# Retiremen Plan for the frefighters Of the Southern Manatee Fire \& Resue Distiric 

Actuarlal Valuation<br>As of Octoberl, 2016

Determines the Contribution For the 2016/7 Fiscal Year
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November 25, 2016

## Introduction

This report presents the results of the October 1, 2016 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, 2016 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2016/17 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 2016/17 plan year. The minimum required contribution rate is $54.83 \%$ of covered payroll, which represents an increase of $5.44 \%$ of payroll from the prior valuation.

The normal cost rate is $52.94 \%$, which is $5.25 \%$ greater 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 $1.16 \%$ of payroll due to investment gains, increased by $0.28 \%$ of payroll due to demographic experience, and increased by another $6.13 \%$ of payroll due to the assumption change that is described below. The market value of
assets earned $8.14 \%$ during the 2015/16 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 2016/17 minimum required contribution will be equal to $54.83 \%$ multiplied by the total pensionable earnings for the 2016/17 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 2016/17 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 $\$ 47,257,880$. As illustrated in Table I-A, current assets are sufficient to cover $\$ 29,496,972$ of this amount, the employer's 2016/17 expected contribution will cover $\$ 2,451,014$ of this amount, and future employee contributions are expected to cover $\$ 1,101,438$ of this amount, leaving $\$ 14,208,456$ to be covered by future employer funding beyond the 2016/17 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 1,2016 , the advance employer contribution is $\$ 309,217$, which reflects the advance employer contribution of $\$ 472,337$ as of October 1, 2015 less $\$ 163,120$ that was used to cover the gap between the allowable Chapter 175/185 contribution, actual employer contributions, and the minimum funding requirement for the 2015/16 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 2016/17 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 1,2016 would reduce the normal cost rate to $51.96 \%$ of payroll and would reduce the minimum required contribution for the 2016/17 plan year to $53.81 \%$ of payroll.

## Excess Chapter 175/185 Contributions

As of October 1, 2016, 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 , 2015. The total Chapter $175 / 185$ distribution received during the $2015 / 16$ plan year was $\$ 414,319$, all of which was
allowed to be used to offset the District's minimum required contribution. The Chapter 175/185 contribution consisted of a $\$ 356,502$ regular distribution plus a $\$ 57,817$ supplemental distribution. Table $I I-G$ 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 1,2016 , 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 13 participants who are due a refund of their contributions. We have estimated the accumulated amount of their refunds to be $\$ 1,268$ as of October 1,2016 . The average amount owed to these individuals is only $\$ 98$. 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.

## Assumption Change

Pursuant to the requirements of State law, the mortality basis has been 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. This change increased the minimum required contribution for the 2016/17 plan year by $6.13 \%$ 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. 14-04927

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


For the 2016/17 Plan Year

| Present Value of Future Benefits | $\$ 46,789,980$ |
| ---: | ---: |
| Present Value of Future Administrative Expenses | $\$ 467,900$ |
| Actuarial Value of Assets | $(\$ 29,496,972)$ |
| Present Value of Future Employee Contributions | $(\$ 1,101,438)$ |
| Present Value of Future Normal Costs | $\$ 16,659,470$ |
|  |  |
| Present Value of Future Payroll | $\div \$ 31,469,714$ |
| Normal Cost Rate | $=52.9381 \%$ |
| Expected Payroll | $x \$ 4,470,500$ |

Normal Cost \$2,366,598
Adjustment to Reflect Semi-Monthly Employer Contributions
\$84,416
Preliminary Employer Contribution for the 2016/17 Plan Year
\$2,451,014

Expected Payroll for the 2016/17 Plan Year $\div \$ 4,470,500$
Minimum Required Contribution Rate
54.83\%
(The actual contribution should be based on the minimum required contribution rate multiplied by the actual payroll for the year.)

The minimum required contribution rate of $54.83 \%$ 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 $45.56 \%$ based on the allowable Chapter 175 contribution for the previous year. The chart below shows the expected contribution rate by source for the 2016/17 plan year based on the expected payroll. A comparative chart shows the contribution rate by source for the previous plan year.


## Sensitivity Analysis



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

## Gain and Loss Analysis

Previous normal cost rate ..... 47.69\%
Increase (decrease) due to investment gains and losses ..... -1.16\%
Increase (decrease) due to demographic experience ..... 0.28\%
Increase (decrease) due to plan amendments ..... 0.00\%
Increase (decrease) due to actuarial assumption changes ..... 6.13\%
Increase (decrease) due to actuarial method changes ..... 0.00\%
Current normal cost rate ..... 52.94\%

## Present Value of Future Benefits

Old Assumptions w/o Amendment

Present Value of Future Payroll
Present Value of Future Employee Contribs.
Present Value of Future Employer Contribs.
\$31,492,765
\$1,102,248
\$14,741,797

Old Assumptions
w/ Amendment

| $\$ 28,665,678$ | $\$ 29,907,670$ |
| ---: | ---: |
| $\$ 1,563,596$ | $\$ 1,675,951$ |
| $\$ 1,400,181$ | $\$ 1,452,717$ |
| $\$ 288,985$ | $\$ 356,080$ |
| $\$ 12,486$ | $\$ 12,486$ |
| $\$ 31,930,926$ | $\$ 33,404,904$ |

New Assumptions w/ Amendment

$$
\begin{array}{r}
\$ 28,665,678 \\
\$ 1,563,596 \\
\$ 1,400,181 \\
\$ 288,985 \\
\$ 12,486 \\
\$ 31,930,926
\end{array}
$$

