The Employee Retirement System of the City of Providence

Actuarial Valuation and Review as of July 1, 2017

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July 13, 2018

Retirement Board
The Employee Retirement System of the City of Providence
City Hall
Providence, RI 02903

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2017. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for fiscal 2018 and later years.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement System. The census information and financial information on which our calculations were based was prepared by the staff of the System. That assistance is gratefully acknowledged.

The actuarial calculations were directed under my supervision. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in my opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan/Fund/System.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By: 

Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President and Consultant

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The Employee Retirement System of the City of Providence Actuarial Valuation and Review as of July 1, 2017

Section 1: Actuarial Valuation Summary

Purpose and Basis

This report was prepared by Segal Consulting to present a valuation of The Employee Retirement System of the City of Providence as of July 1, 2017. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The measurements shown in this actuarial valuation may not be applicable for other purposes. In particular, the measures herein are not necessarily appropriate for assessing the sufficiency of System assets to cover the estimated cost of settling the System's benefit obligations. Future actuarial measurements may differ significantly from the current measurements 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; and changes in plan provisions or applicable law.

The contribution requirements presented in this report are based on:

- The benefit provisions of The Employee Retirement System of the City of Providence, as administered by the Board;
- The characteristics of covered active participants, inactive participants, and retired participants and beneficiaries as of July 1, 2017, provided by the Board;
- The assets of the System as of June 30, 2017;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions regarding employee terminations, retirement, death, etc.

Significant Issues

1. Segal Consulting ("Segal") strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the unfunded actuarial accrued liability and the principal balance. The funding policy adopted by The Employee Retirement System of the City of Providence meets this standard and funds the unfunded actuarial accrued liability by June 30, 2040.
2. The funded ratio (the ratio of the actuarial value of assets to actuarial accrued liability) is 26.25%, compared to the prior year funded ratio of 26.24%. This ratio is one measure of funding status, and its history is a measure of funding progress. Using the market value of assets, the funded ratio is 25.71%, compared to 25.05% as of the prior valuation date. These measurements are not necessarily appropriate for assessing the sufficiency of System assets to cover the estimated cost of settling the System's benefit obligation or the need for or the amount of future contributions.
3. During the plan year ended June 30, 2017, the market value rate of return was 10.70% compared to the assumed rate of return of 8.00%. Because the actuarial value of assets gradually recognizes market value fluctuations over a five-year period, the actuarial rate of return for the plan year ended June 30, 2017 was 7.72%. The actuarial value of assets as of June 30, 2017 was $356.0 million, or 102.1% of the market value of assets of $348.6 million. As of December 31, 2016, the actuarial value of assets was 104.7% of the market value.
4. As indicated in Section 2 of this report, the total unrecognized investment loss as of June 30, 2017 is $7,386,203. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. This implies that earning the assumed rate of investment return (net of expenses) on a market value basis will result in investment losses on the actuarial value of assets in the next few years. The funding schedule shown in Section 2 reflects the deferred investment losses in accordance with the asset valuation adopted by the Board.
5. The actuarial valuation report as of July 1, 2017 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected.
6. The unfunded liability has increased from $981.2 million as of July 1, 2016 to $1,000.1 million as of July 1, 2017. The unfunded liability was expected to increase to $996.0 million. The increase of $4.1 million from the expected unfunded liability is primarily due to a loss from demographic experience, as discussed in Section 2.
7. Because the fiscal 2018 and 2019 appropriations have been budgeted based on prior valuations, the results of this valuation will first be reflected in the fiscal 2020 appropriation. The unfunded liability, less the liability associated with the 1995 Deferral, is amortized through June 30, 2040. The amortization payments are initially calculated to increase 3.5% per year beginning with the fiscal 2020 appropriation. The 1995 deferral liability is amortized through June 30, 2031 in level payments.

Section 2 includes a funding schedule that fully funds the System by June 30, 2040. In developing the funding schedule, assets and liabilities were projected from the valuation date. The market value of assets are assumed to earn 8% per year and the deferred investment gains and losses are recognized in the actuarial value of assets in accordance with the methodology adopted by the Board. As a result of recognizing these deferred gains and losses, the actual increase in the amortization payment may be more or less than 3.5%.

Contributions are assumed to be paid on June 30. If the contribution is made before or after June 30, Segal will calculate the change in interest charge based on the actual date of payment.

8. Since the actuarial valuation results are dependent on a given set of assumptions, there is a risk that emerging results may differ significantly as actual experience proves to be different from the assumptions. We have included a discussion of various risks that may affect the plan in Section 2.

Summary of Key Valuation Results

		2017	2016
Contributions for plan year beginning July 1:	• Actuarially Determined Contributions for fiscal 2018 and 2017	$78,123,118	$73,217,543
	• Actuarially Determined Contributions for fiscal 2019 and 2018	83,357,367	78,123,118
	• Actual employer contributions for 2017	--	72,396,000
Actuarial accrued liability for plan year beginning July 1:	• Retired participants and beneficiaries	$932,537,516	$904,791,805
	• Inactive participants	14,206,965	13,306,418
	• Active participants	409,427,431	412,203,039
	• Total	1,356,171,912	1,330,301,262
	• Normal cost for plan year beginning July 1	18,852,441	18,973,208
Assets for plan year beginning July 1:	• Market value of assets (MVA)	$348,644,000	$333,287,000
	• Actuarial value of assets (AVA)	356,030,203	349,094,428
	• Actuarial value of assets as a percentage of market value of assets	102.12%	104.74%
Funded status for plan year beginning July 1:	• Unfunded actuarial accrued liability on market value of assets	$1,007,527,912	$997,014,262
	• Funded percentage on MVA basis	25.71%	25.05%
	• Unfunded actuarial accrued liability on actuarial value of assets	$1,000,141,709	$981,206,834
	• Funded percentage on AVA basis	26.25%	26.24%
Key assumptions:	• Net investment return	8.00%	8.00%
	• Long-term inflation rate	3.50%	3.50%
Demographic data for plan year beginning July 1:	• Number of retired participants and beneficiaries	3,234	3,185
	• Number of inactive participants entitled to a refund of employee contributions	477	421
	• Number of inactive vested participants	56	52
	• Number of active participants	2,891	2,889
	• Total payroll	$140,752,162	$138,236,828

Note: Actuarially determined contributions are assumed to be paid on June 30. If the contribution is made before or after June 30, Segal will calculate the change in interest charge based on the actual date of payment.

Important Information About Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

Plan of benefits	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Participant data	An actuarial valuation for a plan is based on data provided to the actuary by The Employee Retirement System of the City of Providence. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Assets	The valuation is based on the market value of assets as of the valuation date, as provided by The Employee Retirement System of the City of Providence. The Employee Retirement System of the City of Providence uses an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
Actuarial assumptions	In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared at the request of The Employee Retirement System of the City of Providence. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- Actuarial results in this report are not rounded, but that does not imply precision.
- If The Employee Retirement System of the City of Providence is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Employee Retirement System of the City of Providence should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of the System, it is not a fiduciary in its capacity as actuaries and consultants with respect to the System.

Section 2: Actuarial Valuation Results

Participant Data

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, inactive participants, retired participants and beneficiaries.

This section presents a summary of significant statistical data on these participant groups.

More detailed information for this valuation year and the preceding valuation can be found in *Section 3, Exhibits A* and *B*.

PARTICIPANT POPULATION: 2007 – 2017

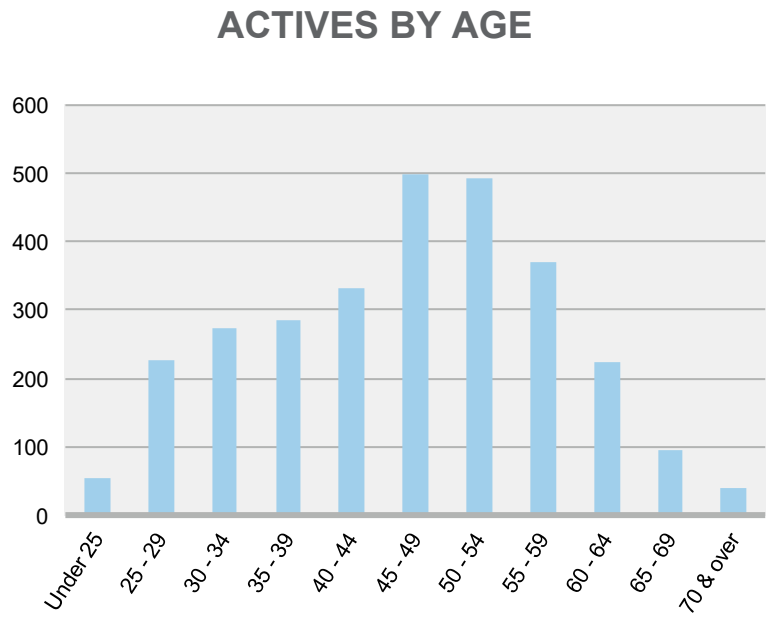
Year Ended June 30	Active Participants	Inactive Participants	Retired Participants and Beneficiaries	Total Non-Actives	Ratio of Non-Actives to Actives
2007	3,083	179	2,821	3,000	0.97
2008	3,008	237	2,875	3,112	1.03
2009	2,955	455	2,883	3,338	1.13
2010	2,998	432	2,929	3,361	1.12
2011	2,987	435	2,999	3,434	1.15
2013	2,998	407	3,094	3,501	1.17
2014	2,986	428	3,108	3,536	1.18
2015	3,012	432	3,094	3,526	1.17
2016	2,889	473	3,185	3,658	1.27
2017	2,891	533	3,234	3,767	1.30

