



# **GASB 74/75 ACTUARIAL VALUATION**

## **Fiscal Year Ending June 30, 2019**

# **TOWN OF PORTSMOUTH**

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**December 13, 2019**

**Lisa Mills**

**Town of Portsmouth**

**2200 East Main Road**

**Portsmouth, RI 02871**

This report summarizes the GASB actuarial valuation for the Town of Portsmouth 2018/19 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 (Financial Reporting for Post-Employment Benefit Plans Other Than Pension Plans) and GASB Statement No. 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.

Suraj M. Datta, ASA, MAAA  
Consulting Actuary

Matt Sherertz, ASA, MAAA  
Valuation Actuary

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# Executive Summary

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Summary of Results

Presented below is the summary of GASB 75 results for the fiscal year ending June 30, 2019 compared to the prior fiscal year as shown in the Town's Notes to Financial Statement.

	As of June 30, 2018	As of June 30, 2019
<b>Total OPEB Liability</b>	\$ 19,774,457	\$ 19,400,227
<b>Actuarial Value of Assets</b>	\$ (1,310,523)	\$ (1,460,001)
<b>Net OPEB Liability</b>	\$ 18,463,934	\$ 17,940,226
<b>Funded Ratio</b>	6.6%	7.5%

	FY 2017/18	FY 2018/19
<b>OPEB Expense</b>	\$ 1,514,741	\$ 1,259,390
<b>Annual Employer Contributions</b>	\$ 1,069,210	\$ 1,059,008
<b>Actuarially Determined Contribution</b>	\$ 1,629,782	\$ 1,695,662

	As of June 30, 2018	As of June 30, 2019
<b>Discount Rate</b>	4.03%	3.78%
<b>Expected Return on Assets</b>	5.50%	5.00%

	As of June 30, 2019
<b>Total Active Participants</b>	122
<b>Total Retiree Participants</b>	53

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.

# Executive Summary

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Summary of Results

Below is a breakdown of total GASB 75 liabilities allocated to past and current service compared to the prior year. The table below also provides a breakdown of the Total OPEB Liability 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	As of June 30, 2018	As of June 30, 2019
Active Employees	\$ 18,572,905	\$ 14,920,124
Retired Employees	11,600,444	12,633,246
<b>Total Present Value of Future Benefits</b>	<b>\$ 30,173,349</b>	<b>\$ 27,553,370</b>

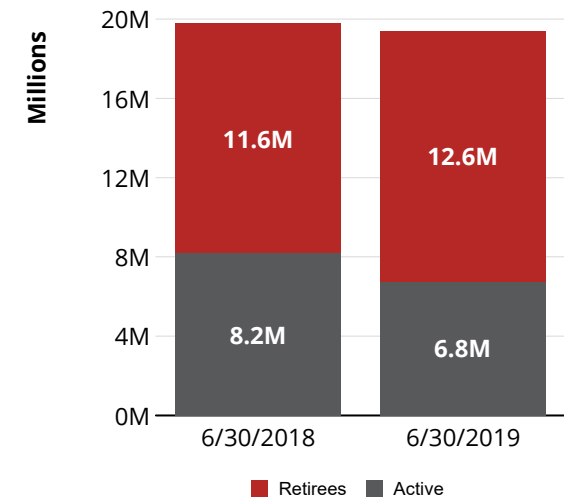
Total OPEB Liability	As of June 30, 2018	As of June 30, 2019
Active Pre-Medicare	\$ 8,174,013	\$ 6,766,981
Active Post-Medicare	0	0
Active Liability	\$ 8,174,013	\$ 6,766,981

Retiree Pre-Medicare	\$ 11,600,444	\$ 12,633,246
Retiree Post-Medicare	0	0
Retiree Liability	\$ 11,600,444	\$ 12,633,246

<b>Total OPEB Liability</b>	<b>\$ 19,774,457</b>	<b>\$ 19,400,227</b>
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	As of June 30, 2018	As of June 30, 2019
Discount Rate	4.03%	3.78%

### Changes In Total OPEB Liability



**Present Value of Future Benefits (PVFB)** is the amount needed as of June 30, 2019 and June 30, 2018, to fully fund the Town'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, 2019 and June 30, 2018. This amount is a required disclosure in the Required Supplementary Information section.

# GASB Disclosures

Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

## Schedule of Changes in Net OPEB Liability and Related Ratios

OPEB Liability	FY 2018/19	FY 2017/18	FY 2016/17
<b>Total OPEB Liability</b>			
Total OPEB Liability - beginning of year	\$ 19,774,457	\$ 21,874,794	\$ 19,058,259
Service cost	782,916	887,744	826,446
Interest	807,833	825,756	564,081
Change of benefit terms	0	(8,005)	0
Changes in assumptions	35,933	(607,184)	(335,511)
Differences between expected and actual experience	(966,904)	(2,179,438)	2,651,611
Benefit payments	(1,034,008)	(1,019,210)	(890,092)
Net change in total OPEB liability	\$ (374,230)	\$ (2,100,337)	\$ 2,816,535
Total OPEB Liability - end of year	\$ 19,400,227	\$ 19,774,457	\$ 21,874,794
<b>Plan Fiduciary Net Position</b>			
Plan fiduciary net position - beginning of year	\$ 1,310,523	\$ 1,115,701	\$ 691,217
Contributions - employer	1,059,008	1,069,210	1,169,270
Contributions - active employees	53,312	53,958	55,310
Net investment income	85,681	101,350	90,454
Benefit payments	(1,034,008)	(1,019,210)	(890,092)
Trust administrative expenses	(14,515)	(10,486)	(458)
Net change in plan fiduciary net position	\$ 149,478	\$ 194,822	\$ 424,484
Plan fiduciary net position - end of year	\$ 1,460,001	\$ 1,310,523	\$ 1,115,701
<b>Net OPEB Liability - end of year</b>	<b>\$ 17,940,226</b>	<b>\$ 18,463,934</b>	<b>\$ 20,759,093</b>
Plan fiduciary net position as % of total OPEB liability	7.5%	6.6%	5.1%
Covered employee payroll	\$ 7,635,231	\$ 7,441,122	\$ 7,189,490
Net OPEB liability as % of covered payroll	235.0%	248.1%	288.7%

\* FY 2017/18 covered payroll is based on FY 2016/17 covered payroll increased 3.50% for wage inflation.

