

THE CITY OF NEWPORT, RHODE ISLAND POSTEMPLOYMENT MEDICAL BENEFITS PLAN

ACTUARIAL VALUATION REPORT

JULY 1, 2020







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Executive Summary

	July 1, 2020	July 1, 2019
Number of members		
Active members	649	667
Retired members and dependents	897	887
Total	1,546	1,554
Covered employee payroll	44,393,961	43,739,060
Average plan salary	68,404	65,576
Actuarial present value of future benefits	134,906,180	138,503,973
Actuarial accrued liability	121,262,451	123,912,120
Plan assets		
Market value of assets	52,990,848	50,844,077
Actuarial value of assets	55,276,434	51,507,796
Unfunded accrued liability	65,986,017	72,404,324
Funded ratio	45.6%	41.6%
Actuarially determined employer contribution (ADEC)		
Fiscal year ending	2021	2020
ADEC	6,920,250	7,237,210



Valuation Results and Highlights

Purpose of the Valuation

The purpose of the valuation is to develop the Actuarially Determined Employer Contribution (ADEC).

The ultimate cost of an OPEB plan is based primarily on the level of benefits promised by the plan. The OPEB fund's investment earnings serve to reduce the cost of plan benefits and expenses. Thus,

Ultimate cost = Benefits Paid + Expenses Incurred – Investment Return – Employee Contributions

The actuarial cost method distributes this ultimate cost over the working lifetime of current plan participants. By means of this budgeting process, costs are allocated to both past and future years, and a cost is assigned to the current year. The current year's allocated cost, or normal cost, is the building block upon which the actuarially determined employer contribution is developed. The July 1, 2020 valuation produces the contribution for the fiscal year ending 2021.

Information Available in the Valuation Report

The Executive Summary is intended to emphasize the notable results of the valuation from the perspective of the Plan Sponsor. Supporting technical detail is documented in Results of the Valuation, Supporting Exhibits and Description of Actuarial Methods and Assumptions. A concise summary of the principal provisions of the Plan is outlined in Summary of Plan Provisions.

Changes Reflected in the Valuation

Various assumption changes were reflected in the valuation. See the Description of Actuarial Assumptions section for more details. The impact of the changes was to increase the actuarial accrued liability by approximately 1.7%.

Cash Contribution for Fiscal Year Ending 2021

The City cost is:	2021 Fiscal Year
Fire	\$1,886,040
Police	2,100,370
Public Works	194,830
Water	240,370
WPC	23,990
Recreation	7,580
General Government	259,990
Planning	45,790
Harbor	0
Equip Operations	11,950
School	2,149,340
Total	\$6,920,250



Liability Experience During Period Under Review

Plan experience resulted in a \$6.2 million gain. This is primarily due to premiums increasing less than expected.

Asset Experience During Period Under Review

The plan's assets provided the following rates of return during the past fiscal year:

2020 Fiscal Year

Market Value Basis 2.6%

Actuarial Value Basis 5.8%

The Actuarial Value of assets, rather than the Market Value, is used to determine plan contributions. The Actuarial Value spreads the asset volatility over 5 years, thereby smoothing out fluctuations that are inherent in the Market Value.



Certification

This report presents the results of the July 1, 2020 Actuarial Valuation for The City of Newport, Rhode Island Postemployment Medical Benefits Plan (the Plan) for the purpose of estimating the funded status of the Plan and determining the Actuarially Determined Employer Contribution (ADEC) for the fiscal year ending June 30, 2021. This report may not be appropriate for any other purpose.

The valuation has been performed in accordance with generally accepted actuarial principles and practices. It is intended to comply with all applicable Actuarial Standards of Practice.

I certify that the actuarial assumptions and methods that were selected by me and represent my best estimate of anticipated actuarial experience under the Plan.

In preparing this valuation, I have relied on employee data provided by the Plan Sponsor, and on asset and contribution information provided by the Trustee. I have audited neither the employee data nor the financial information, although I have reviewed them for reasonableness.

The results in this valuation report are based on the Plan as summarized in the *Summary of Plan Provisions* section of this report and the actuarial assumptions and methods detailed in the *Description of Actuarial Methods and Assumptions* section of this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

I have no relationship with the employer or the Plan that would impair, or appear to impair, my objectivity in performing the work presented in this report. I am a member of the American Academy of Actuaries and meet its Qualification Standards to render the actuarial opinion contained herein.

Steve A. Lemanski, FSA, FCA, MAAA Enrolled Actuary 20-05506

October 19, 2020



Development of Unfunded Accrued Liability and Funded Ratio

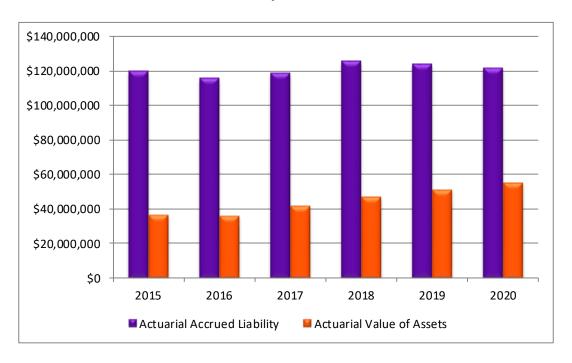
	July 1, 2020	July 1, 2019
Actuarial accrued liability for active members		
Members under age 65	\$13,160,484	\$13,057,300
Members over age 65	5,772,957	5,964,454
Dependents under age 65	11,221,943	11,155,329
Dependents over age 65	4,085,717	4,239,729
Total	34,241,101	34,416,812
Actuarial accrued liability for inactive members		
Members under age 65	8,834,921	9,152,678
Members over age 65	41,080,095	42,919,320
Dependents under age 65	12,309,903	12,336,084
Dependents over age 65	24,796,431	25,087,226
Total	87,021,350	89,495,308
Total actuarial accrued liability	121,262,451	123,912,120
Actuarial value of assets	55,276,434	51,507,796
Unfunded accrued liability	65,986,017	72,404,324
Funded ratio	45.6%	41.6%

	Discount Rate (7.00%)	1% Decrease (6.00%)	1% Increase (8.00%)
Actuarial accrued liability for active members	34,241,101	39,208,582	30,113,758
Actuarial accrued liability for inactive members	87,021,350	95,984,241	79,460,815
Total actuarial accrued liability	121,262,451	135,192,823	109,574,573