## Deferred Vested Participants

Retirement benefits
Termination benefits
Disability benefits
Death benefits
Refund of employee contributions Sub-total

Due a Refund of Contributions

Deferred Beneficiaries
\$0
Retired Participants
Service retirements
Disability retirements
Beneficiaries receiving
DROP participants Sub-total

Grand Total
Actively Employed Participants
Retirement benefits
Termination benefits
Disability benefits
Death benefits
Refund of employee contributions Sub-total
\$1,268
\$6,656,319
\$1,878,947
$\$ 0$
\$4,424,636
\$12,959,902
\$44,892,096
\$0
\$0
\$0
\$0
\$0
\$0
\$1,268
\$0
\$0
\$0

## \$0

\$0

## \$0

\$0
\$1,268
\$0
\$6,875,394
\$1,951,053
\$0
\$4,557,361
\$13,383,808
\$44,892,096
$\$ 46,789,980$

| $\$ 31,492,765$ | $\$ 31,469,714$ |
| ---: | ---: |
| $\$ 1,102,248$ | $\$ 1,101,438$ |
| $\$ 14,741,797$ | $\$ 16,659,470$ |

## Present Value of Accrued Benefits

Old Assumptions
w/o Amendment

| Old Assumptions | New Assumptions |
| :--- | :--- |
| w/ Amendment | W/Amendment |

Actively Employed Participants
Retirement benefits
Termination benefits
Disability benefits
Death benefits
Refund of employee contributions
Sub-total

Deferred Vested Participants
Retirement benefits
Termination benefits
Disability benefits
Death benefits
Refund of employee contributions
Sub-total

Due a Refund of Contributions

Deferred Beneficiaries
\$13,944,733
\$1,033,458
\$846,545 \$198,621 \$7,962
\$16,031,319

| $\$ 13,944,733$ | $\$ 14,525,282$ |
| ---: | ---: |
| $\$ 1,033,458$ | $\$ 1,106,826$ |
| $\$ 846,545$ | $\$ 877,085$ |
| $\$ 198,621$ | $\$ 241,932$ |
| $\$ 7,962$ | $\$ 7,961$ |
| $\$ 16,031,319$ | $\$ 16,759,086$ |

\$0

## \$0

\$0
\$0
$\$ 0$
\$0
\$1,268
\$0

Retired Participants
Service retirements
Disability retirements
Beneficiaries receiving
DROP participants
Sub-total

Grand Total
\$6,656,319
\$1,878,947
\$0
\$4,424,636
\$12,959,902
\$28,992,489
$\$ 0$
\$0
\$0
\$0
$\$ 0$
\$0
\$1,268
\$0
\$6,656,319 \$6,875,394
\$1,878,947
\$0
\$4,424,636 \$12,959,902
\$28,992,489
\$0
\$0
$\$ 0$
\$0
\$0
\$0
\$1,268

## Present Value of Vested Benefits

Old Assumptions w/o Amendment

Old Assumptions w/ Amendment

New Assumptions w/ Amendment

Actively Employed Participants
Retirement benefits
Termination benefits
Disability benefits
Death benefits
Sub-total
Deferred Vested Participants

Retired Participants
Service retirements
Disability retirements
Beneficiaries receiving
DROP participants
Sub-total

Grand Total

Retirement benefits
Termination benefits
Disability benefits
Death benefits
Refund of employee contributions
Retirement benefits
Termination benefits
Disability benefits
Death benefits
Refund of employee contributions
Retirement benefits
Termination benefits
Disability benefits
Death benefits
Refund of employee contributions
Retirement benefits
Termination benefits
Disability benefits
Death benefits
Refund of employee contributions
Retirement benefits
Termination benefits
Disability benefits
Death benefits
Refund of employee contributions
Sub-total
Due a Refund of Contributions
Deferred Beneficiaries
\$12,963,229
\$998,774
\$846,545
\$198,621
\$15,571
\$15,022,740
\$12,963,229
\$998,774
\$846,545
\$198,621
\$15,571
\$15,022,740
\$13,504,889
\$1,069,393
\$877,085
\$241,932
\$15,569
\$15,708,868
\$0
\$0
\$0
\$0
\$0
\$0
\$1,268
\$0
\$6,656,319
\$1,878,947
\$0
\$4,424,636
\$12,959,902
\$27,983,910
\$0
\$0 \$0
\$0
\$0
\$0
\$0
\$1,268
\$0
\$0

## \$1,268

|  |  |
| ---: | ---: |
| $\$ 6,656,319$ | $\$ 6,875,394$ |
| $\$ 1,878,947$ | $\$ 1,951,053$ |
| $\$ 0$ | $\$ 0$ |
| $\$ 4,424,636$ | $\$ 4,557,361$ |
| $\$ 12,959,902$ | $\$ 13,383,808$ |

\$27,983,910
\$29,093,944

## Entry Age Normal Accrued Liability

Old Assumptions
w/o Amendment

| Old Assumptions | New Assumptions |
| :--- | :---: |
| w/ Amendment | w/ Amendment |

Actively Employed Participants
Retirement benefits
Termination benefits
Disability benefits
Death benefits
Refund of employee contributions
Sub-total
Deferred Vested Participants
Retirement benefits

