



CITY OF MERIDEN EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL VALUATION REPORT

JULY 1, 2018





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Executive Summary

	July 1, 2018	July 1, 2016
Number of members		
Active employees	491	531
Terminated vested members	29	34
Vested in employee contributions only	69	73
Retired, disabled and beneficiaries	497	486
Total	1,086	1,124
Covered employee payroll	33,003,112	34,465,270
Average plan salary	67,216	64,906
Actuarial present value of future benefits	240,482,275	220,158,069
Actuarial accrued liability	201,890,699	183,814,979
Plan assets		
Market value of assets	148,592,039	131,835,469
Actuarial value of assets	163,664,645	158,672,766
Unfunded accrued liability	38,226,054	25,142,213
Funded ratio	81.1%	86.3%
Actuarially determined employer contribution (ADEC)		
Fiscal year ending	2020	2018
ADEC	5,698,548	4,044,454
Fiscal year ending	2021	2019
ADEC	5,698,548	4,044,454



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, 2018 valuation produces the contributions for the fiscal years ending 2020 and 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

The investment rate of return assumption decreased from 7.75% to 7.375%.

Cash Contribution for Fiscal Years Ending 2020 and 2021

The City cost is:	2020 Fiscal Year	2021 Fiscal Year
City	\$4,136,058	\$4,136,058
Fire	662,604	662,604
Police	899,886	899,886
Total	\$5,698,548	\$5,698,548

Liability Experience During Period Under Review

The plan experienced a net actuarial gain on liabilities of \$215,249 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:

	2017 Fiscal Year	2018 Fiscal Year
Market Value Basis	9.5%	10.2%
Actuarial Value Basis	4.4%	5.4%

The Actuarial Value of assets, rather than the Market Value, is used to determine plan contributions. The Actuarial Value spreads the asset volatility by recognizing 20% of the difference each year, thereby smoothing out fluctuations that are inherent in the Market Value.



Certification

This report presents the results of the July 1, 2018 Actuarial Valuation for City of Meriden Employees' Retirement System (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, 2020 and June 30, 2021. This report is intended to satisfy the requirements of Connecticut General Statute 7-450a. 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.

