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CITY OF HOLLYWOOD POLICE OFFICERS' RETIREMENT SYSTEM

ACTUARIAL VALUATION REPORT
AS OF
OCTOBER 1, 2015

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September 1, 2016

Board of Trustees of the
City of Hollywood Police Officers' Retirement System
4205 Hollywood Blvd., Suite 4
Hollywood, Florida 33021

Dear Members of the Board:

This report presents the results of the actuarial valuation of the City of Hollywood Police Officers' Retirement System for the plan year beginning October 1, 2015. The purpose of this report is to provide a summary of the funded status of the plan as of October 1, 2015 and to determine the minimum required contribution amount for the 2016/2017 fiscal year. In addition, this report provides a record of any plan amendments or other plan changes affecting the financial status of the fund. Our calculations were prepared based on member data and financial information provided by the Retirement System.

Summary of Valuation Results

Generally, the Retirement System receives contributions from the City of Hollywood, the State of Florida and from active members. Currently, the State of Florida is withholding the System's premium tax distribution under Florida Statutes, Chapter 185 pending resolution of issues related to the Supplemental Distribution (i.e., 13th check). According to the State's October 2, 2015 letter, the distribution of premium tax moneys requires: 1) the prefunding of future 13th check distributions and 2) the City's lump sum payment to the System of the 13th check distributions made in 2014 and 2015. To meet the State of Florida requirement to pre-fund the Supplemental Distribution, a pre-funding method has been established effective October 1, 2015. To estimate the future Supplemental Distributions, 1,000 100-year scenarios of returns were randomly generated based on the plan's capital market assumptions and asset allocations. Based on these return scenarios and the plan's projected liabilities for the closed employee group eligible for supplemental distributions and the plan's projected assets, an estimate of distributions and the present value of these distributions under each scenario was determined. The median present value of the 1,000 scenarios is used to estimate the increase in the plan's unfunded liability to fund all future supplemental distributions. This process will be replicated in future valuations to determine any unfunded liability associated with future supplemental distributions. Based on our discussions with the State of Florida actuary, Mr. Doug Beckendorf, this approach is acceptable to the State to pre-fund the Supplemental Distributions.

As stipulated in the letter from the State dated October 2, 2015, the City is also required to deposit a lump sum of $4,104,375 for the 2014 and 2015 Supplemental Distribution payments for the premium tax distribution to be released. In determining the sources of contributions to the System for the 2016/2017 fiscal year we have assumed the City will make the required lump sum payment to the System and State distributions in the amount of $1,375,501 will be available to offset the City's contribution requirement. The amount of $1,375,501 is the State premium tax distribution in August 2016. If the State does not release the premium tax distributions we will have to adjust the City's contribution requirement.

The total required annual contribution for the 2016/2017 fiscal year from all sources is $18,807,272. The amount of the City contributions varies year to year. The blended member contributions are equal to 6.99% of payroll. The blended member contribution rate assumes 0.5% contributions from members currently participating in the Reformed Planned Retirement Benefit and 8.0% for all other active members. Taking into account expected member contributions of $1,349,967 and expected State contributions of $1,375,501, the total required contribution from the City is $16,081,804. The actual required City contribution will have to be adjusted depending on the actual State distribution in August 2017. In comparison, the required City contribution for the 2015/2016 fiscal year was $13,106,868. The City's contribution requirement for the 2016/2017 fiscal year assumes the City is State compliant and will receive the State distribution to offset its contribution. For illustration purposes in the table below, we have provided a comparison of the City's contribution requirement through fiscal year 2016/2017 with and without the $4.1 million lump payment.

		With City Lump Sum Payment of $4.1 Million *(State Compliant)*	Without City Lump Sum Payment of $4.1 Million *(Not State Compliant)*
(1)	City lump sum payment to meet State requirement 10/2/2015 letter	$4,104,375	$0
(2)	Unpaid City contribution as of June 1, 2016 for installment payments for 30 year amortization of 13th check distributions	$441,042	$569,982
(3)	Release of August 2015 ($1,308,509) and August 2016 ($1,375,501) State premium tax distributions	$2,684,010	$0
(4)	Due from City before fiscal year 2017 contribution [(1) + (2) – (3)]	$1,861,407	$569,982
(5)	Required City/State contribution for fiscal year 2017 with pre-funding of supplemental distribution	$17,457,305	$17,725,179
(6)	Estimated State contribution August 2017	$1,375,501	$0
(7)	City contribution for fiscal year 2017 [(5) – (6)]	$16,081,804	$17,725,179
(8)	Total City contribution [(4) + (7)]	$17,943,211	$18,295,161

The table above shows that the total City contribution requirement through fiscal year 2017 is lower by approximately $350,000 if it decides to make the lump sum payment of $4.1 million. In addition, by making the $4.1 million payment and complying with State requirements the City will be able to use future State premium tax distributions of approximately $1.3 million annually to offset its contributions to the plan. As discussed at the August 19, 2016 Board meeting, in the rest of the report we present contribution requirements assuming the City will make the contribution of approximately $4.1 million to comply with State requirements. However, if the City decides not the make the $4.1 million payment we will have to revise the contribution requirements.

In determining the City's contribution requirement we have included interest to reflect our understanding that the City makes bi-weekly contributions throughout the fiscal year. In the table below we present the City's contribution requirements whether the City elects to pay the full amount on October 1, 2016 or in bi-weekly installments throughout the 2016/2017 fiscal year. Please note that the table below assumes the City will be State compliant.

City contribution payable October 1, 2016	$15,403,109
Interest for bi-weekly payments during 2016/2017 fiscal year	$678,695
City contribution payable in bi-weekly installments	$16,081,804

The plan's unfunded liability was projected to be $146,530,596 as of October 1, 2015, taking into account City/State contributions from all sources of $13,425,807 for the year ended September 30, 2015. The actual unfunded liability is $172,387,793. The increase of $25,857,197 in the unfunded liability is primarily due to the pre-funding of future Supplemental Distributions and the benefit changes as a result of the most recent collective bargaining agreement included in Ordinance No. 2015-22 effective September 16, 2015 and adopted on October 7, 2015. The total increase in City contribution to amortize the unfunded liability is $2,379,453. Of this increase, $1,868,802 is due to the pre-funding of future Supplemental Distributions, $393,963 is attributable to the 3.5% increase in the amortization payment under the current method and $130,577 is the change due to Ordinance No. 2015-22. The expected City contribution of $4,104,375 for the 2014 and 2015 Supplemental Distributions has reduced the plan's unfunded liability by that amount and has reduced the payment to amortize the unfunded liability related to the $4.1 million reduction in the unfunded. The reasons for the increase in the City unfunded liability contributions are explained in Table II. A summary of the amortization payments is presented in Table Vb.

The valuation is based on a series of actuarial assumptions, including an interest rate of 8% per year. Actuarial gains and losses result when the actual experience of the plan (such as asset return, pay increases, turnover, deaths, etc.) is different from that expected by the actuarial assumptions.

As mentioned above, the valuation reflects the benefit changes included in the 2015 collective bargaining agreement. The impact of the benefit changes is to increase the City's annual contribution requirement by approximately $433,000. The benefit changes include the new Reformed Planned Retirement Benefit (RPRB) plan. As of October 1, 2015, 27 active employees have elected the RPRB. These employees are contributing 0.5% of pay to the System instead of the 8% other members are contributing. Since these members are still active employees making Retirement System contributions we have included them as active System members. The estimated future cost of the RPRB is very sensitive to the assumed rates of retirement. The actual cost of the RPRB will be different from the costs we have estimated and will not be known for many years. The actual cost will depend on many factors, including when members actually terminate from service and how long members will work while participating in the RPRB. Generally, assuming members will work longer before retiring will reduce the annual cost of the benefit because the full cost will be spread over a longer period. If in the future, members do not work as long as anticipated by the assumptions the cost to the City of the adopted changes will be higher than estimated. We will monitor the future actual experience under the Reformed Planned Retirement Benefit and recommend changes in the retirement rates if necessary.

A summary of the results of the valuation and the contribution requirements is presented in Table I. Additional disclosure information can be found in Table III. The disclosure information required by Chapter 112, Florida Statutes, is presented in Table Va. Tables VII and X provide information about the fund's assets and historical contributions. Table VIc provides an asset reconciliation between October 1, 2014 and October 1, 2015. Table VIa provides a breakdown of the fund assets by investment type and the calculation of the actuarial value of assets. Tables VIIa, VIIb, and VIII provide a historical record of the growth, expenses, revenues, annual returns and contributions of the fund. Tables IXa through IXe provide a variety of useful information concerning the participant population. The assumptions and methods used in the valuation are outlined in Table XI. Provisions of the plan are set forth in Table XII.

This actuarial valuation was prepared and completed by me or under my direct supervision and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate and, in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. 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.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreased expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Respectfully submitted,

Jose I. Fernandez, ASA, EA, FCA, MAAA	Todd B. Green, ASA, FCA, MAAA
Principal and Consulting Actuary	Principal and Consulting Actuary
Enrolled Actuary No. 14-4461	

JIF/TBG:jnw

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	As of October 1, 2014	As of October 1, 2015
1. Number of Members		
a. Active Members (including RPRB)	**216**	**245**
b. Deferred Vested Members	**9**	**13**
c. Retired Members:		
i. Members in DROP	27	23
ii. Non-disabled	273	277
iii. Disabled	27	26
iv. Beneficiaries	40	39
v. Sub-total	**367**	**365**
d. Total Members	**592**	**623**
2. Total Annual Compensation	**$16,504,396**	**$18,649,015**
3. Total Projected Payroll	**$17,082,050**	**$19,301,731**
4. Total Retired Member Benefits	**$21,341,224**	**$21,695,704**
5. Derivation of Normal Cost		
a. Present Value of Future Benefits	$353,286,611	$393,935,027
b. Present Value of Future Normal Cost	($34,343,749)	($40,009,708)
City Portion	*($19,809,641)*	*($24,532,545)*
Member Portion	*($14,534,108)*	*($15,477,163)*
c. Actuarial Accrued Liability (AAL)	$318,942,862	$353,925,319
d. Actuarial Value of Assets	($172,701,186)	($181,537,526) [2]
e. Unfunded Accrued Liability (c. + d.)	**$146,241,676**	**$172,387,793**
f. Normal Cost with Interest	$3,518,988	$4,093,052
g. Payment to Amortize Unfunded Liability	$11,256,072	$13,635,525
h. Administrative Expenses	$400,000	$400,000
i. Bi-weekly Interest Adjustment	$568,122	$678,695
j. Total (f. + g. + h. + i.)	**$15,743,182**	**$18,807,272**
6. Expected Contributions Fiscal Year	**2015/2016**	**2016/2017**
a. Expected Member Contributions	$1,366,564	$1,349,967
b. Expected Chapter 185 Monies	$1,269,750	$1,375,501 [3]
c. Expected City Contribution	$13,106,868 [1]	$16,081,804
d. Total (a. + b. + c.)	**$15,743,182**	**$18,807,272**

[1] There was a prepaid City contribution of $2,269,751 as of October 1, 2014 which the City used to reduce its cash contribution for fiscal year 2015.

