



THE CITY OF NEW HAVEN CITY EMPLOYEES' RETIREMENT FUND

ACTUARIAL VALUATION REPORT

JULY 1, 2020



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## Executive Summary

	July 1, 2020	July 1, 2018
<b>Number of members</b>		
Active employees	880	940
Terminated vested members	19	22
Vested in employee contributions only	67	44
Retired, disabled and beneficiaries	1,119	1,102
Total	2,085	2,108
<b>Covered employee payroll</b>	51,478,494	51,106,803
<b>Average plan salary</b>	58,498	54,369
<b>Actuarial present value of future benefits</b>	543,616,777	498,224,758
<b>Actuarial accrued liability</b>	497,499,570	459,960,594
<b>Plan assets</b>		
Market value of assets	179,036,391	169,713,789
Actuarial value of assets	181,827,946	178,553,006
<b>Unfunded accrued liability</b>	315,671,624	281,407,588
<b>Funded ratio</b>	36.5%	38.8%
<b>Actuarially determined employer contribution (ADEC)</b>		
Fiscal year ending	2022	2020
ADEC	25,528,125	22,221,339
Fiscal year ending	2023	2021
ADEC	26,166,328	22,665,766



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

$$\text{Ultimate cost} = \text{Benefits Paid} + \text{Expenses Incurred} - \text{Investment Return} - \text{Employee Contributions}$$

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 contributions for the fiscal years ending 2022 and 2023.

### 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

The mortality assumption was updated from RP-2014 with Scale MP-2018 to Pub-2010 with Scale MP-2020.

The investment return assumption was decreased from 7.75% to 7.25%.

The expected COLA increase assumption was updated to be based on a participant's tier.

The COLA buyout assumption was increased from 0% to 30%.

The net impact of the assumption changes was an increase in the unfunded accrued liability and ADEC of \$33,841,000 and \$2,311,000, respectively.

### Cash Contribution for Fiscal Years Ending 2022 and 2023

The City cost is:	2022 Fiscal Year	2023 Fiscal Year
	\$25,528,125	\$26,166,328

### Liability Experience During Period Under Review

The plan experienced a net actuarial gain on liabilities of approximately \$12,730,000 since the prior valuation.



### Asset Experience During Period Under Review

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

	2019 Fiscal Year	2020 Fiscal Year
Market Value Basis	5.6%	7.0%
Actuarial Value Basis	3.5%	5.1%

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.

### Assessment and Measurement of Risks

#### Financial Significance of Plan

It is important to understand the size of the pension plan compared to the size of the sponsor of that plan. Additional pension contributions may be required at inopportune times for the plan sponsor. In general, a plan sponsor with assets or revenue that are much larger than the liabilities in its pension plans will be better able to withstand increases in required pension contributions.

#### Plan Maturity Measurements

	July 1, 2020	July 1, 2018
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Actuarial accrued liability for members currently in pay status as a percentage of the total actuarial accrued liability	69.9%	67.1%
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- A lower percentage results in greater volatility as the investment return assumption changes.
- A higher percentage results in greater demand on cash due to a proportionately higher percentage of benefits being in pay status.

	July 1, 2020
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Duration of benefit payments using an investment rate of return of 7.25%	11.3 years
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- A higher duration will occur if the plan's percentage of members in pay status decreases. A plan with a higher duration will have a liability that is more sensitive to changes in the investment return assumption.



	July 1, 2020	July 1, 2018
Ratio of market value of assets to covered payroll	3.5	3.3

- A higher ratio is more typical of relatively mature plans with a larger percentage of inactive members and may cause more potential contribution volatility as pension fund assets fluctuate.

	July 1, 2020
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Ratio of market value of assets to expected benefit payments	5.2
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- A plan with a high percentage of members in pay status can have a low ratio. As the ratio decreases, liquidity risk increases, and may indicate the need to review (and potentially adjust) the plan sponsor's funding policy contribution.

## Risks to Assess

### Overriding Minimum Contribution

	Fiscal Year Ending 2022
Actuarially determined employer contribution (ADEC)	25,528,125
Overriding minimum contribution (OMC)*	36,412,229
Surplus (deficit) - ADEC vs. OMC	(10,884,104)

- A deficit suggests that a plan's current funding policy contribution approach may result in little to no progress being made towards: (1) reducing the plan's unfunded liability; and (2) increasing the plan's funded ratio in the near-term.

\* As defined in "Public Pension Plan Funding Policy" (Society of Actuaries, 2010).

### Estimated Impact of a 5% Reduction in Market Value of Assets

	Fiscal Year Ending 2022	Fiscal Year Ending 2023
Increase in actuarially determined employer contribution (ADEC)	134,375	137,735

- Plans would generally be subject to a larger amortization payment if the market value of assets were 5% smaller. As a result, the ADEC would generally be higher for up to 22 years.

Due to the asset smoothing method, the ADEC will additionally increase by the same amount in each of the next few years. Each of these additional contributions will continue for up to 22 years.



## Historical Results

<b>Valuation Year Beginning</b>	<b>Investment Return Assumption</b>	<b>Annual Effective Rate of Return on Market Value of Assets</b>	<b>Market Value of Assets as a % of Actuarial Accrued Liability</b>	<b>Benefit Payments as a % of Market Value of Assets</b>
2020	7.25%	N/A	36.0%	N/A
2019	N/A	7.0%	N/A	19.2%
2018	7.75%	5.6%	36.9%	18.9%
2017	N/A	7.9%	N/A	19.3%
2016	7.75%	8.7%	33.2%	19.5%



## Certification

This report presents the results of the July 1, 2020 Actuarial Valuation for The City of New Haven City Employees' Retirement Fund (the Plan) for the purpose of estimating the funded status of the Plan and determining the Actuarially Determined Employer Contribution (ADEC) for the fiscal years ending June 30, 2022 and June 30, 2023. 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.

In our opinion, the actuarial assumptions used in this report are reasonably related to the experience of the Plan and to reasonable long-term expectations. These assumptions are based on an experience study covering the period 2014 through 2020.

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.

