiduciary net position	\$ 514,785
Plan fiduciary net position – end of year	\$ 764,785
Net OPEB Liability – end of year	\$ 55,952,317
Plan fiduciary net position as % of total OPEB liability	1.3%
Covered employee payroll	\$ 13,102,224
Net OPEB liability as % of covered payroll	427.0%

Schedule of Employer Contributions

The Actuarially Determined Contribution (ADC) for FY 2015/16 is only calculated for the Town that is pre-funding the retiree health benefits. ADC prior to FY 2015/16 is based on the Annual Required Contribution (ARC) calculated in the prior GASB 45 actuarial valuations and they are for both the Town and School as shown in the Town's financial statements.

	FY 2015/16 (Town)	FY 2014/15	FY 2013/14	FY 2012/13	FY 2011/12
Actuarially Determined Contribution (ADC)	\$ 3,854,662 ²	\$ 5,651,000	\$ 5,332,000	\$ 4,955,000	\$ 4,686,000
Contributions in relation to the ADC	3,257,830 ³	3,839,000	2,961,000	2,841,000	2,771,000
Contribution deficiency / (excess)	\$ 596,832	\$ 1,812,000	\$ 2,371,000	\$ 2,114,000	\$ 1,915,000
Covered employee payroll	\$ 13,102,224	\$ 37,460,000	\$ 37,460,000	\$ 41,332,000	\$ 41,332,000
Contribution as a % of covered employee payroll	24.9%	10.2%	7.9%	6.9%	6.7%
	FY 2010/11	FY 2009/10	FY 2008/09		
Actuarially Determined Contribution (ADC)	\$ 4,549,000	\$ 4,289,000	\$ 4,039,000		
Contributions in relation to the ADC	2,208,000	1,945,000	1,646,000		
Contribution deficiency / (excess)	\$ 2,341,000	\$ 2,344,000	\$ 2,393,000		
Covered employee payroll	\$ N/A	\$ N/A	\$ N/A		
Contribution as a % of covered employee payroll	N/A	N/A	N/A		

² Refer to the Actuarially Determined Contribution section for the calculation details.

³ Includes estimated employer contribution for pay-go cost of \$2,757,830 paid from General Fund and \$500,000 pre-funding contributions deposited into the OPEB Trust in FY 2015/16 (this includes \$250,000 accrued contribution attributed to FY 2014/15 but deposited in FY 2015/16).

OPEB Expense

<i>OPEB Expense</i>		<i>FY 2015/16</i>
Discount Rate		2.92%
Service cost	\$	2,725,113
Interest		2,233,318
Changes of benefit terms		(2,584)
Projected earnings on OPEB plan investments		(37,161)
Reduction for contributions from active employees		0
OPEB plan administrative expenses		0
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$	(421,823)
Changes in assumptions		230,446
Net difference between projected and actual earnings on OPEB plan investments		4,475
Total current period recognition	\$	(186,902)
Total OPEB expense	\$	4,731,784

Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Difference between projected and actual earnings in OPEB plan investments

The initial amortization period for the first two items noted above is based on the average future service to retirement while the difference between projected and actual earnings in OPEB plan investment is amortized over five years. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the item above.

<i>Differences between expected and actual experience for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2016</i>
June 30, 2016	\$ (5,905,518)	14	\$ (421,823)	\$ (5,483,695)

<i>Changes in assumptions for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2016</i>
June 30, 2016	\$ 3,226,250	14	\$ 230,446	\$ 2,995,804

<i>Net difference between projected and actual earnings in OPEB plan investments for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2016</i>
June 30, 2016	\$ 22,376	5	\$ 4,475	\$ 17,901

<i>As of fiscal year ending June 30, 2016</i>	<i>Deferred Outflows</i>	<i>Deferred Inflows</i>
Differences between expected and actual experience	\$ 0	\$ (5,483,695)
Changes in assumptions	2,995,804	0
Net difference between projected and actual earnings in OPEB plan investments	17,901	0
Total	\$ 3,013,705	\$ (5,483,695)

Deferred Outflows / (Inflows) of Resources – Continued

Annual Amortization of Deferred Outflows / (Inflows)

The balances of June 30, 2016 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

<i>FYE</i>	<i>Balance</i>
2017	\$ (186,902)
2018	\$ (186,902)
2019	\$ (186,902)
2020	\$ (186,901)
2021	\$ (191,377)
Thereafter	\$ (1,531,005)

Sensitivity Results

The following presents the net OPEB liability as of June 30, 2016, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 2.92%.
- The 1% decrease in discount rate would be 1.92%.
- The 1% increase in discount rate would be 3.92%.

<i>As of June 30, 2016</i>	<i>Net OPEB Liability</i>
1% Decrease	\$ 61,054,370
Current Discount Rate	\$ 55,952,317
1% Increase	\$ 51,373,442

The following presents the net OPEB liability as of June 30, 2016, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 9.0% decreasing by 0.5% annually to an ultimate rate of 5.0%.
- The 1% decrease in health care trend rates would assume an initial rate of 8.0% decreasing by 0.5% annually to an ultimate rate of 4.0%.
- The 1% increase in health care trend rates would assume an initial rate of 10.0% decreasing by 0.5% annually to an ultimate rate of 6.0%.

<i>As of June 30, 2016</i>	<i>Net OPEB Liability</i>
1% Decrease	\$ 50,445,510
Current Health Care Trend Rates	\$ 55,952,317
1% Increase	\$ 62,370,074

Asset Information

Asset Breakdown	As of June 30, 2016
Assets	
Cash and cash equivalents	\$ 806
Securities lending cash collateral	0
Total cash	\$ 806
Receivables	
Contributions	\$ 0
Accrued interest	0
Total receivables	\$ 0
Investments	
Fixed income	\$ 0
Equities	0
Mutual Funds	763,979
Total investments	\$ 763,979
Total assets	\$ 763,979
Liabilities	
Payables	
Investment management fees	\$ 0
Securities lending expense	0
Total liabilities	\$ 0
Net position restricted to OPEB	\$ 764,785

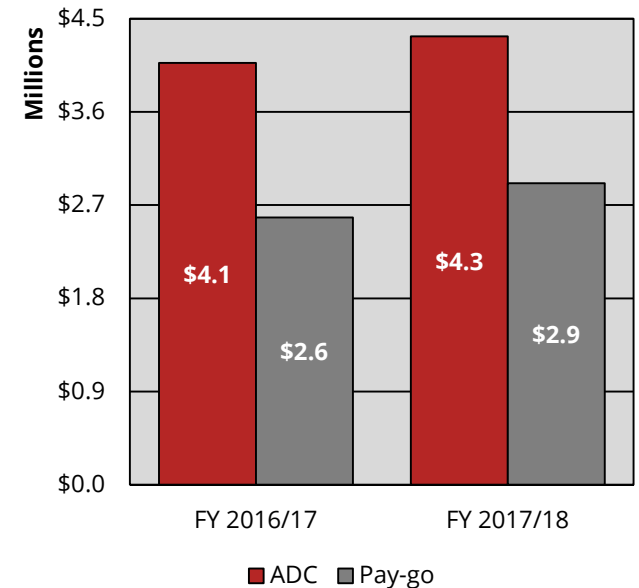
Reconciliation of Assets	FY 2015/16
Additions	
Contributions received	
Employer	\$ 3,257,830
Employee	0
Total contributions	\$ 3,257,830
Investment income	
Net increase in fair value of investments	\$ 13,887
Interests and dividends	1,578
Investment expense, other than from securities lending	0
Securities lending income	0
Securities lending expense	0
Net investment income	\$ 15,465
Total additions	\$ 3,273,295
Deductions	
Benefit payments	\$ (2,757,830)
Administrative expenses	(680)
Other	0
Total deductions	\$ (2,758,510)
Net increase in net position	\$ 514,785
Beginning of year	\$ 250,000
End of year	\$ 764,785

Actuarially Determined Contributions

	FY 2015/16	FY 2016/17	FY 2017/18
Discount rate (Funding)	7.50%	7.50%	7.50%
Payroll growth factor used for amortization	3.50%	3.50%	3.50%
Actuarial cost method	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary
Amortization type	Level % of Salary	Level % of Salary	Level % of Salary
Amortization period	22 years	21 years	20 years
AAL beginning of year	\$ 37,655,411	\$ 39,234,705	\$ 40,772,001
AVA beginning of year	(250,000)	(764,785)	(1,081,349) ⁴
Unfunded AAL – beginning of year	\$ 37,405,411	\$ 38,469,920	\$ 39,690,652
Normal Cost	1,125,750	1,182,038	1,246,488
Amortization of UAAL	2,459,982	2,607,323	2,778,262
Total normal cost plus amortization	\$ 3,585,732	\$ 3,789,361	\$ 4,024,750
Interest to the end of year	268,930	284,202	301,856
Actuarially Determined Contribution	\$ 3,854,662	\$ 4,073,563	\$ 4,326,606
Expected benefit payments	\$ 2,367,854	\$ 2,580,961	\$ 2,909,653

The recommended ADC represents the total employer cash contributions for retiree health benefits paid from General Fund plus contributions deposited into the OPEB Trust.

