

# City of Hollywood General Employees' Retirement System

ACTUARIAL VALUATION REPORT  
AS OF OCTOBER 1, 2018

ANNUAL EMPLOYER CONTRIBUTION FOR THE FISCAL YEAR  
ENDING SEPTEMBER 30, 2020







April 22, 2019

Board of Trustees  
City of Hollywood General  
Employees' Retirement System  
Hollywood, Florida

**Re: City of Hollywood General Employees' Retirement System  
Actuarial Valuation as of October 1, 2018**

Dear Board Members:

The results of the October 1, 2018 Annual Actuarial Valuation of the City of Hollywood General Employees' Retirement System are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the System's funding progress and to determine the employer contribution rate for the fiscal year ending September 30, 2020. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results associated with the benefits described in this report for purposes other than those identified above may be significantly different.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section B of this report. This report includes risk metrics in Section A but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data or other information through October 1, 2018. The valuation was based upon information furnished by the Plan Administrator and the City concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator and the City.

This report was prepared using certain assumptions approved by the Board as authorized under Florida Statutes and prescribed by the Florida Statutes, as described in the section of this report entitled Actuarial Assumptions and Cost Method. The investment return assumption was prescribed by the Board and the assumed mortality rates detailed in the Actuarial Assumptions and Cost Method section were prescribed by the Florida Statutes in accordance with Chapter 112.63, Florida Statutes. All actuarial assumptions used in this report are reasonable for purposes of this valuation.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of the Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Jeffrey Amrose and Trisha Amrose are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

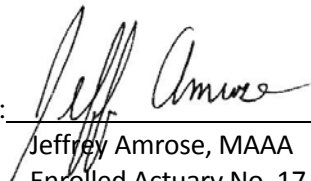
The signing actuaries are independent of the plan sponsor.


This actuarial valuation and/or cost determination was prepared and completed by us or under our direct supervision, and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate. In our opinion, the techniques and assumptions used are reasonable, meet the requirements and intent of Part VII, Chapter 112, Florida Statutes, and are based on generally accepted actuarial principles and practices. There is no benefit or expense to be provided by the Plan and/or paid from the Plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.

Gabriel, Roeder, Smith & Company (GRS) will be pleased to review this valuation and report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

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## SECTION A

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### DISCUSSION OF VALUATION RESULTS

## DISCUSSION OF VALUATION RESULTS

### Comparison of Required Employer Contributions

The following is a comparison of required contributions developed in this year's and last year's actuarial valuations.

Required Employer Contribution	For FYE 9/30/2020 Based on 10/1/2018 Valuation	For FYE 9/30/2019 Based on 10/1/2017 Valuation	Increase (Decrease)
If paid in full on October 1			
Date of Payment	10/1/2019	10/1/2018	
Dollar Amount	\$ 24,216,445	\$ 24,281,286	\$ (64,841)
As % of Covered Payroll	56.73 %	56.44 %	0.29 %
If paid Biweekly			
Date of Payment	Biweekly	Biweekly	
Dollar Amount	\$ 25,125,682	\$ 25,206,246	\$ (80,564)
As % of Covered Payroll	58.86 %	58.59 %	0.27 %

### Payment of Required Contribution

The required contribution if paid biweekly has been adjusted for interest on the basis that payment is made at the end of each pay period during the fiscal year. Also displayed above is the required contribution if the payment is made in full on the first day of the fiscal year.

The actual employer contribution for the fiscal year ending September 30, 2018 was \$22,113,713, and after offsetting the \$7,426,299 receivable contribution as of September 30, 2017, the resulting net employer contribution is \$14,687,414. The actuarially determined contribution was \$24,580,287 reflecting interest based on the payment schedule. The \$9,892,873 shortfall in the actual contribution is due to the City making the required contribution excluding the pre-funding of the Supplemental Pension Distribution for the fiscal years ending September 30, 2015 through September 30, 2018.

The pre-funding of the Supplemental Pension Distribution was done in accordance with the July 3, 2014 letter from the Division of Retirement which states if the benefit provision regarding the

Supplemental Pension Distribution remains unchanged in the City Code, the actuary must estimate the frequency and amounts of future additional distributions and include a cost factor to pre-fund it. Additionally, Section 112.64(2) of the Florida Statutes states “total contributions to the retirement system or plan shall be sufficient to meet the normal cost of the retirement system or plan and to amortize the unfunded liability”, i.e. the actuarially determined contribution which was \$24,580,287 for the fiscal year ending September 30, 2018.

This report reflects a \$9,892,873 receivable employer contribution which includes interest through September 30, 2018. It is our understanding that the payment of the Supplemental Pension Distribution is currently in litigation. If there are any changes to the Supplemental Pension Distribution payment, this report will need to be revised.

## **Revisions in Benefits**

There were no revisions in benefits since the previous valuation.

## **Revisions in Actuarial Assumptions or Methods**

As approved by the Board in connection with the October 1, 2014 Experience Study Report, the investment return assumption was lowered from 7.60% to 7.50%, net of investment expenses. This assumption change has increased the required employer contribution by 1.05% of covered payroll.

Currently, the Plan’s costs and liabilities are determined by anticipating that the pension fund will earn 7.5% per year net of investment expenses, or about 7.8% gross before investment expenses. Based on the Plan’s asset allocation, an assumed net rate of return of no more than 7.0% would be more in line with projected expected returns over the long term. The current assumption of 7.5% is at the upper limit of what we believe constitutes a reasonable range for this assumption, so we recommend consideration be given to lowering the investment return assumption.

## **Actuarial Experience**

There was a net actuarial gain of \$4,790,305 for the year which means that actual experience was more favorable than anticipated. The gain is partially due to recognized investment return above the assumed rate of 7.6%. The investment return was 6.8% based on market value of assets and 8.3% based on actuarial value of assets. Additionally, there were liability gains primarily due to lower than expected salary increases (average salary increases were 2.2% versus 4.9% assumed). The net gain has decreased the required employer contribution by 0.96% of covered payroll.

## **Supplemental Pension Distribution**

Since the investment return for the fiscal year ending September 30, 2018 is below 12.1%, a Supplemental Pension Distribution is not payable for the fiscal year ending September 30, 2018.



## Funded Ratio

The funded ratio this year is 64.7% compared to 62.1% last year. The funded ratio was 65.3% before the change in actuarial assumptions. Please note that the funded ratio is 62.8% if the receivable City contribution as of September 30, 2018 is excluded from the actuarial value of assets. The funded ratio is equal to the actuarial value of assets divided by the actuarial accrued (past service) liability.

## Analysis of Change in Employer Contributions

The components of change in the required employer contribution as a percent of payroll are as follows:

Contribution Rate Last Year	58.59 %
Changes in Benefits	0.00
Changes in Actuarial Assumptions	1.05
Actuarial Experience	(0.96)
Amortization Payment on UAAL	0.29
Normal Cost Rate	(0.15)
Administrative Expenses	<u>0.04</u>
Contribution Rate This Year	58.86

## Variability of Future Contribution Rates

The Actuarial Cost Method used to determine the contribution rate is intended to produce contribution rates which are generally level as a percent of payroll. Even so, when experience differs from the assumptions, as it often does, the employer's contribution rate can vary significantly from year-to-year.

Over time, if the year-to-year gains and losses offset each other, the contribution rate would be expected to return to the current level, but this does not always happen.

The Market Value of Assets exceeds the Actuarial Value of Assets by \$5,204,440 as of the valuation date (see Section C). This difference will be gradually recognized over the next several years. In turn, the computed employer contribution rate will decrease by approximately 1% of covered payroll over the same period in the absence of offsetting losses.

## Relationship to Market Value

If market value of assets had been used in the valuation instead of the actuarial value of assets, the City contribution rate on a bi-weekly basis would have been 57.83%, and the funded ratio would have been 65.7%. In the absence of other gains and losses, the City contribution rate should decrease to that level over the next several years.

## Conclusion and Recommendations

It is important to note that system assets are not sufficient to cover the liabilities for current retirees. As of October 1, 2018, the market value of assets is \$340.0 million (including the receivable City contribution), and the liability for current inactive members is \$397.2 million.

The funded ratio dropped from 82.5% in 2000 to the current level of 64.7%. Some steps have been taken to improve funding, such as strengthening the actuarial assumptions including lowering the assumed investment return rate. Given the low funded ratio, we recommend shortening the amortization period. For example, the amortization period for new bases could be shortened one year with each valuation, with the goal of reaching a 20 year period. If the maximum amortization period were changed to 29 years, the actuarially determined contribution for the fiscal year ending September 30, 2020 would increase by approximately \$1,000. If the maximum amortization period was shortened to 25 years, the actuarially determined contribution would increase by approximately \$51,000. This would result in higher contributions in the short-term for the City but would also have a positive effect on improving the funded ratio of the plan.

The remainder of this report includes detailed actuarial valuation results, financial information, miscellaneous information and statistics, and a summary of plan provisions.

## RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; 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. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page 1 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

## Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	<u>2018</u>	<u>2017</u>
Ratio of the market value of assets to payroll	8.24	7.72
Ratio of actuarial accrued liability to payroll	12.55	12.08
Ratio of actives to retirees and beneficiaries	0.6	0.6
Ratio of net cash flow to market value of assets	-1.20 %	-1.32 %

### Ratio of Market Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

### Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

### Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

## **Ratio of Net Cash Flow to Market Value of Assets**

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

## **Additional Risk Assessment**

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

**SECTION B**

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**VALUATION RESULTS**

<b>PARTICIPANT DATA</b>			
	October 1, 2018 <i>After Change</i>	October 1, 2018 <i>Before Change</i>	October 1, 2017
<b>ACTIVE MEMBERS</b>			
Number	629	629	636
Covered Annual Payroll	\$ 41,243,666	\$ 41,243,666	\$ 41,566,583
Average Annual Payroll	\$ 65,570	\$ 65,570	\$ 65,356
Average Age	47.8	47.8	47.8
Average Past Service	10.8	10.8	10.6
Average Age at Hire	37.0	37.0	37.2
<b>ACTIVE TRANSFERS</b>			
Number	18	18	18
Covered Annual Payroll	\$ 1,835,732	\$ 1,835,732	\$ 1,780,482
Average Annual Payroll	\$ 101,985	\$ 101,985	\$ 98,916
Average Age	46.5	46.5	45.5
Average Past Service	2.8	2.8	2.8
<b>RETIREES, BENEFICIARIES &amp; DROP PLAN MEMBERS</b>			
Number	997	997	991
Annual Benefits <sup>1</sup>	\$ 28,412,877	\$ 28,412,877	\$ 27,666,097
Average Annual Benefit	\$ 28,498	\$ 28,498	\$ 27,917
Average Age	68.4	68.4	67.9
<b>DISABILITY RETIREES</b>			
Number	49	49	48
Annual Benefits <sup>1</sup>	\$ 1,419,172	\$ 1,419,172	\$ 1,325,588
Average Annual Benefit	\$ 28,963	\$ 28,963	\$ 27,616
Average Age	65.1	65.1	65.0
<b>TERMINATED VESTED MEMBERS</b>			
Number	77	77	80
Annual Benefits	\$ 1,242,168	\$ 1,242,168	\$ 1,209,087
Average Annual Benefit	\$ 16,132	\$ 16,132	\$ 15,114
Average Age	49.6	49.6	49.1