# GASB Disclosures

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Schedule of Employer Contributions

The Actuarially Determined Contributions (ADC) shown below are based on the Annual Required Contribution (ARC) calculated in prior GASB 45 actuarial valuations as shown in the Town's financial statements.

	FY 2018/19	FY 2017/18	FY 2016/17	FY 2015/16	FY 2014/15
Actuarially Determined Contribution (ADC)	\$ 1,695,662	\$ 1,629,782	\$ 1,739,943	\$ 1,351,405	\$ 1,313,035
Contributions in relation to the ADC	1,059,008	1,069,210	1,169,270	861,032	726,394
Contribution deficiency/(excess)	\$ 636,654	\$ 560,572	\$ 570,673	\$ 490,373	\$ 586,641
Covered employee payroll	\$ 7,635,231	\$ 7,441,122	\$ 7,189,490	\$ 6,476,502	\$ 6,287,866
Contribution as a % of covered payroll	13.9%	14.4%	16.3%	13.3%	11.6%

	FY 2013/14	FY 2012/13	FY 2011/12	FY 2010/11	FY 2009/10
Actuarially Determined Contribution (ADC)	\$ 1,254,874	\$ 1,297,531	\$ 1,248,914	\$ 1,345,177	\$ 1,569,039
Contributions in relation to the ADC	768,926	800,908	953,389	792,174	645,276
Contribution deficiency/(excess)	\$ 485,948	\$ 496,623	\$ 295,525	\$ 553,003	\$ 923,763
Covered employee payroll	\$ 5,569,426	\$ 5,407,210	\$ 6,574,560	\$ 6,383,155	\$ 5,510,188
Contribution as a % of covered payroll	13.8%	14.8%	14.5%	12.4%	11.7%

\*Refer to the Actuarially Determined Contributions section for the calculation details.  
Includes employer contribution for pay-go costs and pre-funding contributions deposited into the OPEB Trust.



# GASB Disclosures

Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

## OPEB Expense

OPEB Expense	FY 2018/19	FY 2017/18
Discount Rate		
Beginning of year	4.03%	3.71%
End of year	3.78%	4.03%
Service cost	\$ 782,916	\$ 887,744
Interest	807,833	825,756
Change of benefit terms	0	(8,005)
Projected earnings on OPEB plan investments	(73,810)	(63,900)
Reduction for contributions from active employees	(53,312)	(53,958)
OPEB plan administrative expenses	14,515	10,486
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$ (70,675)	\$ 67,454
Changes in assumptions	(129,538)	(134,671)
Net difference between projected and actual earnings on OPEB plan investments	(18,539)	(16,165)
Total current period recognition	\$ (218,752)	\$ (83,382)
Total OPEB expense	\$ 1,259,390	\$ 1,514,741

# GASB Disclosures

Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

## 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. Differences between projected and actual earnings in OPEB plan investments (for funded plans only)

The initial amortization period for the first two items noted above is based on expected future service lives while the difference between the 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 items above.

Differences between expected and actual experience for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2019
June 30, 2017	\$ 2,651,611	7	\$ 378,802	\$ 1,515,205
June 30, 2018	\$ (2,179,438)	7	\$ (311,348)	\$ (1,556,742)
June 30, 2019	\$ (966,904)	7	\$ (138,129)	\$ (828,775)

Changes in assumptions for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2019
June 30, 2017	\$ (335,511)	7	\$ (47,930)	\$ (191,721)
June 30, 2018	\$ (607,184)	7	\$ (86,741)	\$ (433,702)
June 30, 2019	\$ 35,933	7	\$ 5,133	\$ 30,800

Net Difference between projected and actual earnings in OPEB plan investments for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2019
June 30, 2017	\$ (43,374)	5	\$ (8,675)	\$ (17,349)
June 30, 2018	\$ (37,450)	5	\$ (7,490)	\$ (22,470)
June 30, 2019	\$ (11,871)	5	\$ (2,374)	\$ (9,497)

# GASB Disclosures

Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

## Deferred Outflows / (Inflows) of Resources (Continued)

As of fiscal year ending June 30, 2019	Deferred Outflows	Deferred Inflows
Differences between expected and actual experience	\$ 1,515,205	\$ (2,385,517)
Changes in assumptions	30,800	(625,423)
Net difference between projected and actual earnings in OPEB plan investments	0	(49,316)
<b>Total</b>	<b>\$ 1,546,005</b>	<b>\$ (3,060,256)</b>

## Annual Amortization of Deferred Outflows / (Inflows)

The balances as of June 30, 2019 of the deferred outflows / (inflows) of resources will be recognized in OPEB expense in the future fiscal years as noted below.

FYE	Balance
2020	\$ (218,752)
2021	\$ (218,751)
2022	\$ (210,077)
2023	\$ (202,592)
2024	\$ (531,084)
Thereafter	\$ (132,995)

# GASB Disclosures

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Sensitivity Results

The following presents the Net OPEB Liability as of June 30, 2019, 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 3.78%.
- The 1% decrease in discount rate would be 2.78%.
- The 1% increase in discount rate would be 4.78%.

As of June 30, 2019	Net OPEB Liability
1% Decrease	\$ 19,873,805
Current Discount Rate	\$ 17,940,226
1% Increase	\$ 16,246,674

The following presents the Net OPEB Liability as of June 30, 2019, 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 8.00%, decreasing to an ultimate rate of 4.50%.
- The 1% decrease in health care trend rates would assume an initial rate of 7.00%, decreasing to an ultimate rate of 3.50%.
- The 1% increase in health care trend rates would assume an initial rate of 9.00%, decreasing to an ultimate rate of 5.50%.