Richard S. Sych, FSA, FCA, MAAA,  
Enrolled Actuary 20-05065

Robert P. Lessard, ASA, FCA, MAAA,  
Enrolled Actuary 20-08801

March 3, 2021



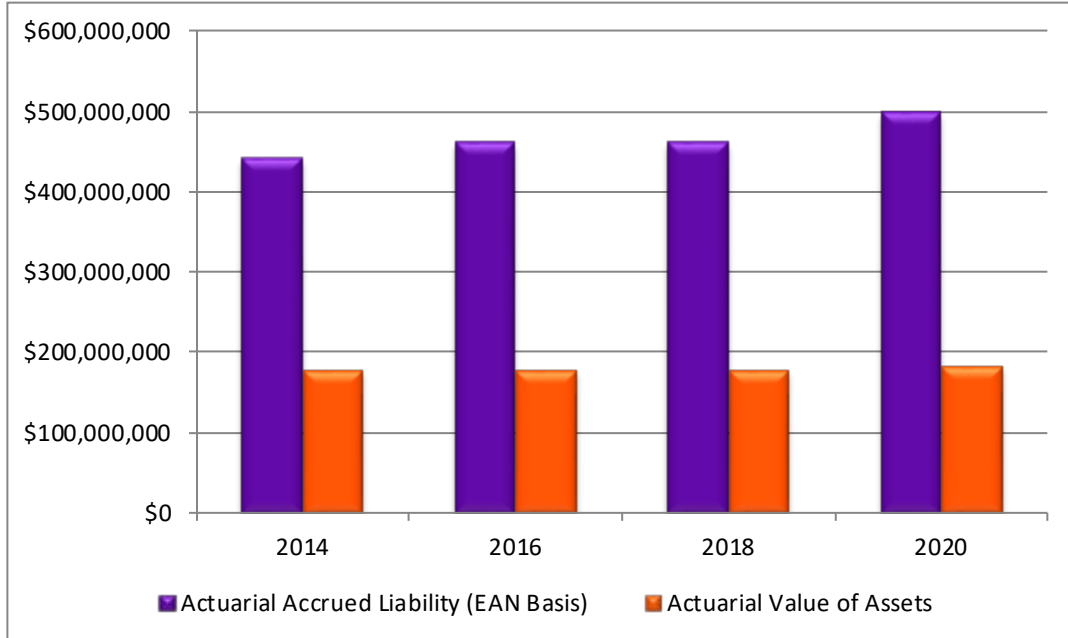


## Development of Unfunded Accrued Liability and Funded Ratio

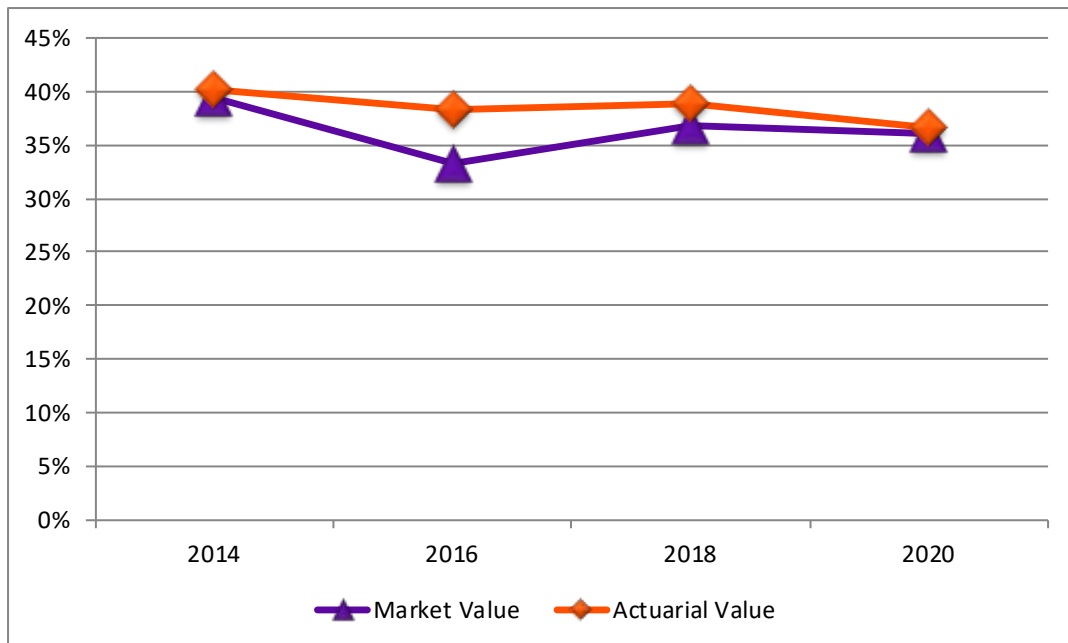
	July 1, 2020	July 1, 2018
Actuarial accrued liability for inactive members		
Retired, disabled and beneficiaries	\$347,689,244	\$308,814,165
Terminated vested members	1,540,376	1,832,648
Due refund of employee contributions only	509,019	425,775
Total	349,738,639	311,072,588
Actuarial accrued liability for active employees	147,760,931	148,888,006
Total actuarial accrued liability	497,499,570	459,960,594
Actuarial value of assets	181,827,946	178,553,006
Unfunded accrued liability	315,671,624	281,407,588
Funded ratio	36.5%	38.8%



### Actuarial Accrued Liability vs. Actuarial Value of Assets



### Funded Ratio



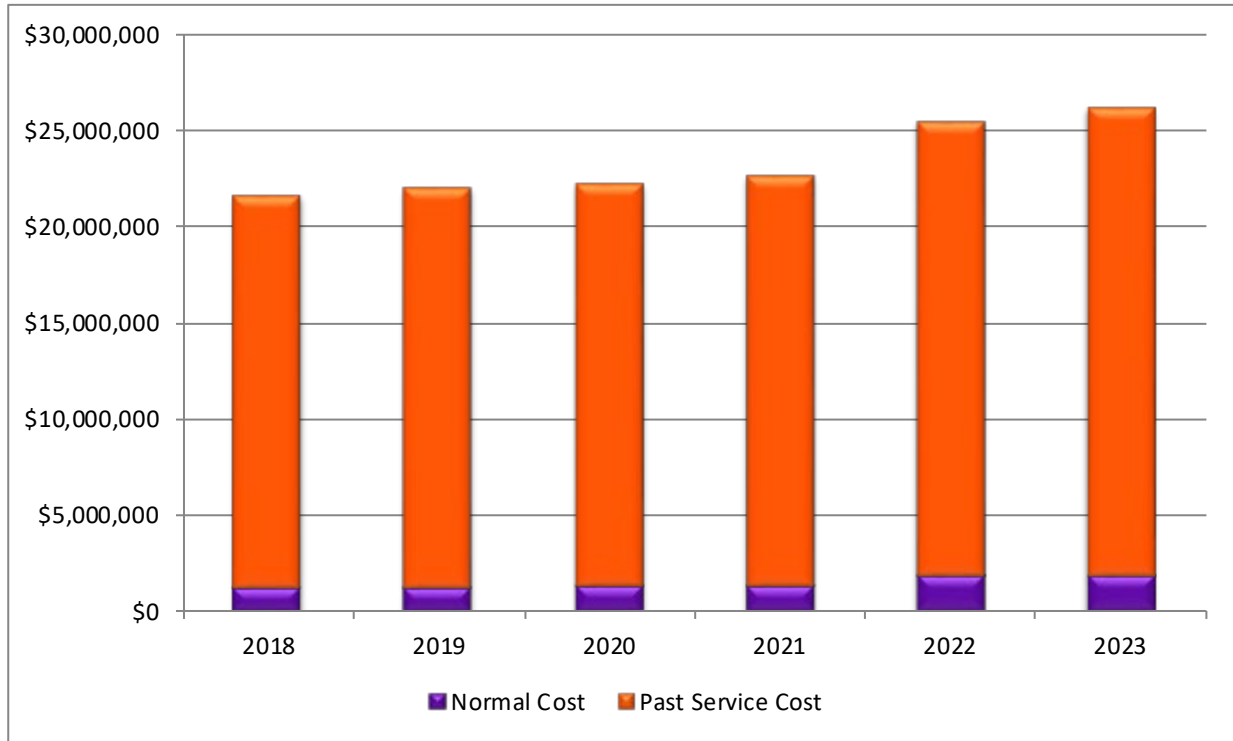


## Determination of Normal Cost and Actuarially Determined Employer Contribution

	July 1, 2020		July 1, 2018	
	Cost	Percent of payroll	Cost	Percent of payroll
Gross normal cost	\$6,565,446	12.2%	\$5,887,225	10.9%
Estimated employee contributions	(5,062,670)	-9.4%	(4,876,183)	-9.0%
Estimated administrative expenses	288,131	0.5%	255,000	0.4%
City's normal cost	1,790,907	3.3%	1,266,042	2.3%
Amortization of unfunded accrued liability	23,114,581	42.8%	20,519,584	38.0%
Contribution before adjustment as of the valuation date	24,905,488	46.1%	21,785,626	40.3%
Estimated valuation year payroll for actives not yet at 100% assumed retirement age	53,992,680		54,018,127	
Fiscal year ending	2022		2020	
Adjustment for interest and inflation	622,637		435,713	
Actuarially determined employer contribution	25,528,125		22,221,339	
Fiscal year ending	2023		2021	
Adjustment for interest and inflation	638,203		444,427	
Actuarially determined employer contribution	26,166,328		22,665,766	



### Actuarially Determined Employer Contribution





## Valuation Contribution Change

Valuation Contribution Change	
Contribution before adjustment as of July 1, 2018	\$21,785,626
Increase due to actuarial return on assets	\$927,692
Decrease due to liability gains	(969,273)
Expected increase in normal cost	51,148
Expected increase in amortization of unfunded accrued liability	828,991
Increase due to assumption or method changes	2,310,686
Miscellaneous decrease	<u>(29,382)</u>
Total increase in contribution	<u>3,119,862</u>
Contribution before adjustment as of July 1, 2020	24,905,488



