

RETIREMENT PLAN FOR THE POLICE OFFICERS  
OF THE CITY OF LAKE HELEN

ACTUARIAL VALUATION  
AS OF OCTOBER 1, 2018

DETERMINES THE CONTRIBUTION  
FOR THE 2018/19 FISCAL YEAR



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March 3, 2019

## Introduction

This report presents the results of the October 1, 2018 actuarial valuation for the Retirement Plan for the Police Officers of the City of Lake Helen. 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, 2018 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 rate is 15.68% of covered payroll, which represents a decrease of 2.62% of payroll from the prior valuation.

The normal cost rate is also 15.68%, which is 2.62% lower than the normal cost 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 1.02% of payroll due to investment gains, decreased by 0.35% of payroll due to demographic experience, and decreased by another 1.25% of payroll due to the assumption change that is described below. The





market value of assets earned 7.46% during the 2017/18 plan year, whereas a 7.00% 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 15.68% multiplied by the total pensionable earnings for the 2018/19 fiscal year for the active employees who are covered by the plan and reduced by the portion of the Chapter 175/185 contribution that is allowed to be recognized during the 2018/19 plan year.

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 \$1,505,569. As illustrated in Table I-A, current assets are sufficient to cover \$1,233,873 of this amount, the employer's 2018/19 expected contribution will cover \$25,150 of this amount, and future employee contributions are expected to cover \$16,284 of this amount, leaving \$230,262 to be covered by future employer funding beyond the 2018/19 fiscal 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, 2018, the advance employer contribution is \$148,947, which reflects the advance employer contribution of \$153,887 as of October 1, 2017 less \$4,940 to cover the shortfall between the actual employer contribution and the minimum required contribution for the 2017/18 plan 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 2018/19 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, 2018 would reduce the minimum required contribution rate for the 2018/19 plan year to 6.54% of payroll.

#### 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 the market value of assets. 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, 2018, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

### Assumption Change

Since the previous valuation was completed, the mortality basis was changed from the RP-2000 Combined Mortality Table to the RP-2000 Blue Collar Mortality Table.

### 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

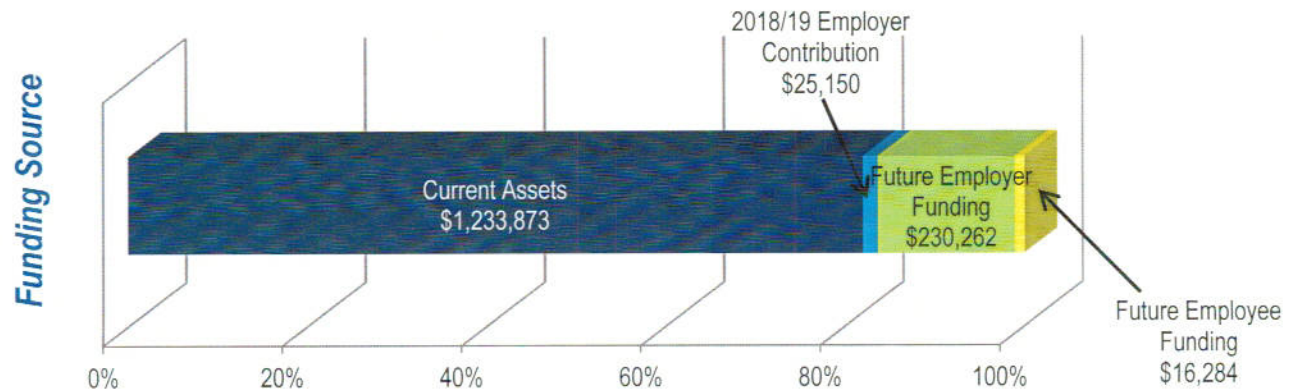
*The individual above is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.*





## Minimum Required Contribution

Table I-A



### For the 2018/19 Plan Year

Present Value of Future Benefits	\$1,437,297
Present Value of Future Administrative Expenses	\$68,272
Actuarial Value of Assets	(\$1,233,873)
Present Value of Future Employee Contributions	(\$16,284)
Present Value of Future Normal Costs	\$255,412
Present Value of Future Payroll	÷ \$1,628,436
Normal Cost Rate	= 15.6845%
Expected Payroll	x \$160,347
Normal Cost	\$25,150
Adjustment to Reflect Monthly Employer Contributions	\$0
Preliminary Employer Contribution for the 2018/19 Plan Year	\$25,150
Expected Payroll for the 2018/19 Plan Year	÷ \$160,347

