



**GASB 74/75 ACTUARIAL VALUATION  
ALTERNATE MEASUREMENT METHOD  
Fiscal Year Ending June 30, 2019**

**TOWN OF WARREN**

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**October 24, 2019**

**Fung Chan  
Town of Warren  
514 Main Street  
Warren, RI 02885**

This report summarizes the GASB actuarial valuation for the Town of Warren 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, turnover assumption, and other economic assumptions have been selected by the Plan Sponsor with the concurrence of Nyhart. Demographic assumptions, except for turnover, are as prescribed in GASB 74/75 under Alternate Measurement Method. 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.

A handwritten signature in black ink, appearing to read 'S. Datta'.

Suraj M. Datta, ASA, MAAA  
Consulting Actuary

A handwritten signature in black ink, appearing to read 'Brian Nichols'.

Brian Nichols, EA, MAAA, FCA  
Valuation Actuary

# Executive Summary

## Town of Warren GASB 74/75 AMM 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>	\$ 4,960,727	\$ 4,682,123
<b>Actuarial Value of Assets</b>	\$ (812,737)	\$ (869,345)
<b>Net OPEB Liability</b>	\$ 4,147,990	\$ 3,812,778
<b>Funded Ratio</b>	16.4%	18.6%

	FY 2017/18	FY 2018/19
<b>OPEB Expense</b>	\$ (257,983)	\$ (97,632)
<b>Annual Employer Contributions</b>	\$ 204,420	\$ 222,959
<b>Actuarially Determined Contribution</b>	\$ 366,102	\$ 392,994

	As of June 30, 2018	As of June 30, 2019
<b>Discount Rate</b>	4.37%	4.27%
<b>Expected Return on Assets</b>	5.50%	5.50%

	As of June 30, 2019
<b>Total Active Participants</b>	68
<b>Total Retiree Participants</b>	11

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 Warren GASB 74/75 AMM 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	\$ 5,794,381	\$ 5,755,666
Retired Employees	1,169,836	1,216,464
<b>Total Present Value of Future Benefits</b>	<b>\$ 6,964,217</b>	<b>\$ 6,972,130</b>

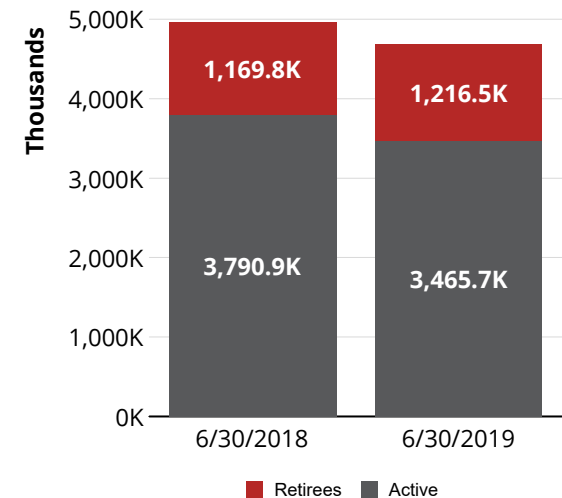
Total OPEB Liability	As of June 30, 2018	As of June 30, 2019
Active Pre-Medicare	\$ 3,196,289	\$ 3,178,343
Active Post-Medicare	594,602	287,316
Active Liability	\$ 3,790,891	\$ 3,465,659

Retiree Pre-Medicare	\$ 803,682	\$ 902,578
Retiree Post-Medicare	366,154	313,886
Retiree Liability	\$ 1,169,836	\$ 1,216,464

<b>Total OPEB Liability</b>	<b>\$ 4,960,727</b>	<b>\$ 4,682,123</b>
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	As of June 30, 2018	As of June 30, 2019
Discount Rate	4.37%	4.27%

## 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 Warren GASB 74/75 AMM 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	\$ 4,960,727	\$ 4,885,041	\$ 5,253,284
Service cost	160,657	160,194	219,675
Interest	218,985	205,673	170,401
Change of benefit terms	0	0	0
Changes in assumptions	(59,690)	(85,761)	(351,830)
Differences between expected and actual experience	(375,597)	0	(194,295)
Benefit payments	(222,959)	(204,420)	(212,194)
Net change in total OPEB liability	\$ (278,604)	\$ 75,686	\$ (368,243)
Total OPEB Liability - end of year	\$ 4,682,123	\$ 4,960,727	\$ 4,885,041
<b>Plan Fiduciary Net Position</b>			
Plan fiduciary net position - beginning of year	\$ 812,737	\$ 780,735	\$ 749,452
Contributions - employer	222,959	204,420	212,194
Contributions - active employees	0	0	0
Net investment income	58,665	34,009	33,023
Benefit payments	(222,959)	(204,420)	(212,194)
Trust administrative expenses	(2,057)	(2,007)	(1,740)
Net change in plan fiduciary net position	\$ 56,608	\$ 32,002	\$ 31,283
Plan fiduciary net position - end of year	\$ 869,345	\$ 812,737	\$ 780,735
<b>Net OPEB Liability - end of year</b>	<b>\$ 3,812,778</b>	<b>\$ 4,147,990</b>	<b>\$ 4,104,306</b>
Plan fiduciary net position as % of total OPEB liability	18.6%	16.4%	16.0%
Covered employee payroll	\$ 3,858,543	\$ 3,605,868	\$ 3,483,930
Net OPEB liability as % of covered payroll	98.8%	115.0%	117.8%