Disability benefits
Death benefits
Refund of employee contributions
Sub-total

Due a Refund of Contributions

Deferred Beneficiaries

## Termination benefits

$$
\begin{array}{r}
\$ 21,087,369 \\
\$ 1,262,572 \\
\$ 1,079,005 \\
\$ 224,542 \\
\$ 8,293 \\
\$ 23,661,781
\end{array}
$$

Retired Participants
Service retirements
Disability retirements
Beneficiaries receiving
DROP participants
Sub-total

Grand Total
\$0
\$0
\$0
\$0
\$0
\$0
\$1,268
\$0
\$6,656,319
\$1,878,947
\$0
\$4,424,636
\$12,959,902
\$36,622,951

| \$21,087,369 | $\$ 21,988,180$ |
| ---: | ---: |
| $\$ 1,262,572$ | $\$ 1,352,682$ |
| $\$ 1,079,005$ | $\$ 1,118,884$ |
| $\$ 224,542$ | $\$ 275,918$ |
| $\$ 8,293$ | $\$ 8,293$ |
| $\$ 23,661,781$ | $\$ 24,743,957$ |

$$
\$ 4,424,636
$$ \$12,959,902

\$36,622,951

## Actuarial Value of Assets

Market Value of Assets as of October 1, $2016 \quad \$ 30,527,026$
Minus DROP account balances
Minus advance employer contributions
Minus excess Chapter 175/185 contributions
$(\$ 642,275)$
(\$309,217)
$(\$ 78,562)$
Actuarial Value of Assets as of October 1, 2016
\$29,496,972

## Historical Actuarial Value of Assets

October 1, 2007
\$10,178,736
October 1, 2008
\$9,901,143
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


## Historical Market Value of Assets

October 1, 2007
\$11,170,167
October 1, 2008
\$11,461,484
October 1, 2009
\$11,531,839
October 1, 2010 \$14,165,249
October 1, 2011
October 1, 2012
October 1, 2013
October 1, 2014
October 1, 2015
October 1, 2016
\$15,576,823
\$19,409,374
\$22,836,219
\$26,085,813
\$26,747,732
\$30,527,026

Investment Return
Table II-C


|  |  |  |  |
| :--- | ---: | ---: | ---: |
| Plan | Market <br> Value | Actuarial <br> Value | Assumed |
| $\underline{\text { Year }}$ | $\underline{\text { Return }}$ | $\underline{\text { Return }}$ | $\underline{\text { Return }}$ |
| $2006 / 07$ | $11.80 \%$ | $13.09 \%$ | $7.50 \%$ |
| $2007 / 08$ | $-13.08 \%$ | $-14.47 \%$ | $7.50 \%$ |
| $2008 / 09$ | $2.81 \%$ | $3.11 \%$ | $7.50 \%$ |
| $2009 / 10$ | $9.34 \%$ | $10.70 \%$ | $7.50 \%$ |
| $2010 / 11$ | $0.68 \%$ | $0.75 \%$ | $7.50 \%$ |
| $2011 / 12$ | $17.18 \%$ | $18.41 \%$ | $7.50 \%$ |
| $2012 / 13$ | $11.92 \%$ | $12.58 \%$ | $7.50 \%$ |
| $2013 / 14$ | $8.45 \%$ | $8.90 \%$ | $7.00 \%$ |
| $2014 / 15$ | $-0.11 \%$ | $-0.11 \%$ | $7.00 \%$ |
| $2015 / 16$ | $8.14 \%$ | $8.43 \%$ | $7.00 \%$ |
|  |  |  |  |
| $10 y r$. Avg. | $5.39 \%$ | $5.75 \%$ | $7.35 \%$ |
|  |  |  |  |

## Asset Reconciliation

As of October 1, 2015
Increases Due To:
Employer Contributions Chapter 175/185 Contributions

Employee Contributions Service Purchase Contributions

Total Contributions
Interest and Dividends
Realized Gains (Losses)
Unrealized Gains (Losses)
Total Investment Income

Other Income
Total Income

Decreases Due To:

Monthly Benefit Payments
Refund of Employee Contributions DROP Credits
Total Benefit Payments
Investment Expenses
Administrative Expenses
Advance Employer Contribution
Excess Chapter 175/185 Contribution
Total Expenses
As of October 1, 2016

Market Value

| \$30,527,026 |
| :--- |

\$4,524,798
$(\$ 745,504)$
( $\$ 867,390)$
$\$ 29,496,972$

Historical Trust Fund Detail

Income

|  |  |  |  | Service |  | Realized | Unrealized |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Plan | Employer | Chapter | Employee | Purchase | Interest/ | Gains / | Gains / | Other |
| Year | Contribs. | Contribs. | Contribs. | Contribs. | Dividends | Losses | Losses | Income |
| 2006/07 | \$1,054,605 | \$277,689 | \$141,642 | \$76,834 | \$0 | \$0 | \$1,101,297 | \$0 |
| 2007/08 | \$1,342,701 | \$432,471 | \$153,012 | \$40,772 | \$0 | \$0 | -\$1,584,177 | \$0 |
| 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 |