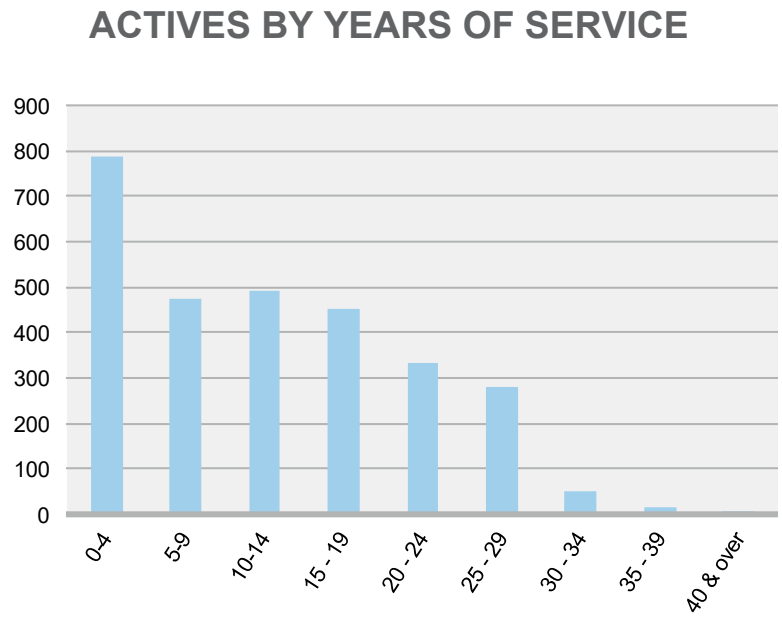
Active Participants

Plan costs are affected by the age, years of service and compensation of active participants. In this year's valuation, there were 2,891 active participants with an average age of 46.8, average years of service of 12.7 years and average compensation of $48,686. The 2,889 active participants in the prior valuation had an average age of 47.3, average service of 13.1 years and average compensation of $47,849.

Among the active participants, there were none with unknown age and/or service information.

Distribution of Active Participants as of June 30, 2017





Inactive Participants

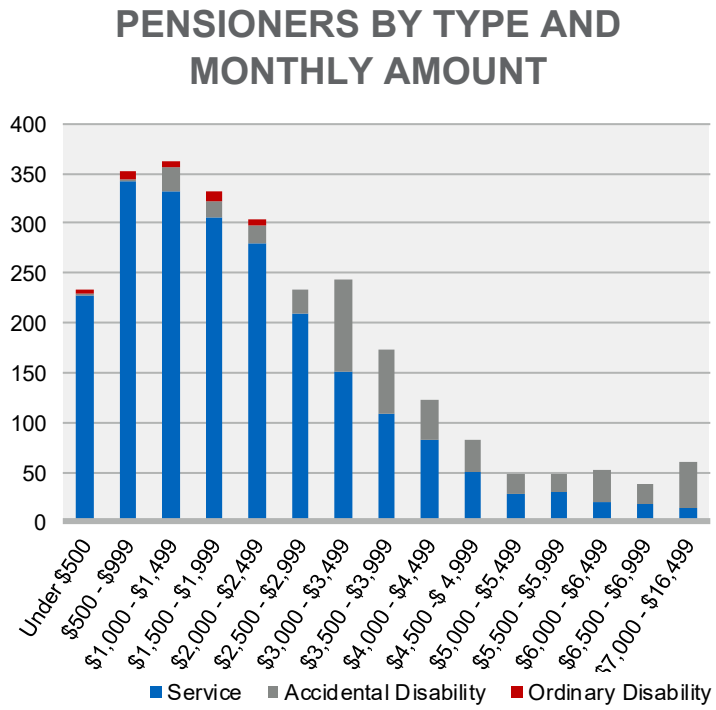
In this year's valuation, there were 56 participants with a vested right to a deferred or immediate vested benefit and 477 participants entitled to a return of their employee contributions.

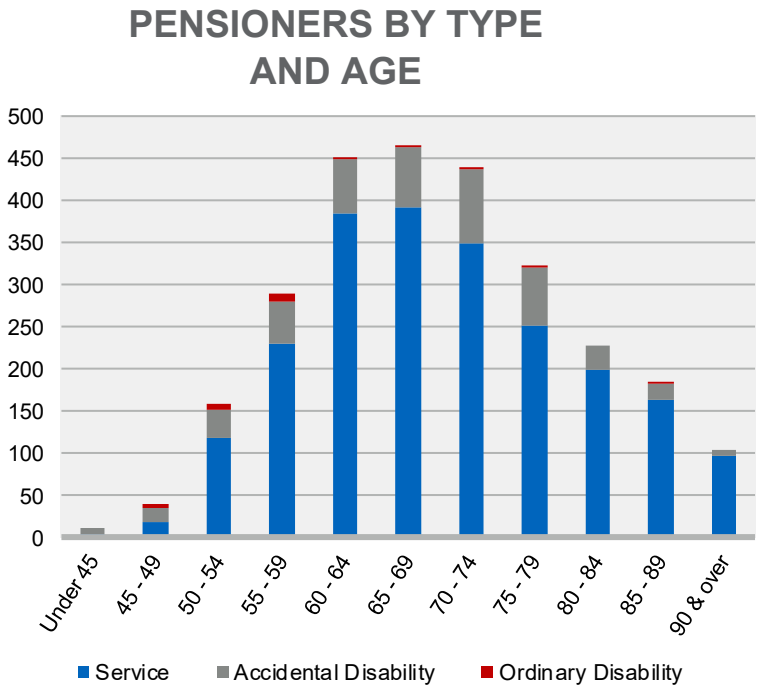
Retired Participants and Beneficiaries

As of June 30, 2017, 2,687 retired participants and 547 beneficiaries were receiving total monthly benefits of $7,885,376. For comparison, in the previous valuation, there were 2,637 retired participants and 548 beneficiaries receiving monthly benefits of $7,737,748. There were three retired participants in suspended status in the current and prior valuation.

As of June 30, 2017, the average monthly benefit for retired participants and beneficiaries is $2,438, compared to $2,429 in the previous valuation. The average age for retired participants and beneficiaries is 70.5 in the current valuation, compared with 70.6 in the prior valuation.

Distribution of Pensioners as of June 30, 2017



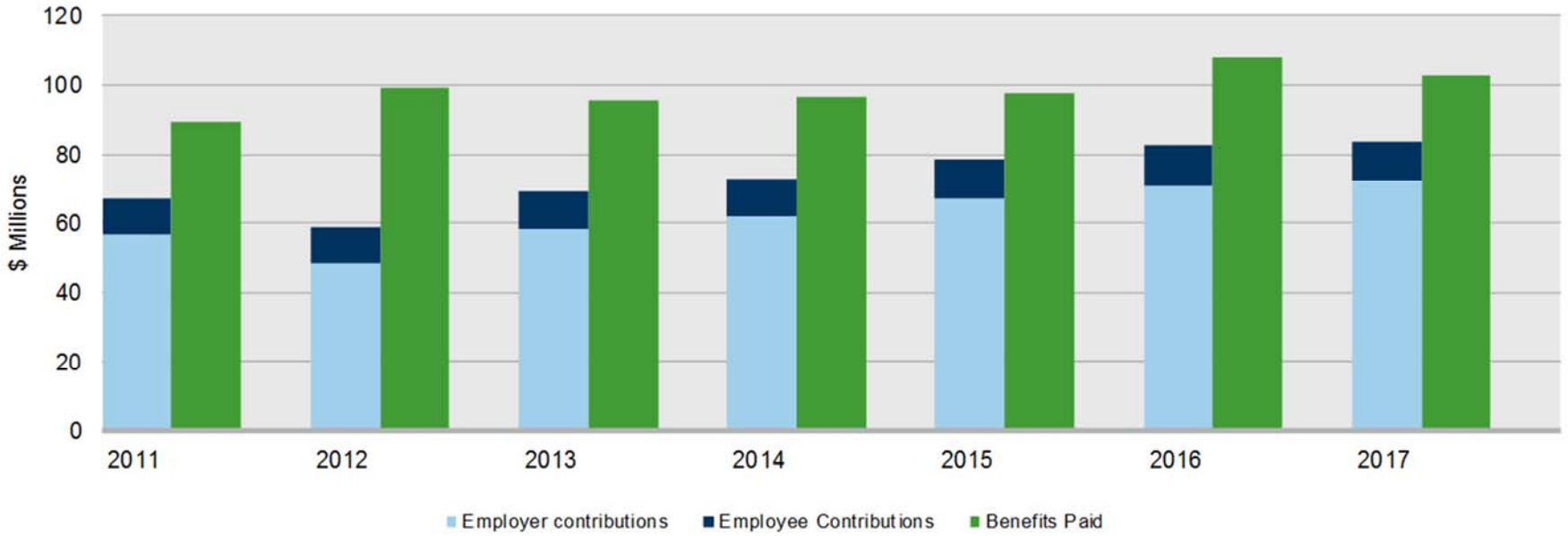


Financial Information

Retirement plan funding anticipates that, over the long term, both contributions and investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components.

Additional financial information, including a summary of transactions for the valuation year, is presented in *Section 3, Exhibits I* and *J*.

