



LYNNFIELD CENTER WATER DISTRICT

OTHER POSTEMPLOYMENT BENEFITS PROGRAM

FINANCIAL REPORTING AND DISCLOSURES
Governmental Accounting Standards Board
Statements 74 and 75

Disclosures as of
June 30, 2018

KMS Actuarial, LLC
814 Elm Street, Suite 204
Manchester, NH 03101

May, 2019



May 6, 2019

Board of Water Commissioners
Lynnfield Center Water District
83 Phillips Road
Lynnfield, MA 01940

Dear Members of the Board:

We are pleased to present the enclosed report of the July 1, 2017 actuarial valuation of the retiree health care benefits for the Lynnfield Center Water District. The valuation was prepared in accordance with, and for the purpose of financial reporting and disclosures as of June 30, 2018, under the following Government Accounting Standards Board (GASB) Statements:

- ◆ GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans (GASB 74)
- ◆ GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (GASB 75)

The Principal Valuation Results, including assets, liabilities and the development of future contributions, are provided in Section 1. The Notes to the Financial Statements and the Required Supplementary Information are provided in Sections 2 and 3, respectively. Employer Reporting Amounts under GASB 75 are provided in Section 4. The Summary of Plan Provisions and Actuarial Assumptions and Methods are shown in Sections 5 and 6, respectively. Section 7 summarizes the demographic profile of active members and retired members, covered spouses and survivors. Finally, a Glossary of Terms is provided in Section 8.

Our calculations are based on member census data and other information provided by the Lynnfield Center Water District as well as health plan rates provided by the District. Although we did not audit the data used in the valuation and disclosure calculations, we believe that the information is complete and reliable.

Liabilities presented in this report are based on a discount rate of 7.5%, a long-term investment return rate of 7.5% and a municipal bond rate of 3.87%. The long-term investment return rate is based on expected long-term investment return rates provided by Bartholomew & Company.

This report was completed in accordance with generally accepted actuarial standards and procedures, and conforms to the Code of Professional Conduct of the American Academy of Actuaries. The actuarial assumptions other than those explicitly applicable to the postemployment benefit plans are consistent with those used by the Essex Regional Retirement System's actuaries for the Retirement System pension valuations.

Future actuarial valuation results may differ significantly from the current results presented in this report. Examples of potential sources of volatility include plan experience differing from that anticipated by the economic or demographic assumptions, the effect of new entrants, changes in economic or demographic assumptions, the effect of law changes and the delayed effect of smoothing techniques.

Our valuation follows generally accepted actuarial methods and we perform such tests as we consider necessary to assure the accuracy of the results. The amounts presented in this report have been appropriately determined according to the actuarial assumptions and methods stated herein.

This report is intended for the sole use of the Lynnfield Center Water District and is intended to provide information to comply with the stated purpose of the report. It may not be appropriate for other purposes.

The expected claims, cost trend rates, and analysis of regulatory changes have been developed based on the expertise of the undersigned health and welfare actuary, Christopher E. Bean, ASA, MAAA. The undersigned credentialed actuaries are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein. They are available to answer any questions with regard to this report.

Respectfully submitted,



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EXECUTIVE SUMMARY

This report presents the results of the actuarial valuation of the Lynnfield Center Water District's retiree health care benefits as of July 1, 2017. The valuation was prepared in accordance with, and for the purpose of financial reporting and disclosures as of June 30, 2018, under the following Government Accounting Standards Board (GASB) Statements:

- ◆ GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans (GASB 74)
- ◆ GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (GASB 75)

The results as of the measurement date are based on a roll forward of the liabilities developed in the most recent actuarial valuation.

New Accounting Standards

In June 2015, the GASB approved two related Statements that significantly changed the way other postemployment benefits (OPEB) plans and governments account and report OPEB liabilities. Effective for plans with fiscal years beginning after June 15, 2016, GASB Statement No. 74 (GASB 74), *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, replaced the requirements of Statement No. 43 and effective for employers with fiscal years beginning after June 15, 2017, GASB Statement No. 75 (GASB 75), *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, replaced the requirements of Statement No. 45.

GASB 74 requires OPEB plans to present a statement of fiduciary net position (OPEB plan assets) and a statement of changes in fiduciary net position. Further, the statement requires that notes to financial statements include descriptive information such as the types of benefits provided, the classes of plan members covered and the authority under which benefit terms are established or may be amended. Finally, GASB 74 requires OPEB plans to present in required supplementary information the sources of the changes in the net OPEB liability and information about the actuarially determined contributions compared with the actual contributions made to the plan and related ratios.

GASB 74 and GASB 75 require projected benefit payments be discounted to their actuarial present value using the single rate that reflects:

- (1) a long-term expected rate of return on OPEB plan investments *to the extent that the OPEB plan's assets are sufficient to pay benefits and OPEB plan assets are expected to be invested using a strategy to achieve that return and*
- (2) a tax-exempt, high-quality municipal bond rate *to the extent that the conditions for use of the long-term expected rate of return are not met.*

GASB 75 establishes standards for measuring and recognizing liabilities, deferred outflows of resources, deferred inflows of resources and OPEB expense by state and local governments.

EXECUTIVE SUMMARY

Lynnfield Center Water District Other Postemployment Benefits Program

The effective date for GASB 74 is for plan years beginning after June 15, 2016, which is the fiscal year ending June 30, 2017 for the Lynnfield Center Water District. The effective date for GASB 75 is for fiscal years beginning after June 15, 2017, which is the fiscal year ending June 30, 2018 for the Lynnfield Center Water District.

Summary of Results

A summary of principal results from the current and prior measurement dates follows:

Measurement Date	<u>June 30, 2018</u>	<u>June 30, 2017</u>	<u>Increase/ (Decrease)</u>
Valuation Date	July 1, 2017	July 1, 2015	
Membership Data			
Active Plan Members	6	6	0.0%
Inactive Plan Members	3	4	(25.0%)
Total Plan Members	9	10	(10.0%)
 Covered Payroll	 \$713,838	 \$471,153	 51.5%
Valuation Results (GASB 74 and GASB 75)			
Discount rate	7.50%	7.50%	
Total OPEB Liability	\$203,204	\$227,770	(10.8%)
Fiduciary Net Position	\$117,382	\$93,533	25.5%
Net OPEB Liability	\$85,822	\$134,237	(36.1%)
Funded Ratio	57.8%	41.1%	40.6%
Valuation Results (GASB 75)			
OPEB Expense	\$12,414	N/A	
Deferred Outflows	\$14,531	N/A	
Deferred Inflows	\$30,113	N/A	
Valuation Results (GASB 45)			
Actuarial Accrued Liability	N/A	\$322,921	
Market Value of Assets	N/A	\$93,533	
Unfunded Actuarial Accrued Liability	N/A	\$229,388	
Funded Ratio	N/A	29.0%	
 Annual Required Contribution	 N/A	 \$26,138	
Net OPEB Obligation	N/A	(\$21,671)	

EXECUTIVE SUMMARY

Experience Gain and Loss

In developing the Total OPEB Liability, various assumptions are made regarding future premium rates, mortality, retirement, disability and turnover rates. A comparison of the results of the current and prior measurements is made to determine how closely actual experience relates to expected. For the current measurement period, the difference between expected and actual experience resulted in an actuarial gain of approximately \$34,000.

Changes of Assumptions

The healthcare cost trend rates were updated since the previous measurement date. All other assumptions were the same as those used in the previous measurement. The Actuarial Assumptions and Methods used in the valuation are summarized in Section 6.

Changes of Benefit Terms

All benefit terms are the same as those used in the prior measurement. A Summary of the Principal Plan Provisions is provided in Section 5.

Total OPEB Liability

The Total OPEB Liability as of the current measurement date, June 30, 2018, is \$203,204. The Total OPEB Liability as of the prior measurement date, June 30, 2017, was \$227,770. The development of the Total OPEB Liability for the current measurement date is shown in Section 1, Exhibit 1.2.

