

RETIREMENT PLAN FOR THE FIREFIGHTERS  
OF THE SOUTHERN MANATEE FIRE & RESCUE DISTRICT

ACTUARIAL VALUATION  
AS OF OCTOBER 1, 2018

DETERMINES THE CONTRIBUTION  
FOR THE 2018/19 FISCAL YEAR



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January 15, 2019

## Introduction

This report presents the results of the October 1, 2018 actuarial valuation for the Retirement Plan for the Firefighters of the Southern Manatee Fire & Rescue District. 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 38.52% of covered payroll, which represents a decrease of 9.24% of payroll from the prior valuation.

The normal cost rate is 37.19%, which is 8.93% of payroll less 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 0.61% of payroll due to investment gains, decreased by 3.25% of payroll due to demographic experience, decreased by 2.09% of payroll due to the assumption change that is described below, and decreased by



2.98% of payroll due to the transfer of assets from the OPEB trust. The market value of assets earned 7.41% 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 District 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 District's 2018/19 minimum required contribution will be equal to 38.52% multiplied by the total pensionable earnings for the 2018/19 plan 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 \$55,075,509. As illustrated in Table I-A, current assets are sufficient to cover \$40,946,547 of this amount, the employer's 2018/19 expected contribution will cover \$2,069,590 of this amount, and future employee contributions are expected to cover \$1,215,205 of this amount, leaving \$10,844,167 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 District 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 \$469,243, which reflects the advance employer contribution of \$179,406 as of October 1, 2017 plus \$289,837 in actual employer contributions above the minimum funding requirement for the 2017/18 plan year as shown in Table II-F.

The District 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 District 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 normal cost rate to 35.84% of payroll and would reduce the minimum required contribution for the 2018/19 plan year to 37.12% of payroll.

#### Excess Chapter 175/185 Contributions

As of October 1, 2018, the plan has accumulated excess Chapter 175/185 contributions of \$78,562 as shown in Table II-F. This amount is equal to the accumulated excess Chapter 175/185 contribution balance as of October 1, 2017. The total Chapter 175/185 distribution received during the 2017/18 plan year was \$410,300, all of which was allowed to be used to offset the District's minimum required contribution. The Chapter 175/185 contribution consisted



of a \$407,121 regular distribution plus a \$3,179 supplemental distribution. Table II-G provides a history of the Chapter 175/185 contributions and the portion that is allowed to be recognized.

### 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. 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.

### Refund of Participant Contributions

It is our understanding that there are 10 participants who are due a refund of their contributions. We have estimated the accumulated amount of their refunds to be \$562 as of October 1, 2018. The average amount owed to these individuals is only \$56. If possible, we recommend that the accumulated contributions be distributed to these individuals in order to simplify the administration of the plan and to reduce future administrative costs.

### Transfer from OPEB Trust

The trust fund that had previously been established to pay for other post-employment benefits (OPEBs) was closed during the 2017/18 plan year and the \$1,033,133 remaining balance was transferred into this pension fund. This amount has been treated as an additional employer contribution for the 2017/18 plan year. However, the entire amount of the transfer has been applied as an immediate reduction in the unfunded liability instead of being allocated to the advance employer contribution.

### Assumption Change

Since the previous valuation was completed, the mortality basis has been changed from the RP-2000 Combined Mortality Table to the RP-2000 Blue Collar Mortality Table, both with full generational improvements using Scale BB. The impact of this assumption change was a reduction in the minimum required contribution for the 2018/19 plan year of 2.16% 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.

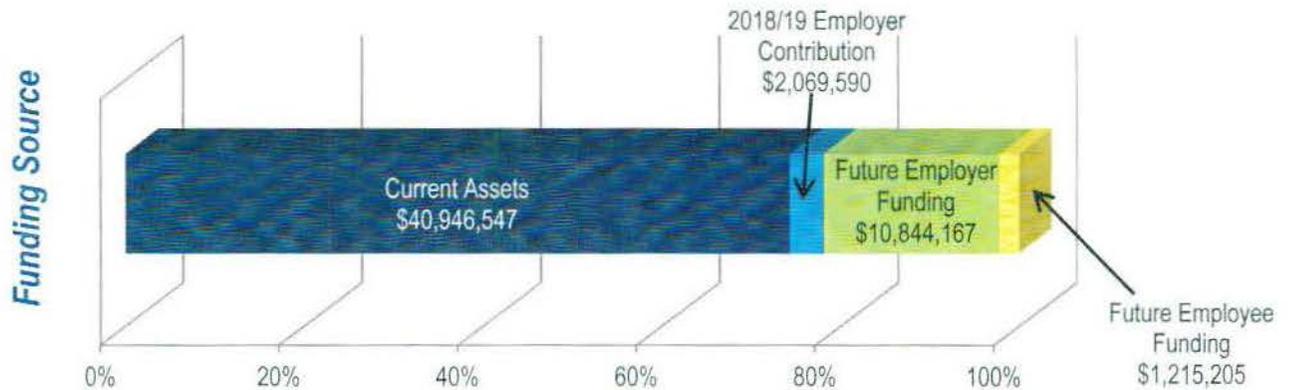
Enrolled Actuary No. 17-04927

*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	\$54,530,207
Present Value of Future Administrative Expenses	\$545,302
Actuarial Value of Assets	(\$40,946,547)
Present Value of Future Employee Contributions	(\$1,215,205)
Present Value of Future Normal Costs	\$12,913,757
<hr/>	
Present Value of Future Payroll	÷ \$34,720,004
Normal Cost Rate	= 37.194%
Expected Payroll	x \$5,372,667
<hr/>	
Normal Cost	\$1,998,310
Adjustment to Reflect Semi-Monthly Employer Contributions	\$71,280
Preliminary Employer Contribution for the 2018/19 Plan Year	\$2,069,590
<hr/>	
Expected Payroll for the 2018/19 Plan Year	÷ \$5,372,667

**Minimum Required Contribution Rate** **38.52%**

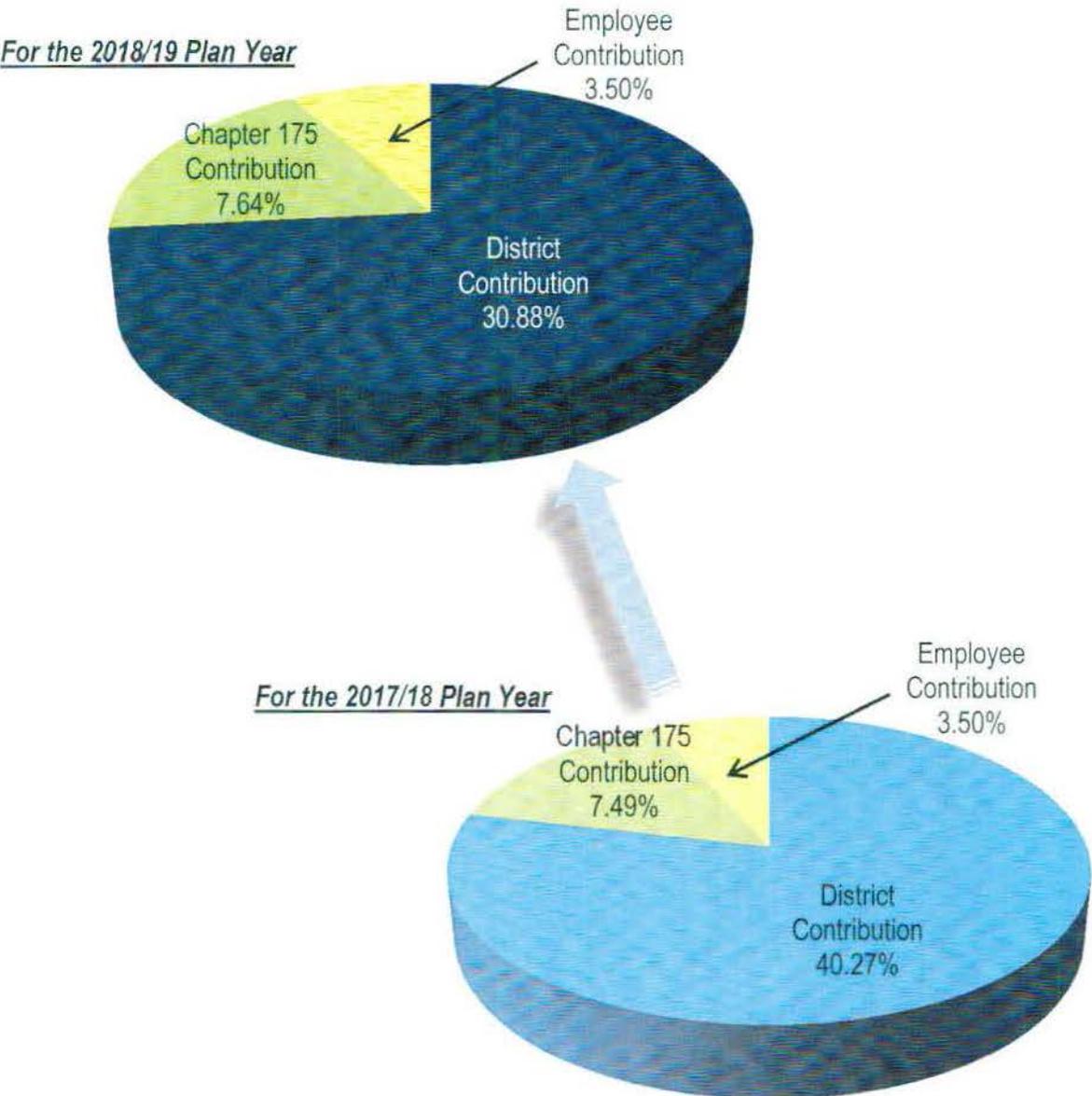
*(The actual contribution should be based on the minimum required contribution rate multiplied by the actual payroll for the year.)*



Minimum Required Contribution

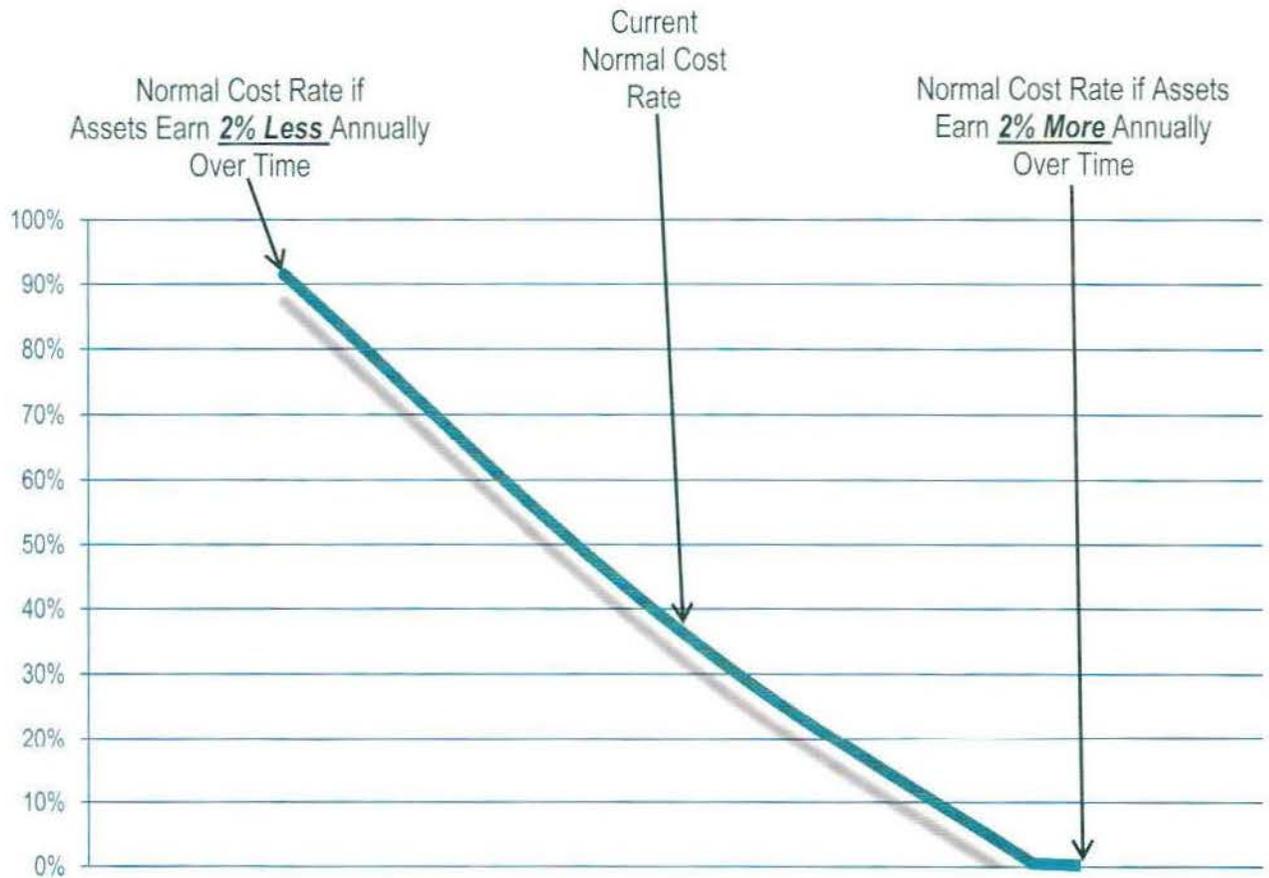
Table I-A  
(continued)