# GASB Disclosures

Town of Warren GASB 74/75 AMM 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)	\$ 392,994	\$ 366,102	\$ 341,832	\$ 315,847	\$ 315,847
Contributions in relation to the ADC	222,959	204,420	212,194	161,228	139,938
Contribution deficiency/(excess)	\$ 170,035	\$ 161,682	\$ 129,638	\$ 154,619	\$ 175,909
Covered employee payroll	\$ 3,858,543	\$ 3,605,868	\$ 3,483,930	\$ 3,302,667	\$ 3,302,667
Contribution as a % of covered payroll	5.8%	5.7%	6.1%	4.9%	4.2%

	FY 2013/14	FY 2012/13	FY 2011/12	FY 2010/11	FY 2009/10
Actuarially Determined Contribution (ADC)	\$ 420,724	\$ 420,724	\$ 423,829	\$ 383,807	\$ 383,807
Contributions in relation to the ADC	140,903	135,814	100,687	58,296	69,875
Contribution deficiency/(excess)	\$ 279,821	\$ 284,910	\$ 323,142	\$ 325,511	\$ 313,932
Covered employee payroll	\$ 2,935,090	\$ 2,935,090	\$ 2,935,090	\$ 3,019,466	\$ 3,019,466
Contribution as a % of covered payroll	4.8%	4.6%	3.4%	1.9%	2.3%



# GASB Disclosures

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

## OPEB Expense

OPEB Expense	FY 2018/19	FY 2017/18
Discount Rate		
Beginning of year	4.37%	4.16%
End of year	4.27%	4.37%
Service cost	\$ 160,657	\$ 160,194
Interest	218,985	205,673
Change of benefit terms	0	0
Projected earnings on OPEB plan investments	(44,645)	(42,886)
Reduction for contributions from active employees	0	0
OPEB plan administrative expenses	2,057	2,007
Current period recognition of deferred outflows / (inflows) of resources		
Differences between expected and actual experience	\$ (375,597)	\$ (178,104)
Changes in assumptions	(59,690)	(408,272)
Net difference between projected and actual earnings on OPEB plan investments	601	3,405
Total current period recognition	\$ (434,686)	\$ (582,971)
Total OPEB expense	\$ (97,632)	\$ (257,983)

# GASB Disclosures

## Town of Warren GASB 74/75 AMM 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. Difference 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 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.

Differences between expected and actual experience for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2019
June 30, 2019	\$ (375,597)	1	\$ (375,597)	\$ 0
Changes in assumptions for FYE	Initial Balance	Initial Amortization Period	Annual Recognition	Unamortized Balance as of June 30, 2019
June 30, 2019	\$ (59,690)	1	\$ (59,690)	\$ 0
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	\$ 8,150	5	\$ 1,630	\$ 3,260
June 30, 2018	\$ 8,877	5	\$ 1,775	\$ 5,327
June 30, 2019	\$ (14,020)	5	\$ (2,804)	\$ (11,216)

# GASB Disclosures

## Town of Warren GASB 74/75 AMM 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	\$ 0	\$ 0
Changes in assumptions	0	0
Net difference between projected and actual earnings in OPEB plan investments	8,587	(11,216)
<b>Total</b>	<b>\$ 8,587</b>	<b>\$ (11,216)</b>

### Annual Amortization of Deferred Outflows / (Inflows)

The balances 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	\$ 601
2021	\$ 601
2022	\$ (1,027)
2023	\$ (2,804)
2024	\$ 0
Thereafter	\$ 0

# GASB Disclosures

## Town of Warren GASB 74/75 AMM 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 4.27%.
- The 1% decrease in discount rate would be 3.27%.
- The 1% increase in discount rate would be 5.27%.