## Development of Asset Values

Summary of Fund Activity		
	Market Value	Actuarial Value
<b>1. Beginning value of assets July 1, 2019</b>		
Trust assets	\$174,010,848	\$179,667,954
<b>2. Contributions</b>		
City contributions during year	22,256,181	22,256,181
Employee contributions during year	4,972,298	4,972,298
Total for plan year	27,228,479	27,228,479
<b>3. Disbursements</b>		
Benefit payments during year	33,394,148	33,394,148
Administrative expenses during year	281,202	281,202
Total for plan year	33,675,350	33,675,350
<b>4. Net investment return</b>		
Interest and dividends	2,058,713	N/A
Realized and unrealized gain / (loss)	10,071,716	N/A
Expected return	N/A	12,661,736
Recognized gain / (loss)	N/A	(4,054,873)
Required adjustment due to corridor	N/A	0
Reversal of prior year required adjustment	N/A	0
Investment-related expenses	(658,015)	N/A
Total for plan year	11,472,414	8,606,863
<b>5. Ending value of assets July 1, 2020</b>		
Trust assets: (1) + (2) - (3) + (4)	179,036,391	181,827,946
<b>6. Approximate rate of return</b>	7.0%	5.1%



**Relationship of Actuarial Value to Market Value**

1. Market value 7/1/2020	\$179,036,391
2. Gain / (loss) not recognized in actuarial value 7/1/2020	<u>(2,791,555)</u>
3. Preliminary actuarial value 7/1/2020: (1) - (2)	181,827,946
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)	101.6%
5. Gain / (loss) recognized for corridor minimum / maximum	N/A
6. Actuarial value 7/1/2020 after corridor minimum / maximum: (3) + (5)	181,827,946
7. Actuarial value as a percentage of market value: (6) ÷ (1)	101.6%

**Development of Market Value Gain / Loss for 2019-2020 Plan Year**

1. Market value 7/1/2019	\$174,010,848
2. City contributions	22,256,181
3. Employee contributions	4,972,298
4. Benefit payments	33,394,148
5. Administrative expenses	281,202
6. Expected return at 7.75%	<u>12,661,736</u>
7. Expected value 7/1/2020: (1) + (2) + (3) - (4) - (5) + (6)	180,225,713
8. Market value 7/1/2020	<u>179,036,391</u>
9. Market value gain / (loss) for 2019-2020 plan year: (8) - (7)	(1,189,322)

**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	(\$17,110,784)	(\$13,688,628)	(\$3,422,156)	(\$17,110,784)	\$0
2016-2017	1,515,587	909,351	303,117	1,212,468	303,119
2017-2018	246,552	98,620	49,310	147,930	98,622
2018-2019	(3,736,398)	(747,280)	(747,280)	(1,494,560)	(2,241,838)
2019-2020	(1,189,322)	0	<u>(237,864)</u>	(237,864)	<u>(951,458)</u>
Total			(4,054,873)		(2,791,555)



<b>Summary of Fund Activity</b>		
	<b>Market Value</b>	<b>Actuarial Value</b>
<b>1. Beginning value of assets July 1, 2018</b>		
Trust assets	\$169,713,789	\$178,553,006
<b>2. Contributions</b>		
City contributions during year	22,140,491	22,140,491
Employee contributions during year	4,991,355	4,991,355
Total for plan year	27,131,846	27,131,846
<b>3. Disbursements</b>		
Benefit payments during year	32,085,119	32,085,119
Administrative expenses during year	318,341	318,341
Total for plan year	32,403,460	32,403,460
<b>4. Net investment return</b>		
Interest and dividends	2,777,458	N/A
Realized and unrealized gain / (loss)	7,465,203	N/A
Expected return	N/A	13,305,071
Recognized gain / (loss)	N/A	(6,918,509)
Required adjustment due to corridor	N/A	0
Reversal of prior year required adjustment	N/A	0
Investment-related expenses	(673,988)	N/A
Total for plan year	9,568,673	6,386,562
<b>5. Ending value of assets July 1, 2019</b>		
Trust assets: (1) + (2) - (3) + (4)	174,010,848	179,667,954
<b>6. Approximate rate of return</b>	5.6%	3.5%





**Relationship of Actuarial Value to Market Value**

1. Market value 7/1/2019	\$174,010,848
2. Gain / (loss) not recognized in actuarial value 7/1/2019	<u>(5,657,106)</u>
3. Preliminary actuarial value 7/1/2019: (1) - (2)	179,667,954
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)	103.3%
5. Gain / (loss) recognized for corridor minimum / maximum	N/A
6. Actuarial value 7/1/2019 after corridor minimum / maximum: (3) + (5)	179,667,954
7. Actuarial value as a percentage of market value: (6) ÷ (1)	103.3%

**Development of Market Value Gain / Loss for 2018-2019 Plan Year**

1. Market value 7/1/2018	\$169,713,789
2. City contributions	22,140,491
3. Employee contributions	4,991,355
4. Benefit payments	32,085,119
5. Administrative expenses	318,341
6. Expected return at 7.75%	<u>13,305,071</u>
7. Expected value 7/1/2019: (1) + (2) + (3) - (4) - (5) + (6)	177,747,246
8. Market value 7/1/2019	<u>174,010,848</u>
9. Market value gain / (loss) for 2018-2019 plan year: (8) - (7)	(3,736,398)

**Recognition of Gain / Loss in Actuarial Value**

Year	(a) Gain / (loss)	(b) Total recognized as of 7/1/2018	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 7/1/2019: (b) + (c)	(e) Not recognized as of 7/1/2019: (a) - (d)
2014-2015	(\$15,507,487)	(\$12,405,988)	(\$3,101,499)	(\$15,507,487)	\$0
2015-2016	(17,110,784)	(10,266,471)	(3,422,157)	(13,688,628)	(3,422,156)
2016-2017	1,515,587	606,234	303,117	909,351	606,236
2017-2018	246,552	49,310	49,310	98,620	147,932
2018-2019	(3,736,398)	0	<u>(747,280)</u>	(747,280)	<u>(2,989,118)</u>
Total			(6,918,509)		(5,657,106)

