

CITY OF PALM BEACH GARDENS  
GENERAL EMPLOYEES'  
PENSION PLAN

ACTUARIAL VALUATION  
AS OF OCTOBER 1, 2017

DETERMINES THE CONTRIBUTION  
FOR THE 2018/19 FISCAL YEAR



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February 24, 2018

## Introduction

This report presents the results of the October 1, 2017 actuarial valuation of the City of Palm Beach Gardens General Employees' Pension Plan. The report is based on the participant data and asset information provided by the pension plan administrator and, except for a cursory review for reasonableness including a comparison to the data provided for the previous valuation, we have not attempted to verify the accuracy of this information.

The primary purpose of this report is to provide a summary of the funded status of the plan as of October 1, 2017 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2018/19 plan year. In addition, this report provides a projection of the long-term funding requirements of the plan, statistical information concerning the assets held in the trust, statistical information concerning the participant population, and a summary of any recent plan changes.

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an estimate of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, if any of the assumptions is not completely realized, then the cost shown in this report will change in the future.

Certain assumptions play a bigger role than others in determining the cost of the post-employment pension benefits. In some cases, relatively small changes in a particular assumption can have a dramatic impact on the anticipated cost of benefits. Although a thorough analysis of the impact of such changes is beyond the scope of this report, Table I-B illustrates the impact that alternative long-term investment returns would have on the normal cost rate.

## Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the 2018/19 plan year. The minimum required contribution is \$204,525, which equates to 110.08% of covered payroll. The minimum required contribution increased by \$22,327 from the prior valuation.

The normal cost rate is 114.76%, which is 10.40% higher than the rate that was developed in the prior valuation. Table I-C provides a breakdown of the sources of change in the normal cost rate. Significantly, the rate decreased by 0.55% of payroll due to investment gains, increased by 4.15% of payroll due to demographic experience, and increased by another 6.80% of payroll due to the assumption change that is described below. Although the market value of assets earned 13.74% during the 2016/17 plan year, the actuarial value of assets is based on a four-year





phase-in of the net investment appreciation. On this basis, the actuarial value of assets only earned 7.55% during the 2016/17 plan year, whereas a 7.25% annual investment return was required to maintain a stable contribution rate.

Chapter 112, Florida Statutes, sets forth the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the City must contribute an amount equal to the annual normal cost of the plan plus an adjustment as necessary to reflect interest on any delayed payment of the contribution beyond the valuation date. On this basis, the City's 2018/19 minimum required contribution will be equal to \$204,525.

Based on the current assets, participant data, and actuarial assumptions and methods that are used to value the plan, the present-day value of the total long-term funding requirement is \$3,962,314. As illustrated in Table I-A, current assets are sufficient to cover \$2,481,966 of this amount, the employer's 2017/18 expected contribution will cover \$182,198 of this amount, the employer's 2018/19 expected contribution will cover \$204,525 of this amount, and future employee contributions are expected to cover \$73,551 of this amount, leaving \$1,020,074 to be covered by future employer funding beyond the 2018/19 plan year. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

## Advance Employer Contribution

The City has made contributions to the plan in excess of the minimum amount that was required to be contributed pursuant to Chapter 112. In this report, the excess contributions are referred to as an "advance employer contribution." As of October 1, 2017, the advance employer contribution is \$97,854, which is equal to the prior year advance contribution of \$26,158 plus \$71,336 of actual City contributions in excess of the minimum required contribution for the 2016/17 fiscal year, as shown in Table II-F.

The City may apply all or any portion of the advance employer contribution towards the minimum required contribution for the 2017/18 plan year or for any later plan year. The minimum required contribution for that plan year will be reduced dollar-for-dollar by the amount of the advance employer contribution that is applied in this manner.

Alternatively, at any time, the City may apply all or any portion of the advance employer contribution as an *extra* contribution in excess of the minimum required contribution. In this case, the immediate application of the entire balance of the advance employer contribution as of October 1, 2017 would reduce the normal cost rate to 106.78% of payroll and would reduce the minimum required contribution for the 2018/19 plan year to \$189,411.

## Contents of the Report

Tables I-D through I-G provide a detailed breakdown of various liability amounts by type of benefit and by participant group. Tables II-A through II-F provide information concerning the assets of the trust fund. Specifically, Table II-A shows the development of the actuarial value of assets, which is based on a four-year phase-in of the net investment appreciation in order to provide a more stable and predictable contribution rate for the employer. Tables III-A through III-G provide statistical information concerning the plan's participant population. In particular, Table III-G gives a 10-year projection of the cash that is expected to be required from the trust fund in order to pay benefits to the current



group of participants. Finally, Tables IV-A through V-B provide a summary of the actuarial assumptions and methods that are used to value the plan's benefits and of the relevant plan provisions as of October 1, 2017, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

### Accumulated Employee Contributions

Note that an employee contribution history was only available since September 30, 2004. Therefore, this report does not show the balance of accumulated employee contributions.

### Assumption Change

The assumed interest (or discount) rate was decreased from 7.25% per annum to 7.00% per annum to reflect lowered expected investment earnings in the future. This change increased the normal cost rate by 6.80% of payroll.

### Certification

This actuarial valuation was prepared 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 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 change in plan costs or required contribution rates have been taken into account in the valuation.

For the firm,



Charles T. Carr  
Consulting Actuary  
Southern Actuarial Services Company, Inc.

Enrolled Actuary No. 17-04927

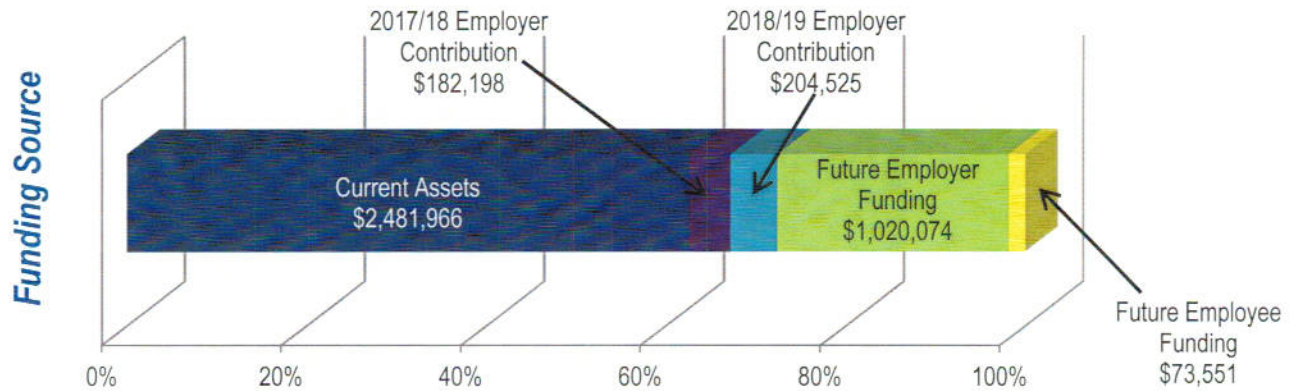
*The individual above is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.*