As of June 30, 2019	Net OPEB Liability
1% Decrease	\$ 4,195,783
Current Discount Rate	\$ 3,812,778
1% Increase	\$ 3,464,203

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 5.00%.
- The 1% decrease in health care trend rates would assume an initial rate of 7.00%, decreasing to an ultimate rate of 4.00%.
- The 1% increase in health care trend rates would assume an initial rate of 9.00%, decreasing to an ultimate rate of 6.00%.

As of June 30, 2019	Net OPEB Liability
1% Decrease	\$ 3,366,324
Current Trend Rates	\$ 3,812,778
1% Increase	\$ 4,334,087

# GASB Disclosures

Town of Warren GASB 74/75 AMM 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	\$ 0
Accrued interest	0	0
Total receivables	\$ 0	\$ 0
Investments		
Fixed income	\$ 463,261	\$ 495,527
Equities	284,457	304,271
Mutual Funds	65,019	69,548
Total investments	\$ 812,737	\$ 869,345
Total Assets	\$ 812,737	\$ 869,345
<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>\$ 812,737</b>	<b>\$ 869,345</b>

# GASB Disclosures

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

## Asset Information (Continued)

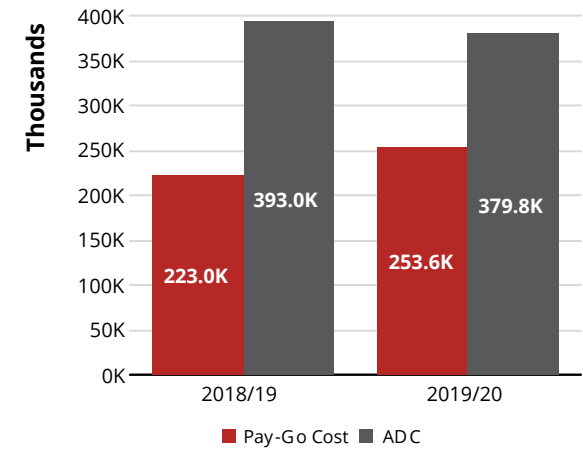
Asset Reconciliation	FY 2017/18	FY 2018/19
<b>Additions</b>		
Contributions Received		
Employer	\$ 204,420	\$ 222,959
Employee	0	0
Total contributions	\$ 204,420	\$ 222,959
Investment Income		
Net increase in fair value of investments	\$ 34,009	\$ 58,665
Interest and Dividends	0	0
Investment expense, other than from securities lending	0	0
Securities lending income	0	0
Securities lending expense	0	0
Net investment income	\$ 34,009	\$ 58,665
Total additions	\$ 238,429	\$ 281,624
<b>Deductions</b>		
Benefit payments	\$ 204,420	\$ 222,959
Administrative expenses	2,007	2,057
Other	0	0
Total deductions	\$ 206,427	\$ 225,016
Net increase in net position	\$ 32,002	\$ 56,608
Net position restricted to OPEB		
Beginning of year	\$ 780,735	\$ 812,737
End of year	\$ 812,737	\$ 869,345

# Actuarially Determined Contributions

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

	FY 2018/19	FY 2019/20
Discount rate (Funding)	5.50%	5.50%
Payroll growth factor used for amortization	3.50%	3.50%
Actuarial cost method	Entry Age Normal Level % of Salary	Entry Age Normal Level % of Salary
Amortization type	Level % of Salary	Level % of Salary
Amortization period (years)	18	17
Actuarial Accrued Liability (AAL) - beginning of year	\$ 4,530,870	\$ 4,257,861
Actuarial Value of Assets (AVA) - beginning of year	(812,737)	(869,345)
Unfunded AAL - beginning of year	\$ 3,718,133	\$ 3,388,516
Normal Cost	\$ 130,645	\$ 128,728
Amortization of Unfunded AAL	241,861	231,286
Total normal cost plus amortization	\$ 372,506	\$ 360,014
Interest to end of year	20,488	19,801
Actuarially Determined Contribution - Preliminary	\$ 392,994	\$ 379,815
Expected Benefit Payments	222,959	253,581
<b>Actuarially Determined Contribution - Final</b>	<b>\$ 392,994</b>	<b>\$ 379,815</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.

