

**Town of Westford Other
Postemployment Benefits Plan**

GASB 74 Required Supplementary Information

With a Valuation Date of July 1, 2017

For the Reporting Date of June 30, 2018

Delivered October 2, 2018

October 2, 2018

ACTUARIAL CERTIFICATION

This is to certify that Odyssey Advisors has conducted an actuarial valuation of certain benefit obligations of the Town of Westford other postemployment benefit programs with a Valuation Date of July 1, 2017 for the Reporting Date & fiscal year ending June 30, 2018 in accordance with generally accepted actuarial principles and practices. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statement Number 74 for the determination of the liability for postemployment benefits other than pensions.

The actuarial data is based on the plan of benefits verified by the Town and on participant claims or premium data provided by the Town and/or vendors employed by the Town.

The actuarial computations made are for purposes of fulfilling plan accounting requirements. Determinations for purposes other than meeting financial accounting requirements may yield results significantly different than those reported here. As such, additional determinations may be needed for other purposes including determining the benefit security at termination and/or adequacy of the funding of an ongoing plan.

To the best of our knowledge, this report is complete and accurate and in our opinion represents the information necessary to comply with GASB Statement Number 74 with respect to the benefit obligations addressed. The signing actuaries are members of the Society of Actuaries, the American Academy of Actuaries and other professional actuarial organizations and meet their "General Qualification Standards for Statements of Actuarial Opinion" to render the actuarial opinion contained herein. Further, in our opinion, the assumptions as approved by the Town are reasonably related to the experience and expectations of the postemployment benefits programs.



Parker E. Elmore, ASA, EA, FCA, MAAA
President, CEO & Actuary

GASB 74 Required Supplementary Information
(Liabilities As of June 30, 2018)

1. EFFECT OF 1% CHANGE IN HEALTHCARE TREND

For the Reporting Date June 30, 2018, in the event that healthcare trend rates were 1% higher than forecast and employee contributions were to increase at the forecast rates, the Total OPEB Liability would increase to \$94,824,003 or by 28.9% and the Net OPEB Liability would increase to \$90,269,451 or by 30.9%. The corresponding Service Cost would increase to \$3,642,471 or by 44.3%. If such healthcare trend rates were 1% less than forecast and employee contributions were to increase at the forecast rate, the Total OPEB Liability would decrease to \$56,730,418 or by 22.9% and the Net OPEB Liability would decrease to 52,175,866 or by 24.4%. The corresponding Service Cost would decrease to \$1,684,996 or by 33.2%.

Impact of a 1% Change in the Healthcare Trend Rate as of the June 30, 2018 Reporting Date

	<u>1% Decrease (4.00%)</u>	<u>Current Trend Rate (5.00%)</u>	<u>1% Increase (6.00%)</u>
I. Total OPEB Liability	56,730,418	73,538,392	94,824,003
II. Fiduciary Net Position	4,554,552	4,554,552	4,554,552
III. Net OPEB Liability (Asset) [I-II.]	52,175,866	68,983,840	90,269,451
IV. Service Cost	1,684,996	2,523,770	3,642,471

2. EFFECT OF 1% CHANGE IN DISCOUNT RATES

For the Reporting Date June 30, 2018, if the discount rate were 1% higher than what was used in this valuation, the Total OPEB Liability would decrease to \$64,359,140 or by 12.5% and the Net OPEB Liability would decrease to 59,804,588 or by 13.3%. The corresponding Service Cost would decrease to \$2,007,985 or by 20.4%. If the discount rate were 1% lower than was used in this valuation, the Total OPEB Liability would increase to \$85,010,481 or by 15.6% and the Net OPEB Liability would increase to \$80,455,929 or by 16.6%. The corresponding Service Cost would increase to \$3,212,382 or by 27.3%.

Impact of a 1% Change in the Discount Rate as of the June 30, 2018 Reporting Date

	<u>1% Decrease (5.00%)</u>	<u>Current Discount Rate (6.00%)</u>	<u>1% Increase (7.00%)</u>
I. Total OPEB Liability	85,010,481	73,538,392	64,359,140
II. Fiduciary Net Position	4,554,552	4,554,552	4,554,552
III. Net OPEB Liability (Asset) [I-II.]	80,455,929	68,983,840	59,804,588
IV. Service Cost	3,212,382	2,523,770	2,007,985

GASB 74 Required Supplementary Information
(Liabilities As of June 30, 2018)

3. INVESTMENT POLICY

The chart below shows how the long-term rate of return on assets is developed based on the Town's Investment Policy.