**Minimum Required Contribution Rate** **15.68%**

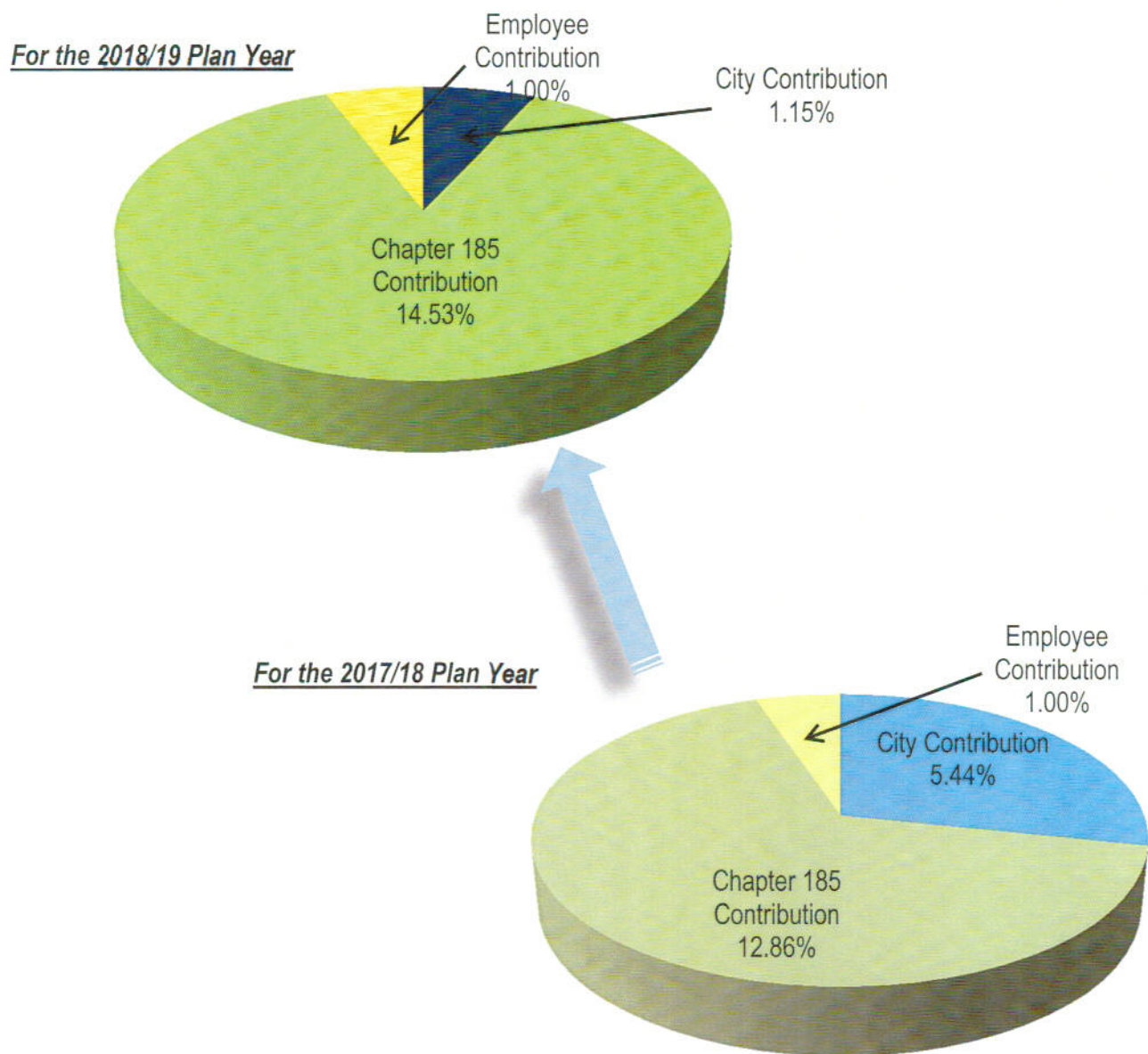
(The actual contribution should be based on the minimum required contribution rate multiplied by the actual payroll for the year.)



## Minimum Required Contribution

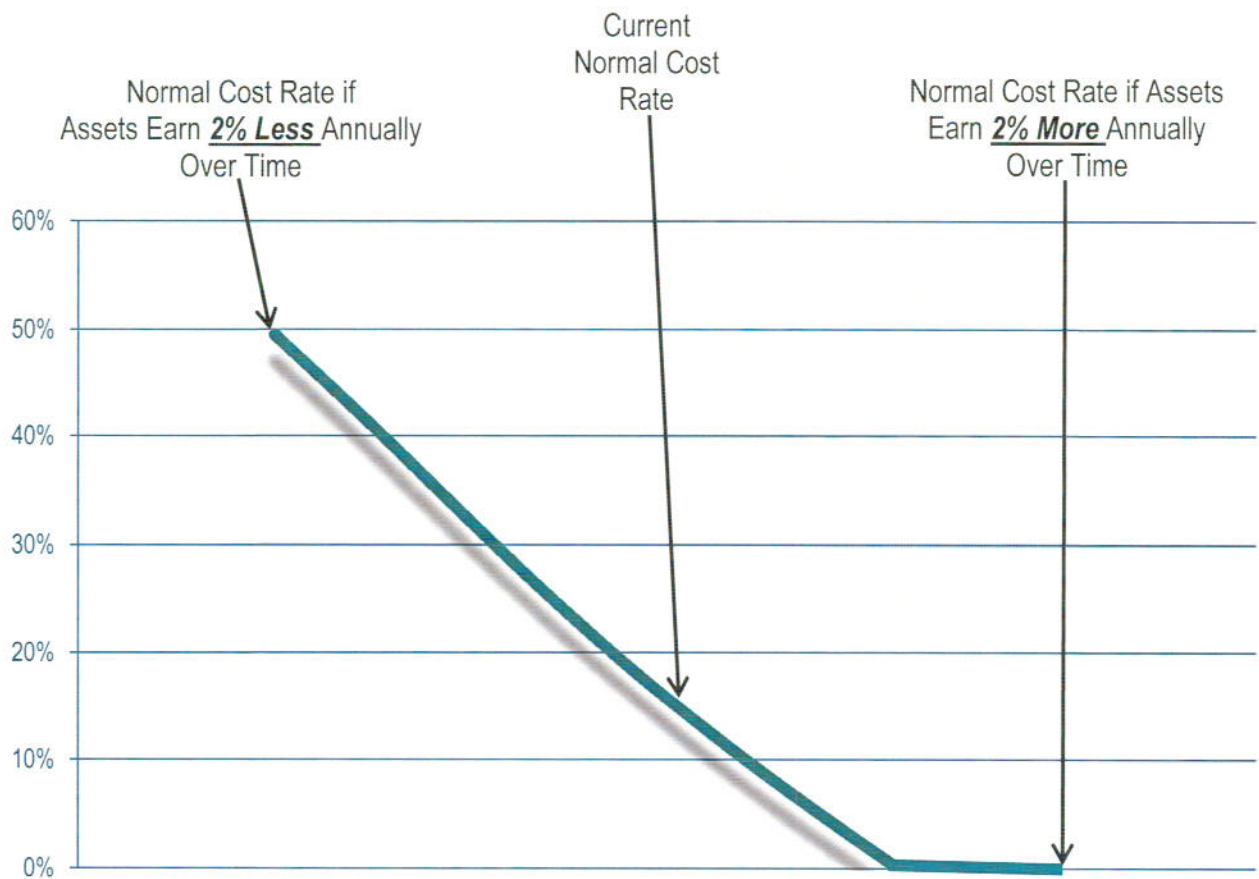
Table I-A  
(continued)

The minimum required contribution rate of 15.68% includes both the City contribution and the allowable Chapter 185 contribution. In addition, employees are required to contribute 1.00% of pensionable earnings. The actual City contribution rate is expected to be approximately 1.15% based on the allowable Chapter 185 contribution for the previous year. The chart below shows the expected contribution rate by source for the 2018/19 plan year based on the expected payroll. A comparative chart shows the contribution rate by source for the previous plan year.