The minimum required contribution rate of 38.52% includes both the District contribution and the allowable Chapter 175 contribution. In addition, employees are required to contribute 3.50% of pensionable earnings. The actual District contribution rate is expected to be approximately 30.88% based on the allowable Chapter 175 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	46.12%
Increase (decrease) due to investment gains and losses	-0.61%
Increase (decrease) due to demographic experience	-3.25%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	-2.09%
Increase (decrease) due to actuarial method changes	0.00%
Decrease due to OPEB asset transfer	-2.98%
Current normal cost rate	<u>37.19%</u>



## Present Value of Future Benefits

Table I-D

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$38,246,240	\$38,246,240	\$37,572,785
Termination benefits	\$1,701,509	\$1,701,509	\$1,665,740
Disability benefits	\$1,662,010	\$1,662,010	\$1,638,579
Death benefits	\$402,177	\$402,177	\$537,864
Refund of employee contributions	\$36,460	\$36,460	\$36,450
Sub-total	<b>\$42,048,396</b>	<b>\$42,048,396</b>	<b>\$41,451,418</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>\$562</b>	<b>\$562</b>	<b>\$562</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$7,907,647	\$7,907,647	\$7,821,531
Disability retirements	\$1,782,599	\$1,782,599	\$1,753,609
Beneficiaries receiving	\$128,366	\$128,366	\$127,272
DROP participants	\$3,408,025	\$3,408,025	\$3,375,815
Sub-total	<b>\$13,226,637</b>	<b>\$13,226,637</b>	<b>\$13,078,227</b>
<u>Grand Total</u>	<b>\$55,275,595</b>	<b>\$55,275,595</b>	<b>\$54,530,207</b>
Present Value of Future Payroll	\$34,781,831	\$34,781,831	\$34,720,004
Present Value of Future Employee Contribs.	\$1,217,359	\$1,217,359	\$1,215,205
Present Value of Future Employer Contribs.	\$13,664,445	\$13,664,445	\$12,913,757



## Present Value of Accrued Benefits

Table I-E

	<u>Old Assumptions w/o Amendment</u>	<u>Old Assumptions w/ Amendment</u>	<u>New Assumptions w/ Amendment</u>
<i><u>Actively Employed Participants</u></i>			
Retirement benefits	\$21,522,709	\$21,522,709	\$21,153,962
Termination benefits	\$1,135,301	\$1,135,301	\$1,111,466
Disability benefits	\$1,077,426	\$1,077,426	\$1,062,779
Death benefits	\$275,461	\$275,461	\$366,368
Refund of employee contributions	\$12,894	\$12,894	\$12,892
Sub-total	<b>\$24,023,791</b>	<b>\$24,023,791</b>	<b>\$23,707,467</b>
<i><u>Deferred Vested Participants</u></i>			
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>
<i><u>Due a Refund of Contributions</u></i>	<b>\$562</b>	<b>\$562</b>	<b>\$562</b>
<i><u>Deferred Beneficiaries</u></i>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<i><u>Retired Participants</u></i>			
Service retirements	\$7,907,647	\$7,907,647	\$7,821,531
Disability retirements	\$1,782,599	\$1,782,599	\$1,753,609
Beneficiaries receiving	\$128,366	\$128,366	\$127,272
DROP participants	\$3,408,025	\$3,408,025	\$3,375,815
Sub-total	<b>\$13,226,637</b>	<b>\$13,226,637</b>	<b>\$13,078,227</b>
<i><u>Grand Total</u></i>	<b><u>\$37,250,990</u></b>	<b><u>\$37,250,990</u></b>	<b><u>\$36,786,256</u></b>
<i><u>Funded Percentage</u></i>	111.18%	111.18%	112.58%

(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 w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<i>Actively Employed Participants</i>			
Retirement benefits	\$20,257,085	\$20,257,085	\$19,907,262
Termination benefits	\$1,105,562	\$1,105,562	\$1,082,364
Disability benefits	\$1,077,426	\$1,077,426	\$1,062,779
Death benefits	\$275,461	\$275,461	\$366,368
Refund of employee contributions	\$17,336	\$17,336	\$17,329
Sub-total	<b>\$22,732,870</b>	<b>\$22,732,870</b>	<b>\$22,436,102</b>
<i>Deferred Vested Participants</i>			
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>
<i>Due a Refund of Contributions</i>	<b>\$562</b>	<b>\$562</b>	<b>\$562</b>
<i>Deferred Beneficiaries</i>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<i>Retired Participants</i>			
Service retirements	\$7,907,647	\$7,907,647	\$7,821,531
Disability retirements	\$1,782,599	\$1,782,599	\$1,753,609
Beneficiaries receiving	\$128,366	\$128,366	\$127,272
DROP participants	\$3,408,025	\$3,408,025	\$3,375,815
Sub-total	<b>\$13,226,637</b>	<b>\$13,226,637</b>	<b>\$13,078,227</b>
<i>Grand Total</i>	<b><u>\$35,960,069</u></b>	<b><u>\$35,960,069</u></b>	<b><u>\$35,514,891</u></b>



## Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<i><u>Actively Employed Participants</u></i>			
Retirement benefits	\$29,611,907	\$29,611,907	\$29,105,719
Termination benefits	\$1,336,367	\$1,336,367	\$1,308,375
Disability benefits	\$1,283,197	\$1,283,197	\$1,265,495
Death benefits	\$308,296	\$308,296	\$413,306
Refund of employee contributions	\$14,853	\$14,853	\$14,850
Sub-total	<b>\$32,554,620</b>	<b>\$32,554,620</b>	<b>\$32,107,745</b>
<i><u>Deferred Vested Participants</u></i>			
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>
<i><u>Due a Refund of Contributions</u></i>	<b>\$562</b>	<b>\$562</b>	<b>\$562</b>
<i><u>Deferred Beneficiaries</u></i>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<i><u>Retired Participants</u></i>			
Service retirements	\$7,907,647	\$7,907,647	\$7,821,531
Disability retirements	\$1,782,599	\$1,782,599	\$1,753,609
Beneficiaries receiving	\$128,366	\$128,366	\$127,272
DROP participants	\$3,408,025	\$3,408,025	\$3,375,815
Sub-total	<b>\$13,226,637</b>	<b>\$13,226,637</b>	<b>\$13,078,227</b>
<i><u>Grand Total</u></i>	<b>\$45,781,819</b>	<b>\$45,781,819</b>	<b>\$45,186,534</b>



Actuarial Value of Assets

Table II-A

Market Value of Assets as of October 1, 2018	\$42,564,666
Minus DROP account balances	(\$1,070,314)
Minus advance employer contributions	(\$469,243)
Minus excess Chapter 175/185 contributions	(\$78,562)
<b>Actuarial Value of Assets as of October 1, 2018</b>	<b><u>\$40,946,547</u></b>

<b>Historical Actuarial Value of Assets</b>	
October 1, 2009	\$9,778,891
October 1, 2010	\$12,806,292
October 1, 2011	\$14,407,208
October 1, 2012	\$18,425,606
October 1, 2013	\$21,754,439
October 1, 2014	\$24,788,582
October 1, 2015	\$25,839,564
October 1, 2016	\$29,496,972
October 1, 2017	\$35,412,405
October 1, 2018	\$40,946,547

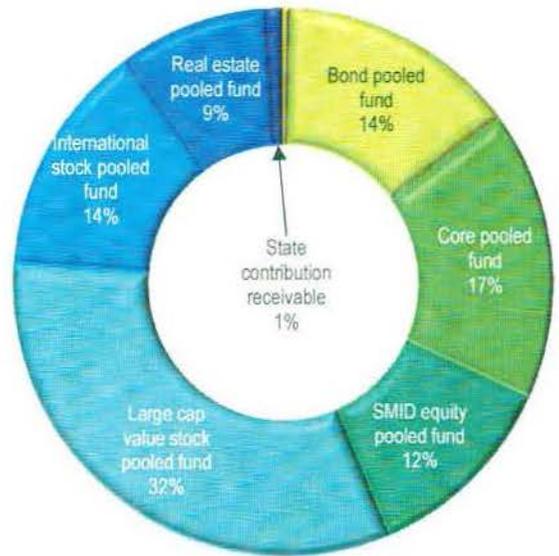


Market Value of Assets

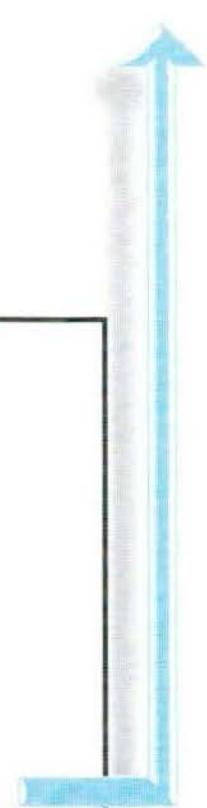
Table II-B

As of October 1, 2018

<b>Market Value of Assets</b>	<b><u>\$42,564,666</u></b>
Cash	\$168,630
Bond pooled fund	\$6,112,844
Core pooled fund	\$7,251,098
SMID equity pooled fund	\$5,058,906
Large cap value stock pooled fund	\$13,785,517
International stock pooled fund	\$5,986,371
Real estate pooled fund	\$3,794,179
State contribution receivable	\$407,121

