



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve

**Report of the Actuary on the Annual Valuation of the City of East
Point Employees Retirement Plan**

**Prepared as of January 1, 2018
For the City's Fiscal Year July 1, 2019– June 30, 2020**



May 2, 2018

Pension Board of Trustees
City of East Point Employees Retirement Plan
P.O. Box 90129
East Point, Georgia 30364

Dear Trustees:

We are pleased to submit revised results of the annual actuarial valuation of the City of East Point Employees Retirement Plan prepared as of January 1, 2018. The purpose of this report is to provide a summary of the funded status of the Plan as of January 1, 2018, and to recommend rates of employer contribution. While not verifying the data at source, the actuary performed tests for consistency and reasonability. Separate reports will be required to provide accounting information under Governmental Accounting Standards Board Statements No. 67 and 68.

The January 1, 2014 actuarial valuation was the first valuation prepared by Cavanaugh Macdonald Consulting, LLC. All results presented in the report as of January 1, 2013 and for prior years were prepared by the prior actuary.

The January 1, 2018 valuation will set the City's actuarially determined contribution rate for the 2019/2020 fiscal year.

The total actuarially determined contribution rate for the 2019/2020 fiscal year is 38.60% of compensation. In comparison, the City's actuarially determined contribution rate for the 2018/2019 fiscal year was 39.56% of compensation. A detailed analysis of the gains and losses during the year are shown in Section III of the report.

The promised benefits of the Plan are included in the actuarially calculated employer contribution rates which are developed using the entry normal cost method. Gains and losses are reflected in the unfunded accrued liability and are amortized on a closed basis over a 6 year period. The assumptions recommended by the actuary are in aggregate reasonably related to the experience under the Plan and to reasonable expectations of anticipated experience under the Plan.

Assuming that the annual required employer contributions to the Plan are made by the City from year to year in the future at the rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the Plan may be safely anticipated.

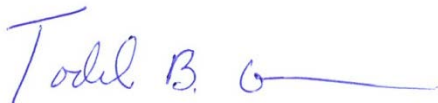
This is to certify that the independent consulting actuary is a Member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the Plan and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Plan.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as 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. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Actuarial computations presented in this report are for purposes of determining the funding amounts for the City of East Point Employees Retirement Plan. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Plan's funding requirements and goals. Please direct any inquiries regarding this report to the Pension Board.

We trust that the report will meet the approval of the Board and will furnish the desired information concerning the financial condition of the Plan.

Respectfully submitted,



Todd B. Green ASA, FCA, MAAA
Principal & Consulting Actuary



Beverly V. Bailey, ASA, EA, FCA, MAAA
Senior Actuary

TBG/my

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Section I – Summary of Principal Results

Summary of Results

For convenience of reference, the principal results of the current valuation are summarized below.