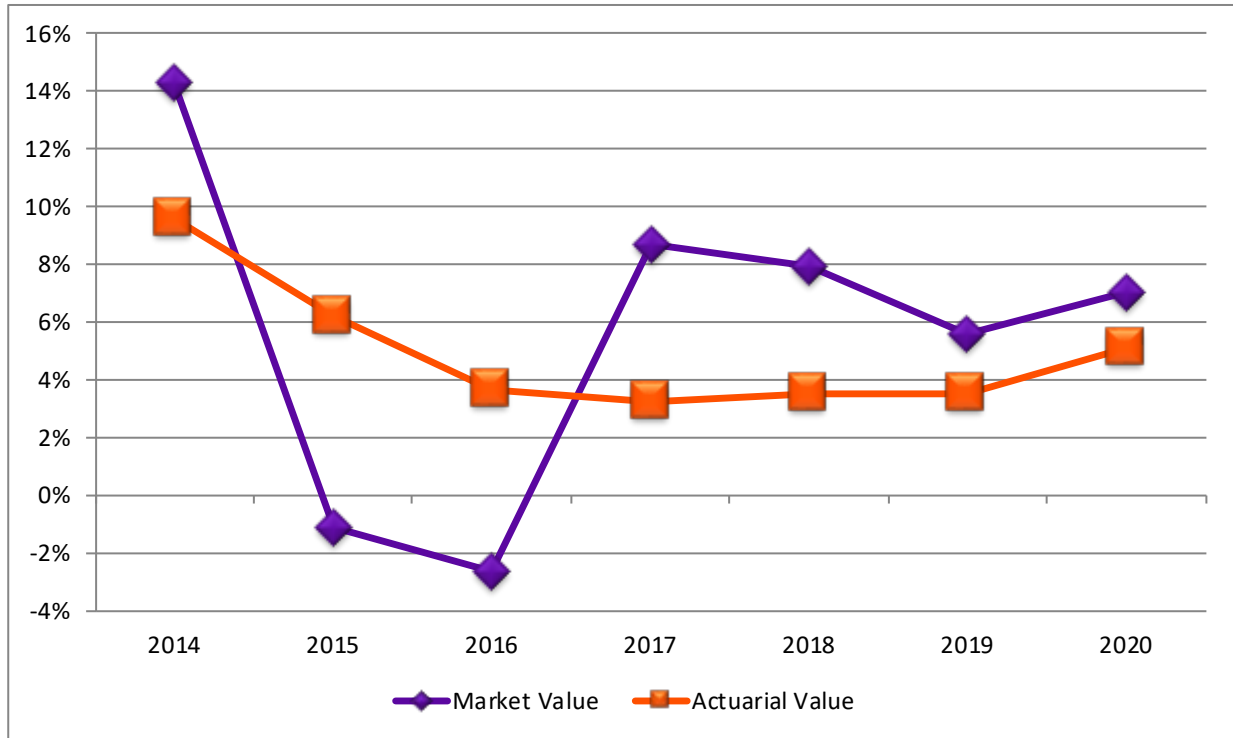


<b>Rate of Return on Market Value of Assets</b>				
<b>Period Ending</b>	<b>Average Annual Effective Rate of Return</b>			
	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>
<b>June 30</b>				
2011	18.1%	0.2%	2.5%	4.3%
2012	-0.4%	9.3%	-0.4%	4.5%
2013	7.2%	8.0%	1.4%	4.9%
2014	14.3%	6.9%	9.8%	4.9%
2015	-1.1%	6.6%	7.3%	3.9%
2016	-2.6%	3.2%	3.3%	2.9%
2017	8.7%	1.5%	5.1%	2.3%
2018	7.9%	4.5%	5.2%	3.3%
2019	5.6%	7.4%	3.6%	6.7%
2020	7.0%	6.8%	5.2%	6.3%

<b>Rate of Return on Actuarial Value of Assets</b>				
<b>Period Ending</b>	<b>Average Annual Effective Rate of Return</b>			
	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>
<b>June 30</b>				
2011	7.4%	0.3%	N/A	N/A
2012	-1.6%	-0.5%	N/A	N/A
2013	0.3%	2.0%	-0.1%	N/A
2014	9.6%	2.7%	1.6%	N/A
2015	6.2%	5.3%	4.3%	N/A
2016	3.7%	6.4%	3.5%	N/A
2017	3.3%	4.4%	4.6%	N/A
2018	3.5%	3.5%	5.2%	2.5%
2019	3.5%	3.4%	4.0%	2.8%
2020	5.1%	4.0%	3.8%	4.0%



### Actual Rate of Return on Assets





## Target Allocation and Expected Rate of Return July 1, 2020

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*	Weighting
US Large Cap Equity	20.00%	4.24%	0.85%
US Small Cap Equity	7.50%	4.61%	0.35%
Emerging Markets Equity Unhedged	7.50%	5.10%	0.38%
AC World ex-US All Cap Equity Unhedged	20.00%	4.36%	0.87%
US High Yield Fixed Income	5.00%	3.12%	0.16%
Multi- Asset Credit	5.00%	3.05%	0.15%
Core Plus Fixed Income	5.00%	1.81%	0.09%
Emerging Market Government FI - Hard Currency	5.00%	3.25%	0.16%
Non-US Real Estate - Private	5.00%	5.43%	0.27%
Private Equity - Venture Cap	5.00%	7.39%	0.37%
Master Limited Partnerships	5.00%	4.65%	0.23%
Hedge Funds - Macro	5.00%	4.07%	0.20%
Natural Resources - Listed	5.00%	4.50%	0.23%
	100.00%		4.31%
Long-Term Inflation Expectation			2.50%
Long-Term Expected Nominal Return			6.81%

*\*Long-Term Real Returns are provided by Raymond James. The returns are geometric means.*

The long-term expected rate of return on pension 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 pension 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 7.25% 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	23,114,581	22	315,671,624



## Member Data

The data reported by the Plan Sponsor for this valuation includes 880 active employees who met the Plan's minimum age and service requirements as of July 1, 2020.

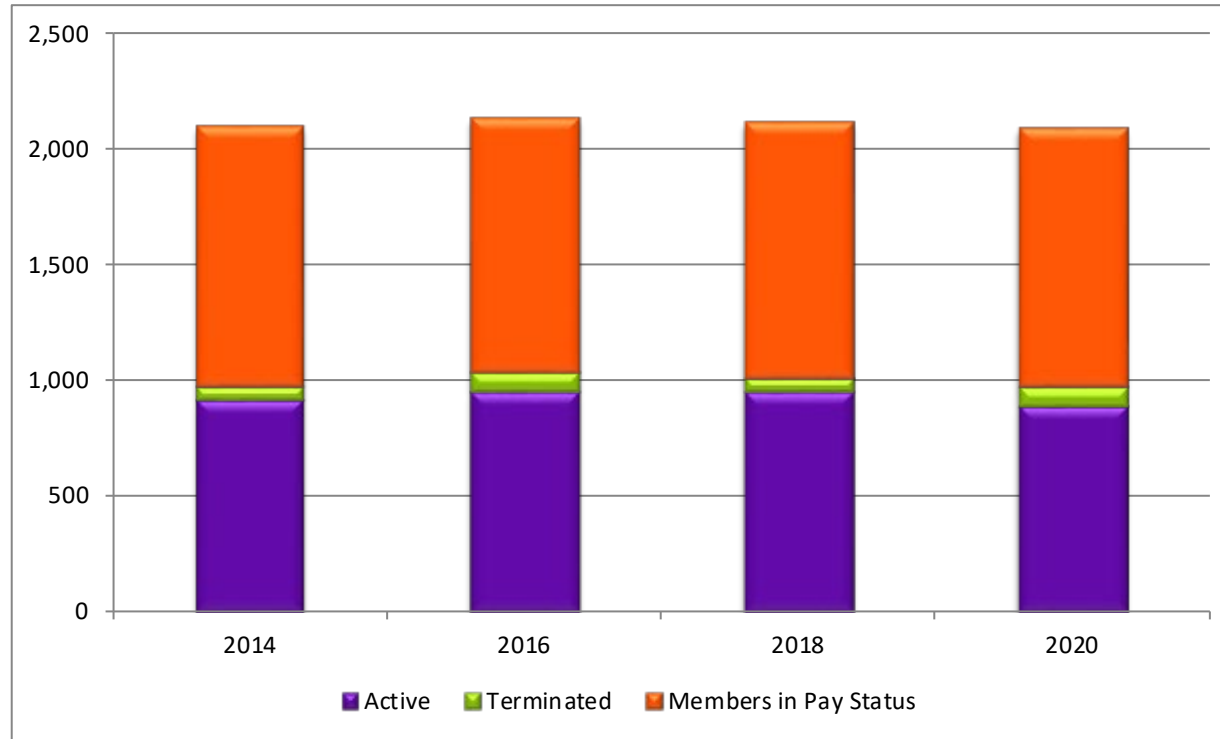
Member Data					
	Active	Terminated vested	Due refund of contributions	Members in pay status	Total
<b>Total members July 1, 2018</b>	940	22	44	1,102	2,108
Adjustments	+1	-1	+8	-1	+7
Retirements	-91	-6	N/A	+97	0
Disabilities	-3	N/A	N/A	+3	0
Terminations					
Vested	-4	+4	N/A	N/A	0
Lump sum payments	-36	0	-7	N/A	-43
Due contributions only	-15	N/A	+15	N/A	0
Deaths					
With death benefit	-1	0	0	-22	-23
Without death benefit	-6	0	0	-87	-93
Transfers	0	0	0	N/A	0
Rehires	+4	0	0	N/A	+4
New beneficiaries	N/A	N/A	N/A	+27	+27
New entrants	+91	N/A	+7	N/A	+98
<b>Total members July 1, 2020</b>	880	19*	67	1,119**	2,085

\* Includes 1 alternate payee eligible for future benefit

\*\* Includes 7 alternate payees receiving benefits



### Member Counts by Status





<b>Member Data</b>				
	<b>Active</b>	<b>Terminated vested</b>	<b>Due refund of contributions</b>	<b>Members in pay status</b>
<b>Average age</b>				
July 1, 2018	50.1	46.2	43.7	72.4
July 1, 2020	50.0	52.4	43.6	72.4
<b>Average service</b>				
July 1, 2018	14.2	N/A	N/A	N/A
July 1, 2020	14.1	N/A	N/A	N/A
<b>Covered employee payroll</b>				
July 1, 2018	\$51,106,803	N/A	N/A	N/A
July 1, 2020	51,478,494	N/A	N/A	N/A
<b>Total annual benefits</b>				
July 1, 2018	N/A	\$262,433	N/A	\$30,552,127
July 1, 2020	N/A	244,401	N/A	32,562,125