As of June 30, 2019	Net OPEB Liability
1% Decrease	\$ 16,099,472
Current Trend Rates	\$ 17,940,226
1% Increase	\$ 20,084,744

# GASB Disclosures

Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

## Asset Information

Asset Breakdown	FY 2017/18	FY 2018/19
<b>Assets</b>		
Cash and cash equivalents	\$ 0	\$ 0
Securities lending cash collateral	0	0
Total cash	\$ 0	\$ 0
Receivables		
Contributions	\$ 0	\$ 25,000
Accrued interest	0	0
Total receivables	\$ 0	\$ 25,000
Investments		
Fixed income	\$ 488,039	\$ 534,538
Equities	822,484	900,463
Mutual Funds	0	0
Total investments	\$ 1,310,523	\$ 1,435,001
Total Assets	\$ 1,310,523	\$ 1,460,001
<b>Liabilities</b>		
Payables		
Investment management fees	\$ 0	\$ 0
Securities lending expense	0	0
Total liabilities	\$ 0	\$ 0
<b>Net Position Restricted to OPEB</b>	<b>\$ 1,310,523</b>	<b>\$ 1,460,001</b>

\* Asset Allocation for FY 2018/19 is estimated based on the OPEB Trust target allocation.

# GASB Disclosures

Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

## Asset Information (Continued)

Asset Reconciliation	FY 2017/18	FY 2018/19
<b>Additions</b>		
Contributions Received		
Employer	\$ 1,069,210	\$ 1,059,008
Employee	53,958	53,312
Total contributions	\$ 1,123,168	\$ 1,112,320
Investment Income		
Net increase in fair value of investments	\$ 70,787	\$ 85,681
Interest and Dividends	30,563	0
Investment expense, other than from securities lending	0	0
Securities lending income	0	0
Securities lending expense	0	0
Net investment income	\$ 101,350	\$ 85,681
Total additions	\$ 1,224,518	\$ 1,198,001
<b>Deductions</b>		
Benefit payments	\$ 1,019,210	\$ 1,034,008
Administrative expenses	10,486	14,515
Other	0	0
Total deductions	\$ 1,029,696	\$ 1,048,523
Net increase in net position	\$ 194,822	\$ 149,478
Net position restricted to OPEB		
Beginning of year	\$ 1,115,701	\$ 1,310,523
End of year	\$ 1,310,523	\$ 1,460,001

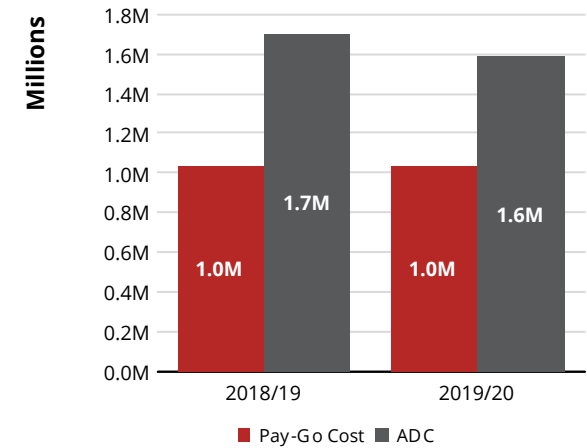
\* Asset Allocation for FY 2018/19 is estimated based on the OPEB Trust target allocation.

# Actuarially Determined Contributions

Town of Portsmouth GASB 74/75 Valuation For Fiscal Year Ending June 30, 2019

	FY 2018/19	FY 2019/20
Discount rate (Funding)	5.50%	5.00%
Payroll growth factor used for amortization	N/A	N/A
Actuarial cost method	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary
Amortization type	Level Dollar	Level Dollar
Amortization period (years)	28	27
Actuarial Accrued Liability (AAL) - beginning of year	\$ 17,290,972	\$ 17,362,828
Actuarial Value of Assets (AVA) - beginning of year	(1,310,523)	(1,460,001)
Unfunded AAL - beginning of year	\$ 15,980,449	\$ 15,902,827
Normal Cost	\$ 534,613	\$ 478,851
Amortization of Unfunded AAL	1,072,650	1,034,318
Total normal cost plus amortization	\$ 1,607,263	\$ 1,513,169
Interest to end of year	88,399	75,658
Actuarially Determined Contribution - Preliminary	\$ 1,695,662	\$ 1,588,827
Expected Benefit Payments	1,034,008	1,031,877
<b>Actuarially Determined Contribution - Final</b>	<b>\$ 1,695,662</b>	<b>\$ 1,588,827</b>

## 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.

\* Normal cost is reduced for actual employee contributions of \$53,312 for FY 2018/19 and expected employee contributions of \$56,054 for FY 2019/20.

# Projection of GASB Disclosures

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

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 when 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 (TOL)	FY 2018/19	FY 2019/20
TOL as of beginning of year	\$ 19,774,457	\$ 19,400,227
Normal cost as of beginning of year	782,916	685,689
Exp. benefit payments during the year	(1,034,008)	(1,031,877)
Interest adjustment to end of year	807,833	739,926
Exp. TOL as of end of year	\$ 20,331,198	\$ 19,793,965
Actuarial Loss / (Gain)	(930,971)	TBD
<b>Actual TOL as of end of year</b>	<b>\$ 19,400,227</b>	<b>\$ TBD</b>

Discount rate as of beginning of year	4.03%	3.78%
Discount rate as of end of year	3.78%	TBD

Projection of Actuarial Value of Assets (AVA)	FY 2018/19	FY 2019/20
AVA as of beginning of year	\$ 1,310,523	\$ 1,460,001
Exp. employer contributions during the year	1,112,320	1,112,931
Exp. benefit payments during the year	(1,034,008)	(1,031,877)
Expected investment income	73,810	74,912
Exp. Trust administrative expenses	(14,515)	(3,650)
Exp. AVA as of end of year	\$ 1,448,130	\$ 1,612,317
Differences between expected and actual experience	11,871	TBD
<b>AVA as of end of year</b>	<b>\$ 1,460,001</b>	<b>\$ TBD</b>

Expected asset return as of beginning of year	5.50%	5.00%
Expected asset return as of end of year	5.00%	TBD

\* Employer contributions shown include actual employee contributions of \$53,312 for FY 2018/19 and expected employee contributions of \$56,054 for FY 2019/20.