Fiduciary Net Position

The Fiduciary Net Position is equal to the market value of assets and as of the current measurement date, June 30, 2018, is \$117,382. The Fiduciary Net Position as of the prior measurement date, June 30, 2017, was \$93,533. The Fiduciary Net Position is shown in Section 1, Exhibit 1.1.

Employer Future Period Contributions

The District is assumed to contribute \$20,000 per year to the OPEB trust.

Discount Rate

As of the June 30, 2018 measurement date, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 7.5%.

OPEB Expense

The OPEB Expense as of the current measurement date, June 30, 2018, is \$12,414. The development of the OPEB expense for the current measurement date is shown in Section 4, Exhibit 4.2.

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.1 - OPEB Trust Assets

The District has established an irrevocable trust pursuant to Section 20 of Chapter 32B of the Massachusetts General Laws for the purpose of accumulating assets to prefund the OPEB liabilities. Plan assets segregated and restricted in an OPEB trust must be dedicated to providing plan benefits to retirees and beneficiaries in accordance with the terms of the plan and must be legally protected from creditors of the employer. Further, employer contributions to the trust must be irrevocable. Asset information for the current and prior fiscal years was provided by the the Board and is presented below:

Fiscal Year Ended June 30	2018	2017
Trust Fund Composition at Fiscal Year-End		
Domestic Equity	\$29,301	\$24,221
International Equity	19,450	13,122
Domestic Bond	37,155	29,698
International Bond	8,666	7,438
Alternatives	22,317	18,679
Cash	493	375
Total Market Value of Assets	\$117,382	\$93,533
Asset Activity		
Market value, beginning of year	\$93,533	\$67,153
Employer Premiums	25,247	31,985
OPEB Trust Contributions	20,000	22,392
Benefit Payments	(25,247)	(31,985)
Administrative Expenses	-	-
Investment Return	3,849	3,988
Market value, end of year	\$117,382	\$93,533
Money-Weighted Rate of Return	4.12%	5.94%
(Gain) / Loss on OPEB Plan Investments		
Projected earnings	\$7,015	\$5,876
Actual earnings	3,849	3,988
(Gain) / Loss on OPEB plan investments	\$3,166	\$1,888

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.2 - Total OPEB Liability

The Total OPEB Liability, developed using the Entry Age Normal funding method, is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service. The total OPEB liability as of the June 30, 2018 measurement date was developed from an actuarial valuation as of July 1, 2017 and rolled forward to the OPEB plan's fiscal year-end.

The Service Cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year. Only active employees who have not reached the age at which the probability of retirement is 100% incur a service cost.

Actuarial gains and losses arise from the difference between estimates and actual experience, excluding amounts related to benefit changes and changes in assumptions or other inputs.

The development of the Total OPEB Liability from the beginning of the measurement period, June 30, 2017 to the end of the measurement period, June 30, 2018 is shown below:

<u>Measurement Date</u>		<u>June 30, 2018</u>
1. Total OPEB Liability, beginning of year:		
a. Actives	\$98,049	
b. Retirees, Covered Spouses and Survivors	129,721	
c. Total OPEB Liability at 7.5% (a. + b.)		\$227,770
2. Service Cost		\$4,740
3. Expected Benefit Payments		
a. Current retirees	(\$23,827)	
b. Future retirees	(1,421)	
c. Total (a. + b.)		(\$25,248)
4. Interest [7.5% x (1.c. + 2. + .5 x 3.c)]		\$16,491
5. Changes of benefit terms		\$0
6. Differences between expected and actual experience		(\$34,160)
7. Changes of assumptions or other inputs		\$13,611
8. Total OPEB Liability, end of year (1.c. + 2. + 3.c. + 4. + 5. + 6. + 7.)		
a. Actives	\$101,769	
b. Retirees, Covered Spouses and Survivors	101,435	
c. Total OPEB Liability at 7.5% (a. + b.)		\$203,204

SECTION 1 - PRINCIPAL VALUATION RESULTS

Exhibit 1.3 - Development of Actuarially Determined Employer Contributions

The District is assumed to contribute \$20,000 per year to the OPEB trust.

The Actuarially Determined Employer Contribution (ADEC) equals the Normal Cost plus a provision for amortizing the Unfunded Actuarial Accrued Liability. We have assumed level dollar amortization over an amortization period of 30 years.

Fiscal Year Ending	June 30, 2018
Discount Rate	7.50%
1. Normal Cost	\$4,740
2. Unfunded Actuarial Accrued Liability	
a. Actuarial Accrued Liability	\$227,770
b. Actuarial Value of Plan Assets	\$93,533
c. Unfunded Actuarial Accrued Liability	\$134,237
3. Amortization of Unfunded Actuarial Accrued Liability	
a. Unfunded Actuarial Accrued Liability	\$134,237
b. Amortization Period in years	30
c. Payroll Growth Rate	0.0%
d. Amortization Factor	12.70
e. Amortization Amount (3.a. / 3.d.)	\$10,570
4. Interest on 1. and 3.e.	\$1,148
5. Actuarially Determined Employer Contribution (1. + 3.e. + 4.)	\$16,458
6. Actual Employer Contribution to OPEB Trust	\$20,000
7. Expected Benefit Payments	\$25,248
8. Total Contribution (6. + 7.)	\$45,248

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.1 - Plan Description

Plan administration:

The Lynnfield Center Water District administers the retiree health care benefits program - a single-employer defined benefit plan that is used to provide postemployment benefits other than pensions (OPEB) for all permanent full-time employees.

Plan membership:

At June 30, 2018, OPEB plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefit payments ¹	3
Inactive plan members entitled to but not yet receiving benefit payments	0
Active plan members	6
	<hr/>
	9
	<hr/>

¹Per paragraph 34a of GASB 74 and further clarified by Question 4.67 of the 2017-2 GASB 74 Implementation Guide, the total shown for inactive plan members or beneficiaries currently receiving benefit payments does not include covered spouses or other dependents.

Benefits provided:

The District provides health care benefits for retirees and their dependents. Benefits are provided through the Massachusetts Interlocal Insurance Association, and the full cost of benefits is shared between the District and retirees.

Contributions:

The District is assumed to contribute \$20,000 per year to the OPEB trust.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

The components of the net OPEB liability at June 30, 2018, were as follows:

Total OPEB liability	\$ 203,204
Fiduciary net position	(117,382)
Net OPEB liability	<u>\$ 85,822</u>

Fiduciary net position as a percentage of the total OPEB liability 57.77%

Actuarial assumptions:

The total OPEB liability was determined by an actuarial valuation as of July 1, 2017, rolled forward to the measurement date and using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.6 percent
Discount rate	7.5%, net of investment expenses, including inflation
Healthcare cost trend rate	8 percent for 2017, decreasing 0.5 percent per year to 5.5 percent, then grading down to an ultimate trend rate of 3.8 percent, utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate medical inflation rate is reached in 2075.
Pre-Retirement Mortality - General employees:	RP-2000 Employees Mortality Table, base year 2000, projected with generational mortality improvement using scale BB.
Post-Retirement Mortality - General employees:	RP-2000 Healthy Annuitant Mortality Table, base year 2000, projected with generational mortality improvement using scale BB.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the target asset allocation as of June 30, 2018 are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation¹</u>	<u>Long-Term Expected Real Rates of Return¹</u>
Domestic Equity	25%	6.11%
International Equity	10%	2.78%
Domestic Bond	35%	3.82%
International Bond	10%	3.94%
Alternatives	20%	3.67%
Cash	0%	0.00%
Total	100%	

¹ provided by Bartholomew & Company.