Cash vs Accrual Accounting



Actuarially Determined Contribution (ADC) is the target or recommended contribution to a defined benefit OPEB plan, which if paid on an ongoing basis, will provide sufficient resources to fund future costs for services to be earned and liabilities attributed to past services. This is typically higher than the pay-as-you-go cost because it includes recognition of employer costs expected to be paid in future accounting periods.

⁴ Asset as of July 1, 2017 is projected from July 1, 2016 asset balance assuming a 7.50% asset return and \$2,830,961 total contribution in FY 2016/17 (\$250,000 for pre-funding and \$2,580,961 for estimated pay-go cost).

The Total OPEB Liability (TOL) is expected to change on an annual basis as a result of expected and unexpected events. Under normal circumstances, it is generally expected to have a net increase each year. Below is a list of the most common events affecting the total OPEB liability and whether they increase or decrease the liability.

Expected Events

- Increases in TOL due to additional benefit accruals as employees continue to earn service each year
- Increases in TOL due to interest as the employees and retirees age
- Decreases in TOL due to benefit payments

Unexpected Events

- Increases in TOL when actual premium rates increase more than expected. A liability decrease occurs if the reverse happens.
- Increases in TOL when more new retirements occur than expected or fewer terminations occur than anticipated. Liability decreases occur when the opposite outcomes happen.
- Increases or decreases in TOL depending on whether benefits are improved or reduced.

Projection of Total OPEB Liability	FY 2015/16	FY 2016/17
Total OPEB Liability as of beginning of year	\$ 57,198,352	\$ 56,717,102
Normal cost as of beginning of year	2,620,301	2,875,515
Expected benefit payments during the year	(2,757,830)	(2,580,961)
Interest adjustment to end of year	2,338,130	1,702,694
Expected Actuarial Accrued Liability as of end of year	\$ 59,398,953	\$ 58,714,350
Actuarial Loss/(Gain)	(2,681,851)	TBD
Actual Total OPEB Liability as of end of year	\$ 56,717,102	\$ TBD

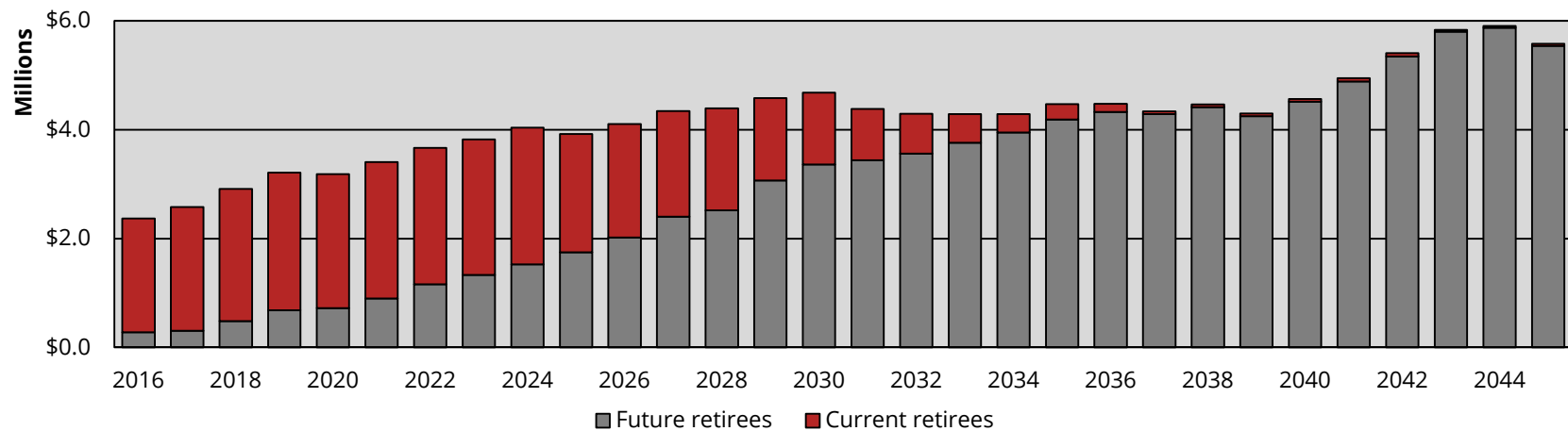
Projection of Actuarial Value of Assets⁵	FY 2015/16	FY 2016/17
Actuarial Value of Assets as of beginning of year	\$ 250,000	\$ 764,785
Expected employer contributions during the year	3,257,830	2,830,961
Expected benefit payments during the year	(2,757,830)	(2,580,961)
Expected investment income	37,161	66,564
Expected Actuarial Value of Assets as of end of year	\$ 787,161	\$ 1,081,349
Differences between expected and actual experience	(22,376)	TBD
Actual Actuarial Value of Assets as of end of year	\$ 764,785	\$ TBD

⁵ Assumes a 7.50% expected asset return.

The below projections show the actuarially estimated employer-paid contributions for retiree health benefits for the next thirty years. Results are shown separately for a closed group of current /future retirees and gross claim costs/retiree contributions. These projections include explicit and implicit subsidies.

FYE	Current Retirees	Future Retirees ⁶	Total	FYE	Current Retirees	Future Retirees ⁶	Total	FYE	Current Retirees	Future Retirees ⁶	Total
2016	\$ 2,088,059	\$ 279,794	\$ 2,367,853	2026	\$ 2,087,511	\$ 2,017,518	\$ 4,105,029	2036	\$ 149,699	\$ 4,326,580	\$ 4,476,279
2017	\$ 2,275,984	\$ 304,976	\$ 2,580,960	2027	\$ 1,941,561	\$ 2,402,909	\$ 4,344,470	2037	\$ 49,177	\$ 4,288,077	\$ 4,337,254
2018	\$ 2,426,008	\$ 483,645	\$ 2,909,653	2028	\$ 1,870,476	\$ 2,519,832	\$ 4,390,308	2038	\$ 52,613	\$ 4,413,868	\$ 4,466,481
2019	\$ 2,528,584	\$ 684,959	\$ 3,213,543	2029	\$ 1,510,722	\$ 3,069,768	\$ 4,580,490	2039	\$ 53,075	\$ 4,246,067	\$ 4,299,142
2020	\$ 2,460,230	\$ 725,219	\$ 3,185,449	2030	\$ 1,320,860	\$ 3,360,429	\$ 4,681,289	2040	\$ 53,447	\$ 4,511,745	\$ 4,565,192
2021	\$ 2,502,932	\$ 902,219	\$ 3,405,151	2031	\$ 945,746	\$ 3,435,946	\$ 4,381,692	2041	\$ 58,269	\$ 4,886,062	\$ 4,944,331
2022	\$ 2,506,772	\$ 1,159,846	\$ 3,666,618	2032	\$ 731,319	\$ 3,559,767	\$ 4,291,086	2042	\$ 58,436	\$ 5,347,727	\$ 5,406,163
2023	\$ 2,486,755	\$ 1,332,658	\$ 3,819,413	2033	\$ 525,579	\$ 3,758,756	\$ 4,284,335	2043	\$ 34,813	\$ 5,800,521	\$ 5,835,334
2024	\$ 2,508,824	\$ 1,527,976	\$ 4,036,800	2034	\$ 336,414	\$ 3,949,298	\$ 4,285,712	2044	\$ 35,022	\$ 5,870,583	\$ 5,905,605
2025	\$ 2,171,881	\$ 1,747,799	\$ 3,919,680	2035	\$ 285,599	\$ 4,185,579	\$ 4,471,178	2045	\$ 35,169	\$ 5,540,367	\$ 5,575,536

Projected Employer Pay-go Cost



⁶ Projections for future retirees do not take into account future new hires.

Under GASB 74, the discount rate used in valuing OPEB liabilities for funded plans as of the Measurement Date must be based on the long-term expected rate of return on OPEB plan investments that are expected to be used to finance future benefit payments to the extent that (a) they are sufficient to pay for the projected benefit payments and (b) the OPEB plan assets are invested using a strategy that will achieve that return. When the OPEB plan investments are insufficient to cover future benefit payments, a yield 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) must be used.

For the current valuation:

1. The long-term expected rate of return on OPEB plan investment is 7.5% for the Town.
2. The discount rate used when the OPEB plan investments are insufficient to pay for future benefit payments are selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.
3. The final equivalent single discount rate used for accounting disclosure is 2.92%. This is based on the following expectations:
 - a. The Town will contribute \$750,000 for FYE 2017 and \$250,000 annually beginning in FYE 2018.
 - b. Pay-go cost will continue to be paid from the General Fund as the Trust does not accumulate enough assets at the end of 50 years to cover future benefit payments.

If any of the above expectations have changed, Nyhart will need to re-evaluate the discount rate used for accounting disclosure purposes.