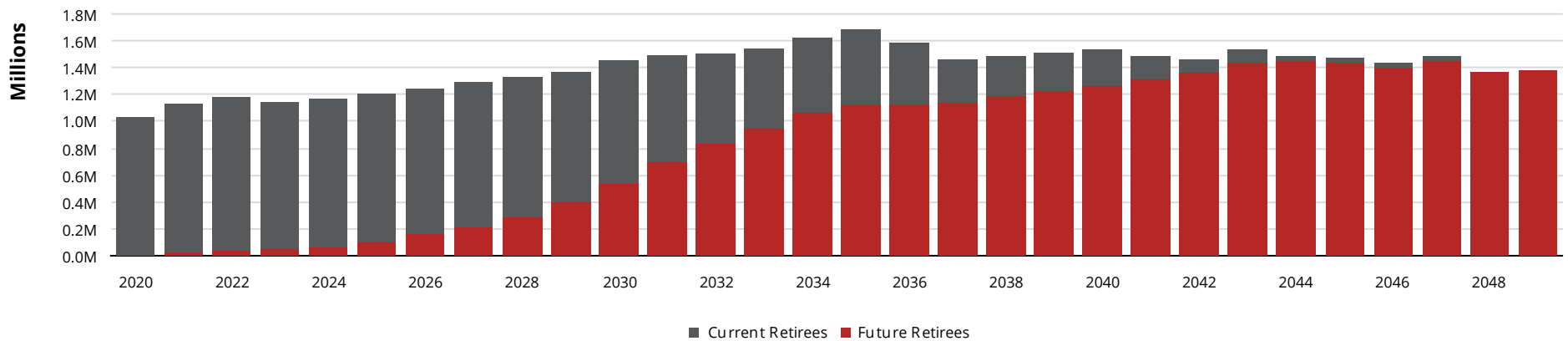
# Cash Flow Projections

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

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. These projections include explicit and implicit subsidies.

FYE	Current Retirees	Future Retirees*	Total	FYE	Current Retirees	Future Retirees*	Total	FYE	Current Retirees	Future Retirees*	Total
2020	\$ 1,027,226	\$ 4,651	\$ 1,031,877	2030	\$ 919,075	\$ 532,180	\$ 1,451,255	2040	\$ 273,263	\$ 1,271,231	\$ 1,544,494
2021	\$ 1,106,468	\$ 23,907	\$ 1,130,375	2031	\$ 797,077	\$ 691,614	\$ 1,488,691	2041	\$ 178,756	\$ 1,316,523	\$ 1,495,279
2022	\$ 1,139,348	\$ 36,860	\$ 1,176,208	2032	\$ 669,273	\$ 832,898	\$ 1,502,171	2042	\$ 90,951	\$ 1,368,339	\$ 1,459,290
2023	\$ 1,090,127	\$ 49,175	\$ 1,139,302	2033	\$ 604,135	\$ 940,087	\$ 1,544,222	2043	\$ 99,724	\$ 1,445,106	\$ 1,544,830
2024	\$ 1,106,116	\$ 66,656	\$ 1,172,772	2034	\$ 556,663	\$ 1,073,058	\$ 1,629,721	2044	\$ 32,806	\$ 1,456,617	\$ 1,489,423
2025	\$ 1,105,192	\$ 102,156	\$ 1,207,348	2035	\$ 561,313	\$ 1,127,932	\$ 1,689,245	2045	\$ 34,062	\$ 1,439,616	\$ 1,473,678
2026	\$ 1,080,111	\$ 156,425	\$ 1,236,536	2036	\$ 466,084	\$ 1,127,631	\$ 1,593,715	2046	\$ 35,354	\$ 1,407,741	\$ 1,443,095
2027	\$ 1,084,813	\$ 211,565	\$ 1,296,378	2037	\$ 317,522	\$ 1,147,859	\$ 1,465,381	2047	\$ 36,682	\$ 1,450,620	\$ 1,487,302
2028	\$ 1,046,122	\$ 283,036	\$ 1,329,158	2038	\$ 297,929	\$ 1,188,426	\$ 1,486,355	2048	\$ 0	\$ 1,364,852	\$ 1,364,852
2029	\$ 979,756	\$ 391,903	\$ 1,371,659	2039	\$ 292,885	\$ 1,227,080	\$ 1,519,965	2049	\$ 0	\$ 1,383,776	\$ 1,383,776

### Projected Employer Pay-go Cost



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

# Discussion of Discount Rates

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

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 assumed to be 5.00%. This was determined using a building block method in which expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These expected future real rates of return are then combined to produce the long-term expected rate of return by weighting them based on the target asset allocation percentage. The best estimates of arithmetic nominal rates of return for each major asset class included in the OPEB Plan's target asset allocation as of June 30, 2019 are summarized in the following table.
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.

Asset Class	Target Allocation	L/T Expected ROR <sup>1</sup>
U.S. Large-Cap Equity	42.12%	5.90%
U.S. Mid-Cap Equity	2.14%	7.30%
U.S. Small-Cap Equity	0.83%	5.90%
International Equity	11.04%	5.40%
EM Equity	2.42%	8.90%
US Aggregate Bonds	15.55%	3.10%
U.S. Short Duration Government/Credit	10.50%	3.00%
U.S. High Yield Bonds	5.00%	4.90%
TIPS	3.40%	2.80%
Diversifying Strategies	7.00%	4.78%
<b>Total</b>	<b>100.00%</b>	<b>4.97%</b>

Yield as of	July 1, 2018	June 30, 2019
Bond Buyer Go 20-Bond Municipal Bond Index	3.87%	3.51%
S&P Municipal Bond 20-Year High Grade Rate Index	2.98%	2.79%
Fidelity 20-Year Go Municipal Bond Index	3.62%	3.13%
Bond Index Range	2.98% - 3.87%	2.79% - 3.51%

3. The final equivalent single discount rate used in this year's valuation is 4.03% as of July 1, 2018 and 3.78% as of June 30, 2019. This is based on the expectation that the Town will contribute the pay-go costs plus an additional \$25,000 for pre-funding to the OPEB Trust going forward. Under this funding scenario, the Trust is expected to have insufficient balance to pay for future benefit payments starting in FYE 2033.