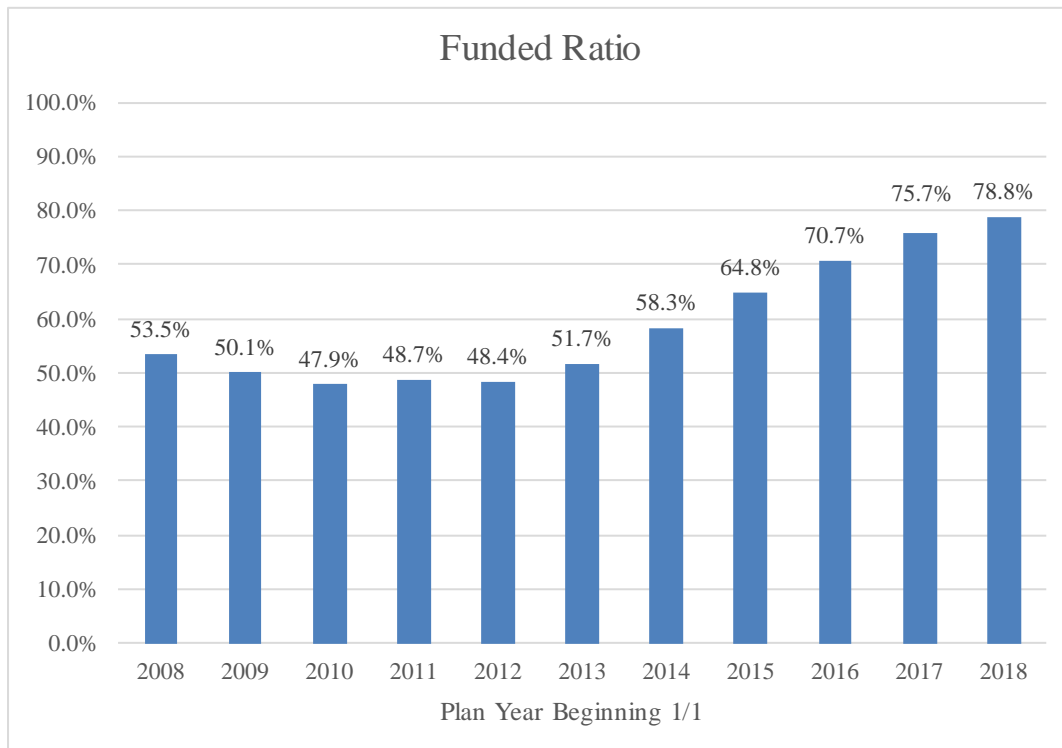
Valuation Date	January 1, 2017	January 1, 2018
Active Participants:		
a. Number	447	468
b. Covered Compensation	\$ 19,192,214	\$ 20,545,009
Retired Participants and Beneficiaries:		
a. Number	345	344
b. Total Annual Benefits	\$ 7,700,966	\$ 7,967,937
Number of Terminated Vested Participants	26	26
Assets:		
a. Market Value	\$ 89,921,618	\$ 103,550,250
b. Actuarial Value	\$ 91,243,478	\$ 99,712,936
Actuarial Accrued Liability	\$ 120,587,907	\$ 126,467,147
Unfunded actuarial accrued liability	\$ 29,344,429	\$ 26,754,211
Amortization Period	7 years	6 years
Fiscal Year Ending	June 30, 2019	June 30, 2020
Actuarially Determined Contribution		
a. Normal Cost Rate	13.93%	14.14%
b. Admin Expenses	1.41%	1.45%
c. Unfunded Accrued Liability Rate	<u>30.22%</u>	<u>29.02%</u>
d. Total City Contribution	45.56%	44.60%
Required City Contribution		
a. Required City Contribution	39.56%	38.60%
b. Required Member Contribution	<u>6.00%</u>	<u>6.00%</u>
c. Total Contribution	45.56%	44.60%

Section I – Summary of Principal Results

- A. The promised benefits of the City of East Point Employees Retirement Plan are included in the actuarially determined contribution rates which are developed using the entry age normal cost method. Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions as a level dollar amount over a 6 year period. The assumptions recommended by the actuary are in the aggregate reasonably related to the experience under the Plan and to reasonable expectations of anticipated experience under the Plan.

The valuation has been prepared in accordance with the parameters set forth in Georgia funding standards as set forth in Code Section 47-20-10 of the Georgia Public Retirement System Standards.

The following table represents the City’s historical funded ratio for the past eleven years. The funded ratio represents the percentage of the plan actuarial accrued liability that is covered by the actuarial value of plan assets as of the valuation date.



Section I – Summary of Principal Results

- B.** The major benefit and contribution provisions of the City as reflected in the valuation are summarized in Section VIII.
- C.** Section VII of this report outlines the full set of actuarial assumptions and methods used in the valuation. Since the prior valuation, the mortality table has been projected to 2018.
- D.** The individual entry age normal cost method was used to prepare the valuation. Section VII contains a brief description of the actuarial cost method.
- E.** Comments on the valuation results as of January 1, 2018 are given in Section I and further discussion of the contributions is set out in Section II.
- F.** Since the previous valuation, the assumed COLA increase for Class 1-3 has been increased from 1.75% to 2.25%.

Section I – Summary of Principal Results

Contributions Payable

- A. The City of East Point Employees Retirement Plan requires employees to contribute 6% of pay on a before-tax basis.
- B. The City contribution for the fiscal year ending June 30, 2020 consists of three components. The first component is the normal cost. Under the entry age normal cost method, the normal cost is a level percentage of payroll over the service life of each individual. The employer portion of the normal cost for the fiscal year ending June 30, 2020 is 8.14% of covered payroll.
- C. The second component of the City contribution is a load for administration expenses. The administration expenses for the fiscal year ending June 30, 2020 is 1.45% of covered payroll.
- D. The third component of the City contribution is the amortization of the unfunded liability. The amortization cost for the fiscal year ending June 30, 2020 is 29.02% of covered payroll based on a level dollar amortization over a 6 year period.
- E. The total required contribution to the Plan for the fiscal year ending June 30, 2020 is 38.60% of covered payroll.
- F. The following table summarizes the employer contribution which was determined as of January 1, 2018.