COMPARISON OF CONTRIBUTIONS WITH BENEFITS AND EXPENSES FOR YEARS ENDED JUNE 30, 2011 – 2017



It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

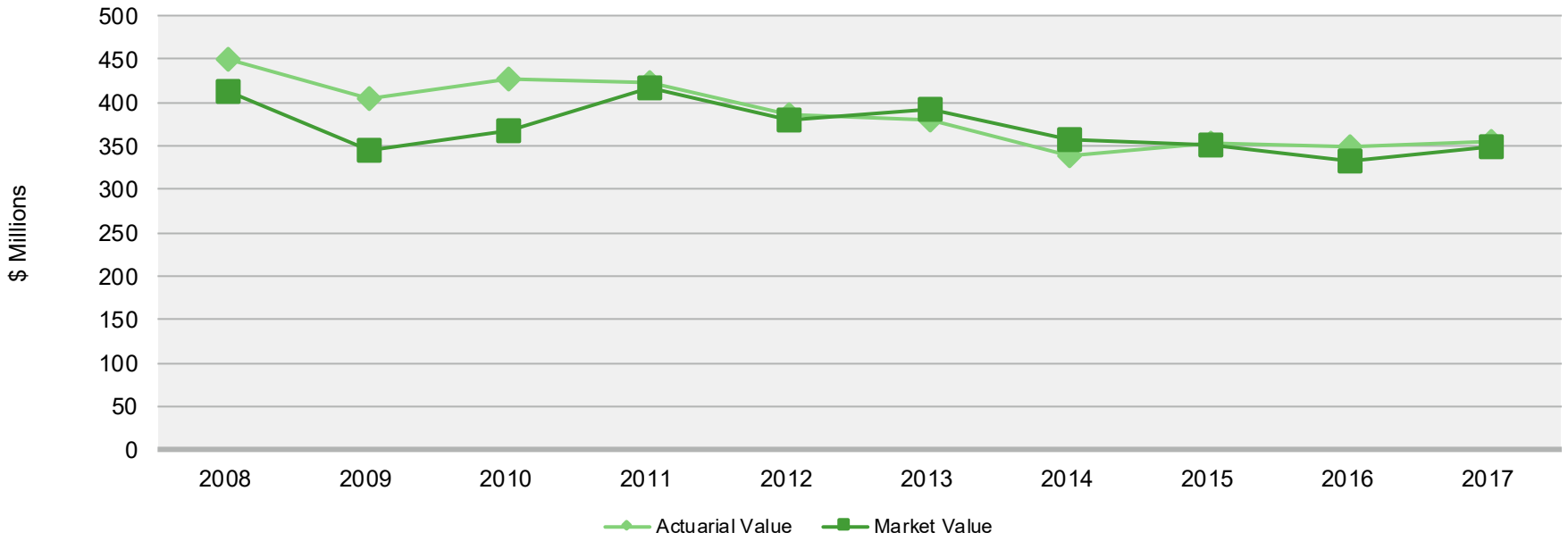
DETERMINATION OF ACTUARIAL VALUE OF ASSETS FOR YEAR ENDED JUNE 30, 2017

1	Market value of assets, June 30, 2017				$348,644,000
2	Calculation of unrecognized return	Original Amount[1]	Percent Deferred	Unrecognized Amount[2]	
	(a) Year ended June 30, 2017	$8,737,960	80%	$6,990,368	
	(b) Year ended June 30, 2016	-19,402,600	60	-11,641,560	
	(c) Year ended June 30, 2015	-16,214,261	40	-6,485,704	
	(d) Year ended June 30, 2014	18,753,464	20	3,750,693	
	(e) Year ended June 30, 2013	9,709,109	0	0	
	(f) Total unrecognized return				-7,386,203
3	Preliminary actuarial value: (1) - (2f)				$356,030,203
4	Adjustment to be within 20% corridor				0
5	Final actuarial value of assets as of June 30, 2017: (3) + (4)				$356,030,203
6	Actuarial value as a percentage of market value: (5) ÷ (1)				102.1%
7	Amount deferred for future recognition: (1) - (5)				-$7,386,203

[1] Total return minus expected return on a market value basis.
[2] Recognition at 20% per year over five years.

Both the actuarial value and market value of assets are representations of the System's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the System's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

ACTUARIAL VALUE OF ASSETS VS. MARKET VALUE OF ASSETS AS OF JUNE 30, 2008 – 2017



Note: Assets as of July 1, 2013 and earlier years include the discounted contribution expected to be paid by the City for the fiscal year following the valuation date.

Actuarial Experience

To calculate any actuarially determined contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), any contribution requirement will decrease from the previous year. On the other hand, any contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The net experience loss is $4,175,143, which includes $947,859 from investment losses and $3,227,284 in losses from all other sources. The net experience variation from individual sources other than investments was 0.2% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

ACTUARIAL EXPERIENCE FOR YEAR ENDED JUNE 30, 2017

1	Net loss from investments	-$947,859
2	Net loss from other experience	-3,227,284
3	Net experience loss: 1 + 2	-$4,175,143

Investment Experience

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the System's investment policy. The rate of return on the market value of assets was 10.70% for the year ended June 30, 2017.

For valuation purposes, the assumed rate of return on the actuarial value of assets is 8.00%. The actual rate of return on an actuarial basis for the 2017 plan year was 7.72%. Since the actual return for the year was less than the assumed return, the Plan experienced an actuarial loss during the year ended June 30, 2017 with regard to its investments.

INVESTMENT EXPERIENCE

		Year Ended June 30, 2017	
		Market Value	Actuarial Value
1	Net investment income	$34,630,000	$26,208,775
2	Average value of assets	323,650,500	339,457,928
3	Rate of return: 1 ÷ 2	10.70%	7.72%
4	Assumed rate of return	8.00%	8.00%
5	Expected investment income: 2 x 4	$25,892,040	$27,156,634
6	Actuarial gain/(loss): 1 – 5	$8,737,960	-$947,859

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the actual market value investment return for the last seven years.

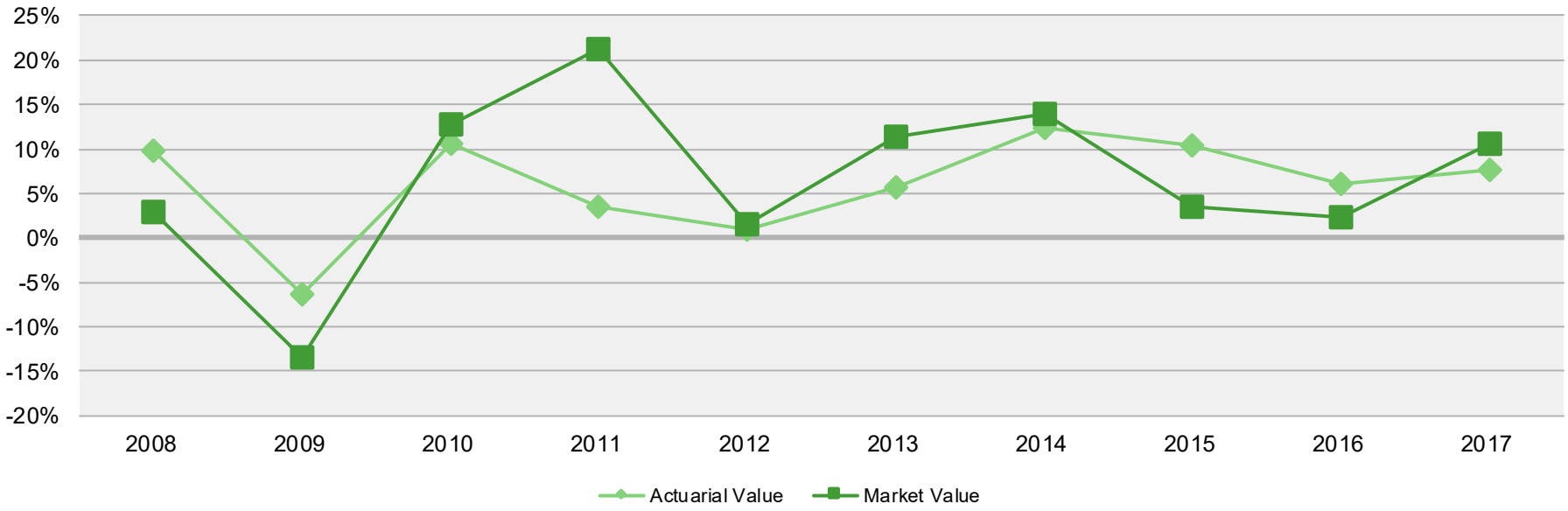
INVESTMENT RETURN – ACTUARIAL VALUE VS. MARKET VALUE: 2011 - 2017

Year Ended June 30	Actuarial Value Investment Return		Market Value Investment Return	
	Amount	Percent	Amount	Percent
2011	N/A	3.42%	N/A	21.33%
2012	$3,391,254	0.97	$5,100,797	1.49
2013	18,132,553	5.70	35,563,000	11.35
2014	38,601,141	12.39	45,484,000	14.04
2015	34,418,220	10.47	12,507,000	3.59
2016	21,019,880	6.17	7,665,000	2.27
2017	26,208,775	7.72	34,630,000	10.70
Total	$141,771,823		$140,949,797	
Most recent five-year average return:		8.45%		8.25%

Note: Each year's yield is weighted by the average asset value in that year.

The actuarial asset valuation method gradually recognizes fluctuations in the market value rate of return. The goal of this is to stabilize the actuarial rate of return and to produce more level pension plan costs.

MARKET AND ACTUARIAL RATES OF RETURN FOR YEARS ENDED JUNE 30, 2008 - 2017



Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among participants,
- retirement experience (earlier or later than projected),
- mortality (more or fewer deaths than projected),
- the number of disability retirements (more or fewer than projected), and
- salary increases (greater or smaller than projected).

The net loss from this other experience for the year ended June 30, 2017 amounted to $3,227,284, which is 0.2% of the actuarial accrued liability.

LIABILITY CHANGES DUE TO DEMOGRAPHIC EXPERIENCE FOR YEAR ENDED JUNE 30, 2017

Salary increases greater than expected for continuing actives	-$5,554,325
Miscellaneous gains including disability and mortality experience	2,327,041
Total	**-$3,227,284**

Changes in the Actuarial Accrued Liability

The actuarial accrued liability as of July 1, 2017 is $1,356,171,912, an increase of $25,870,650, or 1.9%, from the actuarial accrued liability as of the prior valuation date. The liability is expected to grow each year with normal cost and interest, and to decline due to benefit payments made. Additional fluctuations can occur due to actual experience that differs from expected (as discussed in the previous subsection).

Actuarial Assumptions

There are no assumption changes reflected in this report.

Details on actuarial assumptions and methods are in *Section 4, Exhibit I*.

Plan Provisions

There were no changes in plan provisions since the prior valuation.

A summary of plan provisions is in *Section 4, Exhibit II*.