<sup>1</sup> Including inflation.

# Summary of Plan Participants

Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

## Active Employees

Actives with coverage	Single	Non-Single	Total	Avg. Age	Avg. Svc	Salary
Healthmate 0002 Ded		13	13	47.3	10.2	\$ 718,729
Healthmate 0005 HDHP	8	19	27	38.0	9.6	\$ 1,621,746
Healthmate 0006 HDHP	4		4	32.2	2.4	\$ 164,000
Healthmate 0007 Ded	8	17	25	53.1	9.8	\$ 1,612,023
Healthmate 0008 Ded	11	18	29	36.1	9.0	\$ 1,897,450
<b>Total actives with coverage</b>	<b>31</b>	<b>67</b>	<b>98</b>	<b>42.3</b>	<b>9.3</b>	<b>\$ 6,013,948</b>

Actives without coverage	Total	Avg. Age	Avg. Svc	Salary
<b>Total actives without coverage</b>	<b>24</b>	<b>44.0</b>	<b>4.8</b>	<b>\$ 1,621,283</b>

Active employees who currently have no coverage are assumed not to elect coverage at retirement. They have been excluded from the GASB valuation.

# Summary of Plan Participants

Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

## 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	6	1									7
25 to 29	1	14	4								19
30 to 34		6	4	3							13
35 to 39	1	5	2	7							15
40 to 44			2	8	1						11
45 to 49	1	1	5	6	8	1					22
50 to 54	2	5	1	4	3	1					16
55 to 59	3	4	2			3					12
60 to 64			1			2					3
65 to 69	1			1			1				3
70 & up		1									1
<b>Total</b>	<b>15</b>	<b>37</b>	<b>21</b>	<b>29</b>	<b>12</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>122</b>

# Summary of Plan Participants

Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

## Retirees

Retirees with coverage	Single	Non-Single	Total	Avg. Age
Classic 0007		1	1	64.1
Classic 0009		1	1	61.5
Healthmate 0001		2	2	57.4
Healthmate 0002	1		1	62.5
Healthmate 0004		6	6	58.3
Healthmate 0006 HDHP		17	17	53.6
Healthmate 0007 Ded		3	3	61.2
Healthmate 0009 Ded	1	8	9	49.6
Healthmate 0009	3	10	13	57.4
<b>Total retirees with coverage</b>	<b>5</b>	<b>48</b>	<b>53</b>	<b>55.5</b>

## Retiree Age Distribution

Age	Retirees
< 45	4
45 to 49	9
50 to 54	9
55 to 59	15
60 to 64	16
65 to 69	
70 to 74	
75 to 79	
80 to 84	
85 to 89	
90 & up	
<b>Total</b>	<b>53</b>

# Substantive Plan Provisions

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## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Eligibility

Police and Fire

Police and Fire employees are eligible for retiree health care benefits until Medicare eligibility upon attainment of 20 years of service with the Town.

General Employees

General employees (PMEA, Public Works union groups and Non-Union groups) are eligible for retiree health care benefits until Medicare eligibility at the earlier of:

1. Age 60 with 10 years of service (normal retirement)
2. Age 55 with 25 years of service and within 5 years of normal retirement

### Disability Health Care Eligibility

Police officers and Firefighters injured in the line of duty are eligible for disability health care until Medicare eligibility without any age or years of service requirement.

Police officers and Firefighters injured not in the line of duty are eligible for disability health care until Medicare eligibility once they attain 10 years of service with the Town.

### Spouse Benefit

Police and Fire

Upon death of the retiree, health care coverage continues to unmarried surviving spouse and dependent children up to age 19.

General Employees

Retiree health care coverage is discounted upon death of the retiree. Surviving spouse will be offered COBRA.

### Active Cost Sharing

Fire

Active firefighters contribute 1.5% of base earnings to OPEB Trust Fund that was set up to defray the cost of post-employment benefits.

Police

Active police officers contribute 1% of salary to OPEB Trust Fund that was set up to defray the cost of post-employment benefits.

Public Works

Public works employees contribute 0.25% of salary and longevity to OPEB Trust Fund that was set up to defray the cost of post-employment benefits

# Substantive Plan Provisions

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Explicit Subsidy

Fire Firefighters receive free retiree health care coverage (medical, dental, and vision) until Medicare eligibility.

In addition to the free retiree health care coverage, the Town will contribute the following amounts annually for retired firefighters enrolled in the HDHP plan based on the date of retirement.

<b>Date of Retirement</b>	<b>Single</b>	<b>Family</b>
7/1/2010 – 12/31/2012	\$ 2,000	\$ 4,000
1/1/2013 – 6/30/2016	\$ 1,000	\$ 2,000
7/1/2016 – 6/30/2017	\$ 750	\$ 1,500
7/1/2017 – 6/30/2018	\$ 500	\$ 1,000
7/1/2018 – 6/30/2019	\$ 250	\$ 500

Police and PMEA Employees who retired prior to July 1, 2013 receive free retiree health care coverage (medical, dental, and vision) until Medicare eligibility. Employees hired prior to July 1, 2013 who retire on/after July 1, 2013 are required to contribute 10% of the cost of coverage for all benefits. Employees hired on/after July 1, 2013 are required to contribute 20% of the cost of coverage for all benefits.

Public Works The Town will contribute 80% of the medical and dental costs for Public Works employees until Medicare eligibility. Vision coverage is free for retirees.

Non-Union Groups The Town will contribute 85% of the medical costs for Non-Union group employees who retired prior to July 1, 2018 until Medicare eligibility. The Town will contribute 80% of the medical costs for Non-Union group employees who retired on/after July 1, 2018 until Medicare eligibility. Dental and Vision coverage remains free to this group of employees.