[2] The actuarial value of assets includes a City contribution receivable of $4,104,375, which represents a lump sum payment for the 2014 and 2015 Supplemental Distributions.

[3] Receipt of the premium tax distribution assumes the City will make a lump sum payment of $4,104,375 to the System as required by the State of Florida in the letter dated October 2, 2015.

1. Actual Unfunded Accrued Liability as of October 1, 2014	$146,241,676
2. Plan sponsor normal cost for this plan year	$2,363,356
3. Interest on 1. and 2.	$11,888,403
4. Plan sponsor contribution for this plan year (including amounts expected to be paid)	($13,425,807)
5. Interest on 4.	($537,032)
6. Changes due to:	
a. assumptions	$23,800,000
b. plan amendments	$2,092,326
c. funding method	$0
d. actuarial (gain)/loss (includes expected City contribution of $4,104,375 to meet State requirements for Supplemental Distributions paid in 2014 and 2015)	($35,129)
	$25,857,197
7. Total Current Unfunded Actuarial Accrued Liability as of October 1, 2015 (1. + 2. + 3. + 4. + 5. + 6.)	$172,387,793

8. Items Affecting Calculation of Accrued Liability

a. Plan provisions reflected in the unfunded accrued liability (see Table XIIa)
b. Plan amendments reflected in item 6.b. above (see Table XIIb)
c. Actuarial assumptions and methods used to determine actuarial accrued liability and normal cost (see Table XIa)
d. Changes in actuarial assumptions and methods reflected in items 6.a. and 6.c. above (see Table XIb)

9. Actual Unfunded Accrued Liability (UAL) Payment as of October 1, 2014 Valuation:		$11,256,072
10. Changes in UAL Payment Due to Actuarial (Gains)/Losses During the 2014/2015 Plan Year:		
a. Due to Salary	($13,331)	
b. Due to Investment Performance	(13,105)	
c. Due to Turnover/Mortality	(61,078)	
d. Due to New Retirements	8,318	
e. Due to Data/Service Adjustments	25,129	
f. Due to Timing of DROP Retiree COLAs	35,083	
g. Due to Timing of Employer Contributions	111,035	
h. Due to Expected Payroll Growth	393,963	
i. Due to New Members	16,791	
j. Due to Supplemental Distribution	(122,731)	
k. Total		$380,074
11. Other Changes in UAL Payment During the 2014/2015 Plan Year:		
a. Assumption and method changes	$1,868,802	
b. Plan changes	130,577	
c. Total change		$1,999,379
12. Unfunded Accrued Liability Payment as of October 1, 2015 Valuation:		$13,635,525

13. Comments on Change in Unfunded Accrued Liability Contribution Payment:

Salary/Service: Average salary increases of 4.53% compared to expected increases of 5.46%.

Investment Performance: 8.12% actual vs. 8.0% expected return on the actuarial value of assets.

Turnover: Net effect on the valuation liabilities of actual deaths, terminations of employment and disabilities different from what was anticipated in the aggregate by the assumptions related to those events.

New retirements: Net effect of differences in expected vs. actual numbers of, and benefits for, new retirements and refund of employee contributions.

Data/Service Adjustments: Effect of service adjustments for service purchases and other data adjustments.

Timing of DROP Retiree COLAs: Effect of COLA beginning earlier than 8-year deferral period for members leaving DROP and timing of COLAs.

Payroll Growth: 3.5% annual increase in amortization payment according to amortization method.

Employer Contributions: Employer contributions greater than expected

Assumption and Method Changes: Pre-funding of Supplemental Distributions. Based on simulation of future asset returns, an additional unfunded liability basis of $23.8 million was created to reflect the present value of future Supplemental Distributions.

Plan Changes: Ordinance No. 2015-22 effective September 16, 2015 and adopted on October 7, 2015

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (1)	Actuarial Accrued Liability (AAL) (2)	Unfunded AAL (UAAL) (2) - (1)	Funded Ratio (1)/(2)	Annual Covered Payroll (3)	UAAL as % of Covered Payroll [(2) - (1)]/(3)
10/1/2010	$172,261,712	$283,729,153	$111,467,441	60.7%	$15,289,445	729.0%
10/1/2011	$163,376,325	$289,627,228	$126,250,903	56.4%	$15,230,825	828.9%
10/1/2012	$166,024,436	$303,650,726	$137,626,290	54.7%	$13,707,806	1004.0%
10/1/2013	$165,773,329	$312,769,339	$146,996,010	53.0%	$14,581,728	1008.1%
10/1/2014	$172,701,186	$318,942,862	$146,241,676	54.1%	$16,504,396	886.1%
10/1/2015	$181,537,526	$353,925,319	$172,387,793	51.3%	$18,649,015	924.4%

Additional Disclosure Information

Valuation date :	October 1, 2014	October 1, 2015
Actuarial cost method:	Entry Age Normal	Entry Age Normal
Amortization method:	Level Percent Closed	Level Percent Closed
Remaining amortization period:	18 to 30 years	17 to 30 years
Asset valuation method:	5 - Year Smoothed Market	5 - Year Smoothed Market
Actuarial assumptions:		
Investment rate of return	8.00%	8.00%
Discount rate	8.00%	8.00%
Projected salary increases	5.03% to 10.67%	5.03% to 10.67%
Includes inflation at	3.50%	3.50%
Cost of living adjustments	2.00% for Benefits Accured Prior to October 1, 2011	2.00% for Benefits Accured Prior to October 1, 2011

Shown below is the development of the Total Present Value of Accrued Benefit for the Plan. The calculations were performed using the Plan's discount rate of 8.0%.

1. Actuarial Present Value of Accrued Benefits

	As of October 1, 2014	As of October 1, 2015
a. Vested Accrued Benefits:		
i. Inactive members and beneficiaries	$265,328,681	$291,858,764
ii. Active members	$35,401,513	$41,362,655
iii. Sub-total	$300,730,194	$333,221,419
b. Non-vested Accrued Benefits	$4,588,374	$5,705,917
c. Total Benefits	**$305,318,568**	**$338,927,336**
d. Market Value of Assets	$183,536,037	$176,781,293
e. Percentage Funded	60.1%	52.2%

2. Statement of Changes in Total Actuarial Present Value of All Accrued Benefits

a. Actuarial Present Value as of October 1, 2014 (8.0% Interest):	**$305,318,568**
b. Increase (Decrease) During 2014/2015 Plan Year Attributable to:	
i. Interest	$23,577,499
ii. Benefits accumulated/experience	$5,620,576
iii. Benefits paid	($21,199,651)
iv. Plan amendments	$1,810,344
v. Changes in actuarial assumptions or methods	$23,800,000
vi. Net increase (decrease)	**$33,608,768**
c. Actuarial Present Value as of October 1, 2015 (8.0% Interest):	**$338,927,336**

3. Items Affecting Calculation of Actuarial Present Value of Accrued Benefits

a. Plan provisions reflected in the accrued benefits (see Table XIIa)
b. Plan amendments reflected in item 2.b.iv. above (see Table XIIb)
c. Actuarial assumptions and methods used to determine present values (see Table XIa)
d. Changes in actuarial assumptions and methods reflected in item 2.b.v. above (see Table XIb)

	October 1, 2014	Prior to Plan & Assumption Change October 1, 2015	After Plan & Assumption Change October 1, 2015
1. Participant Data:			
a. Active members:			
i. Number	216	245	245
ii. Total annual payroll	$16,504,396	$18,649,015	$18,649,015
iii. Projected annual payroll	$17,082,050	$19,301,731	$19,301,731
b. Retirees, members in DROP, and beneficiaries:			
i. Number	340	339	339
ii. Total annualized benefit	$20,556,277	$20,914,992	$20,914,992
c. Disabled members receiving benefits:			
i. Number	27	26	26
ii. Total annualized benefit	$784,947	$780,712	$780,712
d. Terminated vested members:			
i. Number	9	13	13
ii. Total annualized benefit	$318,049	$471,310	$471,310
2. Assets:			
a. Actuarial value of assets	$172,701,186	$177,433,151	$181,537,526
b. Market value of assets	$183,536,037	$173,328,776	$176,781,293

(CONTINUED)

	October 1, 2014	Prior to Plan & Assumption Change October 1, 2015	After Plan & Assumption Change October 1, 2015
3. Liabilities:			
a. Present value of all future expected benefit payments:			
i. Active members:			
Retirement benefits	$74,641,371	$84,602,824	$87,578,166
Vesting benefits	$1,263,175	$1,295,571	$1,293,625
Disability benefits	$3,469,326	$3,723,244	$3,723,173
Death benefits	$8,329,834	$9,277,946	$9,174,269
Sub-total	$87,703,706	$98,899,585	$101,769,233
ii. Terminated vested members	$3,081,760	$4,480,756	$4,480,756
iii. Retired members and beneficiaries:			
Retirees, members in DROP, and beneficiaries	$253,985,128	$255,456,897	$255,456,897
Disabled members	$8,261,793	$8,121,110	$8,121,110
Sub-total	$262,246,921	$263,578,007	$263,578,007
iv. Supplemental Distributions	$0	$0	$23,800,000
v. Member contributions (annuities & refunds)	$254,224	$331,570	$307,031
vi. Total present value of all future expected ben. pmts.	$353,286,611	$367,289,918	$393,935,027
b. Liabilities due and unpaid	$0	$0	$0
c. Active actuarial accrued liability	$53,614,181	$59,974,230	$62,066,556
d. Inactive actuarial accrued liability	$265,328,681	$268,058,763	$291,858,763
e. Total actuarial accrued liability	$318,942,862	$328,032,993	$353,925,319
f. Unfunded actuarial accrued liability (please reference Table Va for details concerning the unfunded liability bases and amortization periods)	$146,241,676	$150,599,842	$172,387,793

(CONTINUED)

	October 1, 2014	Prior to Plan & Assumption Change October 1, 2015	After Plan & Assumption Change October 1, 2015
4. Actuarial Present Value of Accrued Benefits: (please reference Table IV for details concerning the present value of accrued benefits)	$305,318,568	$313,316,992	$338,927,336
5. Pension Cost (as a % of projected payroll):			
a. Normal cost plus projected administrative expenses	22.94%	22.76%	23.28%
Dollar amount	$3,918,988	$4,393,092	$4,493,052
b. Payment to amortize unfunded liability	65.89%	61.62%	70.64%
Dollar amount	$11,256,072	$11,894,353	$13,635,525
c. Interest adjustment	3.33%	3.16%	3.52%
Dollar amount	$568,122	$609,767	$678,695
d. Amount to be contributed by members	8.00%	8.00%	6.99%
Dollar amount	$1,366,564	$1,544,138	$1,349,967
e. Expected Chapter 185 monies	7.43%	0.00%	7.13%
Dollar amount	$1,269,750	$0	$1,375,501
f. Expected City Contributions	76.73%	79.54%	83.32%
Dollar amount	$13,106,868	$15,353,074	$16,081,804

