

CITY OF ATLANTA
FIREFIGHTERS' PENSION FUND

ACTUARIAL VALUATION
AS OF JULY 1, 2015

DETERMINES THE CONTRIBUTION
FOR THE 2016/17 FISCAL YEAR



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February 17, 2016

Introduction

This report presents the results of the July 1, 2015 actuarial valuation of the City of Atlanta Firefighters' Pension Fund. This valuation is based upon the participant data provided as of July 1, 2015 by the City and plan administrator and asset information provided as of June 30, 2015 by the plan auditor. Except for a cursory review for reasonableness, 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 July 1, 2015 and to determine the minimum required contribution under Georgia Code Section 47-20-10 for the City's 2016/17 fiscal 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 minimum required contribution rate.

Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the City's 2016/17 fiscal year. The minimum required contribution rate is 36.69% of covered payroll, which represents an increase of 3.16% of payroll from the prior valuation.

Table I-C provides a breakdown of the sources of change in the contribution rate. Significantly, the rate increased by 6.31% of payroll due to investment losses and decreased by 3.15% of payroll due to demographic experience. The market value of assets only earned 0.41% during the 2014/15 plan year, whereas a 7.50% annual investment return was required to maintain a stable contribution rate.



Georgia Code Section 47-20-10 sets forth many of the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the City will meet the minimum funding requirement if the employer contributions are at least equal to the annual required contribution under GASB 25/27. In addition, Georgia Code Section 47-20-13 exempts public plan sponsors from the minimum funding requirements if the plan's actuarial value of assets exceeds 150% of the present value of accumulated retirement system benefits.

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 \$906,784,544. As illustrated in Table I-A, current assets are sufficient to cover \$644,649,000 of this amount, the employer's expected contribution for the 2015/16 plan year will cover \$15,731,621 of this amount, the employer's expected contribution for the 2016/17 plan year will cover \$17,901,221 of this amount, and future employee contributions will cover \$42,206,487 of this amount, leaving \$186,296,215 to be covered by future employer funding. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

Contents of the Report

Tables I-D through I-G provide a detailed breakdown of various liability amounts by type of benefit and by participant group. Tables II-A through II-F provide information concerning the assets of the trust fund. Specifically, Table II-A shows the development of the actuarial value of assets, which is based on the market value. Tables III-A through III-F provide statistical information concerning the plan's participant population. In particular, Table III-F 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 July 1, 2015, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

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 Georgia Code Section 47-20-10. 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

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

Table I-A



For the 2016/17 Fiscal Year

Entry Age Normal Cost for the 2015/16 Plan Year	\$11,754,910
Unfunded Liability Amortization Payment for the 2015/16 Plan Year	\$10,057,778
Expense Allowance for the 2015/16 Plan Year	\$469,180
Expected Employee Contribution for the 2015/16 Plan Year	(\$5,184,444)
Adjustment to Reflect Semi-Monthly Employer Contributions	\$652,430
	<u>\$17,749,854</u>
Expected Employer Contribution for the 2015/16 Plan Year	<u>(\$15,731,621)</u>
Remaining Contribution Due/(Credit) for the 2015/16 Plan Year	\$2,018,233
	<u>x 0.075</u>
One Year's Interest Charge/(Credit) on the Remaining Contribution	\$151,367
Preliminary Employer Contribution for the 2016/17 Fiscal Year	\$17,901,221
Expected Payroll for the 2016/17 Fiscal Year	<u>÷ \$48,794,770</u>