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	18.30%
Increase (decrease) due to investment gains and losses	-1.02%
Increase (decrease) due to demographic experience	-0.35%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	-1.25%
Increase (decrease) due to actuarial method changes	0.00%
Current normal cost rate	<u>15.68%</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>
<u>Actively Employed Participants</u>			
Retirement benefits	\$914,832	\$914,832	\$901,796
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>\$914,832</b>	<b>\$914,832</b>	<b>\$901,796</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
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>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Due a Refund of Contributions</u>	<b>\$228</b>	<b>\$228</b>	<b>\$228</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$316,724	\$316,724	\$311,592
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$224,951	\$224,951	\$223,681
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$541,675</b>	<b>\$541,675</b>	<b>\$535,273</b>
<u>Grand Total</u>	<b><u>\$1,456,735</u></b>	<b><u>\$1,456,735</u></b>	<b><u>\$1,437,297</u></b>
Present Value of Future Payroll	\$1,628,436	\$1,628,436	\$1,628,436
Present Value of Future Employee Contribs.	\$16,284	\$16,284	\$16,284
Present Value of Future Employer Contribs.	\$275,773	\$275,773	\$255,412





## 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	\$342,866	\$342,866	\$337,904
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>\$342,866</b>	<b>\$342,866</b>	<b>\$337,904</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
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>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Due a Refund of Contributions</u>	<b>\$228</b>	<b>\$228</b>	<b>\$228</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$316,724	\$316,724	\$311,592
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$224,951	\$224,951	\$223,681
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$541,675</b>	<b>\$541,675</b>	<b>\$535,273</b>
<u>Grand Total</u>	<b><u>\$884,769</u></b>	<b><u>\$884,769</u></b>	<b><u>\$873,405</u></b>
<u>Funded Percentage</u>	156.29%	156.29%	158.33%

(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	\$327,115	\$327,115	\$322,360
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>\$327,115</b>	<b>\$327,115</b>	<b>\$322,360</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
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>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Due a Refund of Contributions</u>	<b>\$228</b>	<b>\$228</b>	<b>\$228</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$316,724	\$316,724	\$311,592
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$224,951	\$224,951	\$223,681
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$541,675</b>	<b>\$541,675</b>	<b>\$535,273</b>
<u>Grand Total</u>	<b><u>\$869,018</u></b>	<b><u>\$869,018</u></b>	<b><u>\$857,861</u></b>





## Entry Age Normal Accrued Liability

Table I-G

	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	\$519,221	\$519,221	\$511,714
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>\$519,221</b>	<b>\$519,221</b>	<b>\$511,714</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
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>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Due a Refund of Contributions</u>	<b>\$228</b>	<b>\$228</b>	<b>\$228</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$316,724	\$316,724	\$311,592
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$224,951	\$224,951	\$223,681
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$541,675</b>	<b>\$541,675</b>	<b>\$535,273</b>
<u>Grand Total</u>	<b><u>\$1,061,124</u></b>	<b><u>\$1,061,124</u></b>	<b><u>\$1,047,215</u></b>



## Actuarial Value of Assets

Table II-A

Market Value of Assets as of October 1, 2018	\$1,382,820
Minus advance employer contributions	(\$148,947)
Minus excess Chapter 175/185 contributions	\$0
<b>Actuarial Value of Assets as of October 1, 2018</b>	<b><u>\$1,233,873</u></b>

**Historical Actuarial Value of Assets**

October 1, 2009	\$414,239
October 1, 2010	\$515,198
October 1, 2011	\$560,980
October 1, 2012	\$710,588
October 1, 2013	\$835,123
October 1, 2014	\$943,446
October 1, 2015	\$934,524
October 1, 2016	\$1,012,249
October 1, 2017	\$1,150,782
October 1, 2018	\$1,233,873



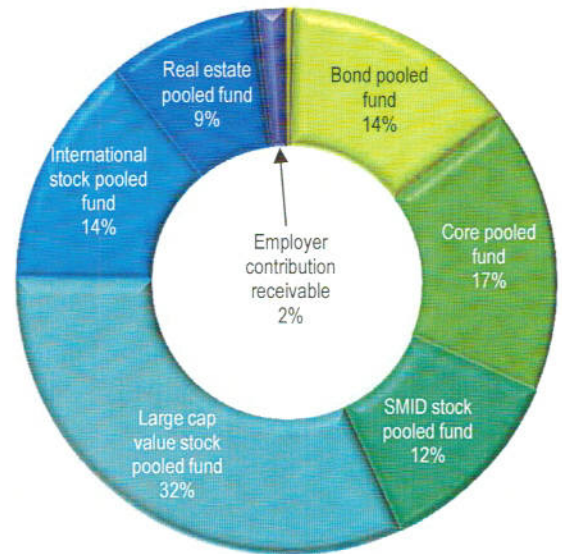


## Market Value of Assets

Table II-B

As of October 1, 2018

<b>Market Value of Assets</b>	<b><u>\$1,382,820</u></b>
Cash	\$5,415
Bond pooled fund	\$196,310
Core pooled fund	\$232,865
SMID stock pooled fund	\$162,464
Large cap value stock pooled fund	\$442,713
International stock pooled fund	\$192,249
Real estate pooled fund	\$121,848
Employer contribution (unallocated)	\$4,920
Employer contribution receivable	\$23,295
Employee contribution receivable	\$741