	Bond Buyer Go 20-Bond Municipal Bond Index	S&P Municipal Bond 20-Year High Grade Rate Index	Bonds Online 20-Year Municipal AA Index	Fidelity 20-Year Go Municipal Bond Index	Nyhart Recommendation
Yield as of June 30, 2016	2.85%	2.71%	2.59%	2.92%	2.92%

<i>Actives with coverage</i>	<i>Single</i>	<i>Non-Single</i>	<i>Total</i>	<i>Avg. Age</i>	<i>Avg. Svc</i>	<i>Salary</i>
DPW Healthmate	8	12	20	44.3	14.1	\$ 803,733
Firefighters Healthmate	26	55	81	40.0	13.1	\$ 4,313,365
Non-Union / Admin Classic	2	1	3	59.9	34.6	\$ 165,478
Non-Union / Admin Healthmate	10	21	31	50.2	12.2	\$ 1,289,119
Police Classic		1	1	44.3	21.6	\$ 67,095
Police Healthmate	20	37	57	37.5	9.8	\$ 3,740,000
Local 1033 Healthmate	13	30	43	51.0	14.6	\$ 1,805,212
Total actives with coverage	79	157	236	43.4	12.9	\$ 12,184,002

<i>Actives without coverage</i>		<i>Total</i>	<i>Avg. Age</i>	<i>Avg. Svc</i>	<i>Salary</i>
DPW		1	42.9	16.8	\$ 45,830
Firefighters		8	38.8	11.2	\$ 417,080
Non-Union / Admin		4	67.3	19.8	\$ 207,953
Police		3	41.5	3.3	\$ 170,589
Local 1033		2	41.5	2.3	\$ 76,770
Total actives without coverage		18	46.1	11.1	\$ 918,221

Active employees who currently have no coverage are assumed to elect coverage with the Town according to the health care coverage election rate assumption. They have been included in the GASB valuation.

Active Age-Service Distribution

Age	Years of Service										Total
	< 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	3	8									11
25 to 29	3	17	6								26
30 to 34	5	15	7	9							36
35 to 39		4	7	19	3						33
40 to 44		3	4	9	9	7					32
45 to 49	1	3	6	4	10	6	10	2			42
50 to 54		3	3	2	7	2	11	1			29
55 to 59	1	1	3	7	2	3	4	2	3		26
60 to 64			4	1	1	1	1				8
65 to 69			4				1	1		1	7
70 & up				1		1	1	1			4
Total	13	54	44	52	32	20	28	7	3	1	254

<i>Retirees with coverage⁷</i>	<i>Single</i>	<i>Non-Single</i>	<i>Total</i>	<i>Avg. Age</i>
DPW Healthmate	1		1	62.3
Firefighters Classic	1	6	7	58.0
Firefighters Healthmate	4	51	55	54.9
Police Classic	2	3	5	68.5
Police Healthmate	2	27	29	52.8
Local 1033 Healthmate	2	6	8	60.5
Total retirees with coverage	12	93	105	55.7

Retiree Age Distribution

<i>Age</i>	<i>Retirees</i>
< 45	3
45 to 49	11
50 to 54	38
55 to 59	30
60 to 64	17
65 to 69	4
70 to 74	1
75 to 79	
80 to 84	
85 to 89	1
90 & up	
Total	105

⁷ Includes disabled retirees.

SECTION C - VALUATION RESULTS FOR NORTH PROVIDENCE SCHOOL

Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2015/16
Total OPEB Liability	
Total OPEB liability – beginning of year	\$ 8,188,540
Service cost	294,094
Interest	315,409
Changes of benefit terms	(367,084)
Changes in assumptions	66,260
Differences between expected and actual experience	(937,473)
Benefit payments	(612,644)
Net change in total OPEB liability	\$ (1,241,438)
Total OPEB liability – end of year	\$ 6,947,102
Plan Fiduciary Net Position	
Plan fiduciary net position – beginning of year	\$ 0
Contributions – employer	612,644
Contributions – retired members	0
Net investment income	0
Benefit payments	(612,644)
Trust administrative expenses	0
Net change in plan fiduciary net position	\$ 0
Plan fiduciary net position – end of year	\$ 0
Net OPEB Liability – end of year	\$ 6,947,102
Plan fiduciary net position as % of total OPEB liability	0.0%
Covered employee payroll	\$ 26,618,426
Net OPEB liability as % of covered payroll	26.1%

OPEB Expense

<i>OPEB Expense</i>		<i>FY 2015/16</i>
Discount Rate		2.92%
Service cost	\$	294,094
Interest		315,409
Changes of benefit terms		(367,084)
Projected earnings on OPEB plan investments		0
Reduction for contributions from active employees		0
OPEB plan administrative expenses		0
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$	(72,113)
Changes in assumptions		5,097
Net difference between projected and actual earnings on OPEB plan investments		0
Total current period recognition	\$	(67,016)
Total OPEB expense	\$	175,403

Deferred Outflows / (Inflows) of Resources

Deferred Outflows / (Inflows) of Resources represents the following items that have not been recognized in the OPEB Expense:

1. Differences between expected and actual experience of the OPEB plan
2. Changes of assumptions
3. Difference between projected and actual earnings in OPEB plan investments

The initial amortization period for the first two items noted above is based on the average future service to retirement. All balances are amortized linearly on a principal only basis and new bases will be created annually for each of the item above.

<i>Differences between expected and actual experience for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2016</i>
June 30, 2016	\$ (937,473)	13	\$ (72,113)	\$ (865,360)

<i>Changes in assumptions for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2016</i>
June 30, 2016	\$ 66,260	13	\$ 5,097	\$ 61,163

<i>Net difference between projected and actual earnings in OPEB plan investments for FYE</i>	<i>Initial Balance</i>	<i>Initial Amortization Period</i>	<i>Annual Recognition</i>	<i>Unamortized Balance as of June 30, 2016</i>
June 30, 2016	\$ 0	N/A	\$ 0	\$ 0

<i>As of fiscal year ending June 30, 2016</i>	<i>Deferred Outflows</i>	<i>Deferred Inflows</i>
Differences between expected and actual experience	\$ 0	\$ (865,360)
Changes in assumptions	61,163	0
Net difference between projected and actual earnings in OPEB plan investments	N/A	N/A
Total	\$ 61,163	\$ (865,360)

Deferred Outflows / (Inflows) of Resources – Continued

Annual Amortization of Deferred Outflows / (Inflows)

The balances of June 30, 2016 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

<i>FYE</i>	<i>Balance</i>
2017	\$ (67,016)
2018	\$ (67,016)
2019	\$ (67,016)
2020	\$ (67,016)
2021	\$ (67,016)
Thereafter	\$ (469,117)

Sensitivity Results

The following presents the net OPEB liability as of June 30, 2016, calculated using the discount rate assumed and what it would be using a 1% higher and 1% lower discount rate.

- The current discount rate is 2.92%.
- The 1% decrease in discount rate would be 1.92%.
- The 1% increase in discount rate would be 3.92%.

<i>As of June 30, 2016</i>	<i>Net OPEB Liability</i>
1% Decrease	\$ 7,295,131
Current Discount Rate	\$ 6,947,102
1% Increase	\$ 6,606,045

The following presents the net OPEB liability as of June 30, 2016, using the health care trend rates assumed and what it would be using 1% higher and 1% lower health care trend rates.

- The current health care trend rate starts at an initial rate of 9.0% decreasing by 0.5% annually to an ultimate rate of 5.0%.
- The 1% decrease in health care trend rates would assume an initial rate of 8.0% decreasing by 0.5% annually to an ultimate rate of 4.0%.
- The 1% increase in health care trend rates would assume an initial rate of 10.0% decreasing by 0.5% annually to an ultimate rate of 6.0%.

<i>As of June 30, 2016</i>	<i>Net OPEB Liability</i>
1% Decrease	\$ 6,433,852
Current Health Care Trend Rates	\$ 6,947,102
1% Increase	\$ 7,523,498

The Total OPEB Liability (TOL) is expected to change on an annual basis as a result of expected and unexpected events. Under normal circumstances, it is generally expected to have a net increase each year. Below is a list of the most common events affecting the total OPEB liability and whether they increase or decrease the liability.