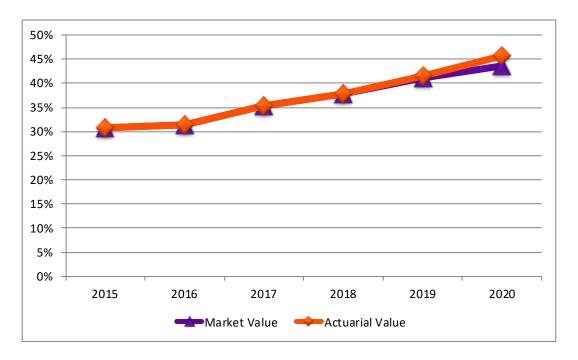
	Healthcare Cost Trend Rates (6.50% decreasing to 4.40%)	1% Decrease (5.50% decreasing to 3.40%)	1% Increase (7.50% decreasing to 5.40%)
Actuarial accrued liability for active members	34,241,101	29,290,594	40,371,168
Actuarial accrued liability for inactive members	87,021,350	79,682,582	95,574,841
Total actuarial accrued liability	121,262,451	108,973,176	135,946,009



Actuarial Accrued Liability vs. Actuarial Value of Assets



Funded Ratio





Development of Unfunded Accrued Liability and Funded Ratio by Group

	Fire	Police	Public Works	Water	WPC	Recreation	General Government	Planning	Harbor	Equip Operations	School	Total
Actuarial accrued liability for active members												
Members under age 65	\$3,512,910	\$3,814,589	\$539,018	\$485,546	\$99,836	\$3,791	\$383,573	\$48,230	\$0	\$0	\$4,272,991	\$13,160,484
Members over age 65	2,037,376	1,954,949	210,986	205,350	7,142	19,139	677,617	106,759	0	0	553,639	5,772,957
Dependents under age 65	3,858,665	3,576,161	566,869	564,626	92,946	7,640	205,823	16,156	0	0	2,333,057	11,221,943
Dependents over age 65	1,794,273	1,436,633	131,004	133,754	4,846	12,967	371,241	80,465	0	0	120,534	4,085,717
Total	11,203,224	10,782,332	1,447,877	1,389,276	204,770	43,537	1,638,254	251,610	0	0	7,280,221	34,241,101
Actuarial accrued liability for inactive members												
Members under age 65	2,161,773	4,457,614	276,181	280,653	0	0	109,934	0	0	0	1,548,766	8,834,921
Members over age 65	6,122,281	7,527,036	608,177	1,101,102	34,227	73,325	1,462,390	290,793	0	131,945	23,728,819	41,080,095
Dependents under age 65	3,683,172	5,556,681	326,790	702,430	0	0	89,703	33,456	0	0	1,917,671	12,309,903
Dependents over age 65	5,802,115	5,433,036	372,928	777,473	42,357	0	555,849	292,989	0	136,949	11,382,735	24,796,431
Total	17,769,341	22,974,367	1,584,076	2,861,658	76,584	73,325	2,217,876	617,238	0	268,894	38,577,991	87,021,350
Total actuarial accrued liability	28,972,565	33,756,699	3,031,953	4,250,934	281,354	116,862	3,856,130	868,848	0	268,894	45,858,212	121,262,451
Actuarial value of assets	13,206,891	15,387,698	1,382,089	1,937,752	128,253	53,271	1,757,783	396,057	0	122,573	20,904,067	55,276,434
Unfunded accrued liability	15,765,674	18,369,001	1,649,864	2,313,182	153,101	63,591	2,098,347	472,791	0	146,321	24,954,145	65,986,017
Funded ratio	45.6%	45.6%	45.6%	45.6%	45.6%	45.6%	45.6%	45.6%	0.0%	45.6%	45.6%	45.6%

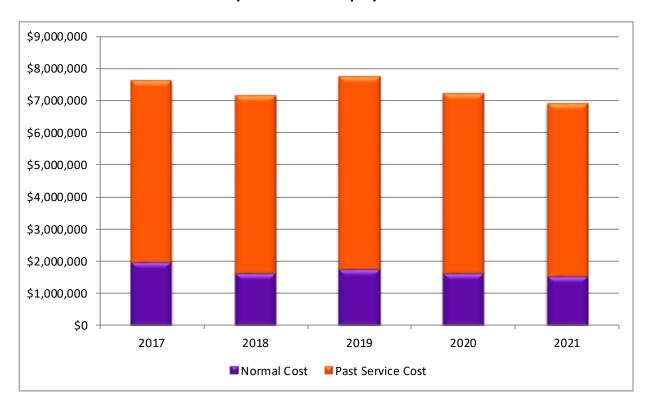


Determination of Normal Cost and Actuarially Determined Employer Contribution

	July 1, 2	.020	July 1, 2	2019
	Cost	Percent of payroll	Cost	Percent of payroll
Gross normal cost	\$1,560,134	3.6%	\$1,658,323	3.8%
Estimated employee contributions	(30,734)	-0.1%	(34,748)	-0.1%
City's normal cost Amortization of unfunded accrued liability	1,529,400 5,390,848	3.6%	1,623,575 5,613,638	3.7%
Contribution before adjustment as of the valuation date Contribution rounded to nearest \$10	6,920,248 6,920,250	16.2%	7,237,213 7,237,210	16.7%
Estimated valuation year payroll for actives not yet at 100% assumed retirement age	42,747,652		43,422,888	
Fiscal year ending	2021		2020	
Adjustment for interest and inflation	0		0	
Actuarially determined employer contribution	6,920,250		7,237,210	



Actuarially Determined Employer Contribution





Actuarially Determined Employer Contribution per Group

	Fire	Police	Public Works	Water	WPC	Recreation	General Government	Planning	Harbor	Equip Operations	School	Total
Gross normal cost	\$598,037	\$599,680	\$60,036	\$51,387	\$11,480	\$2,389	\$88,564	\$7,161	\$0	\$0	\$141,400	\$1,560,134
Estimated employee contributions	0	0	0	0	0	0	0	0	0	0	(30,734)	(30,734)
City's normal cost	598,037	599,680	60,036	51,387	11,480	2,389	88,564	7,161	0	0	110,666	1,529,400
Actuarial accrued liability	28,972,565	33,756,699	3,031,953	4,250,934	281,354	116,862	3,856,130	868,848	0	268,894	45,858,212	121,262,451
Actuarial value of assets	13,206,891	15,387,698	1,382,089	1,937,752	128,253	53,271	1,757,783	396,057	0	122,573	20,904,067	55,276,434
Unfunded accrued liability	15,765,674	18,369,001	1,649,864	2,313,182	153,101	63,591	2,098,347	472,791	0	146,321	24,954,145	65,986,017
Amortization of unfunded accrued liability	1,288,005	1,500,689	134,789	188,980	12,508	5,195	171,428	38,626	0	11,954	2,038,674	5,390,848
Contribution before adjustment as of the												
valuation date	1,886,042	2,100,369	194,825	240,367	23,988	7,584	259,992	45,787	0	11,954	2,149,340	6,920,248
Contribution rounded to nearest \$10	1,886,040	2,100,370	194,830	240,370	23,990	7,580	259,990	45,790	0	11,950	2,149,340	6,920,250
Fiscal year ending June 30, 2021												
Adjustment for interest and inflation	0	0	0	0	0	0	0	0	0	0	0	0
Actuarially determined employer contribution	1,886,040	2,100,370	194,830	240,370	23,990	7,580	259,990	45,790	0	11,950	2,149,340	6,920,250