Investment Target Allocation & Expected Long-Term Real Rate of Return			
Asset Class	Target Allocation	Asset Class	Long-Term Expected Real Rate of Return
Domestic Equity - Large Cap	30.75%	Domestic Equity - Large Cap	4.00%
Domestic Equity - Small/Mid Cap	16.25%	Domestic Equity - Small/Mid Cap	6.00%
International Equity - Developed Market	6.50%	International Equity - Developed Market	4.50%
International Equity-Emerging Market	3.25%	International Equity-Emerging Market	7.00%
Domestic Fixed Income	20.00%	Domestic Fixed Income	2.00%
International Fixed Income	10.00%	International Fixed Income	3.00%
Alternatives	0.00%	Alternatives	6.50%
Real Estate	8.25%	Real Estate	6.25%
Cash	5.00%	Cash	0.00%
Total	<u>100.00%</u>		
		I. Real Rate of Return	3.94%
		II. Inflation Assumption	2.75%
		III. Total Nominal Return [I. + II.]	6.69%
		IV. Investment Expense	0.25%
		V. Net Investment Return [III.-IV.]	6.44%

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(Liabilities As of June 30, 2018)

4. SCHEDULE OF NET OPEB LIABILITY CHANGE

Schedule of Changes in the Town's Net OPEB Liability and Related Ratios		
	<u>June 30, 2018</u>	<u>June 30, 2017</u>
Total OPEB Liability	73,538,392	83,134,715
I. Service Cost	2,523,770	3,379,477
II. Interest on Total OPEB Liability, Service Cost, and Benefit Payments	4,227,028	3,932,112
III. Changes in Benefit terms	0	0
IV. Difference between Expected & Actual Plan Experience	(14,101,615)	(2,545,735)
V. Changes of assumptions	0	0
VI. Benefit Payments Excluding Implicit Cost	(1,926,448)	N/A
VII. Implicit Cost Amount	(319,058)	N/A
VIII. Total Benefit payments including Implicit Cost [VI.+VII.]	(2,245,506)	(2,042,259)
IX. Net Change in OPEB liability [I.+II.+III.+IV.+V.+VIII.]	(9,596,323)	2,723,595
X. Total OPEB liability - beginning of period	83,134,715	80,411,120
XI. Total OPEB liability - end of period [IX.+X.]	73,538,392	83,134,715
Plan Fiduciary Net Position	4,554,552	3,559,027
XII. Earning from Plan Investments	(4,960)	152,263
XIII. Employer Contribution to trust	3,245,991	3,162,513
XIV. Benefit payments from trust, including refunds of member contributions	(2,245,506)	(2,042,259)
XV. Administrative expense	0	0
XVI. Other	0	0
XVII. Net change in plan fiduciary net position [XII.+XIII.+XIV.+XV.+XVI.]	995,525	1,272,517
XVIII. Plan fiduciary net position - beginning of period	3,559,027	2,286,510
XIX. Plan fiduciary net position - end of period [XVII.+XVIII.]	4,554,552	3,559,027
XX. Net OPEB Liability [XI.-XIX.]	68,983,840	79,575,688
XXI. Plan fiduciary net position as % of total OPEB liability [XIX. / XI.]	6.19%	4.28%
XXII. Covered employee payroll	57,273,016	57,373,661
XXIII. Plan NOL as % of covered employee payroll [XX. / XXII.]	120.45%	138.70%
Single Discount Rate to calculate Plan Liabilities	6.00%	4.75%

GASB 74 Required Supplementary Information
(Liabilities As of June 30, 2018)

5. ACTUARIALLY DETERMINED CONTRIBUTION (ADC)

	Actuarially Determined Contribution - Deficiency / (Excess)	
	For the Fiscal Year Ending:	
	June 30, 2018	June 30, 2017
I. Service Cost	2,523,770	N/A
II. 30 year level dollar amortization of NOL	<u>5,453,856</u>	<u>N/A</u>
III. Actuarial Determined Contribution [I. + II.]	7,977,626	3,162,513
IV. Contributions in relation to the actuarially determined contribution	<u>(3,245,991)</u>	<u>(3,162,513)</u>
V. Contribution deficiency / (excess) [III. + IV.]	<u>4,731,635</u>	<u>0</u>
Covered employee payroll	57,273,016	57,373,661
Contributions as a % of covered employee payroll	5.67%	5.51%
Discount Rate	6.00%	4.75%
Money Weighted Rate of Return	-0.12%	14.69%

GASB 74 Required Supplementary Information
(Liabilities As of June 30, 2018)