Expected Events

- Increases in TOL due to additional benefit accruals as employees continue to earn service each year
- Increases in TOL due to interest as the employees and retirees age
- Decreases in TOL due to benefit payments

Unexpected Events

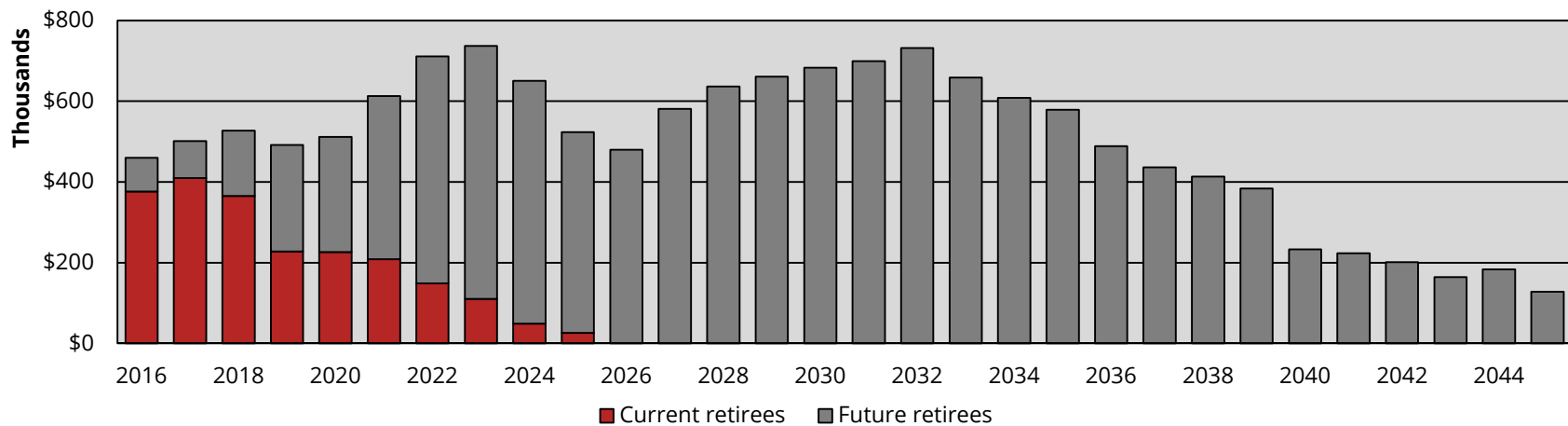
- Increases in TOL when actual premium rates increase more than expected. A liability decrease occurs if the reverse happens.
- Increases in TOL when more new retirements occur than expected or fewer terminations occur than anticipated. Liability decreases occur when the opposite outcomes happen.
- Increases or decreases in TOL depending on whether benefits are improved or reduced.

<i>Projection of Total OPEB Liability</i>	<i>FY 2015/16</i>		<i>FY 2016/17</i>	
Total OPEB Liability as of beginning of year	\$	8,188,540	\$	6,947,102
Normal cost as of beginning of year		282,783		350,599
Expected benefit payments during the year		(612,644)		(500,969)
Interest adjustment to end of year		326,720		205,831
Expected Actuarial Accrued Liability as of end of year	\$	8,185,399	\$	7,002,563
Actuarial Loss/(Gain)		(1,238,297)		TBD
Actual Total OPEB Liability as of end of year	\$	6,947,102	\$	TBD

The below projections show the actuarially estimated employer-paid contributions for retiree health benefits for the next thirty years. Results are shown separately for a closed group of current /future retirees and gross claim costs/retiree contributions. These projections include explicit and implicit subsidies.

FYE	Current Retirees	Future Retirees ⁸	Total	FYE	Current Retirees	Future Retirees ⁸	Total	FYE	Current Retirees	Future Retirees ⁸	Total
2016	\$ 376,145	\$ 83,461	\$ 459,606	2026	\$ 0	\$ 480,146	\$ 480,146	2036	\$ 0	\$ 488,680	\$ 488,680
2017	\$ 409,998	\$ 90,972	\$ 500,970	2027	\$ 0	\$ 581,449	\$ 581,449	2037	\$ 0	\$ 436,449	\$ 436,449
2018	\$ 365,649	\$ 161,212	\$ 526,861	2028	\$ 0	\$ 636,790	\$ 636,790	2038	\$ 0	\$ 413,676	\$ 413,676
2019	\$ 228,285	\$ 263,539	\$ 491,824	2029	\$ 0	\$ 660,608	\$ 660,608	2039	\$ 0	\$ 383,604	\$ 383,604
2020	\$ 226,553	\$ 285,348	\$ 511,901	2030	\$ 0	\$ 683,332	\$ 683,332	2040	\$ 0	\$ 233,287	\$ 233,287
2021	\$ 209,048	\$ 403,830	\$ 612,878	2031	\$ 0	\$ 699,071	\$ 699,071	2041	\$ 0	\$ 223,118	\$ 223,118
2022	\$ 148,979	\$ 562,345	\$ 711,324	2032	\$ 0	\$ 731,814	\$ 731,814	2042	\$ 0	\$ 201,104	\$ 201,104
2023	\$ 110,317	\$ 626,511	\$ 736,828	2033	\$ 0	\$ 658,926	\$ 658,926	2043	\$ 0	\$ 164,575	\$ 164,575
2024	\$ 49,248	\$ 601,623	\$ 650,871	2034	\$ 0	\$ 608,462	\$ 608,462	2044	\$ 0	\$ 183,421	\$ 183,421
2025	\$ 26,305	\$ 497,393	\$ 523,698	2035	\$ 0	\$ 579,283	\$ 579,283	2045	\$ 0	\$ 127,988	\$ 127,988

Projected Employer Pay-go Cost

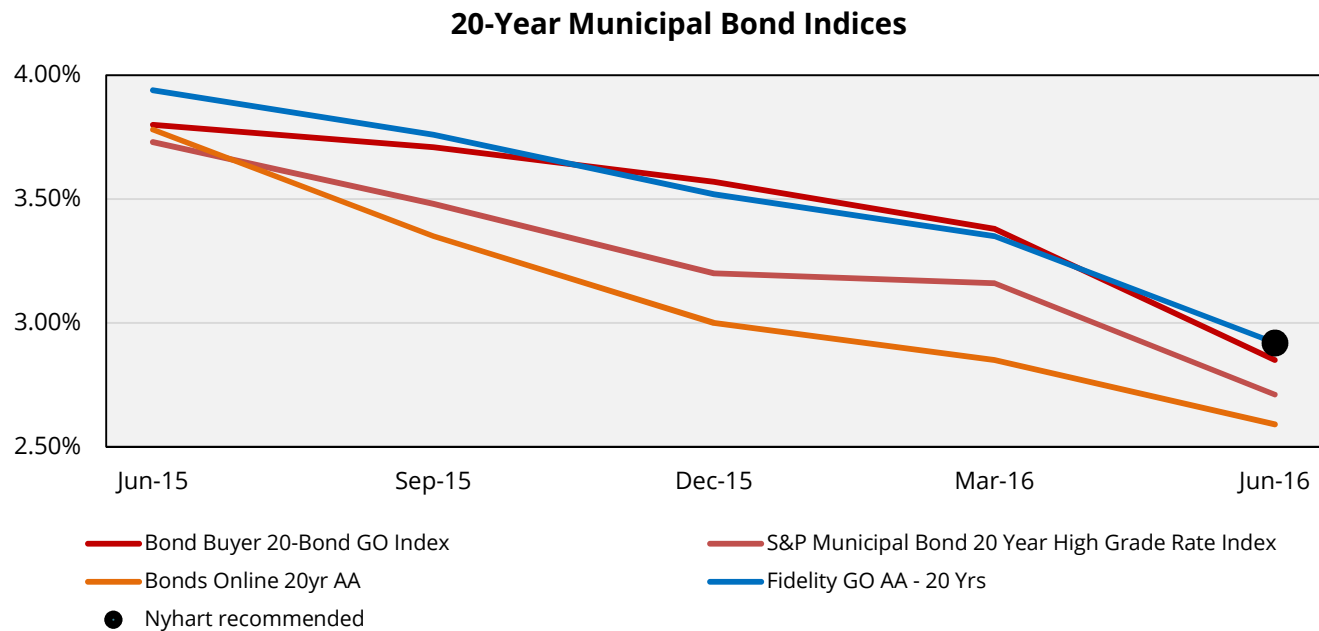


⁸ Projections for future retirees do not take into account future new hires.

Under GASB 75, the discount rate used in valuing OPEB liabilities for unfunded plans as of the Measurement Date must be based on a yield 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).

For the current valuation, the discount rate was selected from the range of indices as shown in the table below, where the range is given as the spread between the lowest and highest rate shown.

	Bond Buyer Go 20-Bond Municipal Bond Index	S&P Municipal Bond 20-Year High Grade Rate Index	Bonds Online 20-Year Municipal AA Index	Fidelity 20-Year Go Municipal Bond Index	Nyhart Recommendation	Actual Discount Rate Used
Yield as of June 30, 2016	2.85%	2.71%	2.59%	2.92%	2.59% - 2.92%	2.92%



<i>Actives with coverage</i>	<i>Single</i>	<i>Non-Single</i>	<i>Total</i>	<i>Avg. Age</i>	<i>Avg. Svc</i>	<i>Salary</i>
Admin Classic		1	1	62.5	12.9	\$ 93,000
Admin Healthmate	2	13	15	51.8	9.3	\$ 1,355,723
Custodian Healthmate	5	12	17	52.0	9.5	\$ 619,528
Teacher Classic		2	2	55.0	25.8	\$ 163,387
Teacher Healthmate	71	182	253	45.1	14.5	\$ 18,154,012
Local 1033 Healthmate	13	47	60	55.4	11.9	\$ 1,340,595
Total actives with coverage	91	257	348	47.6	13.6	\$ 21,726,244

<i>Actives without coverage</i>		<i>Total</i>	<i>Avg. Age</i>	<i>Avg. Svc</i>	<i>Salary</i>
Admin		5	45.2	7.6	\$ 460,698
Custodians		7	51.9	7.1	\$ 253,864
Teacher		57	42.2	11.7	\$ 3,840,813
Local 1033		17	51.5	8.5	\$ 336,806
Total actives without coverage		86	45.0	10.5	\$ 4,892,182

Active employees who currently have no coverage are assumed to elect coverage with the Town according to the health care coverage election rate assumption. They have been included in the GASB valuation.