Development of Asset Values

Summary of Fund Activity						
	Market Value	Actuarial Value				
1. Beginning value of assets July 1, 2019						
Trust assets	\$50,866,628	\$51,530,347				
Accrued contribution	0	0				
Benefits payable	(22,551)	(22,551)				
Administrative expenses payable	0	0				
Net total	50,844,077	51,507,796				
2. Contributions						
City contributions during year	7,293,233	7,293,233				
Employee contributions during year	0	0				
Change in accrued contribution	0	0				
Total for plan year	7,293,233	7,293,233				
3. Disbursements						
Benefit payments during year	6,445,371	6,445,371				
Administrative expenses during year	47,471	47,471				
Change in benefits payable	5,346	5,346				
Change in administrative expenses payable	0	0				
Total for plan year	6,498,188	6,498,188				
4. Net investment return						
Interest and dividends	0	N/A				
Change in accrued income	0	N/A				
Realized and unrealized gain / (loss)	1,432,873	N/A				
Expected return	N/A	3,586,472				
Recognized gain / (loss)	N/A	(612,879)				
Required adjustment due to corridor	N/A	0				
Reversal of prior year required adjustment	N/A	0				
Investment-related expenses	(81,147)	N/A				
Total for plan year	1,351,726	2,973,593				
5. Ending value of assets July 1, 2020						
Trust assets	53,018,745	55,304,331				
Accrued contribution	0	0				
Benefits payable	(27,897)	(27,897)				
Administrative expenses payable	0	0				
Net total: (1) + (2) - (3) + (4)	52,990,848	55,276,434				
6. Approximate rate of return	2.6%	5.8%				



Relationship of Actuarial Value to Market Value	
1. Market value 7/1/2020	\$52,990,848
2. Gain / (loss) not recognized in actuarial value 7/1/2020	(2,285,586)
3. Preliminary actuarial value 7/1/2020: (1) - (2)	55,276,434
4. Preliminary actuarial value as a percentage of market value: (3) \div (1)	104.3%
5. Gain / (loss) recognized for corridor minimum / maximum	N/A
6. Actuarial value 7/1/2020 after corridor minimum / maximum: (3) + (5)	55,276,434
7. Actuarial value as a percentage of market value: (6) \div (1)	104.3%

Development of Market Value Gain / Loss for 2019-2020 Plan Y	ear
1. Market value 7/1/2019	\$50,844,077
2. City contributions	7,293,233
3. Employee contributions	0
4. Benefit payments	6,450,717
5. Administrative expenses	47,471
6. Expected return at 7.00%	3,586,472
7. Expected value 7/1/2020: (1) + (2) + (3) - (4) - (5) + (6)	55,225,594
8. Market value 7/1/2020	52,990,848
9. Market value gain / (loss) for 2019-2020 plan year: (8) - (7)	(2,234,746)

	Recognition of Gain / Loss in Actuarial Value						
Year	(a) Gain / (loss)	(b) Total recognized as of 7/1/2019	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 7/1/2020: (b) + (c)	(e) Not recognized as of 7/1/2020: (a) - (d)		
2015-2016	\$0	\$0	\$0	\$0	\$0		
2016-2017	0	0	0	0	0		
2017-2018	0	0	0	0	0		
2018-2019	(829,649)	(165,930)	(165,930)	(331,860)	(497,789)		
2019-2020	(2,234,746)	0	(446,949)	(446,949)	(1,787,797)		
Total			(612,879)		(2,285,586)		

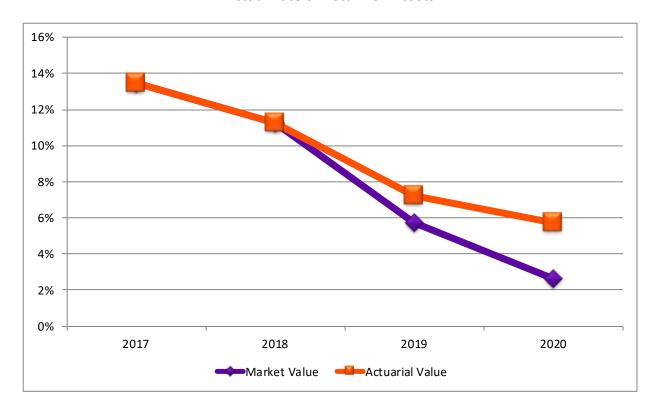


R	Rate of Return on Market Value of Assets					
Period Ending	Avera	Average Annual Effective Rate of Return				
June 30	1 Year	3 Years	5 Years	10 Years		
2011	N/A	N/A	N/A	N/A		
2012	N/A	N/A	N/A	N/A		
2013	N/A	N/A	N/A	N/A		
2014	N/A	N/A	N/A	N/A		
2015	N/A	N/A	N/A	N/A		
2016	N/A	N/A	N/A	N/A		
2017	13.5%	N/A	N/A	N/A		
2018	11.3%	N/A	N/A	N/A		
2019	5.8%	10.1%	N/A	N/A		
2020	2.6%	6.5%	N/A	N/A		

Rate of Return on Actuarial Value of Assets						
Period Ending	Avera	Average Annual Effective Rate of Return				
June 30	1 Year	3 Years	5 Years	10 Years		
2011	N/A	N/A	N/A	N/A		
2012	N/A	N/A	N/A	N/A		
2013	N/A	N/A	N/A	N/A		
2014	N/A	N/A	N/A	N/A		
2015	N/A	N/A	N/A	N/A		
2016	N/A	N/A	N/A	N/A		
2017	13.5%	N/A	N/A	N/A		
2018	11.3%	N/A	N/A	N/A		
2019	7.2%	10.6%	N/A	N/A		
2020	5.8%	8.1%	N/A	N/A		



Actual Rate of Return on Assets





Target Allocation and Expected Rate of Return July 1, 2020

		Long-Term	
Asset Class	Target Allocation	Expected Real Rate of Return*	Weighting
Large Cap Equity	20.00%	5.25%	1.05%
Mid Cap Equity	15.00%	5.75%	0.86%
Small Cap Equity	15.00%	5.75%	0.86%
International Equity	15.00%	5.75%	0.86%
Fixed Income	20.00%	1.25%	0.25%
Real Estate and Timber	15.00%	5.75%	0.86%
	100.00%		4.74%
Long-Term Inflation Expectation			2.40%
Long-Term Expected Nominal Return			7.14%

^{*}Long-Term Real Returns are provided by HHIA. The returns are geometric means.