	October 1, 2014	Prior to Plan & Assumption Change October 1, 2015	After Plan & Assumption Change October 1, 2015
6. Past Contributions:			
a. Required City & State contribution	$12,479,298	$13,425,807	$13,425,807
b. Actual contribution made by:			
i. City	$11,209,547	$13,425,807	$13,425,807
ii. State	$1,269,750	$0	$0
iii. Members	$1,369,100	$1,664,762	$1,664,762
7. Net actuarial (gain) / loss:	($1,876,857)	$4,069,246	($35,129)
8. Other disclosures:			
a. Present value of active members':			
i. Future salaries:			
at attained age	$181,676,355	$207,564,574	$206,310,695
at entry age	N/A	N/A	N/A
ii. Future contributions:			
at attained age	$14,534,108	$16,605,166	$15,477,163
at entry age	N/A	N/A	N/A
b. Present value of future normal contributions from City	$19,809,641	$22,651,761	$24,532,545
c. Present value of future expected benefit payments for active members at entry age	N/A	N/A	N/A
d. Amount of active members' accumulated contributions	$15,173,409	$16,464,142	$14,022,992

Description	Original Amount	Outstanding Balance as of October 1, 2014	2014/2015 Amortization Payment	Outstanding Balance as of October 1, 2015	2015/2016 Amortization Payment	Years Remaining October 1, 2015
2002 Early Retirement Window	$11,314,357	$12,855,786	$1,080,994	$12,803,254	$1,118,829	17 years
2002 Experience Loss	$26,376,767	$29,970,245	$2,520,084	$29,847,781	$2,608,287	17 years
2004 Experience Loss	$36,560,843	$41,340,147	$3,246,074	$41,401,285	$3,359,686	19 years
2005 Experience Loss	$15,940,669	$17,916,111	$1,364,443	$17,984,957	$1,412,199	20 years
2006 Experience Loss	$9,046,327	$10,085,261	$746,530	$10,145,552	$772,658	21 years
2007 Experience Loss	$914,479	$1,009,367	$72,760	$1,017,356	$75,307	22 years
2008 Experience Loss	$10,116,472	$11,036,233	$776,081	$11,143,051	$803,244	23 years
2009 Experience Loss	$20,405,785	$22,012,506	$1,512,485	$22,261,021	$1,565,422	24 years
2010 Experience (Gain)	($2,327,568)	($2,479,188)	($166,686)	($2,510,837)	($172,520)	25 years
2011 Experience Loss	$13,843,275	$14,539,711	$957,847	$14,745,041	$991,371	26 years
2012 Experience Loss	$3,123,194	$3,230,659	$208,793	$3,280,319	$216,101	27 years
2013 Experience Loss	$8,447,927	$8,596,548	$545,666	$8,738,606	$564,764	28 years
2014 Experience (Gain)	($1,545,400)	($1,545,400)	($96,444)	($3,506,125)	($222,551)	29 years
2015 Experience Loss*	$1,744,066			$1,744,066	$108,843	30 years
2004 Plan Amendment	$703,020	$794,920	$62,418	$796,096	$64,603	19 years
2006 Plan Amendment	$8,475,357	$9,448,716	$699,411	$9,505,202	$723,891	21 years
2009 Plan Amendment	$3,279	$3,537	$243	$3,577	$252	24 years
2010 Plan Amendment	($28,657,120)	($30,523,879)	($2,052,249)	($30,913,540)	($2,124,078)	25 years
2012 Plan Amendment	$7,272,455	$7,522,688	$486,181	$7,638,322	$503,197	27 years
2015 Plan Amendment	$2,092,326			$2,092,326	$130,577	30 years
2006 Assumption Change	($840,518)	($937,048)	($69,362)	($942,650)	($71,790)	21 years
2015 Assumption Change	$23,800,000			$23,800,000	$1,868,802	20 years
2006 Asset Method Change	($7,745,683)	($8,635,244)	($639,197)	($8,686,867)	($661,569)	21 years
Total		**$146,241,676**	**$11,256,072**	**$172,387,793**	**$13,635,525**	

Date	Projected Unfunded Liability
October 1, 2015	$172,387,793
October 1, 2016	$172,543,291
October 1, 2017	$172,233,987
October 1, 2018	$171,405,992
October 1, 2045	$0

* The total experience loss/(gain) for the 2014/2015 plan year of ($35,129) is adjusted by contribution timing differences adjusted for interest equal to ($154,342) and by expected City contribution of $1,933,537 for 2014 Supplemental Distribution allocated to outstanding balance as of October 1, 2015 of the 2014 experience (gain).

	As of October 1, 2014	As of October 1, 2015
1. Market Value of Assets		
a. Cash and short term investments (2.53%)	$3,051,193	$4,480,550
b. U.S. government obligations (9.21%)	$20,182,583	$16,282,949
c. Common stock (61.56%)	$110,890,981	$108,826,158
d. Corporate bonds and notes (33.88%)	$77,092,412	$59,899,715
e. State of Israel bonds (0.28%)	$750,001	$500,000
f. Domestic equity funds (12.33%)	$21,490,788	$21,801,049
g. Accrued income receivable (2.06%)	$3,911,414	$3,639,345
h. Real estate (14.55%)	$16,481,816	$25,718,933
i. Alternative investment (2.55%)	$0	$4,501,804
j. Prepaid expenses (0.02%)	$0	$26,813
k. Accounts payable (-0.15%)	($337,075)	($264,312)
l. Deferred Retirement Option Plan Payable (-39.27%)	($64,113,948)	($69,399,172)
m. Share plan investments (-1.89%)	($3,542,908)	($3,334,152)
n. Payable for securities purchased (0.02%)	($51,469)	($2,762)
o. Prepaid City contributions (0%)	($2,269,751)	$0
p. City contribution receivable (2.32%)	$0	$4,104,375
q. Market value of assets (100%)	**$183,536,037**	**$176,781,293**

2. Actuarial Value of Assets

	As of October 1, 2014	As of October 1, 2015
a. Market Value of Assets	$183,536,037	$176,781,293
b. State contribution reserve	$0	$0
c. Supplemental benefit payable	$0	$0
d. Market value of assets available for funding	$183,536,037	$176,781,293

e. 5-year phase-in of (gain)/loss on Actuarial Value of Assets:

i. 2010/2011	$14,881,572	*x 20% =*	$2,976,314		
ii. 2011/2012	($18,756,365)	*x 40% =*	($7,502,546)	*x 20% =*	($3,751,273)
iii. 2012/2013	($4,807,601)	*x 60% =*	($2,884,561)	*x 40% =*	($1,923,040)
iv. 2013/2014	($4,280,073)	*x 80% =*	($3,424,058)	*x 60% =*	($2,568,044)
v. 2014/2015	$16,248,237			*x 80% =*	$12,998,590
vi. Total unrecognized losses/(gains)			($10,834,851)		$4,756,233

	As of October 1, 2014	As of October 1, 2015
f. Preliminary Actuarial Value of Assets (Item d. plus item e.vi.)	**$172,701,186**	**$181,537,526**
g. Corridor around Actuarial Value of Assets		
i. 90% of Market Value (item d.)	**$165,182,433**	**$159,103,164**
ii. 110% of Market Value (item d.)	**$201,889,641**	**$194,459,422**
h. Actuarial Value of Assets (Item f., but within items g.i. and g.ii.)	**$172,701,186**	**$181,537,526**

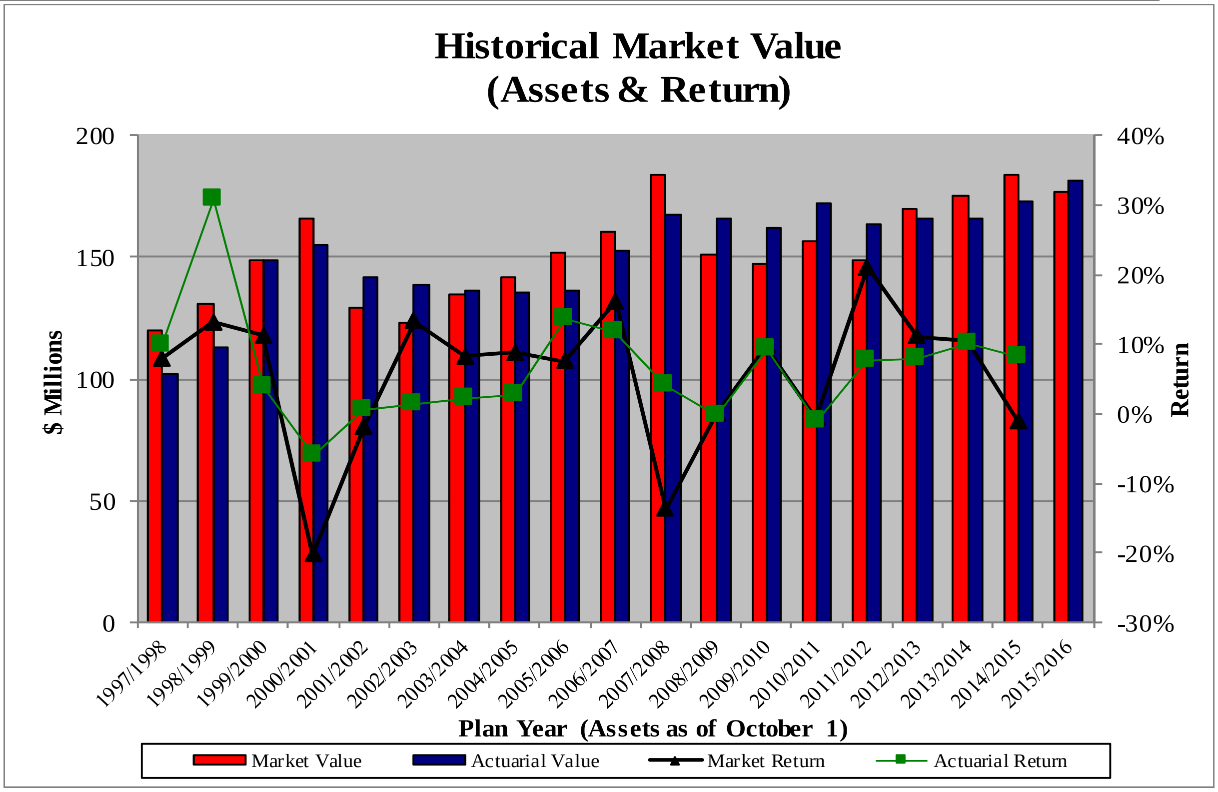
	Market Value As of October 1, 2015
1. Beginning of Year	$183,536,037
2. Increases Due to:	
a. Contributions:	
i. City	$13,425,807
ii. State	$0
iii. Members	$1,664,762
iv. Total	$15,090,569
3. Decreases Due to:	
a. Benefit payments	$23,297,061
b. Refund of member contributions	$73,428
c. Administrative expenses	$656,738
d. Miscellaneous	$0
e. Total decreases	$24,027,227
4. City Contribution Recievable*	$4,104,375
5. Expected Investment Income [(1 x 8%) + ((2a.iv. - 3e.) x 0.5 x 8%) + (4 x 0%)]	$14,325,417
6. Actual Investment Income	($1,922,820)
7. (Gain) / Loss [5 - 6]	$16,248,237