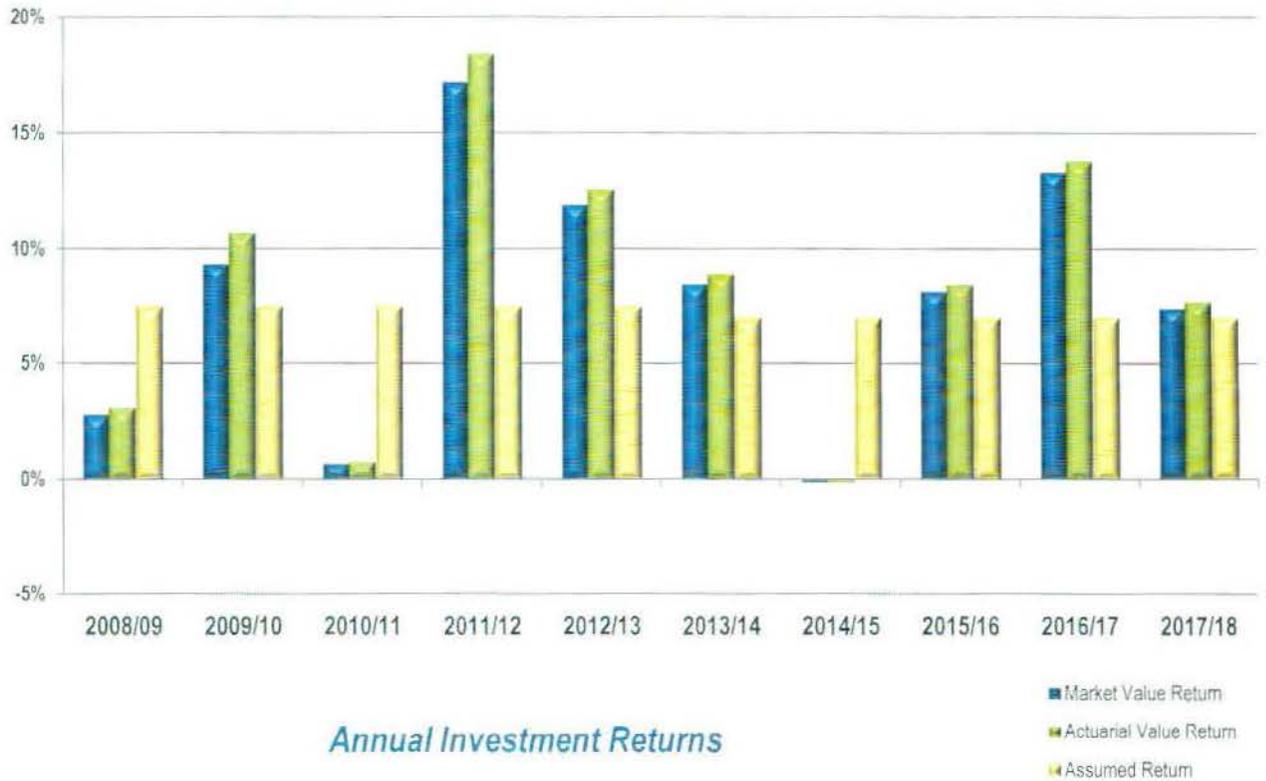


Historical Market Value of Assets	
October 1, 2009	\$11,531,839
October 1, 2010	\$14,165,249
October 1, 2011	\$15,576,823
October 1, 2012	\$19,409,374
October 1, 2013	\$22,836,219
October 1, 2014	\$26,085,813
October 1, 2015	\$26,747,732
October 1, 2016	\$30,527,026
October 1, 2017	\$36,627,689
October 1, 2018	\$42,564,666



Investment Return

Table II-C



Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2008/09	2.81%	3.11%	7.50%
2009/10	9.34%	10.70%	7.50%
2010/11	0.68%	0.75%	7.50%
2011/12	17.18%	18.41%	7.50%
2012/13	11.92%	12.58%	7.50%
2013/14	8.45%	8.90%	7.00%
2014/15	-0.11%	-0.11%	7.00%
2015/16	8.14%	8.43%	7.00%
2016/17	13.33%	13.83%	7.00%
2017/18	7.41%	7.69%	7.00%
10yr. Avg.	7.79%	8.28%	7.25%



## Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of October 1, 2017	\$36,627,689	\$35,412,405
<i>Increases Due To:</i>		
Employer Contributions	\$3,527,797	\$3,527,797
Chapter 175/185 Contributions	\$410,300	\$410,300
Employee Contributions	\$191,645	\$191,645
Service Purchase Contributions	\$0	\$0
Total Contributions	<u>\$4,129,742</u>	<u>\$4,129,742</u>
Interest and Dividends	\$0	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	\$2,828,414	
Total Investment Income	<u>\$2,828,414</u>	\$2,828,414
Other Income	\$0	
<b>Total Income</b>	<u><b>\$6,958,156</b></u>	<u><b>\$6,958,156</b></u>
<i>Decreases Due To:</i>		
Monthly Benefit Payments	(\$955,125)	(\$955,125)
Refund of Employee Contributions	(\$720)	(\$720)
DROP Credits		(\$112,998)
Total Benefit Payments	<u>(\$955,845)</u>	<u>(\$1,068,843)</u>
Investment Expenses	\$0	
Administrative Expenses	(\$65,334)	(\$65,334)
Advance Employer Contribution		(\$289,837)
Excess Chapter 175/185 Contribution		\$0
<b>Total Expenses</b>	<u><b>(\$1,021,179)</b></u>	<u><b>(\$1,424,014)</b></u>
As of October 1, 2018	<u><u>\$42,564,666</u></u>	<u><u>\$40,946,547</u></u>



## Historical Trust Fund Detail

Table II-E

Income

Plan Year	Employer Contribs.	Chapter Contribs.	Employee Contribs.	Service Purchase Contribs.	Interest / Dividends	Realized Gains / Losses	Unrealized Gains / Losses	Other Income
2008/09	\$862,274	\$463,450	\$151,515	\$0	\$0	\$0	\$319,010	\$0
2009/10	\$1,036,007	\$425,465	\$154,877	\$0	\$0	\$0	\$1,146,562	\$0
2010/11	\$1,144,422	\$398,462	\$146,195	\$0	\$0	\$0	\$101,054	\$0
2011/12	\$907,375	\$429,639	\$139,372	\$0	\$0	\$0	\$2,767,695	\$0
2012/13	\$1,598,463	\$408,775	\$136,039	\$0	\$0	\$0	\$2,376,983	\$0
2013/14	\$1,267,372	\$448,192	\$143,926	\$0	\$0	\$0	\$1,982,480	\$0
2014/15	\$1,397,570	\$483,833	\$152,860	\$0	\$0	\$0	-\$28,475	\$0
2015/16	\$1,709,287	\$414,319	\$162,048	\$0	\$0	\$0	\$2,239,144	\$0
2016/17	\$2,133,651	\$403,971	\$170,272	\$0	\$0	\$0	\$4,197,202	\$0
2017/18	\$3,527,797	\$410,300	\$191,645	\$0	\$0	\$0	\$2,828,414	\$0

Expenses

Plan Year	Monthly Benefit Payments	Contrib. Refunds	Admin. Expenses	Invest. Expenses	<u>Other Actuarial Adjustments</u>		
					DROP Credits	Advance Employer Contribs.	Excess Chapter Contribs.
2008/09	\$1,685,869	\$10,590	\$29,435	\$0	\$147,617	\$2,562	\$24,479
2009/10	\$86,037	\$425	\$43,039	\$0	\$183,600	-\$577,591	\$0
2010/11	\$326,691	\$0	\$51,868	\$0	\$131,135	-\$320,477	\$0
2011/12	\$362,065	\$1,262	\$48,203	\$0	\$341,936	-\$527,783	\$0
2012/13	\$1,041,946	\$1,101	\$50,368	\$0	-\$287,641	\$385,653	\$0
2013/14	\$526,686	\$6,682	\$59,008	\$0	\$249,206	-\$42,976	\$9,221
2014/15	\$1,279,900	\$201	\$63,768	\$0	-\$426,533	-\$7,392	\$44,862
2015/16	\$680,847	\$0	\$64,657	\$0	\$285,006	-\$163,120	\$0
2016/17	\$739,639	\$0	\$64,794	\$0	\$315,041	-\$129,811	\$0
2017/18	\$955,125	\$720	\$65,334	\$0	\$112,998	\$289,837	\$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	\$179,406
Additional Employer Contribution	\$3,938,097
Immediate reduction of unfunded liability	(\$1,033,133) *
Minimum Required Contribution	(\$2,615,127)
Net Increase in Advance Employer Contribution	\$289,837
Advance Employer Contribution as of October 1, 2018	\$469,243

Excess Chapter 175/185 Contribution

Excess Chapter 175/185 Contribution as of October 1, 2017	\$78,562
Additional Chapter 175/185 Contribution	\$410,300
Allowable Chapter 175/185 Contribution	(\$410,300)
Net Increase in Excess Chapter 175/185 Contribution	\$0
Excess Chapter 175/185 Contribution as of October 1, 2018	\$78,562

DROP Account Reconciliation

DROP Balance as of October 1, 2017	\$957,316
DROP Benefit Credits	\$249,267
DROP Investment Credits	\$59,929
DROP Benefits Paid Out	(\$196,198)
Net DROP Credit	\$112,998
DROP Balance as of October 1, 2018	\$1,070,314

\* Note: The funds that were transferred from the OPEB trust have been applied as an immediate reduction in the unfunded liability.



## Historical Chapter 175/185 Contributions

Table II-G

**Total Accumulated Excess Chapter 175/185 Contribution** **\$78,562**

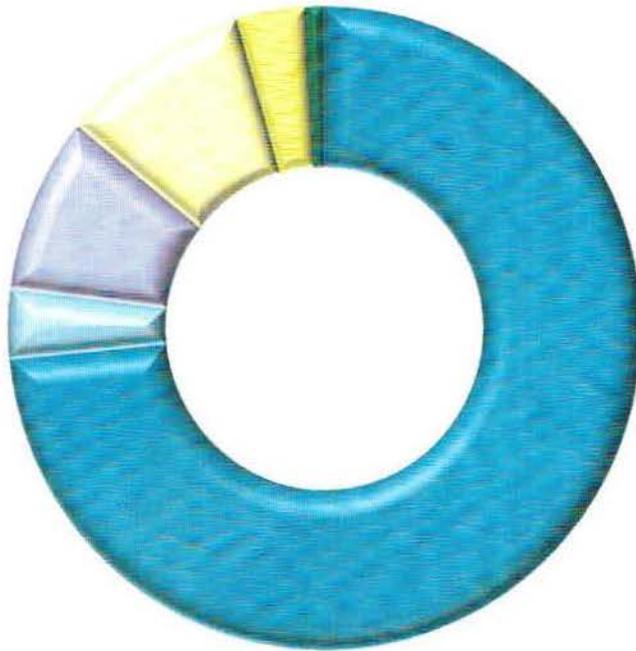
	<u>Chapter 175 Regular Distribution</u>	<u>Chapter 175 Supplemental Distribution</u>	<u>Chapter 185 Distribution</u>	<u>Allowable Amount</u>
1998 Distribution	\$38,443	\$0	\$0	(\$38,443)
1999 Distribution	\$49,368	\$0	\$0	(\$49,368)
2000 Distribution	\$76,102	\$0	\$0	(\$76,102)
2001 Distribution	\$99,756	\$0	\$0	(\$99,756)
2002 Distribution	\$132,354	\$0	\$0	(\$132,354)
2003 Distribution	\$158,638	\$0	\$0	(\$158,638)
2004 Distribution	\$196,521	\$0	\$0	(\$196,521)
2005 Distribution	\$239,425	\$0	\$0	(\$239,425)
2006 Distribution	\$273,425	\$4,264	\$0	(\$277,689)
2007 Distribution	\$297,089	\$135,382	\$0	(\$432,471)
2008 Distribution	\$329,717	\$133,733	\$0	(\$438,971)
2009 Distribution	\$324,870	\$100,595	\$0	(\$425,465)
2010 Distribution	\$324,070	\$74,392	\$0	(\$398,462)
2011 Distribution	\$333,648	\$95,991	\$0	(\$429,639)
2012 Distribution	\$304,728	\$104,047	\$0	(\$408,775)
2013 Distribution	\$315,742	\$132,450	\$0	(\$438,971)
2014 Distribution	\$348,350	\$135,483	\$0	(\$438,971)
2015 Distribution	\$356,502	\$57,817	\$0	(\$414,319)
2016 Distribution	\$380,171	\$23,800	\$0	(\$403,971)
2017 Distribution	\$407,121	\$3,179	\$0	(\$410,300)