**City Actuarially Determined Contribution
For Fiscal Year Ending June 30, 2020**

Contribution	Percentage of Active Participants' Compensation
a. Normal Cost Rate	8.14%
b. Admin Expenses	1.45%
c. Unfunded Accrued Liability Rate	<u>29.02%</u>
d. Total City Actuarially Determined Contribution	38.60%

Section I – Summary of Principal Results

Assets

As of January 1, 2018 the total market value of assets amounted to \$103,550,250. The actuarial value of assets used for the current valuation was \$99,712,936. Section V shows the development of the actuarial value of assets as of January 1, 2018. The method for determining the Actuarial Value of Assets recognizes investment gains and losses over a five year period. Asset information was provided by Resource Centers.

Comments on the Valuation

Section II of this report contains the valuation balance sheet which shows the present assets and liabilities of the Plan as of January 1, 2018. The valuation was prepared in accordance with the actuarial assumptions and the actuarial cost method set forth in Section VII.

The valuation balance sheet shows that the Plan has a present value of prospective benefits of \$144,659,260 of which \$86,606,508 is for the future benefits payable on behalf of inactive members and \$58,052,752 is payable on account of future benefits for present active members. Against these liabilities, the Plan has present actuarial value of assets of \$99,712,936 as of January 1, 2018. The difference of \$44,946,324 between the total present value of benefits and total present actuarial value of assets represents the present value of contributions to be made in the future.

The normal cost contribution rate is equal to the actuarial present value of benefits accruing during the current year divided by the annual active participant's payroll. For the 2019 plan year the total normal cost contribution rate is determined to be 14.14% of payroll and is determined under the entry age normal cost method. Members contribute 6.00% of compensation; therefore the City's portion of the total normal cost rate is 8.14%. Prospective employer normal contributions have a present value of \$10,252,387 and prospective member contributions have a present value of \$7,939,726. When these amounts are subtracted from \$44,946,324, there remains \$26,754,211 as the amount of unfunded accrued liability. The amount necessary to amortize the unfunded liability is 29.02% of payroll. The development of the unfunded accrued liability is shown in Section II.

Section II - Plan Contribution Development

Normal Cost

The Normal Cost component of the contribution represents active participant benefits accruing during the 2018 plan year. The following table shows the Normal Cost attributable to plan benefits under the current plan.

	January 1, 2017	January 1, 2018
1. Total Normal Cost		
a. Retirement Benefits	\$ 1,388,648	\$ 1,536,812
b. Termination Benefits	848,553	890,954
c. Death Benefits	141,174	151,873
d. Disability Benefits	<u>59,286</u>	<u>63,169</u>
e. Total	\$ 2,437,661	\$ 2,642,808
2. Valuation Payroll	\$ 17,503,499	\$ 18,694,580
3. Total Normal Cost as a Percent of Payroll	13.93%	14.14%
4. Member Portion of Normal Cost	6.00%	6.00%
5. Employer Portion of Normal Cost	7.93%	8.14%

Section II - Plan Contribution Development

Actuarial Accrued Liability

The Actuarial Accrued Liability represents the obligations of the plan as of the valuation date for active and inactive participant benefits. The following table shows the components of the liability.

	January 1, 2017	January 1, 2018
1. Actuarial Accrued Liability		
a. Inactive Participants		
i. Retired Participants and Beneficiaries	\$ 77,888,939	\$ 82,035,677
ii. Terminated Vested Participants Deferred	3,567,589	4,276,364
iii. Terminated Non-Vested Participants	<u>287,100</u>	<u>294,467</u>
iv. Total Inactive	81,743,628	86,606,508
b. Active Participants	\$ 38,844,279	\$ 39,860,639
2. Total Actuarial Accrued Liability	\$120,587,907	\$126,467,147

Section II - Plan Contribution Development

Development of the Unfunded Actuarial Accrued Liability

The Unfunded Actuarial Accrued Liability represents the Actuarial Accrued Liability less the Actuarial Value of Assets. The Unfunded Actuarial Accrued Liability as of January 1, 2018 is \$26,754,211. In other words, the plan liabilities exceed the plan assets by this amount as of the valuation date. The following table shows the components of the Unfunded Actuarial Accrued Liability of the plan.