# Projection of GASB Disclosures

## Town of Warren GASB 74/75 AMM 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	\$ 4,960,727	\$ 4,682,123
Normal cost as of beginning of year	160,657	163,730
Exp. benefit payments during the year	(201,735)	(253,581)
Interest adjustment to end of year	219,444	201,561
Exp. TOL as of end of year	\$ 5,139,093	\$ 4,793,833
Actuarial Loss / (Gain)	(456,970)	TBD
<b>Actual TOL as of end of year</b>	<b>\$ 4,682,123</b>	<b>\$ TBD</b>

Discount rate as of beginning of year	4.37%	4.27%
Discount rate as of end of year	4.27%	TBD

Projection of Actuarial Value of Assets (AVA)	FY 2018/19	FY 2019/20
AVA as of beginning of year	\$ 812,737	\$ 869,345
Exp. employer contributions during the year	222,959	253,581
Exp. benefit payments during the year	(201,735)	(253,581)
Expected investment income	44,645	47,755
Exp. Trust administrative expenses	(2,057)	(2,173)
Exp. AVA as of end of year	\$ 855,325	\$ 914,927
Differences between expected and actual experience	14,020	TBD
<b>AVA as of end of year</b>	<b>\$ 869,345</b>	<b>\$ TBD</b>

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



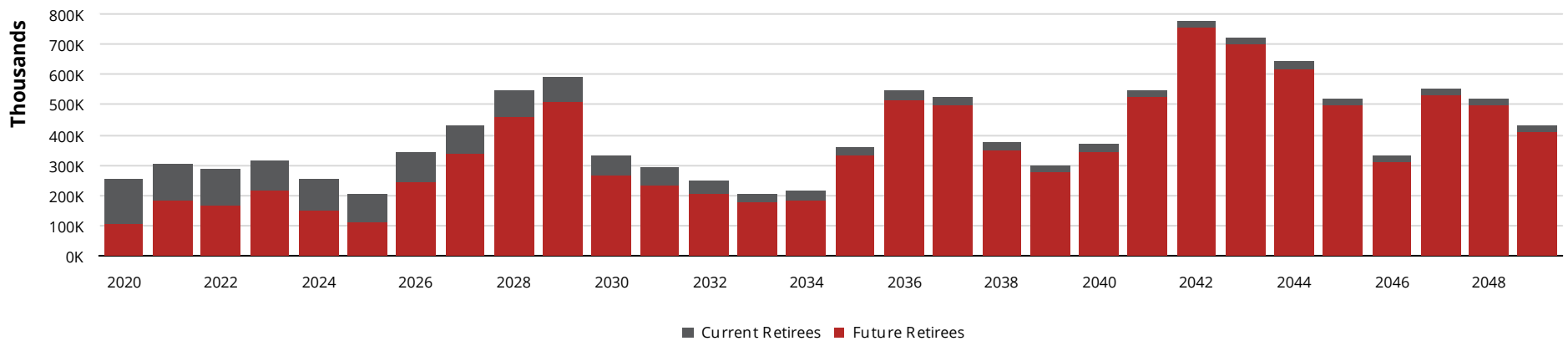
# Cash Flow Projections

## Town of Warren GASB 74/75 AMM 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	\$ 146,261	\$ 107,320	\$ 253,581	2030	\$ 65,468	\$ 263,488	\$ 328,956	2040	\$ 24,912	\$ 343,504	\$ 368,416
2021	\$ 116,122	\$ 184,677	\$ 300,799	2031	\$ 62,548	\$ 231,354	\$ 293,902	2041	\$ 24,814	\$ 523,830	\$ 548,644
2022	\$ 123,424	\$ 166,110	\$ 289,534	2032	\$ 42,065	\$ 205,175	\$ 247,240	2042	\$ 24,681	\$ 755,480	\$ 780,161
2023	\$ 100,149	\$ 214,186	\$ 314,335	2033	\$ 29,522	\$ 175,874	\$ 205,396	2043	\$ 24,510	\$ 698,427	\$ 722,937
2024	\$ 105,404	\$ 147,850	\$ 253,254	2034	\$ 29,901	\$ 182,861	\$ 212,762	2044	\$ 24,296	\$ 619,588	\$ 643,884
2025	\$ 96,170	\$ 109,946	\$ 206,116	2035	\$ 30,228	\$ 329,717	\$ 359,945	2045	\$ 24,033	\$ 494,486	\$ 518,519
2026	\$ 100,138	\$ 243,258	\$ 343,396	2036	\$ 30,501	\$ 513,723	\$ 544,224	2046	\$ 23,716	\$ 306,796	\$ 330,512
2027	\$ 93,004	\$ 338,111	\$ 431,115	2037	\$ 24,953	\$ 499,206	\$ 524,159	2047	\$ 23,338	\$ 530,209	\$ 553,547
2028	\$ 84,651	\$ 459,195	\$ 543,846	2038	\$ 24,986	\$ 350,287	\$ 375,273	2048	\$ 22,889	\$ 495,660	\$ 518,549
2029	\$ 87,010	\$ 506,008	\$ 593,018	2039	\$ 24,971	\$ 274,395	\$ 299,366	2049	\$ 22,362	\$ 407,084	\$ 429,446

### Projected Employer Pay-go Cost



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

# Discussion of Discount Rates

## Town of Warren GASB 74/75 AMM 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 5.50%. 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 and adding in expected inflation (1.80%). The best estimates of arithmetic real 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.