Active Age-Service Distribution

Age	Years of Service										Total
	< 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	3	4									7
25 to 29	10	7	7								24
30 to 34		10	34								44
35 to 39	5	4	13	11	11						44
40 to 44	7	5	15	14	22	1					64
45 to 49	6	6	11	9	20	17	4				73
50 to 54	3	5	9	4	17	6	13	1			58
55 to 59	3	3	4	8	18	7	10	3	1		57
60 to 64	3	1	7	7	15	4	6	2	2		47
65 to 69			4		5	1	1		1		12
70 & up	1				2	1					4
Total	41	45	104	53	110	37	34	6	4	0	434

<i>Retirees with coverage</i>	<i>Single</i>	<i>Non-Single</i>	<i>Total</i>	<i>Avg. Age</i>
Teacher Classic	2	3	5	60.0
Teacher Healthmate	24	7	31	61.2
Local 1033 Healthmate		6	6	64.9
Total retirees with coverage	26	16	42	61.6

Retiree Age Distribution

<i>Age</i>	<i>Retirees</i>
< 45	
45 to 49	
50 to 54	
55 to 59	14
60 to 64	26
65 to 69	1
70 to 74	1
75 to 79	
80 to 84	
85 to 89	
90 & up	
Total	42

**SECTION D - SUBSTANTIVE PLAN PROVISIONS AND
ACTUARIAL METHODS AND ASSUMPTIONS**

Eligibility

Town

Police officers are eligible for retiree health benefits (medical and dental) until Medicare eligibility once they attain 20 years of service.

Firefighters are eligible for retiree health benefits (medical and dental) until Medicare eligibility if they are eligible to retire under Rhode Island Municipal Employees Retirement System (RI MERS).

Town general employees are eligible for retiree health benefits (medical and dental) for up to 36 months if they are eligible to retire under RI MERS and have the following years of service with the Town of North Providence:

1. Council 94 – 18 years of service
2. Local 1033 and Non-Union – 20 years of service

School

Teachers / Administrators are eligible for retiree health benefits until Medicare eligibility once they are eligible to retire under Rhode Island Employees Retirement System (RI ERS) and have the following years of service with the North Providence School System:

1. RI ERS Schedule A members – 15 years of service
2. RI ERS Schedule B members – 20 years of service

School general employees, except for Custodians, are eligible for retiree health benefits (medical and dental) for up to 36 months if they are eligible to retire under RI MERS and have 20 years of service with the North Providence School System.

Custodians hired prior to July 1, 1989 are eligible for retiree health benefits (medical and dental) for up to 36 months if they are eligible to retire under RI MERS and have 10 years of service with North Providence School System. For those hired on/after July 1, 1989, duration of retiree health benefits is until Medicare eligibility and they must have 20 years of service with North Providence School System.

Spouse Benefit

Surviving spouse may continue coverage upon death of the retiree or active employees eligible to retire. Upon death of active employees who are not eligible to retire, surviving spouses are eligible for COBRA.

For the following employee groups that offer retiree health benefits until Medicare eligibility (Police, Fire, Teachers and School Administrators), the duration of spouse benefits while the retiree is alive is as follows:

1. Police / Fire – when the retiree turns 65, spouse are eligible for COBRA coverage for 36 months.
2. Teachers and School Administrators – spouse coverage is terminated at the earlier of the spouse turning 65 (if the retiree is under 65) or retiree turning 65.

RI ERS Eligibility Requirements

RI ERS eligibility requirements is the earlier of each employee’s (a) Article 7 or (b) RIRSA eligibility dates which vary by Schedules summarized below:

Schedules	Vested with 10 years of contributing service credit as of 7/1/2005	Eligible to retire as of 9/30/2009
A	Y	Y*
B	N	Y**
AB	Y	N
B1	N	N
B2	Employees that became a member of RI ERS after 9/30/2009	

* Schedule A members were eligible to retire as of 9/30/2009 if they had (i) 28 years of service as of 9/30/2009 or (ii) had 10 years of contributing service and were age 60 as of 9/30/2009.

** Schedule B members were eligible to retire as of 9/30/2009 if they had 10 years of contributing service and were age 65 as of 9/30/2009.

Article 7 Eligibility Date

There are no changes to Schedule A and Schedule B members retirement eligibility dates. These employees may retire at any time once they met the prior RI ERS eligibility rules. The prior RI ERS eligibility rules are:

- Schedule A – earlier of (i) 28 years of service or (ii) age 60 with 10 years of contributing service.
- Schedule B – earlier of (i) age 65 with 10 years of contributing service or (ii) age 59 with 29 years of contributing service.

Minimum retirement age under Article 7 for Schedule AB and B1 members is 62 with “proportional downward adjustment” toward an earlier retirement age based on years of service as of 9/30/2009 (referred to as “frozen service credit”).

Schedule B2 members minimum retirement age under Article 7 is age 62 without “proportional downward adjustment” toward an earlier retirement age.

RI ERS Eligibility Requirements (Continued) RIRSA Eligibility Date

Employees with less than five years of contributing service credit on 6/30/2012 may retire at the Social Security normal retirement age (not higher than 67).

For employees with at least five years of contributing service credit on 6/30/2012, minimum retirement age is 62 with “proportional downward adjustment” toward an earlier retirement date based on years of service prior to 7/1/2012, but not earlier than 59.

Employees with at least 10 years of contributing service credit on 6/30/2012 may retire at their Article 7 eligibility date if they continue to work and contribute until that date. If they are within five years of reaching RIRSA retirement eligibility date and have at least 20 years of service, they may retire at any time.

Public school teachers may retire with a reduced pension if they have 20 years of service credit and are within five years of their RIRSA retirement date.

Effective on July 1, 2015, employees are now eligible to retire upon attainment of age 65 with 30 years of service, age 64 with 31 years of service, age 63 with 32 years of service, or age 62 with at least 33 years of service. These are additional eligibility requirements, which means that if employees are eligible to retire under the current eligibility requirements, they may do so.

MERS Eligibility RequirementsGeneral Employees

Employees eligible to retire as of 7/1/2012 are not impacted by the new eligibility requirements described below. Prior to 7/1/2012, employees were eligible to retire at the earlier of: (i) age 58 with 10 years of service credit or (ii) 30 years of service (no age requirement).

For employees who are not eligible to retire as of 7/1/2012:

- a) Members with less than five years of contributing service credit on 6/30/2012 may retire at their Social Security normal retirement age.
- b) Members with at least five years of contributing service credit on 6/30/2012 may retire at an individually determined age, which is the result of interpolating the member's prior Retirement Date (described in previous paragraph) and the retirement age applicable to members hired after 6/30/2012 (described in item (a) above).
- c) Members with at least ten years of contributing service credit on 6/30/2012 may retire at their prior Retirement Date (described in previous paragraph) if they continue to work and contribute until that date.

All members who are within five years of reaching their retirement eligibility date (described in the paragraphs above) may retire at any time if they have at least 20 years of service.

MERS Eligibility Requirements (Continued) Firefighters

Employees eligible to retire as of 7/1/2012 are not impacted by the new eligibility requirements described below. Prior to 7/1/2012, employees were eligible to retire at any age with 20 or more years of service.

For employees who are not eligible to retire as of 7/1/2012:

- a) Members who are at least age 45 with 10 years of service as of 7/1/2012 and are eligible to retire prior to age 52 under the old eligibility requirements may retire at age 52.
- b) All other members are eligible to retire at age 50 with 25 years of service or at any age if they have 27 years of contributing service. For members with at least five years of service but less than 25, they are eligible to retire at their Social Security normal retirement age.

All members who are within five years of reaching their retirement eligibility date (described in the paragraphs above) may retire at any time if they have at least 20 years of service.

Effective on July 1, 2015, firefighters are eligible to retire with full benefit upon attainment of age 50 with 25 years of service or any age with 27 years of service. These are additional eligibility requirements, which means that if employees are eligible to retire under the current eligibility requirements, they may do so.

Explicit Subsidy

The Town / School pays for the full cost of medical and dental coverage for the following group of employees at retirement:

1. Police officers hired prior to January 1, 2015
2. Firefighters
3. School Local 1033
4. School Custodians (Local 2435)

School pays 50% of the medical and dental cost at retirement for Teachers and Administrators.