Discount rate:

The discount rate used to measure the total OPEB liability was 7.5%. The projection of cash flows used to determine the discount rate assumed that contributions from the District will be made in accordance with the plan's funding policy. Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

Exhibit 2.2 - Net OPEB Liability

Sensitivity of the net OPEB liability to changes in the discount rate:

The following presents the net OPEB liability calculated using the current discount rate of 7.5 percent, as well as what the net OPEB liability would be if it were calculated using a discount rate 1-percentage point lower (6.5 percent) or 1-percentage point higher (8.5 percent) than the current rate:

	1% Decrease (6.5%)	Discount Rate (7.5%)	1% Increase (8.5%)
Net OPEB Liability	\$ 116,989	\$ 85,822	\$ 60,696

Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates:

The following presents the net OPEB liability calculated using the current healthcare cost trend rates as well as what the net OPEB liability would be if it were calculated using healthcare cost trend rates that are 1-percentage point lower (7% year 1 decreasing to 2.8%) or 1-percentage point higher (9% year 1 decreasing to 4.8%) than the current healthcare cost trend rates:

	1% Decrease 7% Year 1 Decreasing to 2.8%	Healthcare Cost Trend Rates 8% Year 1 Decreasing to 3.8%	1% Increase 9% Year 1 Decreasing to 4.8%
Net OPEB Liability	\$ 56,818	\$ 85,822	\$ 123,015

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.1 - Changes in Net OPEB Liability and Related Ratios

Fiscal Year Ended June 30	2018	2017
Total OPEB Liability		
Service cost	\$ 4,740	\$ 4,558
Interest	16,491	17,007
Changes of benefit terms	-	-
Differences between expected and actual experience	(34,161)	-
Changes of assumptions	13,611	-
Benefit payments	(25,247)	(31,985)
Net change in total OPEB liability	\$ (24,566)	\$ (10,420)
Total OPEB liability—beginning	\$ 227,770	\$ 238,190
Total OPEB liability—ending (a)	\$ 203,204	\$ 227,770
Plan fiduciary net position		
Contributions—employer	\$ 45,247	\$ 54,377
Net investment income	3,849	3,988
Benefit payments	(25,247)	(31,985)
Administrative expenses	-	-
Other	-	-
Net change in plan fiduciary net position	\$ 23,849	\$ 26,380
Plan fiduciary net position—beginning	\$ 93,533	\$ 67,153
Plan fiduciary net position—ending (b)	\$ 117,382	\$ 93,533
Net OPEB liability—ending (a) – (b)	\$ 85,822	\$ 134,237
Plan fiduciary net position as a percentage of the total OPEB liability	57.77%	41.06%
Covered payroll	\$ 713,838	\$ 471,153
Net OPEB liability as a percentage of covered payroll	12.02%	28.49%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Investment Returns

Fiscal Year Ended June 30	<u>2018</u>	<u>2017</u>
Annual money-weighted rate of return, net of investment expenses	4.12%	5.94%

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of OPEB plan investments by the proportion of time they are available to earn a return during that period. The rate of return is then calculated by solving, through an iterative process, for the rate that equates the sum of the weighted external cash flows into and out of the OPEB plan investments to the ending fair value of OPEB plan investments.

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.2 - Investment Returns

Calculation of Money-Weighted Rate of Return

	Plan Investments/ Net External Cash Flows (a)	Periods Invested (b)	Period Weight (c)=(b)÷12	(d)=(a) x (1+r _{mw}) ^(c)
Beginning value - July 1, 2017	\$ 93,533	12	1.00	\$ 97,382
Monthly net external cash flows:				
July	-	11	0.92	-
August	-	10	0.83	-
September	-	9	0.75	-
October	-	8	0.67	-
November	-	7	0.58	-
December	-	6	0.50	-
January	-	5	0.42	-
February	-	4	0.33	-
March	-	3	0.25	-
April	-	2	0.17	-
May	-	1	0.08	-
June	20,000	0	0.00	20,000
Ending value - June 30, 2018				\$ 117,382
			Money-weighted rate of return:	4.12%

SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

Exhibit 3.3 - Schedule of Employer Contributions

Fiscal Year Ended June 30	2018	2017
Actuarially determined contribution	\$ 16,458	\$ 26,138
Contributions in relation to the actuarially determined contribution	45,247	54,377
Contribution deficiency (excess)	\$ (28,789)	\$ (28,239)
Covered payroll	\$ 713,838	\$ 471,153
Contributions as a percentage of covered payroll	6.34%	11.54%
Discount rate	7.50%	5.00%

Notes to Schedule

Valuation date:

Actuarially determined contributions are determined as of July 1, one year prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used in calculations of actuarially determined contributions:

Actuarial cost method	Entry Age Normal
Amortization method	Level dollar amount over 30 years on an open amortization period
Amortization period	30 years
Asset valuation method	Market value
Inflation	2.6 percent
Healthcare cost trend rates	8 percent for 2017, decreasing 0.5 percent per year to 5.5 percent, then grading down to an ultimate trend rate of 3.8 percent, utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate medical inflation rate is reached in 2075.

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 75

Exhibit 4.1 - Deferred Outflows and Deferred Inflows of Resources

Deferred Outflows of Resources and Deferred Inflows of Resources arising from differences between expected and actual experience are recognized in OPEB Expense over the average expected remaining service life of all active and inactive participants.

Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in OPEB Expense through June 30, 2018 (c)	Balances at June 30, 2018	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2018	\$ -	\$ 34,161	\$ (4,048)	\$ -	\$ 30,113
Total				<u>\$ -</u>	<u>\$ 30,113</u>

Deferred Outflows of Resources and Deferred Inflows of Resources arising from changes of assumptions are recognized in OPEB Expense over the average expected remaining service life of all active and inactive participants.

Year	Increases in the Total OPEB Liability (a)	Decreases in the Total OPEB Liability (b)	Amounts Recognized in OPEB Expense through June 30, 2018 (c)	Balances at June 30, 2018	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2018	\$ 13,611	\$ -	\$ 1,613	\$ 11,998	\$ -
Total				<u>\$ 11,998</u>	<u>\$ -</u>

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 75

Exhibit 4.1 - Deferred Outflows and Deferred Inflows of Resources

Deferred Outflows of Resources and Deferred Inflows of Resources arising from differences between projected and actual earnings on OPEB Plan investments are recognized in OPEB Expense over five years.

Year	Investment Earnings Less Than Projected	Investment Earnings Greater Than Projected	Amounts Recognized in OPEB Expense through June 30, 2018	Balances at June 30, 2018	
	(a)	(b)	(c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2018	\$ 3,166	\$ -	\$ 633	\$ 2,533	\$ -
Total				\$ 2,533	\$ -
Net				\$ 2,533	\$ -

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources will be recognized in OPEB expense as follows:

Year ended June 30		
2019	\$	(1,802)
2020	\$	(1,802)
2021	\$	(1,802)
2022	\$	(1,801)
2023	\$	(2,435)
Thereafter		(5,940)

SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 75

Exhibit 4.2 - OPEB Expense

The OPEB Expense and deferred outflows and inflows of resources primarily result from changes in the components of the net OPEB liability (NOL). Most changes in the NOL are included in the OPEB Expense in the period of the change, including service cost, interest on total OPEB liability, changes in benefit terms and projected earnings on the OPEB plan's investments. Other changes in the net OPEB liability are included in OPEB Expense over the current and future periods. These include the effects on the total OPEB liability of changes of economic and demographic assumptions and differences between expected and actual experience. In addition, the effect on the net OPEB liability of differences between the projected earnings on OPEB plan investments and actual experience with regard to those earnings are included in OPEB expense over the current and future periods. The OPEB Expense for the reporting period ending June 30, 2018 is presented below:

Fiscal Year Ended June 30	<u>2018</u>
Measurement date	6/30/2018
1. Service cost	\$ 4,740
2. Interest on the total OPEB liability	
a. Total OPEB liability, beginning of year	227,770
b. Service cost, beginning of year	4,740
c. Benefit payments	<u>(25,247)</u>
d. Interest on total OPEB liability = 7.5% times (a. + b. + .5 times c.)	16,491
3. Differences between expected and actual experience	(4,048)
4. Changes of benefit terms	-
5. Changes of assumptions	1,613
6. Projected earnings on OPEB plan investments	
a. Plan fiduciary net position, beginning of year	93,533
b. Contributions - Employer	45,247
c. Benefit payments	(25,247)
d. Administrative expenses and other	<u>-</u>
e. Total projected earnings	(7,015)
7. Differences between projected and actual earnings on OPEB plan investments	633
8. OPEB plan administrative expenses	-
9. Other changes in fiduciary net position	-
10. Total OPEB Expense	<u>\$ 12,414</u>

Lynnfield Center Water District Postemployment Benefits Other Than Pensions
 Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018

SECTION 5 - SUMMARY OF PLAN PROVISIONS

Eligibility for Postemployment Benefits: Employees of the District and their dependents are eligible for postemployment medical, dental and life insurance based on the eligibility requirements under the Essex Regional Retirement System.