Asset Class	Target Allocation	L/T Expected Real ROR
U.S. Equity	24.50%	6.80%
Non-U.S. Equity	10.50%	8.90%
U.S. Aggregate Bonds	21.00%	3.50%
Intermediate-Term Credit	12.60%	4.00%
Short-Term Credit	8.40%	3.80%
Intermediate-Term TIPS	15.00%	2.80%
REITs	8.00%	5.90%
Total	100.00%	5.55%

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.

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 for this year's valuation is 4.37% as of July 1, 2018 and 4.27% as of June 30, 2019 based on the expectation that the Town will not make future contributions into the OPEB Trust. If the contribution policy changes, Nyhart will need to re-evaluate the discount rate used for accounting disclosure purposes. Based on our projections, the Trust is expected to be depleted at the end of FY 2043/44. A discount rate of 5.50% is used for funding purposes (in determining the Actuarially Determined Contribution).

# Summary of Plan Participants

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

## Active Employees

Actives with coverage	Single	Non-Single	Total	Avg. Age	Avg. Svc	Salary
Plan A (Police)	10	15	25	42.4	16.1	\$ 1,615,425
Plan B (Town)	5	31	36	48.6	15.1	\$ 1,864,061
Plan C (Fire)	2	0	2	42.5	1.3	\$ 109,767
<b>Total actives with coverage</b>	<b>17</b>	<b>46</b>	<b>63</b>	<b>46.0</b>	<b>15.1</b>	<b>\$ 3,589,253</b>

Actives without coverage	Total	Avg. Age	Avg. Svc	Salary
<b>Total actives without coverage</b>	<b>5</b>	<b>44.5</b>	<b>6.9</b>	<b>\$ 269,291</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 Warren GASB 74/75 AMM 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	2	2										4
25 to 29		2										2
30 to 34	2	1	1									4
35 to 39	2	2		5	2							11
40 to 44		3	1	4	3	1						12
45 to 49		1	2		3	5						11
50 to 54			1		3		6					10
55 to 59				1	1	1	1	2				6
60 to 64		1				1	2	1				5
65 to 69		1		1								2
70 & up									1			1
<b>Total</b>	<b>6</b>	<b>13</b>	<b>5</b>	<b>11</b>	<b>12</b>	<b>8</b>	<b>9</b>	<b>3</b>	<b>1</b>	<b>0</b>		<b>68</b>

# Summary of Plan Participants

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

## Retirees

Retirees with coverage	Single	Non-Single	Total	Avg. Age
Plan A (Police)	0	6	6	58.8
Plan B (Town)	0	2	2	67.3
Plan C (Fire)	0	1	1	72.4
<b>Total retirees with coverage</b>	<b>0</b>	<b>9</b>	<b>9</b>	<b>62.2</b>

Additionally there are two retirees with dental coverage but no health coverage. They have been included in the GASB valuation.

## Retiree Age Distribution

Age	Retirees
< 45	
45 to 49	
50 to 54	2
55 to 59	2
60 to 64	1
65 to 69	3
70 to 74	2
75 to 79	1
80 to 84	
85 to 89	
90 & up	
<b>Total</b>	<b>11</b>

# Substantive Plan Provisions

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

### Eligibility

All employees are eligible for retiree health benefits once they meet the Rhode Island Municipal Employees Retirement System (MERS) retirement eligibility requirements as described below.

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 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 the 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 the previous paragraph) if they continue to work and contribute until that date.

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

### Explicit Subsidy

Retirees are eligible for subsidized coverage as noted below:

- Police officers (IBPO) – 4 years of free coverage that can extend past Medicare eligibility
- Non-union Supervisory Personnel:
  - Hired prior to April 26, 2006 – 3 years of free coverage or until Medicare eligibility, whichever is earlier
  - Hired on/after April 26, 2006 – 3 years subsidized coverage or until Medicare eligibility, whichever is earlier. During the subsidy period, the Town will contribute 80% of the premium
- Town (USW) employees:
  - Hired prior to July 1, 1994 – 3 years of free coverage that can extend past Medicare eligibility
  - Hired on/after July 1, 1994 – 2 years of free coverage that can extend past Medicare eligibility
  - Any USW employees who retire at age 65 with 10 years of service are eligible for free lifetime coverage under Plan 65.

# Substantive Plan Provisions

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

### Spouse Benefit

Surviving spouse is eligible for COBRA coverage upon death of the retiree.

### Retiree Cost Sharing

Retirees contribute the cost of coverage not covered by the Town's explicit subsidy.