## Minimum Required Contribution

Table I-A



### For the 2018/19 Plan Year

Present Value of Future Benefits	\$3,809,917
Present Value of Future Administrative Expenses	\$152,397
Actuarial Value of Assets	(\$2,481,966)
Present Value of Future Employee Contributions	(\$73,551)
Present Value of Future Normal Costs	\$1,406,797

Present Value of Future Payroll	÷ \$1,225,858
Normal Cost Rate	= 114.7602%
Expected Payroll	x \$176,946

Normal Cost	\$203,064
Adjustment to Reflect Beginning-of-Year Employer Contribution	\$0
Additional Interest Adjustment Due to the One-Year Delay	\$1,461

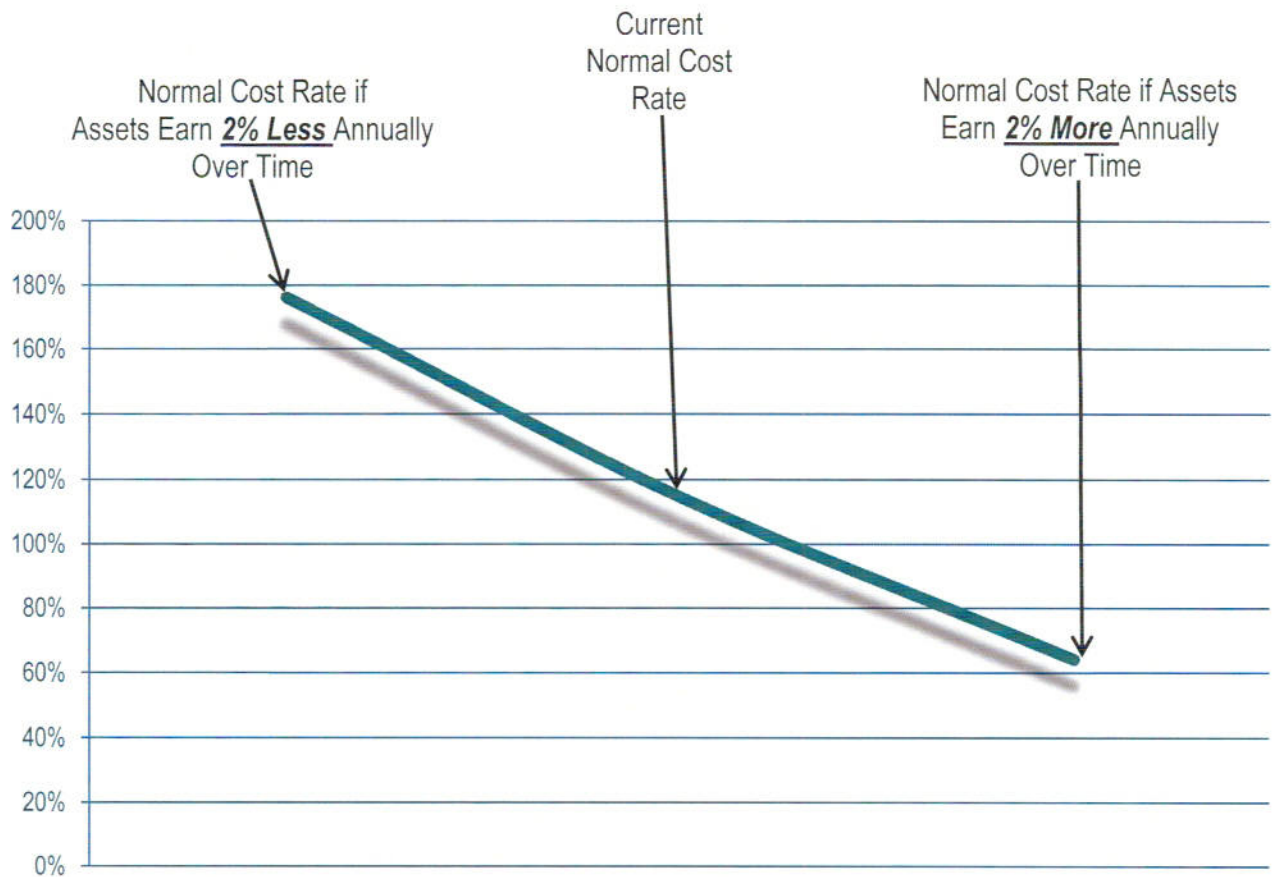
**Minimum Required Contribution for the 2018/19 Plan Year** **\$204,525**

Expected Payroll for the 2018/19 Plan Year	÷ \$185,793
Minimum Required Contribution as a % of Payroll	110.08%



Sensitivity Analysis

Table I-B



*The line above illustrates the sensitivity of the normal cost rate to changes in the long-term investment return.*



Gain and Loss Analysis

Table I-C

Previous normal cost rate	104.36%
Increase (decrease) due to investment gains and losses	-0.55%
Increase (decrease) due to demographic experience	4.15%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	6.80%
Increase (decrease) due to actuarial method changes	0.00%
Current normal cost rate	<u>114.76%</u>





## Present Value of Future Benefits

Table I-D

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<i><u>Actively Employed Participants</u></i>			
Retirement benefits	\$1,369,233	\$1,369,233	\$1,426,855
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$1,369,233</b>	<b>\$1,369,233</b>	<b>\$1,426,855</b>
<i><u>Deferred Vested Participants</u></i>			
Retirement benefits	\$334,163	\$334,163	\$343,559
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$334,163</b>	<b>\$334,163</b>	<b>\$343,559</b>
<i><u>Due a Refund of Contributions</u></i>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<i><u>Deferred Beneficiaries</u></i>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<i><u>Retired Participants</u></i>			
Service retirements	\$1,554,561	\$1,554,561	\$1,580,133
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$452,183	\$452,183	\$459,370
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$2,006,744</b>	<b>\$2,006,744</b>	<b>\$2,039,503</b>
<i><u>Grand Total</u></i>	<b><u>\$3,710,140</u></b>	<b><u>\$3,710,140</u></b>	<b><u>\$3,809,917</u></b>
Present Value of Future Payroll	\$1,207,989	\$1,207,989	\$1,225,858
Present Value of Future Employee Contribs.	\$72,479	\$72,479	\$73,551
Present Value of Future Employer Contribs.	\$1,304,101	\$1,304,101	\$1,406,797



## Present Value of Accrued Benefits

Table I-E

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$818,739	\$818,739	\$846,740
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$818,739</b>	<b>\$818,739</b>	<b>\$846,740</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$334,163	\$334,163	\$343,559
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$334,163</b>	<b>\$334,163</b>	<b>\$343,559</b>
<u>Due a Refund of Contributions</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$1,554,561	\$1,554,561	\$1,580,133
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$452,183	\$452,183	\$459,370
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$2,006,744</b>	<b>\$2,006,744</b>	<b>\$2,039,503</b>
<u>Grand Total</u>	<b><u>\$3,159,646</u></b>	<b><u>\$3,159,646</u></b>	<b><u>\$3,229,802</u></b>
<u>Funded Percentage</u>	82.76%	82.76%	80.96%

(Note: Funded percentage is equal to the ratio of the usable portion of the market value of assets divided by the present value of accrued benefits.)