Retirement Eligibility: General employees hired before April 2, 2012: retire after attaining age 55 with 10 or more years of service or any age with 20 or more years of service

General employees hired after April 1, 2012: retire after attaining age 60 with 10 or more years of service

Ordinary Disability Eligibility: Any member who is unable to perform his or her duties due to a non-occupational disability and has ten or more years of creditable service.

Accidental Disability Eligibility: Any member who is unable to perform his or her duties due to a job-related disability.

Medical Premiums: The total monthly premiums by plan are shown below:

<u>Non-Medicare Plans - July 1, 2018</u>	<u>Individual</u>	<u>2-Person</u>
Blue Care Elect Preferred	\$1,533.52	\$3,067.07
HMO Blue	\$1,267.07	\$2,507.96
<u>Medicare Plans - January 1, 2019</u>		
Medex	\$197.21	

Participant Contributions: Retired employees contribute 50% of the total medical premium.

Continuation of Coverage to Spouse After Death of Retiree: Surviving spouse may continue coverage for lifetime by paying the required medical premium.

Dental Coverage: Dental coverage is not offered to retirees.

Life Insurance Coverage: Life insurance coverage is not offered to retirees.

SECTION 5 - SUMMARY OF PLAN PROVISIONS

PPACA Excise Tax:

The Patient Protection and Affordable Care Act (PPACA) applies a 40% excise tax, commonly referred to as the "Cadillac Tax", to the cost of plan benefits in excess of statutory thresholds beginning in 2022. The 2018 thresholds are assumed to be \$10,200 for individual and \$27,500 for family coverage, increasing by chained CPI plus one percentage point in 2019 and by chained CPI thereafter. The annual limits are increased by \$1,650 for individual and \$3,450 for family coverage for retirees not eligible for Medicare benefits.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Valuation Date:	July 1, 2017
Disclosure Date:	June 30, 2018
GASB 75 Reporting Date:	June 30, 2018
Long-Term Expected Rate of Return:	7.5%, compounded annually, net of fees. A long-term assumption based on capital market expectations by asset class, historical returns and professional judgment. A building block approach was used that considered the target asset allocation, expected returns by asset class and risk analysis to determine a long-term expected average annual rate of return.
Municipal Bond Rate:	3.87%, based on the Bond Buyer 20-Bond GO Index published on June 28, 2018.
Discount Rate (GASB):	7.5%, compounded annually, for the measurement as of June 30, 2018. 7.5%, compounded annually, for the measurement as of June 30, 2017. The single rate that reflects the long-term expected rate of return on OPEB plan investments to the extent that the OPEB plan's assets, which are expected to be invested using a strategy to achieve that return, are sufficient to pay benefits, and a tax-exempt, high-quality municipal bond rate to the extent that the conditions for use of the long-term expected rate of return are not met.
Discount Rate (ADEC):	7.5%, compounded annually, for development of the Actuarially Determined Contribution (ADEC) as of June 30, 2018.
Amortization Method:	Level dollar amount over 30 years on an open amortization period for partial pre-funding.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Medical Trend Rates:

<u>Year</u>	<u>Trend</u>
1	8.00%
2	7.50%
3	7.00%
4	6.50%
5	6.00%
6	5.50%
Ultimate	3.80%

Trend rates after year 6 grade down to the ultimate rate utilizing the Society of Actuaries Getzen Medical Trend Model. The ultimate trend rate is reached in 2075.

Health care trend assumptions begin at current levels and grade down over a period of years to a lower level equal to some real rate plus inflation. The principal components of health trend are medical inflation, deductible erosion, cost shifting, utilization, technology and catastrophic claims. The overall effect of these components are expected to decline year by year.

Dental Trend Rates: Not applicable (no dental coverage).

Inflation: 2.6% per year, based on the 2017 Social Security Trustees Report.

Chained Consumer Price Index: 2.35% per year, based on assumed CPI of 2.6% and historical data trends of chained CPI approximately 0.25% lower than standard CPI.

Payroll Growth: 4% per year.

Participation Rates: Medical - 100% of eligible retired employees will elect to participate.
Medicare - all retired employees are assumed to enroll in Medicare at age 65.

Dependent Status: Male spouses are assumed to be three years older and female spouses are assumed to be three years younger than the retired employee.

50% of employees are assumed to retire with a covered spouse.

For current retirees, the actual census information is used.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Medical Per Capita Costs: The following annual per capita costs are for the fiscal year beginning July 1, 2017 and are applicable to retirees, survivors and spouses. Annual costs for current and future retirees are based on the blended curve shown below, developed using the plan coverages elected by current retirees and survivors and premium rates currently in effect. Future years' costs are based on the first year cost adjusted with trend.

<u>Age</u>	<u>Male</u>	<u>Female</u>
Under 20	\$6,227	\$7,311
20-24	4,907	7,784
25-29	5,106	11,483
30-34	6,414	14,509
35-39	8,045	14,945
40-44	10,026	15,306
45-49	12,653	16,801
50-54	16,676	19,765
55-59	21,670	22,853
60-64	27,810	27,200
65-69	1,675	1,632
70-74	2,008	1,925
75-79	2,371	2,233
80-84	2,725	2,561
85-89	3,036	2,863
90-94	3,305	3,056
95+	3,513	2,955

Retiree Contributions: Annual per capita participant contributions for the fiscal year beginning July 1, 2017 are as follows:

<u>Plan</u>	<u>Contribution</u>
Non-Medicare	\$ 8,520
Medicare	1,057

PPACA Excise Tax: For purposes of estimating the Patient Protection and Affordable Care Act (PPACA) excise tax, per capita plan costs are developed for individual and family coverage for both Medicare and non-Medicare members. These plan costs are compared to the thresholds stipulated in the PPACA. Beginning in 2022, a 40% excise tax is applied on the excess of the plan costs over the thresholds. The thresholds increase annually by chained CPI.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Cost Method: Entry Age Normal. The costs of each employee's postemployment benefits are allocated as a level basis over the earnings of the employee between the employee's date of hire and the assumed exit ages.

Employee Data: Employee and retiree data were submitted by the District. We made reasonable adjustments for missing or invalid data.

SECTION 6 - ACTUARIAL ASSUMPTIONS AND METHODS

Post-Retirement Mortality: Post-retirement mortality rates for General employees are based on the RP-2000 Healthy Annuitant Mortality Table, base year 2000, projected with generational mortality improvement using scale BB.

Pre-Retirement Mortality: Pre-retirement mortality rates for General employees are based on the RP-2000 Employees Mortality Table, base year 2000, projected with generational mortality improvement using scale BB.

Turnover Rates: Turnover rates for General employees are as follows:

<u>General Employees</u>	
Service	Rate
0	15.00%
1	12.00%
2	10.00%
3	9.00%
4	8.00%
5	7.60%
10	5.40%
15	3.30%
20	2.00%
25	1.00%
30	0.00%

Disability Rates: Disability rates for General employees are as follows:

<u>General Employees</u>	
Age	Rate
25	0.02%
30	0.03%
35	0.06%
40	0.10%
45	0.15%
50	0.19%
55	0.24%
60	0.28%

55% of the General employee disabilities are job-related.