Development of Unfunded Actuarial Accrued Liability

DEVELOPMENT FOR YEAR ENDED JUNE 30, 2017

1	Unfunded actuarial accrued liability at beginning of year		$981,206,834
2	Normal cost at beginning of year		18,973,208
3	Employer contributions		-72,396,000
4	Employee contributions		-11,419,000
5	Interest		
	• For whole year on 1 + 2	$80,014,403	
	• For half year on 4	-412,879	
	Total interest		79,601,524
6	Expected unfunded actuarial accrued liability		$995,966,566
7	Changes due to:		
	• Net loss from investments	$947,859	
	• Net loss from other experience	3,227,284	
	Total changes		$4,175,143
8	Unfunded actuarial accrued liability at end of year		$1,000,141,709

Actuarially Determined Contribution

The actuarially determined contribution is equal to the employer normal cost payment and a payment on the unfunded actuarial accrued liability.

The contribution requirement as of July 1, 2018 is based on the data previously described, the actuarial assumptions and Plan provisions described in *Section 4*, including all changes affecting future costs adopted at the time of the actuarial valuation, actuarial gains and losses, and changes in the actuarial assumptions.

To determine the unfunded liability as of July 1, 2018, the liabilities are rolled forward using standard actuarial techniques and the actuarial value of assets are projected based on an anticipated employer contribution of $78,123,118 for fiscal 2018 and assuming that the market value of assets return 8.00% net of investment expenses.

Because the fiscal 2018 and 2019 appropriations have been budgeted based on prior valuations, the results of this valuation will first be reflected in the fiscal 2020 appropriation.

ACTUARIALLY DETERMINED CONTRIBUTION FOR YEAR BEGINNING JULY 1

		2017		2016	
		Amount	% of Projected Compensation	Amount	% of Projected Compensation
1	Total normal cost	$18,852,441	12.93%	$18,973,208	13.24%
2	Expected employee contributions	-11,574,296	-7.94%	-11,354,985	-7.92%
3	Employer normal cost: (1) + (2)	$7,278,145	4.99%	$7,618,223	5.32%
4	Actuarial accrued liability	1,356,171,912		1,330,301,262	
5	Actuarial value of assets	356,030,203		349,094,428	
6	Unfunded actuarial accrued liability: (4) - (5)	$1,000,141,709		$981,206,834	
7	Employer normal cost projected to July 1, 2018 and 2017	8,167,120	5.41%	8,547,462	5.76%
8	Projected unfunded actuarial accrued liability	1,012,578,186		997,871,907	
9	Amortization of 1995 Deferral, adjusted for timing	464,222	0.31%	464,222	0.31%
10	Payment on unfunded actuarial accrued liability, adjusted for timing	74,726,025	49.51%	69,111,434	46.59%
11	Actuarially determined contribution: (7) + (9) + (10)	$83,357,367	55.23%	$78,123,118	52.67%
12	Projected compensation	$150,918,662		$148,327,141	

Notes: Actuarially determined contributions are assumed to be paid on June 30.
If the contribution is made before or after June 30, Segal will calculate the change in interest charge based on the actual date of payment.

Contribution by Class and Department

The chart below shows the contribution for the fiscal year beginning July 1, 2018 for Class A and Class B.

		Class A		Class B - Police		Class B - Fire		Class B - Total	
		Amount	% of Pay	Amount	% of Pay	Amount	% of Pay	Amount	% of Pay
1	Total normal cost	$9,213,562	9.82%	$5,215,817	18.84%	$4,423,062	18.21%	$9,638,879	18.55%
2	Expected employee contributions	-7,490,763	-7.98%	-2,128,944	-7.69%	-1,954,589	-8.05%	-4,083,533	-7.86%
3	Employer normal cost: (1) + (2)	$1,722,799	1.84%	$3,086,873	11.15%	$2,468,473	10.17%	$5,555,346	10.69%
4	Actuarial accrued liability	478,470,393		413,804,806		463,896,713		877,701,519	
5	Actuarial value of assets	125,610,853		108,634,464		121,784,885		230,419,350	
6	Unfunded actuarial accrued liability (UAAL): (4) - (5)	$352,859,540		$305,170,342		$342,111,828		$647,282,169	
The actuarial factors projected to the following fiscal year are:									
7	Employer normal cost as of July 1, 2018, adjusted for timing	$1,941,193	2.00%	$3,459,252	12.07%	$2,766,675	11.01%	$6,225,927	11.58%
8	Unfunded actuarial accrued liability as of July 1, 2018	357,247,247		308,965,049		346,365,890		655,330,939	
9	Amortization of 1995 Deferral, adjusted for timing	143,532	0.15%	150,029	0.52%	170,661	0.68%	320,690	0.60%
10	Payment on remaining unfunded actuarial accrued liability as of July 1, 2018, adjusted for timing	26,364,055	27.14%	22,800,937	79.58%	25,561,034	101.70%	48,361,971	89.92%
11	Total fiscal 2018 contribution: (7) + (9) + (10)	$28,448,780	29.29%	$26,410,218	92.18%	$28,498,370	113.39%	$54,908,588	102.09%
12	Projected compensation as of July 1, 2018	$97,134,555		$28,650,943		$25,133,164		$53,784,107	

Notes: Contributions are assumed to be paid on June 30. If the contribution is made before or after June 30, Segal will calculate the change in interest charge based on the actual date of payment.
July 1, 2017 actuarial value of assets allocated in proportion to July 1, 2017 actuarial accrued liability.
July 1, 2018 unfunded actuarial accrued liability allocated in proportion to July 1, 2017 unfunded actuarial accrued liability.
Class A includes Elected Officials.

The chart below shows the contribution for the fiscal year beginning July 1, 2018 for the departments of Class A.

CLASS A CONTRIBUTION BY DEPARTMENT

	Total Contribution	Projected Compensation
General	$11,225926	$38,329,423
School	10,726,570	36,624,440
School Crossing Guards	277,388	947,105
Water	4,180,383	14,273,360
Workforce Development (JTPA)	340,092	1,161,197
Fire Civilians	376,870	1,286,772
Police Civilians	1,321,551	4,512,258
Total	$28,448,780	$97,134,555

Note: Contribution is allocated in proportion to projected compensation.

Funding Schedule

(1) Fiscal Year Ended June 30:	(2) Employer Normal Cost	(3) Amortization of Deferral Liability	(4) Amortization of Remaining Unfunded Liability	(5) Total Plan Cost: (2)+(3)+(4)	(6) Increase	(7) Payroll	(8) Contributions as a % of Payroll	(9) Actuarial Accrued Liability	(10) Actuarial Value of Assets	(11) Total Unfunded Actuarial Accrued Liability	(12) Funded Ratio
2018	$7,860,397	$464,222	$69,798,499	$78,123,118		$145,815,132	53.58%	$1,356,171,912	$356,030,203	$1,000,141,709	26.25%
2019	8,167,120	464,222	74,726,025	83,357,367	6.70%	150,918,662	55.23%	1,374,505,629	361,927,443	1,012,578,186	26.33%
2020	8,485,735	464,222	77,773,448	86,723,404	4.04%	156,200,815	55.52%	1,400,878,725	376,159,468	1,024,719,258	26.85%
2021	8,816,699	464,222	80,705,110	89,986,031	3.76%	161,667,843	55.66%	1,428,719,212	397,590,841	1,031,128,371	27.83%
2022	9,160,488	464,222	83,419,084	93,043,793	3.40%	167,326,218	55.61%	1,458,066,627	426,981,539	1,031,085,088	29.28%
2023	9,517,596	464,222	86,338,751	96,320,569	3.52%	173,182,635	55.62%	1,488,811,105	459,122,514	1,029,688,591	30.84%
2024	9,888,536	464,222	89,360,608	99,713,366	3.52%	179,244,028	55.63%	1,520,663,169	495,402,463	1,025,260,706	32.58%
2025	10,273,843	464,222	92,488,229	103,226,294	3.52%	185,517,569	55.64%	1,552,994,895	535,538,161	1,017,456,734	34.48%
2026	10,674,069	464,222	95,725,317	106,863,608	3.52%	192,010,684	55.66%	1,585,862,100	579,961,278	1,005,900,822	36.57%
2027	11,089,787	464,222	99,075,703	110,629,712	3.52%	198,731,057	55.67%	1,619,401,560	629,218,210	990,183,350	38.85%
2028	11,521,596	464,222	102,543,353	114,529,170	3.52%	205,686,644	55.68%	1,653,751,190	683,893,096	969,858,094	41.35%
2029	11,970,114	464,222	106,132,370	118,566,706	3.53%	212,885,677	55.70%	1,688,897,418	744,458,250	944,439,168	44.08%
2030	12,435,984	464,222	109,847,003	122,747,209	3.53%	220,336,676	55.71%	1,725,177,051	811,779,341	913,397,710	47.05%
2031	12,919,876	464,222	113,691,648	127,075,746	3.53%	228,048,459	55.72%	1,762,651,592	886,493,290	876,158,302	50.29%
2032	13,422,481	0	117,670,856	131,093,337	3.16%	236,030,155	55.54%	1,801,686,379	969,591,284	832,095,095	53.82%
2033	13,944,519	0	121,789,336	135,733,855	3.54%	244,291,211	55.56%	1,842,901,311	1,061,909,464	780,991,847	57.62%
2034	14,486,739	0	126,051,963	140,538,701	3.54%	252,841,403	55.58%	1,886,714,130	1,165,032,271	721,681,859	61.75%
2035	15,049,917	0	130,463,781	145,513,698	3.54%	261,690,852	55.61%	1,933,824,229	1,280,459,784	653,364,445	66.21%
2036	15,634,857	0	135,030,014	150,664,870	3.54%	270,850,032	55.63%	1,984,710,630	1,409,540,811	575,169,819	71.02%
2037	16,242,398	0	139,756,064	155,998,462	3.54%	280,329,783	55.65%	2,039,989,849	1,553,836,458	486,153,391	76.17%
2038	16,873,407	0	144,647,526	161,520,933	3.54%	290,141,326	55.67%	2,100,118,947	1,714,829,349	385,289,598	81.65%
2039	17,528,788	0	149,710,190	167,238,977	3.54%	300,296,272	55.69%	2,165,931,873	1,894,466,633	271,465,240	87.47%
2040	18,209,475	0	154,950,046	173,159,521	3.54%	310,806,642	55.71%	2,237,739,930	2,094,267,661	143,472,269	93.59%
2041	18,916,442	0	0	18,916,442	-89.08%	321,684,874	5.88%	2,316,231,295	2,316,231,295	0	100.00%

Notes: Fiscal 2018 and 2019 contributions set at budgeted amounts.
Contributions are assumed to paid on June 30. If the contribution is made after June 30, Segal will calculate the additional interest charge based on the actual date of payment.
Item (2) reflects 3.5% growth in payroll as well as a 0.15% adjustment to total normal cost to reflect the effects of mortality improvements due to the generational mortality assumption.
Amortization payments of remaining unfunded liability increase at 3.5% per year beginning with fiscal year 2020.
Projected unfunded actuarial accrued liability reflects deferred investment losses. Recognizing deferred investment losses means the System is anticipating investment losses on an actuarial basis.
Normal cost is projected based on plan of benefits of current employees and does not reflect different benefits for new hires, if applicable.