Stephen Chykirda, ASA, ACA, MAAA
Enrolled Actuary 17-07517

July 3, 2019

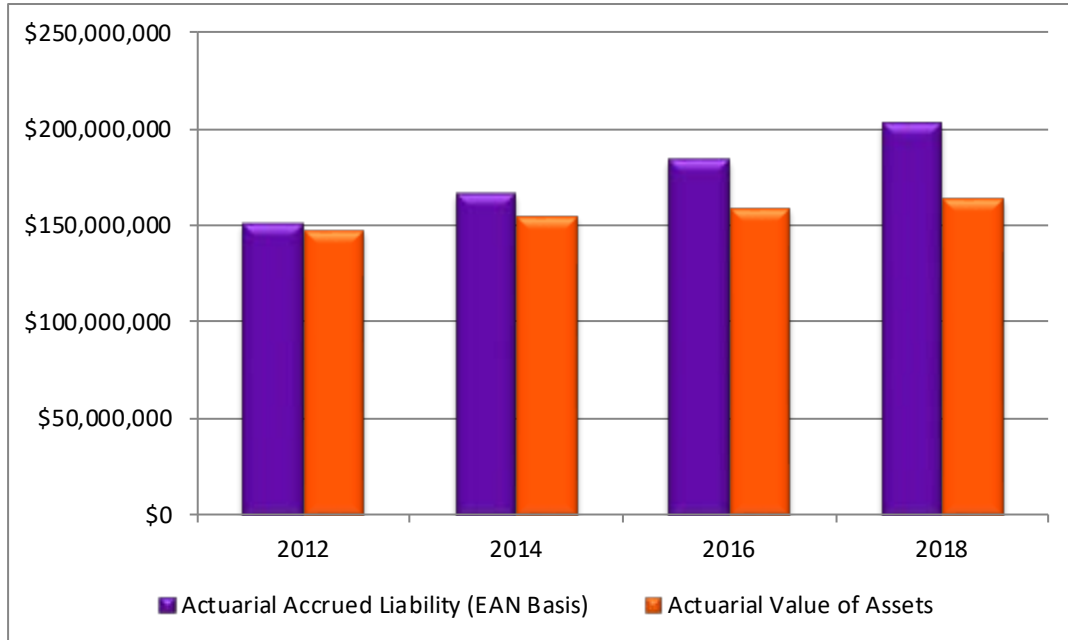


Development of Unfunded Accrued Liability and Funded Ratio

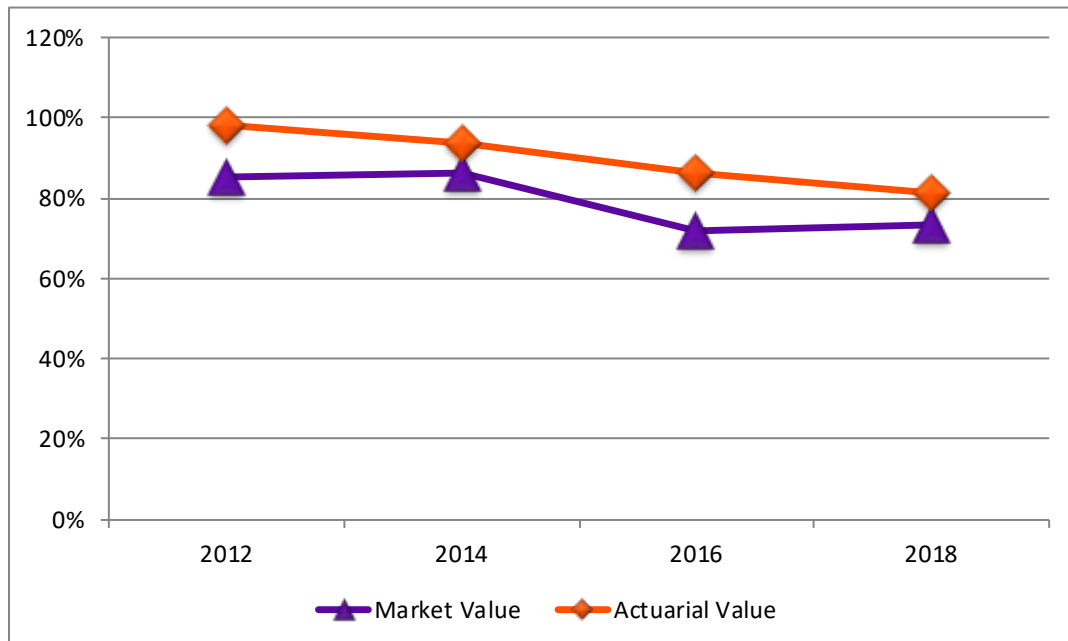
	July 1, 2018	July 1, 2016
Actuarial accrued liability for inactive members		
Retired, disabled and beneficiaries	\$113,844,838	\$99,837,962
Terminated vested members	2,223,671	2,342,762
Due refund of employee contributions only	426,590	602,762
Total	116,495,099	102,783,486
Actuarial accrued liability for active employees	85,395,600	81,031,493
Total actuarial accrued liability	201,890,699	183,814,979
Actuarial value of assets	163,664,645	158,672,766
Unfunded accrued liability	38,226,054	25,142,213
Funded ratio	81.1%	86.3%