Minimum Required Contribution Rate **36.69%**

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

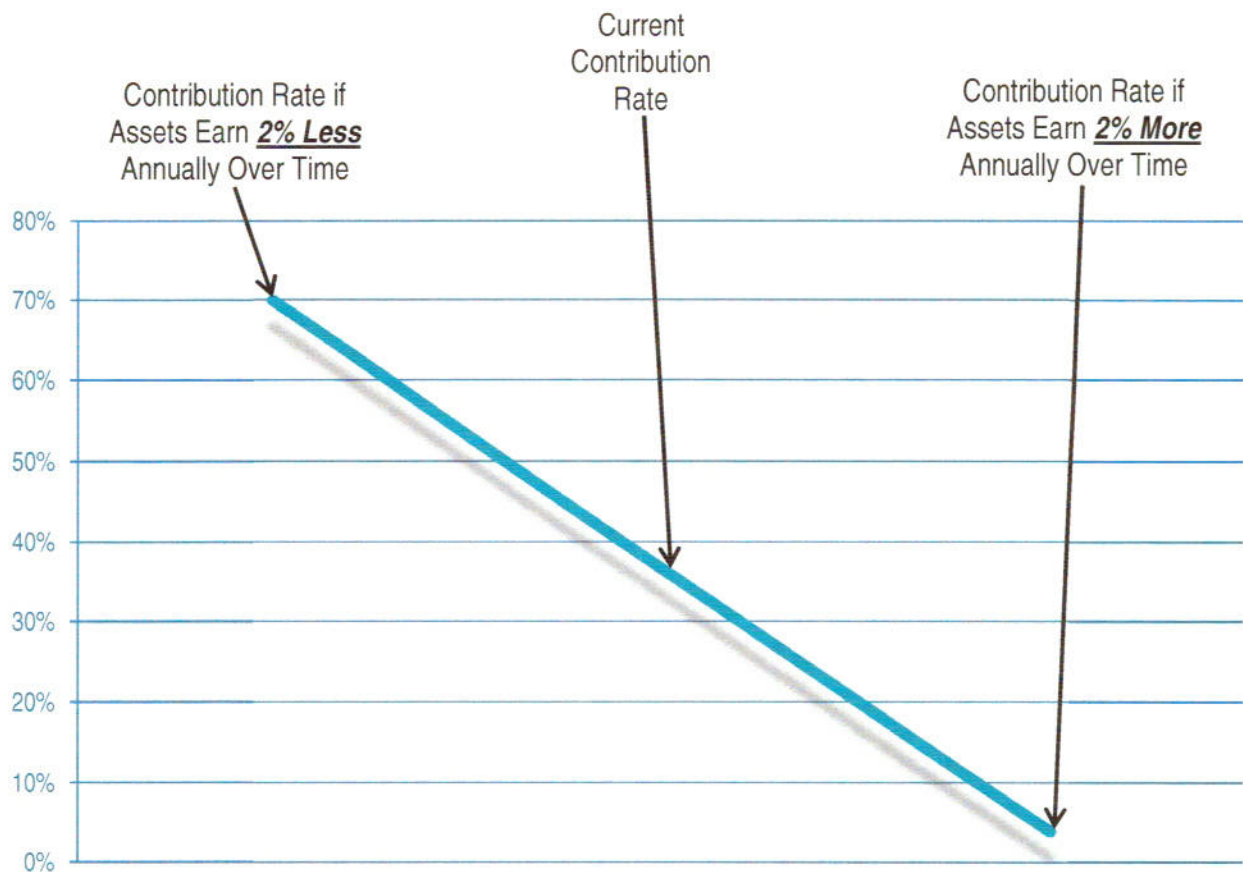
Additional Disclosures

Present Value of Future Compensation	\$382,091,252
Present Value of Future Employer Contributions	\$219,929,057
Present Value of Future Employee Contributions	\$42,206,487



Sensitivity Analysis

Table I-B



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



Gain and Loss Analysis

Table I-C

Source of Change in the Contribution Rate

Previous minimum required contribution rate	33.53%
Increase (decrease) due to investment gains and losses	6.31%
Increase (decrease) due to demographic experience	-3.15%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	0.00%
Increase (decrease) due to actuarial method changes	0.00%
Current minimum required contribution rate	<u>36.69%</u>

Source of Change in the Unfunded Liability

Previous unfunded liability	\$156,338,834
Increase due to interest	\$11,725,413
Decrease due to amortization payments	(\$8,614,729)
Increase (decrease) due to plan experience	\$18,824,026
Increase (decrease) due to plan amendments	\$0
Increase (decrease) due to actuarial assumption changes	\$0
Increase (decrease) due to actuarial method changes	\$0
Current unfunded liability	<u>\$178,273,544</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	\$279,513,329	\$279,513,329	\$279,513,329
Termination benefits	\$12,502,022	\$12,502,022	\$12,502,022
Disability benefits	\$13,717,260	\$13,717,260	\$13,717,260
Death benefits	\$2,432,754	\$2,432,754	\$2,432,754
Refund of employee contributions	\$291,402	\$291,402	\$291,402
Sub-total	\$308,456,767	\$308,456,767	\$308,456,767
<u>Deferred Vested Participants</u>			
Retirement benefits	\$4,060,109	\$4,060,109	\$4,060,109
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$4,060,109	\$4,060,109	\$4,060,109
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$471,602,354	\$471,602,354	\$471,602,354
Disability retirements	\$74,844,064	\$74,844,064	\$74,844,064
Beneficiaries receiving	\$44,000,337	\$44,000,337	\$44,000,337
DROP participants	\$0	\$0	\$0
Sub-total	\$590,446,755	\$590,446,755	\$590,446,755
<u>Grand Total</u>	<u>\$902,963,631</u>	<u>\$902,963,631</u>	<u>\$902,963,631</u>