6. MONEY WEIGHTED RATE OF RETURN

	Plan Investments / Net External Cash Flows	Periods Invested	Period Weight
I. Beginning value - July 1, 2017	3,559,027	12	1.0000
Monthly net external cash flows:			
July	0	11	0.9167
August	0	10	0.8333
September	0	9	0.7500
October	0	8	0.6667
November	0	7	0.5833
December	865,013	6	0.5000
January	0	5	0.4167
February	0	4	0.3333
March	135,472	3	0.2500
April	0	2	0.1667
May	0	1	0.0833
June	0	0	0.0000
II. Total net external cash flow	1,000,485		
III. Earnings and increase in fair value	(4,960)		
IV. Ending value - June 30, 2018 [I.+II.+III.]	4,554,552		
Money Weighted Rate of Return	-0.12%		
Asset Value - June 30, 2018	4,554,552		

GASB 74 Required Supplementary Information
(Liabilities As of June 30, 2018)

Notes to Required Supplementary Information:

Valuation Date:	July 1, 2017
Actuarial Cost Method:	Individual Entry Age Normal
Asset-Valuation Method:	Market Value of Assets as of the Reporting Date, June 30, 2018.

Plan Membership

Plan Membership: At July 1, 2017, OPEB plan membership consisted of the following

Inactive employees or beneficiaries currently receiving benefits:	502
Active Employees:	<u>1,028</u>
Total:	1,530

Actuarial Assumptions:

Investment Rate of Return:	6.44%, net of OPEB plan investment expense, including inflation.
Municipal Bond Rate:	3.45% as of June 30, 2018 (source: S&P Municipal Bond 20-Year High Grade Index - SAPIHG)
Single Equivalent Discount Rate:	6.00%, net of OPEB plan investment expense, including inflation. Using a blend of the Municipal Bond Index Rate for unfunded periods and the Investment Rate of Return for funded periods, based on GASB No. 74 Implementation Guide Exposure Draft; IG ED 4.136.
Inflation:	2.75% as of June 30, 2018 and for future periods
Salary Increases:	3.00% annually as of June 30, 2018 and for future periods
Cost of Living Adjustment:	Not Applicable

GASB 74 Required Supplementary Information
(Liabilities As of June 30, 2018)

Actuarial Assumptions (Continued):

Pre-Retirement Mortality:	RP-2000 Employees Mortality Table projected generationally with scale BB and a base year 2009 for males and females
Post-Retirement Mortality:	RP-2000 Healthy Annuitant Mortality Table projected generationally with scale BB and a base year 2009 for males and females
Disabled Mortality:	RP-2000 Healthy Annuitant Table projected generationally with Scale BB and a base year 2012 for males and females
Mortality Experience Study:	The mortality assumptions reflect PERAC's recent experience analysis published in 2014 (based on the years 2006-2011), updated to reflect data through January 1, 2015 for post-retirement mortality, and professional judgement. As such, mortality assumptions reflect observed current mortality as well as expected mortality improvements.

Changes in Assumptions: Effective for the Fiscal Year ending June 30, 2018

- Discount rate is 6.00% previously 4.75%

GASB 74 Required Supplementary Information
Projection Exhibits
(Liabilities As of June 30, 2018)

Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2017 Valuation Date

Fiscal Year	I. Projected Beginning Fiduciary Net Position for Curret Plan	II. Portion of Employer Contributions for Current Plan	III. Total Projected Benefit Payments	IV. Projected Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Projected Investment Earnings	VIII. Projected Ending Fiduciary Net Position for Current Plan Members
	Members	Members				Members		Members
2018	3,559,027	2,245,506	2,245,506	0	1,000,485	1,000,485	(4,960)	4,554,552
2019	4,554,552	2,485,694	2,485,694	0	1,362,984	1,239,598	336,517	6,130,667
2020	6,130,667	2,709,299	2,709,299	0	1,660,743	1,388,344	447,457	7,966,468
2021	7,966,468	2,893,050	2,893,050	0	1,997,421	1,540,959	576,354	10,083,781
2022	10,083,781	3,097,605	3,097,605	0	2,377,339	1,694,782	724,752	12,503,315
2023	12,503,315	3,348,075	3,348,075	0	2,496,206	1,646,767	884,337	15,034,419
2024	15,034,419	3,555,130	3,555,130	0	2,621,016	1,603,478	1,051,297	17,689,194
2025	17,689,194	3,809,172	3,809,172	0	2,752,067	1,562,612	1,226,418	20,478,224
2026	20,478,224	4,115,244	4,115,244	0	2,889,670	1,527,890	1,410,393	23,416,507
2027	23,416,507	4,428,212	4,428,212	0	3,034,154	1,481,433	1,604,199	26,502,139
2028	26,502,139	4,772,119	4,772,119	0	3,185,862	1,439,174	1,807,722	29,749,035
2029	29,749,035	5,216,311	5,256,131	0	3,345,155	1,386,209	2,021,871	33,117,295
2030	33,117,295	5,623,532	5,728,039	0	3,512,413	1,329,555	2,244,089	36,586,432
2031	36,586,432	5,999,101	6,197,396	0	3,688,034	1,273,543	2,473,068	40,134,748
2032	40,134,748	6,430,438	6,754,149	0	3,872,436	1,214,149	2,707,425	43,732,611
2033	43,732,611	6,857,557	7,336,008	0	4,066,058	1,157,543	2,945,265	47,356,968
2034	47,356,968	7,065,658	7,668,098	0	4,269,361	1,102,556	3,185,117	51,042,201
2035	51,042,201	7,322,447	8,071,413	0	4,482,829	1,040,623	3,429,213	54,763,071
2036	54,763,071	7,506,034	8,419,527	0	4,706,970	981,304	3,675,942	58,506,824
2037	58,506,824	7,647,551	8,701,389	0	4,942,319	923,436	3,924,499	62,300,921
2038	62,300,921	7,808,778	9,021,216	0	5,189,435	866,014	4,176,672	66,131,169
2039	66,131,169	8,075,007	9,501,845	0	5,448,907	802,279	4,431,565	69,938,175
2040	69,938,175	8,170,912	9,887,449	0	5,721,352	744,089	4,685,372	73,651,099
2041	73,651,099	8,327,589	10,409,165	0	6,007,420	683,954	4,933,552	77,187,029
2042	77,187,029	8,521,230	11,047,983	0	6,307,791	627,387	5,170,787	80,458,450
2043	80,458,450	8,589,203	11,633,358	0	6,623,181	570,932	5,391,463	83,376,690
2044	83,376,690	8,587,160	12,071,618	0	6,954,340	520,560	5,589,895	86,002,687
2045	86,002,687	8,540,160	12,521,915	0	7,302,057	465,656	5,770,031	88,256,619
2046	88,256,619	8,544,305	13,067,922	0	7,667,160	417,746	5,926,757	90,077,505
2047	90,077,505	8,365,361	13,392,184	0	8,050,518	376,345	6,056,174	91,483,201
2048	91,483,201	8,320,215	13,895,294	0	0	0	5,891,518	91,799,640
2049	91,799,640	8,222,419	14,410,181	0	0	0	5,911,897	91,523,775
2050	91,523,775	8,067,128	14,938,317	0	0	0	5,894,131	90,546,717
2051	90,546,717	7,961,353	15,584,464	0	0	0	5,831,209	88,754,815
2052	88,754,815	7,863,872	16,315,732	0	0	0	5,715,810	86,018,765
2053	86,018,765	7,776,606	17,134,167	0	0	0	5,539,608	82,200,812
2054	82,200,812	7,724,901	17,997,265	0	0	0	5,293,732	77,222,180
2055	77,222,180	7,628,363	18,880,239	0	0	0	4,973,108	70,943,412
2056	70,943,412	7,467,211	19,757,255	0	0	0	4,568,756	63,222,124
2057	63,222,124	7,335,692	20,706,427	0	0	0	4,071,505	53,922,894

GASB 74 Required Supplementary Information
Projection Exhibits
(Liabilities As of June 30, 2018)

Projection of OPEB Plan's Fiduciary Net Position using a July 1, 2017 Valuation Date (Continued)