	January 1, 2017	January 1, 2018
1. Actuarial Accrued Liability		
a. Present Active Participants	\$ 38,844,279	\$ 39,860,639
b. Present retired participants, beneficiaries, terminated participants entitled to deferred vested benefits and participants due a refund	<u>81,743,628</u>	<u>86,606,508</u>
c. Total	\$ 120,587,907	\$ 126,467,147
2. Actuarial Value of Assets	\$ 91,243,478	\$ 99,712,936
3. Unfunded Actuarial Accrued Liability (1c.) - (2)	\$ 29,344,429	\$ 26,754,211
4. Payment to Amortize Unfunded Actuarial Accrued Liability	\$ 5,186,223	\$ 5,330,419
5. Covered Compensation	\$ 19,192,214	\$ 20,545,009
6. Contribution Rate to Amortize Unfunded Actuarial Accrued Liability (((4) * 1.0775^1.5) / (5))^	30.22%	29.02%

Section II - Plan Contribution Development

Development of the Annual Contribution

The following exhibits show the development of the fiscal year ending June 30, 2020 required contribution. This contribution was developed using level dollar amortization of the unfunded liability with a 6 year closed amortization period.

	January 1, 2017	January 1, 2018
1. Actuarial Accrued Liability		
a. Active Participants	\$ 38,844,279	\$ 39,860,639
b. Retirees & Beneficiaries	77,888,939	82,035,677
c. Deferred Vested & Non-Vested	<u>3,854,689</u>	<u>4,570,831</u>
d. Total	\$ 120,587,907	\$ 126,467,147
2. Covered Compensation for Active Participants	\$ 19,192,214	\$ 20,545,009
3. Actuarial Value of Assets	\$ 91,243,478	\$ 99,712,936
4. Unfunded Actuarial Accrued Liability	\$ 29,344,429	\$ 26,754,211
5. City Actuarially Determined Contribution (Fiscal Year Ending)	June 30, 2019	June 30, 2020
a. Normal Cost Rate	7.93%	8.14%
b. Admin Expenses	1.41%	1.45%
c. Unfunded Accrued Liability Rate	<u>30.22%</u>	<u>29.02%</u>
d. Total City ADC	39.56%	38.60%

Section III – Gain/(Loss) Analysis

Development of the Actuarial Gain/(Loss)

(1)	Unfunded Accrued Liability (UAL) as of January 1, 2017	\$	29,344,429
(2)	Normal Cost		2,437,661
(3)	Contributions		9,818,181
(4)	Interest		2,082,657
(5)	Expected UAL at January 1, 2018 (1) + (2) - (3) + (4)		24,046,566
(6)	Actual UAL at January 1, 2018		26,754,211
(7)	Total Gain / (Loss) (6) - (5)		(2,707,645)
(8)	Asset Gain / (Loss)		1,474,621
(9)	Ad Hoc COLAs		(799,546)
(10)	Assumption and Method Changes		(2,595,965)
(11)	Liability Gain / (Loss) (7) - (8) - (9) - (10)	\$	(786,755)

Section III – Gain/(Loss) Analysis

Analysis of Total Gain / (Loss) January 1, 2017 to January 1, 2018

(1)	Actuarial assets (return of 7.75%)	\$ 1,474,621
(2)	Salary increases more than expected	(769,871)
(3)	Retirements	533,827
(4)	Data changes *	119,929
(5)	New Plan participants and rehires	(1,041,867)
(6)	Mortality	417,225
(7)	Disability	(23,584)
(8)	Benefit Payments	(161,503)
(9)	Termination	384,977
(10)	Cost of Living Adjustment (Class 1-3) (in excess of assumed)	(237,945)
(11)	Ad Hoc COLAs (Class 5)	(799,546)
(12)	Assumption and Method Changes	(2,595,965)
(13)	Other Gains / (Losses)	<u>(7,943)</u>
(14)	Total Gain / (Loss)	<u>\$ (2,707,645)</u>

*Includes data corrections, changes in non-vested terminations, and active retiree load.

Section IV – Additional Disclosures

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
January 1, 2018	\$ 99,712,936	\$ 126,467,147	\$ 26,754,211	78.8%	\$ 20,545,009	130.2%
January 1, 2017	91,243,478	120,587,907	29,344,429	75.7%	19,192,214	152.9%
January 1, 2016	83,584,374	118,177,465	34,593,091	70.7%	19,171,323	180.4%
January 1, 2015	75,496,622	116,476,102	40,979,480	64.8%	17,949,686	228.3%
January 1, 2014	67,442,177	115,671,696	48,229,519	58.3%	17,920,581	269.1%
January 1, 2013	59,041,617	114,213,800	55,186,563	51.7%	17,732,754	311.1%
January 1, 2012	55,473,617	114,717,480	59,243,863	48.4%	18,920,699	313.1%
January 1, 2011	54,407,669	111,721,874	57,314,205	48.7%	18,471,549	310.3%
January 1, 2010	52,815,701	110,322,330	57,506,629	47.9%	18,141,948	317.0%
January 1, 2009	53,310,907	106,468,681	53,106,684	50.1%	17,248,956	307.9%
January 1, 2008	57,782,237	108,091,103	50,308,866	53.5%	21,146,659	237.9%
January 1, 2007	55,645,262	105,625,551	49,980,289	52.7%	21,163,964	236.2%