## Expenses

| Monthly |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Plan | Benefit | Contrib. | Admin. | Invest. |
| Year | Payments | Refunds | Expenses | Expenses |
| 2006/07 | \$57,191 | \$1,123 | \$27,436 | \$0 |
| 2007/08 | \$57,191 | \$3,441 | \$32,830 | \$0 |
| 2008/09 | \$1,685,869 | \$10,590 | \$29,435 | \$0 |
| 2009/10 | \$86,037 | \$425 | \$43,039 | \$0 |
| 2010/11 | \$326,691 | \$0 | \$51,868 | \$0 |
| 2011/12 | \$362,065 | \$1,262 | \$48,203 | \$0 |
| 2012/13 | \$1,041,946 | \$1,101 | \$50,368 | \$0 |
| 2013/14 | \$526,686 | \$6,682 | \$59,008 | \$0 |
| 2014/15 | \$1,279,900 | \$201 | \$63,768 | \$0 |
| 2015/16 | \$680,847 | \$0 | \$64,657 | \$0 |


| Other Actuarial Adjustments |  |  |
| ---: | ---: | ---: |
|  | Advance | Excess <br> DROP |
| Employer | Chapter <br> Credits | $\underline{\text { Contribs. }}$ |
| Contribs. |  |  |

[^0]
## Advance Emplover Contribution

Advance Employer Contribution as of October 1, 2015 ..... \$472,337
Additional Employer Contribution ..... \$2,123,606
Minimum Required Contribution ..... (\$2,286,726)
Net Increase in Advance Employer Contribution ..... $(\$ 163,120)$
Advance Employer Contribution as of October 1, 2016 ..... \$309,217
Excess Chapter 175/185 Contribution
Excess Chapter 175/185 Contribution as of October 1, 2015 ..... \$78,562
Additional Chapter 175/185 Contribution ..... \$414,319
Allowable Chapter 175/185 Contribution ..... $(\$ 414,319)$
$\$ 0$
Net Increase in Excess Chapter 175/185 Contribution
Excess Chapter 175/185 Contribution as of October 1, 2016 ..... \$78,562
DROP Account Reconciliation
DROP Balance as of October 1, 2015 ..... \$357,269

| DROP Benefit Credits | $\$ 253,464$ |
| ---: | ---: |
| DROP Investment Credits | $\$ 31,542$ |
| DROP Benefits Paid Out | $\$ 0$ |
| Net DROP Credit | $\$ 285,006$ |

DROP Balance as of October $1,2016 \xlongequal{\$ 642,275}$

|  | Chapter 175 <br> Regular <br> Distribution | Chapter 175 <br> Supplemental <br> Distribution | Chapter 185 <br> Distribution | Allowable <br> Amount |
| :--- | ---: | ---: | ---: | ---: |
| 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 | $\$ 348,350$ | $\$ 135,483$ | $\$ 70$ | $\$ 0$ |
| 2015 Distribution | $\$ 356,502$ | $\$ 57,817$ | $\$ 438,971)$ |  |

Summary of Participant Data

As of October 1, 2016


Participant Distribution by Status

Number of Participants Included in Prior Valuations

|  | Active | DROP | Inactive | Retired | Total |
| :--- | ---: | ---: | ---: | ---: | ---: |
| October 1, 2007 | 87 | 0 | 21 | 3 | 111 |
| October 1, 2008 | N/A | N/A | N/A | N/A | N/A |
| 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 |

Deferred Due a Def. Service Disabled Benef.Active DROP Vested Refund Benef. Retiree Retiree Rec'v. Total

| October 1,2015 | 73 | 4 | 0 | 13 | 0 | 9 | 5 | 0 | 104 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Change in Status
Re-employedTerminatedRetired
Participation Ended
Transferred Out
(2) 2Cashed OutDied
Participation Began
Newly Hired
Transferred In
New Beneficiary
Other Adjustment

| October 1,2016 | 71 | 6 | 0 | 13 | 0 | 9 | 5 | 0 | 104 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Active Participant Data

## Table III-C

Gender Mix

w Male
a Female

As of October 1, 2016
Average Age 41.3 years
Average Service 13.8 years
Total Annualized Compensation for the Prior Year \$4,534,768
Total Expected Compensation for the Current Year \$4,470,500
Average Increase in Compensation for the Prior Year $\quad 9.14 \%$
Expected Increase in Compensation for the Current Year 4.50\%
Accumulated Contributions for Active Employees $\$ 1,602,339$

Actual vs. Expected Salary Increases

## Active Participant Statistics From Prior Valuations

October 1, 2007
October 1, 2008
October 1, 2009
October 1, 2010
October 1, 2011
October 1, 2012
October 1, 2013
October 1, 2014
October 1, 2015
October 1, 2016

|  |  |  | Average <br> Expected | Average <br> Actual |
| :---: | :---: | :---: | :---: | :---: |
| Average | Average | Average | Salary |  |
| Age 379 | Service | Salary | Increase N/A | Increase |
| 37.9 | 9.8 | \$46,671 | N/A | N/A |
| N/A | N/A | N/A | 5.45\% | 7.61\% |
| 36.2 | 8.7 | \$47,154 | 5.20\% | 2.14\% |
| 37.7 | 10.1 | \$53,650 | 5.43\% | 5.94\% |
| 37.0 | 9.6 | \$48,778 | 5.13\% | 0.21\% |
| 37.9 | 10.5 | \$50,965 | 5.27\% | 3.14\% |
| 39.3 | 11.7 | \$52,471 | 5.12\% | 1.23\% |
| 40.2 | 12.7 | \$56,296 | 4.50\% | 4.32\% |
| 40.6 | 13.0 | \$58,976 | 4.50\% | 6.91\% |
| 41.3 | 13.8 | \$63,870 | 4.50\% | 9.14\% |