<sup>1</sup> Does not include any Supplemental Pension Distribution

**ACTUARIALLY DETERMINED CONTRIBUTION (ADC)**

A. Valuation Date	October 1, 2018 <i>After Change</i>	October 1, 2018 <i>Before Change</i>	October 1, 2017
B. ADC to Be Paid During Fiscal Year Ending	9/30/2020	9/30/2020	9/30/2019
C. Assumed Date of Employer Contribution	Biweekly	Biweekly	Biweekly
D. Annual Payment to Amortize Unfunded Actuarial Liability	\$ 20,190,849	\$ 19,882,358	\$ 20,304,480
E. Employer Normal Cost	3,205,220	3,086,233	3,155,193
F. ADC if Paid on the Valuation Date: D+E	23,396,069	22,968,591	23,459,673
G. ADC Adjusted for Frequency of Payments	24,275,457	23,843,028	24,352,806
H. ADC as % of Covered Payroll	58.86 %	57.81 %	58.59 %
I. Assumed Rate of Increase in Covered Payroll to Contribution Year	3.50 %	3.50 %	3.50 %
J. Covered Payroll for Contribution Year	42,687,194	42,687,194	43,021,414
K. ADC for Contribution Year: H x J	25,125,682	24,677,467	25,206,246
L. ADC as % of Covered Payroll in Contribution Year: K ÷ J	58.86 %	57.81 %	58.59 %



ALLOCATION OF REQUIRED EMPLOYER CONTRIBUTION BY EMPLOYEE GROUP						
Group	Employer Normal Cost (Before Expenses)	% of Total Employer Normal Cost	Active Actuarial Accrued Liability	% of Active Actuarial Accrued Liability	Allocated Required Employer Contribution for FYE 9/30/2020*	
					Percentage	Dollar Amount
Non-General Fund Members	\$ 682,803	25.22%	\$ 34,685,162	28.79%	28.30%	\$ 7,110,060
Grandfathered Non-General Fund Members	204,481	7.55%	6,071,467	5.04%	5.38%	1,352,599
General Fund Members	1,658,916	61.28%	74,998,289	62.24%	62.11%	15,606,426
Grandfathered General Fund Members	161,122	5.95%	4,732,973	3.93%	4.21%	1,056,597
Total	\$ 2,707,322	100.00%	\$ 120,487,891	100.00%	100.00%	\$ 25,125,682

\* The Employer Normal Cost is allocated based on each group's percentage of the Employer Normal Cost for benefits, and the annual payment to amortize the UAL is allocated based on each group's percentage of the Actuarial Accrued Liability for active members.

**ACTUARIAL VALUE OF BENEFITS AND ASSETS**

A. Valuation Date	October 1, 2018 <i>After Change</i>	October 1, 2018 <i>Before Change</i>	October 1, 2017
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	\$ 138,719,462	\$ 136,618,236	\$ 135,090,293
b. Vesting Benefits	8,105,009	7,928,227	8,473,716
c. Disability Benefits	11,468,622	11,313,002	11,641,867
d. Preretirement Death Benefits	4,412,535	4,342,722	4,519,760
e. Return of Member Contributions	1,219,316	1,217,383	1,237,261
f. Total	163,924,944	161,419,570	160,962,897
2. Inactive Members			
a. Service Retirees & Beneficiaries	368,812,281	365,352,005	358,655,919
b. Disability Retirees	16,610,801	16,464,683	15,556,396
c. Terminated Vested Members	11,777,534	11,601,665	10,793,879
d. Total	397,200,616	393,418,353	385,006,194
3. Total for All Members	561,125,560	554,837,923	545,969,091
C. Actuarial Accrued (Past Service) Liability (Entry Age Normal)	517,688,507	512,494,883	502,163,903
D. Actuarial Present Value of Accumulated Plan Benefits per FASB No. 35	502,188,168	496,940,639	486,432,059
E. Plan Assets			
1. Market Value	340,003,800	340,003,800	320,901,612
2. Actuarial Value	334,799,360	334,799,360	311,932,945
F. Unfunded Accrued Liability: C - E2	182,889,147	177,695,523	190,230,958
G. Actuarial Present Value of Projected Covered Payroll	322,119,853	320,350,926	326,729,510
H. Actuarial Present Value of Projected Member Contributions	25,769,587	25,628,074	26,138,361
I. Accumulated Contributions of Active Members	27,137,292	27,137,292	26,468,524

**CALCULATION OF EMPLOYER NORMAL COST**

A. Valuation Date	October 1, 2018 <i>After Change</i>	October 1, 2018 <i>Before Change</i>	October 1, 2017
B. Normal Cost for			
1. Service Retirement Benefits	\$ 3,912,832	\$ 3,825,927	\$ 3,897,511
2. Vesting Benefits	817,720	798,162	812,890
3. Disability Benefits	746,990	737,240	751,868
4. Preretirement Death Benefits	220,635	216,662	222,307
5. Return of Member Contributions	<u>308,638</u>	<u>309,837</u>	<u>309,416</u>
6. Total for Future Benefits	6,006,815	5,887,828	5,993,992
7. Assumed Amount for Administrative Expenses	<u>497,898</u>	<u>497,898</u>	<u>486,528</u>
8. Total Normal Cost	6,504,713	6,385,726	6,480,520
C. Expected Member Contribution	3,299,493	3,299,493	3,325,327
D. Employer Normal Cost: B8-C	3,205,220	3,086,233	3,155,193
E. Employer Normal Cost as % of Covered Payroll	7.77 %	7.48 %	7.59 %

## LIQUIDATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY

A. UAAL Amortization Period and Payments						
Original UAAL			Current UAAL			
Date Established	Source	Amount	Years Remaining	Amount	Payment	
					After Change	Before Change
10/1/08	Combined Base	\$ 120,402,171	10	\$ 92,427,773	\$ 12,525,978	\$ 12,571,538
10/1/08	Assumption Change	6,133,233	20	6,347,583	579,208	583,077
10/1/09	Experience Loss	21,720,025	21	20,980,301	1,874,163	1,887,155
10/1/10	Experience Loss	5,090,043	22	4,852,302	425,138	428,188
10/1/10	Assumption Change	(11,684,981)	22	(11,139,212)	(975,970)	(982,972)
10/1/10	Plan Change	(17,448,058)	22	(16,633,115)	(1,457,322)	(1,467,777)
10/1/11	Experience Loss	26,493,199	23	25,242,111	2,172,824	2,188,920
10/1/12	Experience Loss	16,888,651	24	15,928,773	1,349,131	1,359,429
10/1/13	Experience Loss	934,513	25	887,759	74,085	74,667
10/1/13	Plan Change	5,490,249	25	5,215,562	435,248	438,664
10/1/13	Assumption Change	23,450,820	25	22,277,537	1,859,100	1,873,693
10/1/14	Experience Gain	(4,233,453)	26	(4,034,503)	(332,141)	(334,818)
10/1/14	Assumption Change	5,726,542	26	5,457,423	449,284	452,904
10/1/15	Experience Gain	(3,077,339)	27	(2,977,792)	(242,107)	(244,106)
10/1/15	Assumption Change	4,368,350	27	4,227,043	343,676	346,515
10/1/15	Plan Change	598,036	27	578,691	47,050	47,439
10/1/16	Experience Gain	(11,069,062)	28	(10,856,701)	(872,628)	(880,003)
10/1/16	Assumption Change	23,064,814	28	22,622,313	1,818,312	1,833,678
10/1/17	Experience Gain	(3,970,427)	29	(3,927,202)	(312,343)	(315,040)
10/1/17	Assumption Change	5,064,314	29	5,009,182	398,396	401,836
10/1/18	Experience Gain	(4,790,305)	30	(4,790,305)	(377,303)	(380,629)
10/1/18	Assumption Change	5,193,624	30	5,193,624	409,070	N/A
		\$ 214,344,959		\$ 182,889,147	\$ 20,190,849	\$ 19,882,358

**B. Amortization Schedule**

The UAAL is being liquidated as a level percent of payroll over the number of years remaining in the amortization period. The expected amortization schedule is as follows:

Amortization Schedule	
Year	Expected UAAL
2018	\$ 182,889,147
2019	174,900,675
2020	166,313,063
2021	157,081,380
2022	147,157,321
2023	136,488,957
2028	69,875,478
2033	52,455,675
2038	27,447,294
2043	3,495,735
2048	0

## ACTUARIAL GAINS AND LOSSES

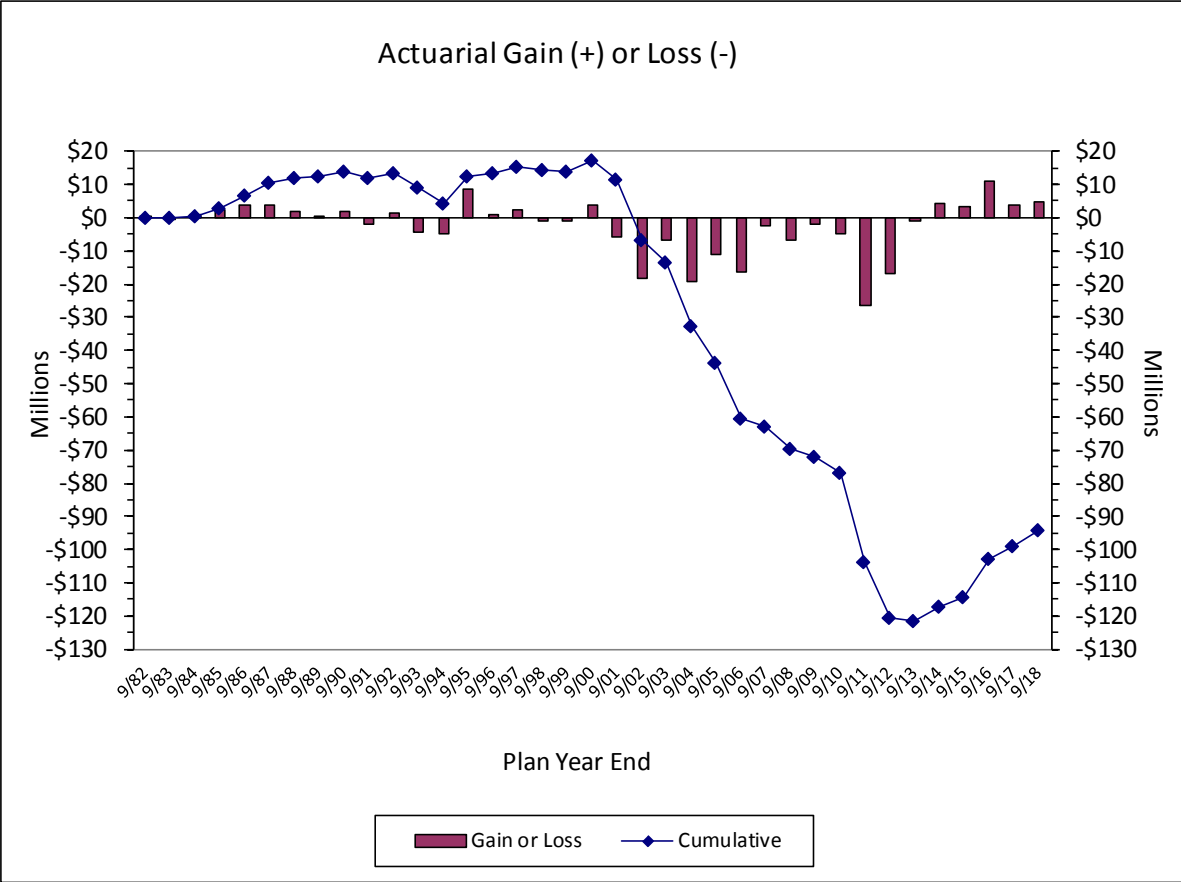
The assumptions used to anticipate mortality, employment turnover, investment income, expenses, salary increases, and other factors have been based on long range trends and expectations. Actual experience can vary from these expectations. The variance is measured by the gain and loss for the period involved. If significant long term experience reveals consistent deviation from what has been expected and that deviation is expected to continue, the assumptions should be modified. The net actuarial gain (loss) for the past year is computed as follows:

1. Last Year's UAAL (After Changes in Benefits, Assumptions, or Methods)	\$ 190,230,958
2. Last Year's Employer Normal Cost	3,155,193
3. Last Year's Employer Contributions	24,580,287
4. Interest at the Assumed Rate on:	
a. 1 and 2 for one year	14,697,347
b. 3 from dates paid	1,017,383
c. a - b	13,679,964
5. This Year's Expected UAAL (Before any Changes in Assumptions or Benefits): 1 + 2 - 3 + 4c	182,485,828
6. Change in UAAL Due to Change in Assumptions/Methods	5,193,624
7. Change in UAAL Due to Change in Benefits	0
8. This Year's Expected UAAL (After Changes in Assumptions and Benefits): 5 + 6 + 7	187,679,452
9. This Year's Actual UAAL (After Changes in Assumptions and Benefits)	182,889,147
10. Net Actuarial Gain (Loss): 8 - 9	4,790,305
11. Gain (Loss) Due to Investments	2,008,417
12. Gain (Loss) From Other Sources	2,781,888

Net actuarial gains in previous years have been as follows:

Year Ended	Net Gain (Loss)	
	Prior*	Supplemental
9/30/1982	\$ 357,574	\$ (293,400)
9/30/1983	(53,055)	(47,952)
9/30/1984	655,952	13,007
9/30/1985	1,910,328	214,974
9/30/1986	3,522,953	387,117
9/30/1987	3,085,353	541,011
9/30/1988	1,673,391	(20,803)
9/30/1989	631,806	(395,640)
9/30/1990	2,021,350	(117,331)
9/30/1991	(2,112,517)	N/A
9/30/1992	1,394,549	N/A
9/30/1993	(4,345,862)	N/A
9/30/1994	(4,780,402)	N/A
9/30/1995	8,381,537	N/A
9/30/1996	694,600	N/A
9/30/1997	2,097,065	N/A
9/30/1998	(859,539)	N/A
9/30/1999	(828,976)	N/A
9/30/2000	3,710,238	N/A
9/30/2001	(6,021,041)	N/A
9/30/2002	(18,219,741)	N/A
9/30/2003	(6,740,689)	N/A
9/30/2004	(19,270,365)	N/A
9/30/2005	(11,135,131)	N/A
9/30/2006	(16,622,969)	N/A
9/30/2007	(2,621,034)	N/A
9/30/2008	(6,640,889)	N/A
9/30/2009	(2,172,025)	N/A
9/30/2010	(5,090,043)	N/A
9/30/2011	(26,493,199)	N/A
9/30/2012	(16,888,651)	N/A
9/30/2013	(934,513)	N/A
9/30/2014	4,233,453	N/A
9/30/2015	3,077,339	N/A
9/30/2016	11,069,062	N/A
9/30/2017	3,970,427	N/A
9/30/2018	4,790,305	N/A

\* After 1990, these are the figures for the entire System.





The fund earnings and salary increase assumptions have considerable impact on the cost of the Plan so it is important that they are in line with the actual experience. The following table shows the actual fund earnings and salary increase rates compared to the assumed rates for the last several years:

Year Ending	Investment Return		Salary Increases			
	Actual	Assumed	Prior Members		Other Members <sup>1</sup>	
			Actual	Assumed	Actual	Assumed
9/30/1977	8.9 %	5.0 %	10.0 %	3.0 %	N/A %	N/A %
9/30/1978	9.5	6.5	8.3	5.0	7.1	5.0
9/30/1979	8.8	6.5	8.1	5.0	14.1	5.0
9/30/1980	8.4	6.5	18.5	5.0	24.8	5.0
9/30/1981	0.4	6.5	11.0	5.0	12.1	5.0
9/30/1982	9.2	8.0	4.2	8.0	7.6	8.0
9/30/1983	9.8	8.0	6.5	8.0	9.2	8.0
9/30/1984	10.3	8.0	5.1	8.0	8.4	8.0
9/30/1985	13.7	8.0	5.1	8.0	7.2	8.0
9/30/1986	16.1	8.0	2.8	8.0	4.7	8.0
9/30/1987	14.4	8.0	4.6	8.0	6.0	8.0
9/30/1988	11.2	7.5	8.3	7.0	10.0	8.0
9/30/1989	11.5	7.5	11.8	7.0	12.9	8.0
9/30/1990	10.6	7.5	3.5	7.0	5.8	8.0
9/30/1991	7.9	8.75	2.5	7.0	5.0	8.0
9/30/1992	10.8	8.75	2.9	7.0	5.9	8.0
9/30/1993	7.1	8.75	6.4	7.0	9.9	8.0
9/30/1994	0.9	8.3	N/A <sup>2</sup>	5.7	N/A <sup>2</sup>	5.7
9/30/1995	14.6	8.3	N/A	N/A	6.5	5.7
9/30/1996	12.3	8.3	N/A	N/A	7.3	5.7
9/30/1997	11.0	8.3	N/A	N/A	7.4	5.7
9/30/1998	10.2	8.3	N/A	N/A	5.0	5.7
9/30/1999	11.0	8.3	N/A	N/A	8.4	5.7
9/30/2000	12.7	8.3	N/A	N/A	5.3	5.7
9/30/2001	8.1	8.3	N/A	N/A	7.0	5.7
9/30/2002	0.5	8.3	N/A	N/A	7.9	5.7
9/30/2003	5.0	8.3	N/A	N/A	6.9	5.0
9/30/2004	4.4	8.3	N/A	N/A	8.2	6.0
9/30/2005	3.0	8.3	N/A	N/A	9.3	6.1
9/30/2006	6.0	8.3	N/A	N/A	7.0	5.7
9/30/2007	9.6	8.3	N/A	N/A	7.3	5.5
9/30/2008	4.3	8.3	N/A	N/A	5.8	5.7
9/30/2009	(1.0)	8.0	N/A	N/A	3.2	6.6
9/30/2010	5.4	8.0	N/A	N/A	1.9	6.2
9/30/2011	0.8	8.0	N/A	N/A	(0.6)	(1.5) <sup>3</sup>
9/30/2012	1.9	8.0	N/A	N/A	0.2	1.4 <sup>4</sup>
9/30/2013	7.2	8.0	N/A	N/A	1.9	5.8
9/30/2014	9.8	8.0	N/A	N/A	5.8	5.8
9/30/2015	8.5	7.9	N/A	N/A	5.2	4.9
9/30/2016	10.3	7.8	N/A	N/A	7.4	5.0
9/30/2017	9.5	7.7	N/A	N/A	6.2	5.1
9/30/2018	8.3	7.6	N/A	N/A	2.2	4.9
Averages	8.1 %	---	7.0 %	---	7.0 %	---

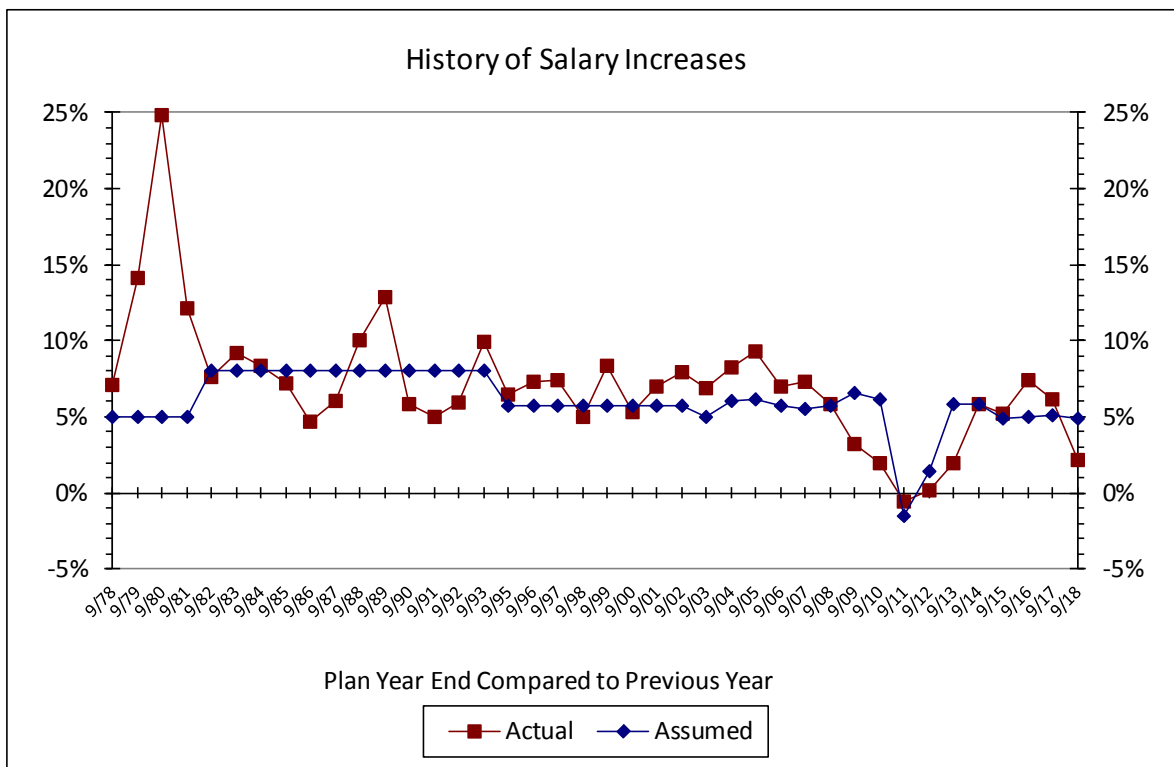
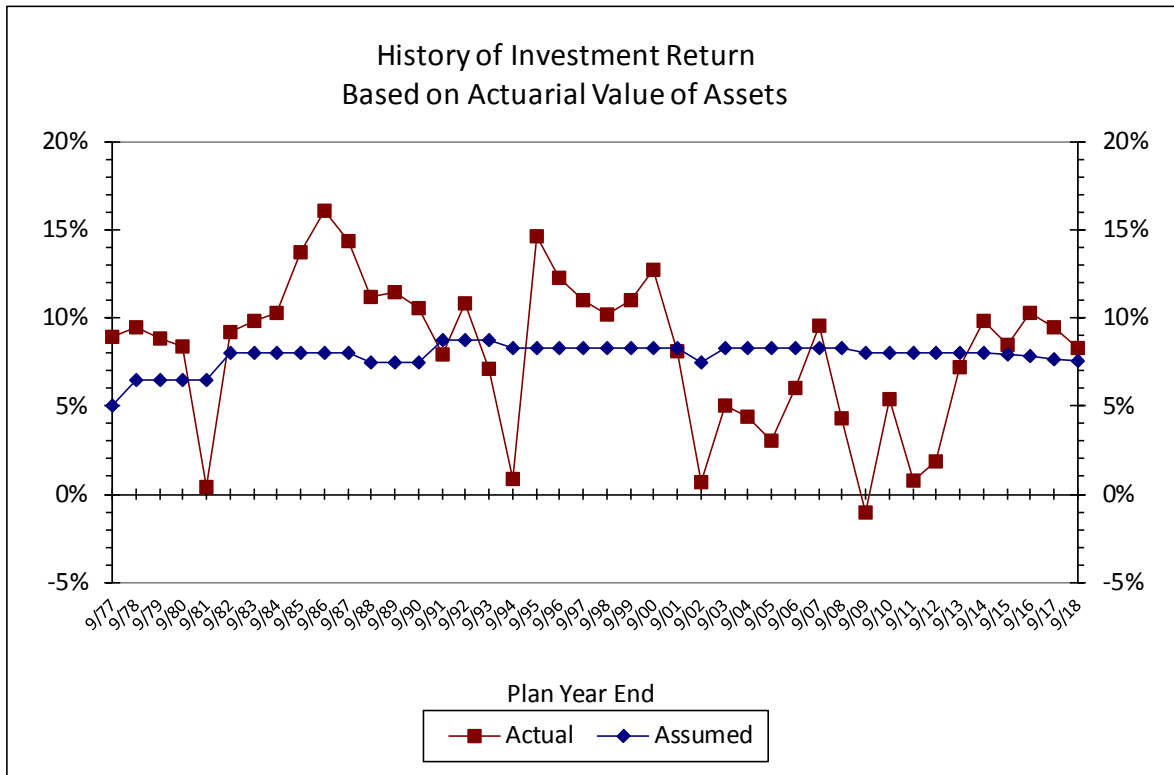
<sup>1</sup> All members after 9/30/1994.