Actuarial Methods and Assumptions

Valuation date	January 1, 2018
Actuarial cost method	Individual Entry Age Normal
Amortization method	Level Dollar – Closed
Remaining amortization period	6 years
Asset valuation method	Five-year smoothed market value
Actuarial assumptions:	
Investment rate of return (includes inflation)	7.75%
Projected salary increases (includes inflation)	3.50%
Inflation	2.25%
COLA	2.25%

Section V – Assets

Reconciliation of Market Value of Assets

	January 1, 2017	January 1, 2018
1. Beginning of Year Market Value of Assets	\$ 80,569,741	\$ 89,921,618
2. Expenditures		
a. Benefit Payments	\$ 8,638,756	\$ 9,616,270
b. Administrative Expenses	<u>250,881</u>	<u>275,589</u>
c. Total	\$ 8,889,637	\$ 9,891,859
3. Income		
a. Employer Contributions	\$ 8,674,036	\$ 8,628,709
b. Employee Contributions	\$ 1,356,521	\$ 1,189,472
c. Other Receipts	<u>-</u>	<u>-</u>
d. Total	\$ 10,030,557	\$ 9,818,181
4. Investment Income		
a. Investment gains/losses	\$ 8,717,624	\$ 14,287,213
b. Investment expense	<u>(506,667)</u>	<u>(584,903)</u>
c. Total	\$ 8,210,957	\$ 13,702,310
5. End of Year Market Value of Assets (1 - 2c + 3d + 4c)	\$ 89,921,618	\$ 103,550,250
6. Rate of Return on Market Value of Assets	10.12%	15.24%

Section V - Assets

Development of Actuarial Value of Assets

Valuation Date January 1:	2017	2018	2019	2020	2021	2022
1. Actuarial Value Beginning of Year	\$ 83,584,374	\$ 91,243,478				
2. Market Value End of Year	\$ 89,921,618	\$ 103,550,250				
3. Market Value Beginning of Year	\$ 80,569,741	\$ 89,921,618				
4. Cash Flow						
a. Contributions	\$ 10,030,557	\$ 9,818,181				
b. Other Revenue	0	0				
c. Benefit Payments	(8,638,756)	(9,616,270)				
d. Administrative Expenses	(250,881)	(275,589)				
e. Investment Expenses	(506,667)	(584,903)				
f. Net	\$ 634,253	\$ (658,581)				
5. Investment Income						
a. Market Total	\$ 8,717,624	\$ 14,287,213				
b. Assumed Rate	7.75%	7.75%				
c. Amount for Immediate Recognition	6,795,033	7,550,973				
d. Amount for Phased-In Recognition	\$ 1,922,591	\$ 6,736,240				
6. Phased-In Recognition of Investment Income						
a. Current Year: 0.20 *5.d.	\$ 384,518	\$ 1,347,248	\$ 0	\$ 0	\$ 0	\$ 0
b. First Prior Year	(1,266,912)	384,518	1,347,248	0	0	0
c. Second Prior Year	(171,414)	(1,266,912)	384,518	1,347,248	0	0
d. Third Prior Year	1,283,626	(171,414)	(1,266,912)	384,518	1,347,248	0
e. Fourth Prior Year	0	1,283,626	(171,414)	(1,266,912)	384,518	1,347,248
f. Total Recognized Investment Gain	\$ 229,818	\$ 1,577,066	\$ 293,440	\$ 464,854	\$ 1,731,766	\$ 1,347,248
7. Actuarial Value End of Year	\$ 91,243,478	\$ 99,712,936				
8. Difference Between Market & Actuarial Values	\$ (1,321,860)	\$ 3,837,314	\$ 3,543,868	\$ 3,079,014	\$ 1,347,248	\$ -
9. Rate of Return on Actuarial Value	7.75%	9.37%				
10. Rate of Return on Market Value	10.12%	15.24%				

The actuarial value of assets recognizes assumed investment income (line 5c) fully each year. Differences between actual and assumed investment income (line 5d) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, the actuarial value will tend to be less than market value. During periods when investment performance is less than assumed, the actuarial value will tend to be greater than the market value.