Present Value of Accrued Benefits

Table I-E

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$167,155,745	\$167,155,745	\$167,155,745
Termination benefits	\$6,873,198	\$6,873,198	\$6,873,198
Disability benefits	\$10,052,226	\$10,052,226	\$10,052,226
Death benefits	\$1,409,303	\$1,409,303	\$1,409,303
Refund of employee contributions	\$176,348	\$176,348	\$176,348
Sub-total	\$185,666,820	\$185,666,820	\$185,666,820
<u>Deferred Vested Participants</u>			
Retirement benefits	\$4,060,109	\$4,060,109	\$4,060,109
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$4,060,109	\$4,060,109	\$4,060,109
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$471,602,354	\$471,602,354	\$471,602,354
Disability retirements	\$74,844,064	\$74,844,064	\$74,844,064
Beneficiaries receiving	\$44,000,337	\$44,000,337	\$44,000,337
DROP participants	\$0	\$0	\$0
Sub-total	\$590,446,755	\$590,446,755	\$590,446,755
<u>Grand Total</u>	<u>\$780,173,684</u>	<u>\$780,173,684</u>	<u>\$780,173,684</u>
<u>Funded Percentage</u>	82.63%	82.63%	82.63%



Present Value of Vested Benefits

Table I-F

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$151,812,905	\$151,812,905	\$151,812,905
Termination benefits	\$6,254,570	\$6,254,570	\$6,254,570
Disability benefits	\$10,052,226	\$10,052,226	\$10,052,226
Death benefits	\$1,391,688	\$1,391,688	\$1,391,688
Refund of employee contributions	\$622,227	\$622,227	\$622,227
Sub-total	\$170,133,616	\$170,133,616	\$170,133,616
<u>Deferred Vested Participants</u>			
Retirement benefits	\$4,060,109	\$4,060,109	\$4,060,109
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$4,060,109	\$4,060,109	\$4,060,109
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$471,602,354	\$471,602,354	\$471,602,354
Disability retirements	\$74,844,064	\$74,844,064	\$74,844,064
Beneficiaries receiving	\$44,000,337	\$44,000,337	\$44,000,337
DROP participants	\$0	\$0	\$0
Sub-total	\$590,446,755	\$590,446,755	\$590,446,755
<u>Grand Total</u>	<u>\$764,640,480</u>	<u>\$764,640,480</u>	<u>\$764,640,480</u>



Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$209,232,227	\$209,232,227	\$209,232,227
Termination benefits	\$8,570,116	\$8,570,116	\$8,570,116
Disability benefits	\$8,897,817	\$8,897,817	\$8,897,817
Death benefits	\$1,538,003	\$1,538,003	\$1,538,003
Refund of employee contributions	\$177,517	\$177,517	\$177,517
Sub-total	\$228,415,680	\$228,415,680	\$228,415,680
<u>Deferred Vested Participants</u>			
Retirement benefits	\$4,060,109	\$4,060,109	\$4,060,109
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$4,060,109	\$4,060,109	\$4,060,109
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$471,602,354	\$471,602,354	\$471,602,354
Disability retirements	\$74,844,064	\$74,844,064	\$74,844,064
Beneficiaries receiving	\$44,000,337	\$44,000,337	\$44,000,337
DROP participants	\$0	\$0	\$0
Sub-total	\$590,446,755	\$590,446,755	\$590,446,755
<u>Grand Total</u>	<u>\$822,922,544</u>	<u>\$822,922,544</u>	<u>\$822,922,544</u>
less Actuarial Value of Assets	(\$644,649,000)	(\$644,649,000)	(\$644,649,000)
<u>Unfunded Accrued Liability</u>	<u>\$178,273,544</u>	<u>\$178,273,544</u>	<u>\$178,273,544</u>



Entry Age Normal Cost

Table I-H

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$9,923,983	\$9,923,983	\$9,923,983
Termination benefits	\$679,470	\$679,470	\$679,470
Disability benefits	\$954,206	\$954,206	\$954,206
Death benefits	\$132,139	\$132,139	\$132,139
Refund of employee contributions	\$65,112	\$65,112	\$65,112
Sub-total	\$11,754,910	\$11,754,910	\$11,754,910
<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	\$0	\$0	\$0
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$0	\$0	\$0
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	\$0	\$0	\$0
<u>Grand Total</u>	<u>\$11,754,910</u>	<u>\$11,754,910</u>	<u>\$11,754,910</u>



Actuarial Value of Assets

Table II-A

Market Value of Assets as of July 1, 2015	\$644,649,000
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Minus advance employer contributions	\$0
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Actuarial Value of Assets as of July 1, 2015	<u>\$644,649,000</u>
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Historical Actuarial Value of Assets