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 are developed. Best estimates of the real rates of return for each major asset class are included in the OPEB plan's target asset allocation.

The information above is based on geometric means and does not reflect additional returns through investment selection, asset allocation and rebalancing. An expected rate of return of 7.00% was used.



Amortization of Unfunded Liability

	Schedule of Amortization Bases				
	Date established	Amortization installment	Years remaining	Present value of remaining installments as of July 1, 2020	
2020 base	July 1, 2020	5,390,848	17	65,986,017	



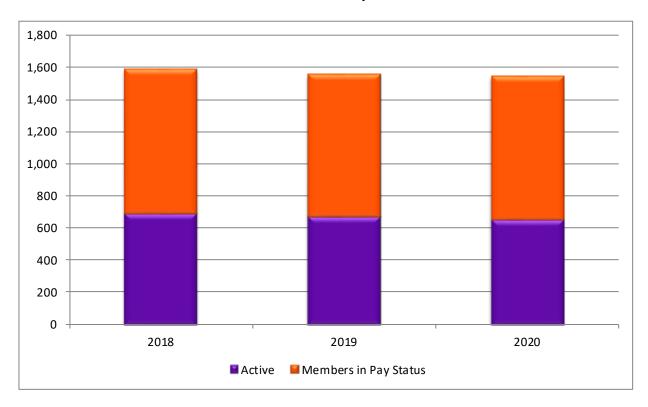
Member Data

The data reported by the Plan Sponsor for this valuation includes 649 active employees who met the Plan's minimum age and service requirements as of July 1, 2020.

	Fire	Police	Public Works	Water	WPC	Recreation	General Government	Planning	Harbor	Equip Operations	School	Total
Total members July 1, 2020												
Active members	93	100	36	44	9	2	37	7	0	0	321	649
Retirees	110	115	17	25	1	1	26	5	0	2	252	554
Dependents of current retirees	79	79	11	15	1	0	9	4	0	2	143	343
Total	282	294	64	84	11	3	72	16	0	4	716	1,546
Average age July 1, 2020												
Active members	43.0	41.5	48.4	47.9	39.2	52.4	51.5	61.2	N/A	N/A	47.7	46.4
Retirees	70.3	67.4	70.2	72.8	85.5	67.4	74.1	76.3	N/A	73.7	71.4	70.6
Dependents of current retirees	64.6	62.6	68.7	63.4	83.9	N/A	67.0	69.2	N/A	73.7	70.0	66.7



Member Counts by Status





Expected Benefit Payments from Trust Fund

An important consideration in formulating short-term or intermediate-term investment policy is the need for liquidity to meet the payment requirements of the Plan. The Plan's investment advisors may wish to compare expected benefit payments and expenses with anticipated cash income from investments and employer contributions.

The table below presents projected annual benefit payments for the next twenty plan years. The following assumptions are reflected in this table:

- Retirements among active participants will occur consistent with the Plan's retirement assumption.
- Benefits will continue to accrue according to the provisions of the Plan.

Differences between actual experience and that assumed will affect the pattern of benefit payments.

Participant categories reflect status as of July 1, 2020.

Fiscal Year Beginning	Active as of July 1, 2020	Retired and Terminated as of July 1, 2020	Total Benefit Payments
2020	\$188,886	\$7,098,969	\$7,287,855
2021	490,500	7,097,027	7,587,527
2022	838,845	7,062,215	7,901,060
2023	1,237,322	7,082,611	8,319,933
2024	1,623,454	7,012,921	8,636,375
2025	2,046,075	7,077,264	9,123,339
2026	2,391,143	7,129,216	9,520,359
2027	2,693,870	7,057,125	9,750,995
2028	3,035,994	7,091,767	10,127,761
2029	3,234,244	7,245,515	10,479,759
2030	3,652,022	7,167,127	10,819,149
2031	3,938,139	6,979,780	10,917,919
2032	4,131,720	6,719,159	10,850,879
2033	4,474,784	6,571,365	11,046,149
2034	4,509,764	6,401,038	10,910,802
2035	4,553,544	6,359,890	10,913,434
2036	4,714,869	6,263,174	10,978,043
2037	4,922,948	6,132,313	11,055,261
2038	5,126,162	5,906,583	11,032,745
2039	5,192,035	5,776,249	10,968,284



Expected Per Capita Claims (without Medicare Integration)

Others (Pre-65)

Sample	Expected Claim	Expected Claim
Age	(Male)	(Female)
45	\$6,876	\$9,584
50	8,980	11,167
55	11,783	13,010
60	15,180	15,174
64	18,538	17,764

School Retirees (Pre-65)

Sample	Expected Claim	Expected Claim
Age	(Male)	(Female)
45	\$7,184	\$10,013
50	9,382	11,668
55	12,311	13,592
60	15,859	15,853
64	19,368	18,559

School Actives (Post-65)

Sample	Expected Claim	Expected Claim
Age	(Male)	(Female)
65	\$4,070	\$3,857
70	4,666	4,417
75	5,073	4,818
80	5,335	5,096
85	5,369	5,130

School Actives (Pre-65)

Sample	Expected Claim	Expected Claim
Age	(Male)	(Female)
45	\$6,862	\$9,564
50	8,961	11,144
55	11,758	12,982
60	15,147	15,142
64	18,498	17,726

Others (Post-65)

Sample	Expected Claim	Expected Claim
Age	(Male)	(Female)
65	\$4,070	\$3,857
70	4,666	4,417
75	5,073	4,818
80	5,335	5,096
85	5,369	5,130

School Retirees (Post-65)

Sample	Expected Claim Expected Cla	
Age	(Male)	(Female)
65	\$4,381	\$4,152
70	5,023	4,755
75	5,460	5,186
80	5,743	5,485
85	5,779	5,521



Description of Actuarial Methods

Asset Valuation Method

The Actuarial Value of assets used in the development of plan contributions phases in the recognition of differences between the actual return on Market Value and expected return on Market Value over a 5-year period at 20% per year (effective with gains and losses for 2018-19).