Fiscal Year	I. Projected Beginning Fiduciary Net Position	II. Portion of Employer Contributions for		III. Total Projected Benefit Payments	IV. Projected Administrative Expense	V. Total Contributions to Trust	VI. Contributions to Trust for Current Plan Members	VII. Projected Investment Earnings	VIII. Projected Ending Fiduciary Net Position for Current Plan Members
		Current Plan Members	Members						
2058	53,922,894	7,193,835		21,705,580	0	0	0	3,472,634	46,739,149
2059	46,739,149	7,002,133		22,728,127	0	0	0	3,010,001	39,743,187
2060	39,743,187	6,854,492		23,877,491	0	0	0	2,559,461	32,892,100
2061	32,892,100	6,690,623		25,094,816	0	0	0	2,118,251	26,203,270
2062	26,203,270	6,486,076		26,362,760	0	0	0	1,687,491	19,717,964
2063	19,717,964	6,309,396		27,752,777	0	0	0	1,269,837	13,408,825
2064	13,408,825	6,118,301		29,188,880	0	0	0	863,528	7,290,584
2065	7,290,584	5,897,990		30,682,116	0	0	0	469,514	1,392,603
2066	1,392,603	5,676,098		32,265,485	0	0	0	89,684	89,684
2067	89,684	5,445,296		33,914,886	0	0	0	5,776	5,776
2068	5,776	5,206,175		35,642,822	0	0	0	372	372
2069	372	4,959,563		37,459,539	0	0	0	24	24
2070	24	4,707,832		39,371,608	0	0	0	2	2
2071	2	4,451,724		41,383,593	0	0	0	0	0
2072	0	4,194,353		43,505,568	0	0	0	0	0
2073	0	3,975,459		45,784,232	0	0	0	0	0
2074	0	3,762,486		48,188,670	0	0	0	0	0
2075	0	3,542,118		50,705,281	0	0	0	0	0
2076	0	3,316,546		53,346,827	0	0	0	0	0
2077	0	3,086,900		56,117,467	0	0	0	0	0
2078	0	2,855,914		59,020,933	0	0	0	0	0
2079	0	2,625,498		62,069,520	0	0	0	0	0
2080	0	2,397,929		65,277,177	0	0	0	0	0
2081	0	2,176,034		68,651,360	0	0	0	0	0
2082	0	1,960,097		72,206,251	0	0	0	0	0
2083	0	1,753,128		75,956,204	0	0	0	0	0
2084	0	1,555,469		79,908,906	0	0	0	0	0
2085	0	1,369,346		84,073,380	0	0	0	0	0
2086	0	1,195,164		88,464,737	0	0	0	0	0
2087	0	1,034,307		93,095,463	0	0	0	0	0
2088	0	886,425		97,971,324	0	0	0	0	0
2089	0	752,176		103,110,942	0	0	0	0	0
2090	0	631,733		108,526,493	0	0	0	0	0
2091	0	524,711		114,233,214	0	0	0	0	0
2092	0	431,026		120,245,873	0	0	0	0	0
2093	0	350,302		126,581,597	0	0	0	0	0
2094	0	281,357		133,254,307	0	0	0	0	0
2095	0	223,385		140,279,069	0	0	0	0	0
2096	0	175,207		147,674,295	0	0	0	0	0
2097	0	135,588		155,459,382	0	0	0	0	0

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Projection Exhibits
(Liabilities As of June 30, 2018)

Actuarial Present Values of Projected Benefit Payments using a July 1, 2017 Valuation Date