Summary of Participant Data

Table III-A

As of October 1, 2018



Participant Distribution by Status

<u>Actively Employed Participants</u>		
◆	Active Participants	83
◆	DROP Participants	4
<u>Inactive Participants</u>		
◆	Deferred Vested Participants	0
◆	Due a Refund of Contributions	10
◆	Deferred Beneficiaries	0
<u>Participants Receiving a Benefit</u>		
◆	Service Retirements	11
◆	Disability Retirements	4
◆	Beneficiaries Receiving	1
<b>Total Participants</b>		<b>113</b>

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	89	2	22	4	117
October 1, 2010	82	2	25	5	114
October 1, 2011	81	4	26	9	120
October 1, 2012	77	4	24	11	116
October 1, 2013	74	3	25	12	114
October 1, 2014	72	4	15	12	103
October 1, 2015	73	4	13	14	104
October 1, 2016	71	6	13	14	104
October 1, 2017	73	5	13	15	106
October 1, 2018	83	4	10	16	113



Data Reconciliation

Table III-B

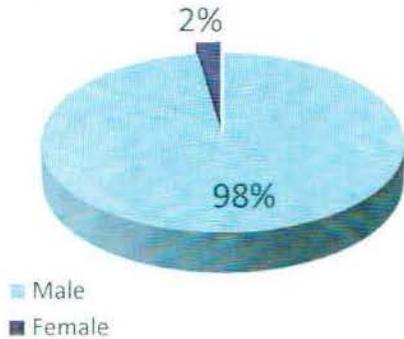
	<u>Active</u>	<u>DROP</u>	<u>Deferred Vested</u>	<u>Due a Refund</u>	<u>Def. Benef.</u>	<u>Service Retiree</u>	<u>Disabled Retiree</u>	<u>Benef. Rec'v.</u>	<u>Total</u>
<u>October 1, 2017</u>	73	5	0	13	0	10	4	1	106
<u>Change in Status</u>									
Re-employed									
Terminated	(1)			1					
Retired		(1)				1			
<u>Participation Ended</u>									
Transferred Out									
Cashed Out				(4)					(4)
Died									
<u>Participation Began</u>									
Newly Hired	11								11
Transferred In									
New Beneficiary									
<u>Other Adjustment</u>									
<u>October 1, 2018</u>	83	4	0	10	0	11	4	1	113



Active Participant Data

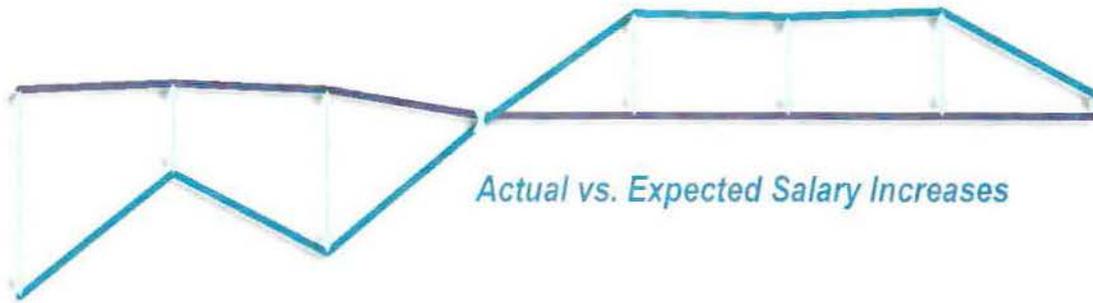
Table III-C

Gender Mix



As of October 1, 2018

Average Age	41.1 years
Average Service	13.5 years
Total Annualized Compensation for the Prior Year	\$5,607,464
Total Expected Compensation for the Current Year	\$5,372,667
Average Increase in Compensation for the Prior Year	5.02%
Expected Increase in Compensation for the Current Year	4.50%
Accumulated Contributions for Active Employees	\$1,964,249



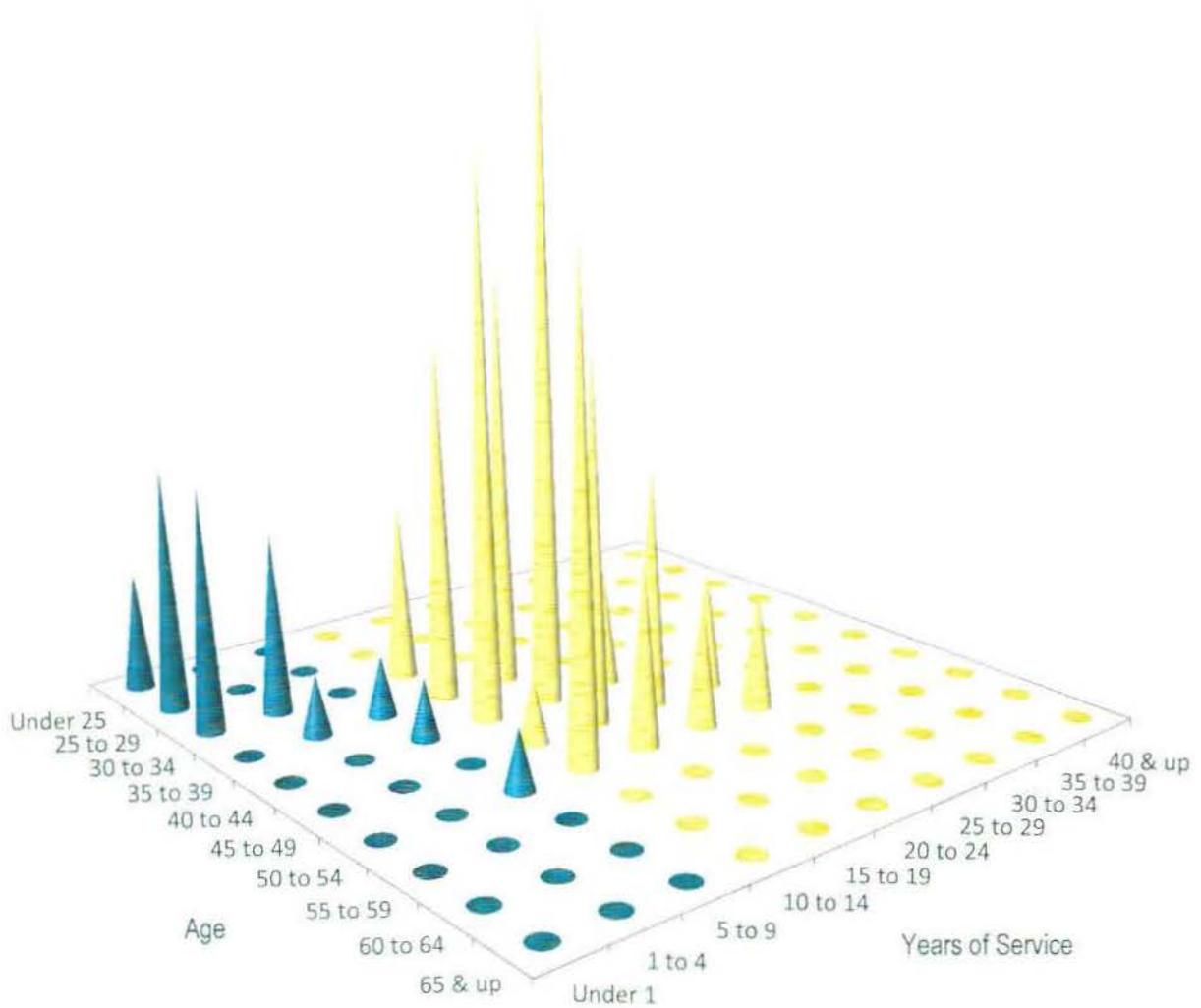
Active Participant Statistics From Prior Valuations

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 2009	36.2	8.7	\$47,154	5.20%	2.14%
October 1, 2010	37.7	10.1	\$53,650	5.43%	5.94%
October 1, 2011	37.0	9.6	\$48,778	5.13%	0.21%
October 1, 2012	37.9	10.5	\$50,965	5.27%	3.14%
October 1, 2013	39.3	11.7	\$52,471	5.12%	1.23%
October 1, 2014	40.2	12.7	\$56,296	4.50%	4.32%
October 1, 2015	40.6	13.0	\$58,976	4.50%	6.91%
October 1, 2016	41.3	13.8	\$63,870	4.50%	6.83%
October 1, 2017	42.0	14.4	\$67,478	4.50%	6.97%
October 1, 2018	41.1	13.5	\$67,560	4.50%	5.02%