January 1, 2007	N/A
January 1, 2008	\$340,075,000
January 1, 2009	\$408,090,000
January 1, 2010	\$422,791,314
January 1, 2011	\$481,640,221
July 1, 2011	\$509,590,000
July 1, 2012	\$505,692,000
July 1, 2013	\$561,450,000
July 1, 2014	\$658,508,000
July 1, 2015	\$644,649,000

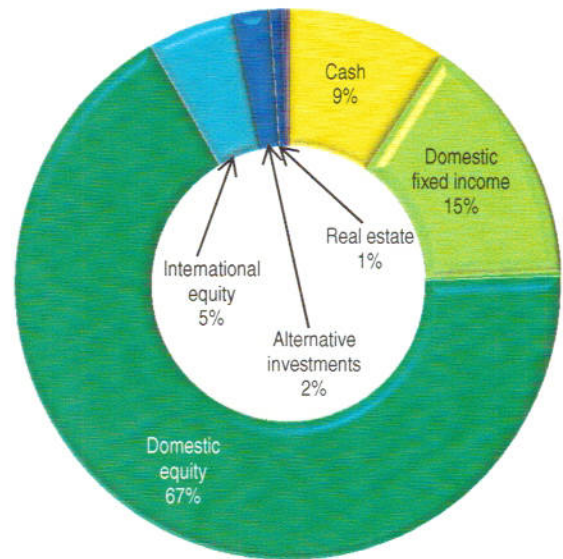


Market Value of Assets

Table II-B

As of July 1, 2015

Market Value of Assets	<u>\$644,649,000</u>
Cash	\$61,181,000
Domestic fixed income	\$95,821,000
International fixed income	\$1,333,000
Domestic equity	\$434,277,000
International equity	\$33,314,000
Alternative investments	\$13,807,000
Real estate	\$4,323,000
Income receivable	\$1,614,000
Employee contribution receivable	\$237,000
Net due to brokers	(\$842,000)
Net accounts payable	(\$416,000)

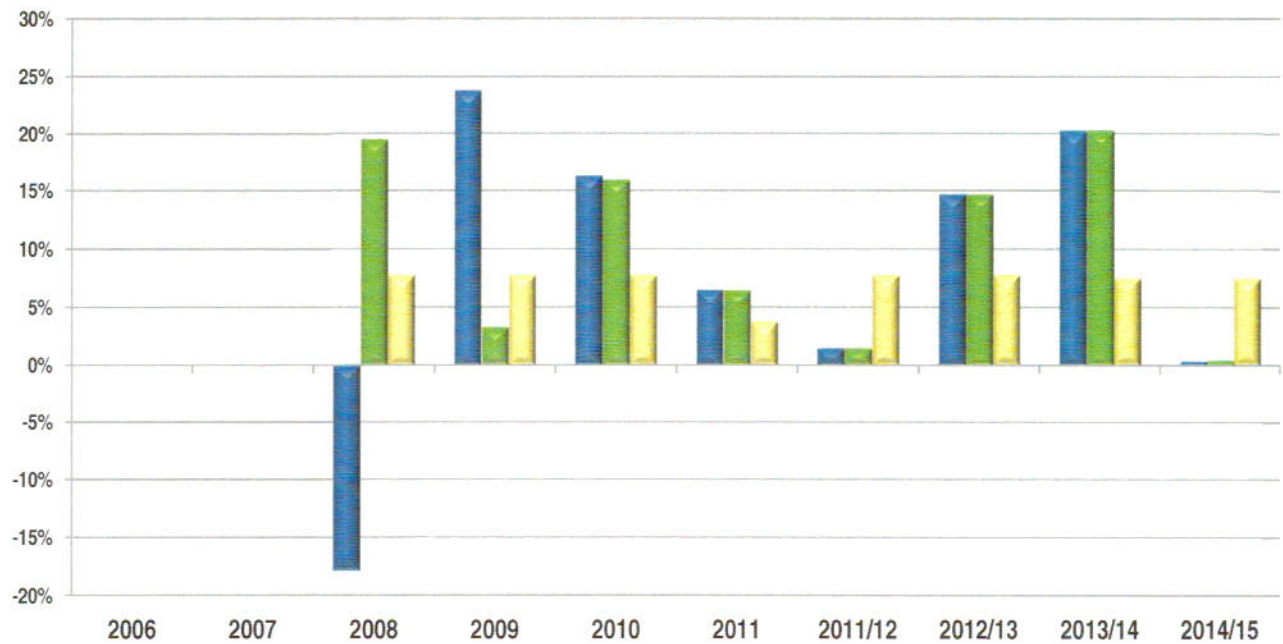
Historical Market Value of Assets

January 1, 2007	N/A
January 1, 2008	\$411,686,841
January 1, 2009	\$339,458,639
January 1, 2010	\$421,599,215
January 1, 2011	\$481,640,221
July 1, 2011	\$509,590,000
July 1, 2012	\$505,692,000
July 1, 2013	\$561,450,000
July 1, 2014	\$658,508,000
July 1, 2015	\$644,649,000