### Retiree Cost Sharing

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

# Substantive Plan Provisions

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Medical Benefits

Same benefit options are available to retirees as active employees. The Town and School are in a collaborative pool with more than 30 entities in Rhode Island. All health plans are fully insured and experience-rated. Each entity in the collaborative pool is viewed individually. Depending on its size the entity's experience is blended with the community pool (the community is used in all of the municipal accounts in Rhode Island, not just the collaborative pool that they are a part of). In the case of Portsmouth (both Town and School), their final rates are based on 80% of their own experience and 20% of the community average. There is no asset used to suppress premium rate increases. Premium rates are calculated to fund the expected costs (including claims and administrative costs). The monthly premium rates by plan (excluding BCBS WRI) effective on July 1, 2019 are as shown below:

Health Plan	Group	Single	Family
HM 0007 Ded	PMEA & NUG (active & retired post 7/13)		
HM 0002 Ded	DPW (active & retired post 7/14)	\$ 662.21	\$ 1,710.31
HM 0009 Ded	Retired Police (post 4/14)		
HM 0001	Retired Fire (post-4/08, pre-7/10)	\$ 699.47	\$ 1,806.62
HM 0002	Retired Public Works (pre 7/14)		
HM 0004	Retired Fire (pre-4/08)	\$ 725.57	\$ 1,873.97
HM 0009	Retired Police (pre-4/14)		
HM 0005 HDHP	Fire (active)	\$ 565.65	\$ 1,340.68
HM 0006 HDHP	Retired Fire (post-7/10) Civilian Fire Dispatchers	\$ 489.64	\$ 1,264.67
Classic 0007	Retired NUG (pre-7/14)	\$ 838.96	\$ 2,156.30
Classic 0009	Retired Police (pre-4/14)	\$ 964.16	\$ 2,545.57
HM 0007	Retired PMEA (pre-7/13)	\$ 699.70	\$ 1,807.13
HM 0008 Ded	Police (Active)	\$ 710.61	\$ 1,758.71

For GASB valuation, we have assumed that active employees will enroll in different health plans at retirement according to the table below:

Group	Plan at Retirement
Fire (including Dispatchers)	HM 0006 HDHP
PMEA, NUG, Police, and Public Works	HM 0002/7/9 Ded



# Substantive Plan Provisions

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## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Dental Benefit

Dental monthly premium rates effective on July 1, 2019 are as shown below:

<b>Group</b>	<b>Single</b>	<b>Family</b>
Police, Fire, and Public Works	\$ 32.46	\$ 87.43
PMEA and NUG	\$ 32.46	\$ 88.32

### Vision Benefit

Vision benefit is funded annually through the budget based on the vision benefits agreed upon by the Town and the union groups. The annual budget for the 2019/20 FY is \$4,000 for all active employees and retirees. The Town is responsible for any vision requests for reimbursement that exceeds the budgeted amount.

# Actuarial Methods and Assumptions

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## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

The actuarial assumptions used in this report represent a reasonable long-term expectation of future OPEB outcomes. As national economic and Town 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 for the fiscal year ending June 30, 2018. 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, mortality table, and per capita costs again in the next full GASB valuation, which will be for the fiscal year ending June 30, 2021.

<b>Measurement Date</b>	For fiscal year ending June 30, 2019, a June 30, 2019 measurement date was used.
<b>Actuarial Valuation Date</b>	June 30, 2019 with no adjustments to get to the June 30, 2019 measurement date. Liabilities as of July 1, 2018 are based on an actuarial valuation date of July 1, 2017 projected to July 1, 2018 on a "no loss / no gain" basis.
<b>Discount Rate</b>	4.03% as of July 1, 2018 and 3.78% as of June 30, 2019 for accounting disclosure purposes 5.50% as of July 1, 2018 and 5.00% as of June 30, 2019 for funding disclosure purposes (in calculating the Actuarially Determined Contribution). Refer to the Discussion of Discount Rates section for more information on selection of the discount rate.
<b>Payroll Growth</b>	3.50% which is based on the salary increase assumption from the Town of Portsmouth pension actuarial valuation as of July 1, 2018.
<b>Inflation Rate</b>	2.50% per year
<b>Cost Method</b>	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: <ul style="list-style-type: none"><li>• 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</li><li>• Annual Service Cost is a constant percentage of the participant's salary that is assumed to increase according to the Payroll Growth.</li></ul>
<b>Employer Funding Policy</b>	Partially pre-funding by active employees' contributions and discretionary employer contributions. For FY 2019/20, the Town budgeted to pre-fund \$25,000 in addition to active employee contributions.
<b>Census Data</b>	Census information was provided by the Town in September 2019. We have reviewed it for reasonableness and no material modifications were made to the census data.

# Actuarial Methods and Assumptions

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## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Experience Study

Best actuarial practices call for a periodic assumption review and the Town has completed an experience study in 2016. Nyhart recommends the Town to complete another experience study prior to the fiscal year ending June 30, 2026.

### Mortality

General Employees and Retirees: SOA Pub-2010 General Headcount Weighted Mortality Table fully generational using Scale MP-2019

Public Safety Employees and Retirees: SOA Pub-2010 Public Safety Headcount Weighted Mortality Table fully generational using Scale MP-2019

Disabled General Retirees: SOA Pub-2010 Non-Safety Disabled Headcount Weighted Mortality Table fully generational using Scale MP-2019

Disabled Public Safety Retirees: SOA Pub-2010 Public Safety Disabled Headcount Weighted Mortality Table fully generational using Scale MP-2019

Surviving Spouses: SOA Pub-2010 Continuing Survivor Headcount Weighted Mortality Table fully generational using Scale MP-2019

### Disability

Sample annual disability rates are as shown below.

<b>Age</b>	<b>Annual Rate</b>
25	0.09%
35	0.15%
45	0.36%
55	1.00%

# Actuarial Methods and Assumptions

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Turnover Rate

Assumption used to project terminations (voluntary and involuntary) prior to meeting minimum retirement eligibility for retiree health coverage. Annual withdraw rates are based on the Town's historical termination experience in 2011 through 2015. Sample annual rates are as shown below.

Age	Police / Fire	All Others
25	3.7%	9.7%
35	3.3%	8.7%
45	1.2%	6.4%
55	0.0%	1.5%

### Retirement Rate

Annual rates of retirement by group based on the Town's historical retirement experience in 2011 through 2015 are as shown below.