Actuarial Cost Method

Changes in Actuarial Cost Method: None.

Description of Current Actuarial Cost Method: Entry Age Normal (level percentage of salary)

<u>Normal Cost</u>: Under this method, the total normal cost is the sum of amounts necessary to fund each active member's normal retirement benefit if paid annually from entry age to assumed retirement age. Entry age is the age at which the employee would have been first eligible for the plan, if it had always been in effect. The normal cost for each participant is expected to remain a level percentage of the employee's salary. The normal cost for the plan is the difference between the total normal cost for the year and the anticipated member contributions for that year.

<u>Past Service Liability</u>: The present value of future benefits that relates to service before the valuation date is the total past service liability. The unfunded past service liability is the difference between the total past service liability and any assets (including accumulated member contributions). This amount is amortized over 17 years on a closed basis.

<u>Experience Gains and Losses:</u> All experience gains and losses (the financial effect of the difference between the actual experience during the prior period and the result expected by the actuarial assumptions for that prior period) appear directly in the past service liability and are amortized at the same rate the plan is amortizing the remaining unfunded past service liability.

In addition, an annual 2.40% amortization increase rate was assumed (prior year: 2.60%).

Description of Actuarial Assumptions

Changes in Actuarial Assumptions

The valuation reflects changes in the actuarial assumptions listed below. (The assumptions used before and after these changes are more fully described in the next section.)

- Inflation
- Mortality Improvement
- Healthcare Cost Trend Rates
- Expected Claims Costs

The assumptions indicated were changed to represent the Enrolled Actuary's current best estimate of anticipated experience of the plan.

Investment rate of return (net of investment-related and administrative expenses)

7.00%.

Rate of compensation increase (including inflation)

Police and Fire: 2.40% (Prior: 2.60%) per year plus longevity increases of 3.00% after seventh year of employment and 0.50% for each year of employment thereafter through the thirty-first year of employment. No longevity increases are assumed after the thirty-first year of employment.

School and General City: 2.40% per year (Prior: 2.60%).

The assumption is based on input from the plan sponsor regarding future expectations, as well as our review of long-term inflation expectations.

Inflation

2.40%. (Prior: 2.60%)

This assumption is consistent with the Social Security Administration's current best estimate of the ultimate long-term (75-year horizon) annual percentage increase in CPI, as published in the 2020 OASDI Trustees Report.

Mortality

Police and Fire: Pub-2010 Public Retirement Plans Mortality Tables for Public Safety employees, for non-annuitants and annuitants, projected to the valuation date with Scale MP-2019.

Teachers and Administrators: Pub-2010 Public Retirement Plans Mortality Tables for Teachers, for non-annuitants and annuitants, projected to the valuation date with Scale MP-2019.

School Support Staff and General City: Pub-2010 Public Retirement Plans Mortality Tables for General employees, for non-annuitants and annuitants, projected to the valuation date with Scale MP-2019.

(Prior All: Pub-2010 Public Retirement Plans Mortality Tables for Public Safety employees, Teachers, and General employees, for non-annuitants and annuitants, projected to the valuation date with Scale MP-2018.)



Mortality Improvement

Projected to date of decrement using Scale MP-2019 (generational).

(Prior: Projected to date of decrement using Scale MP-2018 (generational).)

We have selected this mortality assumption because it is based on the latest published public pension mortality study released by the Society of Actuaries.

The mortality assumption was updated to better reflect anticipated experience.

Retirement

Police and Fire: Retirement rates are based on an experience study conducted by Hay Group in 2014:

	Probability of	
Years of Service	Retirement	
20	10.00%	
21	2.00%	
22	2.00%	
23	2.00%	
24	2.00%	
25	50.00%	
26	10.00%	
27	10.00%	
28	10.00%	
29	10.00%	
30	50.00%	
31	20.00%	
32	20.00%	
33	20.00%	
34	20.00%	
35+	100.00%	

Teachers and Administrators: Rates of retirement are based on an employee's age. Selected ages are listed below.

	Retirement Rate		
Age	Male	Female	
45	10.00%	5.00%	
50	16.00%	12.00%	
55	26.00%	22.00%	
60	40.00%	35.00%	
62	25.00%	25.00%	
65	25.00%	35.00%	
70	100.00%	100.00%	



School Support Staff and General City: Rates of retirement are based on an employee's age. Selected ages are listed below.

	Retirement Rate		
Age	Male	Female	
45	10.00%	10.00%	
50	15.00%	10.00%	
55	15.00%	15.00%	
60	25.00%	20.00%	
62	25.00%	30.00%	
65	25.00%	30.00%	
70	100.00%	100.00%	

Termination prior to retirement

Police and Fire: Rates of withdrawal are based on an employee's length of service, as follows:

Years of Service	Probability of Withdrawal	
Less than 1	3.00%	
1	2.25%	
2	2.00%	
3	1.75%	
4	1.50%	
5	1.25%	
6	1.00%	
7	0.75%	
8	0.50%	
9	0.25%	
10 or more	0.00%	

Teachers and Administrators: Rates of withdrawal are based on an employee's age. Selected ages are listed below.

	Withdrawal Rate		
Age	Male	Female	
20	20.00%	20.00%	
25	20.00%	20.00%	
30	12.00%	14.00%	
35	8.00%	11.30%	
40	6.50%	8.60%	
45	5.80%	6.00%	
50	5.40%	5.00%	
55	0.00%	0.00%	



School Support Staff and General City: Rates of withdrawal are based on an employee's age. Selected ages are listed below.

	Withdrawal Rate*	
Age	Male	Female
20	4.14%	4.14%
25	3.15%	3.15%
30	2.52%	2.52%
35	2.10%	2.10%
40	1.95%	1.95%
45	1.73%	1.73%
50	1.44%	1.44%
55	0.00%	0.00%

^{*} Higher rates in effect for first 9 years of service

Disability

Police and Fire: Rates of Disability are based on an employee's age. Selected ages are listed below.

Attained Age	Probability of Disability
25	0.17%
35	0.29%
45	0.72%
55	1.21%

90% of disabilities are assumed to be service related.

Teachers and Administrators: Rates of Disability are based on an employee's age. Selected ages are listed below.