<sup>2</sup> Because the salary basis reported to the actuaries changed from 10/1/1993 to 10/1/1994, a meaningful salary increase figure was not computed.

<sup>3</sup> Reflects a one-time pay reduction for general fund members and no pay increases for non-general fund members.

<sup>4</sup> Reflects no pay increases for general fund members.

The actual investment return rates shown on the previous page are based on the actuarial value of assets. The actual salary increase rates shown on the previous page are the increases received by those active members who were included in the actuarial valuations both at the beginning and the end of each year.



**Actual (A) Compared to Expected (E) Decrements  
Among Active Employees**

Year Ended	Number Added During Year		Service & DROP Retirement		Disability Retirement		Death		Terminations				Active Members End of Year
	A	E	A	E	A	E	A	E	Vested	Other	Totals		
									A	A	A	E	
9/30/2010	7	56	26	14	3	3	1	1	13	13	26	26	<b>668</b>
9/30/2011	12	146	114	16	2	3	1	1	15	14	29	22	<b>534</b>
9/30/2012	35	47	22	8	3	2	0	1	10	12	22	19	<b>522</b>
9/30/2013	41	47	19	7	1	2	0	1	12	15	27	18	<b>516</b>
9/30/2014	78	57	28	50	1	2	1	1	17	10	27	17	<b>537</b>
9/30/2015	86	49	17	9	1	2	0	1	6	25	31	26	<b>574</b>
9/30/2016	72	40	6	9	1	3	1	1	8	24	32	32	<b>606</b>
9/30/2017	64	34	16	11	0	3	1	1	0	17	17	36	<b>636</b>
9/30/2018	57	64	17	12	3	3	0	1	7	37	44	39	<b>629</b>
9/30/2019				15		3		1				38	
9 Yr Totals *	452	540	265	136	15	23	5	9	88	167	255	235	

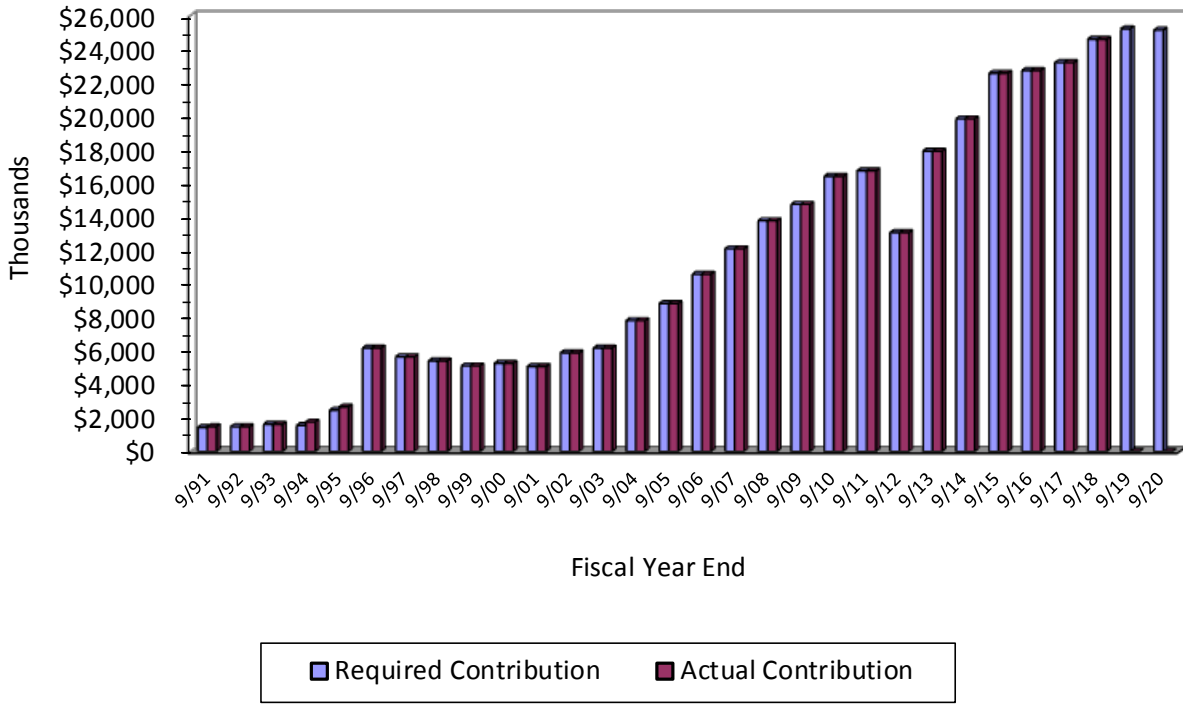
\* Totals are through current Plan Year only.

RECENT HISTORY OF VALUATION RESULTS									
Valuation Date	Number of		Covered Annual Payroll	Actuarial Value of Assets	Actuarial Accrued Liability (AAL) - Entry Age	Unfunded AAL (UAAL)	Funded Ratio	Employer Normal Cost (NC)	NC as % of Payroll
	Active Members*	Inactive Members							
10/1/1991	755	411	\$ 20,630,207	\$ 76,669,632	\$ 79,506,348	\$ 2,836,716	96.4 %	\$ 1,043,805	5.06 %
10/1/1992	727	439	20,191,327	83,752,649	85,450,424	1,697,775	98.0	860,076	4.26
10/1/1993	736	469	22,147,889	88,296,336	95,668,897	7,372,561	92.3	1,520,178	6.86
10/1/1994	587	667	18,757,186	88,937,435	129,179,737	40,242,302	68.8	2,241,185	11.95
10/1/1995	659	662	21,560,893	100,881,259	135,034,342	34,153,083	74.7	1,507,437	6.99
10/1/1996	742	656	24,532,562	112,060,623	141,765,578	29,704,955	79.0	1,405,716	5.73
10/1/1997	739	656	25,596,439	121,232,151	146,459,241	25,227,090	82.8	1,210,712	4.73
10/1/1998	773	645	27,581,966	129,407,169	154,243,888	24,836,719	83.9	1,412,197	5.12
10/1/1999	776	648	28,950,262	141,673,440	172,564,633	30,891,193	82.1	1,809,391	6.25
10/1/2000	778	668	30,000,733	156,750,497	189,916,733	33,166,236	82.5	1,983,048	6.61
10/1/2002	878	722	36,664,439	164,597,832	213,758,531	49,160,699	77.0	3,810,183	10.39
10/1/2003	872	745	38,497,328	175,458,765	233,155,961	57,697,196	75.3	4,123,269	10.71
10/1/2004	879	770	40,421,513	180,192,031	257,632,743	77,440,712	69.9	4,451,446	11.01
10/1/2005	840	811	41,480,512	185,301,557	275,757,219	90,455,662	67.2	4,704,515	11.34
10/1/2006	825	851	41,755,261	195,193,325	303,778,626	108,585,301	64.3	4,949,811	11.85
10/1/2007	827	885	45,999,379	212,980,592	325,892,851	112,912,259	65.4	5,342,240	11.61
10/1/2008	792	900	45,848,717	222,098,827	348,634,231	126,535,404	63.7	6,445,410	14.05
10/1/2009	717	927	44,084,422	220,155,870	369,526,337	149,370,467	59.6	5,138,036	11.65
10/1/2010	668	947	38,748,664	223,942,457	351,118,031	127,175,574	63.8	2,971,772	7.67
10/1/2011	534	1,053	29,823,518	224,237,503	376,225,569	151,988,066	59.6	2,187,628	7.34
10/1/2012	522	1074	29,111,818	217,907,548	387,472,215	169,564,667	56.2	2,191,076	7.53
10/1/2013	516	1,091	28,007,058	227,700,385	424,004,184	196,303,799	53.7	2,324,011	8.30
10/1/2014	537	1,112	31,028,415	243,861,301	438,745,548	194,884,247	55.6	2,075,371	6.69
10/1/2015	574	1,119	34,141,024	262,500,651	452,766,023	190,265,372	58.0	2,304,306	6.75
10/1/2016	606	1,117	37,818,489	288,322,823	483,798,487	195,475,664	59.6	2,704,760	7.15
10/1/2017	636	1,119	41,566,583	311,932,945	502,163,903	190,230,958	62.1	3,155,193	7.59
10/1/2018	629	1,123	41,243,666	334,799,360	517,688,507	182,889,147	64.7	3,205,220	7.77

\* Excludes transfers.

RECENT HISTORY OF REQUIRED AND ACTUAL CONTRIBUTIONS				
Valuation Date	For Fiscal Year Ended September 30	Required City Contribution		Actual City Contribution
		Amount	% of Payroll	
10/1/89	1991	\$ 1,437,693	7.43 %	\$ 1,484,132
10/1/90	1992	1,473,155	7.07	1,484,743
10/1/91	1993	1,617,462	7.84	1,623,342
10/1/92	1994	1,554,337	7.70	1,758,060
10/1/93	1995	2,458,234	11.10	2,648,667
10/1/94	1996	6,169,517	32.89	6,169,521
10/1/95	1997	5,647,078	26.19	5,647,180
10/1/96	1998	5,399,263	22.01	5,399,263
10/1/97	1999	5,101,822	19.93	5,101,822
10/1/98	2000	5,256,720	19.06	5,256,720
10/1/99	2001	5,071,643	17.52	5,071,643
10/1/00	2002	5,878,301	18.09	5,878,301
10/1/01	2003	6,164,953	18.09	6,164,953
10/1/02	2004	7,805,841	20.57	7,805,841
10/1/03	2005	8,817,640	22.13	8,817,640
10/1/04	2006	10,559,474	25.24	10,559,474
10/1/05	2007	12,087,074	28.15	12,087,074
10/1/06	2008	13,761,179	31.84	13,761,179
10/1/07	2009	14,743,450	30.97	14,743,450
10/1/08	2010	16,406,324	34.58	16,406,324
10/1/09	2011	16,734,454	36.68	16,734,454
10/1/10	2012	13,050,878	36.14	13,050,878
10/1/11	2013	17,913,508	59.43	17,913,508
10/1/12	2014	19,834,090	67.51	19,834,090
10/1/13	2015	22,547,585	80.30	22,547,585
10/1/14	2016	22,716,242	69.56	22,716,242
10/1/15	2017	23,189,007	66.33	23,189,007
10/1/16	2018	24,580,287	63.11	24,580,287
10/1/17	2019	25,206,246	58.59	---
10/1/18	2020	25,125,682	58.86	---

### Recent History of Required and Actual Contributions



# ACTUARIAL ASSUMPTIONS AND COST METHOD

## Valuation Methods

**Actuarial Cost Method** - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- (i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

**Financing of Unfunded Actuarial Accrued Liabilities** - Unfunded Actuarial Accrued Liabilities (full funding credit if assets exceed liabilities) were amortized by level (principal & interest combined) percent-of-payroll contributions over a reasonable period of future years.