Investment Return

Table II-C

*Annual Investment Returns*

■ Market Value Return
 ■ Actuarial Value Return
 ■ Assumed Return

Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2006	N/A	N/A	N/A
2007	N/A	N/A	N/A
2008	-17.86%	19.54%	7.75%
2009	23.77%	3.28%	7.75%
2010	16.33%	16.00%	7.75%
2011	6.52%	6.52%	3.80%
2011/12	1.49%	1.49%	7.75%
2012/13	14.70%	14.70%	7.75%
2013/14	20.29%	20.29%	7.50%
2014/15	0.41%	0.41%	7.50%
7.5yr. Avg.	7.92%	10.71%	7.68%



Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of July 1, 2014	\$658,508,000	\$658,508,000
<i>Increases Due To:</i>		
Employer Contributions	\$20,866,000	\$20,866,000
Employee Contributions	\$5,637,000	\$5,637,000
Total Contributions	<u>\$26,503,000</u>	<u>\$26,503,000</u>
Interest and Dividends	\$11,197,000	
Gains (Losses)	<u>(\$5,768,000)</u>	
Total Investment Income	\$5,429,000	\$2,655,000
Other Income	\$4,000	
Total Income	<u>\$31,936,000</u>	<u>\$29,158,000</u>
<i>Decreases Due To:</i>		
Benefit Payments	(\$42,590,000)	(\$42,590,000)
Total Benefit Payments	<u>(\$42,590,000)</u>	<u>(\$42,590,000)</u>
Investment Expenses	(\$2,778,000)	
Administrative Expenses	(\$427,000)	(\$427,000)
Advance Employer Contribution		\$0
Total Expenses	<u>(\$45,795,000)</u>	<u>(\$43,017,000)</u>
As of July 1, 2015	<u>\$644,649,000</u>	<u>\$644,649,000</u>



Historical Trust Fund Detail

Table II-E

Income

<u>Plan Year</u>	<u>Employer Contribs.</u>	<u>Employee Contribs.</u>	<u>Interest / Dividends</u>	<u>Gains / Losses</u>	<u>Other Income</u>
2006	N/A	N/A	N/A	N/A	N/A
2007	N/A	N/A	N/A	N/A	N/A
2008	\$28,752,000	\$2,920,034	\$11,864,299	-\$82,726,401	\$476,858
2009	\$22,826,650	\$3,566,186	\$11,622,333	\$70,709,177	\$469,298
2010	\$23,803,695	\$3,496,705	\$10,227,517	\$60,161,207	\$152,680
2011	\$12,456,000	\$1,785,000	\$4,531,000	\$27,924,279	\$0
2011/12	\$21,092,000	\$4,891,000	\$10,283,000	-\$324,000	\$75,000
2012/13	\$17,491,000	\$5,676,000	\$11,134,000	\$64,208,000	\$17,000
2013/14	\$20,656,000	\$5,670,000	\$11,661,000	\$103,894,000	\$3,000
2014/15	\$20,866,000	\$5,637,000	\$11,197,000	-\$5,768,000	\$4,000

Expenses

<u>Plan Year</u>	<u>Benefit Payments</u>	<u>Admin. Expenses</u>	<u>Invest. Expenses</u>
2006	N/A	N/A	N/A
2007	N/A	N/A	N/A
2008	\$29,504,175	\$735,779	\$3,275,038
2009	\$24,722,331	\$379,592	\$1,951,145
2010	\$35,226,102	\$230,473	\$2,344,223
2011	\$17,573,000	\$24,500	\$1,149,000
2011/12	\$37,333,000	\$60,000	\$2,522,000
2012/13	\$40,180,000	\$301,000	\$2,287,000
2013/14	\$41,268,000	\$374,000	\$3,184,000
2014/15	\$42,590,000	\$427,000	\$2,778,000

Other Actuarial Adjustments

Advance
Employer
Contribs.