Active Age-Service Distribution
Table III-D


Eligible to retire
$\triangle$ May be eligible to retire

- Not eligible to retire

| Attained Age | Completed Years of Service |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Under 1 | 1 to 4 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 \& up | Total |
| 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 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Avg.Pay | 0 | 46,529 | 58,386 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52,458 |
| 30 to 34 | 0 | 1 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Avg.Pay | 0 | 46,506 | 54,911 | 62,625 | 0 | 0 | 0 | 0 | 0 | 0 | 58,118 |
| 35 to 39 | 0 | 0 | 2 | 13 | 7 | 1 | 0 | 0 | 0 | 0 | 23 |
| Avg.Pay | 0 | 0 | 53,403 | 61,627 | 65,469 | 62,605 | 0 | 0 | 0 | 0 | 62,124 |
| 40 to 44 | 0 | 0 | 0 | 7 | 8 | 2 | 1 | 0 | 0 | 0 | 18 |
| Avg.Pay | 0 | 0 | 0 | 61,414 | 63,007 | 69,147 | 73,960 | 0 | 0 | 0 | 63,678 |
| 45 to 49 | 0 | 0 | 1 | 0 | 6 | 3 | 1 | 0 | 0 | 0 | 11 |
| Avg.Pay | 0 | 0 | 60,480 | 0 | 67,540 | 81,887 | 91,576 | 0 | 0 | 0 | 72,996 |
| 50 to 54 | 0 | 0 | 1 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 10 |
| Avg.Pay | 0 | 0 | 59,055 | 64,228 | 68,184 | 0 | 0 | 0 | 0 | 0 | 64,502 |
| 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 | 7 | 31 | 23 | 6 | 2 | 0 | 0 | 0 | 71 |
| Avg.Pay | 0 | 46,518 | 56,364 | 62,295 | 65,389 | 74,427 | 82,768 | 0 | 0 | 0 | 63,870 |

## Inactive Participant Data



Average Monthly Benefit

| Service Retirements | $\$ 4,922.74$ |
| ---: | ---: |
| Disability Retirements | $\$ 2,486.52$ |
| Beneficiaries Receiving | Not applicable |
| DROP Participants | $\$ 4,464.13$ |

Deferred Vested Participants Not applicable
Deferred Beneficiaries Not applicable

Projected Benefit Payments


Actual
For the period October 1, 2015 through September 30, 2016
\$934,311

Projected
For the period October 1, 2016 through September 30, 2017
For the period October 1, 2017 through September 30, 2018
For the period October 1, 2018 through September 30, 2019
For the period October 1, 2019 through September 30, 2020
For the period October 1, 2020 through September 30, 2021
For the period October 1, 2021 through September 30, 2022
For the period October 1, 2022 through September 30, 2023
For the period October 1, 2023 through September 30, 2024
For the period October 1, 2024 through September 30, 2025
\$1,080,263

For the period October 1, 2025 through September 30, 2026
\$1,168,658
\$1,250,002
\$1,492,535
\$1,725,299
\$1,995,672
\$2,152,584
\$2,408,241
\$2,684,425

## Summary of Actuarial Methods and Assumptions

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

- 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

Since the completion of the previous valuation, 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.

## Summary of Plan Provisions

## 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 $66^{2} / 3 \%$ 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

## 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

## 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

## 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 postretirement 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 <br> Table V-B

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

# Retiremen Plan for the frefighiers Ofthe Southern Manatee Fire \& Rescue District 

Actuarial Valuation As of October I, 2015

GASB 67/68 Supplement As of September 30, 2016

## NET PENSION LIABILITY AS OF SEPTEMBER 30, 2016

| Total pension liability | $\$ 36,507,111^{*}$ |
| :--- | :--- |
| Less fiduciary net position | $\underline{(30,448,464)}$ |
| Net pension liability | $\underline{\$ 6,058,647}{ }^{*}$ |

## Net pension liability

* This amount has been rolled forward from October 1, 2015.
" This amount is recognized on the employer's balance sheet.


## PENSION EXPENSE FOR THE 2015/16 FISCAL YEAR

Service cost $\$ 1,229,781$
Other recognized changes in net pension liability:
Expected interest growth Investment gain/loss
$(87,754)$
Demographic gain/loss
Employee contributions
402,313

## Administrative expenses

Changes in benefit terms
Assumption changes
Pension expense

- This amount is recognized on the employer's income statement, along with the employer contribution for the 2015/16 fiscal year.


## DEFERRED INFLOW AND OUTFLOW OF RESOURCES

|  | Deferred Outlows <br> Of Resources | Deferred Inflows <br> Of Resources |
| :--- | :---: | :---: |
| Balance as of September 30, 2015 | $\$ 1,986,093$ | $\$ 2,963,451$ |
| Change due to: | $\$(1,502,842)$ | $\$ 0$ |
| $\quad$ Amortization payments | $\$ 577,969$ | $\$(448,977)$ |
| Investment gain/loss | $\$ 319,309$ |  |
| Demographic gain/loss | $\$ 0$ |  |
| Assumption changes | $\$ 7,117,345$ | $\$ 472$ |
| Total change | $\$ 9,178,565 *$ | $\$ 0$ |
| Balance as of September 30, 2016 | $\$(129,668)$ |  |

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


## BALANCE EQUATION

| Net pension liability as of September 30, 2015 | $\$(1,238,388)$ |
| :--- | ---: |
| Plus pension expense for the 2015/16 fiscal year | $\$ 2,098,501$ |
| Minus employer contribution for the 2015/16 fiscal year | $\$(2,123,606)$ |
| Plus change in balance of deferred outtiows of resources | $\$ 7,192,472$ |
| Minus change in balance of deferred inflows of resources | $\$ 129,668$ |
| Net pension liability as of September 30, 2016 | $\$ 6,058,647$ |