-	Ordinary Disability		Accidental Disability	
Age	Male	Female	Male	Female
25	0.015%	0.015%	0.008%	0.008%
30	0.018%	0.018%	0.010%	0.010%
35	0.024%	0.024%	0.013%	0.013%
40	0.036%	0.036%	0.019%	0.019%
45	0.059%	0.059%	0.032%	0.032%
50	0.099%	0.099%	0.054%	0.054%
55	0.165%	0.165%	0.089%	0.089%
60	0.230%	0.230%	0.124%	0.124%

School Support Staff and General City: Rates of Disability are based on an employee's age. Selected ages are listed below.

	Ordinary Disability		oility Accidental Disability	
Age	Male	Female	Male	Female
25	0.025%	0.036%	0.020%	0.009%
30	0.030%	0.044%	0.025%	0.011%
35	0.041%	0.060%	0.034%	0.015%
40	0.061%	0.088%	0.050%	0.022%
45	0.099%	0.144%	0.081%	0.036%
50	0.168%	0.244%	0.137%	0.061%
55	0.278%	0.404%	0.227%	0.101%
60	0.388%	0.564%	0.317%	0.141%



Utilization

Police and Fire: 100% of current active members will elect medical coverage at retirement.

Teachers and Administrators: 90% of current active members will elect medical coverage at retirement.

School Support Staff: 80% of paraprofessionals and 95% of others will elect medical coverage at retirement.

General City: 100% of AFSCME and NEA and 95% of others will elect medical coverage at retirement.

100% of all pre-65 retirees will continue medical coverage after age 65, if eligible.

100% of future Police retirees are expected to elect life insurance.

Marital Status

Police and Fire: 80% of male and 80% of female active members are assumed to be married and elect spousal benefits at retirement.

Teachers and Administrators: 70% of male and 60% of female active members are assumed to be married and elect spousal benefits at retirement.

School Support Staff: 70% of male and 60% of female active members are assumed to be married and elect spousal benefits at retirement.

General City: 70% of male and 50% of female active members are assumed to be married and elect spousal benefits at retirement.

Spouse's Age

Husbands are assumed to be 3 years older than wives.

Healthcare Cost Trend Rates

Year Beginning	Trend Rate
2020	6.50%
2021	6.30%
2022	6.10%
2023	5.90%
2024	5.70%
2025	5.50%
2026	5.30%
2027	5.10%
2028	4.90%
2029	4.70%
2030	4.50%
2031+	4.40%

Medicare Part B is assumed to increase by 3.4% per year (prior: 3.6%).



Healthcare Cost Trend Rates (cont.)

Healthcare cost trend rates reflect both the current and long-term outlook for increases in healthcare costs. The short-term rates are based on recent industry surveys, plan experience and near-term expectations. The long-term trend rate is based on our general inflation assumption plus an adjustment to reflect expectations for long-term medical inflation.

The trend rates were changed to better reflect anticipated experience.

Payroll Growth Rate

2.40%. (Prior: 2.60%)

Pre-Age 65 Retirees

Current retirees who are under age 65 are assumed to remain in their current medical plan until age 65.

Current City active employees who are assumed to retire prior to age 65 are valued with a weighted-average premium. This weighted-average premium is based on the medical plan coverage of current retirees under age 65. Current School active employees are assumed to be in the Healthmate CC \$250 Deductible plan if retiring prior to age 65.

Post-Age 65 Retirees

Current grandfathered retirees over age 65 are valued as remaining in their current medical plan; all other retirees (if eligible) are assumed to participate in Plan 65. It is assumed that all future eligible retirees will enroll in Plan 65 upon reaching age 65, except that Teachers in the Extended Benefit Program who retired prior to August 31, 2005 are assumed to remain in their current medical plan.

Please see the Summary of Plan Provisions for Plan 65 eligibility information by group.

Premiums / Allocation Rates

	Single	Dual
Pre-65		
School Active	\$8,897	\$21,489
School Retiree	9,315	22,500
Others	8,952	21,623
Post-65		
School Active	4,752	9,504
School Retiree	5,115	10,230
Others	4,752	9,504

Premiums were used as the basis for per capita costs. The average premium was derived by reflecting participation among the various plans offered by the employer.

We have not valued any liability for dental benefits as it is our understanding that retirees pay the full cost for these benefits.

Expected Claims Costs

The sample per capita claims costs for plans not integrated with Medicare were developed as follows: Using the total count of active participants eligible for post-retirement medical benefits and retirees currently electing medical coverage in a non-Medicare supplement plan, we calculate the total projected claims by multiplying the total count by the average annual premium. Using the cost increases derived from a study sponsored by the Society of Actuaries prepared by Dale H. Yamamoto from May 2013: "Health Care Costs from Birth to Death", we allocate the total projected claims by age and gender.

Expected Claims Costs (cont.)

The sample per capita claims costs for plans integrated with Medicare were developed as follows: Using the total count of retirees currently electing medical coverage in a Medicare Supplement plan, we calculate the total projected claims by multiplying the total count by the average annual premium. Using the cost increases derived from a study sponsored by the Society of Actuaries prepared by Dale H. Yamamoto from May 2013: "Health Care Costs from Birth to Death", we allocate the total projected claims by age and gender.

Medicare Part B Premium

\$144.60 per month for 2020, assumed to increase 3.40% per year.

Dental Insurance

Premiums paid for retiree pay all dental coverage are assumed to be self-supporting, based on our understanding of the arrangements involved.

Life Insurance

Valued per actual benefit amounts in force.

Employee Contributions (Teachers)

Teacher employees who have elected the Extended Benefit plan contribute 5% of pay while employed. The value of future contributions is not directly reflected in the valuation. The Actuarially Determined Contribution amount is assumed to reflect the overall contribution amount for the fiscal year, with the City's required Normal Cost contribution to be directly reduced by any contribution made by the employees. This treatment is consistent with the entry age normal actuarial cost method. The valuation does not reflect an estimated value of return of contributions for amounts contributed prior to the valuation date.

Patient Protection and Affordable Care Act (PPACA)

For purposes of this valuation, extended coverage for adult children and 100% coverage of preventive care are assumed to be reflected in per capita costs.

For purposes of this valuation, elimination of lifetime maximum benefits and removal of the limits on essential healthcare are assumed to have no impact on plan liabilities.



Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan. It is not intended to be, nor should it be interpreted as a complete statement of all plan provisions. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.

Plan identification

Single-employer OPEB plan

All Groups

Participants who retire with a disability receive the same benefits as regular retirees and remain in their chosen plan until age 65, at which time they are enrolled in Plan 65.