**Actuarial Value of Assets** - The Actuarial Value of Assets phases in the difference between the actual return on market value and the expected return on Actuarial Value of Assets at the rate of 20% per year. The Actuarial Value of Assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the Market Value of plan assets and whose upper limit is 120% of the Market Value of plan assets. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than assumed rate, Actuarial Value of Assets will tend to be greater than Market Value.

## Valuation Assumptions

**The actuarial assumptions used** in the valuation are shown in this Section. Both the economic and demographic assumptions were established following the Experience Study Report as of October 1, 2014 covering the five years ending September 30, 2014. The mortality table is based on the assumption used by the Florida Retirement System, as required by Chapter 112.63, Florida Statutes.

## Economic Assumptions

**The investment return rate** assumed in the valuation is 7.5% per year, compounded annually (net after investment expenses).

The **Inflation Rate** assumed in this valuation is 2.5% per year. The Inflation Rate is defined to be the expected long-term rate of increases in the prices of goods and services.

The assumed **real rate of return** over inflation is defined to be the portion of total investment return that is more than the assumed inflation rate. Considering other economic assumptions, the 7.5% investment return rate translates to an assumed real rate of return over inflation of 5.0%.

The active member population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at 3.5% per year, but not greater than the actual ten-year average. The most recent ten-year average is below 0%.

Total payroll is projected to the contribution year by applying a 3.5% payroll increase assumption.

**Pay increase assumptions** for individual active members are shown below. Part of the assumption for each age is for merit and/or seniority increase, and the other 2.5% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

**The rates of salary increase** used for general employees are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based. The dollar balance of unused sick leave and unused vacation leave are added to Average Final Compensation to reflect the inclusion of unused leave in Average Final Compensation at retirement or termination. For general fund members who are not normal retirement eligible as of September 30, 2011 and for non-general fund members who are not normal retirement eligible as of March 5, 2014, adjustments are not made for unused vacation leave and unused sick leave for benefits accrued after September 30, 2011 and March 5, 2014, respectively.

Years of Service	% Increase in Salary		
	Merit and Seniority	Base (Economic)	Total Increase
1	5.00 %	2.50 %	7.50
2	4.25	2.50	6.75
3	4.25	2.50	6.75
4	4.25	2.50	6.75
5	4.25	2.50	6.75
6	4.25	2.50	6.75
7	4.25	2.50	6.75
8	4.25	2.50	6.75
9	4.25	2.50	6.75
10	5.50	2.50	8.00
11	0.50	2.50	3.00
12	0.50	2.50	3.00
13	0.50	2.50	3.00
14	0.50	2.50	3.00
15	4.50	2.50	7.00
16	0.50	2.50	3.00
17	0.50	2.50	3.00
18	0.50	2.50	3.00
19	0.50	2.50	3.00
20	2.50	2.50	5.00
21 or more	0.50	2.50	3.00



## Demographic Assumptions

**The mortality table** for healthy lives is the RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality), with mortality improvements projected to all future years after 2000 using Scale BB. For males, the base mortality rates include a 50% blue collar adjustment and a 50% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Regular Class members of the Florida Retirement System (FRS) in their July 1, 2017 actuarial valuation report, as mandated by Chapter 112.63, Florida Statutes.

### FRS Healthy Post-Retirement Mortality for Regular Class Members

Sample Attained Ages (in 2018)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.55 %	0.23 %	34.77	38.40
55	0.60	0.32	30.14	33.39
60	0.76	0.47	25.48	28.48
65	1.13	0.73	20.95	23.74
70	1.75	1.22	16.69	19.27
75	2.92	2.07	12.82	15.19
80	4.95	3.47	9.47	11.56

### FRS Healthy Pre-Retirement Mortality for Regular Class Members

Sample Attained Ages (in 2018)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.21 %	0.15 %	35.69	38.75
55	0.36	0.24	30.57	33.61
60	0.61	0.39	25.64	28.59
65	1.07	0.70	20.99	23.76
70	1.75	1.22	16.69	19.27
75	2.92	2.07	12.82	15.19
80	4.95	3.47	9.47	11.56

For active transfers, the RP-2000 Mortality Table for Annuitants (for post-retirement mortality) was used, with mortality improvements projected to all future years after 2000 using Scale BB. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in their July 1, 2017 actuarial valuation report, as mandated by Chapter 112.63, Florida Statutes.

### FRS Healthy Post-Retirement Mortality for Special Risk Class Members

Sample Attained Ages (in 2018)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.53 %	0.23 %	34.01	38.40
55	0.67	0.32	29.37	33.39
60	0.90	0.47	24.80	28.48
65	1.29	0.73	20.40	23.74
70	1.98	1.22	16.26	19.27
75	3.21	2.07	12.52	15.19
80	5.29	3.47	9.30	11.56

For disabled lives, the RP-2000 Mortality Table for Disabled Annuitants was used, with a two year set forward for females and a four year setback for males, with no provision being made for future mortality improvements. These are the same rates used for Regular Class members of the Florida Retirement System (FRS) in their July 1, 2017 actuarial valuation report, as mandated by Chapter 112.63, Florida Statutes.

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	2.38 %	1.35 %	20.25	23.74
55	3.03	1.87	17.78	20.46
60	3.67	2.41	15.55	17.43
65	4.35	3.13	13.44	14.58
70	5.22	4.29	11.39	11.96
75	6.58	5.95	9.43	9.65
80	8.70	8.23	7.65	7.66

**The rates of retirement** used to measure the probability of eligible members retiring during the next year were as follows:

**General Fund Members Hired Before October 1, 2001 and  
Non-General Fund Members Hired Before March 5, 2004**

Age	Years of Service				
	5-14	15 - 19	20 - 24	25 - 29	30 +
<=49	0.0 %	0.0 %	0.0 %	5.0 %	15.0 %
50 - 51	0.0	0.0	0.0	5.0	15.0
52 - 54	0.0	0.0	0.0	10.0	10.0
55	2.5	5.0	7.5	15.0	15.0
56	2.5	2.5	2.5	15.0	15.0
57 - 59	2.5	2.5	2.5	22.5	60.0
60 - 61	5.0	5.0	5.0	22.5	60.0
62	10.0	10.0	10.0	100.0	100.0
63 - 64	5.0	5.0	5.0	100.0	100.0
65 - 69	45.0	60.0	75.0	100.0	100.0
70 +	100.0	100.0	100.0	100.0	100.0

**General Fund Members Hired After September 30, 2001 and  
Non-General Fund Members Hired After March 5, 2004**

Age	Years of Service				
	7 - 14	15 - 19	20 - 24	25 - 29	30+*
60	0.0 %	0.0 %	0.0 %	0.0 %	30.0 %
61	0.0	0.0	0.0	0.0	30.0
62	0.0	0.0	0.0	100.0	100.0
63	0.0	0.0	0.0	100.0	100.0
64	0.0	0.0	0.0	100.0	100.0
65	15.0	20.0	25.0	100.0	100.0
66	22.5	22.5	22.5	100.0	100.0
67	30.0	30.0	30.0	100.0	100.0
68	37.5	37.5	37.5	100.0	100.0
69	45.0	45.0	45.0	100.0	100.0
70	100.0	100.0	100.0	100.0	100.0

\* Upon attaining 30 years of service, the retirement rates for the first and second years of eligibility are 30% and the rate for the third year is 100% (regardless of age).

**Rates of separation from active membership** were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

<b>Sample Ages</b>	<b>Years of Service</b>	<b>% of Active Members Separating Within Next Year</b>
ALL	0	13.0 %
	1	12.0
	2	12.0
	3	11.0
	4	10.0
20	5 & Over	12.0
25		12.0
30		12.0
35		8.0
40		3.8
45		2.0
50		2.0
55		2.0
60		2.0

**Rates of disability** among active members (25% of disabilities are assumed to be service-connected).

<b>Sample Ages</b>	<b>% Becoming Disabled Within Next Year</b>
20	0.06 %
25	0.08
30	0.10
35	0.13
40	0.17
45	0.27
50	0.46
55	0.86
60	1.49

**Changes Since Previous Valuation**

The investment return assumption was changed from 7.6% to 7.5% effective October 1, 2018.

## Miscellaneous and Technical Assumptions

<b><i>Administrative &amp; Investment Expenses</i></b>	The investment return assumption is intended to be the return net of investment expenses. Annual administrative expenses are assumed to be equal to the prior year's expenses. Assumed administrative expenses are added to the Normal Cost.
<b><i>Benefit Service</i></b>	Exact fractional service is used to determine the amount of benefit payable.
<b><i>COLA</i></b>	The COLA delay is 3 years for projected benefits of active members who are not eligible to enter the DROP. The COLA delay is assumed to be 6 years for current DROP members who entered the DROP after August 17, 2009.
<b><i>Data Assumptions/ Adjustments</i></b>	Where complete participant data was not available, we have used data assumptions which we believe are reasonable and internally consistent. The salaries for transfers were estimated based on a projection of their 2017 salaries using the salary increase assumption. All new entrants were assumed to be General Fund members.
<b><i>Decrement Operation</i></b>	Disability and mortality decrements operate during retirement eligibility.
<b><i>Decrement Timing</i></b>	Decrements of all types are assumed to occur at the beginning of the year.
<b><i>Eligibility Testing</i></b>	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
<b><i>Forfeitures</i></b>	For vested separations from service, it is assumed that 0% of members separating will withdraw their contributions and forfeit an employer financed benefit. It was further assumed that the liability at termination is the greater of the vested deferred benefit (if any) or the member's accumulated contributions.
<b><i>Incidence of Contributions</i></b>	Employer contributions are assumed to be made in equal installments biweekly throughout the year. Member contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
<b><i>Marriage Assumption</i></b>	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.

<b>Maximum Benefit</b>	The maximum accrued benefit payable as a life annuity reflects the 415(b) limit (\$220,000 for 2018 for ages 62 through 65). The limitation is projected to increase by 4.0% per year and is adjusted for other commencement ages based on IRS regulations.
<b>Normal Form of Benefit</b>	A life annuity is the normal form of benefit.
<b>Pay Increase Timing</b>	Beginning of fiscal year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
<b>Planned Retirement Program</b>	<p>Eligible members are assumed to first elect the Planned Retirement Program once they are five years past their earliest normal retirement date.</p> <p>Employees who enter the Planned Retirement Program are assumed to elect the following benefit with the greatest value:</p> <ul style="list-style-type: none"> <li>▪ Value of the normal retirement benefit</li> <li>▪ Value of the one to five year Planned Retirement Program benefit. For example, a five year Planned Retirement Program present value is calculated as the accumulated value of the accrued benefit from five years ago plus the present value of this reduced benefit.</li> </ul> <p>The deposits to the Planned Retirement Program accounts are credited with an assumed interest rate of 5.6% per year.</p>
<b>Pre-Funding of Supplemental Pension Distribution</b>	Projected benefits for members eligible for the Supplemental Pension Distribution currently and in the future are loaded by 5.7% to recognize the effect of the Supplemental Pension Distribution in years when the investment return is above 12.1%.
<b>Service Credit Accruals</b>	It is assumed that members accrue one year of service credit per year.