Actuarial Accrued Liability vs. Actuarial Value of Assets



Funded Ratio



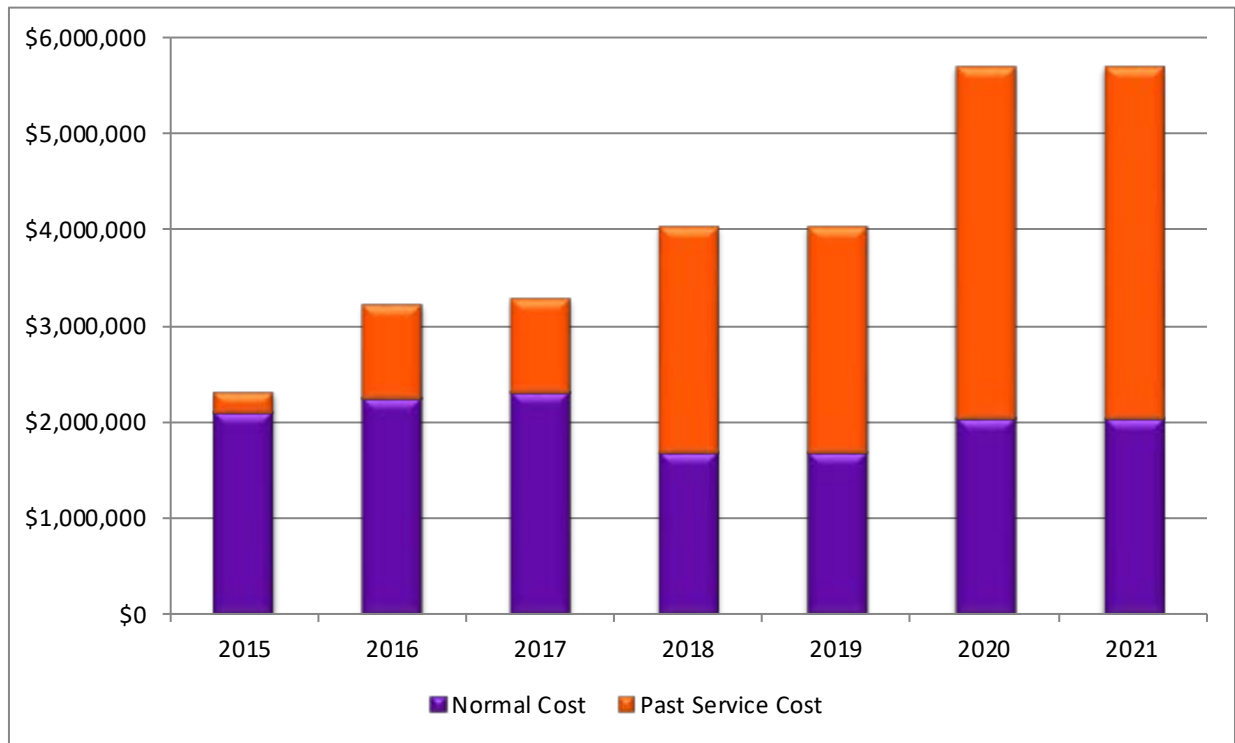


Determination of Normal Cost and Actuarially Determined Employer Contribution

	July 1, 2018		July 1, 2016	
	Cost	Percent of payroll	Cost	Percent of payroll
Gross normal cost	\$3,903,104	11.3%	\$3,625,638	10.1%
Estimated employee contributions	(1,978,163)	-5.7%	(2,046,771)	-5.7%
Estimated administrative expenses	32,500	0.0%	32,500	0.1%
City's normal cost	1,957,441	5.6%	1,611,367	4.5%
Amortization of unfunded accrued liability	3,541,925	10.3%	2,284,923	6.4%
Contribution before adjustment as of the valuation date	5,499,366	15.9%	3,896,290	10.9%
Estimated valuation year payroll for actives not yet at 100% assumed retirement age	34,673,843		35,780,810	
Fiscal year ending	2020		2018	
Adjustment for interest and inflation	199,182		148,164	
Actuarially determined employer contribution	5,698,548		4,044,454	
Fiscal year ending	2021		2019	
Adjustment for interest and inflation	0		0	
Actuarially determined employer contribution	5,698,548		4,044,454	



Actuarially Determined Employer Contribution





Actuarially Determined Employer Contribution per Group

	City	Fire	Police	Total
Gross normal cost	\$2,011,987	\$752,408	\$1,138,709	\$3,903,104
Estimated employee contributions	(1,287,615)	(209,951)	(480,597)	(1,978,163)
Estimated administrative expenses	<u>16,753</u>	<u>6,265</u>	<u>9,482</u>	<u>32,500</u>
City's normal cost	741,125	548,722	667,594	1,957,441
Actuarial accrued liability	185,271,716	5,171,157	11,447,826	201,890,699
Actuarial value of assets	<u>150,192,307</u>	<u>4,192,048</u>	<u>9,280,290</u>	<u>163,664,645</u>
Unfunded accrued liability	35,079,409	979,109	2,167,536	38,226,054
Amortization of unfunded accrued liability	3,250,365	90,722	200,838	3,541,925
Contribution before adjustment as of the valuation date	3,991,490	639,444	868,432	5,499,366
Estimated valuation year payroll for actives not yet at 100% assumed retirement age	21,862,508	5,248,787	7,562,548	34,673,843
City's normal cost as a percentage of payroll	3.4%	10.5%	8.8%	5.6%
Contribution as a percentage of payroll	18.3%	12.2%	11.5%	15.9%
Fiscal year ending June 30, 2020				
Adjustment for interest and inflation	<u>144,568</u>	<u>23,160</u>	<u>31,454</u>	<u>199,182</u>
Actuarially determined employer contribution	4,136,058	662,604	899,886	5,698,548
Fiscal year ending June 30, 2021				
Adjustment for interest and inflation	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Actuarially determined employer contribution	4,136,058	662,604	899,886	5,698,548



Determination of Actuarial Gain/Loss

The Actuarial Gain/Loss is the difference between the expected unfunded accrued liability and the actual unfunded accrued liability, without regard to any changes in actuarial methods, actuarial assumptions or plan provisions. This can also be referred to an Experience Gain/Loss, since it reflects the difference between what was expected and what was actually experienced.

Actuarial Gain / Loss	
Expected unfunded accrued liability July 1, 2018	
Expected unfunded accrued liability July 1, 2017	
Unfunded accrued liability July 1, 2016	\$25,142,213
Gross normal cost July 1, 2016	3,658,138
City and employee contributions for 2016-2017	(5,393,279)
Interest at 7.75% to July 1, 2017	2,026,259
Expected unfunded accrued liability July 1, 2017	25,433,331
Expected unfunded accrued liability July 1, 2018	
Expected unfunded accrued liability July 1, 2017	25,433,331
Expected gross normal cost July 1, 2017	3,658,138
City and employee contributions for 2017-2018	(6,111,521)
Interest at 7.75% to July 1, 2018	2,022,339
Expected unfunded accrued liability July 1, 2018	25,002,287
Actuarial (gain) / loss July 1, 2018	8,786,247
Actual unfunded accrued liability July 1, 2018, prior to plan provision, assumption and method changes	33,788,534
Sources of (gain) / loss	
Assets	9,001,496
Liabilities	(215,249)
Total (gain) / loss	8,786,247
Assumption and method changes since prior valuation	4,437,520
Actual unfunded accrued liability July 1, 2018, after plan provision, assumption and method changes	38,226,054