* Lump sum payment of 2014 and 2015 Supplemental Distribution

	As of October 1, 2014	As of October 1, 2015
1. Beginning of Year Market Value:	**$174,955,960**	**$183,536,037**
2. Audit Adjustment	$202	$359
3. Increases Due to:		
a. Contributions:		
i. City	$11,209,547	$13,425,807
ii. City Contribution Receivable[1]	$0	$4,104,375
iii. State	$1,269,750	$0
iv. Members[2]	$1,369,100	$1,664,762
v. Total	$13,848,397	$19,194,944
b. Investment income	$17,903,601	($1,922,820)
c. Total increases	$31,751,998	$17,272,124
4. Decreases Due to:		
a. Benefit payments	$22,361,108	$23,297,061
b. Refund of member contributions	$126,781	$73,428
c. Administrative expenses	$684,234	$656,738
d. Miscellaneous	$0	$0
e. Total decreases	$23,172,123	$24,027,227
5. End of Year Market Value:	**$183,536,037**	**$176,781,293**

[1] Lump sum payment of 2014 and 2015 Supplemental Distribution

[2] Including Buybacks



Plan Year	Market Value as of October 1	Actuarial Value as of October 1	Benefit Payments	Administrative Expenses	City, State, and Member Contributions	Market Value Return	Actuarial Value Return
1997/1998	$119,763,625	$101,677,988	$3,098,859	$204,977	$4,654,229	7.96%	9.88%
1998/1999	$130,700,897	$113,138,759	$3,416,351	$207,480	$4,654,382	13.19%	30.68%
1999/2000	$149,041,366	$149,041,366	$4,429,296	$282,266	$4,804,272	11.17%	3.79%
2000/2001	$165,783,962	$154,778,060	$7,126,609	$303,284	$3,596,842	(20.18)%	(5.92)%
2001/2002	$128,875,555	$141,902,415	$8,237,745	$370,081	$4,822,459	(1.80)%	0.48%
2002/2003	$122,800,575	$138,795,086	$8,451,107	$334,053	$4,874,030	13.20%	1.23%
2003/2004	$134,838,492	$136,571,369	$11,152,686	$261,382	$7,342,352	8.19%	2.12%
2004/2005	$141,639,648	$135,356,309	$10,166,609	$353,750	$8,281,526	8.79%	2.58%
2005/2006	$151,753,020	$136,577,718	$12,532,418	$302,994	$10,269,928	7.53%	13.52%
2006/2007	$160,524,818	$152,299,396	$15,215,538	$482,895	$13,058,502	16.14%	11.66%
2007/2008	$183,577,473	$167,269,474	$19,148,054	$433,359	$11,336,306	(13.74)%	4.12%
2008/2009	$150,682,249	$165,750,474	$16,464,584	$403,324	$13,388,069	(0.09)%	(0.30)%
2009/2010	$147,072,847	$161,780,132	$18,195,346	$377,636	$14,105,064	9.66%	9.37%
2010/2011	$156,601,556	$172,261,712	$21,268,874	$470,677	$14,676,753	(0.66)%	(1.08)%
2011/2012	$148,523,932	$163,376,325	$20,005,471	$573,221	$11,307,996	21.04%	7.51%
2012/2013	$169,520,688	$166,024,436	$24,163,082	$660,615	$12,148,097	11.10%	7.78%
2013/2014	$174,955,960	$165,773,329	$22,487,889	$684,234	$13,848,397	10.51%	10.09%
2014/2015	$183,536,037	$172,701,186	$23,370,489	$656,738	$19,194,944	(1.07)%	8.12%
2015/2016	$176,781,293	$181,537,526					

The market value return for the System's total assets (including DROP) for the plan year ending September 30, 2015 was 1.29%. The (1.07)% return shown above is the market value return of the System's non-DROP assets net of the 8% guaranteed return for the DROP accounts.

REVENUES

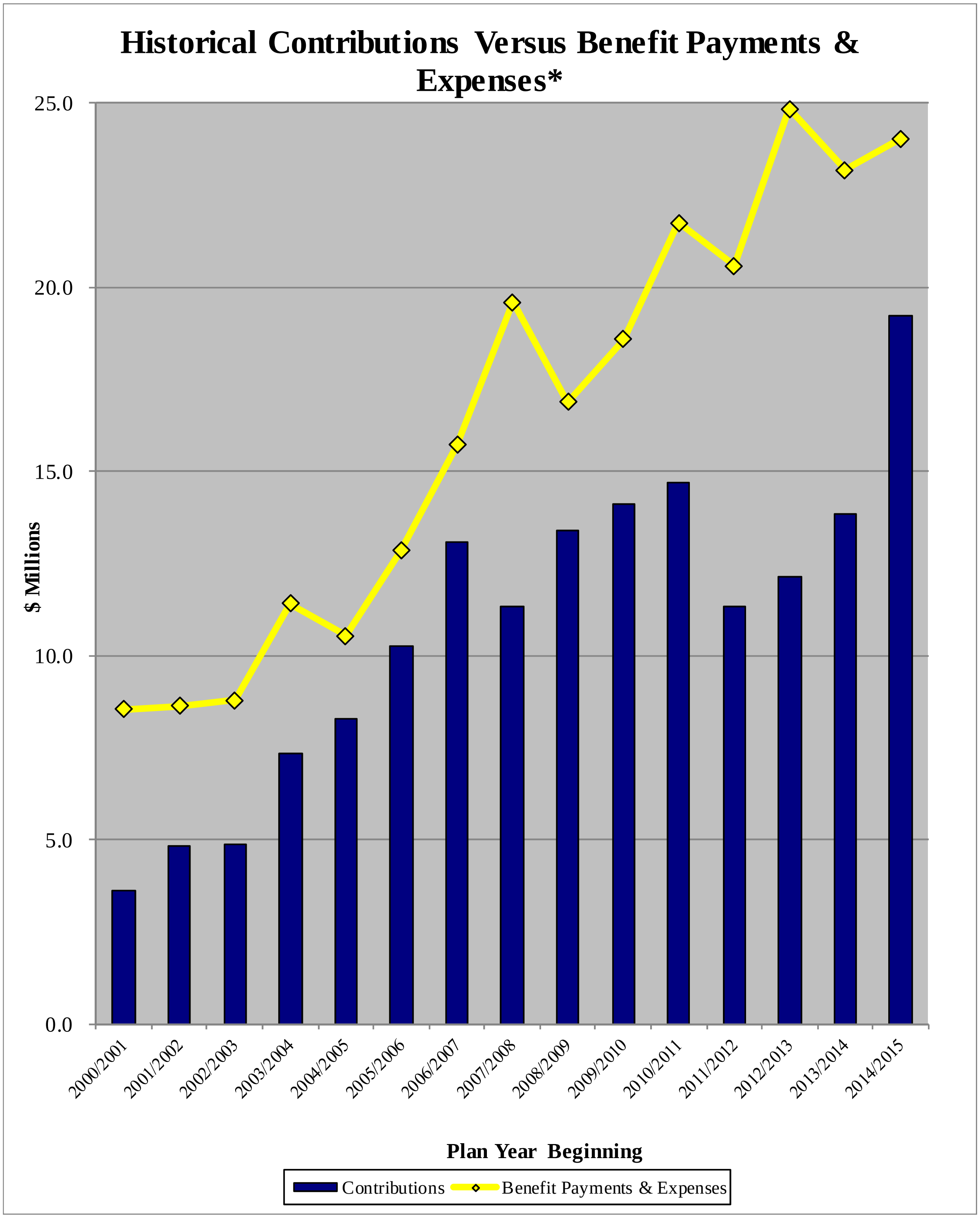
Fiscal Year	City Contributions[1]	State Contributions	Member Contributions	Sub-Total	Net Investment Income	Total
2000/2001	$1,450,312	$860,226	$1,286,304	**$3,596,842**	$16,972,405	**$20,569,247**
2001/2002	$2,911,978	$67,447	$1,843,034	**$4,822,459**	($20,303,040)	**($15,480,581)**
2002/2003	$3,036,862	$67,447	$1,769,721	**$4,874,030**	($2,300,904)	**$2,573,126**
2003/2004	$5,587,558	$67,447	$1,687,347	**$7,342,352**	$15,949,047	**$23,291,399**
2004/2005	$6,327,050	$67,447	$1,887,029	**$8,281,526**	$10,872,872	**$19,154,398**
2005/2006	$8,281,269	$67,447	$1,921,212	**$10,269,928**	$12,352,205	**$22,622,133**
2006/2007	$10,269,819	$1,177,441	$1,611,242	**$13,058,502**	$11,337,282	**$24,395,784**
2007/2008	$8,493,509	$1,139,756	$1,703,041	**$11,336,306**	$25,692,586	**$37,028,892**
2008/2009	$10,119,188	$1,212,981	$2,055,900	**$13,388,069**	($24,650,117)	**($11,262,048)**
2009/2010	$11,369,800	$1,101,980	$1,633,284	**$14,105,064**	($129,563)	**$13,975,501**
2010/2011	$11,917,325	$1,052,885	$1,706,543	**$14,676,753**	($1,014,826)	**$13,661,927**
2011/2012	$8,819,634	$1,111,640	$1,376,722	**$11,307,996**	$30,267,452	**$41,575,448**
2012/2013	$9,573,932	$1,250,143	$1,324,022	**$12,148,097**	$17,862,232	**$30,010,329**
2013/2014	$11,209,547	$1,269,750	$1,369,100	**$13,848,397**	$17,903,601	**$31,751,998**
2014/2015	$17,530,182	$0	$1,664,762	**$19,194,944**	($1,922,820)	**$17,272,124**