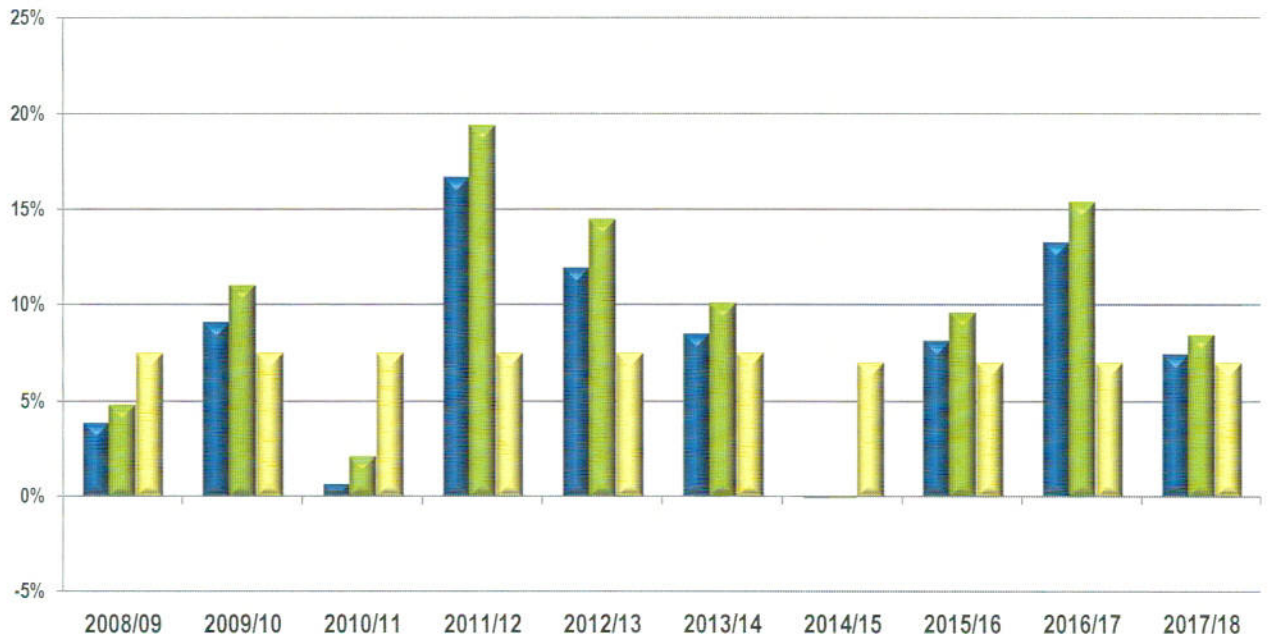
**Historical Market Value of Assets**

October 1, 2009	\$500,312
October 1, 2010	\$613,988
October 1, 2011	\$687,696
October 1, 2012	\$861,097
October 1, 2013	\$994,365
October 1, 2014	\$1,096,748
October 1, 2015	\$1,106,423
October 1, 2016	\$1,176,260
October 1, 2017	\$1,304,669
October 1, 2018	\$1,382,820



## Investment Return

Table II-C

*Annual Investment Returns*

■ Market Value Return  
■ Actuarial Value Return  
■ Assumed Return

Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2008/09	3.93%	4.84%	7.50%
2009/10	9.10%	11.01%	7.50%
2010/11	0.69%	2.14%	7.50%
2011/12	16.70%	19.41%	7.50%
2012/13	11.93%	14.49%	7.50%
2013/14	8.52%	10.10%	7.50%
2014/15	-0.03%	-0.04%	7.00%
2015/16	8.14%	9.61%	7.00%
2016/17	13.31%	15.42%	7.00%
2017/18	7.46%	8.45%	7.00%
10yr. Avg.	7.86%	9.39%	7.30%





## Asset Reconciliation

## Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
<b>As of October 1, 2017</b>	<b>\$1,304,669</b>	<b>\$1,150,782</b>
<i><b>Increases Due To:</b></i>		
Employer Contributions	\$4,920	\$4,920
Chapter 175/185 Contributions	\$23,295	\$23,295
Employee Contributions	\$1,812	\$1,812
Service Purchase Contributions	\$0	\$0
Total Contributions	<u>\$30,027</u>	<u>\$30,027</u>
Interest and Dividends	\$0	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	<u>\$96,697</u>	
Total Investment Income	<u>\$96,697</u>	<u>\$96,697</u>
Other Income	\$0	
<b>Total Income</b>	<u><b>\$126,724</b></u>	<u><b>\$126,724</b></u>
<i><b>Decreases Due To:</b></i>		
Monthly Benefit Payments	(\$42,112)	(\$42,112)
Refund of Employee Contributions	\$0	\$0
Total Benefit Payments	<u>(\$42,112)</u>	<u>(\$42,112)</u>
Investment Expenses	\$0	
Administrative Expenses	(\$6,461)	(\$6,461)
Advance Employer Contribution		\$4,940
Excess Chapter 175/185 Contribution		\$0
<b>Total Expenses</b>	<u><b>(\$48,573)</b></u>	<u><b>(\$43,633)</b></u>
<b>As of October 1, 2018</b>	<u><b>\$1,382,820</b></u>	<u><b>\$1,233,873</b></u>



## Historical Trust Fund Detail

Table II-E

Income

Plan	Employer	Chapter	Employee	Service	Interest /	Realized	Unrealized	Other
<u>Year</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Purchase</u>	<u>Dividends</u>	<u>Gains /</u>	<u>Gains /</u>	<u>Income</u>
				<u>Contribs.</u>		<u>Losses</u>	<u>Losses</u>	
2008/09	\$48,359	\$0	\$1,841	\$0	\$0	\$0	\$18,057	\$0
2009/10	\$47,864	\$17,798	\$1,824	\$0	\$0	\$0	\$48,484	\$0
2010/11	\$38,944	\$32,972	\$1,483	\$0	\$0	\$0	\$4,500	\$0
2011/12	\$38,941	\$16,094	\$1,524	\$0	\$0	\$0	\$119,345	\$0
2012/13	\$15,483	\$16,792	\$1,487	\$0	\$0	\$0	\$104,412	\$0
2013/14	\$0	\$18,960	\$1,573	\$0	\$0	\$0	\$85,465	\$0
2014/15	\$7,872	\$17,928	\$1,562	\$0	\$0	\$0	-\$350	\$0
2015/16	\$0	\$19,581	\$1,194	\$0	\$0	\$0	\$89,247	\$0
2016/17	\$0	\$21,127	\$1,338	\$0	\$0	\$0	\$154,813	\$0
2017/18	\$4,920	\$23,295	\$1,812	\$0	\$0	\$0	\$96,697	\$0