Development of Asset Values

Summary of Fund Activity		
	July 1, 2016 - June 30, 2017	July 1, 2017 - June 30, 2018
1. Beginning market value of assets		
Trust assets	\$131,835,469	\$139,232,560
2. Contributions		
City contributions during year	3,316,370	4,058,052
Employee contributions during year	2,076,909	2,053,469
Total for plan year	5,393,279	6,111,521
3. Disbursements		
Benefit payments during year	10,171,401	10,699,435
Administrative expenses during year	38,998	25,118
Other disbursements	536,118	332,992
Total for plan year	10,746,517	11,057,545
4. Net investment return		
Interest and dividends	2,599,109	2,929,649
Net appreciation (depreciation)	10,836,705	12,106,350
Investment-related expenses	(685,485)	(730,496)
Total for plan year	12,750,329	14,305,503
5. Ending market value of assets		
Trust assets: (1) + (2) - (3) + (4)	139,232,560	148,592,039
6. Approximate rate of return	9.5%	10.2%



Determination of the Actuarial Value of Assets	
1. Actuarial value of assets July 1, 2016	\$ 158,672,766
2. City contributions during 2016-2017	3,316,370
3. Employee contributions during 2016-2017	2,076,909
4. Benefit payments, administrative expenses and other disbursements during 20	(10,746,517)
5. Expected return during 2016-2017	<u>12,085,976</u>
6. Expected actuarial value of assets July 1, 2017	165,405,504
7. Market value of assets July 1, 2017	139,232,560
8. Appreciation (depreciation) recognized: 20% x [(7) - (6)]	(5,234,589)
9. Actuarial value of assets July 1, 2017: (6) + (8)	160,170,915
10. City contributions during 2017-2018	4,058,052
11. Employee contributions during 2017-2018	2,053,469
12. Benefit payments, administrative expenses and other disbursements during 2	(11,057,545)
13. Expected return during 2017-2018	<u>12,207,905</u>
14. Expected actuarial value of assets July 1, 2018	167,432,796
15. Market value of assets July 1, 2018	148,592,039
16. Appreciation (depreciation) recognized: 20% x [(15) - (14)]	(3,768,151)
17. Preliminary actuarial value of assets July 1, 2018: (14) + (16)	163,664,645
18. Preliminary actuarial value of assets as a percentage of market value of assets	110.1%
19. Actuarial value of assets July 1, 2018	163,664,645
2016-2017 return on actuarial value of assets	4.4%
2017-2018 return on actuarial value of assets	5.4%