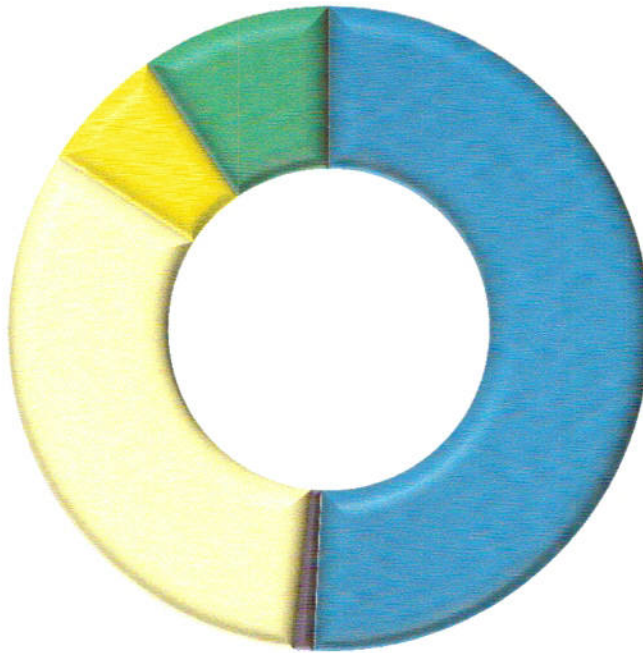
N/A
N/A
\$0
\$0
\$0
\$0
\$0
\$0
\$0
\$0

Note: Amounts shown for the 2011 short plan year are estimated.



Summary of Participant Data

Table III-A

As of July 1, 2015Actively Employed Participants

Active Participants	1,042
DROP Participants	0

Inactive Participants

Deferred Vested Participants	21
Due a Refund of Contributions	0
Deferred Beneficiaries	0

Participants Receiving a Benefit

Service Retirements	665
Disability Retirements	131
Beneficiaries Receiving	196

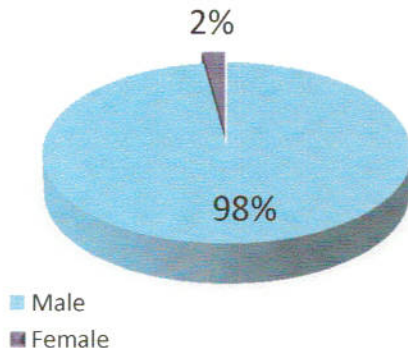
Total Participants 2,055Number of Participants Included in Prior Valuations

	Active	DROP	Inactive	Retired	Total
January 1, 2007	997	0	0	863	1,860
January 1, 2008	991	0	0	918	1,909
January 1, 2009	896	0	0	1,002	1,898
January 1, 2010	864	0	0	924	1,788
January 1, 2011	830	0	3	966	1,799
July 1, 2011	884	0	3	1,001	1,888
July 1, 2012	849	0	3	992	1,844
July 1, 2013	1,045	0	9	994	2,048
July 1, 2014	1,043	0	12	1,004	2,059
July 1, 2015	1,042	0	21	992	2,055



Active Participant Data

Table III-B

Gender Mix**As of July 1, 2015**

<i>Average Age</i>	39.0 years
<i>Average Service</i>	10.3 years
<i>Total Annualized Compensation for the Prior Year</i>	\$46,271,454
<i>Total Expected Compensation for the Current Year</i>	\$46,918,048
<i>Average Increase in Compensation for the Prior Year</i>	N/A
<i>Expected Increase in Compensation for the Current Year</i>	4.00%
<i>Accumulated Contributions for Active Employees</i>	\$48,140,203