## Present Value of Vested Benefits

Table I-F

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$818,739	\$818,739	\$846,740
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$818,739</b>	<b>\$818,739</b>	<b>\$846,740</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$334,163	\$334,163	\$343,559
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$334,163</b>	<b>\$334,163</b>	<b>\$343,559</b>
<u>Due a Refund of Contributions</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$1,554,561	\$1,554,561	\$1,580,133
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$452,183	\$452,183	\$459,370
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$2,006,744</b>	<b>\$2,006,744</b>	<b>\$2,039,503</b>
<u>Grand Total</u>	<b><u>\$3,159,646</u></b>	<b><u>\$3,159,646</u></b>	<b><u>\$3,229,802</u></b>



## Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$1,186,881	\$1,186,881	\$1,227,667
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$1,186,881</b>	<b>\$1,186,881</b>	<b>\$1,227,667</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$334,163	\$334,163	\$343,559
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$334,163</b>	<b>\$334,163</b>	<b>\$343,559</b>
<u>Due a Refund of Contributions</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$1,554,561	\$1,554,561	\$1,580,133
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$452,183	\$452,183	\$459,370
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$2,006,744</b>	<b>\$2,006,744</b>	<b>\$2,039,503</b>
<u>Grand Total</u>	<b><u>\$3,527,788</u></b>	<b><u>\$3,527,788</u></b>	<b><u>\$3,610,729</u></b>



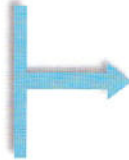


## Actuarial Value of Assets

Table II-A

Market Value Rate of Return

For the 2013/14 plan year	8.68%
For the 2014/15 plan year	0.08%
For the 2015/16 plan year	8.15%
For the 2016/17 plan year	13.74%



Average return for the preceding four years  
7.55%

Actuarial Value of Assets as of October 1, 2016	\$2,362,832
Plus contributions for the 2016/17 plan year	\$263,645
Minus benefit payments and administrative expenses for the 2016/17 plan year	(\$249,451)
Minus advance employer contribution	(\$71,336)

Adjustment for interest at the average rate shown above,  
but restricted to an amount that keeps the actuarial value  
of assets within an 80%-120% corridor of the market value

\$176,276

**Actuarial Value of Assets as of October 1, 2017**

**\$2,481,966**

Historical Actuarial Value of Assets

October 1, 2008	\$2,823,246
October 1, 2009	\$2,501,664
October 1, 2010	\$2,288,593
October 1, 2011	\$2,081,483
October 1, 2012	\$2,059,833
October 1, 2013	\$2,117,422
October 1, 2014	\$2,197,889
October 1, 2015	\$2,294,727
October 1, 2016	\$2,362,832
October 1, 2017	\$2,481,966

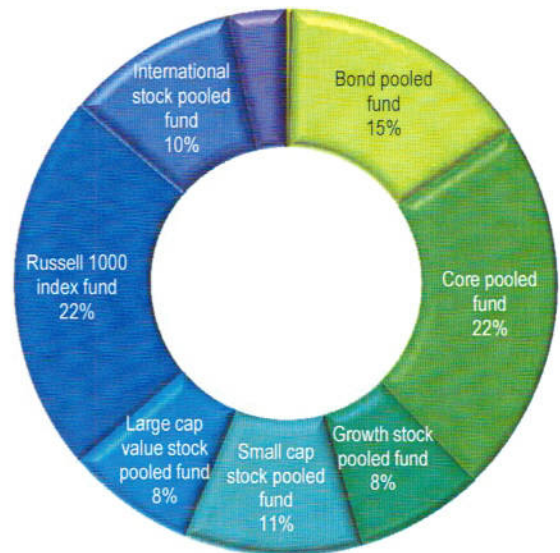


## Market Value of Assets

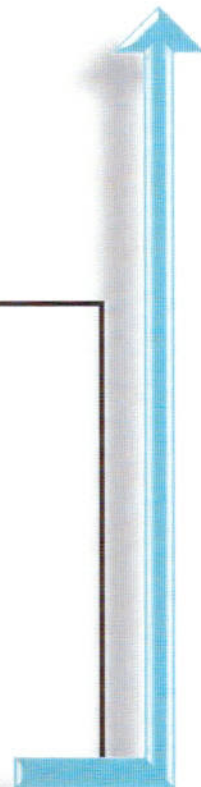
Table II-B

As of October 1, 2017

<b>Market Value of Assets</b>	<b><u>\$2,614,946</u></b>
Cash	\$10,095
Bond pooled fund	\$396,244
Core pooled fund	\$583,009
Growth stock pooled fund	\$201,908
Small cap stock pooled fund	\$277,623
Large cap value stock pooled fund	\$199,384
Russell 1000 index fund	\$588,056
International stock pooled fund	\$267,528
Employer contribution receivable	\$91,099