Fiscal Year	Projected	Projected	Funded Portion	Unfunded	Present Value of	Present Value of	Present Value of
	Beginning			Portion of			
	Fiduciary Net	Benefit	of Benefit	Benefit	Payments	Payments	using Single Discount
	Position	Payments	Payments	Payments	Payments	Payments	Rate
2018	3,559,027	2,245,506	2,245,506	0	2,245,506	0	2,245,506
2019	4,554,552	2,485,694	2,485,694	0	2,335,301	0	2,347,803
2020	6,130,667	2,709,299	2,709,299	0	2,391,372	0	2,417,047
2021	7,966,468	2,893,050	2,893,050	0	2,399,061	0	2,437,800
2022	10,083,781	3,097,605	3,097,605	0	2,413,274	0	2,465,370
2023	12,503,315	3,348,075	3,348,075	0	2,450,591	0	2,516,897
2024	15,034,419	3,555,130	3,555,130	0	2,444,704	0	2,524,293
2025	17,689,194	3,809,172	3,809,172	0	2,460,914	0	2,554,635
2026	20,478,224	4,115,244	4,115,244	0	2,497,794	0	2,606,801
2027	23,416,507	4,428,212	4,428,212	0	2,525,135	0	2,649,444
2028	26,502,139	4,772,119	4,772,119	0	2,556,599	0	2,696,818
2029	29,749,035	5,216,311	5,216,311	0	2,625,487	0	2,784,312
2030	33,117,295	5,623,532	5,623,532	0	2,659,199	0	2,835,160
2031	36,586,432	5,999,101	5,999,101	0	2,665,158	0	2,856,726
2032	40,134,748	6,430,438	6,430,438	0	2,683,938	0	2,892,258
2033	43,732,611	6,857,557	6,857,557	0	2,689,035	0	2,913,265
2034	47,356,968	7,065,658	7,065,658	0	2,603,004	0	2,835,158
2035	51,042,201	7,322,447	7,322,447	0	2,534,390	0	2,775,204
2036	54,763,071	7,506,034	7,506,034	0	2,440,748	0	2,686,972
2037	58,506,824	7,647,551	7,647,551	0	2,336,307	0	2,585,765
2038	62,300,921	7,808,778	7,808,778	0	2,241,227	0	2,493,813
2039	66,131,169	8,075,007	8,075,007	0	2,177,413	0	2,435,778
2040	69,938,175	8,170,912	8,170,912	0	2,069,967	0	2,327,980
2041	73,651,099	8,327,589	8,327,589	0	1,982,017	0	2,241,001
2042	77,187,029	8,521,230	8,521,230	0	1,905,397	0	2,165,904
2043	80,458,450	8,589,203	8,589,203	0	1,804,393	0	2,062,072
2044	83,376,690	8,587,160	8,587,160	0	1,694,818	0	1,947,218
2045	86,002,687	8,540,160	8,540,160	0	1,583,560	0	1,829,132
2046	88,256,619	8,544,305	8,544,305	0	1,488,471	0	1,728,501
2047	90,077,505	8,365,361	8,365,361	0	1,369,127	0	1,598,423
2048	91,483,201	8,320,215	8,320,215	0	1,279,348	0	1,501,605
2049	91,799,640	8,222,419	8,222,419	0	1,187,815	0	1,401,634
2050	91,523,775	8,067,128	8,067,128	0	1,094,872	0	1,298,877
2051	90,546,717	7,961,353	7,961,353	0	1,015,141	0	1,210,738
2052	88,754,815	7,863,872	7,863,872	0	942,044	0	1,129,571
2053	86,018,765	7,776,606	7,776,606	0	875,225	0	1,055,070
2054	82,200,812	7,724,901	7,724,901	0	816,804	0	989,916
2055	77,222,180	7,628,363	7,628,363	0	757,794	0	923,317
2056	70,943,412	7,467,211	7,467,211	0	696,905	0	853,674
2057	63,222,124	7,335,692	7,335,692	0	643,208	0	792,115

GASB 74 Required Supplementary Information
Projection Exhibits
(Liabilities As of June 30, 2018)

Actuarial Present Values of Projected Benefit Payments using a July 1, 2017 Valuation Date (Continued)

Fiscal Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments	Present Value of Unfunded Benefit Payments	Present Value of Benefit Payments using Single Discount Rate
2058	53,922,894	7,193,835	7,193,835	0	592,606	0	733,706
2059	46,739,149	7,002,133	7,002,133	0	541,915	0	674,537
2060	39,743,187	6,854,492	6,854,492	0	498,392	0	623,684
2061	32,892,100	6,690,623	6,690,623	0	457,043	0	575,003
2062	26,203,270	6,486,076	6,486,076	0	416,263	0	526,502
2063	19,717,964	6,309,396	6,309,396	0	380,425	0	483,748
2064	13,408,825	6,118,301	6,118,301	0	346,583	0	443,074
2065	7,290,584	5,897,990	5,897,990	0	313,888	0	403,426
2066	1,392,603	5,676,098	1,392,603	4,283,495	69,630	841,742	366,711
2067	89,684	5,445,296	89,684	5,355,612	4,213	1,017,346	332,284
2068	5,776	5,206,175	5,776	5,200,399	255	954,938	300,069
2069	372	4,959,563	372	4,959,191	15	880,295	269,997
2070	24	4,707,832	24	4,707,808	1	807,820	242,076
2071	2	4,451,724	2	4,451,722	0	738,419	216,208
2072	0	4,194,353	0	4,194,353	0	672,541	192,408
2073	0	3,975,459	0	3,975,459	0	616,197	172,250
2074	0	3,762,486	0	3,762,486	0	563,749	153,979
2075	0	3,542,118	0	3,542,118	0	513,042	136,919
2076	0	3,316,546	0	3,316,546	0	464,360	121,088
2077	0	3,086,900	0	3,086,900	0	417,801	106,451
2078	0	2,855,914	0	2,855,914	0	373,655	93,022
2079	0	2,625,498	0	2,625,498	0	332,060	80,773
2080	0	2,397,929	0	2,397,929	0	293,170	69,680
2081	0	2,176,034	0	2,176,034	0	257,175	59,724
2082	0	1,960,097	0	1,960,097	0	223,933	50,813
2083	0	1,753,128	0	1,753,128	0	193,613	42,927
2084	0	1,555,469	0	1,555,469	0	166,058	35,974
2085	0	1,369,346	0	1,369,346	0	141,316	29,913
2086	0	1,195,164	0	1,195,164	0	119,230	24,659
2087	0	1,034,307	0	1,034,307	0	99,743	20,157
2088	0	886,425	0	886,425	0	82,633	16,316
2089	0	752,176	0	752,176	0	67,782	13,077
2090	0	631,733	0	631,733	0	55,031	10,374
2091	0	524,711	0	524,711	0	44,185	8,139
2092	0	431,026	0	431,026	0	35,086	6,315
2093	0	350,302	0	350,302	0	27,565	4,847
2094	0	281,357	0	281,357	0	21,401	3,677
2095	0	223,385	0	223,385	0	16,426	2,758
2096	0	175,207	0	175,207	0	12,454	2,043
2097	0	135,588	0	135,588	0	9,316	1,493