### Active Member Count by Age and Years of Service

Attained age	Completed Years of Credited Service										All years	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and over		
Under 25	2	5										7
25 to 29	13	34	6									53
30 to 34	6	38	17	5								66
35 to 39	6	28	20	13	3	2						72
40 to 44	3	18	15	15	27	15						93
45 to 49	5	24	11	20	17	26	3					106
50 to 54	2	23	20	20	26	43	12	6				152
55 to 59	3	25	11	16	20	48	10	10	2	1		146
60 to 64		8	8	9	17	34	11	5	6	3		101
65 to 69		8	4	3	7	13	8	11		4		58
70 & over			1	3	5	5	3	4	1	4		26
<b>All ages</b>	<b>40</b>	<b>211</b>	<b>113</b>	<b>104</b>	<b>122</b>	<b>186</b>	<b>47</b>	<b>36</b>	<b>9</b>	<b>12</b>		<b>880</b>



## 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 ten plan years. The following assumptions are reflected in this table:

- Retirements among active participants will occur at the valuation's assumed retirement date.
- Benefits will continue to accrue based on the current Plan.
- Plan salaries will increase in accordance with the valuation's assumption.
- Benefits will be paid monthly.
- Participants will receive the normal form of benefit.

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

Participant categories reflect status as of July 1, 2020.

Year	Active as of July 1, 2020	Retired and Terminated as of July 1, 2020	Total Benefit Payments
2020	\$1,793,000	\$32,828,000	\$34,621,000
2021	3,561,000	32,171,000	35,732,000
2022	5,208,000	31,977,000	37,185,000
2023	6,776,000	31,722,000	38,498,000
2024	8,249,000	31,418,000	39,667,000
2025	9,632,000	31,063,000	40,695,000
2026	10,996,000	30,652,000	41,648,000
2027	12,353,000	30,184,000	42,537,000
2028	13,661,000	29,673,000	43,334,000
2029	14,902,000	29,095,000	43,997,000



## Long Range Forecast

Projected Values as of the Valuation Date				Cash Flows Projected to the Following Fiscal Year				
Fiscal Year Ending	Market Value of Fund - Beginning of Fiscal Year	City Contribution (ADEC) *	Employee Contributions	Estimated Benefit Payments	Estimated Administrative Expense	Expected Net Cash Flow	Estimated Investment Earnings (@ 7.25%)	Market Value of Fund - End Fiscal Year
6/30/2021	\$179,036,391	<b>\$22,666,000</b>	\$5,063,000	\$34,621,000	\$288,000	(\$7,180,000)	\$13,405,000	\$185,261,000
6/30/2022	185,261,000	<b>25,528,000</b>	5,190,000	35,732,000	295,000	(5,309,000)	14,010,000	193,962,000
6/30/2023	193,962,000	<b>26,166,000</b>	5,320,000	37,185,000	302,000	(6,001,000)	14,635,000	202,596,000
6/30/2024	202,596,000	26,689,000	5,453,000	38,498,000	310,000	(6,666,000)	15,253,000	211,183,000
6/30/2025	211,183,000	27,223,000	5,589,000	39,667,000	318,000	(7,173,000)	15,873,000	219,883,000
6/30/2026	219,883,000	27,767,000	5,729,000	40,695,000	326,000	(7,525,000)	16,508,000	228,866,000
6/30/2027	228,866,000	28,322,000	5,872,000	41,648,000	334,000	(7,788,000)	17,166,000	238,244,000
6/30/2028	238,244,000	28,888,000	6,019,000	42,537,000	342,000	(7,972,000)	17,856,000	248,128,000
6/30/2029	248,128,000	29,466,000	6,169,000	43,334,000	351,000	(8,050,000)	18,588,000	258,666,000
6/30/2030	258,666,000	30,055,000	6,323,000	43,997,000	360,000	(7,979,000)	19,372,000	270,059,000
6/30/2031	270,059,000	30,656,000	6,481,000	44,586,000	369,000	(7,818,000)	20,222,000	282,463,000
6/30/2032	282,463,000	31,269,000	6,643,000	45,033,000	378,000	(7,499,000)	21,151,000	296,115,000
6/30/2033	296,115,000	31,894,000	6,809,000	45,326,000	387,000	(7,010,000)	22,178,000	311,283,000
6/30/2034	311,283,000	32,532,000	6,979,000	45,458,000	397,000	(6,344,000)	23,321,000	328,260,000
6/30/2035	328,260,000	33,183,000	7,153,000	45,429,000	407,000	(5,500,000)	24,602,000	347,362,000
6/30/2036	347,362,000	33,847,000	7,332,000	45,294,000	417,000	(4,532,000)	26,042,000	368,872,000
6/30/2037	368,872,000	34,524,000	7,515,000	45,008,000	427,000	(3,396,000)	27,663,000	393,139,000
6/30/2038	393,139,000	35,214,000	7,703,000	44,604,000	438,000	(2,125,000)	29,489,000	420,503,000
6/30/2039	420,503,000	35,918,000	7,896,000	44,092,000	449,000	(727,000)	31,545,000	451,321,000
6/30/2040	451,321,000	36,636,000	8,093,000	43,480,000	460,000	789,000	33,856,000	485,966,000

\* ADECs are projected at the 2% inflator rate after the last published ADEC. ADECs assume a 7.25% rate of return after 7/1/2020



## 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.

### Actuarial Cost Method

Changes in Actuarial Cost Method: None.

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

Normal Cost: 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.

Past Service Liability: 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). The amount is amortized over 22 years on a closed basis.

Experience Gains and Losses: 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 2.00% amortization increase rate was assumed.



## 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.)

- Investment rate of return
- Mortality
- COLA increase
- Payroll growth
- COLA buyout

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 expenses)

7.25% per year. (Prior: 7.75%)

### Inflation

2.50%.

This assumption is based on long term historical inflation numbers. While near term averages have been lower, we do not believe this trend will continue indefinitely and expect that there will be a reversion to the long term average.

### Salary increases

Age	Years of Service			
	< 1	1	2	3+
<=30	10.50%	8.25%	6.00%	3.75%
30	9.50%	7.50%	5.50%	3.50%
40	8.50%	6.75%	5.00%	3.25%
50	7.50%	6.00%	4.50%	3.00%
55	6.50%	4.75%	4.00%	2.75%
>=60	5.50%	4.50%	3.50%	2.50%

\* Implicit inflation assumption is 2.50%.

The actuarial assumption in regards to rates of salary increases shown above are based on the results of an actuarial experience study for the period July 1, 2014 through June 30, 2020.

### Overtime and longevity pay

Project actual total compensation with salary scale to expected retirement and compare with projected final budgeted pay.



## Mortality

Pub-2010 Public Retirement Plans Amount Weighted Mortality Tables for General Employees projected to the valuation date with Scale MP-2020.

Prior: RP-2014 Adjusted to 2006 Total Dataset Mortality Table projected to valuation date with Scale MP-2018, set forward one year.

## Mortality improvement

Projected to date of decrement using Scale MP-2020 (generational mortality).

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

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

The mortality assumption was updated to better reflect anticipated experience.

The change in assumption increased liabilities by approximately 4.0%.

## Retirement age

Age and service based table developed from 2014-2020 experience. The assumed rates of retirement are as follows:

Age	Years of Service				
	10	15	20	25	30+
45	0%	3%	5%	5%	5%
50	3%	3%	10%	10%	15%
55	5%	5%	10%	15%	20%
60	10%	10%	18%	18%	23%
65	25%	25%	25%	25%	30%
70	10%	10%	10%	10%	20%
75	35%	35%	35%	35%	50%
80	100%	100%	100%	100%	100%

The actuarial assumption in regards to rates of retirement shown above is based on the results of an actuarial experience study for the period 2014 through 2020.