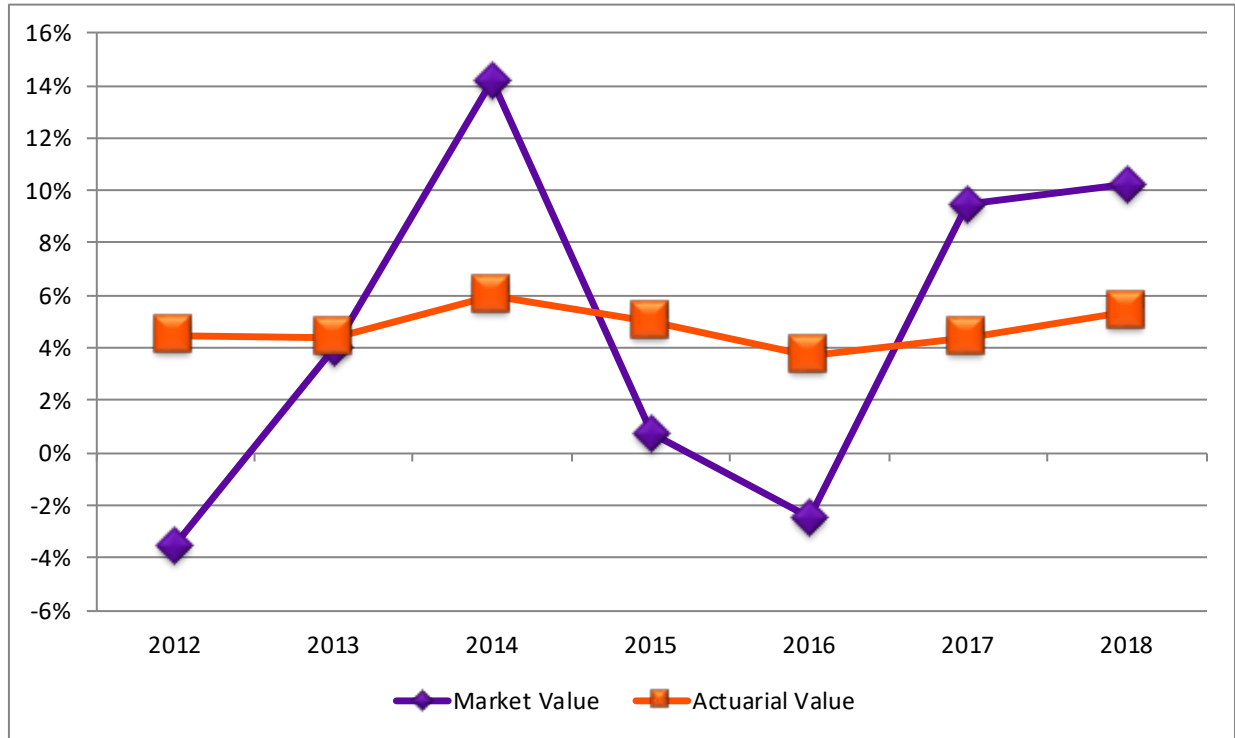


Rate of Return on Market Value of Assets					
Period Ending	Average Annual Effective Rate of Return				
	June 30	1 Year	3 Years	5 Years	10 Years
2009	-20.0%	-0.3%	N/A	N/A	N/A
2010	14.5%	-1.0%	N/A	N/A	N/A
2011	19.7%	3.1%	6.3%	6.3%	N/A
2012	-3.5%	9.8%	2.3%	2.3%	N/A
2013	4.0%	6.3%	1.9%	1.9%	N/A
2014	14.2%	4.7%	9.5%	9.5%	N/A
2015	0.8%	6.2%	6.7%	6.7%	N/A
2016	-2.4%	3.9%	2.4%	2.4%	4.4%
2017	9.5%	2.5%	5.0%	5.0%	3.7%
2018	10.2%	5.6%	6.3%	6.3%	4.1%

Rate of Return on Actuarial Value of Assets					
Period Ending	Average Annual Effective Rate of Return				
	June 30	1 Year	3 Years	5 Years	10 Years
2009	2.3%	6.3%	N/A	N/A	N/A
2010	4.0%	4.8%	N/A	N/A	N/A
2011	6.5%	4.3%	5.9%	5.9%	N/A
2012	4.5%	5.0%	5.1%	5.1%	N/A
2013	4.4%	5.1%	4.3%	4.3%	N/A
2014	6.0%	5.0%	5.1%	5.1%	N/A
2015	5.0%	5.1%	5.3%	5.3%	N/A
2016	3.7%	4.9%	4.7%	4.7%	5.3%
2017	4.4%	4.4%	4.7%	4.7%	4.9%
2018	5.4%	4.5%	4.9%	4.9%	4.6%



Actual Rate of Return on Assets





Target Allocation and Expected Rate of Return July 1, 2018

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*	Weighting
Equity - Domestic	45.00%	5.75%	2.59%
Equity - International	12.00%	6.00%	0.72%
Fixed Income	18.00%	2.50%	0.45%
Real Estate	3.00%	4.25%	0.13%
Hedge Funds	4.00%	4.90%	0.20%
Managed Futures	10.00%	4.50%	0.45%
Private Equity	6.00%	10.70%	0.64%
Commodities	0.00%	2.30%	0.00%
Cash	2.00%	0.50%	0.01%
	100.00%		5.19%
Long-Term Inflation Expectation			2.60%
Long-Term Expected Nominal Return			7.79%

**Long-Term Real Returns are provided by Stifel Nicolaus. 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 7.375% 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, 2018
2018 base	July 1, 2018	3,541,925	19	38,226,054