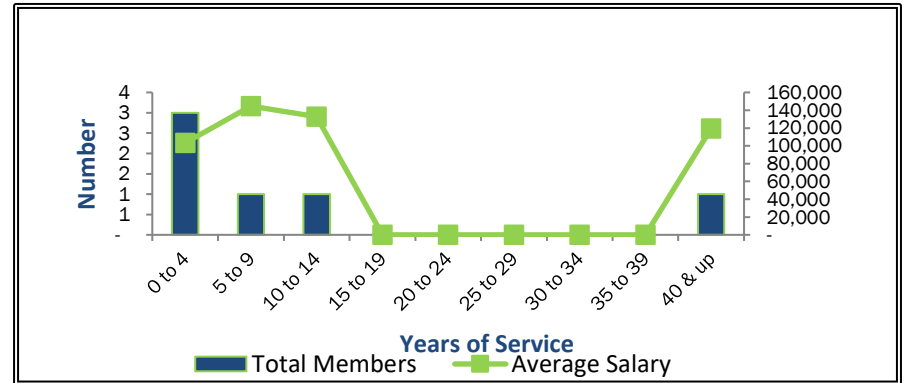
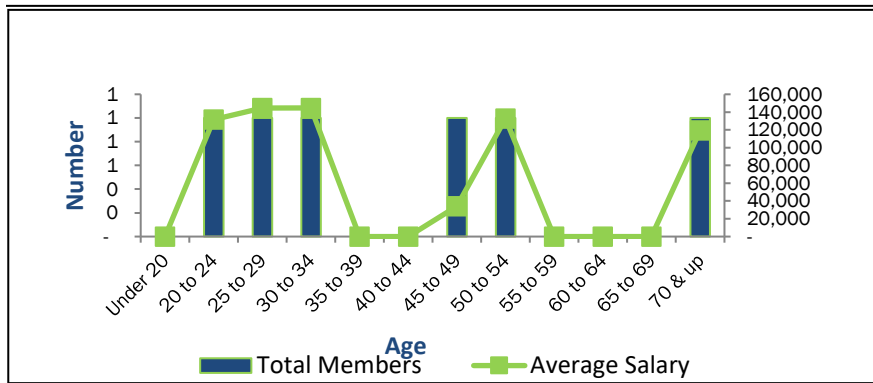
Retirement Rates: 100% at age 65.

SECTION 7 - PLAN MEMBER INFORMATION

TABLE 7.1 - ACTIVE MEMBERS BY AGE and YEARS OF SERVICE AS OF JULY 1, 2017

Age	Years of Service									Total	Total Salary	Average Salary
	0 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 20	-	-	-	-	-	-	-	-	-	-	-	-
20 to 24	1	-	-	-	-	-	-	-	-	1	131,478	131,478
25 to 29	1	-	-	-	-	-	-	-	-	1	144,560	144,560
30 to 34	-	1	-	-	-	-	-	-	-	1	144,648	144,648
35 to 39	-	-	-	-	-	-	-	-	-	-	-	-
40 to 44	-	-	-	-	-	-	-	-	-	-	-	-
45 to 49	1	-	-	-	-	-	-	-	-	1	34,098	34,098
50 to 54	-	-	1	-	-	-	-	-	-	1	132,629	132,629
55 to 59	-	-	-	-	-	-	-	-	-	-	-	-
60 to 64	-	-	-	-	-	-	-	-	-	-	-	-
65 to 69	-	-	-	-	-	-	-	-	-	-	-	-
70 & up	-	-	-	-	-	-	-	-	1	1	119,498	119,498
Total	3	1	1	-	-	-	-	-	1	6	706,910	117,818
Total Salary	310,136	144,648	132,629	-	-	-	-	-	119,498			
Average Salary	103,379	144,648	132,629	-	-	-	-	-	119,498			

Average Age: 42.3 Average Service: 11.5



SECTION 7 - PLAN MEMBER INFORMATION

TABLE 7.2 - RETIRED MEMBERS, COVERED SPOUSES and SURVIVORS AS OF JULY 1, 2017

Age	Non-Medicare Plans		Medicare Plans	Total
	Blue Care Elect Preferred	HMO Blue	Medex	
Under 40	0	0	0	0
40 to 44	0	0	0	0
45 to 49	0	0	0	0
50 to 54	0	0	0	0
55 to 59	0	0	0	0
60 to 64	1	0	0	1
65 to 69	0	0	0	0
70 to 74	0	0	0	0
75 to 79	0	0	2	2
80 to 84	0	0	0	0
85 to 89	0	0	0	0
90+	0	0	0	0
Total	1	0	2	3
Covered Spouses	0	0	2	2
Average Age:				73.0

SECTION 8 - GLOSSARY OF TERMS

Actuarial Assumptions – Assumptions as to the occurrence of future events affecting OPEB costs, such as mortality, withdrawal, disability and retirement; changes in compensation and OPEB 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.

Actuarial Cost Method (or Funding Method) – A procedure for allocating the Actuarial Present Value of projected benefit payments to the current year (Service Cost) and the past (Total OPEB Liability).

Actuarial Gain or Loss (or Experience Gain or Loss) – A measure of the difference between actual experience and that expected based upon the set of Actuarial Assumptions during the period between the valuation date and the most recent immediately preceding valuation date.

Actuarial Present Value of Projected Benefit Payments – The dollar value on the valuation date of all benefits expected to be paid to current members based upon the Actuarial Assumptions and the terms of the Plan.

Actuarially Determined Contribution – A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

Actuarial Valuation Date – The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

Deferred Inflow of Resources – Acquisition of resources by a governmental entity that is applicable to future reporting periods. Under GASB 75, deferred inflows of resources are made up of experience gains, assumption changes reducing the Total OPEB Liability and investment gains that are recognized in future reporting periods.

Deferred Outflow of Resources – Consumption of resources by a governmental entity that is applicable to future reporting periods. Under GASB 75, deferred outflows of resources are made up of experience losses, assumption changes increasing the Total OPEB Liability and investment losses that are recognized in future reporting periods.

Entry Age Normal Actuarial Cost Method – A method under which the actuarial present value of the projected benefits of each individual in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age.

Explicit Subsidy – The difference between (a) the blended rates based on combined active and retired member experience and (b) actual cash contributions made by the employer.

Fiduciary Net Position – The fair market value of assets as of the measurement date.

Funded Ratio – The Actuarial Value of Assets expressed as a percentage of the Actuarial Accrued Liability.

SECTION 8 - GLOSSARY OF TERMS

GASB – Governmental Accounting Standards Board.

Health Cost Trend Rate – The rate of change in per capita health claims cost over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

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 and (b) the blended rates based on combined active and retired member experience.

Measurement Date – The date as of which the Total OPEB Liability and Fiduciary Net Position are measured.

Net OPEB Liability – The liability of the employer for benefits provided through an OPEB plan. It is calculated as the Total OPEB Liability less the Fiduciary Net Position.

OPEB – Other Postemployment Benefits including medical, dental, vision, hearing and life insurance benefits.

Pay-As-You-Go – A method of financing an OPEB 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.

Present Value of Future Benefits – The actuarial present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value of money and the probabilities of payment.

Reporting Date – The last day of the Plan or employer's fiscal year.

Service Cost – The portion of the actuarial present value of projected benefit amounts that is attributed to a valuation year.

Substantive Plan – The terms of an OPEB plan as understood by the employer and plan members.

Total OPEB Liability – The portion of the actuarial present value of projected benefit amounts that is attributed to past periods of employee service.