## Termination prior to retirement

Age	Years of Service			
	< 1	1	2	3+
<=20	12.00%	12.00%	12.00%	12.00%
25	12.00%	12.00%	11.75%	11.00%
30	12.00%	11.00%	10.00%	8.60%
35	12.00%	11.00%	10.00%	6.60%
40	12.00%	11.00%	10.00%	6.00%
45	12.00%	11.00%	10.00%	5.00%
50	10.00%	9.00%	8.00%	5.00%
55	7.00%	6.50%	6.00%	5.00%
>=60	6.00%	5.50%	5.00%	4.50%

The actuarial assumption in regards to rate of termination shown above is based on the results of an actuarial experience study for the period 2014 through 2020.



### **Disability**

The assumed rates of disability are from the 1985 Pension Disability Table, Class 1 professional administrative, supervisory, sales and clerical occupations.

### **Administrative expenses**

The estimate is based on actual expenses paid from the trust in the prior year. Estimated expenses are added to annual budget estimates at the time of their preparation.

### **Cost of living increases**

Increases are assumed to average 2.1% per year for Tier 1 employees, 1.7% for Tier 2, Tier 3 and some Tier 4 employees, and 1.3% for the remaining Tier 4 employees.

Prior: Increases are assumed to average 2.3% per year for Tier 1 employees, 1.7% for Tier 2, Tier 3 and some Tier 4 employees, and 1.4% for the remaining Tier 4 employees.

The actuarial assumption shown above is based on the results of an actuarial experience study for the period 2014 through 2020.

The assumption was updated to better reflect anticipated experience.

This change in assumption decreased liabilities by approximately 1.0%.

### **Payroll growth**

2.50% per year.

(Prior: 2.00% per year.)

This assumption was updated to be consistent with the inflation assumption.

### **Percent of active employees married**

80% of male employees and 70% of female employees assumed married.

### **Spouse's age**

Husbands are assumed to be 3 years older than wives.

### **COLA buyout assumption**

30% of retiring employees are assumed to elect the COLA buyout upon retirement.

Prior: 0% of retiring employees are assumed to elect the COLA buyout upon retirement.

The actuarial assumption shown above is based on the results of an actuarial experience study for the period 2014 through 2020.

The assumption was updated to better reflect anticipated experience.

This change in assumption decreased liabilities by approximately 0.6%.



## 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.

### Effective Date

January 1, 1938 and dates of subsequent amendments.

### Plan Year

July 1 through June 30.

### Employees Covered

General Fund or Water Pollution Control Authority full time employees or full time elected or appointed officers if,

1. hired before age 55 (60 for some employee groups);
2. not receiving benefits from or eligible for participation in any other pension plan of the City or the State of Connecticut; and
3. makes employee contributions.

Coverage is automatic for such full time employees.

### Credited Service

Employment with the City prior to January 1, 1938; employment with the City after January 1, 1938 during which time employee contributions were made.

### Form of Benefit Payment

Life annuity with a 50% survivor benefit for service pensioners and disabled pensioners.

### Non-Occupational Disability

Payable (after 10 years of credited service) upon medical proof of "permanently disabled from performing duties of the nature required by his job". Benefit is equal to the service retirement benefit with a minimum equal to 50% (or lower percentage for members hired after age 40) of the disabled member's rate of pay at time of disability. Benefits are subject to reductions for portions of any earnings received while disabled.

Continuance of benefits are subject to periodic medical examinations.

### Occupational Disability

Same as non-occupational disability except there is no service requirement if disability arises "out of and in the course of employment". Disability benefits are reduced by weekly Worker's Compensation payments.

### Survivor Benefits

The benefit, payable to a qualified spouse or the qualified children of members with at least 10 years of credited service, is equal to either 50% of the benefit to which the member would have been entitled if he was approved for a permanent disabled pension on the date of his death, or 50% of the benefit the deceased member actually was receiving on his date of death. The minimum benefit, subject to only a six month service requirement, is set forth in a table based on the number of qualified survivors and the member's "highest average pay". The maximum monthly benefit in this table for average annual pay of \$16,800 or more, amounts to \$265, \$510 and \$800 respectively when there are one, two or three or more qualified survivors. (Prior to July 1, 1990 the highest average annual pay was \$12,000 which generated maximum survivors' benefits of \$225, \$430 and \$600 respectively.)





### **Death Benefits**

If the accumulated employee contributions exceed the benefit payments made to a member and/or his survivors, the difference will be paid to the appropriate beneficiary, legal representative or estate in a lump sum.

### **Termination Benefits**

100% of the accrued normal retirement benefit will be payable at age 65 for members who have completed 10 years of credited service (previously disabled members who have recovered from their disability and have not returned to work need not satisfy this 10 years of credited service requirement) and have not elected to withdraw their accumulated employee contributions. (Prior to July 1, 1980 previously disabled members had to satisfy the 10 years of credited service requirement.)

All other terminating members receive their accumulated contributions without interest in a lump sum. After March 31, 1991, members who have completed 10 years of credited service and who elect to receive their accumulated contributions instead of their accrued normal retirement benefit will also receive interest on their accumulated contributions at the rate of 3% compounded annually.



## Summary of Plan Provisions – by Union Groups 3144, 884, 71 and 424

PROVISIONS FOR:	<u>3144- Supervisors</u>	<u>884 Clerical</u>	<u>71 Public Works (CILU/CIPU)</u>	<u>424 Public Works</u>
<b>Contract Ratification Date</b> (Tiers only apply to those that retired after this date)	July 1, 2013	September 9, 2012	December 6, 2013	December 3, 2014
<b>Tier 1</b>	As of July 1, 2013, >=20 years of cred svc	As of July 1, 2010, >=20 years of cred svc	As of July 1, 2010, >=20 years of cred svc	As of July 1, 2010, >=20 years of cred svc
<b>Tier 2</b>	As of July 1, 2013, >=10 but <20 years of cred svc	As of July 1, 2010, >=10 but <20 years of cred svc	As of July 1, 2010, >=10 but <20 years of cred svc	As of July 1, 2010, >=10 but <20 years of cred svc
<b>Tier 3</b>	As of July 1, 2013, <10 years of cred svc	As of July 1, 2010, <10 years of cred svc	As of July 1, 2010, <10 years of cred svc	As of July 1, 2010, <10 years of cred svc
<b>Tier 4</b>			Hired after June 30, 2013	Hired after December 3, 2014
<b>Employee Contributions</b>	9.0% - as of July 1, 2013 10.0% - as of July 1, 2014	9.0% - as of July 1, 2014	8.5% - as of July 1, 2013 9.0% - as of July 1, 2014	9.0%
<b>Service Retirement Date</b>	Age 65 with 10 or more years as of July 1, 2013 or Rule of 80 with no minimum age (Tiers 1 and 2). With less than 10 years as of July 1, 2013, Rule of 85 with minimum age 62 (Tier 3).	Age 65 with 10 or more years as of July 1, 2010 or Rule of 80 with no minimum age (Tiers 1 & 2). With less than 10 years as of July 1, 2010, Rule of 85 with minimum age 62 (Tier 3).	Age 65 with 10 or more years as of July 1, 2010 or Rule of 80 with no minimum age (Tiers 1 & 2). With less than 10 years as of July 1, 2010, Rule of 85 with minimum age 62 (Tiers 3 & 4).	Age 65 with 10 or more years as of July 1, 2010 or Rule of 80 with no minimum age (Tiers 1 & 2). With less than 10 years as of July 1, 2010, Rule of 85 with minimum age 62 (Tiers 3 & 4).
<b>Highest Average Pay</b>	Average rate of pay or total earnings if greater, for the five years of service producing the highest average. After March 31, 1991, highest average pay will be subject to a minimum of budgeted salary as of date of retirement.	Average rate of pay (Tiers 2 & 3) or total earnings if greater (Tier 1), for the five years of service producing the highest average. After March 31, 1991, highest average pay will be subject to a minimum of budgeted salary as of date of retirement.	Average rate of pay (Tiers 3 & 4) or total earnings if greater (Tiers 1 & 2), for the five years of service producing the highest average. After March 31, 1991, highest average pay will be subject to a minimum of budgeted salary as of date of retirement.	Average rate of pay (Tiers 3 & 4) or total earnings if greater (Tiers 1 & 2), for the five years of service producing the highest average. After March 31, 1991, highest average pay will be subject to a minimum of budgeted salary as of date of retirement.