Fire

Retirement Eligibility

- Hired on or after July 1, 2011: Age 58 with 10 years of service or 30 years of service
- Hired prior to July 1, 2011: 20 years of service

Vesting Eligibility

10 years of service.

Disability Eligibility

10 years of service.

Medical Coverage

- Healthmate DED 250 (pay the difference if opting for a more expensive plan)
- Blue Cross Plan 65 upon reaching the age of 65
 - Not available for members hired on or after July 1, 2011

Cost Share

- Retire after July 1, 1987 with more than 10 years but less than 25 years of service City's contribution is reduced 4% per year of service less than 25
- Retire on or after September 13, 2007 and before December 31, 2011 pay 1.0% of their pension (with annual COLA increases; and in addition to bullet #1)
- Retire after December 31, 2011 pay 2.0% of their pension (with annual COLA increases; and in addition to bullet #1)
- Retire on or after January 1, 2016 shall pay an additional 5.0% of coverage cost
- Surviving spouses purchase health insurance coverage at their own expense

Life Insurance

None.



Police

Retirement Eligibility

- Hire date after July 1, 2014: 25 years of service
- Hire date before July 1, 2014: 20 years or service.

Vesting Eligibility

10 years of service.

Disability Eligibility

10 years of service.

Medical Coverage

- Base Plan is Healthmate DED 250 (pay the difference if opting for a more expensive plan)
- Blue Cross Plan 65 upon reaching the age of 65
 - Not available for members hired on or after July 1, 2009

Cost Share

- Retired prior to July 1, 2014 with 25 years of service as of January 1, 2007 shall not make any contribution
- Retired Prior to June 30, 2013 with 20 years of service as of January 1, 2007 shall not make any contribution
- Hired after July 1, 2006 and retired prior to July 1, 2014 with less than 20 Years of Service City's contribution is reduced 5% per year of service less than 20
- Retired after July 1, 1987 and prior to July 1, 2014 with less than 20 Years of Service City's contribution is reduced 5% per year of service less than 20
- Retire on or after July 1, 2014 through June 30, 2018 (including members retiring on a job-related accidental disability pension) shall pay 5% of premium.
- Retire on or after July 1, 2018 through June 30, 2019 (including members retiring on a job-related accidental disability pension) shall pay 7.5% of premium.
- Retire after July 1, 2019 (including members retiring on a job-related accidental disability pension) shall pay 10% of premium.
- Surviving spouses purchase health insurance coverage at their own expense

Life Insurance

- \$25,000 effective July 1, 1986
- Retired members shall bear ½ the cost of any increase in life insurance rates effective July 1, 1993



Teachers

Retirement Eligibility

- Members with less than five years of contributory service as of June 30, 2012 and members hired on or after that date are eligible for retirement on or after their Social Security normal retirement age.
- Members who had at least five years of contributory service as of June 30, 2012 will be eligible for retirement at an individually determined age. This age is the result of interpolating between the member's Article 7 Retirement Date (described in Rhode Island's ERSRI Valuation Report) and the retirement age applicable to members hired after June 30, 2012 in bullet #1 above. The interpolation is based on service as of June 30, 2012 divided by projected service at the member's Article 7 Retirement Date. The minimum retirement age is 59.
- Members with 10 or more years of contributory service on June 30, 2012 may choose to
 retire at their Article 7 Retirement Date if they continue to work and contribute until that date. If option
 is elected, the retirement benefit will be calculated using the benefits you have accrued as of June 30,
 2012, i.e., the member will accumulate no additional defined benefits after this date, but the benefit will
 be paid without any actuarial reduction.
- Effective July 1, 2015, members will be eligible to retire with full benefits at the earlier of their current RIRSA date described in bullets #1 #3 above or upon the attainment of age 65 with 30 years of service, age 64 with 31 years of service, age 63 with 32 years of service, or age 62 with 33 years of service.
- A member who is within five years of reaching their retirement eligibility date, described in this section, and has 20 or more years of service, may elect to retire at any time with a reduced benefit. The reduction is 9% for year 1, 8% for year 2, and 7% for each year thereafter.

Vesting Eligibility

As of July 1, 2012, 5 years of contributing service.

Disability Eligibility

5 years of service.

Medical Coverage

- Healthmate Coast to Coast plan until age 65
- Extended Health Care Benefit Plan Plan 65 (we rely upon data provided by the client to determine who is eligible for post-65 coverage)
 - As of 2006-2007 school year, not available for new members.
 - 25 years of service as of June 30, 2015 and not retired by June 30, 2018 shall be offered a single individual post-65 coverage (not available for retiree's spouse)
- Medicare Part B retired before July 1, 2011 shall be reimbursed upon becoming Medicare eligible



Cost Share

- Effective September 1, 2012, future retiree who does not participate in the Extended Health Care Benefit Plan, pay 20% of the premium cost
- Employed effective on or after July 1, 1998 and retired as of August 31, 2005, pay a cost share of 5% of the annual premium
- Retired from July 1, 2012 to June 30, 2014, 20% for Healthmate Coast to Coast plan and 5% for Extended Health Care Benefit Plan
- Retire prior to July 1, 1998, no cost until Medicare eligible and 3% for Extended

	Premium	Extended
Retirement Date	Cost Share	Benefits
Prior to 6/30/2005	0%	4%
7/1/2005 – 6/30/2006	3%	5%
7/1/2006 – 6/30/2007	5%	5%
7/1/2007 – 6/30/2008	7%	5%
7/1/2008 – 6/30/2009	10%	5%
7/1/2009 – 6/30/2010	10.5%	5%
7/1/2010 – 6/30/2011	12%	5%
7/1/2011 – 6/30/2012	15%	5%
After 7/1/2012	20%	5%

Life Insurance

\$50,000 coverage until age 65 for those grandfathered. As of September 1, 2015, continuation of life insurance coverage if at retiree's expense.