Age	All Others	YOS	Police / Fire
55 - 56	5%	20	40%
57 - 61	10%	21 - 22	5%
62	15%	23 - 24	25%
63 - 64	10%	25	100%
65 - 66	40%		
67	100%		

### Health Care Trend Rates

FYE	Medical/Rx	Dental	Vision
2020	8.00%	5.00%	3.00%
2021	7.50%	4.75%	3.00%
2022	7.00%	4.50%	3.00%
2023	6.50%	4.25%	3.00%
2024	6.00%	4.00%	3.00%
2025	5.50%	4.00%	3.00%
2026	5.00%	4.00%	3.00%
2027+	4.50%	4.00%	3.00%

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.

### Retiree Contributions

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

# Actuarial Methods and Assumptions

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Health Care Coverage Election Rate

Active employees with current coverage: 100%  
Active employees with no current coverage: 0%

Inactive employees with current coverage: 100%  
Inactive employees with no current coverage: 0%

### Spousal Coverage

80% of employees are assumed to be married at retirement. Husbands are assumed to be three years older than wives. Spousal coverage and ages for current retirees is based on actual data.

### Per Capita Costs

Annual per capita costs were calculated based on the weighted average premium rates as of July 1, 2019 actuarially increased using health index factors and current enrollment separately for actives and retirees. Annual per capita costs are as shown below.

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

Age	HM 0007 Ded, 0002 Ded, 0009 Ded, 0008 Ded		HM 0001, 0007		HM 0009, 0002, 0004	
	Male	Female	Male	Female	Male	Female
<50	\$ 7,900	\$ 7,900	\$ 8,400	\$ 8,400	\$ 8,700	\$ 8,700
50 - 54	\$ 8,300	\$ 9,400	\$ 8,700	\$ 9,900	\$ 9,100	\$ 10,300
55 - 59	\$ 11,200	\$ 10,800	\$ 11,800	\$ 11,400	\$ 12,200	\$ 11,800
60 - 64	\$ 15,100	\$ 13,300	\$ 16,000	\$ 14,100	\$ 16,600	\$ 14,600

Age	HM 0005 HDHP, 0006 HDHP		Classic 0007, 0009	
	Male	Female	Male	Female
<50	\$ 5,900	\$ 5,900	\$ 10,800	\$ 10,800
50 - 54	\$ 6,100	\$ 6,900	\$ 11,300	\$ 12,700
55 - 59	\$ 8,200	\$ 8,000	\$ 15,200	\$ 14,700
60 - 64	\$ 11,200	\$ 9,800	\$ 20,600	\$ 18,100

Annual dental and vision per capita cost are \$390 and \$51. These costs are assumed to increase with dental and vision trend rates respectively.

# Actuarial Methods and Assumptions

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### 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 non-union male age 64 retiring in FY 2018/19 enrolled in the Healthmate 0007 Ded plan with spousal coverage.

	<b>Premium Rate</b>	<b>Retiree Contribution</b>	<b>Explicit Subsidy</b>
	<b>A</b>	<b>B</b>	<b>C = A - B</b>
Retiree	\$ 662.21	\$ 132.44	\$ 529.77
Spouse	\$ 1,048.10	\$ 209.62	\$ 838.48

### 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 non-union male age 64 retiring in FY 2018/19 with spouse of the same age enrolled in the Healthmate 0007 Ded plan.

	<b>Per Capita Cost</b>	<b>Premium Rate</b>	<b>Implicit Subsidy</b>
	<b>A</b>	<b>B</b>	<b>C = A - B</b>
Retiree	\$ 1,258.33	\$ 662.21	\$ 596.12
Spouse	\$ 1,108.33	\$ 1,048.10	\$ 60.23

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.

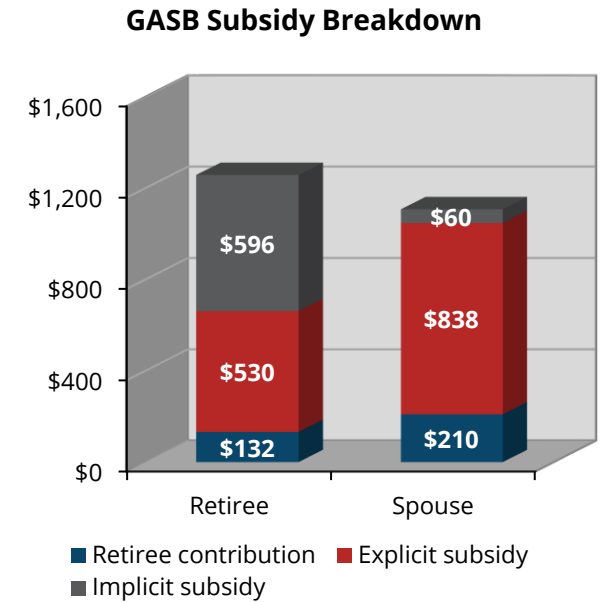
# Actuarial Methods and Assumptions

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### GASB Subsidy Breakdown

Below is a breakdown of the GASB 75 monthly total cost for a non-union male age 64 retiring in FY 2018/19 with spouse of the same age enrolled in the Healthmate 0007 Ded plan.

	Retiree		Spouse	
Retiree contribution	\$	132.44	\$	209.62
Explicit subsidy	\$	529.77	\$	838.48
Implicit subsidy	\$	596.12	\$	60.23
Total monthly cost	\$	1,258.33	\$	1,108.33



# APPENDIX

The background features a complex geometric design. The top half is a solid dark gray. The bottom half is composed of several overlapping, semi-transparent shapes. On the left, there are white and light gray shapes. On the right, there are large, vibrant red shapes that overlap with the lighter tones.



# Appendix

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### 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.

	As of June 30, 2017	As of June 30, 2019
Active Participants	117	122
Retired Participants	50	53
Averages for Active		
Age	42.7	42.6
Service	8.5	8.4
Averages for Inactive		
Age	55.3	55.5

# Appendix

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## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

### Detailed Actuary's Notes

There have been no substantive plan provision changes since the last valuation, which was for the fiscal year ending June 30, 2018.

The prior valuation used a discount rate of 4.03% as of June 30, 2018 for accounting disclosure purposes. The current valuation uses a discount rate of 3.78% as of June 30, 2019 for accounting disclosure purposes. 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. The accounting discount rate will be updated annually to reflect market conditions as of the Measurement Date. The impact of this change was an increase in liabilities.