EXPENSES

Fiscal Year	Benefits Paid	Member Refunds	Administrative Expenses[2]	Total
2000/2001	$8,210,531	$15,923	$303,284	$8,529,738
2001/2002	$8,237,745	$15,923	$370,081	$8,623,749
2002/2003	$8,442,820	$8,287	$334,053	$8,785,160
2003/2004	$11,123,971	$28,715	$261,382	$11,414,068
2004/2005	$10,062,707	$103,902	$353,750	$10,520,359
2005/2006	$12,530,819	$1,599	$302,994	$12,835,412
2006/2007	$14,931,178	$284,360	$482,895	$15,698,433
2007/2008	$19,101,924	$46,130	$433,359	$19,581,413
2008/2009	$16,377,621	$86,963	$403,324	$16,867,908
2009/2010	$18,023,923	$171,423	$377,636	$18,572,982
2010/2011	$21,248,965	$19,909	$470,677	$21,739,551
2011/2012	$19,792,556	$212,915	$573,221	$20,578,692
2012/2013	$23,921,323	$241,759	$660,615	$24,823,697
2013/2014	$22,361,108	$126,781	$684,234	$23,172,123
2014/2015	$23,297,061	$73,428	$656,738	$24,027,227

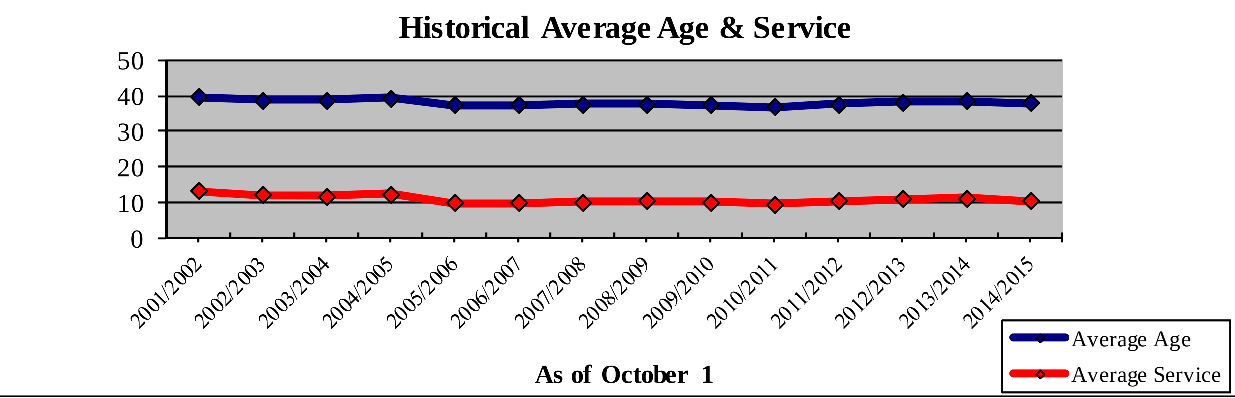
[1] City contributions for fiscal year 2014/2015 include receivable contribution of $4,104,375 for 2014 and 2015 Supplemental Distributions.

[2] Does not include investment expenses

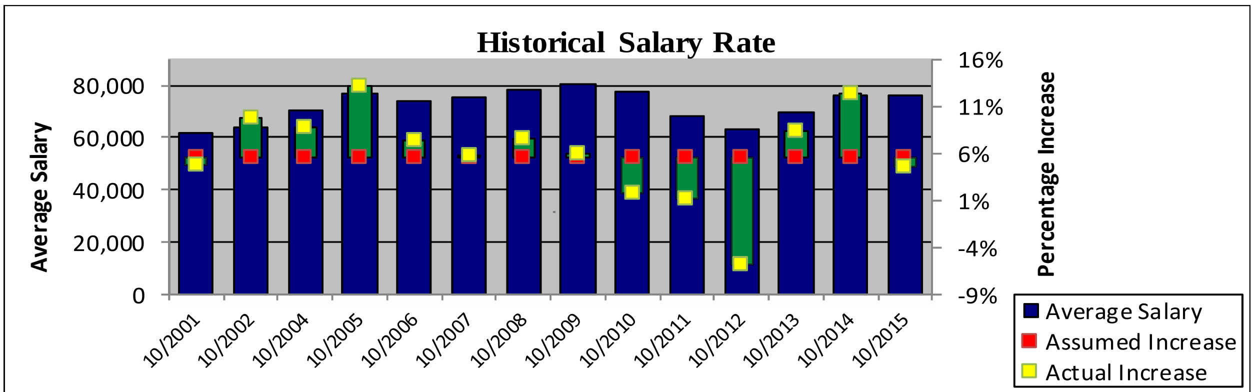


* Please reference Table VIIb for the historical benefit payments, expenses, and contributions.

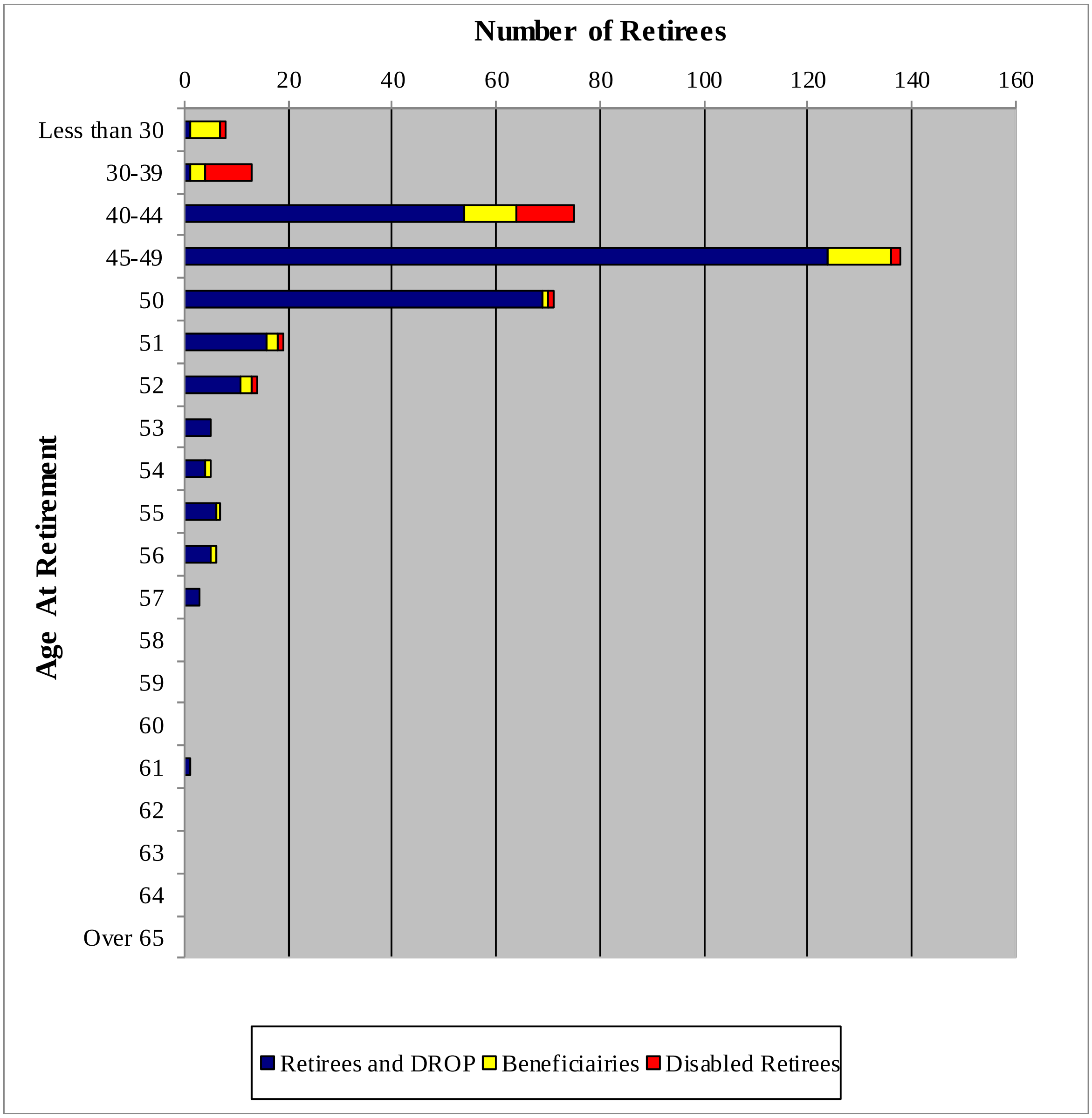
	As of October 1, 2014	As of October 1, 2015
1. Active Members		
a. Vested	119	123
b. Non-vested	97	122
c. Sub-total	**216**	**245**
2. Non-active, Non-retired Members		
a. Fully or partially vested	**9**	**13**
3. Retired Members		
a. Members in DROP	27	23
b. Retirees	273	277
c. Disabled	27	26
d. Beneficiaries	40	39
e. Sub-total	**367**	**365**
4. Total Members	**592**	**623**



Date	Average Service Earned	Average Attained Age	Date	Average Service Earned	Average Attained Age
2001/2002	13.2	39.5	2008/2009	10.4	37.5
2002/2003	12.0	38.8	2009/2010	10.1	37.3
2003/2004	11.9	38.9	2010/2011	9.7	36.8
2004/2005	12.3	39.2	2011/2012	10.5	37.7
2005/2006	9.9	37.5	2012/2013	10.9	38.2
2006/2007	10.0	37.5	2013/2014	11.3	38.6
2007/2008	10.2	37.6	2014/2015	10.6	38.0



Date	Average Salary	Actual Salary Increase	Date	Average Salary	Actual Salary Increase
10/2001	$61,765	4.83%	10/2009	$80,198	5.88%
10/2002	$63,999	9.73%	10/2010	$77,873	1.75%
10/2004	$70,312	8.77%	10/2011	$67,995	1.22%
10/2005	$76,885	13.18%	10/2012	$63,421	-5.88%
10/2006	$74,271	7.38%	10/2013	$69,437	8.43%
10/2007	$75,515	5.79%	10/2014	$76,409	12.24%
10/2008	$78,552	7.50%	10/2015	$76,118	4.53%