Active Age-Service Distribution

Table III-D



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



Active Age-Service-Salary Table

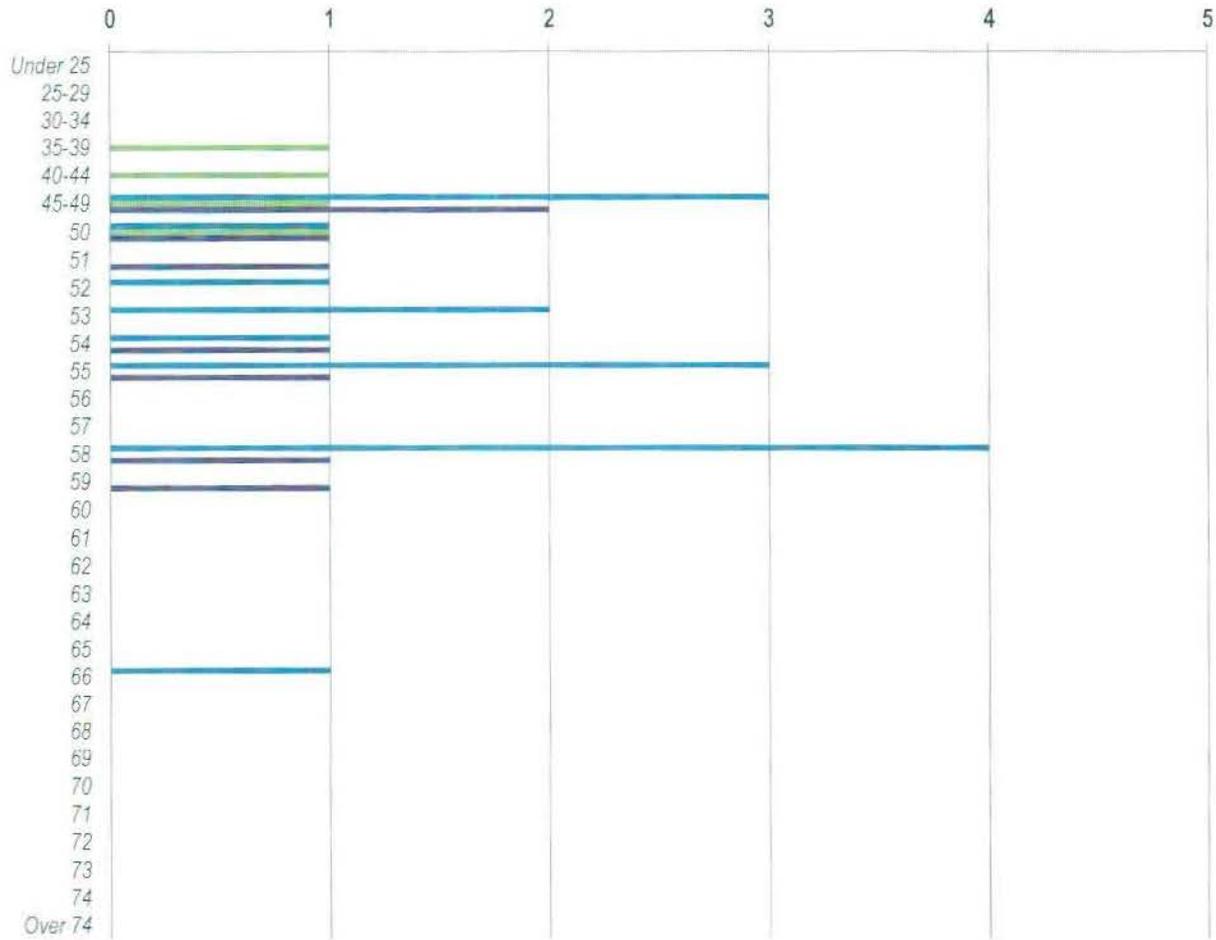
Table III-E

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	2	0	0	0	0	0	0	0	0	0	2
Avg. Pay	42,415	0	0	0	0	0	0	0	0	0	42,415
25 to 29	4	0	0	0	0	0	0	0	0	0	4
Avg. Pay	42,832	0	0	0	0	0	0	0	0	0	42,832
30 to 34	4	3	0	3	0	0	0	0	0	0	10
Avg. Pay	43,747	51,436	0	68,999	0	0	0	0	0	0	53,629
35 to 39	0	1	1	6	7	0	0	0	0	0	15
Avg. Pay	0	59,299	65,187	65,697	73,379	0	0	0	0	0	68,822
40 to 44	0	0	1	9	11	2	0	0	0	0	23
Avg. Pay	0	0	58,693	67,430	70,818	73,566	0	0	0	0	69,204
45 to 49	0	0	0	1	6	4	2	0	0	0	13
Avg. Pay	0	0	0	77,429	70,107	81,085	80,603	0	0	0	75,662
50 to 54	0	0	1	8	3	2	2	0	0	0	16
Avg. Pay	0	0	65,795	69,931	71,926	93,792	89,389	0	0	0	75,462
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
<b>Total</b>	<b>10</b>	<b>4</b>	<b>3</b>	<b>27</b>	<b>27</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83</b>
Avg. Pay	43,115	53,402	63,225	68,331	71,447	82,382	84,996	0	0	0	67,560



Inactive Participant Data

Table III-F



Age at Retirement

- Service Retirements
- Disability Retirements
- DROP Participants

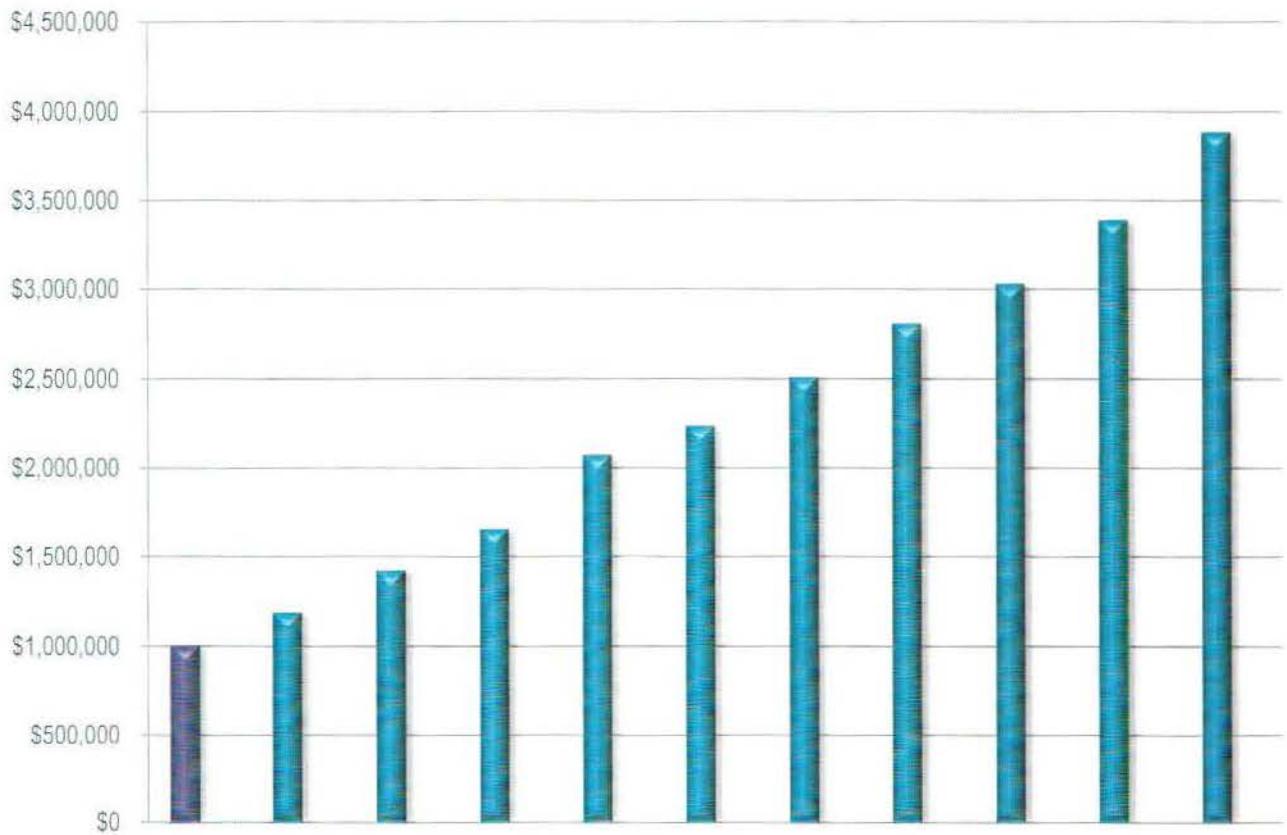
Average Monthly Benefit

Service Retirements	\$4,689.10
Disability Retirements	\$2,893.89
Beneficiaries Receiving	\$857.03
DROP Participants	\$5,370.03
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 \$1,008,914

Projected

For the period October 1, 2018 through September 30, 2019 \$1,189,937  
 For the period October 1, 2019 through September 30, 2020 \$1,423,063  
 For the period October 1, 2020 through September 30, 2021 \$1,654,371  
 For the period October 1, 2021 through September 30, 2022 \$2,077,624  
 For the period October 1, 2022 through September 30, 2023 \$2,242,000  
 For the period October 1, 2023 through September 30, 2024 \$2,512,875  
 For the period October 1, 2024 through September 30, 2025 \$2,811,665  
 For the period October 1, 2025 through September 30, 2026 \$3,033,966  
 For the period October 1, 2026 through September 30, 2027 \$3,392,224  
 For the period October 1, 2027 through September 30, 2028 \$3,886,417



## 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 4.50% per annum, unless actual plan compensation is known for a prior plan year.

5. **Decrements**

- Pre-retirement mortality: Sex-distinct rates set forth in the RP-2000 Blue Collar Mortality Table, with full generational improvements in mortality using Scale BB
- 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: Age- and gender-based rates of disability were assumed, ranging from 0.067% for males and 0.040% for females at age 25, 0.119% for males and 0.118% for females at age 35, 0.462% for males and 0.435% for females at age 45, and 1.000% for males and 0.840% for females at age 55; all disabilities are assumed to be service-related.



## Summary of Actuarial Methods and Assumptions

## Table IV-A

(continued)

- Termination: With respect to participants with less than 10 years of service, the termination rates are both gender- and service-based, ranging from 15.00% for males and 10.01% for females with less than two years of service to 4.30% for males and 4.75% for females with between eight and 10 years of service; with respect to participants with at least 10 years of service, the termination rates are both gender- and age-based, ranging from 4.28% for males and 5.41% for females at age 25 to 0.00% for both genders at age 55.
- Retirement: For those participants who have met the age and service requirements to retire, retirement is assumed to occur at the rate of 10% per year during each of the three years prior to normal retirement age; alternatively, 40% of participants who reach their normal retirement age are assumed to retire immediately, with 20% assumed to retire during each of the next two years after the attainment of normal retirement age and 100% assumed to retire three years after the attainment of normal retirement age. No early retirements are assumed to occur prior to age 50.

**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 1.00% 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 mortality basis was changed from the RP-2000 Combined Mortality Table to the RP-2000 Blue Collar Mortality Table, both with full generational improvements using Scale BB.

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, 2013, the interest (or discount) rate was decreased from 7.50% per annum to 7.00% per annum.*
- (3) *Effective October 1, 2013, the assumed increase in future salaries was changed from a range of rates based on service (8.00% for employees with less than one year of service, 7.00% for employees with at least one but less than two years of service, 6.00% for employees with at least two but less than three years of service, 5.50% for employees with at least three but less than four years of service, and 5.20% for all other employees) to a flat 4.50% per year.*
- (4) *Effective October 1, 2013, the mortality basis was changed from the RP-2000 Mortality Table, projected to 2007 by Scale AA, to the RP-2000 Mortality Table, projected to 2015 by Scale AA, both as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430.*
- (5) *Effective October 1, 2009, the mortality basis was changed from the 1983 Group Annuity Mortality Table to the male rates set forth in the RP-2000 Mortality Table for annuitants and non-annuitants, projected to 2007 by Scale AA.*
- (6) *Effective October 1, 2009, the administrative expense assumption was changed from a flat \$20,000 per year to a 1.00% loading of the total projected benefit liability.*



## Summary of Plan Provisions

Table V-A

### 1. Monthly Accrued Benefit

3.50% of Average Final Compensation multiplied by Credited Service

### 2. Normal Retirement Age and Benefit

- **Age**

Age 55 with at least 10 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); or  
Any other actuarially equivalent form of payment approved by the Board other than a single lump sum payment

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

### 3. Early Retirement Age and Benefit

- **Age**

Age 50 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 District.
- **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 firefighter.
- **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 District-provided disability compensation from exceeding his Average Final Compensation:
  - (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 District.
- **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 District-provided disability compensation from exceeding his Average Final Compensation:
  - (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 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

8. **Pre-Retirement Death Benefit**

In the case of the death of a participant in the line of duty prior to retirement, his beneficiary will receive the greater of the participant's Monthly Accrued Benefit or 50% of the participant's salary payable for life. In the case of the death of a vested participant other than in the line of duty 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.

9. **Average Final Compensation**

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

10. **Compensation**

Fixed monthly compensation or, in the case of voluntary firefighters, actual compensation for services rendered; annual compensation in excess of \$200,000 (as indexed) is excluded in accordance with 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, provided that the participant made all required contributions. In the case of a full-time firefighter, prior service earned before January 12, 2014 as a volunteer firefighter is counted for vesting and eligibility purposes only. In addition, Credited Service includes prior service with the Oneco-Tallevast and Samoset Fire Districts.



Summary of Plan Provisions

Table V-A

(continued)

**12. Participation Requirement**

All firefighters of the Southern Manatee Fire & Rescue District 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 10 years of Credited Service, he receives his Accumulated Contributions in lieu of any other benefits payable from the plan.

**14. Participant Contribution**

3.50% of earnings

**15. Definition of Actuarially Equivalent**

- **Interest Rate**

7.00% per annum

- **Mortality Table**

Unisex mortality table promulgated by the Internal Revenue Service (IRS) for purposes of determining the amount of lump sum distributions pursuant to Internal Revenue Service (IRC) section 417(e)(3)

**16. Plan Effective Date**

March 11, 1997

**17. Deferred Retirement Option Plan (DROP)**

A participant who reaches his Normal Retirement Age is eligible to participate in the DROP for a period of up to 96 months. Interest is credited on the DROP accounts at the rate of 6.50% per annum.