For funding purposes, the expected Trust rate of return has been adjusted from 5.50% as of July 1, 2018 to 5.00% as of June 30, 2019 to reflect updated long-term expected returns provided by the investment advisor. This 5.00% rate is used in calculating the Actuarially Determined Contribution for FY 2019/20. Refer to the Discussion of Discount Rates section for additional information in the discount rate selection.

Additionally, the following assumptions have also been updated:

1. Mortality table has been updated as follows, causing an increase in liability:
  - a. General Employees and Retirees: SOA Pub-2010 General Headcount Weighted Mortality Table fully generational using Scale MP-2019
  - b. Public Safety Employees and Retirees: SOA Pub-2010 Public Safety Headcount Weighted Mortality Table fully generational using Scale MP-2019
  - c. Disabled General Retirees: SOA Pub-2010 Non-Safety Disabled Headcount Weighted Mortality Table fully generational using Scale MP-2019
  - d. Disabled Public Safety Retirees: SOA Pub-2010 Public Safety Disabled Headcount Weighted Mortality Table fully generational using Scale MP-2019
  - e. Surviving Spouses: SOA Pub-2010 Continuing Survivor Headcount Weighted Mortality Table fully generational using Scale MP-2019
2. Medical/Rx trend rates have been reset to an initial rate of 8.0% decreasing by 0.5% annually to an ultimate rate of 4.5%. For dental benefit, the trend rates have been reset to an initial rate of 5.00% decreasing by 0.25% annually to an ultimate rate of 4.00%. These changes caused a decrease in liabilities.

# GLOSSARY

The background features a complex geometric design. The top half is a solid dark gray. Below this, there are several overlapping, semi-transparent shapes in various shades of gray and white, creating a layered effect. A prominent feature is a large, solid red shape that starts from the bottom right and extends towards the center, overlapping with the other geometric elements.

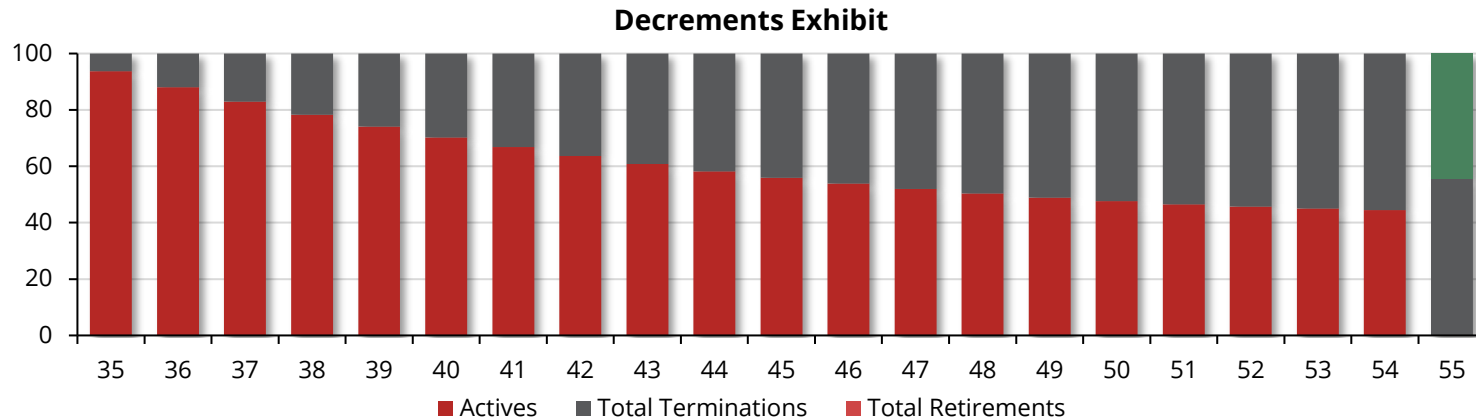
# Glossary – Decrements Exhibit

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

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 44.43 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 <sup>2</sup>	# 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



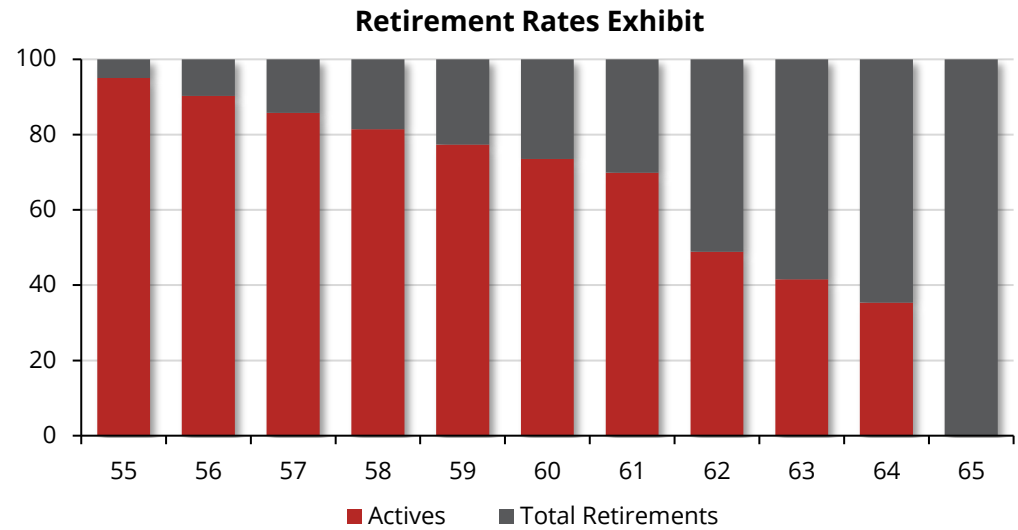
<sup>2</sup> The above rates are illustrative rates and are not used in our GASB calculations.

# Glossary – Retirement Rates Exhibit

## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

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.

# Glossary – Definitions

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## Town of Portsmouth GASB 74/75 Valuation for Fiscal Year Ending June 30, 2019

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.

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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.

# Glossary – Definitions

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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% 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).