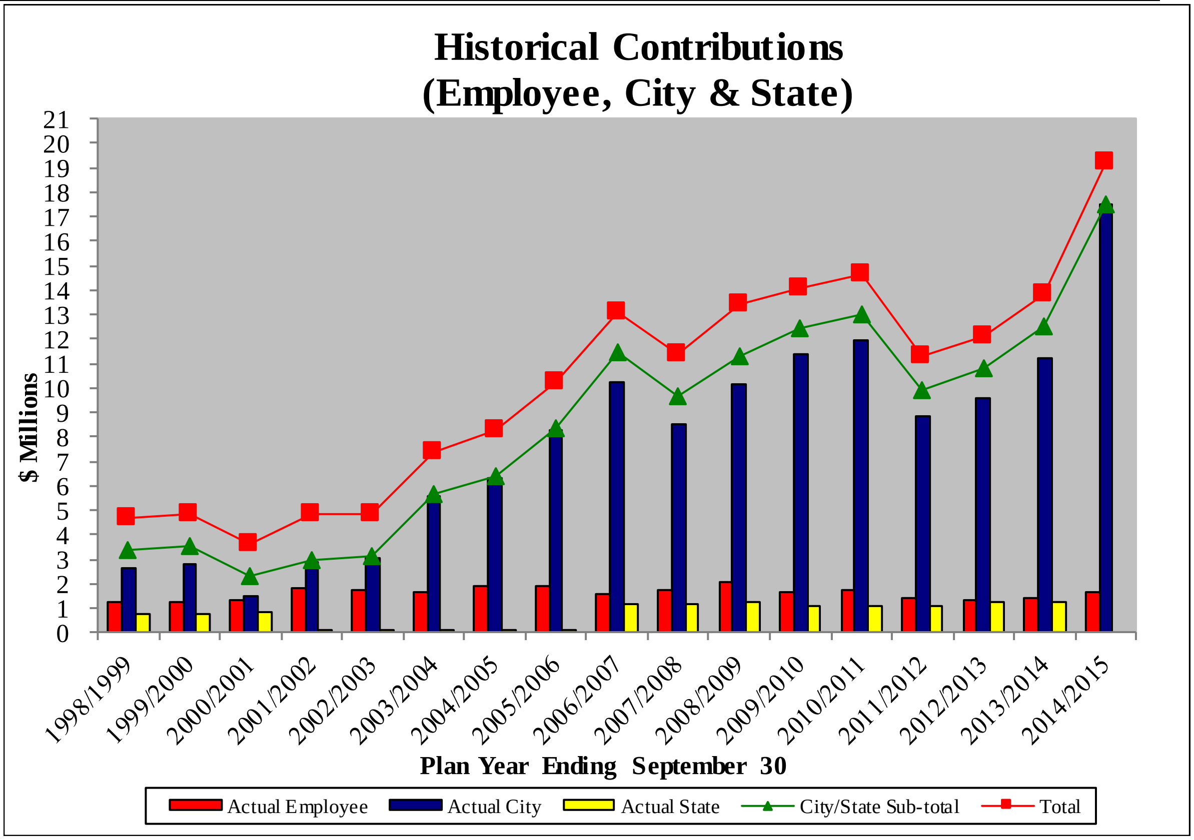
Average benefit being paid to non-disabled retirees is $5,621 per month.

Average benefit being paid to disabled retirees is $2,502 per month.

Average benefit being paid to beneficiaries is $1,449 per month.

	Active	Non-Active, Non-Retired	Retired	Total
1. Number of members as of October 1, 2014	**216**	**9**	**367**	**592**
2. Change in Status during the plan year:				
a. Actives who became inactive	(7)	4		(3)
b. Actives who retired	(1)		1	
c. Inactives who became active				
d. Inactives who retired				
e. Retirees who became active				
3. No longer members due to:				
a. Death			(5)	(5)
b. Permanent break-in-service				
c. Forfeiture of benefits				
d. Expiration of certain period				
e. Included in error last year				
4. New members due to:				
a. Initial membership	37			37
b. Death of another member			2	2
c. Omitted in error last year				
d. Correction				
5. Number of members as of October 1, 2015	**245**	**13**	**365**	**623**

Attained Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	Total
	Completed Years of Service										
Under 25	8	1									**9**
Avg. Pay	56,026	55,452									55,962
25 to 29	13	21	10								**44**
Avg. Pay	56,625	59,230	64,087								59,564
30 to 34	7	9	25	8							**49**
Avg. Pay	57,312	60,258	70,707	80,686							68,504
35 to 39	3	4	7	18	7						**39**
Avg. Pay	63,261	62,473	73,441	80,889	95,849						78,993
40 to 44	1	1	5	14	18	4					**43**
Avg. Pay	55,062	59,354	76,298	81,135	93,165	103,366					86,564
45 to 49			5	11	8	18	2				**44**
Avg. Pay			75,872	82,225	86,625	93,301	119,254				88,517
50 to 54			1	2	3	10					**16**
Avg. Pay			70,204	79,190	82,393	91,090					86,666
55 to 59			1								**1**
Avg. Pay			83,492								83,492
60 to 64											
Avg. Pay											
65 to 79											
Avg. Pay											
70 & Up											
Avg. Pay											
Total	**32**	**36**	**54**	**53**	**36**	**32**	**2**				**245**
Avg. Pay	57,199	59,746	71,059	81,137	91,336	93,868	119,254				76,118



Plan Year	Actual Employee	Actual City[1]	Actual State	City/State Sub-Total	Total
1998/1999	$1,248,232	$2,627,147	$778,850	$3,405,997	$4,654,229
1999/2000	$1,234,026	$2,817,940	$752,306	$3,570,246	$4,804,272
2000/2001	$1,286,304	$1,450,312	$860,226	$2,310,538	$3,596,842
2001/2002	$1,843,034	$2,911,978	$67,447	$2,979,425	$4,822,459
2002/2003	$1,769,721	$3,036,862	$67,447	$3,104,309	$4,874,030
2003/2004	$1,687,347	$5,587,558	$67,447	$5,655,005	$7,342,352
2004/2005	$1,887,029	$6,327,050	$67,447	$6,394,497	$8,281,526
2005/2006	$1,921,212	$8,281,269	$67,447	$8,348,716	$10,269,928
2006/2007	$1,611,242	$10,269,819	$1,177,441	$11,447,260	$13,058,502
2007/2008	$1,703,041	$8,493,509	$1,139,756	$9,633,265	$11,336,306
2008/2009	$2,055,900	$10,119,188	$1,212,981	$11,332,169	$13,388,069
2009/2010	$1,633,284	$11,369,800	$1,101,980	$12,471,780	$14,105,064
2010/2011	$1,706,543	$11,917,325	$1,052,885	$12,970,210	$14,676,753
2011/2012	$1,376,722	$8,819,634	$1,111,640	$9,931,274	$11,307,996
2012/2013	$1,324,022	$9,573,932	$1,250,143	$10,824,075	$12,148,097
2013/2014	$1,369,100	$11,209,547	$1,269,750	$12,479,297	$13,848,397
2014/2015	$1,664,762	$17,530,182	$0	$17,530,182	$19,194,944

[1] City contributions for fiscal year 2014/2015 include receivable contribution of $4,104,375 for 2014 and 2015 Supplemental Distributions.

1. Actuarial Cost Method

- Entry Age Normal Cost Method

2. Decrements

- **Pre-Retirement Mortality**

Representative values of the assumed annual rates of pre-retirement mortality among members in active service are as follows:

Age	Ordinary Mortality Rate	Service Mortality Rate	Age	Ordinary Mortality Rate	Service Mortality Rate
20	.0017	.0002	40	.0043	.0005
25	.0018	.0004	45	.0055	.0006
30	.0020	.0005	50	.0077	.0009
35	.0030	.0005	54	.0103	.0003

- **Post-Retirement Healthy Mortality**

1983 Group Annuity Mortality Table

- **Post-Retirement Disabled Mortality**

1983 Group Annuity Mortality Table

- **Disability**

Representative values of the assumed annual rates of disability among members in active service are as follows:

Age	Ordinary Disability Rate	Service Disability Rate	Age	Ordinary Disability Rate	Service Disability Rate
20	.0004	.0003	40	.0018	.0014
25	.0006	.0005	45	.0032	.0026
30	.0009	.0007	49	.0050	.0040
35	.0012	.0010			

- **Retirement**

  - For members who are eligible to retire as of September 30, 2011:

    - 100% of members are assumed to retire at the earlier of age 55 or the completion of 22 years of service

  - For members who are not eligible to retire as of September 30, 2011:

    - For a member with 10 or more years of creditable service as of September 30, 2011, the assumed annual rates of retirement from active service are as follows:

	Years of Service						
Age	**10**	**11 – 15**	**16 – 17**	**18 – 21**	**22**	**23 – 29**	**30**
45	0.000	0.000	0.000	0.000	0.050	0.025	1.000
46	0.000	0.000	0.000	0.000	0.050	0.025	1.000
47	0.000	0.000	0.000	0.000	0.050	0.025	1.000
48	0.000	0.000	0.000	0.000	0.050	0.025	1.000
49	0.000	0.000	0.000	0.000	0.050	0.025	1.000
50	0.050	0.050	0.050	0.050	0.050	0.025	1.000
51	0.050	0.025	0.025	0.025	0.025	0.025	1.000
52	0.050	0.025	0.025	0.025	0.025	0.025	1.000
53	0.050	0.025	0.025	0.025	0.025	0.025	1.000
54	0.050	0.025	0.025	0.025	0.025	0.025	1.000
55	0.100	0.025	0.025	0.025	0.025	0.025	1.000
56	0.100	0.025	0.025	0.025	0.025	0.025	1.000
57	0.100	0.025	0.025	0.025	0.025	0.025	1.000
58	0.100	0.050	0.075	0.100	0.100	0.100	1.000
59	0.100	0.050	0.075	0.100	0.100	0.100	1.000
60	1.000	1.000	1.000	1.000	1.000	1.000	1.000

- For a member with less than 10 years of creditable service as of September 30, 2011, the assumed annual rates of retirement from active service are as follows:

	Years of Service					
Age	**10**	**11 – 19**	**20 - 24**	**25**	**26 - 29**	**30**
45	0.000	0.000	0.000	0.100	0.025	1.000
46	0.000	0.000	0.000	0.100	0.025	1.000
47	0.000	0.000	0.000	0.100	0.025	1.000
48	0.000	0.000	0.000	0.100	0.025	1.000
49	0.000	0.000	0.000	0.100	0.025	1.000
50	0.000	0.000	0.000	0.100	0.025	1.000
51	0.000	0.000	0.000	0.100	0.025	1.000
52	0.000	0.000	0.000	0.100	0.025	1.000
53	0.000	0.000	0.000	0.100	0.025	1.000
54	0.000	0.000	0.000	0.100	0.025	1.000
55	0.100	0.100	0.100	0.100	0.025	1.000
56	0.100	0.025	0.030	0.030	0.025	1.000
57	0.100	0.025	0.030	0.030	0.025	1.000
58	0.100	0.025	0.030	0.030	0.025	1.000
59	0.100	0.100	0.100	0.100	0.100	1.000
60	1.000	1.000	1.000	1.000	1.000	1.000

- **Withdrawal from Active Status**

Representative values of the assumed annual rates of withdrawal among Members in active service are as follows:

Age	Rate	Age	Rate
20	.1030	35	.0182
25	.0730	40	.0099
30	.0415	45	.0048

3. Interest Rates

- Used for Calculating All Liabilities (including GASB 67/68 liabilities)
  - 8.00% per annum.

4. Salary Increases

- **Individual Compensation**

Representative values of the assumed annual rates of future salary increase are as follows:

Age	Rate	Age	Rate
20	.1067	35	.0530
25	.0880	40	.0510
30	.0625	45	.0503

* Average assumed annual rate of 5.46%

- **Aggregate Compensation**

The aggregate compensation used to compute the accrued liability contribution rate was assumed to increase at a rate of 3½% per year.