Unfunded Actuarial Accrued Liability – The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Under GASB 74, a series of projections and calculations are used to determine the discount rate for the purpose of the measurement of the Total OPEB Liability. The discount rate is the single rate that reflects (1) the long-term expected rate of return on OPEB plan investments that are expected to be used to finance the payment of benefits, to the extent that the OPEB plan's fiduciary net position is projected to be sufficient to make projected benefit payments and OPEB plan assets are expected to be invested using a strategy to achieve that return, and (2) a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher, to the extent that the conditions for use of the long-term expected rate of return are not met.

Projected cash flows into and out of the OPEB plan are assumed to be contributions to the OPEB plan, benefit payments, OPEB plan administrative expenses and OPEB plan investment earnings. These projected cash flows are used to project the OPEB plan's fiduciary net position at the beginning of each period. The OPEB plan's projected fiduciary net position at the beginning of each period is compared to the amount of benefit payments projected to occur in that period.

It is assumed that the OPEB plan's fiduciary net position is expected to always be invested using a strategy to achieve the long-term expected rate of return on OPEB plan investments.

The benefit payments that are projected to occur in a period are discounted using the long-term expected rate of return on OPEB plan investments if the amount of the OPEB plan's beginning fiduciary net position is projected to be sufficient to make the benefit payments in that period. In periods in which benefit payments are projected to be greater than the amount of the OPEB plan's fiduciary net position, they are discounted using a municipal bond rate as required by GASB 74.

For purposes of this valuation, the long-term expected rate of return on OPEB plan investments is 7.5%; the municipal bond rate is 3.87%, based on the Bond Buyer 20-Bond GO Index published on June 28, 2018. The OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability. Projected benefit payments are discounted to their actuarial present value using a single discount rate of 7.5%.

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * .85%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2018	713,838	-	713,838	25,247	20,000	-	45,247
2019	561,760	180,632	742,392	6,974	20,000	1,533	25,441
2020	536,288	235,800	772,088	8,109	20,000	2,001	26,108
2021	514,831	288,141	802,972	9,003	20,000	2,445	26,558
2022	496,726	338,365	835,091	9,379	20,000	2,871	26,508
2023	485,702	382,793	868,495	10,727	20,000	3,248	27,479
2024	476,756	426,479	903,235	11,532	20,000	3,619	27,913
2025	469,701	469,663	939,364	12,627	20,000	3,985	28,642
2026	464,380	512,559	976,939	13,484	20,000	4,349	29,135
2027	460,656	555,361	1,016,017	13,766	20,000	4,712	29,054
2028	458,246	598,412	1,056,658	15,188	20,000	5,078	30,110
2029	457,066	641,858	1,098,924	16,167	20,000	5,446	30,721
2030	456,926	685,955	1,142,881	17,077	20,000	5,820	31,257
2031	457,787	730,809	1,188,596	38,429	20,000	6,201	52,228
2032	315,192	920,948	1,236,140	39,440	20,000	7,814	51,626
2033	317,271	968,315	1,285,586	41,468	20,000	8,216	53,252
2034	320,421	1,016,588	1,337,009	17,687	20,000	8,626	29,061
2035	324,008	1,066,481	1,390,489	17,221	20,000	9,049	28,172
2036	328,043	1,118,066	1,446,109	17,587	20,000	9,487	28,100
2037	332,467	1,171,486	1,503,953	17,340	20,000	9,940	27,400
2038	337,282	1,226,829	1,564,111	16,878	20,000	10,410	26,468
2039	325,695	1,300,980	1,626,675	17,251	20,000	11,039	26,212
2040	331,007	1,360,735	1,691,742	17,301	20,000	11,546	25,755
2041	336,732	1,422,680	1,759,412	17,730	20,000	12,072	25,658
2042	342,889	1,486,899	1,829,788	17,763	20,000	12,617	25,146
2043	349,481	1,553,499	1,902,980	17,899	20,000	13,182	24,717
2044	356,517	1,622,582	1,979,099	18,552	20,000	13,768	24,784
2045	363,791	1,694,472	2,058,263	19,252	20,000	14,378	24,874
2046	371,306	1,769,288	2,140,594	20,322	20,000	15,013	25,309
2047	378,885	1,847,333	2,226,218	21,404	20,000	15,675	25,729
2048	386,521	1,928,746	2,315,267	22,750	20,000	16,366	26,384
2049	394,209	2,013,669	2,407,878	23,975	20,000	17,086	26,889
2050	401,955	2,102,238	2,504,193	26,197	20,000	17,838	28,359
2051	409,775	2,194,586	2,604,361	28,150	20,000	18,621	29,529

Lynnfield Center Water District Postemployment Benefits Other Than Pensions
 Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 1: Projection of Contributions

Year	Projected Payroll			Projected Contributions			
	Payroll for Current Plan Members (a)	Payroll for Future Plan Members (b)	Total Payroll (c) = (a) + (b)	Employer Contributions (Benefit Payments) (d)	Employer Contributions (OPEB Trust) (e)	Employer Contributions Related to Payroll of Future Employees (f) = (b) * .85%	Portion of Employer Contributions for Current Plan Members (g) = (d) + (e) - (f)
2052	417,674	2,290,861	2,708,535	67,631	20,000	19,438	68,193
2053	247,539	2,569,337	2,816,876	71,966	20,000	21,801	70,165
2054	252,311	2,677,240	2,929,551	75,287	20,000	22,717	72,570
2055	257,138	2,789,595	3,046,733	62,704	20,000	23,670	59,034
2056	114,546	3,054,056	3,168,602	65,849	20,000	25,914	59,935
2057	116,734	3,178,612	3,295,346	69,270	20,000	26,971	62,299
2058	118,957	3,308,203	3,427,160	60,657	20,000	28,070	52,587
2059	-	3,564,246	3,564,246	62,480	20,000	30,243	52,237
2060	-	3,706,816	3,706,816	66,001	20,000	31,453	54,548
2061	-	3,855,089	3,855,089	25,532	20,000	32,711	12,821
2062	-	4,009,293	4,009,293	26,795	20,000	34,019	12,776
2063	-	4,169,665	4,169,665	28,528	20,000	35,380	13,148
2064	-	4,336,452	4,336,452	27,962	20,000	36,795	11,167
2065	-	4,509,910	4,509,910	29,997	20,000	38,267	11,730
2066	-	4,690,306	4,690,306	30,212	20,000	39,798	10,414
2067	-	4,877,918	4,877,918	32,086	20,000	41,390	10,696
2068	-	5,073,035	5,073,035	33,884	20,000	43,045	10,839
2069	-	5,275,956	5,275,956	33,824	20,000	44,767	9,057
2070	-	5,486,994	5,486,994	37,095	20,000	46,558	10,537
2071	-	5,706,474	5,706,474	37,892	20,000	48,420	9,472
2072	-	5,934,733	5,934,733	40,538	20,000	50,357	10,181
2073	-	6,172,122	6,172,122	44,044	20,000	52,371	11,673
2074	-	6,419,007	6,419,007	44,276	20,000	54,466	9,810
2075	-	6,675,767	6,675,767	47,912	20,000	56,645	11,267
2076	-	6,942,798	6,942,798	49,053	20,000	58,910	10,143
2077	-	7,220,510	7,220,510	50,777	20,000	61,267	9,510
2078	-	7,509,330	7,509,330	53,447	20,000	63,718	9,729
2079	-	7,809,703	7,809,703	52,606	20,000	66,266	6,340
2080	-	8,122,091	8,122,091	54,039	20,000	68,917	5,122
2081	-	8,446,975	8,446,975	53,513	20,000	71,674	1,839
2082	-	8,784,854	8,784,854	52,422	20,000	74,541	-
2083	-	9,136,248	9,136,248	52,150	20,000	77,522	-
2084	-	9,501,698	9,501,698	48,931	20,000	80,623	-
2085	-	9,881,766	9,881,766	45,837	20,000	83,848	-