Risk

Since the actuarial valuation results are dependent on a given set of assumptions and data as of a specific date, there is a risk that emerging results may differ significantly as actual experience differs from the assumptions.

This report does not contain a detailed analysis of the potential range of future measurements, but does include a brief discussion of some risks that may affect the Plan. Upon request, a more detailed assessment of the risks can be provided to enable a better understanding of the risks specific to your Plan.

- Investment Risk (the risk that returns will be different than expected)

  The market value rate of return over the last 10 years has ranged from a low of -13.42% to a high of 21.33%.

- Longevity Risk (the risk that mortality experience will be different than expected)

  The actuarial valuation includes an expectation of future improvement in life expectancy. Emerging plan experience that does not match these expectations will result in either an increase or decrease in the actuarially determined contribution.

- Contribution Risk (the risk that actual contributions will be different from actuarially determined contribution)

- Demographic Risk (the risk that participant experience will be different than assumed)

  Examples of this risk include:

  - Actual retirements occurring earlier or later than assumed.
  - Disability retirement experience different from assumed.
  - More or less active turnover than assumed.
  - Salary increases greater or less than projected.

- Actual Experience in Recent Years and Implications for the Future

  Past experience can help demonstrate the sensitivity of key results to the Plan's actual experience. Over the past several years:

  - The investment gain(loss) over the past five years has ranged from a loss of $19,402,664, to a gain of $18,753,464.
  - The non-investment gain(loss) over the past five years has ranged from a loss of $15,267,386 to a gain of $6,663,794.
  - Since 2008, the funded percentage on the actuarial value of assets has ranged from a low of 26.2% as of July 1, 2016 to a high of 38.6% as of July 1, 2008

- Maturity Measures

  As pension plans mature, the cash need to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the Plan's asset allocation is aligned to meet emerging pension liabilities.

Section 3: Supplemental Information

EXHIBIT A – TABLE OF PLAN COVERAGE – CLASS A

Category	Year Ended June 30		Change From Prior Year
	2017	2016	
Active participants in valuation:			
• Number	2,107	2,121	-0.7%
• Average age	48.7	48.8	-0.1
• Average years of service	12.1	12.1	0.0
• Total compensation	$90,590,009	$87,486,700	3.5%
• Average compensation	42,995	41,248	4.2%
• Participant contributions	98,965,790	97,873,558	1.1%
Inactive participants in the valuation:			
• Inactive entitled to a refund of employee contributions	446	393	13.5%
• Inactive participants with a vested right to a deferred or immediate benefit	51	48	6.3%
Retired participants:			
• Number in pay status	1,494	1,483	0.7%
• Average age	72.3	72.4	-0.1
• Average monthly benefit	$1,541	$1,535	0.4%
• Number in suspended status	3	3	0.0%
Disabled participants:			
• Number in pay status	84	85	-1.2%
• Average age	69.1	68.7	0.4
• Average monthly benefit	$1,671	$1,630	2.5%
Beneficiaries:			
• Number in pay status	197	196	0.5%
• Average age	77.8	78.4	-0.6
• Average monthly benefit	$1,275	$1,258	1.4%

Note: Includes elected officials

EXHIBIT B – TABLE OF PLAN COVERAGE – CLASS B

Category	Year Ended June 30		Change From Prior Year
	2017	2016	
Active participants in valuation:			
• Number	784	768	2.1%
• Average age	41.9	43.3	-1.4
• Average years of service	14.2	15.8	-1.6
• Total compensation	$50,162,153	$50,750,128	-1.2%
• Average compensation	63,982	66,081	-3.2%
• Participant contributions	77,359,290	83,441,077	-7.3%
Inactive participants in the valuation:			
• Inactive entitled to a refund of employee contributions	31	28	10.7%
• **Beneficiaries with rights to a deferred benefit**	5	4	25.0%
Retired participants:			
• Number in pay status	705	670	5.2%
• Average age	64.9	64.9	0.0
• Average monthly benefit	$3,329	$3,316	0.4%
Disabled participants:			
• Number in pay status	404	399	1.3%
• Average age	66.4	66.0	0.4
• Average monthly benefit	$4,753	$4,781	-0.6%
Beneficiaries:			
• Number in pay status	350	352	-0.6%
• Average age	75.5	75.1	0.4
• Average monthly benefit	$2,667	$2,693	-1.0%

EXHIBIT C – PARTICIPANTS IN ACTIVE SERVICE AS OF JUNE 30, 2017 – CLASS A
BY AGE, YEARS OF SERVICE, AND AVERAGE COMPENSATION

	Years of Service									
Age	Total	0-4	5-9	10-14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	24	23	1	- -	- -	- -	- -	- -	- -	- -
	$35,094	$35,715	$20,816	- -	- -	- -	- -	- -	- -	- -
25 - 29	127	104	23	- -	- -	- -	- -	- -	- -	- -
	$39,144	$41,137	$30,130	- -	- -	- -	- -	- -	- -	- -
30 - 34	171	88	65	18	- -	- -	- -	- -	- -	- -
	$42,306	$41,409	$42,481	$46,058	- -	- -	- -	- -	- -	- -
35 - 39	176	56	51	39	29	1	- -	- -	- -	- -
	$40,829	$40,443	$39,647	$42,291	$42,024	$31,035	- -	- -	- -	- -
40 - 44	244	60	49	42	66	26	1	- -	- -	- -
	$44,265	$44,770	$37,785	$41,154	$48,869	$47,615	$71,250	- -	- -	- -
45 - 49	343	78	52	55	68	64	23	3	- -	- -
	$44,555	$38,571	$42,559	$44,403	$43,214	$48,845	$59,271	$63,537	- -	- -
50 - 54	366	71	52	62	75	54	50	2	- -	- -
	$44,814	$42,194	$36,181	$38,161	$44,591	$44,918	$64,281	$87,494	- -	- -
55 - 59	309	49	62	54	66	39	29	8	2	- -
	$42,775	$34,523	$37,692	$40,662	$42,814	$43,847	$58,262	$81,048	$59,679	- -
60 - 64	211	24	37	37	40	41	18	6	3	5
	$43,140	$35,132	$39,965	$39,858	$39,310	$45,668	$44,324	$71,575	$85,307	$75,602
65 - 69	96	10	10	24	17	13	16	3	2	1
	$41,479	$24,987	$37,128	$42,631	$42,129	$43,513	$47,185	$55,238	$34,825	$65,508
70 & over	40	1	7	6	12	5	5	1	1	2
	$39,229	$34,971	$47,316	$20,410	$46,331	$45,909	$31,764	$55,836	$23,336	$28,506
Total	2,107	564	409	337	373	243	142	23	8	8
	$42,995	$39,927	$39,025	$41,042	$43,960	$46,084	$56,688	$72,391	$58,533	$62,566

EXHIBIT D – PARTICIPANTS IN ACTIVE SERVICE AS OF JUNE 30, 2017 – CLASS B BY AGE, YEARS OF SERVICE, AND AVERAGE COMPENSATION

	Years of Service								
Age	Total	0-4	5-9	10-14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39
Under 25	30	30	- -	- -	- -	- -	- -	- -	- -
	$28,400	$28,400	- -	- -	- -	- -	- -	- -	- -
25 - 29	99	97	2	- -	- -	- -	- -	- -	- -
	$43,654	$43,173	$66,990	- -	- -	- -	- -	- -	- -
30 - 34	103	57	24	22	- -	- -	- -	- -	- -
	$56,036	$46,408	$67,253	$68,742	- -	- -	- -	- -	- -
35 - 39	108	25	24	46	13	- -	- -	- -	- -
	$62,427	$40,546	$67,382	$68,945	$72,294	- -	- -	- -	- -
40 - 44	88	9	10	39	26	4	- -	- -	- -
	$66,333	$48,154	$67,897	$66,947	$70,666	$69,185	- -	- -	- -
45 - 49	156	5	5	36	26	50	34	- -	- -
	$73,070	$53,216	$67,046	$67,886	$71,107	$76,264	$79,166	- -	- -
50 - 54	126	- -	2	9	7	29	69	10	- -
	$75,201	- -	$67,375	$66,058	$75,630	$73,056	$75,479	$88,999	- -
55 - 59	62	- -	- -	4	5	4	32	14	3
	$76,864	- -	- -	$65,488	$66,935	$71,910	$76,108	$86,639	$77,639
60 - 64	12	- -	- -	- -	1	2	3	3	3
	$83,127	- -	- -	- -	$62,303	$69,127	$74,621	$102,221	$88,815
Total	784	223	67	156	78	89	138	27	6
	$63,982	$42,144	$67,376	$67,917	$71,183	$74,544	$76,515	$89,245	$83,227