## GLOSSARY

<b><i>Actuarial Accrued Liability (AAL)</i></b>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<b><i>Actuarial Assumptions</i></b>	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.
<b><i>Actuarial Cost Method</i></b>	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
<b><i>Actuarial Equivalent</i></b>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<b><i>Actuarial Present Value (APV)</i></b>	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
<b><i>Actuarial Present Value of Future Benefits (APVFB)</i></b>	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, nonretired 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.
<b><i>Actuarial Valuation</i></b>	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 No. 67.
<b><i>Actuarial Value of Assets</i></b>	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially determined contribution (ADC).

<b><i>Amortization Method</i></b>	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 rate at which total covered payroll of all active members is assumed to increase.
<b><i>Amortization Payment</i></b>	That portion of the plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<b><i>Amortization Period</i></b>	The period used in calculating the Amortization Payment.
<b><i>Actuarially Determined Contribution (ADC)</i></b>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ADC consists of the Employer Normal Cost and Amortization Payment.
<b><i>Closed Amortization Period</i></b>	A specific number of years that is reduced by one each year, and 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.
<b><i>Employer Normal Cost</i></b>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<b><i>Equivalent Single Amortization Period</i></b>	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
<b><i>Experience Gain/Loss</i></b>	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as 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, losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.



<b><i>Funded Ratio</i></b>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.
<b><i>GASB</i></b>	Governmental Accounting Standards Board.
<b><i>GASB No. 67 and GASB No. 68</i></b>	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.
<b><i>Normal Cost</i></b>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
<b><i>Open Amortization Period</i></b>	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, 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 is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
<b><i>Unfunded Actuarial Accrued Liability</i></b>	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
<b><i>Valuation Date</i></b>	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.

## SECTION C

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### PENSION FUND INFORMATION

## Statement of Plan Assets at Market Value

Item	September 30	
	2018	2017
A. Cash and Cash Equivalents (Operating Cash)	\$ -	\$ -
B. Receivables		
1. Member Contributions	\$ -	\$ -
2. Employer Contributions	9,892,873 *	7,426,299
3. Investment Income and Other Receivables	37,139	201,728
4. Total Receivables	\$ 9,930,012	\$ 7,628,027
C. Investments		
1. Money Market Shares	\$ 7,270,899	\$ 2,374,293
2. Corporate Equities	14,608,041	18,136,312
3. Corporate Bonds	-	10,269,099
4. U.S. Government Securities	-	15,539,417
5. Mutual Funds	221,974,088	191,707,448
6. Pooled Investment Funds	87,950,901	78,645,314
7. Total Investments	\$ 331,803,929	\$ 316,671,883
D. Liabilities		
1. Benefits Payable	\$ -	\$ -
2. Prepaid City Contributions	-	-
3. Accrued Expenses and Other Payables	(393,442)	(609,391)
4. Total Liabilities	\$ (393,442)	\$ (609,391)
E. Total Market Value of Assets Available for Benefits	\$ 341,340,499	\$ 323,690,519
F. DROP Accounts	\$ (1,336,699)	\$ (2,788,907)
G. Market Value Net of Reserves	\$ 340,003,800	\$ 320,901,612
H. Allocation of Investments		
1. Money Market Shares	2.2%	0.7%
2. Corporate Equities	4.4%	5.7%
3. Corporate Bonds	0.0%	3.2%
4. U.S. Government Securities	0.0%	4.9%
5. Mutual Funds	66.9%	60.7%
6. Pooled Investment Funds	26.5%	24.8%
7. Total Investments	100.0%	100.0%

\* Reflects the City contribution receivable due to underpayment in fiscal year ending September 30, 2018, as detailed in Section A.

## Reconciliation of Plan Assets

Item	September 30	
	2018	2017
A. Market Value of Assets at Beginning of Year	\$ 323,690,519	\$ 294,554,159
B. Revenues and Expenditures		
1. Contributions		
a. Employee Contributions	\$ 3,277,081	\$ 3,185,801
b. Employer Contributions	24,567,593 *	23,177,284
c. County Contributions	12,694	11,723
d. Total	<u>\$ 27,857,368</u>	<u>\$ 26,374,808</u>
2. Investment Income		
a. Interest, Dividends, and Other Income	\$ 5,005,755	\$ 4,917,477
b. Net Realized/Unrealized Gains/(Losses)**	17,515,918	29,303,588
c. Investment Expenses	(886,007)	(1,002,227)
d. Net Investment Income	<u>\$ 21,635,666</u>	<u>\$ 33,218,838</u>
3. Benefits and Refunds		
a. Regular Monthly Benefits	\$ (29,187,640)	\$ (28,703,921)
b. Refunds	(448,377)	(166,465)
c. DROP Distributions	(1,709,139)	(1,100,372)
d. Supplemental Pension Distribution	-	-
e. Total	<u>\$ (31,345,156)</u>	<u>\$ (29,970,758)</u>
4. Administrative and Miscellaneous Expenses	\$ (497,898)	\$ (486,528)
5. Transfers	\$ -	\$ -
C. Market Value of Assets at End of Year	\$ 341,340,499	\$ 323,690,519
D. DROP Accounts	\$ (1,336,699)	\$ (2,788,907)
E. Market Value Net of Reserves	\$ 340,003,800	\$ 320,901,612

\* Includes \$9,892,873 City contribution receivable as detailed in Section A.

\*\* The breakdown between realized and unrealized gains/(losses) was not provided.

**Development of Actuarial Value of Assets**

<b>Fiscal Year Ending September 30</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
A. Actuarial Value of Assets Beginning of Year	\$ 291,706,679	\$ 314,721,852				
B. Market Value End of Year	323,690,519	341,340,499				
C. Market Value Beginning of Year	294,554,159	323,690,519				
D. Non-Investment/Administrative Net Cash Flow	(4,082,478)	(3,985,686)				
E. Investment Income						
E1. Actual Market Total: B-C-D	33,218,838	21,635,666				
E2. Assumed Rate of Return	7.70%	7.60%	7.50%	7.50%	7.50%	7.50%
E3. Assumed Amount of Return	22,018,326	23,391,476				
E4. Amount Subject to Phase-In: E1-E3	11,200,512	(1,755,810)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.2 x E4	2,240,102	(351,162)				
F2. First Prior Year	1,535,536	2,240,102	\$ (351,162)			
F3. Second Prior Year	(3,182,294)	1,535,536	2,240,102	\$ (351,162)		
F4. Third Prior Year	1,766,235	(3,182,294)	1,535,536	2,240,102	\$ (351,162)	
F5. Fourth Prior Year	2,719,746	1,766,235	(3,182,296)	1,535,540	2,240,104	\$ (351,162)
F6. Total Phase-Ins	5,079,325	2,008,417	242,180	3,424,480	1,888,942	(351,162)
<b>G. Actuarial Value of Assets End of Year</b>						
G1. Preliminary Actuarial Value of Assets End of Year: A+D+E3+F6	\$ 314,721,852	\$ 336,136,059				
G2. Upper Corridor Limit: 120% x B	388,428,623	409,608,599				
G3. Lower Corridor Limit: 80% x B	258,952,415	273,072,399				
G4. Actuarial Value of Assets End of Year	314,721,852	336,136,059				
G5. DROP Accounts	(2,788,907)	(1,336,699)				
G6. Supplemental Pension Distribution	-	-				
G7. Final Actuarial Value of Assets End of Year	311,932,945	334,799,360				
H. Difference between Market & Actuarial Value of Assets	8,968,667	5,204,440				
<b>I. Actuarial Rate of Return</b>	9.48%	8.25%				
<b>J. Market Value Rate of Return</b>	11.50%	6.83%				
<b>K. Ratio of Actuarial Value of Assets to Market Value</b>	97.23%	98.48%				

**Reconciliation of DROP Accounts**

<b>Year Ended 9/30</b>	<b>Balance at Beginning of Year</b>	<b>Adjustment</b>	<b>Credits</b>	<b>Interest</b>	<b>Distributions</b>	<b>Balance at End of Year</b>
2009	\$ 6,528,104	\$ -	\$ 2,274,151	\$ 419,340	\$ (1,708,212)	\$ 7,513,383
2010	7,513,383	-	2,973,674	585,319	(1,099,439)	9,972,937
2011	9,972,937	4,989	3,882,345	266,041	(2,612,900)	11,513,412
2012	11,513,412	-	5,203,864	1,494,309	(4,659,576)	13,552,009
2013	13,552,009	-	4,668,559	1,628,934	(4,190,755)	15,658,747
2014	15,658,747	-	3,937,061	1,510,901	(5,811,164)	15,295,545
2015	15,295,545	6,075	3,135,456	385,571	(5,183,264)	13,639,383
2016	13,639,383	-	1,621,561	626,094	(12,503,182)	3,383,856
2017	3,383,856	-	352,814	152,609	(1,100,372)	2,788,907
2018	2,788,907	-	208,776	48,155	(1,709,139)	1,336,699

Year Ended	Investment Rate of Return	
	Market Value Basis	Actuarial Value Basis
9/30/1977	8.5 %	8.9 %
9/30/1978	4.2	9.5
9/30/1979	1.3	8.8
9/30/1980	0.7	8.4
9/30/1981	(2.4)	0.4
9/30/1982	34.9	9.2
9/30/1983	16.5	9.8
9/30/1984	8.2	10.3
9/30/1985	22.5	13.7
9/30/1986	16.5	16.1
9/30/1987	3.0	14.4
9/30/1988	11.9	11.2
9/30/1989	11.0	11.5
9/30/1990	6.0	10.6
9/30/1991	16.2	7.9
9/30/1992	12.2	10.8
9/30/1993	7.5	7.1
9/30/1994	(0.3)	0.9
9/30/1995	21.3	14.6
9/30/1996	13.4	12.3
9/30/1997	17.8	11.0
9/30/1998	5.4	10.2
9/30/1999	12.8	11.0
9/30/2000	17.9	12.7
9/30/2001	(8.5)	8.1
9/30/2002	(8.6)	0.5
9/30/2003	17.4	5.0
9/30/2004	8.7	4.4
9/30/2005	9.2	3.0
9/30/2006	7.1	6.0
9/30/2007	11.9	9.6
9/30/2008	(13.6)	4.3
9/30/2009	(2.4)	(1.0)
9/30/2010	8.5	5.4
9/30/2011	0.0	0.8
9/30/2012	19.8	1.9
9/30/2013	14.0	7.2
9/30/2014	11.0	9.8
9/30/2015	1.8	8.5
9/30/2016	10.5	10.3
9/30/2017	11.5	9.5
9/30/2018	6.8	8.3
<b>Average Returns:</b>		
Last 5 Years	8.3 %	9.3 %
Last 10 Years	8.0 %	6.0 %
All Years	8.5 %	8.1 %

The above rates are based on the retirement system's financial information reported to the actuary. They may differ from figures that the investment consultant reports, in part because of differences in the handling of administrative and investment expenses, and in part because of differences in the handling of cash flows.