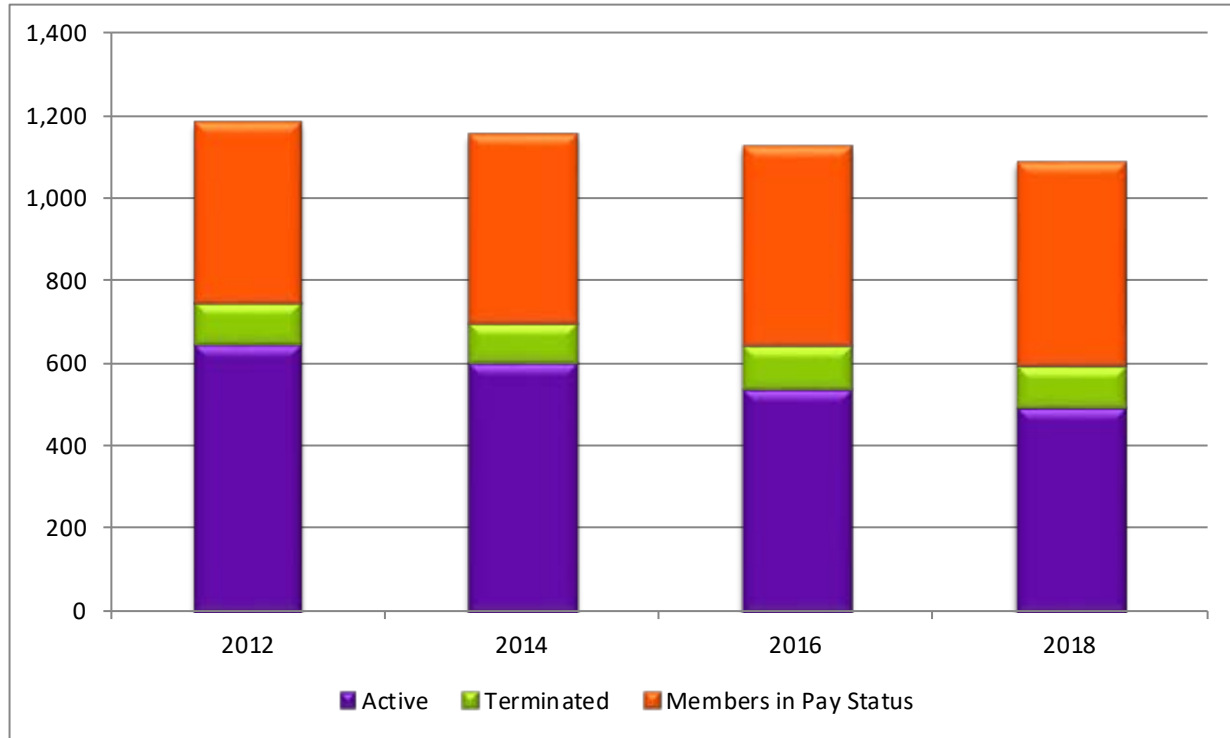
Member Data

The data reported by the Plan Sponsor for this valuation includes 491 active employees who met the Plan's minimum age and service requirements as of July 1, 2018.

Member Data					
	Active	Terminated vested	Due refund of contributions	Members in pay status	Total
Total members July 1, 2016	531	34	73	486	1,124
Adjustments	0	0	0	0	0
Retirements	-43	-7	-1	+51	0
Disabilities	-1	N/A	N/A	+1	0
Terminations					
Vested	-4	+4	N/A	N/A	0
Lump sum payments	-15	-1	-7	N/A	-23
Due contributions only	-2	N/A	+2	N/A	0
Deaths					
With death benefit	-3	0	0	-2	-5
Without death benefit	-1	-1	0	-44	-46
Transfers	0	0	0	N/A	0
Rehires	0	0	0	N/A	0
New beneficiaries	N/A	N/A	N/A	+5	+5
New entrants	+29	N/A	+2	N/A	+31
Total members July 1, 2018	491	29	69	497	1,086



Member Counts by Status





Member Data				
	Active	Terminated vested	Due refund of contributions	Members in pay status
Average age				
July 1, 2016	49.5	58.9	49.0	74.4
July 1, 2018	49.4	57.7	49.5	74.2
Average service				
July 1, 2016	15.5	N/A	N/A	N/A
July 1, 2018	16.0	N/A	N/A	N/A
Covered employee payroll				
July 1, 2016	\$34,465,270	N/A	N/A	N/A
July 1, 2018	33,003,112	N/A	N/A	N/A
Total annual benefits				
July 1, 2016	N/A	\$378,605	N/A	\$10,002,416
July 1, 2018	N/A	347,334	N/A	11,183,627



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 Market Value and Expected Actuarial Value by recognizing 20% of the difference each 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). This amount is amortized over 19 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.



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.)

- Mortality
- Investment rate of return
- Salary Scale
- Inflation

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)

7.375% (Prior: 7.75%)

Salary Scale

Merit tables shown below, plus an annual inflation assumption of 2.60% for all groups.

City		Fire		Police	
Completed Years of Service	Rate	Completed Years of Service	Rate	Completed Years of Service	Rate
0	7.85%	0	7.85%	0	7.85%
1	4.85%	1	5.85%	1	6.35%
2	3.85%	2	3.85%	2	4.85%
3	2.85%	3	1.35%	3	3.85%
4	2.85%	4	1.35%	4	1.85%
5	2.35%	5	1.35%	5	0.85%
6	1.85%	6	1.35%	6	0.35%
7	1.60%	7	1.10%	7	0.35%
8	1.35%	8	1.10%	8	0.35%
9	1.10%	9	1.10%	9	0.35%
10	0.85%	10	1.10%	10	0.35%
11	0.60%	11	1.10%	11	0.35%
12	0.60%	12	1.10%	12	0.35%
13	0.60%	13	0.85%	13	0.35%
14	0.35%	14	0.85%	14+	0.10%
15	0.10%	15+	0.35%		
16	0.00%				



Salary Scale (cont.)