**18. Retiree Health Supplement**

Participants who retire from active service with a normal or disability retirement benefit receive a monthly post-retirement health supplement equal to \$15 for each year of service, with a minimum monthly benefit of \$50 and a maximum monthly benefit of \$450. In addition, this monthly supplement is paid to the participant's eligible spouse during the period that a retirement benefit is payable to the spouse, provided that the participant was either receiving a normal or disability retirement benefit or was eligible for normal retirement at his death.



## Summary of Plan Amendments

Table V-B

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

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*The following additional plan amendments were adopted during the past 10 years and were reflected in prior valuation reports:*

- (1) *During the 2010/11 plan year, the plan was amended to eliminate the optional lump sum distribution.*



DISCLOSURES REQUIRED PURSUANT TO CHAPTER 2013-100, FLORIDA STATUTES

(a) City/District	Southern Manatee FD
(b) Plan Name	Retirement Plan for the Firefighters of the SMFRD
(c) Plan Type	Defined Benefit
(d) Valuation Date	10/1/2018
(e) Interest Rate:	
(1) Discount Rate, net of investment fees	7.00%
(2) Long-Term Expected Rate of Return, net of investment fees	7.00%

With respect to the reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), F.S., the actuarial disclosures required under this section were 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, meet the requirements of Section 112.664(1), F.S., and Section 60T-1.0035, F.A.C.

(f) Certification Statement:

(1) Signature	
(2) Actuary's Name	Charles T. Carr
(3) Enrollment Number	17-04927
(4) Signature Date	1/15/2019
(5) Cover letter attached (pdf)?	N

Section 112.664(1)(a), F.S.

(g) Total pension liability:

(1) Service cost	\$1,614,781
(2) Interest	\$3,072,198
(3) Benefit changes	\$0
(4) Difference between expected and actual experience	\$467,153
(5) Changes in assumptions	(\$585,285)
(6) Benefit payments	(\$1,151,323)
(7) Contribution refunds	(\$720)
(8) Net change in total pension liability	\$3,416,804
(9) Total pension liability - beginning of year	\$42,840,044
(10) Total pension liability - ending of year	\$46,256,848

(h) Plan fiduciary net position:

(1) Contributions - Employer	\$3,237,960
(2) Contributions - State	\$410,300
(3) Contributions - Member	\$191,645
(4) Net investment income	\$2,423,541
(5) Benefit payments	(\$1,151,323)
(6) Contribution refunds	(\$720)
(7) Administrative expenses	(\$65,334)
(8) Other	\$0
(9) Net change in plan fiduciary net position	\$5,046,069
(10) Plan fiduciary net position - beginning of year	\$36,369,721
(11) Plan fiduciary net position - ending of year	\$41,415,790

(i) Net pension liability/(asset) [(g)(10) minus (h)(11)]	\$4,841,058
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Section 112.664(1)(b), F.S.

(j) Total pension liability:

(1) Service cost	\$2,618,984
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(2) Interest	\$2,909,239
(3) Benefit changes	\$0
(4) Difference between expected and actual experience	\$547,207
(5) Changes in assumptions	(\$1,037,957)
(6) Benefit payments	(\$1,151,323)
(7) Contribution refunds	(\$720)
(8) Net change in total pension liability	\$3,885,430
(9) Total pension liability - beginning of year	\$56,134,793
(10) Total pension liability - ending of year	\$60,020,223
 (k) Plan fiduciary net position:	
(1) Contributions - Employer	\$3,237,960
(2) Contributions - State	\$410,300
(3) Contributions - Member	\$191,645
(4) Net investment income	\$2,423,541
(5) Benefit payments	(\$1,151,323)
(6) Contribution refunds	(\$720)
(7) Administrative expenses	(\$65,334)
(8) Other	\$0
(9) Net change in plan fiduciary net position	\$5,046,069
(10) Plan fiduciary net position - beginning of year	\$36,369,721
(11) Plan fiduciary net position - ending of year	\$41,415,790
 (l) Net pension liability/(asset) [(j)(10) minus (k)(11)]	 \$18,604,433

Section 112.664(1)(c), F.S. (on last valuation basis)

(m) Number of Years, and fractional parts of Years, for which the Market Value of Assets are adequate to sustain expected retirement benefits	23.35
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Section 112.664(1)(c), F.S. (on Section 112.664(1)(a), F.S. basis)

(n) Number of Years, and fractional parts of Years, for which the Market Value of Assets are adequate to sustain expected retirement benefits	23.35
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Section 112.664(1)(c), F.S. (on Section 112.664(1)(b), F.S. basis)

(o) Number of Years, and fractional parts of Years, for which the Market Value of Assets are adequate to sustain expected retirement benefits	18.46
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Section 112.664(1)(d), F.S. (on last valuation basis)

(p) Recommended Plan contributions in Annual Dollar Value	\$2,257,634
(q) Recommended Plan contributions as a Percentage of Valuation Payroll	42.02%

Section 112.664(1)(d), F.S. (on Section 112.664(1)(a), F.S. basis)

(r) Recommended Plan contributions in Annual Dollar Value	\$2,257,634
(s) Recommended Plan contributions as a Percentage of Valuation Payroll	42.02%

Section 112.664(1)(d), F.S. (on Section 112.664(1)(b), F.S. basis)

(t) Recommended Plan contributions in Annual Dollar Value	\$5,167,744
(u) Recommended Plan contributions as a Percentage of Valuation Payroll	96.19%

RETIREMENT PLAN FOR THE FIREFIGHTERS  
OF THE SOUTHERN MANATEE FIRE & RESCUE DISTRICT

ACTUARIAL VALUATION  
AS OF OCTOBER 1, 2017

GASB 67/68 SUPPLEMENT  
AS OF SEPTEMBER 30, 2018



## DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN

This report was issued on January 14, 2019 as a supplement to the October 1, 2017 actuarial valuation report, which report provides important information related to the assumptions, participant data, and assets used to prepare the following disclosures under Governmental Accounting Standards Board Statements Nos. 67 and 68 (GASB 67/68).

### NET PENSION LIABILITY AS OF SEPTEMBER 30, 2018

Total pension liability	\$46,287,849 *
Less fiduciary net position	(42,486,104)
<b>Net pension liability</b>	<b>\$3,801,745 **</b>

\* This amount has been rolled forward from October 1, 2017.

\*\* This amount is recognized on the employer's balance sheet.

### PENSION EXPENSE FOR THE 2017/18 FISCAL YEAR

Service cost	\$1,483,450
Other recognized changes in net pension liability:	
Expected interest growth	244,359
Investment gain/loss	(69,844)
Demographic gain/loss	358,862
Employee contributions	(191,645)
Administrative expenses	65,334
Changes in benefit terms	0
Assumption changes	866,935
<b>Pension expense</b>	<b>\$2,757,451 *</b>

\* This amount is recognized on the employer's income statement, along with the employer contribution for the 2017/18 fiscal year.

### DEFERRED INFLOW AND OUTFLOW OF RESOURCES

	Deferred Outflows Of Resources	Deferred Inflows Of Resources
Balance as of September 30, 2017	\$9,623,018	\$4,047,908
Change due to:		
Amortization payments	\$(2,077,087)	\$(921,134)
Investment gain/loss	\$0	\$281,903
Demographic gain/loss	\$935,094	\$0
Assumption changes	\$0	\$0
Total change	\$(1,141,993)	\$(639,231)
Balance as of September 30, 2018	<b>\$8,481,025 *</b>	<b>\$3,408,677 *</b>

\* These amounts are recognized on the employer's balance sheet.

### BALANCE EQUATION

Net pension liability as of September 30, 2017	\$5,485,153
Plus pension expense for the 2017/18 fiscal year	\$2,757,451
Minus employer contribution for the 2017/18 fiscal year	\$(3,938,097)
Plus change in balance of deferred outflows of resources	\$(1,141,993)
Minus change in balance of deferred inflows of resources	\$639,231
Net pension liability as of September 30, 2018	\$3,801,745

**DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)**

**DEFERRED INFLOW AND OUTFLOW OF RESOURCES (continued)**

Amortization schedule for deferred outflows and inflows of resources:

	Deferred Outflows Of Resources	Deferred Inflows Of Resources
Balance as of September 30, 2018	\$8,481,025	\$3,408,677
Amount recognized in the 2018/19 pension expense:		
<i>Investment gain/loss</i>	\$484,537	\$536,018
<i>Demographic gain/loss</i>	\$358,862	\$0
<i>Assumption changes</i>	<u>\$1,233,690</u>	<u>\$366,755</u>
<i>Total</i>	\$2,077,089	\$902,773
Balance as of September 30, 2019	\$6,403,936	\$2,505,904
Amount recognized in the 2019/20 pension expense:		
<i>Investment gain/loss</i>	\$0	\$536,017
<i>Demographic gain/loss</i>	\$358,862	\$0
<i>Assumption changes</i>	<u>\$1,233,690</u>	<u>\$366,755</u>
<i>Total</i>	\$1,592,552	\$902,772
Balance as of September 30, 2020	\$4,811,384	\$1,603,132
Amount recognized in the 2020/21 pension expense:		
<i>Investment gain/loss</i>	\$0	\$472,158
<i>Demographic gain/loss</i>	\$358,862	\$0
<i>Assumption changes</i>	<u>\$1,233,690</u>	<u>\$366,755</u>
<i>Total</i>	\$1,592,552	\$838,913
Balance as of September 30, 2021	\$3,218,832	\$764,219
Amount recognized in the 2021/22 pension expense:		
<i>Investment gain/loss</i>	\$0	\$56,379
<i>Demographic gain/loss</i>	\$336,795	\$0
<i>Assumption changes</i>	<u>\$1,178,832</u>	<u>\$366,755</u>
<i>Total</i>	\$1,515,627	\$423,134
Balance as of September 30, 2022	\$1,703,205	\$341,085
Amount recognized in the 2022/23 pension expense:		
<i>Investment gain/loss</i>	\$0	\$0
<i>Demographic gain/loss</i>	\$160,995	\$0
<i>Assumption changes</i>	<u>\$944,976</u>	<u>\$341,085</u>
<i>Total</i>	\$1,105,971	\$341,085
Balance as of September 30, 2023	\$597,234	\$0

**DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)**

**CHANGES IN THE NET PENSION LIABILITY**

	Total Pension Liability	Fiduciary Net Position	Net Pension Liability
Balance as of September 30, 2017	\$42,112,842	\$(36,627,689)	\$5,485,153
Change due to:			
<i>Service cost</i>	\$1,483,450	\$0	\$1,483,450
<i>Expected interest growth</i>	\$2,908,506	\$(2,664,147)	\$244,359
<i>Unexpected investment income</i>	\$0	\$(281,903)	\$(281,903)
<i>Demographic experience</i>	\$935,094	\$0	\$935,094
<i>Employer contributions</i>	\$0	\$(3,938,097)	\$(3,938,097)
<i>Employee contributions</i>	\$0	\$(191,645)	\$(191,645)
<i>Benefit payments &amp; refunds</i>	\$(1,152,043)	\$1,152,043	\$0
<i>Administrative expenses</i>	\$0	\$65,334	\$65,334
<i>Changes in benefit terms</i>	\$0	\$0	\$0
<i>Assumption changes</i>	\$0	\$0	\$0
Balance as of September 30, 2018	\$46,287,849	\$(42,486,104)	\$3,801,745

**COMPARISON OF NET PENSION LIABILITY USING ALTERNATIVE DISCOUNT RATES**

	Discount Rate Minus 1.00%	7.00% Discount Rate	Discount Rate Plus 1.00%
Total pension liability	\$53,015,444	\$46,287,849	\$40,802,515
Less fiduciary net position	(42,486,104)	(42,486,104)	(42,486,104)
Net pension liability	\$10,529,340	\$3,801,745	\$(1,683,589)