Section VI - Data

- A. Data regarding the participants in the Plan for use as a basis of the valuation were furnished by the City and Resource Centers. The valuation included active participants with annualized compensation totaling \$20,545,009.
- B. The following table shows the number of retired participants and beneficiaries as of January 1, 2018 together with the amount of their annual retirement benefits payable under the Plan as of that date.

**The Number and Average Annual Benefits of
Retired Participants and Beneficiaries
as of January 1, 2018**

Group	Number	Average Annual Benefits
Service Retirements	256	\$ 25,888
Beneficiaries of Deceased Members	85	15,184
Disability Retirements	<u>3</u>	16,668
Total	344	\$ 23,163

- C. Table 1 on the next page shows the distribution by age and years of service of the number of active participants included in the valuation, while Table 2 shows the number and annual benefits of retired participants and beneficiaries included in the valuation, distributed by age. Table 3 shows the reconciliation of valuation data from last year's valuation carried forward to this year's valuation. Table 4 shows the historical cost-of-living increases for the Plan.

Section VI - Data

Table 1: Distribution of Active Participants by Age and Service Groups as of January 1, 2018

Attained Age	Completed Years of Service									Total
	Under 3	3 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 or More	
Under 25	21	1	0	0	0	0	0	0	0	22
Average Pay	32,508	28,080	0	0	0	0	0	0	0	32,307
25 to 29	36	6	2	0	0	0	0	0	0	44
Average Pay	34,528	39,707	34,469	0	0	0	0	0	0	35,232
30 to 34	27	4	15	7	0	0	0	0	0	53
Average Pay	42,165	40,617	40,794	47,481	0	0	0	0	0	42,362
35 to 39	21	6	14	3	1	0	0	0	0	45
Average Pay	35,285	37,278	45,681	51,034	58,561	0	0	0	0	40,352
40 to 44	20	5	13	18	9	5	0	0	0	70
Average Pay	36,635	36,899	43,011	47,521	46,065	68,997	0	0	0	44,161
45 to 49	13	4	13	16	17	10	2	0	0	75
Average Pay	40,303	51,544	42,670	49,480	53,925	59,746	69,240	0	0	49,722
50 to 54	10	2	10	13	9	6	5	2	0	57
Average Pay	41,174	34,135	51,406	46,788	44,941	57,775	70,118	72,448	0	49,981
55 to 59	11	2	10	13	10	7	4	0	0	57
Average Pay	41,028	36,073	47,720	46,552	51,085	35,350	47,680	0	0	44,822
60 to 64	7	4	13	6	2	0	2	1	2	37
Average Pay	40,650	37,747	42,791	37,325	36,251	0	48,640	52,850	69,948	42,657
65 to 69	1	0	3	1	0	0	1	0	0	6
Average Pay	71,823	0	44,650	102,528	0	0	47,735	0	0	59,339
70 & up	0	0	0	1	1	0	0	0	0	2
Average Pay	0	0	0	53,476	11,000	0	0	0	0	32,238
Total Count	167	34	93	78	49	28	14	3	2	468
Average Pay	37,612	39,251	44,255	47,768	48,749	54,877	58,914	65,915	69,948	43,900

Section VI - Data

Table 2: Number of Retired Participants and Beneficiaries and their Benefits as of January 1, 2018

Attained Age	Number of Members	Total Annual Benefits	Average Annual Benefit
49 & Under	4	\$ 57,952	\$ 14,488
50 – 54	7	187,355	26,765
55 – 59	21	482,558	22,979
60 – 64	44	1,097,609	24,946
65 – 69	83	2,251,366	27,125
70 – 74	76	1,940,032	25,527
75 – 79	46	1,004,156	21,829
Over 80	63	946,909	15,030
Total	344	\$ 7,967,937	\$ 23,163

Section VI - Data

Table 3: Reconciliation of Plan Participants as of January 1, 2018

	Active Participants	Inactive Participants with Deferred Benefits	Inactive Participants Receiving Benefits	Total
January 1, 2017	447	26	345	818
Retirements	(4)	(7)	11	
Deaths	(1)		(18)	(19)
Non Vested Terminations	(17)			(17)
Vested Terminations	(7)	7		
Refunds	(43)			(43)
Rehires	18		(1)	17
New Entrants	75			75
New Beneficiaries			7	7
Benefits Expired				
Data Adjustments				
Net Change	21	0	(1)	20
January 1, 2018	468	26	344	838