**Historical Market Value of Assets**

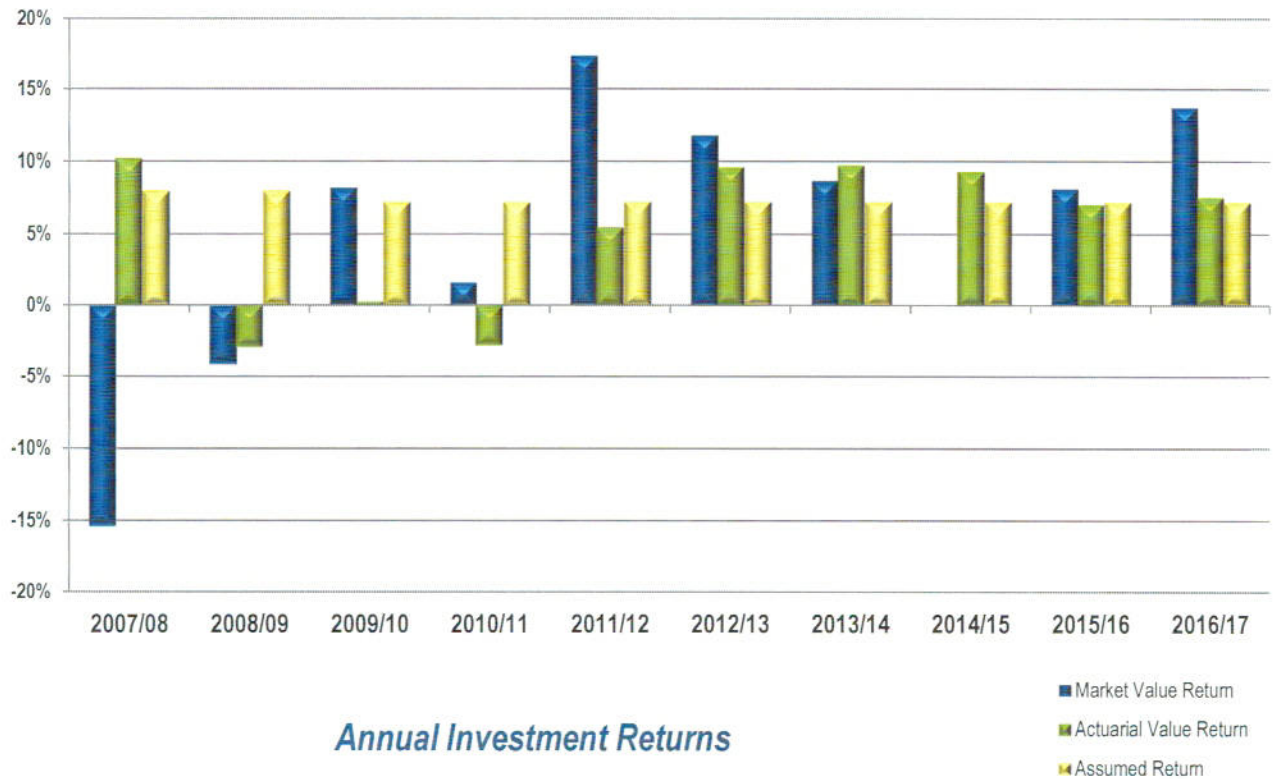
October 1, 2008	\$2,422,411
October 1, 2009	\$2,084,720
October 1, 2010	\$2,027,219
October 1, 2011	\$1,914,292
October 1, 2012	\$2,103,061
October 1, 2013	\$2,209,462
October 1, 2014	\$2,276,084
October 1, 2015	\$2,205,007
October 1, 2016	\$2,285,725
October 1, 2017	\$2,614,946





## Investment Return

Table II-C



Plan	Market Value	Actuarial Value	Assumed
Year	Return	Return	Return
2007/08	-15.35%	10.20%	8.00%
2008/09	-4.11%	-2.90%	8.00%
2009/10	8.22%	0.28%	7.25%
2010/11	1.65%	-2.79%	7.25%
2011/12	17.37%	5.49%	7.25%
2012/13	11.82%	9.63%	7.25%
2013/14	8.68%	9.74%	7.25%
2014/15	0.08%	9.31%	7.25%
2015/16	8.15%	7.09%	7.25%
2016/17	13.74%	7.55%	7.25%
10yr. Avg.	4.60%	5.24%	7.40%



## Asset Reconciliation

## Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of October 1, 2016	\$2,285,725	\$2,362,832
<i>Increases Due To:</i>		
Employer Contributions	\$253,534	\$253,534
Employee Contributions	\$10,111	\$10,111
Service Purchase Contributions	\$0	\$0
Total Contributions	<u>\$263,645</u>	<u>\$263,645</u>
Interest and Dividends	\$0	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	<u>\$315,027</u>	
Total Investment Income	\$315,027	\$176,276
Other Income	\$0	
Total Income	<u>\$578,672</u>	<u>\$439,921</u>
<i>Decreases Due To:</i>		
Monthly Benefit Payments	(\$237,655)	(\$237,655)
Refund of Employee Contributions	\$0	\$0
Total Benefit Payments	<u>(\$237,655)</u>	<u>(\$237,655)</u>
Investment Expenses	\$0	
Administrative Expenses	(\$11,796)	(\$11,796)
Advance Employer Contribution		(\$71,336)
Total Expenses	<u>(\$249,451)</u>	<u>(\$320,787)</u>
As of October 1, 2017	<u><u>\$2,614,946</u></u>	<u><u>\$2,481,966</u></u>



## Historical Trust Fund Detail

Table II-E

Income

Plan Year	Employer Contribs.	Employee Contribs.	Service Purchase Contribs.	Interest / Dividends	Realized Gains / Losses	Unrealized Gains / Losses	Other Income
2007/08	\$91,488	\$8,996	\$0	\$69,277	-\$26,382	-\$475,050	\$419
2008/09	\$60,503	\$8,970	\$0	\$56,266	-\$272,886	\$133,400	\$0
2009/10	\$77,753	\$9,658	\$0	\$0	\$0	\$162,321	\$0
2010/11	\$125,273	\$10,223	\$0	\$0	\$0	\$32,337	\$0
2011/12	\$130,810	\$9,713	\$0	\$0	\$0	\$320,989	\$0
2012/13	\$120,572	\$9,658	\$0	\$0	\$0	\$240,658	\$0
2013/14	\$120,572	\$9,540	\$0	\$0	\$0	\$186,524	\$0
2014/15	\$172,758	\$10,080	\$0	\$0	\$0	\$1,788	\$0
2015/16	\$146,187	\$9,976	\$0	\$0	\$0	\$175,749	\$0
2016/17	\$253,534	\$10,111	\$0	\$0	\$0	\$315,027	\$0

Expenses

Plan Year	Monthly Benefit Payments	Contrib. Refunds	Admin. Expenses	Invest. Expenses
2007/08	\$296,477	\$0	\$12,780	\$26,325
2008/09	\$293,670	\$0	\$18,973	\$11,301
2009/10	\$293,361	\$0	\$13,872	\$0
2010/11	\$269,627	\$0	\$11,133	\$0
2011/12	\$262,249	\$0	\$10,494	\$0
2012/13	\$254,313	\$0	\$10,174	\$0
2013/14	\$244,528	\$0	\$5,486	\$0
2014/15	\$244,528	\$0	\$11,175	\$0
2015/16	\$240,519	\$0	\$10,675	\$0
2016/17	\$237,655	\$0	\$11,796	\$0

Other Actuarial Adjustments

Advance Employer Contribs.
\$0
\$0
\$0
\$0
\$0
\$0
\$0
\$30,143
-\$3,625
\$71,336

Note: Information was not available to separate the investment expenses from the investment income nor to separate the investment income by source after September 30, 2009.