School Administrators

Retirement Eligibility

- Members with less than five years of contributory service as of June 30, 2012 and members hired on or after that date are eligible for retirement on or after their Social Security normal retirement age.
- Members who had at least five years of contributory service as of June 30, 2012 will be eligible for retirement at an individually determined age. This age is the result of interpolating between the member's Article 7 Retirement Date (described in Rhode Island's ERSRI Valuation Report) and the retirement age applicable to members hired after June 30, 2012 in bullet #1 above. The interpolation is based on service as of June 30, 2012 divided by projected service at the member's Article 7 Retirement Date. The minimum retirement age is 59.
- Members with 10 or more years of contributory service on June 30, 2012 may choose to
 retire at their Article 7 Retirement Date if they continue to work and contribute until that date. If option
 is elected, the retirement benefit will be calculated using the benefits you have accrued as of June 30,
 2012, i.e., the member will accumulate no additional defined benefits after this date, but the benefit will
 be paid without any actuarial reduction.
- Effective July 1, 2015, members will be eligible to retire with full benefits at the earlier of their current RIRSA date described in bullets #1 #3 above or upon the attainment of age 65 with 30 years of service, age 64 with 31 years of service, age 63 with 32 years of service, or age 62 with 33 years of service.
- A member who is within five years of reaching their retirement eligibility date, described in this section, and has 20 or more years of service, may elect to retire at any time with a reduced benefit. The reduction is 9% for year 1, 8% for year 2, and 7% for each year thereafter.



Vesting Eligibility

As of July 1, 2012, 5 years of contributing service to the defined benefit pension plan.

Disability Eligibility

5 years of service.

Medical Coverage

- Healthmate Coast to Coast plan until age 65
- Extended Health Care Benefit Plan Plan 65 (we rely upon data provided by the client to determine who is eligible for post-65 coverage)
 - Not available for members hired after July 1, 2012
- Medicare Part B reimbursement not available

Cost Share

	Premium	Extended
Retirement Date	Cost Share	Benefits
Prior to 6/30/2004	0%	3%
7/1/2004 – 6/30/2008	10%	3%
7/1/2008 – 6/30/2010	12.5%	3%
7/1/2010 – 6/30/2012	20%	3%
After 7/1/2012	20%	N/A

The cost share at the time of retirement remains in place until age 65.

Life Insurance

\$50,000 coverage until age 65.

Schools Support Staff

Retirement Eligibility

- Members with less than 5 years of contributory service as of June 30, 2012 and members hired on or after June 30, 2012 are eligible for retirement on or after their Social Security normal retirement age.
- Members who had at least five years of contributory service as of June 30, 2012 will be eligible for retirement at an individually determined age. This age is the result of interpolating between the member's prior Retirement Date, described in bullet #6 below, and the retirement age applicable to members hired after June 30, 2012 in bullet #1 above. The interpolation if based on service as of June 30, 2012 divided by projected service at the member's prior Retirement Date. The minimum retirement age is 59.
- Members with 10 or more years of contributory service on June 30, 2012 may choose to retire at their prior Retirement Date if they continue to work and contribute until that date.
- Effective July 1, 2015, members will be eligible to retire at the earlier of above or upon reaching age 65 with 30 years of service, age 64 with 31 years of service, age 63 with 32 years of service or age 62 with 33 years of service.
- A member who is within five years of reaching their retirement eligibility date and has 20 or more years of service, may elect to retire at any time with an actuarially reduced benefit.
- Prior to July 1, 2012, members were eligible for retirement on or after age 58 if they had credit for 10 or more years of service, or at any age if they had credit for at least 30 years of service. Members eligible to retire before July 1, 2012 were not impacted by the changes to retirement eligibility above.



Vesting Eligibility

As of July 1, 2012, 5 years of contributing service to the defined benefit pension plan.

Disability Eligibility

5 years of service.

Medical Coverage

- Healthmate Coast to Coast plan until age 65
- Extended Health Care Benefit Plan Plan 65 (we rely upon data provided by the client to determine who is eligible for post-65 coverage)
 - Not available for members hired after July 1, 2012
- Medicare Part B reimbursement for those that retired before July 1, 2012 and had 15 or more years of service.

Cost Share

Retirement Date	Premium Cost Share	Extended Benefits
Prior to 6/30/2006	0%	3%
7/1/2006 – 6/30/2007	3%	4%
7/1/2007 – 6/30/2008	5%	5%
7/1/2008 - 6/30/2009	7%	5%
7/1/2009 – 6/30/2012	10%	5%
7/1/2012 – 6/30/2013	12%	5%
7/1/2013 - 6/30/2016	15%	5%
7/1/2016 – 6/30/2017	15.5%	5%
7/1/2017 – 6/30/2019	16%	5%
After 7/1/2019	20%	5%

Para-educators who retire pay 50% of premium as cost share.

Life Insurance

\$50,000 coverage until age 65.

General Employees

Retirement Eligibility

- Members with less than 5 years of contributory service as of June 30, 2012 and members hired on or after June 30, 2012 are eligible for retirement on or after their Social Security normal retirement age.
- Members who had at least five years of contributory service as of June 30, 2012 will be eligible for retirement at an individually determined age. This age is the result of interpolating between the member's prior Retirement Date, described in bullet #6 below, and the retirement age applicable to members hired after June 30, 2012 in bullet #1 above. The interpolation if based on service as of June 30, 2012 divided by projected service at the member's prior Retirement Date. The minimum retirement age is 59.
- Members with 10 or more years of contributory service on June 30, 2012 may choose to retire at their prior Retirement Date if they continue to work and contribute until that date.
- Effective July 1, 2015, members will be eligible to retire at the earlier of above or upon reaching age 65 with 30 years of service, age 64 with 31 years of service, age 63 with 32 years of service or age 62 with 33 years of service.

Retirement Eligibility (cont.)

- A member who is within five years of reaching their retirement eligibility date and has 20 or more years of service, may elect to retire at any time with an actuarially reduced benefit.
- Prior to July 1, 2012, members were eligible for retirement on or after age 58 if they had credit for 10 or more years of service, or at any age if they had credit for at least 30 years of service. Members eligible to retire before July 1, 2012 were not impacted by the changes to retirement eligibility above.
- For all NEA employees retiring effective July 1, 2019 and thereafter, City health insurance coverage shall no longer be provided after retirement.

Vesting Eligibility

As of July 1, 2012, 5 years of contributing service.

Disability Eligibility

5 years of service.

Medical Coverage

- Healthmate DED 250 (pay the difference if opting for a more expensive plan)
- Blue Cross Plan 65 upon reaching the age of 65 and plan supplementation will be provided at no cost to retirees
- For AFSCME and NEA retired on or after June 1, 2009, no post-65 benefit.
- For all others, retiree and spouse are covered for lifetime.

Cost Share

- Retired on or after July 1, 2009, 3.0% of the premium (April 9, 2009 for NEA)
- Retired on or after January 1, 2017, 5.0% of the premium (January 1, 2016 for NEA)
- Non-union Municipal Supervisory employees who retire between July 1, 2004 and July 31, 2010 pay 10% of the premium as a cost share. Those retired on or after August 1, 2010 pay 15% of the premium as a cost share. Those retired before July 1, 2004 do not incur a cost.