## **SECTION D**

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### **FINANCIAL ACCOUNTING INFORMATION**



**FASB NO. 35 INFORMATION**

A. Valuation Date	October 1, 2018	October 1, 2017
B. Actuarial Present Value of Accumulated Plan Benefits		
1. Vested Benefits		
a. Members Currently Receiving Payments	\$ 385,423,082	\$ 374,212,315
b. Terminated Vested Members	11,777,534	10,793,879
c. Other Members	98,992,565	95,866,961
d. Total	<u>496,193,181</u>	<u>480,873,155</u>
2. Non-Vested Benefits	5,994,987	5,558,904
3. Total Actuarial Present Value of Accumulated Plan Benefits: 1d + 2	502,188,168	486,432,059
4. Accumulated Contributions of Active Members	27,137,292	26,468,524
C. Changes in the Actuarial Present Value of Accumulated Plan Benefits		
1. Total Value at Beginning of Year	486,432,059	469,095,250
2. Increase (Decrease) During the Period Attributable to:		
a. Plan Amendment	0	0
b. Change in Actuarial Assumptions	5,247,529	5,124,788
c. Latest Member Data, Benefits Accumulated and Decrease in the Discount Period	40,353,373	41,435,221
d. Benefits Paid (Net Basis)	<u>(29,844,793)</u>	<u>(29,223,200)</u>
e. Net Increase	15,756,109	17,336,809
3. Total Value at End of Period	502,188,168	486,432,059
D. Market Value of Assets	340,003,800	320,901,612
E. Actuarial Assumptions - See page entitled Actuarial Assumptions and Cost Method		

## SECTION E

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### MISCELLANEOUS INFORMATION

<b>RECONCILIATION OF MEMBERSHIP DATA</b>		
	<b>From 10/1/17 To 10/1/18</b>	<b>From 10/1/16 To 10/1/17</b>
<b>A. Active Members</b>		
1. Number Included in Last Valuation	636	606
2. New Members Included in Current Valuation	57	57
3. Non-Vested Employment Terminations	(37)	(17)
4. Vested Employment Terminations	(7)	0
5. Service Retirements	(17)	(16)
6. DROP Retirements	0	0
7. Disability Retirements	(3)	0
8. Deaths	0	(1)
9. Other - Rehires/Data Corrections	0	7
10. Number Included in This Valuation	<u>629</u>	<u>636</u>
<b>B. Active Transfers</b>		
1. Number Included in Last Valuation	18	18
2. Additions	0	0
3. Non-Vested Employment Terminations	0	0
4. Vested Employment Terminations	0	0
5. Service Retirements	0	0
6. DROP Retirements	0	0
7. Deaths	0	0
8. Number Included in This Valuation	<u>18</u>	<u>18</u>
<b>C. Terminated Vested Members</b>		
1. Number Included in Last Valuation	80	94
2. Additions from Active Members	7	0
3. Lump Sum Payments/Refund of Contributions	(3)	0
4. Payments Commenced	(7)	(14)
5. Deaths	0	0
6. Other - Rehires/Data Corrections	0	0
7. Number Included in This Valuation	<u>77</u>	<u>80</u>
<b>D. DROP Plan Members</b>		
1. Number Included in Last Valuation	18	22
2. Additions from Active Members	0	0
3. Retirements	(11)	(4)
4. Deaths Resulting in No Further Payments	0	0
5. Other - Data Corrections	0	0
6. Number Included in This Valuation	<u>7</u>	<u>18</u>
<b>E. Service Retirees, Disability Retirees and Beneficiaries</b>		
1. Number Included in Last Valuation	1,021	1,001
2. Additions from Active Members and Transfers	20	16
3. Additions from Terminated Vested Members	7	14
4. Additions from DROP Plan Members	11	4
5. Deaths Resulting in No Further Payments	(20)	(15)
6. Deaths Resulting in New Survivor Benefits	1	1
7. End of Certain Period - No Further Payments	(1)	0
8. Other - Data Corrections	0	0
9. Number Included in This Valuation	<u>1,039</u>	<u>1,021</u>

## ACTIVE PARTICIPANT SCATTER

Age Group	Years of Service to Valuation Date												Totals	
	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Up		
15-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24	7	3	1	0	0	0	0	0	0	0	0	0	0	11
25-29	7	8	9	8	2	1	0	0	0	0	0	0	0	35
30-34	12	8	10	7	7	5	2	0	0	0	0	0	0	51
35-39	7	7	7	8	7	9	9	8	0	0	0	0	0	62
40-44	2	2	3	7	8	7	10	10	3	0	0	0	0	52
45-49	8	5	7	8	7	8	12	21	17	3	0	0	0	96
50-54	8	6	6	10	6	11	14	21	39	9	1	0	0	131
55-59	4	4	6	6	6	10	16	26	25	12	3	0	0	118
60-64	2	1	6	3	4	4	10	12	5	4	0	0	0	51
65 & Up	0	2	3	3	0	2	6	5	1	0	0	0	0	22
<b>Totals</b>	57	46	58	60	47	57	79	103	90	28	4	0	0	629

## INACTIVE PARTICIPANT SCATTER

Age Group	Terminated Vested		Disabled		Retired		Deceased with Beneficiary	
	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits
Under 20	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	2	12,084
30-34	2	25,072	-	-	-	-	7	106,488
35-39	6	66,741	-	-	-	-	3	37,506
40-44	11	174,678	1	10,935	-	-	6	28,400
45-49	23	419,582	3	95,675	7	182,335	6	102,490
50-54	23	443,585	3	77,727	34	1,289,686	9	140,728
55-59	5	55,508	4	131,823	124	4,264,187	8	129,881
60-64	6	46,818	14	462,193	178	6,365,417	16	207,655
65-69	-	-	8	301,802	171	5,355,738	17	314,801
70-74	-	-	9	226,029	139	3,885,015	19	394,631
75-79	1	10,184	2	30,935	93	2,254,192	15	279,986
80-84	-	-	4	72,097	48	1,330,985	17	363,871
85-89	-	-	-	-	28	521,405	13	196,758
90-94	-	-	1	9,956	20	453,025	12	172,254
95-99	-	-	-	-	2	11,782	3	11,577
100 & Over	-	-	-	-	-	-	-	-
<b>Total</b>	<b>77</b>	<b>1,242,168</b>	<b>49</b>	<b>1,419,172</b>	<b>844</b>	<b>25,913,767</b>	<b>153</b>	<b>2,499,110</b>
<b>Average Age</b>		<b>50</b>		<b>65</b>		<b>68</b>		<b>69</b>

## **SECTION F**

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### **SUMMARY OF PLAN PROVISIONS**

# SUMMARY OF PLAN PROVISIONS

## A. Ordinances

The Plan was established under the Code of Ordinances for the City of Hollywood, Florida, and was most recently restated under Ordinance No. O-2003-07 passed and adopted on June 4, 2003. The Plan was most recently amended by Ordinance No. O-2016-08 passed and adopted on May 18, 2016. The Plan is also governed by certain provisions of Part VII, Chapter 112, Florida Statutes (F.S.) and the Internal Revenue Code.

## B. Effective Date

October 1, 1958

## C. Plan Year

October 1 through September 30

## D. Type of Plan

Qualified, governmental defined benefit retirement plan; for GASB purposes it is a single employer plan.

## E. Eligibility Requirements

All regular full-time employees who are contributing to the pension plan.

## F. General Fund Member

Any member paid out of the City's general fund and/or other City funds, with the exception of the water and sewer utility, storm water utility, parking and sanitation funds.

## G. Credited Service

Service rendered to the City for which the member has received Compensation and has made contributions to the fund. No service is credited for any periods of employment for which the member received a refund of employee contributions.

## H. Compensation

General Fund Members Eligible for Normal Retirement as of September 30, 2011 and Non-General Fund Members Eligible for Normal Retirement as of March 5, 2014

Gross wages received from the City, including overtime and payments for accumulated annual leave and accumulated sick leave. For members hired prior to October 1, 2002 and employed by the City on that date, Compensation includes payments for accumulated annual leave, but the

amount of accumulated sick leave shall not exceed the amount accumulated as of October 1, 2002. For members hired after October 1, 2002, Compensation includes payments for accumulated annual leave, but payment of accumulated sick leave is excluded. For members hired prior to July 15, 2009 who retire or enter the DROP on or after August 17, 2009, Compensation excludes payouts for blood time and compensatory time. In addition, for these members payments for accumulated annual leave are limited to 125 hours for employees covered by a bargaining unit and are limited to 60 hours for employees not covered by a bargaining unit. For members hired on or after July 15, 2009, Compensation includes only base pay and longevity pay.

#### All Other Members

Same as above for benefits accrued before October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Compensation under the definition above is frozen as of September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Effective October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members, Compensation includes only base pay and longevity pay.

### **I. Average Final Compensation (AFC)**

#### General Fund Members Eligible for Normal Retirement as of September 30, 2011 and Non-General Fund Members Eligible for Normal Retirement as of March 5, 2014

Members hired before July 15, 2009: The average of Compensation over the highest 78 consecutive biweekly pay periods of Credited Service prior to termination or retirement. Payments for accumulated sick and annual leave are deemed to be received in the final pay period.

Members hired on or after July 15, 2009: The average of Compensation over the highest 104 consecutive biweekly pay periods of Credited Service prior to termination or retirement.

#### All Other Members

Same as above for benefits accrued before October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. AFC is frozen as of September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Effective October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members, AFC is the average of Compensation over the highest 130 consecutive biweekly pay periods or the last 260 biweekly pay periods of Credited Service prior to termination or retirement.



## J. Normal Retirement

### General Fund Members Eligible for Normal Retirement as of September 30, 2011 and Non-General Fund Members Eligible for Normal Retirement as of March 5, 2014

**Eligibility:** Members hired before July 15, 2009: A member may retire upon attaining age 55 with 5 years of Credited Service or upon attaining 25 years of Credited Service regardless of age.

Members hired on or after July 15, 2009: A member may retire upon attaining age 60 with 7 years of Credited Service, upon attaining age 57 with 25 years of Credited Service, or upon attaining 30 years of Credited Service regardless of age.

**Benefit:** Members hired before July 15, 2009: 3.0% of AFC multiplied by years of Credited Service, up to 81% of AFC.

Members hired on or after July 15, 2009: 2.5% of AFC multiplied by years of Credited Service, up to 81% of AFC.

**Normal Form of Benefit:** Single Life Annuity; other options are also available.

**COLA:** 2.0% per year commencing 3 years after retirement benefits begin. Members hired on or after July 15, 2009 are not eligible for the COLA.

### All Other Members

**Eligibility:** Members with ten or more years of service as of September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members: Same as above.

Members with less than ten years of service as of September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members: Same as above for benefits accrued before October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Effective October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members, a member may retire upon attaining age 65 with 7 years of Credited Service, age 62 with 25 years of Credited Service, or 30 years of Credited Service regardless of age.

**Benefit:** Same as above for benefits accrued before October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Benefits are frozen as of September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Effective October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members, 2.5% of AFC multiplied by years of Credited Service, up to 81% of AFC (reduced by 3% for each year of Credited Service prior to October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members).

Normal Form  
of Benefit: Single Life Annuity; other options are also available.

COLA: Same as above for benefits accrued before October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Benefits accrued after September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members are not eligible for the COLA.

#### **K. Early Retirement**

None.

#### **L. Delayed Retirement**

Same as Normal Retirement taking into account Compensation earned and service credited until the date of actual retirement.

#### **M. Service Connected Disability**

##### General Fund Members Eligible for Normal Retirement as of September 30, 2011 and Non-General Fund Members Eligible for Normal Retirement as of March 5, 2014

Eligibility: Any member who becomes totally and permanently disabled and unable to perform the specific duties of the member's position as a result of an act occurring in the performance of service for the City is immediately eligible for a disability benefit.