Town pays 95% of the medical and dental cost at retirement for Police officers hired on/after January 1, 2015.

Retiree Cost Sharing

Retirees are responsible for the portion of premium rates not covered by the Town / School.

Medical Benefits

Same benefit options are available to retirees as active employees. All health plans are self-insured. For participants eligible for Medicare, benefits are administered as secondary to Medicare.

The 2016/17 monthly premiums by plan effective on July 1, 2016 are as shown below.

Employee Groups	Plans	Single	Family
School Admin / Teachers	Classic	\$ 754.72	\$ 2,035.50
School Admin / Teachers	Healthmate	\$ 617.88	\$ 1,666.44
School Custodians	Healthmate	\$ 640.00	\$ 1,726.09
School Local 1033	Healthmate	\$ 502.88	\$ 1,356.25
Town DPW	Healthmate	\$ 751.46	\$ 2,000.38
Town Fire	Classic	\$ 914.03	\$ 2,201.88
Town Fire	Healthmate	\$ 737.61	\$ 1,963.54
Town Non-Union / Admin	Classic	\$ 813.14	\$ 2,164.58
Town Non-Union / Admin	Healthmate	\$ 751.46	\$ 2,000.38
Town Police	Classic	\$ 901.69	\$ 2,400.30
Town Police	Healthmate	\$ 745.49	\$ 1,984.49
Town Local 1033	Healthmate	\$ 664.02	\$ 1,767.61

Dental

The monthly premiums effective on July 1, 2016 are as shown below.

Employee Groups	Single	Family
Town Police and Fire	\$ 31.81	\$ 95.31
Town Local 1033	\$ 31.81	\$ 105.02
Town DPW	\$ 30.28	\$ 93.07

The actuarial assumptions used in this report represent a reasonable long-term expectation of future OPEB outcomes. As national economic and Town / School experience change over time, the assumptions will be tested for ongoing reasonableness and, if necessary, updated.

There are changes to the actuarial methods and assumptions since the last GASB valuation, which was as of July 1, 2014. Refer to Actuary’s Notes section for complete information on these changes. For the current year GASB valuation, we have also updated the per capita costs. We expect to update discount rate, health care trend rates and per capita costs again in the next full GASB valuation, which will be for the fiscal year ending June 30, 2018.

Measurement Date

June 30, 2016

Discount Rate

Accounting: 2.92% as of June 30, 2016 for the Town and School.
Funding: 7.50% was used for Town funding purposes.

Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.

Inflation Rate

3.0% per year

Payroll Growth

For amortization purposes: 3.50%
For valuation purposes (to determine Actuarial Accrued Liability): 4.00% wage inflation for Fire and 3.50% wage inflation for all other employees except for Police plus merit and longevity increases shown below. These assumptions are based on the RI ERS and MERS actuarial valuation as of June 30, 2015.

YOS	Fire	School Teachers / Admin	All others (except Police)	Age	Police
1	10.00%	10.00%	4.00%	20	4.50%
2	9.00%	9.00%	3.00%	25	4.50%
3	7.00%	6.25%	2.75%	30	4.00%
4	4.00%	5.50%	2.50%	35	3.75%
5	2.50%	5.00%	2.25%	40	3.50%
6	3.00%	5.00%	2.00%	45	3.50%
7	0.50%	4.50%	1.25%	50	3.50%
8	0.50%	4.25%	0.75%		
9 – 10	0.00%	4.00%	0.50%		
11 – 15	0.00%	0.00%	0.25%		
16+	0.00%	0.00%	0.00%		

Cost Method

Allocation of Actuarial Present Value of Future Benefits for services prior and after the Measurement Date was determined using Entry Age Normal Level % of Salary method where:

- Service Cost for each individual participant, payable from date of employment to date of retirement, is sufficient to pay for the participant's benefit at retirement; and
- Annual Service Cost is a constant percentage of the participant's salary that is assumed to increase according to the Payroll Growth.

Asset Method

Market value of assets

Employer Funding Policy

Town of North Providence is expected to contribute \$250,000 for FYE 2017 and the Actuarially Determined Contribution beginning in FYE 2018. North Providence School Department funds on a pay-as-you-go basis.

Census Data

Census information was provided by the Town and School in September 2016. We have reviewed it for reasonableness and no material modifications were made to the census data.

Mortality

Pre-retirement

Police: RP-2000 Combined Healthy Table for males and females fully generational using scale AA
 Teachers: 50% of RP-2000 Combined Healthy Table for male with white collar adjustment and 50% of RP-2000 Combined Healthy Table for female with white collar adjustment. There is no future mortality improvement built into this assumption.
 All others: 75% of RP-2000 Combined Healthy Table for male with white collar adjustment and 75% of RP-2000 Combined Healthy Table for female with white collar adjustment. There is no future mortality improvement built into this assumption.

Post-retirement (Healthy)

Police and Teachers: RP-2000 Combined Healthy Table for males and females fully generational using scale AA
 All others: 115% of RP-2000 Combined Healthy Table for male with white collar adjustment and 95% of RP-2000 Combined Healthy Table for female with white collar adjustment, fully generational using scale AA

Post-retirement (Disabled)

RP-2000 Disabled Mortality Table with no future mortality improvement.

Turnover Rate

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage. The rates represent the probability of termination in the next 12 months. The termination rates are based on the RI ERS and MERS June 30, 2015 actuarial valuation assumptions for all groups except for Police. Police turnover rates are based on the same assumption used in the North Providence Police pension actuarial valuation as of June 30, 2016. Sample annual turnover rates are shown below:

YOS	School Teachers / Admin	Fire	All Others (except Police)	Age	Police
1	18.00%	10.00%	17.50%	20	2.90%
5	4.82%	2.65%	7.29%	25	2.90%
10	2.09%	1.43%	3.14%	30	2.90%
15	1.32%	0.77%	1.83%	35	1.90%
20	0.96%	0.00%	1.57%	40	1.70%

Disability

Police: 50% of the 1985 Pension Disability Table (DP-85) Class 4. 50% of disabilities are assumed to be duty related.

Retirement Rate

Annual rates of retirement for all groups except for Police are based on the RI ERS and MERS June 30, 2015 actuarial valuation assumptions. Police retirement rates are based on the same assumption used in the North Providence Police pension actuarial valuation as of June 30, 2016.

School Teachers / Admin

A flat 25% per year retirement probability for members eligible for unreduced retirement. A 60% retirement probability at first eligibility will be applied if the member has reached age 65 or with at least 25 years of service. Reduced retirement rates are assumed for Schedule B members based on the years from normal retirement age as shown below:

Years from NRA	Rate
5	2.0%
4	2.0%
3	2.0%
2	3.4%
1	4.0%

Retirement Rate (Continued)

Town Police and Fire

According to the table below. For Firefighters, all members are assumed to retire upon reaching age 65 with at least ten years of service.

YOS	Police	Fire
20	40%	12%
21 – 22	30%	10%
23	40%	10%
24	40%	12%
25	40%	14%
26	5%	16%
27	5%	18%
28 – 29	100%	20%
30	100%	35%

All Others

A flat 25% per year retirement probability for members eligible for unreduced retirement. A 50% retirement probability at first eligibility will be applied if the member has reached age 65 or with at least 25 years of service.

Health Care Trend Rates

FYE	Medical/Rx	FYE	Medical/Rx
2017	9.0%	2022	6.5%
2018	8.5%	2023	6.0%
2019	8.0%	2024	5.5%
2020	7.5%	2025+	5.0%
2021	7.0%		

The initial trend rate was based on a combination of employer history, national trend surveys, and professional judgment.

The ultimate trend rate was selected based on historical medical CPI information.

Annual dental trend is assumed to be 3.0% in the future.

Retiree Contributions

Retiree contributions are assumed to increase according to health care trend rates.

Spousal Coverage

Spousal coverage and ages for current retirees is based on actual data.

Spousal coverage election rate for future retirees are based on the table below. Husbands are assumed to be three years older than wives.

	Male	Female
School Teachers / Admin	50%	40%
School All Others	90%	90%
Town Police and Fire	90%	90%
Town All Others	80%	50%

Health Care Coverage Election Rate

Active employees are assumed to elect health coverage at retirement according to the following assumptions:

1. School Teachers / Admin: 95%
2. School All Others: 100%
3. Town Police: 90%
4. Town Fire and All Others: 100%

For existing retirees, we have assumed that all of them will continue coverage in the future (but not past the benefit duration specified in the substantive plan provision section).