### Medical Benefit

Same benefit options are available to retirees as active employees. Town of Warren purchases their health insurance through BCBS of Rhode Island, and their health plans are operated on a fully-insured arrangement. Their premium rates are determined based on an 80/20 split of the pool-wide and their own claims experience.

BCBS of Rhode Island maintains fund reserves that are held in common. At year end, reserves are evaluated and at times distributions could be made out to the members.

The monthly premiums effective July 1, 2018 and July 1, 2019 are as shown below:

Plan	Eff. 7/1/2018		Eff. 7/1/2019	
	Single	Family	Single	Family
Plan A (Police)	\$ 863.54	\$ 2,043.81	\$ 896.61	\$ 2,125.67
Plan B (Town)	\$ 821.90	\$ 2,015.80	\$ 855.87	\$ 2,099.11
Plan C (Fire)	\$ 901.94	\$ 2,095.84	\$ 935.11	\$ 2,178.35
Plan D with Vision (Town)*	\$ 826.76	\$ 2,027.95	\$ 860.93	\$ 2,111.77
Dental	\$ 31.29	\$ 96.48	\$ 23.39	\$ 87.53

\* Plan D is only available to USW employees, and they are required to pay any differential costs from Plan B.

# Actuarial Methods and Assumptions

## Town of Warren GASB 74/75 AMM 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, 2017. 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>	4.37% as of July 1, 2018 and 4.27% as of June 30, 2019 for accounting disclosure purposes 5.50% 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>Inflation Rate</b>	2.75% per year
<b>Census Data</b>	Census information was provided by the Town and it was provided in August 2019. We have reviewed it for reasonableness and no material modifications were made to the census data.
<b>Payroll Growth</b>	For amortization purposes: 3.50% For valuation purposes (to determine Total OPEB Liability): 3.50% wage inflation for general employees and 4.00% wage inflation for Police / Fire plus merit and longevity increases used in the RI MERS actuarial valuation as of June 30, 2018. Sample merit and longevity increases are as shown below.

<b>YOS</b>	<b>General</b>	<b>Police / Fire</b>
0	3.75%	10.00%
5	1.75%	3.00%
10	0.00%	0.00%
15	0.00%	0.00%



# Actuarial Methods and Assumptions

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

### 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.

### Employer Funding Policy

Pay-as-you-go cash basis

The Town has established an OPEB Trust, but the annual pre-funding decision is made arbitrarily annually depending on budgetary constraints. The last pre-funding contribution made into this Trust was in the 2007/08 fiscal year. The Town plans to make pre-funding contributions to the Trust in future years contingent on any budgetary constraints.

### Experience Study

Best actuarial practices call for a periodic assumption review and Nyhart recommends the Town to complete an actuarial assumption review (also referred to as an experience study) before the next actuarial valuation for the fiscal year ending June 30, 2021.

### Health Care Coverage Election Rate

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

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

### Spousal Coverage

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

Husbands are assumed to be three years older than wives for future retirees. Actual spouse's age is used for current retirees.

### Mortality

SOA RPH-2014 Total Dataset Mortality Table fully generational using Scale MP-2018

### Disability

None

# Actuarial Methods and Assumptions

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## Town of Warren GASB 74/75 AMM 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. The rates represent the probability of termination in the next 12 months.

The termination rates are based on the RI MERS actuarial valuation as of June 30, 2016. Sample annual turnover rates are shown below:

<b>YOS</b>	<b>General</b>	<b>Police/Fire</b>
0	17.5%	10.0%
5	6.1%	2.3%
10	2.7%	1.3%
15	1.7%	0.7%
20	1.5%	0.0%
25	0.0%	0.0%

### Retirement Rate

Each general employee is assumed to retire at age 61 or upon meeting the minimum age/service requirement, whichever is later. If the employee is currently over the age of 61 and has met the minimum age/service requirement, he is assumed to retire immediately.

Each public safety employee is assumed to retire at age 58 or upon meeting the minimum age/service requirement, whichever is later. If the employee is currently over the age of 58 and has met the minimum age/service requirement, he is assumed to retire immediately.

# Actuarial Methods and Assumptions

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

## Health Care Trend Rates

FYE	Medical/Rx	Dental
2020	8.0%	4.0%
2021	7.5%	3.5%
2022	7.0%	3.0%
2023	6.5%	3.0%
2024	6.0%	3.0%
2025	5.5%	3.0%
2026	5.0%	3.0%
2027+	4.5%	3.0%

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.

## Retiree Contributions

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

## Per Capita Costs

Annual per capita costs were calculated based on the Town's monthly premium rates effective July 1, 2019 actuarially increased using health index factors and current enrollment. The costs are assumed to increase with health care trend rates. 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 population.