Amortization schedule for deferred outflows and inflows of resources:

|  | Deferred Outtlows Of Resources | Deferred Inflows Of Resources |
| :---: | :---: | :---: |
| Balance as of September 30, 2016 | \$9,178,565 | \$2,833,783 |
| Amount recognized in the 2016/17 pension expense: |  |  |
| Investment gain/loss | \$484,535 | \$82,222 |
| Demographic gain/oss | \$73,331 | \$0 |
| Assumption changes | \$944,976 | \$366,755 |
| Total | \$1,502,842 | \$448,977 |
| Balance as of September 30, 2017 | \$7,675,723 | \$2,384,806 |
| Amount recognized in the 2017/18 pension expense: |  |  |
| Investment gain/loss | \$484,535 | \$82,223 |
| Demographic gain/loss | \$73,331 | \$0 |
| Assumption changes | \$944,976 | \$366,755 |
| Total | \$1,502,842 | \$448,978 |
| Balance as of September 30, 2018 | \$6,172,881 | \$1,935,828 |
| Amount recognized in the 2018/19 pension expense: |  |  |
| Investment gain/loss | \$484,537 | \$63,862 |
| Demographic gain/loss | \$73,331 | \$0 |
| Assumption changes | \$944,976 | \$366,755 |
| Total | \$1,502,844 | \$430,617 |
| Balance as of September 30, 2019 | \$4,670,037 | \$1,505,211 |
| Amount recognized in the |  |  |
| Investment gain/loss | \$0 | \$63,861 |
| Demographic gain/oss | \$73,331 | \$0 |
| Assumption changes | \$944,976 | \$366,755 |
| Total | \$1,018,307 | \$430,616 |
| Balance as of September 30, 2020 | \$3,651,730 | \$1,074,595 |
| Amount recognized in the |  |  |
| 2020/21 pension expense: | \$0 | \$0 |
| Demographic gain/loss | \$73,331 | \$0 |
| Assumption changes | \$944,976 | \$366,755 |
| Total | \$1,018,307 | \$366,755 |
| Balance as of September 30, 2021 | \$2,633,423 | \$707,840 |

## 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, 2015 | $\$ 25,430,782$ | $\$(26,669,170)$ | $\$(1,238,388)$ |
| Change due to: |  |  |  |
| $\quad$ Service cost | $\$ 1,229,781$ | $\$ 0$ | $\$ 1,229,781$ |
| $\quad$ Expected interest growth | $\$ 1,832,081$ | $\$ 0$ | $\$(1,919,835)$ |
| $\quad$ Unexpected investment income | $\$ 577,969$ | $\$(319,309)$ | $\$ 0$ |
| Demographic experience | $\$ 0$ | $\$(87,754)$ |  |
| Employer contributions | $\$ 0$ | $\$ 0,123,606)$ | $\$ 577,969)$ |
| Employee contributions | $\$(680,847)$ | $\$(162,048)$ | $\$ 123,606)$ |
| Benefit payments \& refunds | $\$ 0$ | $\$ 680,847$ | $\$(162,048)$ |
| Administrative expenses | $\$ 0$ | $\$ 64,657$ | $\$ 0$ |
| Changes in benefitterms | $\$ 8,117,345$ | $\$ 0$ | $\$ 64,657$ |
| Assumption changes | $\$ 36,507,111$ | $\$ 0$ |  |
| Balance as of September 30, 2016 |  | $\$(30,448,464)$ | $\$ 8,117,345$ |
|  |  |  | $\$ 6,058,647$ |

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 | $\$ 41,723,286$ | $\$ 36,507,111$ | $\$ 32,214,695$ |
| Less fiduciary net position | $\underline{(30,448,464)}$ | $\underline{(30,448,464)}$ | $\underline{\$ 6,058,647}$ |
| Net pension liability | $\$ 11,274,822$ | $\$ 1,766,264)$ |  |

HISTORICAL TREND INFORMATION

| $\begin{aligned} & \text { Measurement } \\ & \text { Date } \end{aligned}$ | Total Pension Liability | Fiduciary Net Position | Net Pension Liability | Funded Percentage | Covered Payroll | Net Pension Liability as a \% of Covered Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 | Not applicable |
| 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 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2015/16 | \$1,229,781 | \$(87,754) | \$(319,309) | \$577,969 | \$(2,123,606) | \$(162,048) | \$0 | \$64,657 | S0 | \$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 and 8.59 years for the 2015/16 fiscal year.

## HISTORICAL TREND INFORMATION (continued)

| Fiscal Year End | (1) <br> Actuarially <br> Determined Contribution | (2) <br> Contributions Recognized By the Plan | (3) Difference Between (1) and (2) | Covered Payroll | Column (2) as a \% of Covered Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 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 | Not available | Not available |
| September 30, 2008 | \$1,775,172 | \$1,775,172 | \$0 | Not available | Not available |
| September 30, 2007 | \$1,332,294 | \$1,332,294 | \$0 | Not available | Not available |

## INFORMATION USED TO DETERMINE THE NET PENSION LIABILITY

Employer's reporting date:
Measurement date:
Actuarial valuation date:
Actuarial assumptions
Discount rate:
Salary increases:
Cost-of-living increases:
Mortality basis:

Retirement:

Other decrements:

Non-investment expenses:
Future contributions:
Changes:

September 30, 2016
September 30, 2016
October 1, 2015
$7.00 \%$ per annum (2.92\% per annum is attributable to long-term inflation); this rate was used to discount all future benefit payments.
$4.50 \%$ per annum
None assumed
Sex-distinct rates set forth in the RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA, as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430; future generational improvements in mortaility have not been reflected.
$10 \%$ 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 .
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 .
Liabilities have been loaded by $1.00 \%$ to account for non-investment expenses.
Contributions from the employer and employees are assumed to be made as legally required.
Since the prior measurement date, the discount rate was decreased from $9.08 \%$ per annum to $7.00 \%$ per annum.