Per Capita Costs

Annual per capita costs were calculated based on the weighted average July 1, 2016 premiums separately for the Town and School, actuarially increased using health index factors and current enrollment. The costs are assumed to increase with health care trend rates. Annual per capita costs by employee group are as shown below:

Age	Town Future Retirees		Town Current Retirees	
	Male	Female	Male	Female
<55	\$ 9,900	\$ 11,900	\$ 10,300	\$ 12,300
55 – 59	\$ 13,000	\$ 13,400	\$ 13,400	\$ 13,800
60 – 64	\$ 16,800	\$ 15,900	\$ 17,300	\$ 16,400
65 – 69	\$ 6,600	\$ 6,600	\$ 6,800	\$ 6,800
70 – 74	\$ 7,800	\$ 7,800	\$ 8,100	\$ 8,100
75 – 79	\$ 9,100	\$ 9,100	\$ 9,400	\$ 9,400
80 – 84	\$ 10,000	\$ 10,000	\$ 10,300	\$ 10,300
85 – 89	\$ 10,800	\$ 10,800	\$ 11,100	\$ 11,100
90+	\$ 11,300	\$ 11,300	\$ 11,700	\$ 11,700

The per capita costs represent the cost of coverage for a retiree-only population.

Actuarial standards require the recognition of higher inherent costs for a retired population versus an active population.

Age	School Future Retirees		School Current Retirees	
	Male	Female	Male	Female
<55	\$ 7,200	\$ 7,800	\$ 7,400	\$ 8,000
55 – 59	\$ 8,500	\$ 8,700	\$ 8,700	\$ 9,000
60 – 64	\$ 11,000	\$ 10,400	\$ 11,300	\$ 10,700
65 – 69	\$ 5,100	\$ 5,100	\$ 5,200	\$ 5,200
70 – 74	\$ 6,000	\$ 6,000	\$ 6,200	\$ 6,200
75 – 79	\$ 7,000	\$ 7,000	\$ 7,200	\$ 7,200
80 – 84	\$ 7,700	\$ 7,700	\$ 8,000	\$ 8,000
85 – 89	\$ 8,300	\$ 8,300	\$ 8,600	\$ 8,600
90+	\$ 8,800	\$ 8,800	\$ 9,000	\$ 9,000

Annual dental per capita costs are assumed to be \$363 for Town DPW, \$382 for all other Town participants, and \$398 for all School participants. These costs are assumed to increase with dental trend rates.

Explicit Subsidy

The difference between (a) the premium rate and (b) the retiree contribution. Below is an example of the monthly explicit subsidies for a future retired police hired prior to January 1, 2015.

	Premium Rate	Retiree Contribution	Explicit Subsidy
	A	B	C = A - B
Retiree	\$ 730.75	\$ 0.00	\$ 730.75
Spouse	\$ 1,214.52	\$ 0.00	\$ 1,214.52

Implicit Subsidy

The difference between (a) the per capita cost and (b) the premium rate. Below is an example of the monthly implicit subsidies for a male future retired Police age 64 with spouse of the same age.

	Per Capita Cost	Premium Rate	Implicit Subsidy
	A	B	C = A - B
Retiree	\$ 1,400.00	\$ 730.75	\$ 669.25
Spouse	\$ 1,325.00	\$ 1,214.52	\$ 110.48

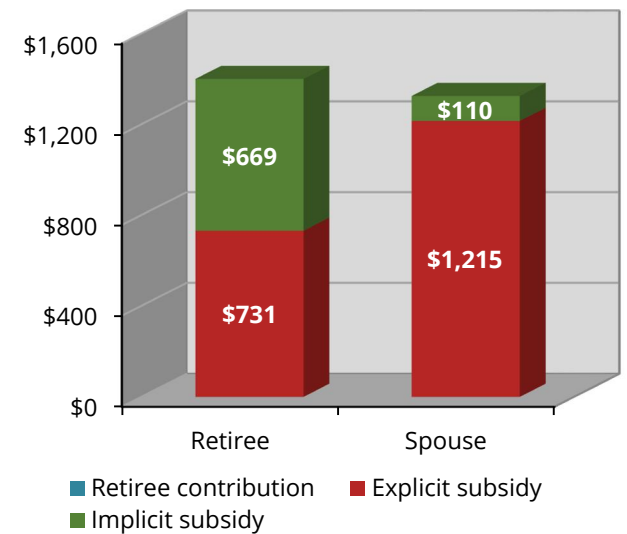
All employers that utilize premium rates based on blended active/retiree claims experience will have an implicit subsidy. There is an exception for Medicare plans using a true community-rated premium rate.

GASB Subsidy Breakdown

Below is a breakdown of the GASB 45 monthly total cost for a male future retired Police age 64 hired prior to January 1, 2015 with spouse of the same age.

	Retiree	Spouse
Retiree contribution	\$ 0.00	\$ 0.00
Explicit subsidy	\$ 730.75	\$ 1,214.52
Implicit subsidy	\$ 669.25	\$ 110.48
Total monthly cost	\$ 1,400.00	\$ 1,325.00

GASB Subsidy Breakdown



SECTION E - APPENDIX

Appendix A – Comparison of Participant Demographic Information

The active participants' number below may include active employees who currently have no health care coverage. Refer to Summary of Participants section for an accurate breakdown of active employees with and without coverage.

	<i>As of July 1, 2014⁹</i>		<i>As of July 1, 2016</i>	
	<i>Town</i>	<i>School</i>	<i>Town</i>	<i>School</i>
Active Participants	267	416	254	434
Retired Participants	91	50	105	42
Averages for Active				
Age	44.8	47.4	43.6	47.1
Service	N/A	N/A	12.8	13.0
Averages for Inactive ⁹				
Age	N/A	N/A	55.7	61.6

⁹ Information taken from prior actuary's valuation report as of July 1, 2014.

Appendix B – Detailed Actuary’s Notes

There are two substantive plan provision changes since the last full valuation, performed by Milliman, as of July 1, 2014.

1. Police officers hired on/after July 1, 2015 are required to contribute 5% of the medical and dental cost at retirement. In the prior valuation, they receive free coverage at retirement for both medical and dental benefits. This change caused a slight reduction in the Town’s liabilities.
2. In the prior valuation, while the retiree is alive, spouse benefits terminate when the spouse reaches Medicare eligibility for School Teachers / Administrators. In this year’s valuation, spouse benefits terminate at the earlier of spouse reaching Medicare eligibility (if the retiree is younger than the spouse) or retiree reaching Medicare eligibility. This change caused a decrease in the School’s liabilities.

The Town and School have opted to disclose OPEB liabilities under GASB 74 / 75 for the current valuation. The prior valuation was disclosed under GASB 45. The following assumptions have been updated in accordance with GASB 74 / 75.

1. The actuarial cost method has been updated from Projected Unit Credit with linear proration to decrement to Entry Age Normal Level % of Salary. This change has caused an increase in liabilities for the Town and a decrease in liabilities for the School.
2. The prior full valuation used a discount rate of 4.00% for both the Town and the School. Discount rate as of the Measurement Date has been updated as follows:
 - a) Town:
 - The current valuation uses a discount rate of 2.92% for accounting disclosure purposes, which was calculated using a discounted cash flow method assuming the following:
 - The Town will contribute \$750,000 in FYE 2017 and \$250,000 annually beginning in FYE 2018.
 - Pay-go cost will continue to be paid from the General Fund as the Trust does not accumulate enough asset at the end of 50 years to cover future benefit payments.
 - For funding purposes, we have used a 7.50% discount rate in calculating the Actuarially Determined Contribution, which is based on the expected rate of return of the Trust.
This change caused an increase in the Town’s liabilities.
 - b) School: the current valuation uses a discount rate of 2.92% based on a yield 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). This change caused an increase in the School’s liabilities.

The discount rate will be updated annually to reflect market conditions as of the Measurement Date and any changes in the funding strategy.

Appendix B – Continued

Additionally, the following assumptions have also been updated:

1. Different aging factors have been applied to the premium rates to determine the per capita costs used in this year’s valuation. This change caused a decrease in the Town’s and School’s liabilities.
2. There is no dependent liabilities valued for Police and Fire employees as they are deemed to be immaterial.
3. Termination and retirement rates for all employee groups except for Police have been updated to be consistent with RI ERS and MERS actuarial valuation as of June 30, 2015. The net impact of this change is an increase in the Town’s liabilities and a decrease in the School’s liabilities.
4. Health care trend rates have been updated to an initial rate of 9.0% decreasing by 0.5% annually to an ultimate rate of 5.0% from an initial rate of 5.65% decrease to an ultimate rate of 4.40% over 83 years. This change caused an increase in the Town’s and School’s liabilities.