City		Fire		Police	
Completed Years of Service	Rate	Completed Years of Service	Rate	Completed Years of Service	Rate
0	8.00%	0	8.00%	0	8.00%
1	5.00	1	6.00	1	6.50
2	4.00	2	4.00	2	5.00
3	3.00	3	1.50	3	4.00
4	3.00	4	1.50	4	2.00
5	2.50	5	1.50	5	1.00
6	2.00	6	1.50	6	0.50
7	1.75	7	1.25	7	0.50
8	1.50	8	1.25	8	0.50
9	1.25	9	1.25	9	0.50
10	1.00	10	1.25	10	0.50
11	0.75	11	1.25	11	0.50
12	0.75	12	1.25	12	0.50
13	0.75	13	1.00	13	0.50
14	0.50	14	1.00	14+	0.25
15	0.25	15+	0.50		
16	0.00				

The actuarial assumption in regards to salary scale shown above is based on the results of an actuarial experience study for the period July 1, 2008 through July 1, 2014.

Inflation

2.60%. (Prior: 2.75%)

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 2018 OASDI Trustees Report. The assumption was changed to better reflect expected experience.

Mortality

City Retirement: RP-2014 Adjusted to 2006 Total Dataset Mortality Table, projected to the valuation date with Scale MP-2018.

(Prior City Retirement: RP-2014 Adjusted to 2006 Total Dataset Mortality Table, projected to the valuation date with Scale MP-2016.)

Fire and Police Retirements: RP-2014 Adjusted to 2006 Blue Collar Mortality Table, projected to the valuation date with Scale MP-2018.

(Prior Fire and Police Retirements: RP-2014 Adjusted to 2006 Blue Collar Mortality Table, projected to the valuation date with Scale MP-2016.)

Disabilities: RP-2014 Adjusted to 2006 Disabled Mortality Table, projected to the valuation date with Scale MP-2018.

(Prior Disabilities: RP-2014 Adjusted to 2006 Disabled Mortality Table, projected to the valuation date with Scale MP-2016.)

Survivors: RP-2014 Adjusted to 2006 Total Dataset Mortality Table, projected to the valuation date with Scale MP-2018.

(Prior Survivors: RP-2014 Adjusted to 2006 Total Dataset Mortality Table, projected to the valuation date with Scale MP-2016.)



Mortality Improvement

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

(Prior All: Projected to date of decrement using Scale MP-2016 (generational mortality).)

We have selected this mortality assumption because it is based on a recently published pension mortality study released by the Society of Actuaries. The group composition of the Plan is consistent with the collar adjustment selected.

Retirement age

City – Sample Rates:

Age	Completed Years of Service				
	10	15	20	25	30
50	0%	0%	0%	10%	15%
55	2.5%	2.5%	3.5%	10%	7%
60	2.5%	2.5%	10%	7%	10%
65	15%	15%	15%	35%	35%
70	20%	20%	20%	25%	25%
75	20%	20%	20%	50%	50%
80	100%	100%	100%	100%	100%

Fire – Sample Rates:

Age	Completed Years of Service			
	<25	25	30	35
50	0%	5%	5%	5%
55	0%	20%	20%	20%
60	0%	20%	20%	30%
65	0%	100%	100%	100%

Police – Sample Rates:

Age	Completed Years of Service					
	10	15	20	25	30	33
40	0%	0%	0%	50%	10%	25%
45	0%	0%	0%	50%	10%	25%
50	0%	0%	0%	50%	10%	25%
55	0%	0%	0%	50%	5%	25%
60	0%	0%	5%	50%	25%	25%
65	100%	100%	100%	100%	100%	100%



Termination prior to retirement

70% of the Vaughn Select & Ultimate Withdrawal Table for City employees

City – Sample Rates:

Age	Completed Years of Service			
	0	1	2	3
20	20.86%	17.50%	14.70%	13.02%
25	19.46%	15.75%	12.95%	9.52%
30	18.06%	14.00%	11.20%	7.07%
35	16.66%	12.46%	9.66%	5.53%
40	15.26%	11.06%	8.26%	4.55%
45	13.86%	9.87%	7.07%	3.85%
50	12.46%	8.82%	6.02%	3.15%
55	0.00%	0.00%	0.00%	0.00%

Fire and Police: None.

Disability

City: None.

Fire and Police: 1985 Pension Disability Study Class 4 Unisex Table.

The actuarial assumptions in regards to rates of decrement shown above are based on the results of an actuarial experience study for the period July 1, 2008 through July 1, 2014.

Administrative expenses

We have included estimated administrative expenses in the development of the normal cost.

The estimate is based on actual expenses paid from the trust in the prior year.

Payroll growth

0%.

Percent of active employees married

75% of male participants and 65% of female participants.

Spouse's age

Husbands are assumed to be 3 years older than wives.

The assumption changes listed above increased liabilities by about 2.2%.



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 pension plan

Eligibility for participation

Regular full-time employees (other than Members of the State Teachers' Retirement System), including elected and appointed officials, are eligible at hire. City Employees hired on or after July 1, 2011 are not eligible.

Years of service

Year and months (rounded) of employment during which employee has made required contributions.

Base rate of pay

Salary or wages including elective deferrals under 401(k) or Sec. 125, limited by IRC 401(a)(17).