Age	Plan	Per Capita
<65	Plan A	\$ 18,156
<65	Plan B	\$ 17,331
<65	Plan C	\$ 18,935
65+	Plan A	\$ 5,484
65+	Plan B	\$ 5,235
65+	Plan C	\$ 5,720

Annual dental per capita cost is assumed to be \$280.68 increasing with dental trend rates.

# Actuarial Methods and Assumptions

## Town of Warren GASB 74/75 AMM 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 future retiree who is enrolled in Plan B.

	<b>Premium Rate</b>	<b>Retiree Contribution<sup>1</sup></b>	<b>Explicit Subsidy</b>
	<b>A</b>	<b>B</b>	<b>C = A - B</b>
Retiree	\$ 855.87	\$ 0	\$ 855.87
Spouse	\$ 1,243.24	\$ 0	\$ 1,243.24

### 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 retiree age 60 with spouse of the same age enrolled in Plan B.

	<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	\$ 1,444.25	\$ 855.87	\$ 588.38
Spouse	\$ 1,444.25	\$ 1,243.24	\$ 201.01

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.

<sup>1</sup> Limited to premium rates for illustration purposes.

# Actuarial Methods and Assumptions

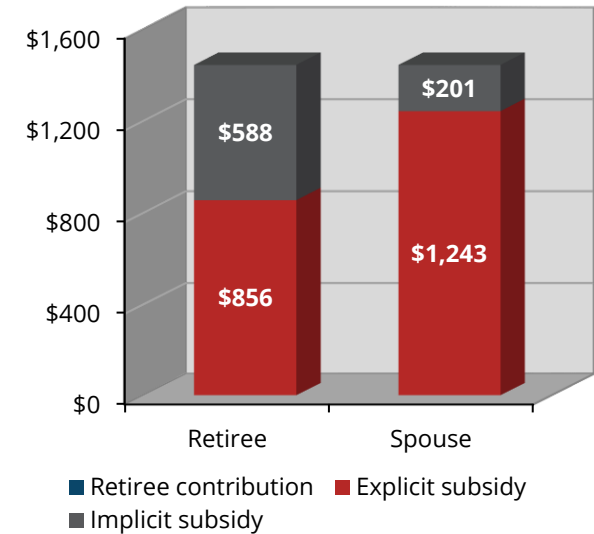
## Town of Warren GASB 74/75 AMM Valuation for Fiscal Year Ending June 30, 2019

### GASB Subsidy Breakdown

Below is a breakdown of the GASB 74/75 monthly total cost for a retiree age 60 with spouse of the same age enrolled in Plan B.

	Retiree	Spouse
Retiree contribution	\$ 0.00	\$ 0.00
Explicit subsidy	\$ 855.87	\$ 1,243.24
Implicit subsidy	\$ 588.38	\$ 201.01
<b>Total monthly cost</b>	<b>\$ 1,444.25</b>	<b>\$ 1,444.25</b>

### GASB Subsidy Breakdown



# APPENDIX

The background features a complex geometric design. It consists of several overlapping, semi-transparent shapes. A large, dark gray shape occupies the upper portion of the frame. Below it, there are various shapes in lighter shades of gray and white, some of which are defined by dashed lines. A prominent, solid red shape is located in the lower right quadrant, overlapping with the other elements.

# Appendix

## Town of Warren GASB 74/75 AMM 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	62	68
Retired Participants	7	11
Averages for Active		
Age	48.2	45.8
Service	16.4	14.5
Averages for Inactive		
Age	59.6	64.4

# Appendix

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

### Detailed Actuary's Notes

There have been no substantive plan provision changes since the last full valuation, which was for the fiscal year ending June 30, 2017.

The following assumptions have been updated in accordance with GASB 75.

1. Discount rate as of the Measurement Date has been updated to 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) and the expected long term rate of return of the Town's OPEB Trust. The prior full valuation used a discount rate of 3.31% as of July 1, 2016 and 4.16% as of June 30, 2017. The current full valuation uses a discount rate of 4.37% as of July 1, 2018 and 4.27% as of June 30, 2019. This change has caused an increase in liabilities.

The discount rate will be updated annually to reflect market conditions as of the Measurement Date. See the Discussion of Discount Rate section for more details.

Additionally, the following assumptions have also been updated:

1. Mortality table has been updated from RP-2014 Combined Mortality Table fully generational using Scale 2017 to SOA RPH-2014 Total Dataset Mortality Table fully generational using Scale MP-2018. The impact of this change is a decrease in liabilities.
2. Health care trend rates have been updated to initial rate of 8.0% decreasing by 0.5% annually to an ultimate rate of 4.5% for Medical/Rx benefit and 4.0% decreasing by 0.5% annually to an ultimate rate of 3.0% for dental benefit. These changes caused a decrease in liabilities for the Town.
3. The salary scale has been updated for the most recent Rhode Island MERS actuarial valuation report as of June 30, 2018.