Lynnfield Center Water District Postemployment Benefits Other Than Pensions
 Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 2: Projection of the OPEB Plan's Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position (a)	Employer Contributions for Current Plan Members (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) +(e)
2018	93,533	45,247	25,247	-	3,849	117,382
2019	117,382	25,441	6,974	-	9,496	145,345
2020	145,345	26,108	8,109	-	11,576	174,920
2021	174,920	26,558	9,003	-	13,777	206,252
2022	206,252	26,508	9,379	-	16,111	239,492
2023	239,492	27,479	10,727	-	18,590	274,834
2024	274,834	27,913	11,532	-	21,227	312,442
2025	312,442	28,642	12,627	-	24,034	352,491
2026	352,491	29,135	13,484	-	27,024	395,166
2027	395,166	29,054	13,766	-	30,211	440,665
2028	440,665	30,110	15,188	-	33,609	489,196
2029	489,196	30,721	16,167	-	37,235	540,985
2030	540,985	31,257	17,077	-	41,106	596,271
2031	596,271	52,228	38,429	-	45,238	655,308
2032	655,308	51,626	39,440	-	49,605	717,099
2033	717,099	53,252	41,468	-	54,224	783,107
2034	783,107	29,061	17,687	-	59,160	853,641
2035	853,641	28,172	17,221	-	64,434	929,026
2036	929,026	28,100	17,587	-	70,071	1,009,610
2037	1,009,610	27,400	17,340	-	76,098	1,095,768
2038	1,095,768	26,468	16,878	-	82,542	1,187,900
2039	1,187,900	26,212	17,251	-	89,429	1,286,290
2040	1,286,290	25,755	17,301	-	96,789	1,391,533
2041	1,391,533	25,658	17,730	-	104,662	1,504,123
2042	1,504,123	25,146	17,763	-	113,086	1,624,592
2043	1,624,592	24,717	17,899	-	122,100	1,753,510
2044	1,753,510	24,784	18,552	-	131,747	1,891,489
2045	1,891,489	24,874	19,252	-	142,073	2,039,184
2046	2,039,184	25,309	20,322	-	153,126	2,197,297
2047	2,197,297	25,729	21,404	-	164,959	2,366,581
2048	2,366,581	26,384	22,750	-	177,630	2,547,845
2049	2,547,845	26,889	23,975	-	191,198	2,741,957
2050	2,741,957	28,359	26,197	-	205,728	2,949,847
2051	2,949,847	29,529	28,150	-	221,290	3,172,516

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 2: Projection of the OPEB Plan's Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position (a)	Employer Contributions for Current Plan Members (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) +(e)
2052	3,172,516	68,193	67,631	-	237,960	3,411,038
2053	3,411,038	70,165	71,966	-	255,760	3,664,997
2054	3,664,997	72,570	75,287	-	274,773	3,937,053
2055	3,937,053	59,034	62,704	-	295,141	4,228,524
2056	4,228,524	59,935	65,849	-	316,918	4,539,528
2057	4,539,528	62,299	69,270	-	340,203	4,872,760
2058	4,872,760	52,587	60,657	-	365,154	5,229,844
2059	5,229,844	52,237	62,480	-	391,854	5,611,455
2060	5,611,455	54,548	66,001	-	420,430	6,020,432
2061	6,020,432	12,821	25,532	-	451,056	6,458,777
2062	6,458,777	12,776	26,795	-	483,883	6,928,641
2063	6,928,641	13,148	28,528	-	519,071	7,432,332
2064	7,432,332	11,167	27,962	-	556,795	7,972,332
2065	7,972,332	11,730	29,997	-	597,240	8,551,305
2066	8,551,305	10,414	30,212	-	640,605	9,172,112
2067	9,172,112	10,696	32,086	-	687,106	9,837,828
2068	9,837,828	10,839	33,884	-	736,973	10,551,756
2069	10,551,756	9,057	33,824	-	790,453	11,317,442
2070	11,317,442	10,537	37,095	-	847,812	12,138,696
2071	12,138,696	9,472	37,892	-	909,336	13,019,612
2072	13,019,612	10,181	40,538	-	975,333	13,964,588
2073	13,964,588	11,673	44,044	-	1,046,130	14,978,347
2074	14,978,347	9,810	44,276	-	1,122,084	16,065,965
2075	16,065,965	11,267	47,912	-	1,203,573	17,232,893
2076	17,232,893	10,143	49,053	-	1,291,008	18,484,991
2077	18,484,991	9,510	50,777	-	1,384,827	19,828,551
2078	19,828,551	9,729	53,447	-	1,485,502	21,270,335
2079	21,270,335	6,340	52,606	-	1,593,540	22,817,609
2080	22,817,609	5,122	54,039	-	1,709,486	24,478,178
2081	24,478,178	1,839	53,513	-	1,833,926	26,260,430
2082	26,260,430	-	52,422	-	1,967,566	28,175,574
2083	28,175,574	-	52,150	-	2,111,212	30,234,636
2084	30,234,636	-	48,931	-	2,265,763	32,451,468
2085	32,451,468	-	45,837	-	2,432,141	34,837,772

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 2: Projection of the OPEB Plan's Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position (a)	Employer Contributions for Current Plan Members (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (f) = (a) + (b) - (c) - (d) +(e)
2086	34,837,772	-	42,645	-	2,611,234	37,406,361
2087	37,406,361	-	38,416	-	2,804,036	40,171,981
2088	40,171,981	-	34,661	-	3,011,599	43,148,919
2089	43,148,919	-	30,356	-	3,235,031	46,353,594
2090	46,353,594	-	26,111	-	3,475,540	49,803,023
2091	49,803,023	-	21,799	-	3,734,409	53,515,633
2092	53,515,633	-	18,219	-	4,012,989	57,510,403
2093	57,510,403	-	14,958	-	4,312,719	61,808,164
2094	61,808,164	-	12,117	-	4,635,158	66,431,205
2095	66,431,205	-	9,680	-	4,981,977	71,403,502
2096	71,403,502	-	7,613	-	5,354,977	76,750,866
2097	76,750,866	-	5,896	-	5,756,094	82,501,064
2098	82,501,064	-	4,518	-	6,187,410	88,683,956
2099	88,683,956	-	3,394	-	6,651,169	95,331,731
2100	95,331,731	-	2,501	-	7,149,786	102,479,016
2101	102,479,016	-	1,828	-	7,685,858	110,163,046
2102	110,163,046	-	1,291	-	8,262,180	118,423,935
2103	118,423,935	-	898	-	8,881,761	127,304,798
2104	127,304,798	-	614	-	9,547,837	136,852,021
2105	136,852,021	-	413	-	10,263,886	147,115,494
2106	147,115,494	-	273	-	11,033,652	158,148,873
2107	158,148,873	-	178	-	11,861,159	170,009,854
2108	170,009,854	-	114	-	12,750,735	182,760,475
2109	182,760,475	-	72	-	13,707,033	196,467,436
2110	196,467,436	-	46	-	14,735,056	211,202,446
2111	211,202,446	-	27	-	15,840,182	227,042,601
2112	227,042,601	-	17	-	17,028,194	244,070,778
2113	244,070,778	-	10	-	18,305,308	262,376,076
2114	262,376,076	-	5	-	19,678,206	282,054,277
2115	282,054,277	-	3	-	21,154,071	303,208,345
2116	303,208,345	-	2	-	22,740,626	325,948,969
2117	325,948,969	-	-	-	24,446,173	350,395,142

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments - End of Measurement Period