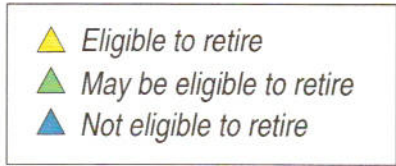
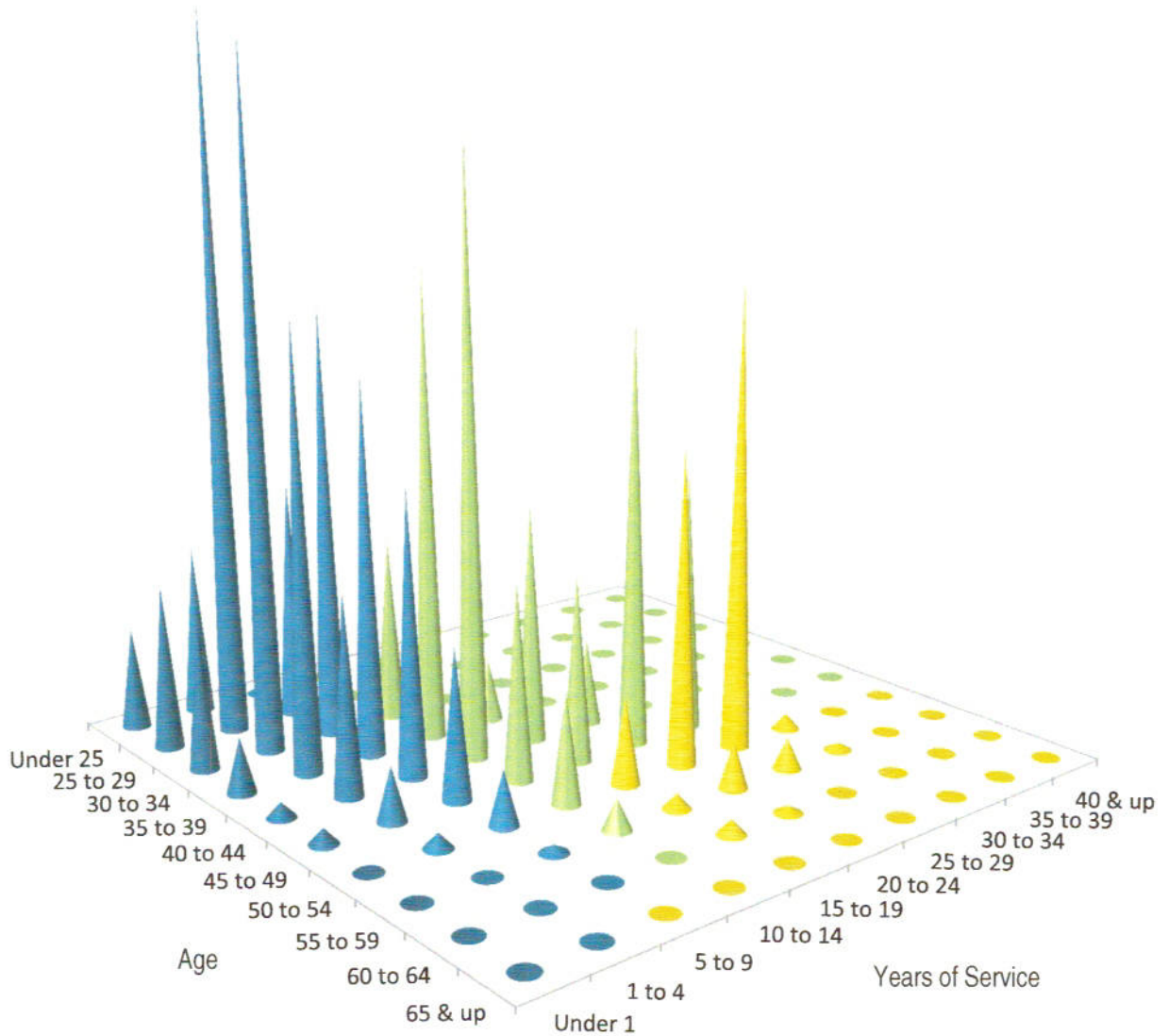
Active Participant Statistics From Prior Valuations

	<i>Average Age</i>	<i>Average Service</i>	<i>Average Salary</i>	<i>Average Expected Salary Increase</i>	<i>Average Actual Salary Increase</i>
January 1, 2007	39.9	13.1	\$55,881	4.00%	8.42%
January 1, 2008	40.2	13.2	\$52,130	4.00%	1.60%
January 1, 2009	40.4	13.4	\$51,624	4.00%	1.81%
January 1, 2010	40.8	12.8	\$50,638	4.00%	7.92%
January 1, 2011	40.5	12.2	\$52,793	4.00%	7.42%
July 1, 2011	39.2	11.1	\$43,527	1.98%	N/A
July 1, 2012	39.8	11.9	\$52,217	4.00%	N/A
July 1, 2013	38.1	9.6	\$41,912	4.00%	N/A
July 1, 2014	38.5	9.9	\$44,731	4.00%	N/A
July 1, 2015	39.0	10.3	\$44,406	4.00%	N/A