<b>PROVISIONS FOR:</b>	<b><u>3144- Supervisors</u></b>	<b><u>884 Clerical</u></b>	<b><u>71 Public Works (CILU/CIPU)</u></b>	<b><u>424 Public Works</u></b>
<b>Service Retirement Benefit:</b>	2% of "highest average pay" for each year of service and fraction thereof up to 20 years plus 3% of "highest average pay" for each year of service and fraction thereof in excess of 20 thereafter. Maximum benefit equals 70% of highest average pay. Minimum annual benefit is \$2,000.	2% of "highest average pay" for each year of service and fraction thereof up to 20 years plus 3% of "highest average pay" for each year of service and fraction thereof in excess of 20 thereafter. Maximum benefit equals 70% of highest average pay. Minimum annual benefit is \$2,000.	2% of "highest average pay" for each year of service and fraction thereof up to 20 years plus 3% of "highest average pay" for each year of service and fraction thereof in excess of 20 thereafter. Maximum benefit equals 70% of highest average pay. Minimum annual benefit is \$2,000.	2% of "highest average pay" for each year of service and fraction thereof up to 20 years plus 3% of "highest average pay" for each year of service and fraction thereof in excess of 20 thereafter. Maximum benefit equals 70% of highest average pay. Minimum annual benefit is \$2,000.
<b>Early Retirement Benefit:</b>	Determined in the same manner as the service retirement benefit and reduced by 3.5% (Tier 3) and 2.0% for employees with more than 10 years of service as of July 1, 2013 (Tiers 1 & 2) for each year benefit payments start prior to service retirement date.	Determined in the same manner as the service retirement benefit and reduced by 3.5% (Tier 3) and 2.0% for employees with more than 10 years of service as of July 1, 2010 (Tiers 1 & 2) for each year benefit payments start prior to service retirement date.	Determined in the same manner as the service retirement benefit and reduced by 3.5% (Tier 4) and 2.0% for hires prior to July 1, 2010 (Tiers 1, 2 & 3) for each year benefit payments start prior to service retirement date.	Determined in the same manner as the service retirement benefit and reduced by 3.5% (Tiers 3 & 4) and 2.0% for employees with more than 10 years of service as of July 1, 2010 (Tiers 1 & 2) for each year benefit payments start prior to service retirement date.



PROVISIONS FOR:	<u>3144- Supervisors</u>	<u>884 Clerical</u>	<u>71 Public Works (CILU/CIPU)</u>	<u>424 Public Works</u>
<b>Cost of Living Adjustments:</b>	Employees and their beneficiaries who are receiving monthly benefits will have these benefits increased or decreased each year according to U.S. CPI subject to the following restrictions: (1) the annual increase or decrease will be limited to 3% (Tier 1) and 2% for participants with less than 20 years as of July 1, 2013 (Tiers 2 & 3) and (2) the cost of living adjustments will never reduce the benefit below its original level. It is capped at 20% for participants with less than 20 years as of July 1, 2013 (Tiers 2 & 3).	Employees and their beneficiaries who are receiving monthly benefits will have these benefits increased or decreased each year according to U.S. CPI subject to the following restrictions: (1) the annual increase or decrease will be limited to 3% (Tier 1) and 2% for participants with less than 20 years as of July 1, 2010 (Tiers 2 & 3) and (2) the cost of living adjustments will never reduce the benefit below its original level. It is capped at 15% for participants with less than 10 years as of July 1, 2010 (Tier 3) and at 20% for participants with less than 20 years but more than 10 years as of July 1, 2010 (Tier 2).	Employees and their beneficiaries who are receiving monthly benefits will have these benefits increased or decreased each year according to U.S. CPI subject to the following restrictions: (1) the annual increase or decrease will be limited to 3% (Tier 1) and 2% for participants with less than 20 years as of July 1, 2010 (Tiers 2, 3 & 4) and (2) the cost of living adjustments will never reduce the benefit below its original level. It is capped at 20% for participants with less than 20 years as of July 1, 2010 (Tiers 2,3 & 4).	Employees and their beneficiaries who are receiving monthly benefits will have these benefits increased or decreased each year according to U.S. CPI subject to the following restrictions: (1) the annual increase or decrease will be limited to 3% (Tier 1) and 2% for participants with less than 20 years of service as of July 1, 2010 (Tiers 2,3 & 4) and (2) the cost of living adjustments will never reduce the benefit below its original level. It is capped at 15% for participants with less than 10 years as of July 1, 2010 (Tier 3 & 4) and at 20% for participants with less than 20 years but more than 10 years as of July 1, 2010 (Tier 2).
<b>Future COLA Buyout</b>	Upon retirement, a member may elect to forego the COLA benefits at a rate of 40% of the actuarial value of the benefit.	Upon retirement, a member may elect to forego the COLA benefits at a rate of 40% of the actuarial value of the benefit.	Upon retirement, a member may elect to forego the COLA benefits at a rate of 40% of the actuarial value of the benefit.	Upon retirement, a member may elect to forego the COLA benefits at a rate of 40% of the actuarial value of the benefit.



## Summary of Plan Provisions – by Union Groups Executive Management, 287, 217, 21, 11, 90 and 777

PROVISIONS FOR:	<u>Executive Management</u>	<u>287 Custodians</u>	<u>217 Food Service</u>	<u>21, 11, 90, 777 Trades</u>
<b>Contract Ratification Date</b> (Tiers only apply to those that retired after this date)		December 31, 2012	April 4, 2017	October 15, 2013
<b>Tier 1</b>		As of December 31, 2012, >=20 years of cred svc	As of July 1, 2016, >=20 years of cred svc	As of July 1, 2010, >=20 years of cred svc
<b>Tier 2</b>		As of December 31, 2012, >=10 but <20 years of cred svc	As of July 1, 2016, >=10 years but <20 years of cred svc	As of July 1, 2010, >=10 but <20 years of cred svc
<b>Tier 3</b>		As of December 31, 2012, <10 years of cred svc	As of April 4, 2017, >10 years of cred svc	As of July 1, 2010, <10 years of cred svc
<b>Tier 4</b>		Hired after December 31, 2012	Hired after April 4, 2017	
<b>Employee Contributions</b>	6.50%	9.0% - as of July 1, 2013	7.00%	8.5% - as of July 1, 2014 9.0% - as of July 1, 2015 9.5% - as of July 1, 2016
<b>Service Retirement Date</b>	Age 60 with 10 years of service	Age 65 with 10 or more years as of December 31, 2012 or Rule of 80 with no minimum age (Tiers 1 & 2). With less than 10 years as of December 31, 2012, Rule of 85 with minimum age 62 (Tiers 3 & 4).	Age 65 with 10 years of service or Rule of 80	Age 65 with 10 or more years as of July 1, 2010 or Rule of 80 with no minimum age (Tiers 1 & 2). With less than 10 years as of July 1, 2010, Rule of 85 with minimum age 62 (Tier 3).
<b>Highest Average Pay</b>	Average rate of pay or total earnings if greater, for the five years of service producing the highest average. After March 31, 1991, highest average pay will be subject to a minimum of budgeted salary as of date of retirement.	Average rate of pay (Tier 4) or total earnings if greater (Tiers 1 & 2), for the five years of service producing the highest average. Average rate of pay for three years of service producing the highest average (Tier 3). After March 31, 1991, highest average pay will be subject to a minimum of budgeted salary as of date of retirement.	Average rate of pay or total earnings if greater, for the five years of service producing the highest average. After March 31, 1991, highest average pay will be subject to a minimum of budgeted salary as of date of retirement.	Average rate of pay (Tiers 3 & 4) or total earnings if greater (Tiers 1 & 2), for the five years of service producing the highest average. After March 31, 1991, highest average pay will be subject to a minimum of budgeted salary as of date of retirement.