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g)
2019	117,382	6,974	6,974	-	6,726	-	6,726
2020	145,345	8,109	8,109	-	7,275	-	7,275
2021	174,920	9,003	9,003	-	7,514	-	7,514
2022	206,252	9,379	9,379	-	7,282	-	7,282
2023	239,492	10,727	10,727	-	7,747	-	7,747
2024	274,834	11,532	11,532	-	7,747	-	7,747
2025	312,442	12,627	12,627	-	7,891	-	7,891
2026	352,491	13,484	13,484	-	7,839	-	7,839
2027	395,166	13,766	13,766	-	7,445	-	7,445
2028	440,665	15,188	15,188	-	7,640	-	7,640
2029	489,196	16,167	16,167	-	7,566	-	7,566
2030	540,985	17,077	17,077	-	7,434	-	7,434
2031	596,271	38,429	38,429	-	15,562	-	15,562
2032	655,308	39,440	39,440	-	14,857	-	14,857
2033	717,099	41,468	41,468	-	14,531	-	14,531
2034	783,107	17,687	17,687	-	5,765	-	5,765
2035	853,641	17,221	17,221	-	5,222	-	5,222
2036	929,026	17,587	17,587	-	4,961	-	4,961
2037	1,009,610	17,340	17,340	-	4,550	-	4,550
2038	1,095,768	16,878	16,878	-	4,120	-	4,120
2039	1,187,900	17,251	17,251	-	3,917	-	3,917
2040	1,286,290	17,301	17,301	-	3,654	-	3,654
2041	1,391,533	17,730	17,730	-	3,484	-	3,484
2042	1,504,123	17,763	17,763	-	3,247	-	3,247
2043	1,624,592	17,899	17,899	-	3,043	-	3,043
2044	1,753,510	18,552	18,552	-	2,934	-	2,934
2045	1,891,489	19,252	19,252	-	2,832	-	2,832
2046	2,039,184	20,322	20,322	-	2,781	-	2,781
2047	2,197,297	21,404	21,404	-	2,725	-	2,725
2048	2,366,581	22,750	22,750	-	2,694	-	2,694
2049	2,547,845	23,975	23,975	-	2,641	-	2,641
2050	2,741,957	26,197	26,197	-	2,685	-	2,685
2051	2,949,847	28,150	28,150	-	2,684	-	2,684
2052	3,172,516	67,631	67,631	-	5,997	-	5,997

Lynnfield Center Water District Postemployment Benefits Other Than Pensions
Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments - End of Measurement Period

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments (b)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g)
2053	3,411,038	71,966	71,966	-	5,937	-	5,937
2054	3,664,997	75,287	75,287	-	5,777	-	5,777
2055	3,937,053	62,704	62,704	-	4,476	-	4,476
2056	4,228,524	65,849	65,849	-	4,373	-	4,373
2057	4,539,528	69,270	69,270	-	4,279	-	4,279
2058	4,872,760	60,657	60,657	-	3,485	-	3,485
2059	5,229,844	62,480	62,480	-	3,340	-	3,340
2060	5,611,455	66,001	66,001	-	3,282	-	3,282
2061	6,020,432	25,532	25,532	-	1,181	-	1,181
2062	6,458,777	26,795	26,795	-	1,153	-	1,153
2063	6,928,641	28,528	28,528	-	1,142	-	1,142
2064	7,432,332	27,962	27,962	-	1,041	-	1,041
2065	7,972,332	29,997	29,997	-	1,039	-	1,039
2066	8,551,305	30,212	30,212	-	973	-	973
2067	9,172,112	32,086	32,086	-	962	-	962
2068	9,837,828	33,884	33,884	-	945	-	945
2069	10,551,756	33,824	33,824	-	877	-	877
2070	11,317,442	37,095	37,095	-	895	-	895
2071	12,138,696	37,892	37,892	-	850	-	850
2072	13,019,612	40,538	40,538	-	846	-	846
2073	13,964,588	44,044	44,044	-	855	-	855
2074	14,978,347	44,276	44,276	-	800	-	800
2075	16,065,965	47,912	47,912	-	805	-	805
2076	17,232,893	49,053	49,053	-	767	-	767
2077	18,484,991	50,777	50,777	-	738	-	738
2078	19,828,551	53,447	53,447	-	723	-	723
2079	21,270,335	52,606	52,606	-	662	-	662
2080	22,817,609	54,039	54,039	-	633	-	633
2081	24,478,178	53,513	53,513	-	583	-	583
2082	26,260,430	52,422	52,422	-	531	-	531
2083	28,175,574	52,150	52,150	-	491	-	491
2084	30,234,636	48,931	48,931	-	429	-	429
2085	32,451,468	45,837	45,837	-	374	-	374
2086	34,837,772	42,645	42,645	-	323	-	323

Lynnfield Center Water District Postemployment Benefits Other Than Pensions
 Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018

APPENDIX A - CALCULATION OF SINGLE DISCOUNT RATE

Table 3: Actuarial Present Value of Projected Benefit Payments - End of Measurement Period

Year	Projected Beginning Fiduciary Net Position (a)	Projected Benefit Payments		Actuarial Present Value of Projected Benefit Payments			
		Projected Benefit Payments (b)	"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)	Present Value of "Funded" Benefit Payments (e)	Present Value of "Unfunded" Benefit Payments (f)	Present Value of Benefit Payments Using the Single Discount Rate (g)
2087	37,406,361	38,416	38,416	-	271	-	271
2088	40,171,981	34,661	34,661	-	227	-	227
2089	43,148,919	30,356	30,356	-	185	-	185
2090	46,353,594	26,111	26,111	-	148	-	148
2091	49,803,023	21,799	21,799	-	115	-	115
2092	53,515,633	18,219	18,219	-	90	-	90
2093	57,510,403	14,958	14,958	-	68	-	68
2094	61,808,164	12,117	12,117	-	52	-	52
2095	66,431,205	9,680	9,680	-	38	-	38
2096	71,403,502	7,613	7,613	-	28	-	28
2097	76,750,866	5,896	5,896	-	20	-	20
2098	82,501,064	4,518	4,518	-	14	-	14
2099	88,683,956	3,394	3,394	-	10	-	10
2100	95,331,731	2,501	2,501	-	7	-	7
2101	102,479,016	1,828	1,828	-	5	-	5
2102	110,163,046	1,291	1,291	-	3	-	3
2103	118,423,935	898	898	-	2	-	2
2104	127,304,798	614	614	-	1	-	1
2105	136,852,021	413	413	-	1	-	1
2106	147,115,494	273	273	-	-	-	-
2107	158,148,873	178	178	-	-	-	-
2108	170,009,854	114	114	-	-	-	-
2109	182,760,475	72	72	-	-	-	-
2110	196,467,436	46	46	-	-	-	-
2111	211,202,446	27	27	-	-	-	-
2112	227,042,601	17	17	-	-	-	-
2113	244,070,778	10	10	-	-	-	-
2114	262,376,076	5	5	-	-	-	-
2115	282,054,277	3	3	-	-	-	-
2116	303,208,345	2	2	-	-	-	-
2117	325,948,969	-	-	-	-	-	-

APPENDIX B - SCHEDULE OF DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES

Year	Differences between Expected and Actual Experience	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2018	\$ (34,161)	8.44	(4,048)	(4,048)	(4,048)	(4,048)	(4,048)	(4,048)	(4,048)	(4,048)	(1,777)	-
Net Increase (Decrease) in OPEB Expense			(4,048)	(4,048)	(4,048)	(4,048)	(4,048)	(4,048)	(4,048)	(4,048)	(1,777)	-

Year	Changes of Assumptions	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2018	\$ 13,611	8.44	1,613	1,613	1,613	1,613	1,613	1,613	1,613	1,613	707	-
Net Increase (Decrease) in OPEB Expense			1,613	1,613	1,613	1,613	1,613	1,613	1,613	1,613	707	-

Year	Differences between Projected and Actual Earnings on OPEB Plan Investments	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
2018	\$ 3,166	5	633	633	633	633	634	-	-	-	-	-
Net Increase (Decrease) in OPEB Expense			633	633	633	633	634	-	-	-	-	-

Lynnfield Center Water District Postemployment Benefits Other Than Pensions
 Financial Reporting and Disclosures Under GASB 74 and GASB 75 as of June 30, 2018