GASB 74 Required Supplementary Information
Projection Exhibits
(Liabilities As of June 30, 2018)

Projection of Contributions using a July 1, 2017 Valuation Date

Fiscal Year	I. Payroll for current employees	II. Payroll for future employees	III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
2018	57,273,016	0	57,273,016	0	2,245,506	0	2,245,506
2019	53,650,959	5,340,247	58,991,206	0	2,485,694	0	2,485,694
2020	50,794,782	9,966,160	60,760,942	0	2,709,299	0	2,709,299
2021	48,281,763	14,302,007	62,583,770	0	2,893,050	0	2,893,050
2022	45,953,821	18,507,462	64,461,283	0	3,097,605	0	3,097,605
2023	43,801,402	22,593,719	66,395,121	0	3,348,075	0	3,348,075
2024	41,837,599	26,549,376	68,386,975	0	3,555,130	0	3,555,130
2025	39,994,731	30,443,853	70,438,584	0	3,809,172	0	3,809,172
2026	38,361,155	34,190,587	72,551,742	0	4,115,244	0	4,115,244
2027	36,486,270	38,242,024	74,728,294	0	4,428,212	0	4,428,212
2028	34,770,312	42,199,831	76,970,143	0	4,772,119	0	4,772,119
2029	32,852,763	46,426,484	79,279,247	0	5,216,311	39,820	5,256,131
2030	30,909,891	50,747,733	81,657,624	0	5,623,532	104,507	5,728,039
2031	29,043,751	55,063,602	84,107,353	0	5,999,101	198,295	6,197,396
2032	27,161,827	59,468,747	86,630,574	0	6,430,438	323,711	6,754,149
2033	25,402,234	63,827,257	89,229,491	0	6,857,557	478,451	7,336,008
2034	23,734,673	68,171,703	91,906,376	0	7,065,658	602,440	7,668,098
2035	21,974,763	72,688,804	94,663,567	0	7,322,447	748,966	8,071,413
2036	20,327,426	77,176,048	97,503,474	0	7,506,034	913,493	8,419,527
2037	18,764,342	81,664,236	100,428,578	0	7,647,551	1,053,838	8,701,389
2038	17,262,336	86,179,099	103,441,435	0	7,808,778	1,212,438	9,021,216
2039	15,687,277	90,857,401	106,544,678	0	8,075,007	1,426,838	9,501,845
2040	14,272,334	95,468,684	109,741,018	0	8,170,912	1,716,537	9,887,449
2041	12,869,009	100,164,240	113,033,249	0	8,327,589	2,081,576	10,409,165
2042	11,579,818	104,844,428	116,424,246	0	8,521,230	2,526,753	11,047,983
2043	10,337,090	109,579,883	119,916,973	0	8,589,203	3,044,155	11,633,358
2044	9,245,550	114,268,932	123,514,482	0	8,587,160	3,484,458	12,071,618
2045	8,112,878	119,107,038	127,219,916	0	8,540,160	3,981,755	12,521,915
2046	7,139,542	123,896,971	131,036,513	0	8,544,305	4,523,617	13,067,922
2047	6,309,451	128,658,157	134,967,608	0	8,365,361	5,026,823	13,392,184
2048	5,394,287	133,622,349	139,016,636	0	8,320,215	5,575,079	13,895,294
2049	4,595,456	138,591,679	143,187,135	0	8,222,419	6,187,762	14,410,181
2050	3,823,870	143,658,879	147,482,749	0	8,067,128	6,871,189	14,938,317
2051	3,190,887	148,716,344	151,907,231	0	7,961,353	7,623,111	15,584,464
2052	2,592,229	153,872,219	156,464,448	0	7,863,872	8,451,860	16,315,732
2053	2,135,266	159,023,115	161,158,381	0	7,776,606	9,357,561	17,134,167
2054	1,701,461	164,291,671	165,993,132	0	7,724,901	10,272,364	17,997,265
2055	1,326,998	169,645,928	170,972,926	0	7,628,363	11,251,876	18,880,239
2056	982,218	175,119,896	176,102,114	0	7,467,211	12,290,044	19,757,255
2057	739,416	180,645,761	181,385,177	0	7,335,692	13,370,735	20,706,427