EXHIBIT E – SERVICE RETIREES AS OF JUNE 30, 2017

	Class A		Class B		Total	
Age	Number	Amount	Number	Amount	Number	Amount
40 - 44	0	$0	4	$116,061	4	$116,061
45 - 49	3	61,240	16	446,823	19	508,063
50 - 54	15	441,207	102	3,266,021	117	3,707,228
55 - 59	105	2,330,940	124	4,516,370	229	6,847,309
60 - 64	243	5,404,952	141	5,864,428	384	11,269,380
65 - 69	287	5,739,361	103	4,377,219	390	10,116,581
70 - 74	256	4,577,890	93	4,380,232	349	8,958,123
75 - 79	216	3,199,405	35	1,543,701	251	4,743,107
80 - 84	160	2,326,583	38	1,740,550	198	4,067,133
85 - 89	130	2,248,646	32	1,171,445	162	3,420,090
90 - 94	62	954,215	13	618,577	75	1,572,792
95 - 99	14	191,511	4	121,278	18	312,790
100 & over	3	43,556	0	0	3	43,556
Total	1,494	$27,519,506	705	$28,162,705	2,199	$55,682,211

EXHIBIT F – CLASS A DISABLED RETIREES AS OF JUNE 30, 2017

	Ordinary		Accidental		Total	
Age	Number	Amount	Number	Amount	Number	Amount
40 - 44	0	$0	0	$0	0	$0
45 - 49	1	4,845	1	33,665	2	38,510
50 - 54	4	53,160	4	109,463	8	162,622
55 - 59	6	79,240	3	75,082	9	154,322
60 - 64	2	16,596	6	159,908	8	176,503
65 - 69	1	16,362	11	252,777	12	269,139
70 - 74	2	25,439	13	301,130	15	326,569
75 - 79	1	10,720	16	284,942	17	295,662
80 - 84	0	0	8	141,417	8	141,417
85 - 89	0	0	4	96,009	4	96,009
90 - 94	0	0	0	0	0	0
95 - 99	0	0	1	23,234	1	23,234
100 & over	0	0	0	0	0	0
Total	17	$206,361	67	$1,477,625	84	$1,683,987

EXHIBIT G – CLASS B DISABLED RETIREES AS OF JUNE 30, 2017

	Ordinary		Accidental		Total	
Age	Number	Amount	Number	Amount	Number	Amount
25 - 29	0	$0	0	$0	0	$0
30 - 34	0	0	1	36,028	1	36,028
35 - 39	0	0	1	43,557	1	43,557
40 - 44	0	0	6	243,944	6	243,944
45 - 49	5	97,451	14	590,301	19	687,752
50 - 54	4	89,160	29	1,140,239	33	1,229,398
55 - 59	5	101,535	47	2,285,177	52	2,386,713
60 - 64	1	20,289	58	2,833,041	59	2,853,330
65 - 69	0	0	62	3,701,067	62	3,701,067
70 - 74	0	0	75	4,795,211	75	4,795,211
75 - 79	0	0	52	3,743,189	52	3,743,189
80 - 84	0	0	21	1,636,400	21	1,636,400
85 - 89	1	19,104	16	1,283,244	17	1,302,348
90 - 94	0	0	4	326,909	4	326,909
95 - 99	0	0	1	18,194	1	18,194
100 & over	0	0	1	38,951	1	38,951
Total	16	$327,540	388	$22,715,452	404	$23,042,992

EXHIBIT H – BENEFICIARIES AS OF JUNE 30, 2017

	Class A		Class B		Total	
Age	Number	Amount	Number	Amount	Number	Amount
Under 20	0	$0	0	$0	0	$0
20 - 24	0	0	0	0	0	0
25 - 29	0	0	0	0	0	0
30 - 34	0	0	0	0	0	0
35 - 39	0	0	0	0	0	0
40 - 44	1	7,944	1	39,888	2	47,832
45 - 49	1	9,984	3	81,168	4	91,152
50 - 54	4	70,656	11	209,868	15	280,524
55 - 59	13	162,528	18	486,936	31	649,464
60 - 64	20	349,056	36	1,003,956	56	1,353,012
65 - 69	20	438,480	40	1,168,344	60	1,606,824
70 - 74	16	195,156	55	1,909,236	71	2,104,392
75 - 79	20	312,804	41	1,727,208	61	2,040,012
80 - 84	27	349,788	42	1,513,284	69	1,863,072
85 - 89	39	660,720	57	2,032,212	96	2,692,932
90 - 94	25	319,704	37	848,220	62	1,167,924
95 - 99	6	90,204	5	115,056	11	205,260
100 & over	5	46,848	2	34,368	7	81,216
Certain Only	0	0	2	31,704	2	31,704
Total	197	$3,013,872	350	$11,201,448	547	$14,215,320

EXHIBIT I – SUMMARY STATEMENT OF INCOME AND EXPENSES ON A MARKET VALUE BASIS

	Year Ended June 30, 2017		Year Ended June 30, 2016	
Net assets at market value at the beginning of the year		$333,287,000		$351,068,000
Contribution income:				
• Employer contributions	$72,396,000		$70,704,000	
• Employer contributions	11,419,000		12,043,000	
Net contribution income		83,815,000		82,747,000
Net investment income		34,630,000		7,665,000
Total income available for benefits		$118,445,000		$90,412,000
Less benefit payments:		-$103,088,000		-$108,193,000
Change in reserve for future benefits		$15,357,000		-$17,781,000
Net assets at market value at the end of the year		$348,644,000		$333,287,000

EXHIBIT J – DEVELOPMENT OF THE FUND THROUGH JUNE 30, 2017

Year Ended June 30	Employer Contributions	Employee Contributions	Net Investment Return	Benefit Payments	Market Value of Assets at Year-End	Actuarial Value of Assets at Year-End	Actuarial Value as a Percent of Market Value
2011	$56,654,000	$10,708,000	$70,100,244	$89,636,000	$416,275,009	$422,839,189	101.6%
2012	48,583,000	10,291,000	621,797	99,273,000	380,252,177	385,106,813	101.3%
2013	58,145,000	10,940,000	31,707,000	95,402,000	393,059,827	380,484,015	96.8%
2014	62,140,000	10,873,000	41,549,000	96,570,000	357,712,000	338,253,329	94.6%
2015	66,876,000	11,624,000	12,507,000	97,651,000	351,068,000	353,520,549	100.7%
2016	70,704,000	12,043,000	7,665,000	108,193,000	333,287,000	349,094,428	104.7%
2017	72,396,000	11,419,000	34,630,000	103,088,000	348,644,000	356,030,203	102.1%

Notes: Net investment return is net of investment expenses.
Assets as of July 1, 2013 and earlier years include the discounted contribution expected to be paid by the City for the fiscal year following the valuation date.
Figures do not add due to the inclusion of discounted contributions in 2013 and earlier years.

EXHIBIT K – DEFINITIONS OF PENSION TERMS

The following list defines certain technical terms for the convenience of the reader:

Actuarial Accrued Liability for Actives:	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial Accrued Liability for Pensioners and Beneficiaries:	The single-sum value of lifetime benefits to existing pensioners and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial Cost Method:	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial Gain or Loss:	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, *e.g.,* assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, *i.e.,* actual results yield in actuarial liabilities that are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.
Actuarially Equivalent:	Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV):	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is: Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.) Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits:	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation:	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB, such as the Actuarially Determined Contribution (ADC) and the Net Pension Liability (NPL).
Actuarial Value of Assets (AVA):	The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.
Actuarially Determined:	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.
Actuarially Determined Contribution (ADC):	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
Amortization Method:	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization Payment:	The portion of the pension plan contribution, or ADC, that is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
Assumptions or Actuarial Assumptions:	The estimates upon which the cost of the Fund is calculated, including: Investment return - the rate of investment yield that the Fund will earn over the long-term future; Mortality rates - the death rates of employees and pensioners; life expectancy is based on these rates; Retirement rates - the rate or probability of retirement at a given age or service; Disability rates – the probability of disability retirement at a given age; Withdrawal rates - the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; Salary increase rates - the rates of salary increase due to inflation and productivity growth.

Closed Amortization Period:	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Open Amortization Period.
Decrements:	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.
Defined Benefit Plan:	A retirement plan in which benefits are defined by a formula applied to the member's compensation and/or years of service.
Defined Contribution Plan:	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
Employer Normal Cost:	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Experience Study:	A periodic review and analysis of the actual experience of the Fund that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.
Funded Ratio:	The ratio of the actuarial value of assets (AVA) to the actuarial accrued liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.
GASB 67 and GASB 68:	Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.
Investment Return:	The rate of earnings of the Fund from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Net Pension Liability (NPL):	The Net Pension Liability is equal to the Total Pension Liability minus the Plan Fiduciary Net Position.
Normal Cost:	That portion of the Actuarial Present Value of pension plan benefits and expenses allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated.

Open Amortization Period:	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period with level percentage of payroll is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never decrease, but will become smaller each year, in relation to covered payroll, if the actuarial assumptions are realized.
Plan Fiduciary Net Position:	Market value of assets.
Total Pension Liability (TPL):	The actuarial accrued liability under the entry age normal cost method and based on the blended discount rate as described in GASB 67 and 68.
Unfunded Actuarial Accrued Liability:	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative, in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.
Valuation Date or Actuarial Valuation Date:	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

Section 4: Actuarial Valuation Basis

EXHIBIT I – ACTUARIAL ASSUMPTIONS AND ACTUARIAL COST METHOD

Rationale for Demographic and Noneconomic Assumptions:

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the Actuarial Experience Review as of June 30, 2015, dated March 25, 2016.

Net Investment Return:

8.00%

Interest on Employee Contributions:

4.00%, compounded weekly. No interest for inactive members after five years.

Salary Increases:

3.5% per year, before reflecting longevity.