5. Marriage Assumptions

- **Percent Married:** 75% of members are assumed married.
- **Age Difference Between Spouses:** Male spouses are assumed to be three years older than female spouses.

6. Expenses

The normal contribution rate is increased by anticipated non-investment expenses. The anticipated expenses are $400,000 for the upcoming plan year.

7. Assets

For the actuarially determined contributions the actuarial value of assets is equal to the market value of assets adjusted to reflect a five year phase-in of the difference between the expected return on market value of assets and the actual investment return on market value of assets. The actuarial value of assets cannot be less than 90% of market value nor greater than 110% of the market value.

8. Supplemental Distribution (13th Check)

Estimated present value of future Supplemental Distributions based on 1,000 scenarios of asset returns and the projected liabilities for the closed member group eligible for Supplemental Distributions.

The following assumptions have been changed during the last few plan years:

1. Effective October 1, 1997:
   The post-retirement mortality table was changed to the 1983 Group Annuity Mortality Table.

2. Effective October 1, 1999:
   a) The actuarial value of assets reflects a "fresh start" at market value, beginning a new five-year phase-in of gains and losses.
   b) The actuarial cost method was changed from frozen entry age to entry age.

3. Effective October 1, 2006:
   a) The retirement decrement was changed to the earlier of age 55 or attainment of 22 years of service. This assumption has been changed to better reflect anticipated retirement behavior as a result of the change in plan provisions effective October 1, 2006.
   b) The percentage of active members assumed married was changed from 95% to 75%. This assumption was changed after a review of the marital status of recent retirees and current active members.
   c) On October 1, 2006, the Actuarial Value of Assets was changed to be equal to the Market Value of Assets, adjusted to reflect a five-year phase-in of the difference between the expected return on Actuarial Value of Assets and the actual investment return. The new method was applied retroactively so that five years of excess returns are smoothed in 2006. The prior Actuarial Value of Assets was equal to the Market Value of Assets adjusted to reflect a five-year phase-in of the net investment gain or loss.
   d) It is assumed that members who enter the DROP on or after October 1, 2006 will participate in the DROP for eight years. Therefore, the COLA payment to these members will be deferred eight years.

4. Effective October 1, 2010:
   a) Age and service based retirement rates were added for members with less than ten years of service as of September 30, 2011.

5. Effective October 1, 2012:
   a) Age and service based retirement rates were updated to reflect the passage of Ordinance No. O-2013-18.

6. Effective October 1, 2015:

a) Retirement rates were revised to evaluate the impact of the change in eligibility for normal retirement for members not vested on September 30, 2011 as a result of Ordinance Change effective September 2015.

b) A pre-funding method was adopted for anticipated Supplemental Distribution payments. To estimate the future Supplemental Distributions, 1,000 100-year scenarios of returns were randomly generated based on the plan's capital market assumptions and asset allocations. Based on these return scenarios and the plan's projected liabilities for the closed employee group eligible for the supplemental distributions and the plan's projected assets, an estimate of distributions and the present value of these distributions under each scenario is determined. The median present value of the 1,000 scenarios is used to estimate the increase in the plan's unfunded liability to fund all future supplemental distributions. This process will be replicated in future actuarial valuations to determine any unfunded liability associated with future supplemental distributions.

c) The amortization period for all future changes in the unfunded liability will be a closed 20 year period.

*** Note: Assumption and Method changes that have first been reflected in this valuation are shown in bold print.**

1. Monthly Accrued Benefit

For members who are eligible to retire as of September 30, 2011:

- 3% of average monthly earnings multiplied by service to 20 years plus 4% multiplied by service over 20 years with a maximum of 80% of average monthly earnings. The full 80% is earned at 22 years of service (resulting in a 12% of earnings increase in benefit at the moment the member attains 22 years of service).

For members who are not eligible to retire as of September 30, 2011:

- The sum of the following, not to exceed 80% of average monthly earnings:
  - 3.3% of average monthly earnings multiplied by service earned up to September 30, 2011.
  - 3.0% of average monthly earnings multiplied by service earned on or after October 1, 2011.

2. Average Monthly Earnings

For benefits accrued prior to October 1, 2011:

- The average of the highest three consecutive years of compensation prior to retirement or termination. Earnings include basic annual wages including regular longevity raises and overtime up to 400 hours per year, but not including amounts for unused sick time or unused vacation time paid at retirement or termination.

For benefits accrued on or after October 1, 2011:

- The average of the highest five consecutive years of compensation prior to retirement or termination. Earnings shall include basic annual wages, longevity pay, and assignment pay, but not including overtime pay, payments for accrued holiday time, payments for accrued blood time, annual “cash-out” payments for accrued vacation time, payments for accrued compensatory time, and payments for unused sick time or for unused vacation time which is paid upon retirement or termination.

3. Normal Retirement Age and Benefit

- **Eligibility:**
  - For a member with 10 or more years of creditable service as of September 30, 2011:
    - Age 50, or
    - Any age upon attainment of 22 years of service
  - For a member with less than 10 years of creditable service as of September 30, 2011:
    - Age 55 with 10 years of service, or
    - Any age upon attainment of 25 years of service
- **Amount:** Monthly Accrued Benefit
- **Form of Payment:** Life annuity with ten years certain, with a 50% survivor annuity payable to the spouse until death or remarriage

4. Disability Retirement Age and Benefit

- **Condition**

  For a service connected disability benefit, the member must become totally and permanently disabled in the line of duty and must have applied for Social Security disability benefits as well as worker's compensation benefits, if applicable;

  For a non-service connected disability benefit, the member must become totally and permanently disabled, must have at least five years of service, and must have applied for Social Security disability benefits as well as worker's compensation benefits, if applicable.

- **Amount**

For a service connected disability benefit:

Greater of monthly accrued benefit or 50% of earnings at the time of determination of disability.

For a non-service connected disability benefit:

- For members who become disabled prior to October 1, 2011:
  - 2½% of average monthly earnings multiplied by service, with a minimum benefit of 25% of earnings at the time of determination of disability. The benefit will be offset by any worker's compensation, Social Security, pension, or similar benefit payable to the member or to his dependents. Upon attainment of age 65, the Social Security offset will cease and, upon attainment of age 50, the benefit will be recomputed as a normal retirement benefit with consideration of service granted for the period of time that the member was receiving a disability retirement benefit.

- For members who become disabled on or after to October 1, 2011:
  - 3% of average monthly earnings multiplied by service, with a minimum benefit of 25% of earnings at the time of determination of disability. The benefit will be offset by any worker's compensation, Social Security, pension, or similar benefit payable to the member or to his dependents. Upon attainment of age 65, the Social Security offset will cease and, upon attainment of age 55, the benefit will be recomputed as a normal retirement benefit with consideration of service granted for the period of time that the member was receiving a disability retirement benefit.

- **Form of Payment**

Ten year certain and Life annuity, with a 50% survivor annuity payable to the spouse until death or remarriage. In the case of a member who dies prior to age 50 (or 55) while receiving a non-service connected disability, a 100% survivor annuity is payable to the spouse until death or remarriage.

5. **Withdrawal Retirement Age and Benefit**

- **Age:** Any age with at least ten years of service
- **Amount:** Monthly Accrued Benefit. If participant was has at least ten years of service prior to October 1, 2011, benefit is payable at age 50. Otherwise, benefit accrued as of September 30, 2011 is payable at age 50 and benefit accrued after that date is payable at age 55.
- **Form of Payment:** Life annuity with ten years certain, with a 50% survivor annuity payable to the spouse until death or remarriage if the member dies after payment has begun. A member may elect to receive his contributions in lieu of a withdrawal retirement benefit.

6. **Death Benefits**

- **Service connected death benefit:** 50% of earnings at the date of death payable as a monthly life and ten years certain benefit to the spouse until death or remarriage or to surviving children until the youngest child reaches age 18.

- **Non-service connected death benefit:** 25% of earnings at the date of death payable as a monthly life and ten years certain benefit to the spouse until death or remarriage or to surviving children until the youngest child reaches age 18.

7. **Employee Contributions**

8.00% of compensation effective the first full pay period on or after May 1, 2013. Employees electing Reformed Planned Retirement Benefit Option 2 contribute 0.5% of compensation.

8. **Refund of Employee Contributions**

If a member's service is terminated prior to his becoming eligible for a withdrawal retirement benefit, then his contributions are returned to him without interest.

9. Police Officers' Deferred Retirement Option Plan (DROP)

Prior to October 1, 2011, a participant may enter the DROP upon attainment of normal retirement age. When a member enters the DROP, his Monthly Accrued Benefit is frozen based on his average monthly earnings and service at that time and his Monthly Accrued Benefit is paid into his DROP account. Upon termination of employment, but not more than eight years after entry into the DROP, the balance in the member's DROP account, including interest, is payable to him and he also begins to receive his frozen Monthly Accrued Benefit.

A member hired on or before September 30, 2009 who elects to enter the DROP plan has the option to receive a rate of return on his or her DROP account that is equal to the assumed rate of investment return on fund assets of 8% per year. For members hired on or after October 1, 2009, his or her DROP account shall earn interest at the rate of six percent (6%) per year. In the event the Plan earnings exceed six percent (6%) per year, the earnings in excess of six percent (6%) up to and including twelve percent (12%) per year shall offset the City’s cost of maintaining the DROP program. Earnings in excess of twelve percent (12%) per year shall be equally divided between the DROP participant and the City.

A participant who does not enter the DROP prior to October 1, 2011 shall not be eligible to participate in the DROP, unless the member was eligible to retire as of September 30, 2011.

10. Reformed Planned Retirement Benefit

Effective September 16, 2015, the existing Planned Retirement Benefit program was replaced by the Reformed Planned Retirement Benefit (RPRB) program. In order to participate in the Reformed Planned Retirement Benefit a member must submit in writing declaring their intent to participate in the program at any time on or after reaching the member's normal retirement date. For members currently participating in the Planned Retirement Benefit in effect prior to September 16, 2015, an irrevocable election must be made no later than November 16, 2015 on one of the RPRB options described below.

- RPRB Option 1:
  - i. Employee contributions shall be 8.0% of earnings
  - ii. Monthly Benefit is calculated under one of the following options:
    1. As if the member retired when he/she makes the election to participate
    2. As if the member retired when service terminates using service and pay earned after entering the RPRB program.
  - iii. Lump Sum Benefit is calculated under one of the following options:
    1. Based on number of years worked after electing to participate
    2. No lump sum
  - iv. Members may choose any combination of lump sum payments or a larger annuity by dividing the years worked after electing to participate in the RPRB program.
  - v. Any lump sum payment must be paid out to the member at termination and cannot be left in the plan.
  - vi. The crediting rate applicable to any lump sum payment shall be calculated in arrears equal to 100% of the first 4% of plan earnings plus 50% of plan earnings in excess of 6%, unless the System is 90% funded. If the System is at least 90% funded, the crediting rate will be based on the 100% of the first 4% of plan earnings plus 100% of plan earnings in excess of 6%. The member will not share in asset losses in those years where plan returns are negative.