## Other Reconciliations

Table II-F

*Advance Employer Contribution*

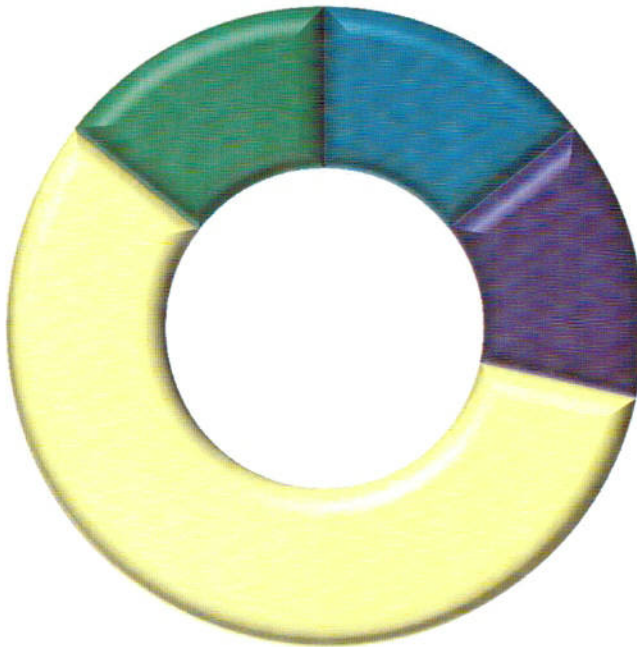
Advance Employer Contribution as of October 1, 2016	\$26,518
Additional Employer Contribution	\$253,534
Minimum Required Contribution	(\$182,198)
Net Increase in Advance Employer Contribution	\$71,336
Advance Employer Contribution as of October 1, 2017	<u>\$97,854</u>



## Summary of Participant Data

Table III-A

As of October 1, 2017

*Participant Distribution by Status*Actively Employed Participants

Active Participants	2
DROPPED Participants	0

Inactive Participants

Deferred Vested Participants	2
Due a Refund of Contributions	0
Deferred Beneficiaries	0

Participants Receiving a Benefit

Service Retirements	8
Disability Retirements	0
Beneficiaries Receiving	2

**Total Participants 14**Number of Participants Included in Prior Valuations

	<i>Active</i>	<i>DROP</i>	<i>Inactive</i>	<i>Retired</i>	<i>Total</i>
October 1, 2008	2	0	3	13	18
October 1, 2009	2	0	3	13	18
October 1, 2010	N/A	N/A	N/A	N/A	N/A
October 1, 2011	2	0	2	13	17
October 1, 2012	2	0	2	13	17
October 1, 2013	N/A	N/A	N/A	N/A	N/A
October 1, 2014	2	0	2	11	15
October 1, 2015	2	0	2	11	15
October 1, 2016	2	0	2	10	14
October 1, 2017	2	0	2	10	14



## Data Reconciliation

Table III-B

	<u>Active</u>	<u>DROP</u>	<u>Deferred Vested</u>	<u>Due a Refund</u>	<u>Def. Benef.</u>	<u>Service Retiree</u>	<u>Disabled Retiree</u>	<u>Benef. Rec'v.</u>	<u>Total</u>
<u>October 1, 2016</u>	2	0	2	0	0	8	0	2	14
<u>Change in Status</u>									
Re-employed									
Terminated									
Retired									
<u>Participation Ended</u>									
Transferred Out									
Cashed Out									
Died									
<u>Participation Began</u>									
Newly Hired									
Transferred In									
New Beneficiary									
<u>Other Adjustment</u>									
<u>October 1, 2017</u>	2	0	2	0	0	8	0	2	14



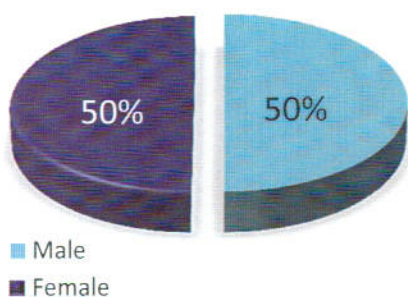


## Active Participant Data

## Table III-C

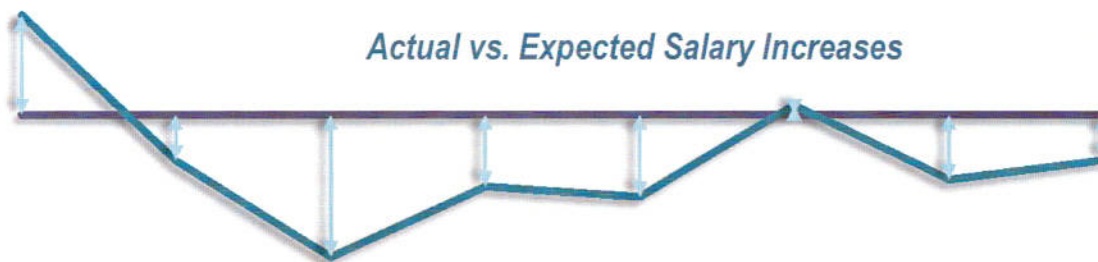
As of October 1, 2017

## Gender Mix



Average Age	54.0 years
Average Service	25.0 years
Total Annualized Compensation for the Prior Year	\$168,520
Total Expected Compensation for the Current Year	\$176,946
Average Increase in Compensation for the Prior Year	1.59%
Expected Increase in Compensation for the Current Year	5.00%