Base wages are increased by the following percentages to reflect longevity compensation:

Class A Years of Service	Rate of base wage increase (%) Hired on or before October 23, 1999
5 – 10	4%
10 – 15	5%
15 – 20	6%
20+	7%
Years of Service	**Hired after October 23, 1999**
7 – 12	3%
12 – 17	4%
17 – 20	5%
20+	6%

Class B – Fire Years of Service	Rate of base wage increase (%) Hired on or before June 30, 1996
5 – 10	8%
10 – 15	9%
15 – 20	10%
20+	11%
Years of Service	**Hired after June 30, 1996**
5 – 10	7%
10 – 15	8%
15 – 20	9%
20+	10%

Class B – Police Years of Service	Rate of base wage increase (%) Hired on or before June 30, 1998
6 – 11	8%
11 – 16	9%
16 – 21	10%
21+	11%
Years of Service	**Hired after June 30, 1998**
6 – 11	7%
11 – 16	8%
16 – 21	9%
21+	10%

COLA:

COLAs commence on January 1, 2023, except for widows of accidental death participants who receive an immediate COLA and participants identified by the City who opted out of the Consent Judgments agreed to by the City.

For participants who opted out of the Consent Judgements, COLA's will commence on January 1, 2036, when the Plan was projected to be greater than 70% funded with the prior valuation. Any Class B retired participant whose total benefit is greater than the base of compensation of a current employee holding the same rank that the retiree held at the time of retirement will not receive a COLA in any year until this is no longer true. We have assumed that Class B average compensation for all ranks will increase by 3.5% per year. Future COLAs will not exceed 3% per year.

Mortality Rates:

Pre-Retirement

- Class A Healthy: RP-2014 Employee Mortality Table with MP-2014 improvement projections backed out to a base year of 2006 and projected generationally with Scale BB2D
- Class B Healthy: RP 2014 Blue Collar Employee Mortality Table with MP-2014 improvement projections backed out to a base year of 2006 and projected generationally with Scale BB2D

Postretirement

- Class A Healthy: RP-2014 Healthy Annuitant Mortality Table with MP-2014 improvement projections backed out to a base year of 2006 and projected generationally with Scale BB2D, set forward one year
- Class B Healthy: RP-2014 Blue Collar Healthy Annuitant Mortality Table with MP-2014 improvement projections backed out to a base year of 2006 and projected generationally with Scale BB2D, set forward one year
- Class A and B Disabled Retirees: RP 2014 Blue Collar Healthy Annuitant Mortality Table with MP-2014 improvement projections backed out to a base year of 2006 and projected generationally with Scale BB2D, set forward three years

Annuitant Mortality Rates:

	Rate per year (%)			
	Class A			
	Healthy		Disabled	
Age	Male	Female	Male	Female
55	0.64	0.41	0.77	0.54
60	0.89	0.66	1.18	0.88
65	1.39	1.07	1.96	1.40
70	2.23	1.72	3.19	2.26
75	3.66	2.76	5.23	3.70
80	6.11	4.62	8.60	6.26
85	10.45	8.15	14.19	10.82
90	17.77	14.26	22.40	17.84

	Class B			
	Healthy		Disabled	
Age	Male	Female	Male	Female
55	0.68	0.45	0.77	0.54
60	0.98	0.72	1.18	0.88
65	1.60	1.16	1.96	1.40
70	2.63	1.87	3.19	2.26
75	4.29	3.03	5.23	3.70
80	7.05	5.05	8.60	6.26
85	11.61	8.71	14.19	10.82
90	19.01	14.81	22.40	17.84

Note: Mortality rates do not reflect generational projection.

Termination Rates before Retirement:

Age	Class A – Rate (%)		
	Mortality		
	Male	Female	Disability
20	0.05	0.02	0.02
25	0.05	0.02	0.03
30	0.05	0.02	0.05
35	0.06	0.03	0.08
40	0.08	0.05	0.10
45	0.12	0.08	0.18
50	0.20	0.12	0.22
55	0.30	0.17	0.28
60	0.50	0.28	0.36

Notes: Mortality rates do not reflect generational projection.
33.33% of the disability rates shown represent accidental disability.
40.00% of the death rates shown represent accidental death.

Age	Class B – Rate (%)		
	Mortality		
	Male	Female	Disability
20	0.07	0.02	0.08
25	0.07	0.02	0.13
30	0.06	0.02	0.19
35	0.07	0.03	0.25
40	0.10	0.05	0.37
45	0.16	0.09	0.66
50	0.26	0.13	1.14
55	0.38	0.19	1.64
60	0.64	0.31	2.28

Notes: Mortality rates do not reflect generational projection.
90% of the disability rates shown represent accidental disability.
50% of the death rates shown represent accidental death.

Withdrawal Rates:

Rate per year (%)			
Age	Class A	Age	Class B
20	14.00	20	2.50
25	11.50	25	1.90
30	9.00	30	1.40
35	6.50	35	0.90
40	5.00	40	0.55
45	3.75	45	0.35
50	2.50	50	0.15
55	1.25	55	0.00
60	0.00	60	0.00

Retirement Rates:

Age	Rate per year (%)		
	Class A		
	Fewer than 10 Years of Service	10 Years of Service or More	Class B
40	2.00	4.50	5.50
41	2.25	5.00	5.50
42	2.50	5.50	5.50
43	2.75	6.00	5.50
44	3.00	6.50	5.50
45	3.25	7.00	5.75
46	3.50	7.50	6.00
47	3.75	8.00	6.25
48	4.00	8.50	6.50
49	4.25	9.00	6.75
50	4.50	9.50	7.00
51	5.00	10.00	7.25
52	5.50	10.50	7.50
53	6.00	11.00	7.75
54	6.50	11.50	8.00
55	7.00	12.00	10.00
56	7.00	12.00	12.50
57	7.00	12.00	15.00
58	7.00	12.00	17.50
59	7.00	12.00	25.00
60	10.00	12.50	100.00
61	11.00	13.50	- -
62	12.00	14.50	- -
63	13.00	16.00	- -
64	14.00	17.50	- -
65	15.00	20.00	- -
66 – 74	15.00	20.00	- -
75	100.00	100.00	- -

Retirement Age for Vested Former Participants:	• Vested former participants who terminated after June 30, 2013: Assumed to retire at minimum age for a Normal Service Retirement. • Vested participants who terminated prior to June 30, 2013: Assumed to take an immediate refund of their employee contributions. • Current active participants who terminate after valuation date: – Participants in the Fire department who terminate with 20 or more years of service are assumed to retire on their 25th anniversary of employment. Other participants who terminate at age 45 or older and are vested are assumed to retire at their minimum age for a Normal Service Retirement and who terminate prior to age 45 or without vesting are assumed to take an immediate refund of their employee contributions. The retirement age for inactive vested participants was based on historical and current demographic data, adjusted to reflect economic conditions of the area and estimated future experience and professional judgment.
Unknown Data for Participants:	Same as those exhibited by participants with similar known characteristics. For retirees missing beneficiary information, Class A members who elected Option 2 or 3 are assumed to have a beneficiary of the opposite sex with males three years older than females. Class B members who did not elect Option 1 are assumed to be married to someone the same age.
Percent Married:	80%.
Age of Spouse:	Females three years younger than males for Class A. Females and males the same age for Class B.
Total Service:	Total service is based on date of hire provided in the data. In addition, 1.0 and 0.5 years of service were added to the service totals for participants of the Police and Fire departments, respectively, to estimate the impact of Purchased Service.
2017 Salary:	Salaries for the year ending June 30, 2017 are equal to the total of pensionable wages earned during the plan year as provided in the data, except for participants who were hired during the plan year, those who were in transition from active to retiree status as of July 1, 2017 and participants receiving worker's compensation, for whom current rate of pay was provided.
Benefit Election:	All participants are assumed to elect the Maximum Retirement Option.
Actuarial Value of Assets:	Market value of assets as reported in the City's Financial Statement less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected market return, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is the age of the participant at date of hire. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary. Normal Cost is determined by using the plan of benefits applicable to each participant.
Justification for Change in Actuarial Assumptions:	There have been no changes in actuarial assumptions since the last valuation.

EXHIBIT II – SUMMARY OF PLAN PROVISIONS

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year:	July 1 through June 30
Plan Status:	Ongoing
Normal Retirement:	• Age and Service Requirements: The minimum age for normal service retirement is: – Class A members hired prior to July 1, 1995: Age 55 or the age at which 25 years of service are completed, if earlier. – Class A members hired between July 1, 1995 and June 30, 2004: Age 55 or the age at which 30 years of service are completed, if earlier. – Class A members hired between July 1, 2004 and June 30, 2009: Age 60 or the age at which 30 years of service are completed, if earlier. – Class A members hired on or after July 1, 2009: Age 62 with 10 years of service or the age at which 30 years of service are completed, if earlier. – Class B members hired prior to July 1, 2004: Age 55 or the age at which 20 years of service are completed, if earlier. – Class B members of the Police Department hired between July 1, 2004 and June 30, 2011 and Class B members of the Fire Department hired between July 1, 2004 and June 30, 2012: Age 55 or the age at which 23 years of service are completed, if earlier. – Class B members of the Police Department hired on or after July 1, 2011 and Class B members of the Fire Department hired on or after July 1, 2012: Age 55 or the age at which 25 years of service are completed, if earlier. • Amount: – Annuity Based on Member Contributions: An annuity which is the actuarial equivalent of his or her accumulated contributions at the time of his or her retirement. – Pension Based on City Contributions: » Class A members hired prior to July 1, 1996: A pension which, when added to the annuity, exclusive of any excess annuity, will give a total retirement allowance of 2.5% of final compensation for each year of total service credited not in excess of 20 years, plus 2% of final compensation for each year of total service credited in excess of 20 years, limited to 100% of final compensation. » Class A members hired on or after July 1, 1996: A pension which, when added to the annuity, exclusive of any excess annuity, will give a total retirement allowance of 2% of final compensation for each year of total service credited, limited to 100% of final compensation.

» Fire: A pension which, when added to the annuity, exclusive of any excess annuity, will give a total retirement allowance of 2.5% of final compensation for each year of total service credited not in excess of 20 years, plus 2% of final compensation for each year of total service credited in excess of 20 years, limited to 75% of final compensation.