Expenses

Plan	Monthly	Contrib.	Admin.	Invest.	<u>Other Actuarial Adjustments</u>	
<u>Year</u>	<u>Benefit</u>	<u>Refunds</u>	<u>Expenses</u>	<u>Expenses</u>	<u>Advance</u>	<u>Excess</u>
	<u>Payments</u>				<u>Employer</u>	<u>Chapter</u>
					<u>Contribs.</u>	<u>Contribs.</u>
2008/09	\$0	\$0	\$3,859	\$0	\$62	\$0
2009/10	\$0	\$0	\$2,294	\$0	\$1,792	\$10,925
2010/11	\$0	\$0	\$4,191	\$0	\$15,573	\$19,226
2011/12	\$0	\$0	\$2,503	\$0	\$7,699	\$9,221
2012/13	\$0	\$0	\$4,906	\$0	-\$1,186	\$9,919
2013/14	\$0	\$0	\$3,615	\$0	-\$18,027	\$12,087
2014/15	\$10,022	\$0	\$7,315	\$0	\$7,542	\$11,055
2015/16	\$31,754	\$0	\$8,431	\$0	\$152,410	-\$160,298
2016/17	\$42,112	\$0	\$6,757	\$0	-\$10,124	\$0
2017/18	\$42,112	\$0	\$6,461	\$0	-\$4,940	\$0

Note: Information was not available to separate the investment expenses from the investment income nor was information available to separate the investment income by source.



## Other Reconciliations

## Table II-F

**Advance Employer Contribution**

Advance Employer Contribution as of October 1, 2017	\$153,887
Additional Employer Contribution	\$28,215
Minimum Required Contribution	(\$33,155)
Net Increase in Advance Employer Contribution	(\$4,940)
Advance Employer Contribution as of October 1, 2018	<u>\$148,947</u>

**Excess Chapter 175/185 Contribution**

Excess Chapter 175/185 Contribution as of October 1, 2017	\$0
Additional Chapter 175/185 Contribution	\$23,295
Allowable Chapter 175/185 Contribution	(\$23,295)
Net Increase in Excess Chapter 175/185 Contribution	\$0
Excess Chapter 175/185 Contribution as of October 1, 2018	<u>\$0</u>





## Historical Chapter 175/185 Contributions

Table II-G

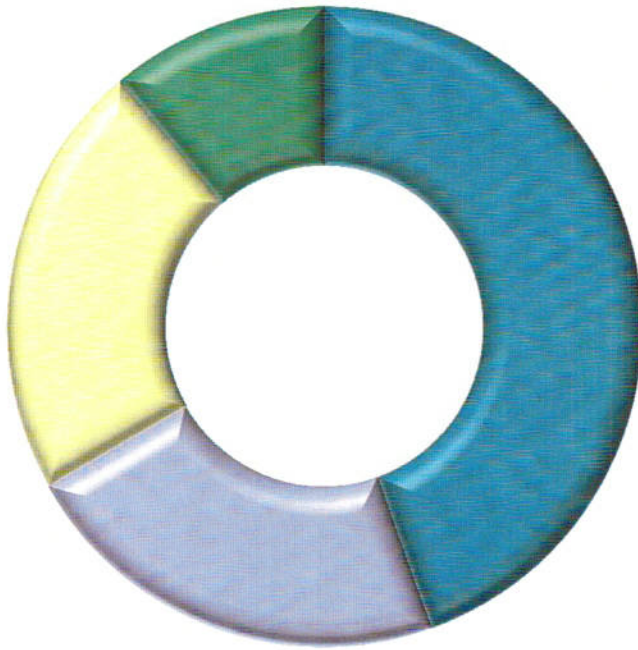
<i>Total Accumulated Excess Chapter 175/185 Contribution</i>				<b>\$0</b>
	<u>Chapter 175 Regular Distribution</u>	<u>Chapter 175 Supplemental Distribution</u>	<u>Chapter 185 Distribution</u>	<u>Allowable Amount</u>
1998 Distribution	\$0	\$0	\$5,966	(\$4,284)
1999 Distribution	\$0	\$0	\$15,755	(\$4,284)
2000 Distribution	\$0	\$0	\$9,538	(\$4,284)
2001 Distribution	\$0	\$0	\$11,845	(\$4,284)
2002 Distribution	\$0	\$0	\$12,646	(\$4,284)
2003 Distribution	\$0	\$0	\$16,499	(\$4,284)
2004 Distribution	\$0	\$0	\$15,406	(\$6,873)
2005 Distribution	\$0	\$0	\$15,406	(\$6,873)
2006 Distribution	\$0	\$0	\$16,100	(\$6,873)
2007 Distribution	\$0	\$0	\$15,638	(\$6,873)
2008 Distribution	\$0	\$0	\$17,798	(\$6,873)
2009 Distribution	\$0	\$0	\$17,333	(\$6,873)
2010 Distribution	\$0	\$0	\$15,639	(\$6,873)
2011 Distribution	\$0	\$0	\$16,094	(\$6,873)
2012 Distribution	\$0	\$0	\$16,792	(\$6,873)
2013 Distribution	\$0	\$0	\$18,960	(\$6,873)
2014 Distribution	\$0	\$0	\$17,928	(\$6,873)
2015 Distribution	\$0	\$0	\$19,581	(\$179,879)
2016 Distribution	\$0	\$0	\$21,127	(\$21,127)
2017 Distribution	\$0	\$0	\$23,295	(\$23,295)
Interest Adjustment				\$6,262