## Actual vs. Expected Salary Increases



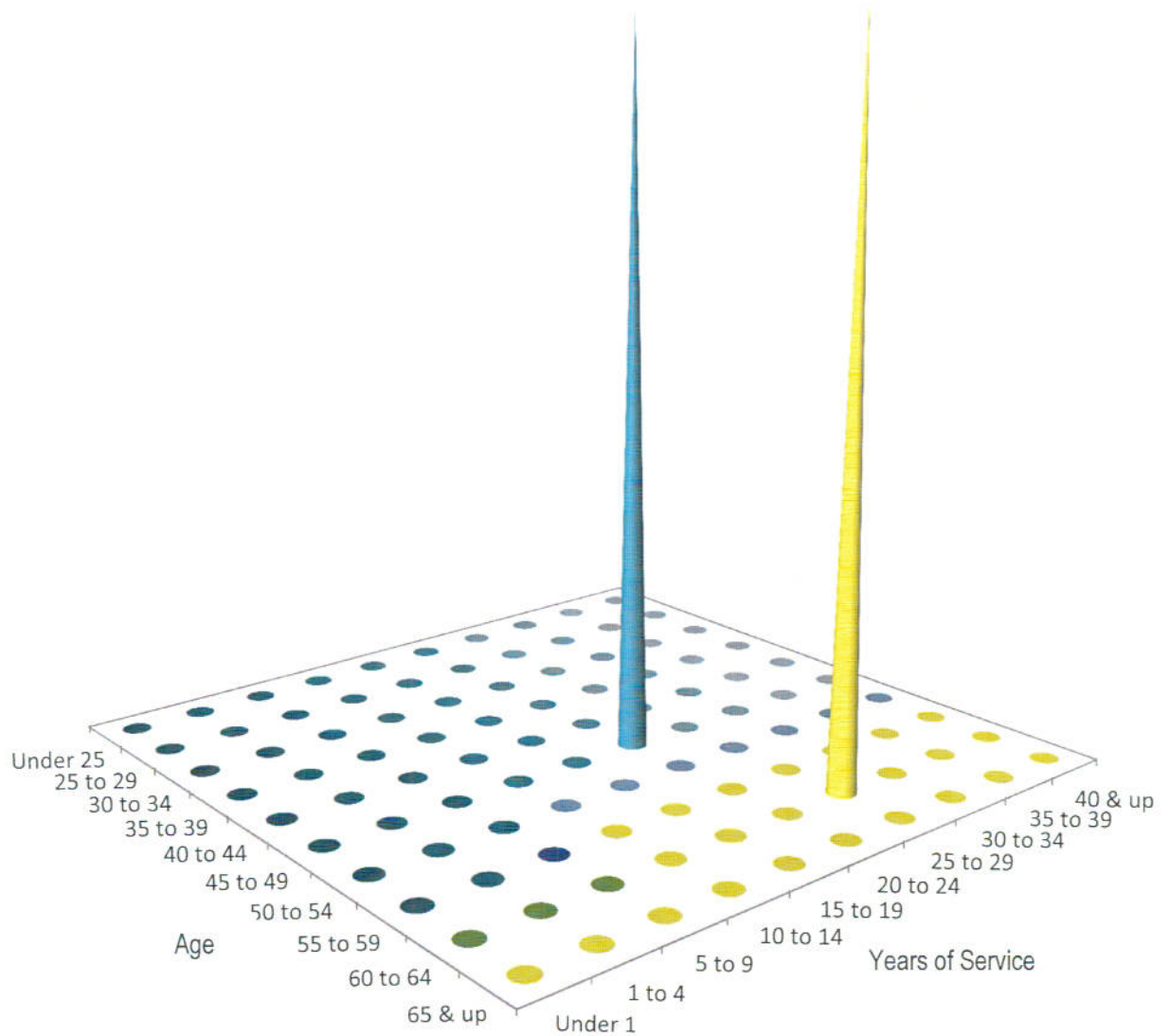
## Active Participant Statistics From Prior Valuations

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 2008	45.7	16.3	\$74,970	6.50%	14.60%
October 1, 2009	45.5	17.0	\$74,970	6.50%	0.00%
October 1, 2010	46.5	18.0	\$83,781	5.00%	12.51%
October 1, 2011	47.5	19.0	\$85,189	5.00%	1.57%
October 1, 2012	48.5	20.0	\$80,939	5.00%	-5.54%
October 1, 2013	49.5	21.0	\$80,600	5.00%	-0.36%
October 1, 2014	51.0	22.0	\$79,498	5.00%	-1.11%
October 1, 2015	52.0	23.0	\$84,003	5.00%	5.69%
October 1, 2016	53.0	24.0	\$83,134	5.00%	0.14%
October 1, 2017	54.0	25.0	\$84,260	5.00%	1.59%



# Active Age-Service Distribution

Table III-D



- ▲ *Eligible to retire*
- ▲ *May be eligible to retire*
- ▲ *Not eligible to retire*



Active Age-Service-Salary Table

Table III-E

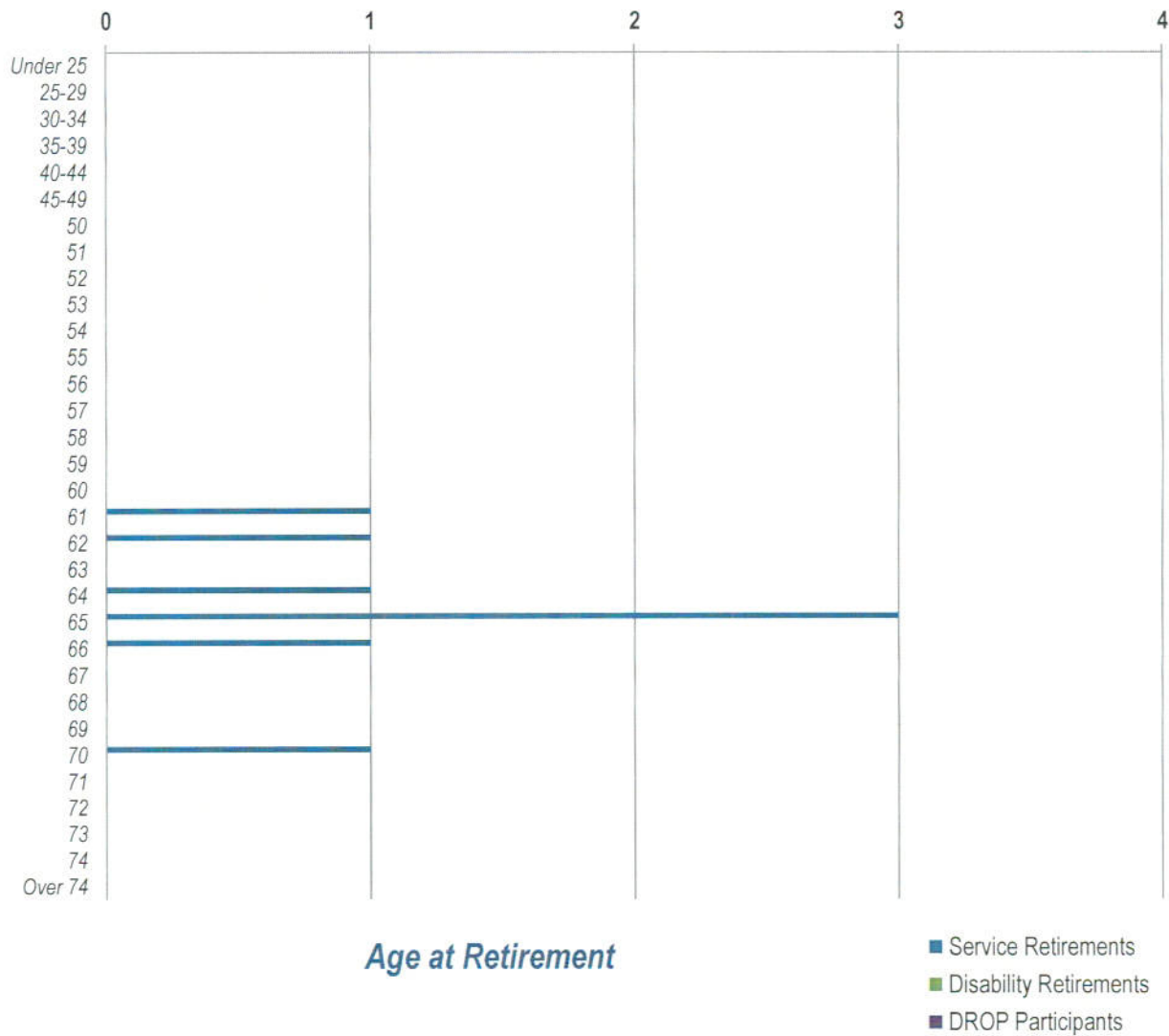
Attained Age	Completed Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
45 to 49	0	0	0	0	0	1	0	0	0	0	1
Avg.Pay	0	0	0	0	0	91,122	0	0	0	0	91,122
50 to 54	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
55 to 59	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
60 to 64	0	0	0	0	0	0	1	0	0	0	1
Avg.Pay	0	0	0	0	0	0	77,398	0	0	0	77,398
65 & up	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	1	0	0	0	2
Avg.Pay	0	0	0	0	0	91,122	77,398	0	0	0	84,260