Benefit: 75% of salary.

Normal Form  
of Benefit: Single Life Annuity; or until recovery from disability.

COLA: 2.0% per year commencing 3 years after retirement benefits begin. Members hired on or after July 15, 2009 are not eligible for the COLA.

##### All Other Members

Eligibility: Any member who becomes totally and permanently disabled and unable to perform the specific duties of the member's position as a result of an act occurring in the performance of service for the City is immediately eligible for a disability benefit.

Benefit: 75% of salary.

Normal Form  
of Benefit: Single Life Annuity; or until recovery from disability.

COLA: Same as above for benefits accrued before October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Benefits accrued after September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members are not eligible for the COLA.

**N. Non-Service Connected Disability**

General Fund Members Eligible for Normal Retirement as of September 30, 2011 and Non-General Fund Members Eligible for Normal Retirement as of March 5, 2014

Eligibility: Any member with 5 years of Credited Service (7 years of Credited Service for members hired on or after July 15, 2009) who becomes totally and permanently disabled and unable to perform the specific duties of the member's position is immediately eligible for a disability benefit.

Benefit: The greater of:  
(1) Accrued Normal Retirement Benefit taking into account Compensation earned and service credited until the date of disability, or  
(2) 20% of AFC.

Normal Form of Benefit: Single Life Annuity; or until recovery from disability.

COLA: 2.0% per year commencing 3 years after retirement benefits begin. Members hired on or after July 15, 2009 are not eligible for the COLA.

All Other Members

Eligibility: Any member with 7 years of Credited Service who becomes totally and permanently disabled and unable to perform the specific duties of the member's position is immediately eligible for a disability benefit.

Benefit: The greater of:  
(1) Accrued Normal Retirement Benefit taking into account Compensation earned and service credited until the date of disability, or  
(2) 20% of AFC.

Normal Form of Benefit: Single Life Annuity; or until recovery from disability.

COLA: Same as above for benefits accrued before October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Benefits accrued after September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members are not eligible for the COLA.

## O. Death in the Line of Duty

### General Fund Members Eligible for Normal Retirement as of September 30, 2011 and Non-General Fund Members Eligible for Normal Retirement as of March 5, 2014

**Eligibility:** Members are eligible for survivor benefits after the completion of 5 years of Credited Service (7 years of Credited Service for members hired on or after July 15, 2009).

**Benefit:** The benefit payable to the spouse determined as though the deceased member had retired on the date of death and had chosen a 100% joint and survivor annuity.

**Normal Form of Benefit:** Single Life Annuity.

**COLA:** 2.0% per year commencing 3 years after retirement benefits begin. Members hired on or after July 15, 2009 are not eligible for the COLA.

The designated beneficiary of a plan member with less than 5 years of Credited Service (7 years of Credited Service for members hired on or after July 15, 2009) will receive a refund of the member's accumulated contributions.

### All Other Members

**Eligibility:** Members are eligible for survivor benefits after the completion of 7 years of Credited Service.

**Benefit:** The benefit payable to the spouse determined as though the deceased member had retired on the date of death and had chosen a 100% joint and survivor annuity.

**Normal Form of Benefit:** Single Life Annuity.

**COLA:** Same as above for benefits accrued before October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Benefits accrued after September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members are not eligible for the COLA.

The designated beneficiary of a plan member with less than 7 years of Credited Service will receive a refund of the member's accumulated contributions.

## P. Other Pre-Retirement Death

### General Fund Members Eligible for Normal Retirement as of September 30, 2011 and Non-General Fund Members Eligible for Normal Retirement as of March 5, 2014

**Eligibility:** Members are eligible for survivor benefits after the completion of 5 years of Credited Service (7 years of Credited Service for members hired on or after July 15, 2009).

**Benefit:** The benefit payable to the spouse determined as though the deceased member had retired on the date of death and had chosen a 100% joint and survivor annuity.

**Normal Form of Benefit:** Single Life Annuity.

**COLA:** 2.0% per year commencing 3 years after retirement benefits begin. Members hired on or after July 15, 2009 are not eligible for the COLA.

The designated beneficiary of a plan member with less than 5 years of Credited Service (7 years of Credited Service for members hired on or after July 15, 2009) will receive a refund of the member's accumulated contributions.

### All Other Members

**Eligibility:** Members are eligible for survivor benefits after the completion of 7 years of Credited Service.

**Benefit:** The benefit payable to the spouse determined as though the deceased member had retired on the date of death and had chosen a 100% joint and survivor annuity.

**Normal Form of Benefit:** Single Life Annuity.

**COLA:** Same as above for benefits accrued before October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Benefits accrued after September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members are not eligible for the COLA.

The designated beneficiary of a plan member with less than 7 years of Credited Service will receive a refund of the member's accumulated contributions.

## Q. Post Retirement Death

Benefit determined by the form of benefit elected upon retirement.

## R. Optional Forms

In lieu of electing the Normal Form of benefit, the optional forms of benefits available to all retirees are the 5, 10 and 20 Year Certain and Life Annuity options and the 50% and 100% Joint and Survivor options. Members who are eligible for normal retirement may elect to receive a Partial Lump Sum of up to 25% of the present value of the benefit with the remainder as a monthly benefit. The lump sum amount is calculated using the Plan's definition of actuarial equivalence.

## S. Vested Termination

### General Fund Members Eligible for Normal Retirement as of September 30, 2011 and Non-General Fund Members Eligible for Normal Retirement as of March 5, 2014

**Eligibility:** A member has earned a non-forfeitable right to Plan benefits after the completion of 5 years of Credited Service (7 years of Credited Service for members hired on or after July 15, 2009).

**Benefit:** The benefit is the member's accrued Normal Retirement Benefit as of the date of termination. Benefit begins at age 55 (age 60 for members hired on or after July 15, 2009).

**Normal Form of Benefit:** Single Life Annuity; other options are also available.

**COLA:** 2.0% per year commencing 3 years after retirement benefits begin. Members hired on or after July 15, 2009 are not eligible for the COLA.

Members terminating employment with less than 5 years of Credited Service (7 years of Credited Service for members hired on or after July 15, 2009) will receive a refund of their own accumulated contributions.

### All Other Members

**Eligibility:** A member has earned a non-forfeitable right to Plan benefits after the completion of 7 years of Credited Service.

**Benefit:** The benefit is the member's accrued Normal Retirement Benefit as of the date of termination. Benefit accrued as of September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members begins at age 55 (age 60 for members hired on or after July 15, 2009). Benefit accrued after September 30, 2011 begins at age 65 for General Fund members and March 5, 2014 for Non-General Fund members.

Normal Form  
of Benefit: Single Life Annuity; other options are also available.

COLA: Same as above for benefits accrued before October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Benefits accrued after September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members are not eligible for the COLA.

Members terminating employment with less than 7 years of Credited Service will receive a refund of their own accumulated contributions.

#### **T. Refunds**

Eligibility: All members terminating non-vested are eligible. Optionally, vested members may elect a refund in lieu of the vested benefits otherwise due.

Benefit: A refund of the member's contributions with simple interest at 4% per year through date of separation.

#### **U. Member Contributions**

8.0% of Compensation.

#### **V. Employer Contributions**

The amount determined by the actuary needed to fund the Plan properly according to State laws.

#### **W. Cost of Living Increases**

General Fund Members Eligible for Normal Retirement as of September 30, 2011 and Non-General Fund Members Eligible for Normal Retirement as of March 5, 2014

2.0% per year commencing 3 years after retirement benefits begin. For Members who enter the DROP on or after August 17, 2009, the COLA begins 1 year after separation of employment, if later. Members hired on or after July 15, 2009 are not eligible for the COLA.

All Other Members

Same as above for benefits accrued before October 1, 2011 for General Fund members and March 5, 2014 for Non-General Fund members. Benefits accrued after September 30, 2011 for General Fund members and March 5, 2014 for Non-General Fund members are not eligible for the COLA.

## **X. Deferred Retirement Option Plan (DROP)**

### General Fund Members Who Retired Before September 30, 2011 and Non-General Fund Members Who Retired Benefit March 5, 2014

**Eligibility:** A member may enter the DROP upon attaining age 55 with 10 years of Credited Service or upon attaining 25 years of Credited Service regardless of age, but before completing 30 years of Credited Service. Members hired on or after July 15, 2009 are not eligible to enter the DROP.

**Benefit:** The member's Credited Service and AFC are frozen upon entry into the DROP. The monthly retirement benefit as described under Normal Retirement is calculated based upon the frozen Credited Service and AFC.

**Maximum**

**DROP Period:** 5 years but no later than completion of 32 years of Credited Service.

**Interest**

**Credited:** The member's DROP account is credited with interest at the same rate as the net rate of investment return on plan assets.

**Normal Form**

**of Benefit:** Lump Sum or Direct Rollover.

**COLA:** For Members who enter the DROP on or after August 17, 2009, 2.0% per year commencing 3 years after DROP payments begin or 1 year after separation of employment, if later.

### General Fund Members Who Retire After October 1, 2011 and Non-General Fund Members Who Retire After March 5, 2014

These members are no longer eligible to participate in the DROP.

## **Y. Planned Retirement Program**

The Planned Retirement Program is available for members who were hired before July 15, 2009 and offers the following features:

- A member may backdrop for up to five years but not prior to the date when normal retirement eligibility was attained
- The retirement benefit is calculated based on service and average final compensation at the retroactive Planned Retirement Program date



- The Planned Retirement Program deposits are credited with interest according to the following schedule:
  - If the Plan's return is negative, the member shares in the losses
  - If the Plan's funded ratio is below 80%, the member receives the first 4%, the Plan receives the next 2%, and the member receives any additional earnings above 6%
  - If the Plan's funded ratio is between 80% and 90%, the member receives the first 4%, the Plan receives the next 1%, and the member receives any additional earnings above 5%
  - If the Plan's funded ratio is above 90%, the member receives the full Plan return

## **Z. Supplemental Pension Distribution**

The Plan provides that a supplemental pension distribution may be paid to eligible benefit recipients if the market value rate of return exceeds the assumed rate of return plus 4.5% (effective as of October 1, 2007). An eligible recipient is any member employed by the City on October 1, 2002, any member receiving benefits on that date, and any spouse of deceased members receiving benefits on that date. The Supplemental Pension Distribution is not payable while an eligible recipient participates in the DROP. The total Supplemental Pension Distribution is equal to the actuarial present value of future retirement benefits with respect to eligible recipients multiplied by the excess (not to exceed 2%) of the net market rate of return over the assumed rate of return plus 4.5%. The amount allocated to each eligible recipient is determined by multiplying the total Supplemental Pension Distribution by each individual member's years of Credited Service divided by total years of Credited Service for all recipients. Credit Service is limited to 25 years.

### **AA. Transfers**

Members who transfer to another City plan are eligible to receive benefits from this Plan. The employee contributions for transferred members remain in the fund. The benefit is based on the Credited Service accrued under this Plan, the multiplier in effect at the date of transfer, and the Compensation earned through date of termination or DROP participation. Eligibility for benefits is based on all service. Death and disability benefits are not payable from this Plan after the date of transfer. Members hired on or after July 15, 2009 who transfer to another City plan are treated as terminated employees.

### **AB. Other Ancillary Benefits**

There are no ancillary retirement type benefits not required by statutes but which might be deemed a City of Hollywood General Employees' Retirement System liability if continued beyond the availability of funding by the current funding source.

### **AC. Changes from Previous Valuation**

None.