## 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 | $39.0 \%$ | $6.08 \%$ 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 |

## PENSION PLAN DESCRIPTION

Name of the pension plan:
Legal plan administrator:
Plan type:
Number of covered individuals:
Contribution requirement:

Pension plan reporting:

Retirement Plan for the Firefighters of the Southern Manatee Fire \& Rescue District
Board of Trustees of the Retirement Plan for the Firefighters of the Southern Manatee Fire \& Rescue District
Single-employer defined benefit pension plan
104 (14 inactive employees and beneficiaries currently receiving benefits; 13 inactive employees entitled to but not yet receiving benefits; 77 active employees)
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.
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.

## Description of the benefit terms

 Employees covered: Types of benefits offered: Basic pension formula: Early retirement adjustment:Firefighters employed by the Southern Manatee Fire \& Rescue District
Retirement, disability, and pre-retirement death benefits
$3.50 \%$ of average earnings $x$ service
Retirement benefit is reduced by $3 \%$ for each year by which the participant's early retirement age precedes his normal retirement age.
Disability pension: 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.
Pre-retirement death benefit: 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)
Normal retirement age: Age 55 with at least 10 years of service, or
Any age with at least 25 years of service
Early retirement age:
Any age with at least 10 years of service
$100 \%$ vesting after 10 years of service
Actuarially increased single life annuity
10-year certain and life annuity
Actuarially equivalent $50 \%, 662 / 3 \%, 75 \%$, or $100 \%$ joint and contingent annuity
Any other actuarially equivalent form of payment approved by the Board of Trustees
Average earnings:
Cost-ot-living adjustment:

## DROP:

Health supplement:

Changes:

Legal authority: The plan was established effective March 11, 1997 pursuant to a District resolution and has been
Average of the highest three years of fixed monthly compensation out of the last 10 years None provided
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.
$\$ 15$ 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. amended several times since that date.
The benefit terms did not change from the prior measurement date.

## PROJECTION OF THE FIDUCIARY NET POSITION

|  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  | Benefit | Administrative | Investment | Earnings $\quad$ EOY Balance

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, 2068 | \$3,314,467 | \$0 | \$728,654 | \$69,197 | \$204,560 | \$2,721,176 |
| October 1, 2069 | \$2,721,176 | \$0 | \$615,216 | \$58,424 | \$167,304 | \$2,214,840 |
| October 1, 2070 | \$2,214,840 | \$0 | \$513,977 | \$48,810 | \$135,674 | \$1,787,727 |
| October 1, 2071 | \$1,787,727 | \$0 | \$417,200 | \$39,620 | \$109,423 | \$1,440,330 |
| October 1, 2072 | \$1,440,330 | \$0 | \$341,950 | \$32,473 | \$87,940 | \$1,153,847 |
| October 1, 2073 | \$1,153,847 | \$0 | \$277,944 | \$26,395 | \$70,298 | \$919,806 |
| October 1, 2074 | \$919,806 | \$0 | \$223,997 | \$21,272 | \$55,947 | \$730,484 |
| October 1, 2075 | \$730,484 | \$0 | \$178,887 | \$16,988 | \$44,394 | \$579,003 |
| October 1, 2076 | \$579,003 | \$0 | \$141,868 | \$13,473 | \$35,185 | \$458,847 |
| October 1, 2077 | \$458,847 | \$0 | \$110,759 | \$10,518 | \$27,946 | \$365,516 |
| October 1, 2078 | \$365,516 | \$0 | \$87,691 | \$8,328 | \$22,282 | \$291,779 |
| October 1, 2079 | \$291,779 | \$0 | \$69,776 | \$6,626 | \$17,796 | \$233,173 |
| October 1, 2080 | \$233,173 | \$0 | \$56,262 | \$5,343 | \$14,202 | \$185,770 |
| October 1, 2081 | \$185,770 | \$0 | \$45,079 | \$4,281 | \$11,306 | \$147,716 |
| October 1, 2082 | \$147,716 | \$0 | \$36,606 | \$3,476 | \$8,961 | \$116,595 |
| October 1, 2083 | \$116,595 | \$0 | \$30,345 | \$2,882 | \$7,018 | \$90,386 |
| October 1, 2084 | \$90,386 | \$0 | \$25,106 | \$2,384 | \$5,381 | \$68,277 |
| October 1, 2085 | \$68,277 | \$0 | \$19,449 | \$1,847 | \$4,047 | \$51,028 |
| October 1, 2086 | \$51,028 | \$0 | \$16,255 | \$1,544 | \$2,960 | \$36,189 |
| October 1, 2087 | \$36,189 | \$0 | \$10,794 | \$1,025 | \$2,127 | \$26,497 |
| October 1, 2088 | \$26,497 | \$0 | \$8,738 | \$830 | \$1,526 | \$18,455 |
| October 1, 2089 | \$18,455 | \$0 | \$7,173 | \$681 | \$1,022 | \$11,623 |
| October 1, 2090 | \$11,623 | \$0 | \$4,342 | \$412 | \$650 | \$7,519 |
| October 1, 2091 | \$7,519 | \$0 | \$3,002 | \$285 | \$413 | \$4,645 |
| October 1, 2092 | \$4,645 | \$0 | \$1,541 | \$146 | \$267 | \$3,225 |
| October 1, 2093 | \$3,225 | \$0 | \$1,015 | \$96 | \$188 | \$2,302 |
| October 1, 2094 | \$2,302 | \$0 | \$937 | \$89 | \$126 | \$1,402 |
| October 1, 2095 | \$1,402 | \$0 | \$554 | \$53 | \$77 | \$872 |
| October 1, 2096 | \$872 | \$0 | \$509 | \$48 | \$42 | \$357 |
| October 1, 2097 | \$357 | \$0 | \$194 | \$18 | \$18 | \$163 |
| October 1, 2098 | \$163 | \$0 | \$0 | \$0 | \$11 | \$174 |