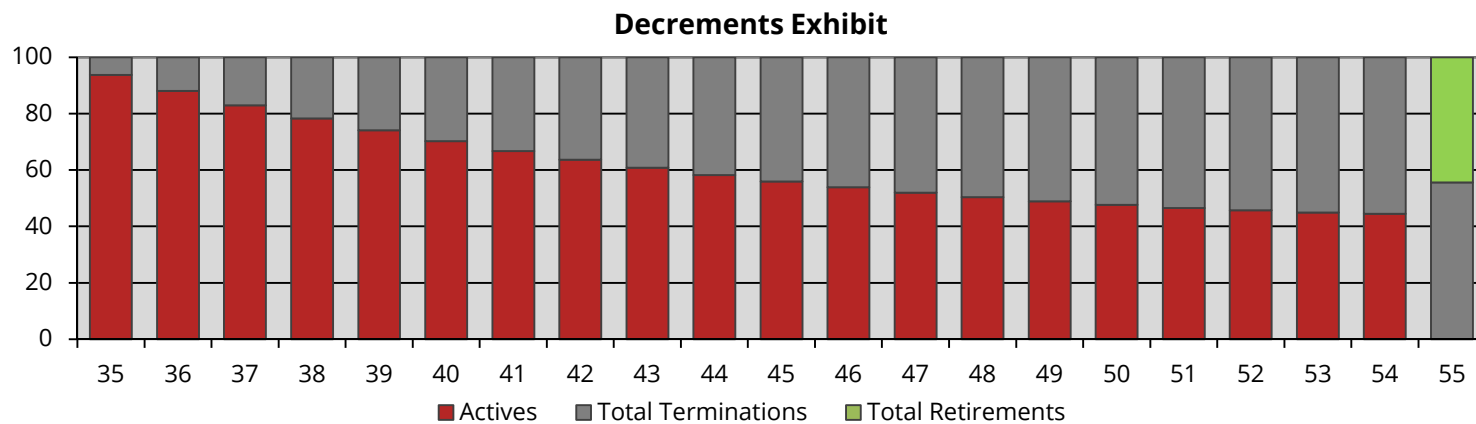
SECTION F – GLOSSARY

Decrements Exhibit

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. Starting with 100 employees at age 35, the illustrated actuarial assumptions show that 44.430 employees out of the original 100 are expected to retire and could elect retiree health benefits at age 55.

Age	# Remaining Employees	# of Terminations per Year*	# of Retirements per Year*	Total Decrements
35	100.000	6.276	0.000	6.276
36	93.724	5.677	0.000	5.677
37	88.047	5.136	0.000	5.136
38	82.911	4.648	0.000	4.648
39	78.262	4.209	0.000	4.209
40	74.053	3.814	0.000	3.814
41	70.239	3.456	0.000	3.456
42	66.783	3.131	0.000	3.131
43	63.652	2.835	0.000	2.835
44	60.817	2.564	0.000	2.564
45	58.253	2.316	0.000	2.316

Age	# Remaining Employees	# of Terminations per Year*	# of Retirements per Year*	Total Decrements
46	55.938	2.085	0.000	2.085
47	53.853	1.866	0.000	1.866
48	51.987	1.656	0.000	1.656
49	50.331	1.452	0.000	1.452
50	48.880	1.253	0.000	1.253
51	47.627	1.060	0.000	1.060
52	46.567	0.877	0.000	0.877
53	45.690	0.707	0.000	0.707
54	44.983	0.553	0.000	0.553
55	44.430	0.000	44.430	44.430

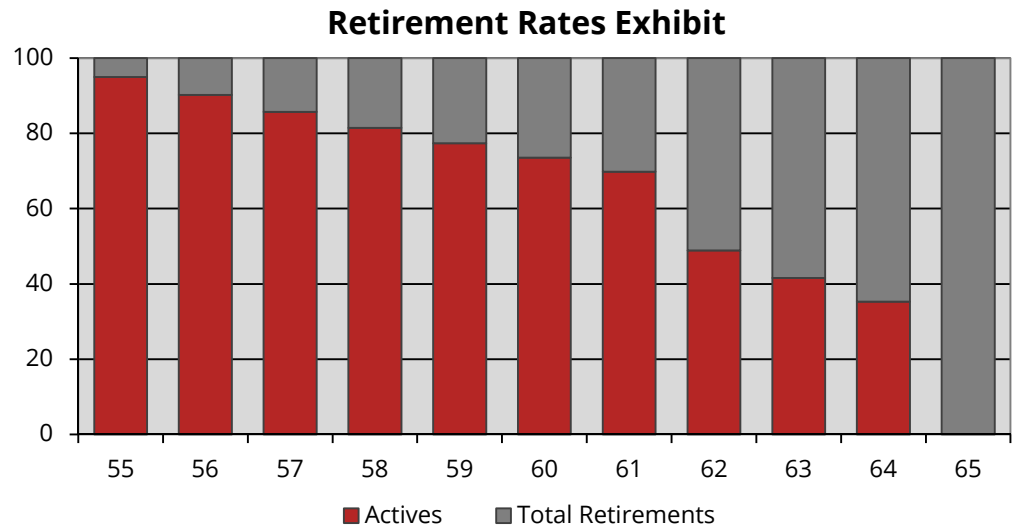


* The above rates are illustrative rates and are not used in our GASB calculations.

Retirement Rates Exhibit

The table below illustrates how actuarial assumptions can affect a long-term projection of future liabilities. The illustrated retirement rates show the number of employees who are assumed to retire annually based on 100 employees age 55 who are eligible for retiree health care coverage. The average age at retirement is 62.0.

Age	Active Employees BOY	Annual Retirement Rates*	# Retirements per Year	Active Employees EOY
55	100.000	5.0%	5.000	95.000
56	95.000	5.0%	4.750	90.250
57	90.250	5.0%	4.513	85.738
58	85.738	5.0%	4.287	81.451
59	81.451	5.0%	4.073	77.378
60	77.378	5.0%	3.869	73.509
61	73.509	5.0%	3.675	69.834
62	69.834	30.0%	20.950	48.884
63	48.884	15.0%	7.333	41.551
64	41.551	15.0%	6.233	35.318
65	35.318	100.0%	35.318	0.000



* The above rates are illustrative rates and are not used in our GASB calculations.

Definitions

GASB 75 defines several unique terms not commonly employed in the funding of pension and retiree health plans. The definitions of the terms used in the GASB actuarial valuations are noted below.

1. **Actuarial Assumptions** – Assumptions as to the occurrence of future events affecting health care costs, such as: mortality, withdrawal, disablement and retirement; changes in compensation and Government provided health care benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.
2. **Actuarial Cost Method** – A procedure for determining the Actuarial Present Value of Future Benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Service Cost and a Total OPEB Liability.
3. **Actuarially Determined Contribution** - A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in accordance with the parameters and in conformity with Actuarial Standards of Practice.
4. **Actuarial Present Value** – The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. For purposes of this standard, each such amount or series of amounts is:
 - a. adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, Social Security, marital status, etc.);
 - b. multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned; and
 - c. discounted according to an assumed rate (or rates) of return to reflect the time value of money.
5. **Deferred Outflow / (Inflow) of Resources** – represents the following items that have not been recognized in the OPEB Expense:
 - a. Differences between expected and actual experience of the OPEB plan
 - b. Changes in assumptions
 - c. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)
6. **Explicit Subsidy** – The difference between (a) the amounts required to be contributed by the retirees based on the premium rates and (b) actual cash contribution made by the employer.
7. **Funded Ratio** – The actuarial value of assets expressed as a percentage of the Total OPEB Liability.

Definitions – Continued

8. **Healthcare Cost Trend Rate** – The rate of change in the per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.
9. **Implicit Subsidy** – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group (which, because of the effect of age on claim costs, generally will be higher than the blended premium rates for all group members) and (b) the amounts required to be contributed by the retirees.
10. **OPEB** – Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payments for sick leave.
11. **OPEB Expense** – Changes in the Net OPEB Liability in the current reporting period, which includes Service Cost, interest cost, changes of benefit terms, expected earnings on OPEB Plan investments, reduction of active employees' contributions, OPEB plan administrative expenses, and current period recognition of Deferred Outflows / (Inflows) of Resources.
12. **Pay-as-you-go** – A method of financing a benefit plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.
13. **Per Capita Costs** – The current cost of providing postretirement health care benefits for one year at each age from the youngest age to the oldest age at which plan participants are expected to receive benefits under the plan.
14. **Present Value of Future Benefits** – Total projected benefits include all benefits estimated to be payable to plan members (retirees and beneficiaries, terminated employees entitled to benefits but not yet receiving them, and current active members) as a result of their service through the valuation date and their expected future service. The actuarial present value of total projected benefits as of the valuation date is the present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. Expressed another way, it is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.
15. **Real Rate of Return** – the rate of return on an investment after adjustment to eliminate inflation.

Definitions – Continued

16. **Select and Ultimate Rates** – Actuarial assumptions that contemplate different rates for successive years. Instead of a single assumed rate with respect to, for example, the investment return assumption, the actuary may apply different rates for the early years of a projection and a single rate for all subsequent years. For example, if an actuary applies an assumed investment return of 8% for year 20W0, then 7.5% for 20W1, and 7% for 20W2 and thereafter, then 8% and 7.5% are select rates, and 7% is the ultimate rate.
17. **Service Cost** – The portion of the Actuarial Present Value of projected benefit payments that are attributed to a valuation year by the Actuarial Cost Method.
18. **Substantive Plan** – The terms of an OPEB plan as understood by the employer(s) and plan members.
19. **Total OPEB Liability** – That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of Future Benefits which is attributed to past periods of employee service (or not provided for by the future Service Costs).