<b>PROVISIONS FOR:</b>	<b><u>Executive Management</u></b>	<b><u>287 Custodians</u></b>	<b><u>217 Food Service</u></b>	<b><u>21, 11, 90, 777 Trades</u></b>
<b>Service Retirement Benefit:</b>	4% of "highest average pay" for each year of service and fraction thereof up to 10 years plus 2% of "highest average pay" for each year of service and fraction thereof in excess of 20 thereafter. Maximum benefit equals 70% of highest average pay. Minimum annual benefit is \$2,000.	2% of "highest average pay" for each year of service and fraction thereof up to 20 years plus 3% of "highest average pay" for each year of service and fraction thereof in excess of 20 thereafter. Maximum benefit equals 70% of highest average pay. Minimum annual benefit is \$2,000.	2% of "highest average pay" for each year of service and fraction thereof up to 20 years plus 3% of "highest average pay" for each year of service and fraction thereof in excess of 20 thereafter. Maximum benefit equals 70% of highest average pay. Minimum annual benefit is \$2,000.	2% of "highest average pay" for each year of service and fraction thereof up to 20 years plus 3% of "highest average pay" for each year of service and fraction thereof in excess of 20 thereafter. Maximum benefit equals 70% of highest average pay. Minimum annual benefit is \$2,000.
<b>Early Retirement Benefit:</b>	Determined in the same manner as the service retirement benefit and reduced by 2% for each year benefit payments start prior to service retirement date.	Determined in the same manner as the service retirement benefit and reduced by 6.0% (Tiers 3 & 4) and 2.0% for hires prior to 2002 (Tiers 1 & 2) for each year benefit payments start prior to service retirement date.	Determined in the same manner as the service retirement benefit and reduced by 2% for each year benefit payments start prior to service retirement date.	Determined in the same manner as the service retirement benefit and reduced by 3.5% (Tier 3) and 2.0% for hires more than ten years prior to July 1, 2010 (Tiers 1 & 2) for each year benefit payments start prior to service retirement date.



<b>PROVISIONS FOR:</b>	<b><u>Executive Management</u></b>	<b><u>287 Custodians</u></b>	<b><u>217 Food Service</u></b>	<b><u>21, 11, 90, 777 Trades</u></b>
<b>Cost of Living Adjustments:</b>	Employees and their beneficiaries who are receiving monthly benefits will have these benefits increased or decreased each year according to U.S. CPI subject to the following restrictions: (1) the annual increase or decrease will be limited to 3% and (2) the cost of living adjustments will never reduce the benefit below its original level. It is not capped.	Employees and their beneficiaries who are receiving monthly benefits will have these benefits increased or decreased each year according to U.S. CPI subject to the following restrictions: (1) the annual increase or decrease will be limited to 3% (Tier 1) and 2% for participants with less than 20 years as of December 31, 2012 (Tiers 2 & 3) and 1.50% for hires after December 31, 2012 (Tier 4) and (2) the cost of living adjustments will never reduce the benefit below its original level. It is capped at 10% for participants with less than 20 years as of December 31, 2012 (Tiers 2, 3 & 4).	Employees and their beneficiaries who are receiving monthly benefits will have these benefits increased or decreased each year according to U.S. CPI subject to the following restrictions: (1) the annual increase or decrease will be limited to 3% and (2) the cost of living adjustments will never reduce the benefit below its original level. It is not capped.	Employees and their beneficiaries who are receiving monthly benefits will have these benefits increased or decreased each year according to U.S. CPI subject to the following restrictions: (1) the annual increase or decrease will be limited to 3% (Tier 1) and 2% for participants with less than 20 years as of October 3, 2014 (Tiers 2 & 3) and 1.50% for hires after October 3, 2014 (Tier 4) and (2) the cost of living adjustments will never reduce the benefit below its original level. It is capped at 15% for participants with less than 10 years as of October 3, 2014 (Tier 3) and at 20% for participants with less than 20 years as of October 3, 2014 (Tier 2).
<b>Future COLA Buyout</b>	None.	Upon retirement, a member may elect to forego the COLA benefits at a rate of 40% of the actuarial value of the benefit.	None.	Upon retirement, a member may elect to forego the COLA benefits at a rate of 40% of the actuarial value of the benefit.



## Summary of Plan Provisions – by Union Groups 1303-467 and 1303-464

PROVISIONS FOR:	<u>Local 1303-467 Nurses</u>	<u>Local 1303-464 Attorneys</u>
<b>Contract Ratification Date (Tiers only apply to those that retired after this date)</b>	August 7, 2017	November 24, 2015
<b>Tier 1</b>	As of July 1, 2010, $\geq 20$ years of cred svc	As of November 24, 2015, $\geq 20$ years of cred svc
<b>Tier 2</b>	As of July 1, 2010, $\geq 10$ but <20 years of cred svc	As of November 24, 2015, <20 years of cred svc
<b>Tier 3</b>	As of July 1, 2010, <10 years of cred svc	As of November 24, 2015, <10 years of cred svc
<b>Employee Contributions</b>	9.0% - as of July 1, 2013	10.0% - as of November 24, 2015
<b>Service Retirement Date</b>	Age 65 with 10 or more years as of July 1, 2013 or Rule of 80 with no minimum age (Tiers 1 and 2). With less than 10 years as of July 1, 2013, Rule of 85 with minimum age 62 (Tier 3).	Age 65 with 10 or more years as of July 1, 2013 or Rule of 80 with no minimum age (Tiers 1 and 2). With less than 10 years as of July 1, 2013, Rule of 85 with minimum age 62 (Tier 3).
<b>Highest Average Pay</b>	Average rate of pay or total earnings if greater, for the five years of service producing the highest average. After March 31, 1991, highest average pay will be subject to a minimum of budgeted salary as of date of retirement.	Average rate of pay or total earnings if greater, for the five years of service producing the highest average. After March 31, 1991, highest average pay will be subject to a minimum of budgeted salary as of date of retirement.





**PROVISIONS FOR:**

**Service Retirement Benefit:**

**Local 1303-467 Nurses**

2% of "highest average pay" for each year of service and fraction thereof up to 20 years plus 3% of "highest average pay" for each year of service and fraction thereof in excess of 20 thereafter. Maximum benefit equals 70% of highest average pay. Minimum annual benefit is \$2,000.

**Local 1303-464 Attorneys**

40% of "highest average pay" for first 10 years of service plus 2% for each full year of service in excess of 10 thereafter. Maximum benefit equals 70% of highest average pay. Minimum annual benefit is \$2,000.

**Early Retirement Benefit:**

Determined in the same manner as the service retirement benefit and reduced by 2.0% for Tier 1 and Tier 2 and reduced by 3.5% for Tier 3.

Determined in the same manner as the service retirement benefit and reduced by 2.0% for Tier 1 and Tier 2 and reduced by 3.5% for Tier 3.



**PROVISIONS FOR:**

**Local 1303-467 Nurses**

**Local 1303-464 Attorneys**

**Cost of Living Adjustments:**

Employees and their beneficiaries who are receiving monthly benefits will have these benefits increased or decreased each year according to U.S. CPI subject to the following restrictions: (1) the annual increase or decrease will be limited to 3% (Tier 1) and 2% for participants with less than 20 years as of July 1, 2013 (Tiers 2 & 3) and (2) the cost of living adjustments will never reduce the benefit below its original level. It is capped at 20% for participants with less than 20 years as of July 1, 2013 (Tiers 2 and 3).

Employees and their beneficiaries who are receiving monthly benefits will have these benefits increased or decreased each year according to U.S. CPI subject to the following restrictions: (1) the annual increase or decrease will be limited to 3% (Tier 1) and 2% for participants with less than 20 years as of July 1, 2013 (Tiers 2 & 3) and (2) the cost of living adjustments will never reduce the benefit below its original level. It is capped at 20% for participants with less than 20 years as of July 1, 2013 (Tiers 2 and 3).

**Future COLA Buyout**

Upon retirement, a member may elect to forego the COLA benefits at a rate of 40% of the actuarial value of the benefit.

Upon retirement, a member may elect to forego the COLA benefits at a rate of 40% of the actuarial value of the benefit.