Section VI - Data

Table 4: Historical COLA Rates

Effective Date	History of COLA		
	January 31	Classes 1-3	Class 5
1999	1.5%		0.0%
2000	2.6%		2.6%
2001	3.0%		0.0%
2002	1.9%		1.9%
2003	2.2%		0.0%
2004	1.8%		2.0%
2005	3.0%		0.0%
2006	3.0%		0.0%
2007	2.0%		2.0% *
2008	3.0%		0.0%
2009	1.1%		0.0%
2010	1.8%		1.1% ^
2011	1.1%		0.0%
2012	3.0%		0.0%
2013	1.8%		0.0%
2014	1.2%		0.0%
2015	1.3%		1.3% **
2016	0.5%		0.0%
2017	1.7%		1.7% ^^
2018	2.2%		2.2%
Total	39.7%		14.8%
	20		20
	1.69%		0.69%

* Effective July 1, 2007

^ Effective July 1, 2010

**Effective July 1, 2015

^^Effective May 1, 2017

Section VII - Actuarial Assumptions & Methods

A. Investment Return:

7.75% per year, compounded annually.

B. Inflation:

2.25% per year

C. Salary Increases:

3.50% per year

D. Cost of Living Adjustment

2.25% per year

E. Pre and Post Retirement Mortality:

RP-2000 Combined Mortality Table, sex distinct, Projected Scale AA to the valuation date.

Representative values of the assumed annual rates of mortality are shown in the following table.

Age	Male	Female
25	0.03%	0.02%
30	0.04	0.02
35	0.07	0.04
40	0.09	0.05
45	0.12	0.08
50	0.15	0.12
55	0.26	0.24
60	0.50	0.46
65	0.99	0.89
70	1.69	1.53
75	2.94	2.43
80	5.37	4.04
85	9.76	6.95

Section VII - Actuarial Assumptions & Methods

F. Post Disablement Mortality:

RP-2000 Disabled Retiree Mortality Table, sex distinct.

Representative values of the assumed annual rates of mortality are shown in the following table.

Age	Male	Female
25	2.26%	0.75%
30	2.26	0.75
35	2.26	0.75
40	2.26	0.75
45	2.26	0.75
50	2.90	1.15
55	3.54	1.65
60	4.20	2.18
65	5.02	2.80
70	6.26	3.76
75	8.21	5.22
80	10.94	7.23
85	14.16	10.02

G. Separation From Active Service:

Representative values of the assumed annual rates of withdrawal and disability are shown in the following table.

Age	Rates of Termination	Rates of Disability
20	25.80%	.05%
25	19.80	.06
30	15.60	.06
35	12.15	.06
40	9.45	.07
45	7.80	.10
50	5.85	.18
55	0.00	.34

Section VII - Actuarial Assumptions & Methods

Representative values of the assumed annual rates of retirement are shown in the following table.

Age	Rates of Retirement	
	Class 2 & 5	Class 3
50 - 59	5%	5%
60	5	100
61	5	100
62	5	100
63	5	100
64	5	100
65	100	100

H. Actuarial Value of Assets:

The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed prior year valuation rate of 7.75%. The amount recognized each year is 20% of the difference between market value and expected market value.

I. Actuarial Cost Method:

Entry Age Normal. This method produces a normal cost as a level percentage of pay over the service life of each participant and amortization of the Unfunded Actuarial Accrued Liability (UAAL). Gains and losses are reflected in the Unfunded Actuarial Accrued Liability and are included in its amortization. The unfunded actuarial accrued liabilities are amortized over a level dollar closed 6 year period.

J. Percent Married:

80% of the plan participants are assumed married with males three years older than females.

The active retiree liability contains a 2% load to account for the GATT lump sum option available to retirees upon retirement.

Section VIII – Plan Provisions

A. **Effective Date**

As amended and restated to January 1, 2013

B. **Eligibility Requirements**

Employees working 40 hours (not casual employees) per week, or firefighters on 24 hour on/48 hour off schedule. Certain management positions may be excluded from the Plan.

C. **Classes**

Class 1: Transferred from old Plan on June 19, 1975
Class 2: General Employees and elected officials hired before April 1, 1992
Class 3: Police and Firefighters hired before April 1, 1992
Class 5: Eligible full-time employees hired on or after April 1, 1992

Note: Any Class may elect the Class 5 benefit.

D. **Compensation**

Excludes overtime pay, bonuses, fringe benefits and reimbursed expenses. Annual maximum \$200,000 as adjusted by the Secretary of the Treasury.

E. **Average Monthly Compensation (AMC)**

Classes 2-3: Monthly average of the highest consecutive five years of earnings.
Class 5: Sum of highest 78 consecutive pay periods divided by 36.