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.
(a) City/District

## Southern Manatee FD

(b) Plan Name
(c) Plan Type Defined Benefit
(d) Valuation Date 10/1/2016
(e) Interest Rate:
(1) Discount Rate, net of investment fees $\quad 7.00 \%$
$\begin{array}{ll}\text { (2) Long-Term Expected Rate of Return, net of investment fees } & 7.00 \%\end{array}$

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

14-04927
(4) Signature Date

11/25/2016
(5) Cover letter attached (pdf)?

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

(g) Total pension liability:

| (1) Service cost | $\$ 1,371,231$ |
| :--- | :--- |
| (2) Interest | $\$ 1,934,489$ |

(2) Interest \$1,934,489
(3) Benefit changes \$0
(4) Difference between expected and actual experience \$451,663
(5) Changes in assumptions \$8,841,318
(6) Benefit payments (\$680,847)
(7) Contribution refunds \$0
(8) Net change in total pension liability $\quad \$ 11,917,854$
(9) Total pension liability - beginning of year $\$ 26,598,997$
(10) Total pension liability - ending of year $\$ 38,516,851$
(h) Plan fiduciary net position:
(1) Contributions - Employer \$1,872,407
(2) Contributions - State \$414,319
(3) Contributions - Member \$162,048
(4) Net investment income $\quad \$ 2,239,144$
(5) Benefit payments (\$680,847)
(6) Contribution refunds \$0
(7) Administrative expenses $(\$ 64,657)$
(8) Other \$0
(9) Net change in plan fiduciary net position $\$ 3,942,414$
(10) Plan fiduciary net position - beginning of year \$26,196,833
(11) Plan fiduciary net position - ending of year $\$ 30,139,247$
$\begin{array}{ll}\text { (i) Net pension liability/(asset) }[(\mathrm{g})(10) \text { minus (h)(11)] } & \$ 8,377,604\end{array}$

## Section 112.664 (1)(b). F.S.

(j) Total pension liability:
(1) Service cost \$2,219,796
(2) Interest ..... \$1,793,629
(3) Benefit changes ..... \$0
(4) Difference between expected and actual experience ..... \$784,491
(5) Changes in assumptions ..... \$12,647,051(6) Benefit payments$(\$ 680,847)$
(7) Contribution refunds ..... \$0
(8) Net change in total pension liability ..... \$16,764,120
(9) Total pension liability - beginning of year ..... \$33,989,053
(10) Total pension liability - ending of year ..... \$50,753,173
(k) Plan fiduciary net position:
(1) Contributions - Employer ..... \$1,872,407
(2) Contributions - State ..... \$414,319
(3) Contributions - Member ..... \$162,048
(4) Net investment income ..... \$2,239,144(5) Benefit payments(\$680,847)
(6) Contribution refunds ..... \$0
(7) Administrative expenses ..... $(\$ 64,657)$
(8) Other ..... \$0
(9) Net change in plan fiduciary net position ..... \$3,942,414
(10) Plan fiduciary net position - beginning of year ..... \$26,196,833
(11) Plan fiduciary net position - ending of year ..... $\$ 30,139,247$
(I) Net pension liability/(asset) [(j)(10) minus (k)(11)] ..... \$20,613,926
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 ..... 20.15
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 ..... 20.13
Section $112.664(1)$ (c), F.S. (on Section 112.664 (1) (b), F.S. basis)
(0) Number of Years, and fractional parts of Years, for which the Market Value of Assets are adequate to sustain expected retirement benefits ..... 16.96
Section $112.664(1)$ (d). F.S. (on last valuation basis)
(p) Recommended Plan contributions in Annual Dollar Value ..... \$2,607,481
(q) Recommended Plan contributions as a Percentage of Valuation Payroll ..... 58.33\%
Section $112.664(1)($ d $)$, F.S. (on Section 112.664 (1) (a), F.S. basis)
(r) Recommended Plan contributions in Annual Dollar Value ..... \$2,468,400
(s) Recommended Plan contributions as a Percentage of Valuation Payroll ..... 55.22\%
Section 112.664(1)(d), F.S. (on Section 112.664(1)(b), F.S. basis)
(t) Recommended Plan contributions in Annual Dollar Value ..... \$4,817,622
(u) Recommended Plan contributions as a Percentage of Valuation Payroll ..... 107.76\%


[^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.