**HISTORICAL TREND INFORMATION**

Measurement Date	Total Pension Liability	Fiduciary Net Position	Net Pension Liability	Funded Percentage	Covered Payroll	Net Pension Liability as a % of Covered Payroll
September 30, 2018	\$46,287,849	\$42,486,104	\$3,801,745	91.79%	\$4,785,662	79.44%
September 30, 2017	\$42,112,842	\$36,627,689	\$5,485,153	86.98%	\$4,470,500	122.70%
September 30, 2016	\$36,507,111	\$30,448,464	\$6,058,647	83.40%	\$4,221,200	143.53%
September 30, 2015	\$25,430,782	\$26,669,170	\$(1,238,388)	104.87%	\$4,067,897	<i>Not applicable</i>
September 30, 2014	\$26,673,369	\$26,052,113	\$621,256	97.67%	\$3,876,548	16.03%
September 30, 2013	\$24,343,810	\$22,811,740	\$1,532,070	93.71%	\$3,876,548	39.52%
October 1, 2012	\$24,417,932	\$18,425,606	\$5,992,326	75.46%	\$3,942,166	152.01%
October 1, 2011	\$22,231,328	\$14,407,208	\$7,824,120	64.81%	\$3,954,450	197.86%
October 1, 2010	\$20,126,718	\$12,806,292	\$7,320,426	63.63%	\$4,315,692	169.62%
October 1, 2009	\$17,500,195	\$9,778,891	\$7,721,304	55.88%	\$4,126,922	187.10%

DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)

HISTORICAL TREND INFORMATION (continued)

Changes in the net pension liability by source

Fiscal Year	Service Cost	Expected Interest Growth	Unexpected Investment Income	Demographic Experience	Employer Contributions	Employee Contributions	Benefit Payments & Refunds	Administrative Expenses	Changes In Benefit Terms	Assumption Changes
2017/18	\$1,483,450	\$244,359	\$(281,903)	\$935,094	\$(3,938,097)	\$(191,645)	\$0	\$65,334	\$0	\$0
2016/17	\$1,378,414	\$417,930	\$(2,078,877)	\$674,713	\$(2,537,622)	\$(170,272)	\$0	\$64,794	\$0	\$1,677,426
2015/16	\$1,229,781	\$(87,754)	\$(319,309)	\$577,969	\$(2,123,606)	\$(162,048)	\$0	\$64,657	\$0	\$8,117,345
2014/15	\$747,705	\$60,231	\$2,422,677	\$53,998	\$(1,836,541)	\$(152,860)	\$56,503	\$63,768	\$0	\$(3,275,125)
2013/14	\$877,974	\$71,513	\$(91,801)	\$0	\$(1,706,343)	\$(143,926)	\$22,761	\$59,008	\$0	\$0

*Note: The amortization period for demographic experience and assumption changes was 8.93 years for the 2014/15 fiscal year, 8.59 years for the 2015/16 fiscal year, 5.81 years for the 2016/17 fiscal year, and 5.52 years for the 2017/18 fiscal year.*

**DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)**

HISTORICAL TREND INFORMATION (continued)

Fiscal Year End	(1) Actuarially Determined Contribution	(2) Contributions Recognized By the Plan	(3) Difference Between (1) and (2)	Covered Payroll	Column (2) as a % of Covered Payroll
September 30, 2018	\$2,615,127	\$3,938,097	\$1,322,970	\$4,785,662	82.29%
September 30, 2017	\$2,667,433	\$2,537,622	\$(129,811)	\$4,470,500	56.76%
September 30, 2016	\$2,286,726	\$2,123,606	\$(163,120)	\$4,221,200	50.31%
September 30, 2015	\$1,843,933	\$1,836,541	\$(7,392)	\$4,067,897	45.15%
September 30, 2014	\$1,749,319	\$1,706,343	\$(42,976)	\$3,876,548	44.02%
September 30, 2013	\$2,007,238	\$2,529,943	\$522,705	\$3,942,166	64.18%
September 30, 2012	\$1,337,014	\$1,337,014	\$0	\$3,954,450	33.81%
September 30, 2011	\$1,542,884	\$1,542,884	\$0	\$4,315,692	35.75%
September 30, 2010	\$1,461,472	\$1,461,472	\$0	\$4,126,922	35.41%
September 30, 2009	\$1,301,245	\$1,301,245	\$0	<i>Not available</i>	<i>Not available</i>

INFORMATION USED TO DETERMINE THE NET PENSION LIABILITY

Employer's reporting date: *September 30, 2018*  
 Measurement date: *September 30, 2018*  
 Actuarial valuation date: *October 1, 2017*

Actuarial assumptions

Discount rate: *7.00% per annum (2.92% per annum is attributable to long-term inflation); this rate was used to discount all future benefit payments.*

Salary increases: *4.50% per annum*

Cost-of-living increases: *None assumed*

Mortality basis: *Sex-distinct rates set forth in the RP-2000 Combined Mortality Table, with full generational improvements in mortality using Scale BB*

Retirement: *10% are assumed to retire at each of the three years prior to normal retirement age, 40% are assumed to retire at normal retirement age, 20% are assumed to retire at each of the two years after normal retirement age, and 100% are assumed to retire three years after normal retirement age; no retirements are assumed prior to age 50.*

Other decrements: *Assumed employment termination is based on gender, age, and service; for participants with less than 10 years of service, termination rates range from 15.00% for males and 10.01% for females with less than two years of service to 4.30% for males and 4.75% for females with between eight and 10 years of service; for participants with at least 10 years of service, termination rates range from 4.28% for males and 5.41% for females at age 25 to 0.00% at age 55. Assumed disability is based on gender and age and ranges from 0.067% for males and 0.040% for females at age 25 to 1.00% for males and 0.84% for females at age 55.*

Non-investment expenses: *Liabilities have been loaded by 1.00% to account for non-investment expenses.*

Future contributions: *Contributions from the employer and employees are assumed to be made as legally required.*

Changes: *No assumptions were changed since the prior measurement date.*

DETERMINATION OF THE LONG-TERM EXPECTED RATE OF RETURN ON PLAN ASSETS

Investment Category	Target Allocation	Expected Long-Term Real Return
Core bonds	16.00%	0.58% per annum
Multi-sector	24.00%	1.08% per annum
U.S. large cap equity	39.00%	6.08% per annum
U.S. small cap equity	11.00%	6.83% per annum
Non-U.S. equity	10.00%	6.83% per annum
Total or weighted arithmetic average	100.00%	4.08% per annum

## DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)

### PENSION PLAN DESCRIPTION

Name of the pension plan:	<i>Retirement Plan for the Firefighters of the Southern Manatee Fire &amp; Rescue District</i>
Legal plan administrator:	<i>Board of Trustees of the Retirement Plan for the Firefighters of the Southern Manatee Fire &amp; Rescue District</i>
Plan type:	<i>Single-employer defined benefit pension plan</i>
Number of covered individuals:	<i>106 (15 inactive employees and beneficiaries currently receiving benefits; 13 inactive employees entitled to but not yet receiving benefits; 78 active employees)</i>
Contribution requirement:	<i>Employer contributions are actuarially determined; employees must contribute 3.50% of pensionable earnings; employee contribution requirement may be amended by District resolution, but employer contribution requirement is subject to State minimums.</i>
Pension plan reporting:	<i>The plan issues a stand-alone financial report each year, which contains information about the plan's fiduciary net position. The plan's fiduciary net position has been determined on the same basis used by the pension plan and is equal to the market value of assets calculated under the accrual basis of accounting. This report is available to the public at the plan's administrative office: Retirement Department, Florida League of Cities, Inc., P. O. Box 1757, Tallahassee, FL 32302, (800) 342-8112.</i>

### Description of the benefit terms

Employees covered:	<i>Firefighters employed by the Southern Manatee Fire &amp; Rescue District</i>
Types of benefits offered:	<i>Retirement, disability, and pre-retirement death benefits</i>
Basic pension formula:	<i>3.50% of average earnings x service</i>
Early retirement adjustment:	<i>Retirement benefit is reduced by 3% for each year by which the participant's early retirement age precedes his normal retirement age.</i>
Disability pension:	<i>Larger of basic pension formula or 42% of average earnings (for service-connected disabilities) Larger of basic pension formula or 25% of average earnings (for non-service-connected disabilities if the participant has earned at least 10 years of service) Disability benefits are offset as necessary to preclude the total of the disability benefit, worker's compensation, and other District-provided disability compensation from exceeding average earnings.</i>
Pre-retirement death benefit:	<i>Greater of 50% of salary or basic pension formula (payable for life to the beneficiary of a participant who dies in the line of duty) Basic pension formula (payable for 10 years to the beneficiary of a vested participant) Return of accumulated employee contributions (payable to the beneficiary of a non-vested participant)</i>
Normal retirement age:	<i>Age 55 with at least 10 years of service, or Any age with at least 25 years of service</i>
Early retirement age:	<i>Any age with at least 10 years of service</i>
Vesting requirement:	<i>100% vesting after 10 years of service</i>
Form of payment:	<i>Actuarially increased single life annuity 10-year certain and life annuity Actuarially equivalent 50%, 66⅔%, 75%, or 100% joint and contingent annuity Any other actuarially equivalent form of payment approved by the Board of Trustees</i>
Average earnings:	<i>Average of the highest three years of fixed monthly compensation out of the last 10 years</i>
Cost-of-living adjustment:	<i>None provided</i>
DROP:	<i>A deferred retirement option plan (DROP) is available to those participants who have attained their normal retirement age and individuals may participate in the DROP for up to 96 months; DROP accounts are credited with interest at the rate of 6.50% per annum.</i>
Health supplement:	<i>\$15 per month x service; minimum benefit is \$50 per month; maximum benefit is \$450 per month; benefit is payable for life to the participant; benefit is payable to the participant's spouse with respect to months during which the spouse is entitled to a monthly pension.</i>
Legal authority:	<i>The plan was established effective March 11, 1997 pursuant to a District resolution and has been amended several times since that date.</i>
Changes:	<i>The benefit terms did not change from the prior measurement date.</i>

**DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)**

**PROJECTION OF THE FIDUCIARY NET POSITION**

Date	BOY Balance	Contributions	Benefit Payments	Administrative Expenses	Investment Earnings	EOY Balance
October 1, 2017	\$36,627,689	\$4,129,742	\$1,152,043	\$65,334	\$2,946,050	\$42,486,104
October 1, 2018	\$42,486,104	\$4,315,580	\$1,232,834	\$67,947	\$3,077,761	\$48,578,664
October 1, 2019	\$48,578,664	\$4,509,781	\$1,442,666	\$70,665	\$3,503,608	\$55,078,722
October 1, 2020	\$55,078,722	\$3,931,939	\$1,754,891	\$73,492	\$3,927,890	\$61,110,168
October 1, 2021	\$61,110,168	\$0	\$2,039,043	\$76,432	\$4,204,922	\$63,199,615
October 1, 2022	\$63,199,615	\$0	\$2,203,822	\$79,489	\$4,345,409	\$65,261,713
October 1, 2023	\$65,261,713	\$0	\$2,469,129	\$82,668	\$4,480,518	\$67,190,434
October 1, 2024	\$67,190,434	\$0	\$2,759,674	\$85,975	\$4,605,417	\$68,950,202
October 1, 2025	\$68,950,202	\$0	\$2,973,374	\$89,414	\$4,721,130	\$70,608,544
October 1, 2026	\$70,608,544	\$0	\$3,316,252	\$92,991	\$4,825,293	\$72,024,594
October 1, 2027	\$72,024,594	\$0	\$3,791,444	\$96,710	\$4,907,938	\$73,044,378
October 1, 2028	\$73,044,378	\$0	\$4,091,008	\$100,579	\$4,968,882	\$73,821,673
October 1, 2029	\$73,821,673	\$0	\$4,454,339	\$104,602	\$5,010,653	\$74,273,385
October 1, 2030	\$74,273,385	\$0	\$4,919,557	\$108,786	\$5,026,122	\$74,271,164
October 1, 2031	\$74,271,164	\$0	\$5,112,739	\$113,137	\$5,019,169	\$74,064,457
October 1, 2032	\$74,064,457	\$0	\$5,310,628	\$117,663	\$4,997,735	\$73,633,901
October 1, 2033	\$73,633,901	\$0	\$5,530,047	\$122,369	\$4,959,884	\$72,941,369
October 1, 2034	\$72,941,369	\$0	\$5,628,860	\$127,264	\$4,907,839	\$72,093,084
October 1, 2035	\$72,093,084	\$0	\$5,722,467	\$132,355	\$4,845,063	\$71,083,325
October 1, 2036	\$71,083,325	\$0	\$5,755,404	\$137,649	\$4,773,064	\$69,963,336
October 1, 2037	\$69,963,336	\$0	\$5,766,569	\$143,155	\$4,694,091	\$68,747,703
October 1, 2038	\$68,747,703	\$0	\$5,738,095	\$148,881	\$4,609,780	\$67,470,507
October 1, 2039	\$67,470,507	\$0	\$5,699,374	\$154,836	\$4,521,504	\$66,137,801
October 1, 2040	\$66,137,801	\$0	\$5,687,494	\$161,030	\$4,428,410	\$64,717,687
October 1, 2041	\$64,717,687	\$0	\$5,643,425	\$167,471	\$4,330,297	\$63,237,088
October 1, 2042	\$63,237,088	\$0	\$5,621,394	\$174,170	\$4,227,182	\$61,668,706
October 1, 2043	\$61,668,706	\$0	\$5,581,039	\$181,137	\$4,118,544	\$60,025,074
October 1, 2044	\$60,025,074	\$0	\$5,517,533	\$188,382	\$4,005,426	\$58,324,585
October 1, 2045	\$58,324,585	\$0	\$5,448,933	\$195,917	\$3,888,493	\$56,568,228
October 1, 2046	\$56,568,228	\$0	\$5,376,656	\$203,754	\$3,767,765	\$54,755,583
October 1, 2047	\$54,755,583	\$0	\$5,298,839	\$211,904	\$3,643,277	\$52,888,117
October 1, 2048	\$52,888,117	\$0	\$5,215,997	\$220,380	\$3,515,113	\$50,966,853
October 1, 2049	\$50,966,853	\$0	\$5,126,608	\$229,196	\$3,383,397	\$48,994,446
October 1, 2050	\$48,994,446	\$0	\$5,029,498	\$238,363	\$3,248,354	\$46,974,939
October 1, 2051	\$46,974,939	\$0	\$4,925,847	\$247,898	\$3,110,227	\$44,911,421
October 1, 2052	\$44,911,421	\$0	\$4,813,608	\$257,814	\$2,969,302	\$42,809,301
October 1, 2053	\$42,809,301	\$0	\$4,693,255	\$266,161	\$2,826,007	\$40,675,892
October 1, 2054	\$40,675,892	\$0	\$4,564,765	\$258,874	\$2,681,340	\$38,533,593
October 1, 2055	\$38,533,593	\$0	\$4,427,252	\$251,076	\$2,536,379	\$36,391,644
October 1, 2056	\$36,391,644	\$0	\$4,280,987	\$242,781	\$2,391,761	\$34,259,637
October 1, 2057	\$34,259,637	\$0	\$4,126,443	\$234,016	\$2,248,140	\$32,147,318
October 1, 2058	\$32,147,318	\$0	\$3,964,352	\$224,824	\$2,106,171	\$30,064,313
October 1, 2059	\$30,064,313	\$0	\$3,795,515	\$215,249	\$1,966,499	\$28,020,048
October 1, 2060	\$28,020,048	\$0	\$3,604,577	\$204,421	\$1,830,343	\$26,041,393
October 1, 2061	\$26,041,393	\$0	\$3,428,799	\$194,452	\$1,698,229	\$24,116,371
October 1, 2062	\$24,116,371	\$0	\$3,249,781	\$184,300	\$1,569,986	\$22,252,276
October 1, 2063	\$22,252,276	\$0	\$3,069,670	\$174,085	\$1,446,048	\$20,454,569
October 1, 2064	\$20,454,569	\$0	\$2,888,551	\$163,814	\$1,326,794	\$18,728,998
October 1, 2065	\$18,728,998	\$0	\$2,707,686	\$153,557	\$1,212,580	\$17,080,335
October 1, 2066	\$17,080,335	\$0	\$2,527,110	\$143,316	\$1,103,739	\$15,513,648
October 1, 2067	\$15,513,648	\$0	\$2,348,711	\$133,199	\$1,000,558	\$14,032,296
October 1, 2068	\$14,032,296	\$0	\$2,172,370	\$123,198	\$903,275	\$12,640,003
October 1, 2069	\$12,640,003	\$0	\$1,998,704	\$113,349	\$812,129	\$11,340,079

**DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)****PROJECTION OF THE FIDUCIARY NET POSITION (continued)**

Date	BOY Balance	Contributions	Benefit Payments	Administrative Expenses	Investment Earnings	EOY Balance
October 1, 2070	\$11,340,079	\$0	\$1,829,388	\$103,747	\$727,290	\$10,134,234
October 1, 2071	\$10,134,234	\$0	\$1,642,715	\$93,161	\$649,668	\$9,048,026
October 1, 2072	\$9,048,026	\$0	\$1,491,526	\$84,587	\$579,131	\$8,051,044
October 1, 2073	\$8,051,044	\$0	\$1,349,137	\$76,511	\$514,519	\$7,139,915
October 1, 2074	\$7,139,915	\$0	\$1,214,675	\$68,886	\$455,629	\$6,311,983
October 1, 2075	\$6,311,983	\$0	\$1,090,700	\$61,855	\$402,182	\$5,561,610
October 1, 2076	\$5,561,610	\$0	\$972,625	\$55,159	\$353,949	\$4,887,775
October 1, 2077	\$4,887,775	\$0	\$860,726	\$48,813	\$310,849	\$4,289,085
October 1, 2078	\$4,289,085	\$0	\$767,945	\$43,551	\$272,314	\$3,749,903
October 1, 2079	\$3,749,903	\$0	\$689,498	\$39,102	\$237,424	\$3,258,727
October 1, 2080	\$3,258,727	\$0	\$624,327	\$35,406	\$205,411	\$2,804,405
October 1, 2081	\$2,804,405	\$0	\$557,957	\$31,643	\$176,021	\$2,390,826
October 1, 2082	\$2,390,826	\$0	\$500,412	\$28,379	\$149,163	\$2,011,198
October 1, 2083	\$2,011,198	\$0	\$455,559	\$25,835	\$124,220	\$1,654,024
October 1, 2084	\$1,654,024	\$0	\$406,702	\$23,065	\$100,994	\$1,325,251
October 1, 2085	\$1,325,251	\$0	\$333,688	\$18,924	\$80,635	\$1,053,274
October 1, 2086	\$1,053,274	\$0	\$299,931	\$17,010	\$62,824	\$799,157
October 1, 2087	\$799,157	\$0	\$215,660	\$12,230	\$48,100	\$619,367
October 1, 2088	\$619,367	\$0	\$180,777	\$10,252	\$36,783	\$465,121
October 1, 2089	\$465,121	\$0	\$157,629	\$8,939	\$26,827	\$325,380
October 1, 2090	\$325,380	\$0	\$109,135	\$6,189	\$18,809	\$228,865
October 1, 2091	\$228,865	\$0	\$81,857	\$4,642	\$13,044	\$155,410
October 1, 2092	\$155,410	\$0	\$46,391	\$2,631	\$9,192	\$115,580
October 1, 2093	\$115,580	\$0	\$35,577	\$2,018	\$6,797	\$84,782
October 1, 2094	\$84,782	\$0	\$35,055	\$1,988	\$4,660	\$52,399
October 1, 2095	\$52,399	\$0	\$22,602	\$1,282	\$2,846	\$31,361
October 1, 2096	\$31,361	\$0	\$22,424	\$1,272	\$1,380	\$9,045
October 1, 2097	\$9,045	\$0	\$8,779	\$498	\$314	\$82
October 1, 2098	\$82	\$0	\$0	\$0	\$6	\$88

**NOTES:**

The fiduciary net position is projected to be sufficient to cover all future benefit payments when due. The plan requires only a 7% average investment return per year to avoid a crossover date. The projection shown above does not reflect future new entrants into the pension plan.

**DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)**

AMORTIZATION BASES ATTRIBUTABLE TO UNEXPECTED INVESTMENT INCOME

Payment Year	YEAR DURING WHICH THE GAIN OR LOSS AROSE					TOTAL
	2013/14	2014/15	2015/16	2016/17	2017/18	
2017/18	-\$18,361	\$484,535	-\$63,862	-\$415,775	-\$56,381	-\$69,844
2018/19		\$484,537	-\$63,862	-\$415,775	-\$56,381	-\$51,481
2019/20			-\$63,861	-\$415,775	-\$56,381	-\$536,017
2020/21				-\$415,777	-\$56,381	-\$472,158
2021/22					-\$56,379	-\$56,379
Remaining Balance	-\$18,361	\$969,072	-\$191,585	-\$1,663,102	-\$281,903	-\$1,185,879

AMORTIZATION BASES ATTRIBUTABLE TO DEMOGRAPHIC EXPERIENCE

Payment Year	YEAR DURING WHICH THE GAIN OR LOSS AROSE				TOTAL
	2014/15	2015/16	2016/17	2017/18	
2017/18	\$6,047	\$67,284	\$116,130	\$169,401	\$358,862
2018/19	\$6,047	\$67,284	\$116,130	\$169,401	\$358,862
2019/20	\$6,047	\$67,284	\$116,130	\$169,401	\$358,862
2020/21	\$6,047	\$67,284	\$116,130	\$169,401	\$358,862
2021/22	\$6,047	\$67,284	\$94,063	\$169,401	\$336,795
2022/23	\$5,622	\$67,284		\$88,089	\$160,995
2023/24		\$39,697			\$39,697
Remaining Balance	\$35,857	\$443,401	\$558,583	\$935,094	\$1,972,935

AMORTIZATION BASES ATTRIBUTABLE TO ASSUMPTION CHANGES

Payment Year	YEAR DURING WHICH THE GAIN OR LOSS AROSE			TOTAL
	2014/15	2015/16	2016/17	
2017/18	-\$366,755	\$944,976	\$288,714	\$866,935
2018/19	-\$366,755	\$944,976	\$288,714	\$866,935
2019/20	-\$366,755	\$944,976	\$288,714	\$866,935
2020/21	-\$366,755	\$944,976	\$288,714	\$866,935
2021/22	-\$366,755	\$944,976	\$233,856	\$812,077
2022/23	-\$341,085	\$944,976		\$603,891
2023/24		\$557,537		\$557,537
Remaining Balance	-\$2,174,860	\$6,227,393	\$1,388,712	\$5,441,245

DISCLOSURES RELATED TO THE FIREFIGHTERS' PENSION PLAN (continued)

SUMMARY OF DEFERRED OUTFLOWS AND INFLOWS AS OF SEPTEMBER 30, 2018

	Deferred Outflows	Deferred Inflows
Unexpected investment income	\$484,537	\$1,600,572
Demographic experience	\$1,614,073	\$0
Assumption changes	\$6,382,415	\$1,808,105
Total	\$8,481,025	\$3,408,677