F. **Normal Form of Payment**

Class 1: 66 2/3% Joint and Survivor Annuity
Class 3: Life Annuity
Class 2 & 5: 75% Joint and Survivor Annuity

G. **Participant Contributions**

Effective July 1, 1998, participants contribute 6% of pay on a before-tax basis. The plan was noncontributory prior to July 1, 1998.

Section VIII – Plan Provisions

H. Normal Retirement Date

- Class 2: Age 65 and 10 years of service. If elected official, Age 60 and 5 years of service.
- Class 3: Age 55 and 10 years of service.
- Class 5: Age 65 (55 Police and Firefighters) and 10 years of service. If elected official, Age 60 and 5 years of service.

I. Early Retirement

- Class 2 & 3: Age 50 and 10 years of service
- Class 5: Age 55 and 10 years of service for general employees. Age 50 and 10 years of service for Police and Firefighters.

The benefit is reduced 3% for each year retirement proceeds Normal Retirement Date.

J. Retirement Benefit Formula (Accrued Benefit)

- Class 2 & 3: 2.25% times AMC times service
- Class 5: Elected: \$30 times service.
Non Elected: AMC times service times Applicable Benefit Percentage

<u>Retirement Age</u>	<u>Applicable Benefit Percentage</u>
50	1.75%*
51	1.80*
52	1.85*
53	1.90*
54	1.95*
55	2.00
56	2.05
57	2.10
58	2.15
59	2.20
60	2.30
61	2.40
62	2.50
63	2.60
64	2.70
65 and above	2.80

*Applicable to Police Officers and Firefighters

Section VIII – Plan Provisions

K. Vesting

Class 2 & 3: 10 years

Class 5: 10 years of service and be within 10 years of earliest retirement date. If elected official, 5 years of service.

L. Termination of Employment Before Retirement

Class 5: A 1-time lump sum payment in accordance with the following schedule:

<u>Years of Credited Service</u>	<u>Percentage of Employee Contributions</u>
<1	100%
1 < 2	110
2 < 3	120
3 < 4	130
4 < 5	140
5 < 6	150
6 < 7	160
7 < 8	170
8 < 9	180
9 < 10	190
10 < 11	200
11 < 12	220
12 < 13	240
13 < 14	260
14 < 15	280
15 < 16	300
16 < 17	320
17 < 18	340
18 < 19	360
19 < 20	380
20 < 21	400
21 < 22	420
22 < 23	440
23 < 24	460
24 < 25	480
25 or more	500

Payments to deceased active or retired Class 5 participants will at least equal the above lump sum. Vested employees may elect a deferred monthly benefit.

Section VIII – Plan Provisions

M. Disability Benefit

- Class 2 & 3: Annuity payable immediately equal to the greater of Accrued Benefit or 20% times average monthly compensation for the last 12 calendar months.
- Class 5: For less than 10 years of service, lump sum termination benefit. For 10 or more years of service, annuity payable immediately equal to the Accrued Benefit payable at the Normal Retirement Date.

N. Death Benefits for Death Prior to Retirement

- Class 2 & 3: Actuarial reserve at age 65 with add-on (maximum 10 years) for full-time employees employed prior to December 1, 1987. Actuarial reserve without add-on for elected officials and full-time employees employed on and after December 1, 1987.
- Class 5: For active and terminated vested employees, spouse's annuity equal to the greater of the Accrued Benefit or, if an active employee, but not elected official, 60% of AMC. This is actuarially reduced for a qualified spouse under age 50. Minimum of service time \$30.

O. Death Benefits after Retirement

- Class 1: Married: Spouse will receive 2/3 of the benefit received by the member until the earlier of his/her death or remarriage.
Unmarried: The benefit paid to the beneficiary is dependent on the form of payment chosen at retirement by the member.
- Class 2 & 3: The benefit paid to the beneficiary is dependent on the form of payment chosen at retirement by the member.
- Class 5: Qualified Spouses, or Children until age 18 (24 if a full-time student), will receive a benefit equal to 75% of the member's benefit. The total distribution to member and beneficiary must be at least equal to the lump sum termination benefit.

P. Cost of Living Adjustment (COLA)

- Class 1-3: The yearly percentage increase of the Consumer Price Index (CPI) of the most recent November CPI reading. The maximum COLA is 3%, and there is no reduction of benefits if the CPI decreases.
- Class 5: Retirement benefits are subject to a cost of living review and possible adjustment each two years by the City Council.