## Summary of Participant Data

Table III-A

As of October 1, 2018

*Participant Distribution by Status*Actively Employed Participants

Active Participants	4
DROP Participants	0

Inactive Participants

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

Participants Receiving a Benefit

Service Retirements	2
Disability Retirements	0
Beneficiaries Receiving	1

**Total Participants 9**Number of Participants Included in Prior Valuations

	<i>Active</i>	<i>DROP</i>	<i>Inactive</i>	<i>Retired</i>	<i>Total</i>
October 1, 2009	N/A	N/A	N/A	N/A	N/A
October 1, 2010	4	0	2	0	6
October 1, 2011	N/A	N/A	N/A	N/A	N/A
October 1, 2012	4	0	2	0	6
October 1, 2013	N/A	N/A	N/A	N/A	N/A
October 1, 2014	4	0	2	0	6
October 1, 2015	3	0	2	2	7
October 1, 2016	3	0	1	3	7
October 1, 2017	5	0	1	3	9
October 1, 2018	4	0	2	3	9



## 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, 2017</u>	5	0	0	1	0	2	0	1	9
<u>Change in Status</u>									
Re-employed									
Terminated	(1)			1					
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, 2018</u>	4	0	0	2	0	2	0	1	9



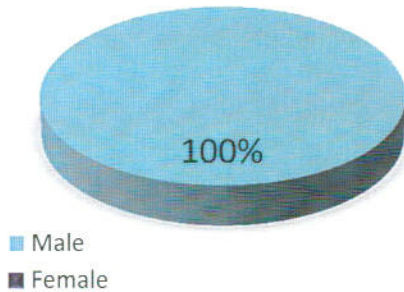


## Active Participant Data

## Table III-C

As of October 1, 2018

## Gender Mix



Average Age	39.0 years
Average Service	8.5 years
Total Annualized Compensation for the Prior Year	\$154,178
Total Expected Compensation for the Current Year	\$160,347
Average Increase in Compensation for the Prior Year	5.25%
Expected Increase in Compensation for the Current Year	4.00%
Accumulated Contributions for Active Employees	\$13,266



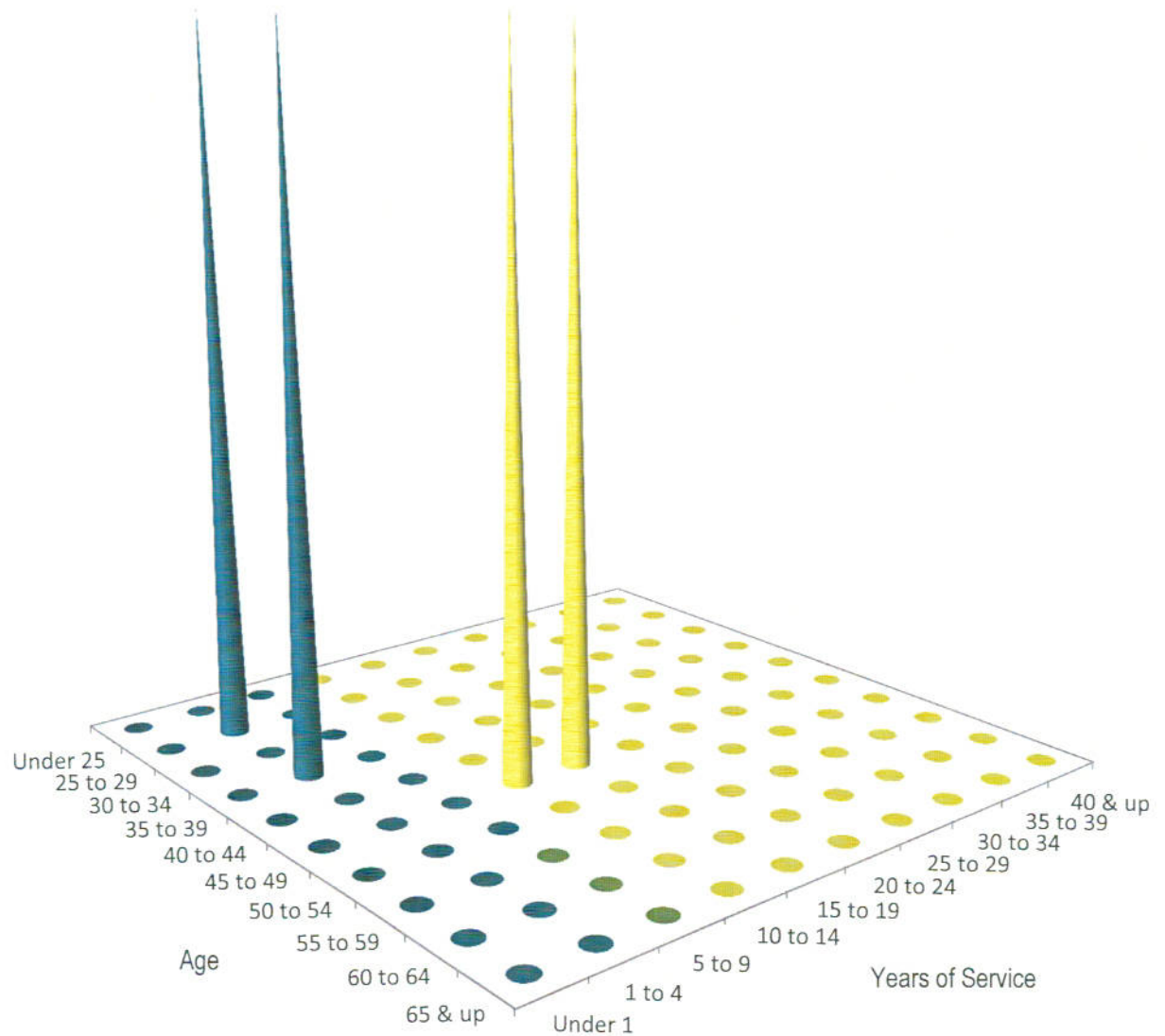
## Active Participant Statistics From Prior Valuations