- RPRB Option 2:
  - i. Employee contributions shall be 0.5% of earnings
  - ii. Monthly Benefit is calculated as if the member retired when he/she makes the election to participate
  - iii. Lump Sum Benefit is calculated based on number of years worked after electing to participate
  - iv. Lump Sum Benefit can be left in the plan after service termination.
  - v. The crediting rate applicable to any lump sum payment shall be calculated in arrears equal to the actual investment rate of return of the Retirement System. The member will share in asset losses in those years where plan returns are negative and asset gains when plan returns are greater than the assumed rate of return.

If a member is participating in the Planned Retirement Benefit as of October 7, 2015, the member must make an irrevocable election of one of the two options described above by November 16, 2015. If electing RPRB Option (2) the member will receive a refund equal to 7.5% of pay (8% minus 0.5%) for the time he/she participated in the Planned Retirement Benefit and were making 8% contributions. After electing RPRB Option (2) future contributions will be reduced from 8% to 0.5%.

A member's written election to participate in the RPRB will indicate the maximum number of years they may participate in the RPRB and the latest employment termination date. The maximum RPRB period is eight years if the member was vested on September 30, 2011. If a members was not vested on September 30, 2011 the maximum RPRB period is five years.

If a member elects to participate in the RPRB, service with the City cannot exceed 30 years. However, if electing to participate in the RPRB a member may terminate employment any time prior to reaching the earlier of 30 years of service or the maximum period of RPRB participation.

11. Cost-of-Living Adjustment

For benefits accrued prior to October 1, 2011:

- Any retiree's whose benefit commences on or after April 1, 1987 and any beneficiary of such retiree will receive a 2% annual increase in benefit payments commencing three years after the retiree's benefit payments have begun.
- For participants who enter the DROP on or after June 7, 2006, cost-of-living adjustments do not occur while the member participates in the DROP. Adjustments commence the later of the date the participant leaves the DROP and three years after entry into the DROP.

For benefits accrued on or after October 1, 2011, there shall be no annual increase in retirement benefits.

12. Supplemental Pension Check

For retirees, surviving spouses, and other beneficiaries who reached their normal retirement date or entered the DROP on or before September 30, 2011:

- If the actual asset return of the trust exceeds 8% for any fiscal year, the excess market value return (up to 2%) will be allocated to retirees and beneficiaries based on service at retirement.

For retirees, surviving spouses, and other beneficiaries who reached their normal retirement date or entered the DROP after September 30, 2011, no supplemental pension check will be paid.

The following plan amendments have been adopted within the past few years:

1. Effective January 1, 1991:

    a) The Police Officers' Deferred Retirement Option Plan (DROP) was established;
    b) The benefit formula was changed from 2½% of average monthly earnings multiplied by service up to 30 years to 3% of average monthly earnings multiplied by service up to 27 years; and
    c) The normal retirement age was changed from age 50 to the earlier of age 50 or the attainment of 25 years of service.

2. Effective January 2000:

    The excess (up to 2%) of the actual asset return over the assumed actuarial return each September 30 would be allocated the following January to retirees and beneficiaries based on service at retirement.

3. Approved April 2001:

    a) Monies received as a result of Chapter 185, Florida Statutes, will no longer be allocated to this System but to a separate shares plan (effective in the fiscal year beginning October 1, 2001).
    b) The benefit formula was changed from 3% of average monthly earnings multiplied by all service up to 27 years to a 3% rate for service up to 20 years and 4% rate for service over 20 years, with a maximum of 88% of average monthly earnings.
    c) Member contribution rate was changed from 7% to 8% of earnings.
    d) A minimum service-incurred disability benefit equal to the monthly accrued benefit was added. In addition, this benefit will no longer be offset by worker's compensation, Social Security or other similar benefits.

4. Approved February 2002:

    Police officers at least age 41 and with between 21 and 25 years of service by September 30, 2002 were permitted to retire and granted service up to 4 years to be credited up to a minimum of 25 years and a maximum of 27 years, provided they paid an amount representing their own estimated contributions for the grant of service.

5. Effective October 1, 2004:

    Normal form of benefit was changed to life annuity with ten years certain, 50% joint and survivor, in compliance with Chapter 99-1 Florida Statutes.

6. Effective October 1, 2006:

   a) The maximum pension benefit was reduced from 88% to 80% of final average salary. The maximum is accrued upon attainment of 22 years of service.
   b) Members with 22 years of service are permitted to enter the DROP with a retirement benefit of 80% of final average salary.
   c) Maximum DROP participation is eight years for members who enter the DROP with 22 years of service on or after October 1, 2006. However, the maximum City service (including service while in the DROP) is limited to 30 years.
   d) Overtime hours were capped at 400 hours per year.
   e) Member contributions were increased from 8.0% to 8.5% of pay.
   f) For participants entering the DROP on or after October 1, 2006, Cost-of-living adjustments do not occur while the member participates in the DROP. Adjustments commence the later of the date the participant leaves the DROP and three years after entry into the DROP.
   g) The life and 10-year certain benefit as the normal form of payment is retroactive to October 1, 2000.
   h) State tax premium distributions (185 Monies) after October 1, 2006 will be used as an offset to the City contribution requirements, not to exceed the annual cost of the benefit improvements. Any future State contributions in excess of the annual cost of the benefit improvements will be accumulated and used for future benefit improvements. Also, the accumulated State excess contribution of $81,376 as of September 30, 2006 will be used to offset the cost of the proposed benefit improvements.

7. Effective October 1, 2009:

   a) Member contributions were increased from 8.5% to 9% of pay.
   b) For members hired on or after October 1, 2009, his or her DROP account shall earn interest at the rate of six percent (6%) per year. In the event the Plan earnings exceed six percent (6%) per year, the earnings in excess of six percent (6%) up to and including twelve percent (12%) per year shall offset the City's cost of maintaining the DROP program. Earnings in excess of twelve percent (12%) per year shall be equally divided between the DROP participant and the City.

8. Effective October 1, 2010:

    a) Member contributions will be increased from 9% to 9.25% of pay.

9. Effective October 1, 2011:

    a) The benefit structure in effect on September 30, 2011 is frozen at midnight. All members will be vested in benefits accrued to date and payable under the terms and conditions of plan provisions then in effect. Except for members eligible to retire on September 30, 2011, effective October 1, 2011, all members are subject to a new benefit structure applicable to future service. None of the benefit changes will apply to members eligible to retire on September 30, 2011.

        i. Under the benefit structure effective October 1, 2011 Average Final Compensation means the arithmetic average of earnings for the 60 highest consecutive months of the last 120 months of credited service prior to retirement, termination or death.

        ii. Under the benefit structure effective October 1, 2011 earnings shall be the sum of the following amounts actually paid to a member: Salary, longevity pay and assignment pay. Earnings shall not include overtime pay, payments for accrued holiday time, payments for accrued blood time, annual cash-out payments for accrued vacation time, payments for accrued compensatory time, and payments for unused sick time or for unused vacation time which is paid upon retirement or termination.

        iii. A member hired prior to October 1, 2011 with less than ten years of credited service as of September 30, 2011 and a member hired on or after October 1, 2011 may retire on the day he or she attains age 55 and completes ten years of creditable service or on the day he or she attains age 52 and competes 25 years of creditable service. A member with 10 or more years of creditable service as of September 30, 2011 shall retain his or her current normal retirement date.

        iv. The monthly retirement benefit shall equal 2.0% of average monthly earnings times years of service earned on or after October 1, 2011. If the member retires before attaining age 62, an additional benefit equal to 0.5% of average monthly earnings times continuous service on and after October 1, 2011 shall be paid to age 62.

        v. A member who does not enter the DROP prior to October 1, 2011 shall not be eligible to enter the DROP, unless the member was eligible to retire as of September 30, 2011.

        vi. Members of the System shall contribute 9.25% of their earnings.

vii. There shall be no annual increase (COLA) in retirement benefits under the benefit structure effective October 1, 2011.

viii. The supplemental pension distribution shall be payable only to retirees (and surviving spouses and other beneficiaries thereof) who reach their normal retirement or enter the DROP on or before September 30, 2011.

10. Effective October 1, 2012:

a) The multiplier increased to 3.3% for service up to September 30, 2011 for vested members on September 30, 2011 and 3% for all members for service after September 30, 2011.
b) The Planned Retirement Benefit was added retroactive to October 1, 2011.
c) Employee contributions were reduced from 9.25% to 8% of pay effective the first full pay period on or after May 1, 2013.

11. **Effective September, 2015:**

a) Remove "And" language from the requirement of age of 52 and 25 years of service for a normal retirement for members not vested on September 30, 2011. Those officers would be eligible for normal retirement at the age 55 and the completion of 10 years of service or the completion of 25 years of credited service, regardless of age.
b) Multiplier increasing to 3.3% for service up to September 30, 2011 for members not vested on September 30, 2011.
c) Reformed Planned Retirement Benefit (RPRB).

i. Allow employees, upon entering Reformed Planned Retirement, to elect one of the following two (2) options. The election shall be irrevocable:

1) While participating in Reformed Planned Retirement, contribute 8% of earnings as that term is defined in Section 33.126 of the City Code until termination of employment and upon termination continue to have the three options currently allowed under Planned Retirement and set forth in Section 33.128(G)(4) of the City Code; or
2) While participating in Reformed Planned Retirement, contribute 0.5% of earnings as that term is defined in Section 33.126 of the City Code and upon termination only be provided with the first option set forth in Section 33.128(G)(4) of the City Code, which is taking a lump sum payment that would be valued based on the number of years the employee worked after electing to participate in Planned Retirement.

- **For employees who choose this option, any Plan earnings/losses calculated into the employee's lump sum payment shall be based on the Plan's actual investment rate of return.**

ii. An employee may enter Reformed Planned Retirement at any time on or after reaching his/her normal retirement date.

iii. Employees currently in Planned Retirement will be given 60 days from the implementation of the Reformed Planned Retirement to make their election. If they elect the new option, they will receive a refund of their contribution into Planned Retirement (7.5%).

iv. Members electing to participate in Reformed Planned Retirement shall not exceed 30 years of service with the City including any time participating in Planned Retirement, Reformed Planned Retirement or a combination of both.

v. Participation in Planned Retirement, Reformed Planned Retirement or a combination of both shall be limited to 8 years for those with 10 or more years of service as of September 30, 2011 and 5 years for those with less than 10 years of creditable service as of September 30, 2011.

d) If a member terminates with less than 10 years of service, the member will receive a refund of contributions without interest, instead of the current 3% interest.

e) Police officers shall become members of the Retirement System and begin contributing into the Retirement System upon their hire (currently they begin to contribute upon completion of probation).

*** Note: Plan changes that have first been reflected in this valuation are shown in bold print.**