GASB 74 Required Supplementary Information
Projection Exhibits
(Liabilities As of June 30, 2018)

Projection of Contributions using a July 1, 2017 Valuation Date (Continued)

Fiscal Year	I. Payroll for current employees	II. Payroll for future employees	III. Total employee payroll [I.+II.]	IV. Contributions from current employees	V. Employer Payments for current plan members	VI. Employer Payments for future employees	VII. Total Payments [IV.+V.+VI.]
2058	542,827	186,283,905	186,826,732	0	7,193,835	14,511,745	21,705,580
2059	394,505	192,037,029	192,431,534	0	7,002,133	15,725,994	22,728,127
2060	263,733	197,940,747	198,204,480	0	6,854,492	17,022,999	23,877,491
2061	172,792	203,977,822	204,150,614	0	6,690,623	18,404,193	25,094,816
2062	95,900	210,179,232	210,275,132	0	6,486,076	19,876,684	26,362,760
2063	43,936	216,539,450	216,583,386	0	6,309,396	21,443,381	27,752,777
2064	15,401	223,065,487	223,080,888	0	6,118,301	23,070,579	29,188,880
2065	4,212	229,769,103	229,773,315	0	5,897,990	24,784,126	30,682,116
2066	3,098	236,663,416	236,666,514	0	5,676,098	26,589,387	32,265,485
2067	893	243,765,616	243,766,509	0	5,445,296	28,469,590	33,914,886
2068	0	251,079,504	251,079,504	0	5,206,175	30,436,647	35,642,822
2069	0	258,611,889	258,611,889	0	4,959,563	32,499,976	37,459,539
2070	0	266,370,246	266,370,246	0	4,707,832	34,663,776	39,371,608
2071	0	274,361,353	274,361,353	0	4,451,724	36,931,869	41,383,593
2072	0	282,592,194	282,592,194	0	4,194,353	39,311,215	43,505,568
2073	0	291,069,960	291,069,960	0	3,975,459	41,808,773	45,784,232
2074	0	299,802,059	299,802,059	0	3,762,486	44,426,184	48,188,670
2075	0	308,796,121	308,796,121	0	3,542,118	47,163,163	50,705,281
2076	0	318,060,005	318,060,005	0	3,316,546	50,030,281	53,346,827
2077	0	327,601,805	327,601,805	0	3,086,900	53,030,567	56,117,467
2078	0	337,429,859	337,429,859	0	2,855,914	56,165,019	59,020,933
2079	0	347,552,755	347,552,755	0	2,625,498	59,444,022	62,069,520
2080	0	357,979,338	357,979,338	0	2,397,929	62,879,248	65,277,177
2081	0	368,718,718	368,718,718	0	2,176,034	66,475,326	68,651,360
2082	0	379,780,280	379,780,280	0	1,960,097	70,246,154	72,206,251
2083	0	391,173,688	391,173,688	0	1,753,128	74,203,076	75,956,204
2084	0	402,908,899	402,908,899	0	1,555,469	78,353,437	79,908,906
2085	0	414,996,166	414,996,166	0	1,369,346	82,704,034	84,073,380
2086	0	427,446,051	427,446,051	0	1,195,164	87,269,573	88,464,737
2087	0	440,269,433	440,269,433	0	1,034,307	92,061,156	93,095,463
2088	0	453,477,516	453,477,516	0	886,425	97,084,899	97,971,324
2089	0	467,081,841	467,081,841	0	752,176	102,358,766	103,110,942
2090	0	481,094,296	481,094,296	0	631,733	107,894,760	108,526,493
2091	0	495,527,125	495,527,125	0	524,711	113,708,503	114,233,214
2092	0	510,392,939	510,392,939	0	431,026	119,814,847	120,245,873
2093	0	525,704,727	525,704,727	0	350,302	126,231,295	126,581,597
2094	0	541,475,869	541,475,869	0	281,357	132,972,950	133,254,307
2095	0	557,720,145	557,720,145	0	223,385	140,055,684	140,279,069
2096	0	574,451,749	574,451,749	0	175,207	147,499,088	147,674,295
2097	0	591,685,301	591,685,301	0	135,588	155,323,794	155,459,382