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 2009	N/A	N/A	N/A	N/A	N/A
October 1, 2010	41.5	7.5	\$35,745	5.25%	-3.23%
October 1, 2011	N/A	N/A	N/A	N/A	N/A
October 1, 2012	43.5	9.5	\$38,100	5.12%	2.73%
October 1, 2013	N/A	N/A	N/A	N/A	N/A
October 1, 2014	45.5	11.5	\$39,326	5.00%	5.96%
October 1, 2015	36.3	8.0	\$38,423	4.00%	9.89%
October 1, 2016	37.3	9.0	\$39,793	4.00%	1.40%
October 1, 2017	37.6	6.0	\$29,850	4.00%	-2.77%
October 1, 2018	39.0	8.5	\$38,545	4.00%	5.25%



# 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	1	0	0	0	0	0	0	0	0	1
Avg. Pay	0	34,060	0	0	0	0	0	0	0	0	34,060
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	1	0	0	0	0	0	0	0	0	1
Avg. Pay	0	32,186	0	0	0	0	0	0	0	0	32,186
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	1	1	0	0	0	0	0	2
Avg. Pay	0	0	0	38,548	49,384	0	0	0	0	0	43,966
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	0	0	0	0	0
Avg. Pay	0	0	0	0	0	0	0	0	0	0	0
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	2	0	1	1	0	0	0	0	0	4
Avg. Pay	0	33,123	0	38,548	49,384	0	0	0	0	0	38,545





## Inactive Participant Data

Table III-F

**Age at Retirement**

- Service Retirements
- Disability Retirements
- DROP Participants

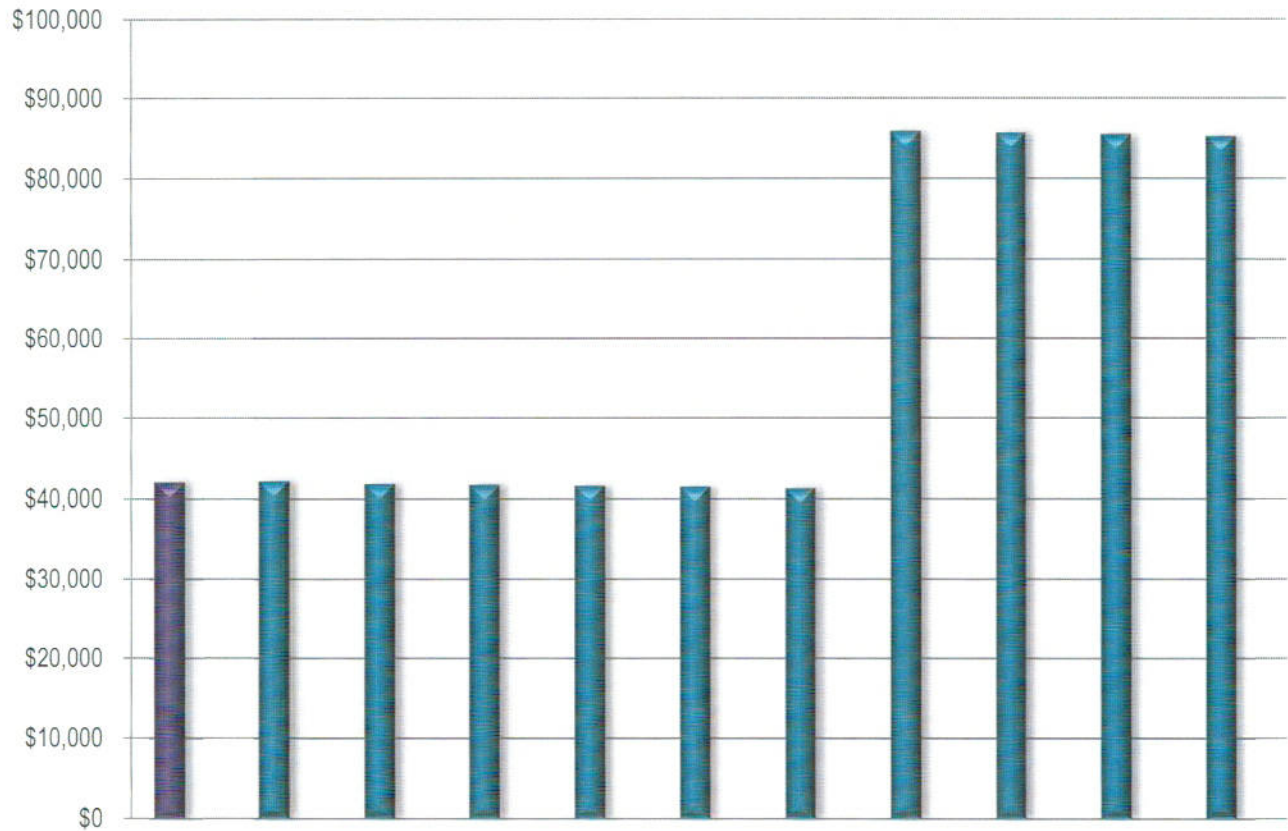
Average Monthly Benefit

Service Retirements	\$1,067.25
Disability Retirements	Not applicable
Beneficiaries Receiving	\$1,374.87
DROP Participants	Not applicable
Deferred Vested Participants	Not applicable
Deferred Beneficiaries	Not applicable



## Projected Benefit Payments

Table III-G

Actual

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

\$42,112

Projected

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

\$42,245

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

\$41,910

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

\$41,793

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

\$41,684

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

\$41,543

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

\$41,389

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

\$85,885

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

\$85,704

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

\$85,503

For the period October 1, 2027 through September 30, 2028

\$85,284



## 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.

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

7.00% per annum

4. **Salary Increases**

Plan compensation is assumed to increase at the rate of 4.00% per annum, unless actual plan compensation is known for a prior plan year.

5. **Decrements**

- Pre-retirement mortality: None assumed
- Post-retirement mortality: Sex-distinct rates set forth in the RP-2000 Blue Collar Mortality Table, with full generational improvements in mortality using Scale BB
- Disability: None assumed
- Termination: None 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 4.75% 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 mortality basis was changed from the RP-2000 Combined Mortality Table to the RP-2000 Blue Collar Mortality Table.