## Inactive Participant Data

Table III-F

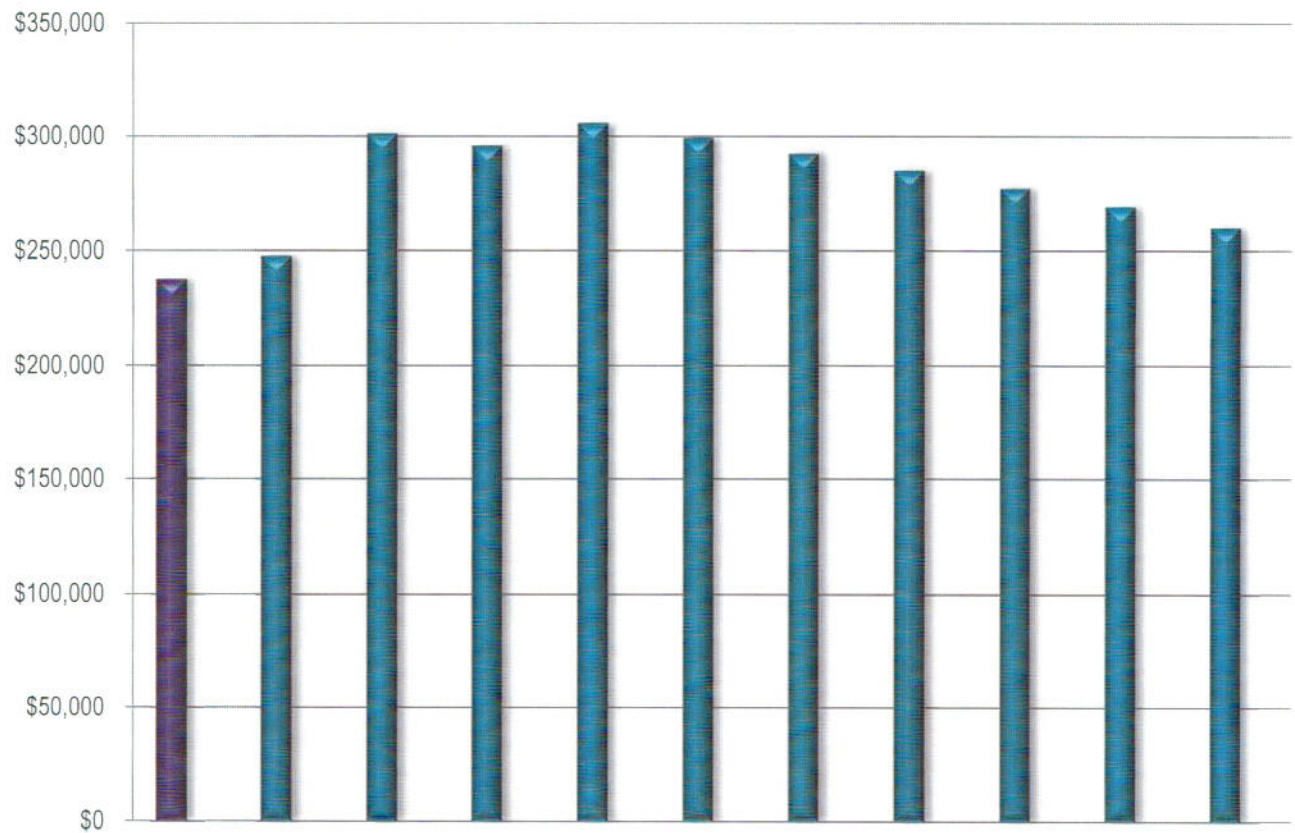
Average Monthly Benefit

Service Retirements	\$1,908.09
Disability Retirements	Not applicable
Beneficiaries Receiving	\$2,269.91
DROP Participants	Not applicable
Deferred Vested Participants	\$1,261.00
Deferred Beneficiaries	Not applicable



## Projected Benefit Payments

Table III-G

Actual

For the period October 1, 2016 through September 30, 2017

\$237,655

Projected

For the period October 1, 2017 through September 30, 2018

\$247,774

For the period October 1, 2018 through September 30, 2019

\$301,269

For the period October 1, 2019 through September 30, 2020

\$295,901

For the period October 1, 2020 through September 30, 2021

\$305,840

For the period October 1, 2021 through September 30, 2022

\$299,456

For the period October 1, 2022 through September 30, 2023

\$292,564

For the period October 1, 2023 through September 30, 2024

\$285,208

For the period October 1, 2024 through September 30, 2025

\$277,410

For the period October 1, 2025 through September 30, 2026

\$269,247

For the period October 1, 2026 through September 30, 2027

\$260,149



## Summary of Actuarial Methods and Assumptions

Table IV-A

*NOTE: The following assumptions and methods have been selected and approved by the Board of Trustees based in part on the advice of the plan's enrolled actuary in accordance with the authority granted to the Board under the pension ordinances and State law.*

1. **Actuarial Cost Method**

Aggregate cost method. Under this actuarial cost method, a funding cost is developed for the plan as a level percentage of payroll. The level funding percentage is calculated as the excess of the total future benefit liability over accumulated assets and future employee contributions, with this excess spread over the expected future payroll for current active participants. The normal cost is equal to the level funding percentage multiplied by the expected payroll for the year immediately following the valuation date. The actuarial accrued liability is equal to the accumulated assets. Therefore, under the aggregate cost method, no unfunded accrued liability is developed.

2. **Asset Method**

The actuarial value of assets is equal to the market value of assets, adjusted to reflect a four-year phase-in of the net investment appreciation.

3. **Interest (or Discount) Rate**

7.00% per annum

4. **Salary Increases**

Plan compensation is assumed to increase at the rate of 5.00% per annum, unless actual plan compensation is known for a prior plan year. In addition, the otherwise determined plan compensation during the final year of employment has been loaded by 20% to account for non-regular compensation.