Average annual pay

Police hired on or after July 1, 2012: Highest paid calendar year out of the last ten years.

All Others: Average of three highest paid calendar years out of the last ten years.

Accrued benefit

Firefighters and BOE: 2% of Average Final Pay times Years of Service with a maximum of 30 years.

Police hired prior to July 1, 2012 and non-BOE City: 2% of Average Final Pay times Years of Service for the first 20 years, plus 2.5% of Average Final Pay times Years of Service for years 21 through 32.

Police hired on or after July 1, 2012: 2% of Average Final Pay times Years of Service with a maximum of 25 years.

Normal retirement

Age & Service Requirements:

City: Earlier of

- Later of 10 Years of Service and age 65
- Any combination of Years of Service and age equaling 80, with a minimum of 10 Years of Service

Police Officers hired prior to July 1, 2012: Earlier of

- Completion of 25 Years of Service
- Any combination of Years of Service and age equaling 80, with a minimum of 10 Years of Service
- Age 65

Police Officers hired on or after July 1, 2012: Earlier of

- Completion of 25 Years of Service
- Later of 10 Years of Service and age 65

Firefighters: Earlier of

- Completion of 25 Years of Service
- Age 65

Benefit: Accrued Benefit



Early retirement

Eligibility:

Police hired prior to July 1, 2012 and City: completion of 10 Years of Service and age 55

Police hired on or after July 1, 2012 and Firefighters: None

Benefit: Accrued Benefit reduced by the following percentages:

- City: 6.67% per year for each year between 65 and 60, plus 3.33% for each year between 60 and 55.
- Police hired prior to July 1, 2012: 5% per year for years between early retirement date and date Member would have completed 25 Years of Service.

Termination

Prior to completion of 10 Years of Service: Return of employee contributions plus regular interest.

After completion of 10 Years of Service: Member may elect to receive either

- Return of employee contributions plus regular interest, or
- Accrued Benefit.

Disability

Eligibility:

Police hired on or after July 1, 2012: Completion of 10 Years of Service.

All Others: None if service-related; otherwise completion of 10 Years of Service.

Benefit:

City and Firefighters:

- Service-related: greater of Accrued Benefit, or 50% of annual rate of Pay at time of disability.
- Non-Service related: Accrued Benefit.

Police:

- Service-related: if disabled from employment as police officer hired prior to July 1, 2012: 50% of annual rate of Pay at time of disability. Hired on or after July 1, 2012: 40% of annual rate of Pay at time of disability.
- Service-related: if disabled from any gainful employment hired prior to July 1, 2012: Accrued Benefit as if Officer had no less than 25 Years of Service. Hired on or after July 1, 2012: Accrued Benefit as if Officer had no less than 20 Years of Service.
- Non-Service related: Accrued Benefit as if Officer had no less than 20 Years of Service.

Death prior to retirement

Prior to completion of 10 Years of Service: Return of employee contributions plus regular interest.

City Employees after eligibility for Early or Normal Retirement: Surviving spouse may elect to receive either

- Return of employee contributions plus regular interest, or
- 50% of benefit Member would have received if retired day before death and elected 50% Joint and Survivor option.

Police Officer and Firefighter Service-related death: Surviving spouse receives 100% of Accrued Benefit as if Officer had at least 25 Years of Service. Upon attainment of date Officer or Firefighter would have attained 25 Years, spouse's benefit decreases to 50% of the pension amount. Payable until death or remarriage.



Death after retirement and after age 65

Firefighters and BOE: \$1,000 lump sum payable to beneficiary in addition to any other benefits under plan.

Police and non-BOE City: \$5,000 lump sum payable to beneficiary in addition to any other benefits under plan.

Normal form of retirement benefit

Single life annuity.

Optional forms of benefits

Actuarial equivalent of Normal Form paid as

- Ten year certain and continuous annuity
- Joint and Survivor annuity with 100%, 66-2/3% or 50% of pension continued to designated beneficiary

Employee contributions

Firefighters: 6% of Pay, split between Pension and OPEB at the City's discretion.

BOE: 8% of Pay, split between Pension and OPEB at the City's discretion.

Non-BOE City: 11% of Pay, split between Pension and OPEB at the City's discretion.

Police: 10% of Pay for employees hired before July 1, 2012, split between Pension and OPEB at the City's discretion. 7% of Pay for employees hired on or after July 1, 2012, for Pension only.

COLA

Police hired on or after July 1, 2012: None.

Retirement prior to July 1, 1989: None.

Retirement after July 1, 1989 and prior to July 1, 2000: 3% every other year, beginning after the later of 3 years from retirement date or age 65.

Retirement after July 1, 2000: 2% every year, beginning after the later of 2 years from retirement date or age 62. For Police and Firefighters with 25 Years of Service, beginning 1 year from retirement.

Lifetime cap of 50% of original pension.

Retirement windows

Retirement windows were offered in 1999 and 2007.