*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 interest (or discount) rate was decreased from 7.50% per annum to 7.00% per annum.*
- (3) Effective October 1, 2014, the assumed increase in future compensation was changed from rates that ranged from 8.00% (for less than one year of service) to 5.00% (for at least four years of service) to a flat 4.00% per year.*
- (4) Effective October 1, 2014, the 4.00% increase in average earnings to account for lump sum payments upon termination of employment was eliminated.*
- (5) Effective October 1, 2014, the mortality basis was changed from the 1994 Group Annuity Reserving Table, projected to 2002 by Scale AA, to the RP-2000 Mortality Table, projected to 2015 by Scale AA.*
- (6) Effective October 1, 2010, the administrative expense assumption was changed from a flat \$3,000 per year to a 4.75% loading of the total projected benefit liability.*



## Summary of Plan Provisions

## Table V-A

### 1. Monthly Accrued Benefit

3% of Average Final Compensation multiplied by Credited Service

### 2. Normal Retirement Age and Benefit

- **Age**

Age 55 with at least six years of Credited Service; or  
Any age with at least 25 years of Credited Service

- **Amount**

Monthly Accrued Benefit

- **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 66<sup>2</sup>/<sub>3</sub>% joint and contingent annuity (optional);  
Actuarially reduced 75% joint and contingent annuity (optional);  
Actuarially reduced 100% joint and contingent annuity (optional);  
Any other actuarially equivalent form of payment approved by the Board; or  
Actuarially equivalent lump sum distribution (automatic if the single sum value of the participant's benefit is less than or equal to \$5,000 or the monthly annuity is less than \$100)

*(Note: A participant may change his joint annuitant up to two times after retirement.)*

### 3. Early Retirement Age and Benefit

- **Age**

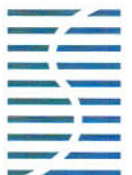
Any age with at least 10 years of Credited Service

- **Amount**

Monthly Accrued Benefit (payable at Normal Retirement Age); or  
Monthly Accrued Benefit reduced by 3% for each year by which the participant's Early Retirement Date precedes his Normal Retirement Date (payable at Early Retirement Age)

- **Form of Payment**

Same as for Normal Retirement





## Summary of Plan Provisions

## Table V-A

(continued)

### 4. Service Incurred Disability Eligibility and Benefit

- **Eligibility**

The participant is eligible if his disability was incurred during the course of his employment with the City.

- **Condition**

The Board must find that the participant has a physical or mental condition resulting from bodily injury, disease, or a mental disorder which renders him incapable of employment as a police officer.

- **Amount Payable**

A monthly 10-year certain and life annuity equal to the larger of (a) or (b), as follows, but offset as necessary to preclude the total of the participant's worker's compensation, disability benefit, and other City-provided disability compensation from exceeding his Average Monthly Earnings:

- (a) Monthly Accrued Benefit; or
- (b) 42% of Average Final Compensation

### 5. Non-Service Incurred Disability Eligibility and Benefit

- **Eligibility**

The participant must have earned at least 10 years of Credited Service if his disability was incurred other than during the course of his employment with the City.

- **Condition**

Same as for a Service Incurred Disability Benefit

- **Amount Payable**

A monthly 10-year certain and life annuity equal to the larger of (a) or (b), as follows, but offset as necessary to preclude the total of the participant's worker's compensation, disability benefit, and other City-provided disability compensation from exceeding his Average Monthly Earnings:

- (a) Monthly Accrued Benefit; or
- (b) 25% of Average Final Compensation

### 6. Delayed Retirement Age and Benefit

- **Age**

After Normal Retirement Age

- **Amount**

Monthly Accrued Benefit

- **Form of Payment**

Same as for Normal Retirement



## Summary of Plan Provisions

## Table V-A

(continued)

### 7. Deferred Vested Benefit

- **Age**  
Any age with at least six years of Credited Service
- **Amount**  
Monthly Accrued Benefit (payable at Normal Retirement Age); or  
Monthly Accrued Benefit reduced by 3% for each year by which the participant's Early Retirement Date precedes his Normal Retirement Date (payable at Early Retirement Age)
- **Form of Payment**  
Same as for Normal Retirement

### 8. Pre-Retirement Death Benefit

In the case of the death of a vested participant prior to retirement, his beneficiary will receive the participant's Monthly Accrued Benefit payable for 10 years beginning on the participant's early or normal retirement date. In the case of the death of a non-vested participant prior to retirement, his beneficiary will receive the participant's Accumulated Contributions in lieu of any other benefits payable from the plan. Regardless of vested status, the beneficiary of a participant who dies in the line of duty receives a minimum lifetime benefit equal to 50% of the participant's salary at the time of his death.

### 9. Average Final Compensation

Average of the highest five years of Compensation out of the last 10 years of employment (or career average, if higher)

### 10. Compensation

Total cash remuneration for services rendered, excluding payments for extra duty or special detail work performed on behalf of a second party employer; annual compensation in excess of \$200,000 (as indexed) is excluded in accordance with Internal Revenue Code (IRC) §401(a)(17).

### 11. Credited Service

The elapsed time from the participant's date of hire until his date of termination, retirement, or death.



## Summary of Plan Provisions

## Table V-A

(continued)

### 12. Participation Requirement

All police officers of the City of Lake Helen, Florida automatically become a participant in the plan on their date of hire.

### 13. Accumulated Contributions

The Employee Contributions accumulated with no interest; if the participant terminates his employment with less than six years of Credited Service, he receives his Accumulated Contributions in lieu of any other benefits payable from the plan.

### 12. Participant Contribution

1.00% of earnings

### 13. Definition of Actuarially Equivalent

- **Interest Rate**

7.00% per annum

- **Mortality Table**

The unisex mortality table promulgated by the Secretary of the Treasury for purposes of Internal Revenue Code (IRC) section 417(e)(3)

### 14. Plan Effective Date

January 1, 1996





## Summary of Plan Amendments

Table V-B

No plan changes were adopted since the completion of the previous valuation.