5. **Decrement**

- Pre-retirement mortality: Sex-distinct rates set forth in the RP-2000 Combined Mortality Table, with full generational improvements in mortality using Scale BB
- Post-retirement mortality: Sex-distinct rates set forth in the RP-2000 Combined Mortality Table, with full generational improvements in mortality using Scale BB
- Disability: None is assumed.
- Termination: None is assumed.
- Retirement: Retirement is assumed to occur at normal retirement age.





## Summary of Actuarial Methods and Assumptions

## Table IV-A

(continued)

**6. Form of Payment**

Future retirees have been assumed to select the 10-year certain and life annuity.

**7. Expenses**

The total projected benefit liability has been loaded by 4.00% to account for anticipated administrative expenses. In addition, the interest rate set forth in item 3. above is assumed to be net of investment expenses and commissions.



## Changes in Actuarial Methods and Assumptions

Table IV-B

Since the completion of the previous valuation, the interest (or discount) rate was decreased from 7.25% per annum to 7.00% per annum.

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*The following additional assumption and method changes were made during the past 10 years:*

- (1) Effective October 1, 2016, the mortality basis was changed from a 2015 projection of the RP-2000 Mortality Table for annuitants to a full generational projection using Scale BB of the RP-2000 Combined Mortality Table as required by State law.*
- (2) Effective October 1, 2014, the assumed retirement age was changed from the most valuable retirement age to the normal retirement age.*



## Summary of Plan Provisions

## Table V-A

### 1. Benefit Formula

2.50% of average monthly earnings multiplied by credited service

### 2. Service Retirement

Normal retirement: Age 62

Early retirement: Age 55 with at least 10 years of credited service

*Note: In the case of early retirement, the participant's benefit is reduced by  $\frac{1}{180}$  for each of the first 60 months and by  $\frac{1}{360}$  for each of the next 24 months by which the participant's early retirement age precedes his normal retirement age.*

### 3. Disability Retirement

Participant must become totally and permanently disabled prior to his termination of employment as determined by the pension board.

The disability benefit is a monthly 10-year certain and life annuity equal to the participant's monthly accrued benefit, but offset as necessary to preclude the total of the participant's worker's compensation, 50% of the participant's social security disability benefit, and any other City-provided disability compensation from exceeding his final monthly salary excluding overtime. For this purpose, the amount of any lump sum worker's compensation payment is converted to an equivalent monthly benefit payable for 10 years certain by dividing the lump sum amount by 83.9692.

A disabled participant may elect the single life annuity or a joint and contingent annuity in lieu of the 10-year certain and life form of payment. Regardless of the form of payment, benefits cease upon the participant's recovery from his disability prior to his normal retirement date.

### 4. Deferred Vested Retirement

A vested participant who terminates employment before becoming eligible for retirement receives a deferred vested retirement benefit equal to the vested portion of his accrued monthly benefit payable at the participant's early or normal retirement age. If the benefit is payable prior to normal retirement age, then the benefit is reduced by  $\frac{1}{15}$  for each of the first 60 months and by  $\frac{1}{30}$  for each of the next 24 months by which the participant's early retirement age precedes his normal retirement age.

A non-vested participant who terminates employment receives his accumulated contributions.





# Summary of Plan Provisions

## Table V-A

(continued)

### 5. Vesting

A participant becomes 100% vested upon the attainment of 10 years of credited service. Alternatively, a participant becomes partially vested upon the attainment of five years of credited service in accordance with the following table:

<u>Years of Credited Service</u>	<u>Vested Percentage</u>
Less than five	0%
At least five, but less than six	25%
At least six, but less than seven	40%
At least seven, but less than eight	55%
At least eight, but less than nine	70%
At least nine, but less than 10	85%
At least 10	100%

### 6. Pre-Retirement Death Benefit

If a vested participant dies prior to retirement, the participant's beneficiary receives a 10-year certain annuity equal to the participant's monthly accrued benefit, payable beginning at the participant's early or normal retirement age. Alternatively, the beneficiary may elect to receive an actuarially equivalent immediate 10-year certain annuity or any one of the optional forms of payment that would otherwise be available to the participant. The pension board may elect to pay the pre-retirement death benefit as a single lump sum if the monthly benefit is less than \$100.00 or the lump sum value is \$5,000.00 or less.

If a non-vested participant dies prior to retirement, the participant's beneficiary receives the participant's accumulated contributions.

### 7. Form of Payment

Actuarially increased single life annuity (*optional*);

10-year certain and life annuity (*normal form of payment*);

Actuarially reduced 50% joint and contingent annuity (*optional*);

Actuarially reduced 66⅔% joint and contingent annuity (*optional*);

Actuarially reduced 75% joint and contingent annuity (*optional*);



## Summary of Plan Provisions

## Table V-A

(continued)

Actuarially reduced 100% joint and contingent annuity (*optional*);

Actuarially adjusted social security level-income annuity (*optional*); or

Actuarially equivalent single lump sum distribution (*only available at the discretion of the pension board if the single sum value of the participant's benefit is less than or equal to \$5,000.00 or the monthly annuity is less than \$100.00*)

*(Note: All forms of payment guarantee at least the return of the participant's accumulated contributions. Furthermore, a participant may change his joint annuitant up to two times after retirement subject to an actuarially equivalent adjustment provided that the participant and his previous joint annuitant were married at the time of retirement and were subsequently divorced and if the previous joint annuitant is still living at the time of the change.)*

### 8. Average Monthly Earnings

Average monthly earnings during the highest three consecutive years out of the last five years of compensation immediately preceding the determination or career average earnings if higher. Earnings include total cash remuneration for services rendered. Earnings cannot exceed the maximum amount allowed under IRC section 401(a)(17).

### 9. Credited Service

The elapsed time from the participant's date of hire until his date of termination, retirement, or death. For purposes of calculating the amount of a participant's benefit, credited service excludes periods during which the participant does not make the required employee contribution.

### 10. Employee Contribution

Employees must contribute 6.00% of earnings. Employee contributions (other than those employee contributions which are used to purchase credited service) are accumulated with interest at the rate of 6.00% per annum.

### 11. City Contribution

The City is required to make periodic contributions at least on a quarterly basis as determined under Chapter 112, Florida Statutes.



## Summary of Plan Provisions

## Table V-A

(continued)

### 12. Participant Requirement

All regular full-time general employees of the City of Palm Beach Gardens who were hired prior to February 7, 1997 became a participant in the plan as of their date of hire. No employees hired after February 6, 1997 are eligible to participate.

### 13. Actuarial Equivalence

Based on 8.00% interest per annum and the 1983 Group Annuity Mortality Table, blended 50%/50% for males and females

### 14. Plan Effective Date

The plan was originally effective on December 20, 1982.





## Summary of Plan Amendments

Table V-B

No significant plan amendments were adopted since the completion of the previous valuation.