# GLOSSARY

The background features a complex geometric design. The top half is a solid dark gray. The bottom half is composed of several overlapping triangles in various shades of gray, white, and a vibrant red. The red triangles are primarily located in the bottom right corner, while the white and light gray triangles form a large, irregular shape on the left and bottom center.

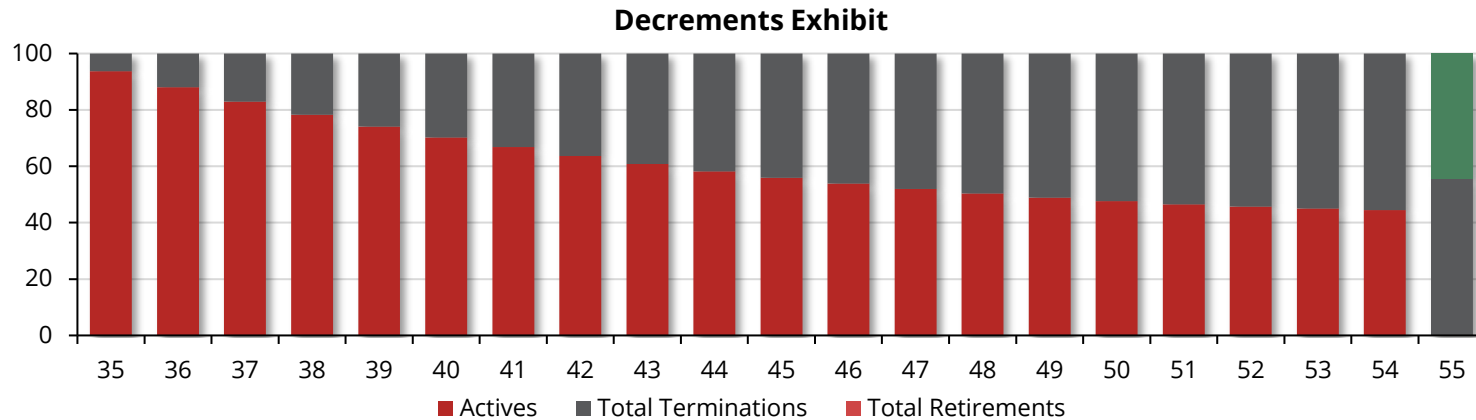
# Glossary – Decrements Exhibit

## Town of Warren GASB 74/75 AMM 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



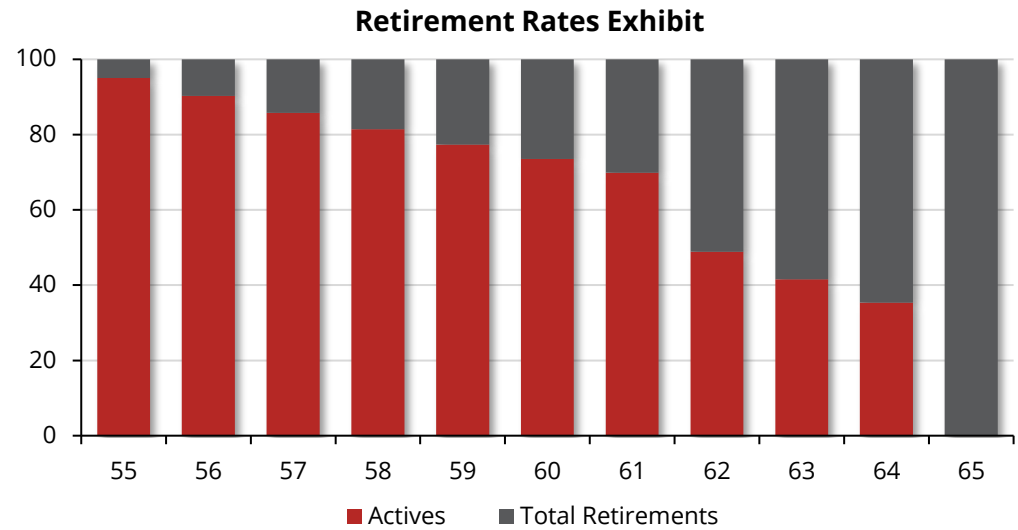
<sup>2</sup> The above rates are illustrative rates and are not used in our GASB calculations.

# Glossary – Retirement Rates Exhibit

Town of Warren GASB 74/75 AMM 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 Warren GASB 74/75 AMM 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.

# Glossary – Definitions

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

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

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).