» Police: A pension which, when added to the annuity, exclusive of any excess annuity, equals:

- Members hired prior to September 1, 2001:

Years of Service	Percentage of Final Compensation	Years of Service	Percentage of Final Compensation
Prior to 20	2.5% per year	26	62%
20	50%	27	64%
21	52%	28	66%
22	54%	29	68%
23	56%	30	75%
24	58%	31	72%
25	65%	32	80%

- Members hired on or after September 1, 2001 and prior to July 1, 2011:

Years of Service	Percentage of Final Compensation	Years of Service	Percentage of Final Compensation
Prior to 20	2.5% per year	26	62%
20	50%	27	64%
21	52%	28	66%
22	54%	29	68%
23	56%	30	70%
24	58%	31	72%
25	60%	32	75%

	○ Members hired on or after July 1, 2011: | Years of Service	Percentage of Final Compensation	Years of Service	Percentage of Final Compensation
---	---	---	---
Prior to 25	2.0% per year	30	62.5%
25	50.0%	31	65.0%
26	52.5%	32	67.5%
27	55.0%	33	70.0%
28	57.5%	34	72.5%
29	60.0%	35	75.0%	 ○ For Non-Union members of the Police Department, the same benefits as described above, but with a maximum benefit of 75% of compensation. Final compensation is the average of the highest four years of base compensation including longevity pay earned by a member during his total service as an employee.
Early Retirement:	• Age Requirement: Age 55 for Class A members hired on or after July 1, 2004. Other members will not receive early retirement benefits. • Service Requirement: 10 years of service. • Amount: – Class A members hired between July 1, 2004 and June 30, 2009: The member's Normal Service Retirement benefit reduced by 5/12% per month for each month between retirement commencement and age 60. – Class A members hired on or after July 1, 2009: The member's Normal Service Retirement benefit reduced by 5/12% per month for each month between retirement commencement and age 62.
Deferred Retirement:	• Age Requirement: Minimum age for Normal Service Retirement. • Service Requirement: 10 years of service. • Amount: Same as Normal Service Retirement. • Any member who withdraws from employment is eligible to receive a refund of his or her accumulated contributions at withdrawal, in lieu of a Deferred Retirement benefit.

Ordinary Disability Retirement:

- Age Requirement: None
- Service Requirement: For members of the Police Department, 10 years of service, but fewer than 20. For all others, 10 years of service.
- Amount:
  - Annuity Based on Member Contributions: An annuity which is the actuarial equivalent of his or her accumulated contributions at the time of his retirement.
  - Pension Based on City Contributions:
    - » Class A members: A pension which, when added to the annuity, exclusive of any excess annuity, will give a total retirement allowance of 90% of 2% of final compensation for each year of total service which would have been credited had the member continued in service to the minimum age for a Normal Service Retirement. Such retirement allowance, exclusive of any excess annuity, is not to exceed 45% of final compensation.
    - » Police: A pension which, when added to the annuity, will give a total retirement allowance equal to a percentage of final compensation, as described in the following table:

Years of Service	Percentage of Final Compensation	Years of Service	Percentage of Final Compensation
10	22.50%	15	33.75%
11	24.75%	16	36.00%
12	27.00%	17	38.25%
13	29.25%	18	40.50%
14	31.50%	19	42.75%

    - » Fire: A pension which, when added to the annuity, exclusive of any excess annuity, will give a total retirement allowance of 90% of 2.5% of final compensation for each year of total service which would have been credited had the member continued in service to the minimum age for a Normal Service Retirement. Such retirement allowance, exclusive of any excess annuity, is not to exceed 45% of the member's final compensation.

Accidental Disability Retirement:	• Age Requirement: None • Service Requirement: None • Amount: – Annuity Based on Member Contributions: An annuity that is the actuarial equivalent of his or her accumulated contributions at the time of his or her retirement. – Pension Based on City Contributions: A pension of 66-2/3% of final compensation, but not less than the Normal Service Retirement allowance. Upon the death of a member within 5 years after accidental disability retirement as a result of an accident while in the performance of duty, a pension of one-half of the member's final compensation is paid to his or her widow until he or she dies or remarries, at which point the pension is paid to his or her child or children until they attain age 19. Upon the death of a Class B member beyond 5 years, 67.5% of his or her monthly benefit will be paid to his or her surviving spouse.
Accidental Death Benefit	• Age Requirement: None • Service Requirement: None • Amount: If a member dies due to an accident in the performance of duty, a pension of one-half of the member's final compensation is paid to his or her surviving spouse until he or she dies or remarries, at which point the pension is payable to his or her child or children until they attain age 19. If there are no other dependents, the pension is payable to his or her dependent parents. In addition, a lump sum payment of the member's accumulated contributions is made.
Ordinary Death Benefit:	Should a member die before retirement, his or her estate or beneficiary is entitled to a refund of the member's accumulated contributions. If the member has attained minimum retirement age, has not made an optional election as described below and is survived by a spouse, such spouse is entitled, in lieu of the return of the member's accumulated contributions, to a benefit equal to that which would have been payable to such spouse upon the death of the member had the member retired on the day of his or her death and elected to receive a benefit under the provisions of Option 2, as described below, and nominated such spouse as his or her designated beneficiary. For a Class B member, the benefit to the spouse shall not be less than 67½% of the benefit that would have been paid to such retired member without reduction.
Benefit upon Death after Retirement:	• Class A: Benefits under any option as described below. • Class B: Upon the death of a Class B pensioner, 67½% of his or her retirement allowance is paid to his or her surviving spouse until he or she dies or remarries, at which point the benefit is paid to any dependent children until they attain age 18.

Options at Retirement:	• Maximum Retirement Option: An unreduced retirement allowance payable during the retired member's life, where no monthly payments will continue to the member's beneficiary, but where, upon the member's death, any unpaid portion of his or her accumulated contributions will be paid to his or her beneficiary. • Option 1: A reduced retirement allowance payable during the retired member's life, where no monthly payments will continue to the member's beneficiary, but where, upon the member's death, any amount that payments made are less than the present value of his or her retirement allowance at his or her date of retirement will be paid to his or her beneficiary. • Option 2: A reduced retirement allowance payable during the retired member's life, where upon the member's death, the entire monthly benefit will continue to be paid to his or her beneficiary for the remainder of his or her life. • Option 3: A reduced retirement allowance payable during the retired member's life, where upon the member's death, 50% of the monthly benefit will continue to be paid to his or her beneficiary for the remainder of his or her life. • Option 4: An unreduced retirement allowance payable during the retired member's life, where the member's accumulated contributions are paid immediately as a lump sum payment, with the pension portion of his or her benefit payable during the retired member's life, where no monthly payments will continue to the member's beneficiary. Class B members who retire on an Accidental Disability Retirement may not elect Option 4. Class B members may not elect Options 2 or 3. Married Class B members may not elect Option 1.

Cost of Living Adjustment:	A ten-year freeze period was implemented effective January 1, 2013 and no COLAs will be granted during this period. COLAs will resume on January 1, 2023. Once COLAs resume, they will be paid in the amount of the lesser of 3% compounded or the percentage the member received prior to the freeze, provided that their total benefit is lower than 150% of the Rhode Island state median income and is lower than the base compensation of a current employee holding the same rank that the retiree held at the time of retirement. If the member's benefit is above either of these amounts, no COLA will be granted. 150% of the state median income as reported by the City was approximately $80,000 as of the valuation date. It is assumed that the median income will increase by 3.5% per year. The following COLAs will resume on January 1, 2023: • Class A: 3% compounded for certain eligible members who retired prior to December 18, 1991 and were not members of Local 1033. 3% simple on first $12,000 of annual benefit for members of Local 1033 who retired prior to December 18, 1991. None for members who retired after December 18, 1991. • Police: 5% compounded for members who retired prior to January 1, 1990; 6% compounded for members who retired between January 1, 1990 and December 18, 1991; 5% compounded for members who retired between December 19, 1991 and December 31, 1992; 3% simple on first $12,000 of annual benefit for Non-Union Police who retired January 1, 1993 and later; 3% compounded for other retired members who retired January 1, 1993 and later; 5% compounded for special court awarded members; for all members hired on or after July 1, 2012, the COLA will be based on the Consumer Price Index for the Northeast Region but shall not be less than 1% and shall not exceed 3% simple and 150% of the Rhode Island state median income. • Fire: 5% compounded for members who retired prior to January 1, 1990; 6% compounded for members who retired between January 1, 1990 and December 18, 1991; 5% compounded for members who retired between December 19, 1991 and June 30, 1992; 6% compounded for members who retired between July 1, 1992 and June 30, 1995; 3% simple on first $12,000 of annual benefit for members who retired between July 1, 1995 and March 16, 2006; 3% compounded for members who retired March 17, 2006 or later; 5% compounded for special court awarded members; for all members hired on or after July 1, 2012, the COLA will be based on the Consumer Price Index for the Northeast Region but shall not exceed 3% simple. The initial COLA payment is deferred until the January 1 that occurs three years after the member's retirement date.
Provisions for Elected Officials:	Any person who has served as Mayor or City Councilman for at least eight full legislative years is entitled to an additional retirement allowance on the basis of such service as an elected official upon attainment of age 52 or the completion of 20 consecutive years as an elected official, whichever is earlier, or the occurrence of total and permanent disability prior thereto. Such retirement allowance is currently $350 for each year of service, provided that no more than 20 years of such service are to be used in determining the allowance. Upon the death of any such elected official, benefits are payable in accordance with the Class A provisions of the act. An elected official may elect to withdraw his accumulated contributions in lieu of his rights to the allowance based on service as an elected official.

Contribution Rates	• Class A: 8% of compensation. • Police: 8% of compensation • Firefighters hired before July 1, 2011: 8% of compensation. • Firefighters hired on or after July 1, 2011: 9% of compensation. • Elected Officials: $350 per year. Class B member contributions may cease after 32.5 years of service.
Changes in Plan Provisions:	There have been no changes in plan provisions since the last valuation.