Active Age-Service Distribution

Table III-C



Active Age-Service-Salary Table

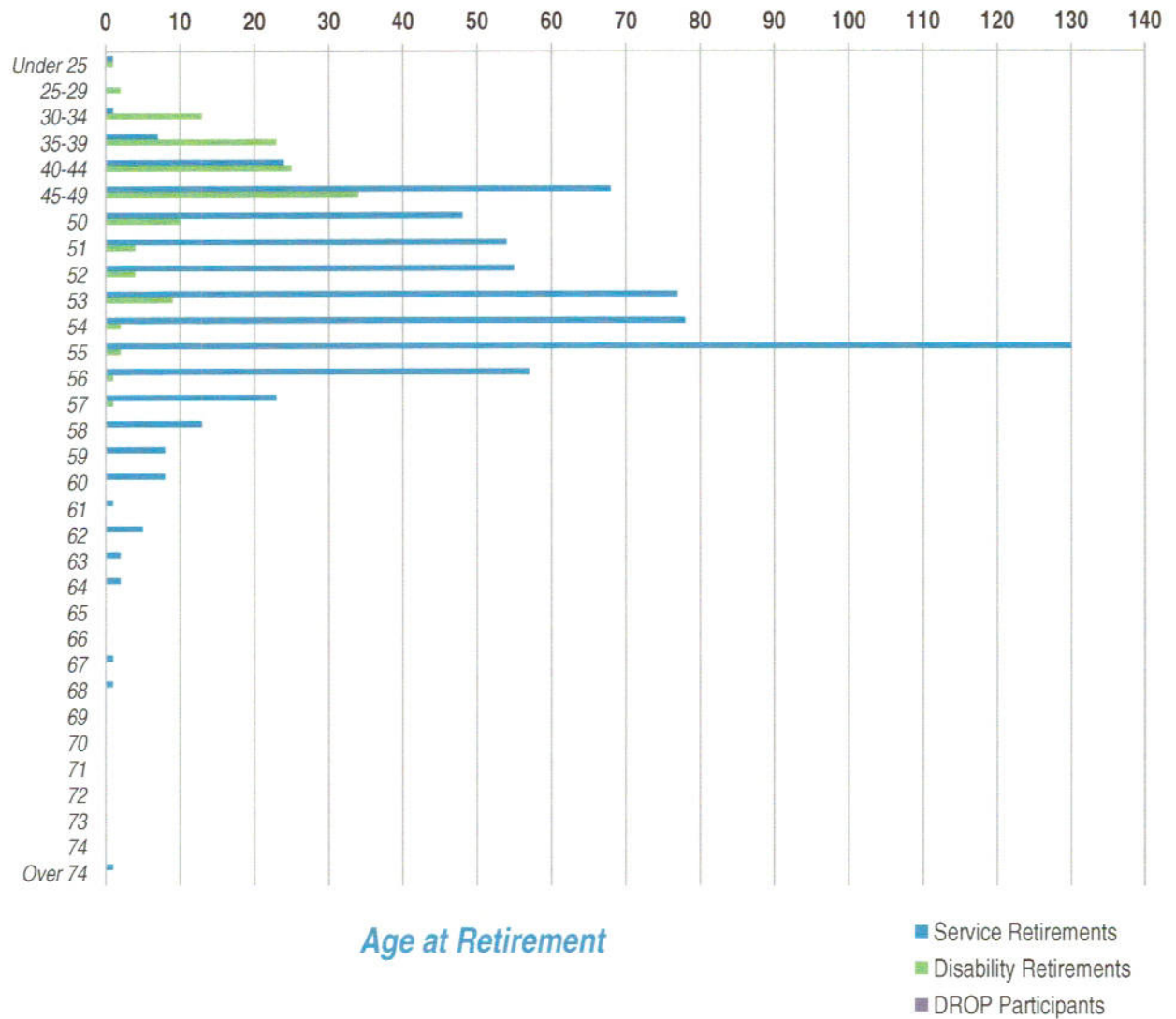
Table III-D

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	13	22	1	0	0	0	0	0	0	0	36
Avg. Pay	11,587	31,936	36,766	0	0	0	0	0	0	0	24,722
25 to 29	21	90	31	0	0	0	0	0	0	0	142
Avg. Pay	12,651	35,135	38,080	0	0	0	0	0	0	0	32,453
30 to 34	19	87	55	24	0	0	0	0	0	0	185
Avg. Pay	12,183	35,641	39,629	40,909	0	0	0	0	0	0	35,101
35 to 39	7	56	48	60	8	0	0	0	0	0	179
Avg. Pay	11,520	33,847	40,311	45,714	54,496	0	0	0	0	0	39,608
40 to 44	2	25	36	76	31	11	0	0	0	0	181
Avg. Pay	12,359	34,644	42,313	47,523	55,672	64,783	0	0	0	0	46,764
45 to 49	2	7	19	25	24	54	33	0	0	0	164
Avg. Pay	12,359	33,755	45,075	47,790	54,613	68,625	64,291	0	0	0	57,623
50 to 54	0	2	7	14	11	40	58	2	0	0	134
Avg. Pay	0	38,264	40,912	45,118	61,416	62,108	66,341	71,689	0	0	60,788
55 to 59	0	0	1	4	2	6	4	1	0	0	18
Avg. Pay	0	0	69,479	43,242	28,120	56,281	67,617	57,995	0	0	53,602
60 to 64	0	0	0	0	2	1	0	0	0	0	3
Avg. Pay	0	0	0	0	55,536	53,688	0	0	0	0	54,920
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	64	289	198	203	78	112	95	3	0	0	1,042
Avg. Pay	12,154	34,740	40,744	45,989	55,326	65,126	65,683	67,124	0	0	44,406



Inactive Participant Data

Table III-E

Average Monthly Benefit

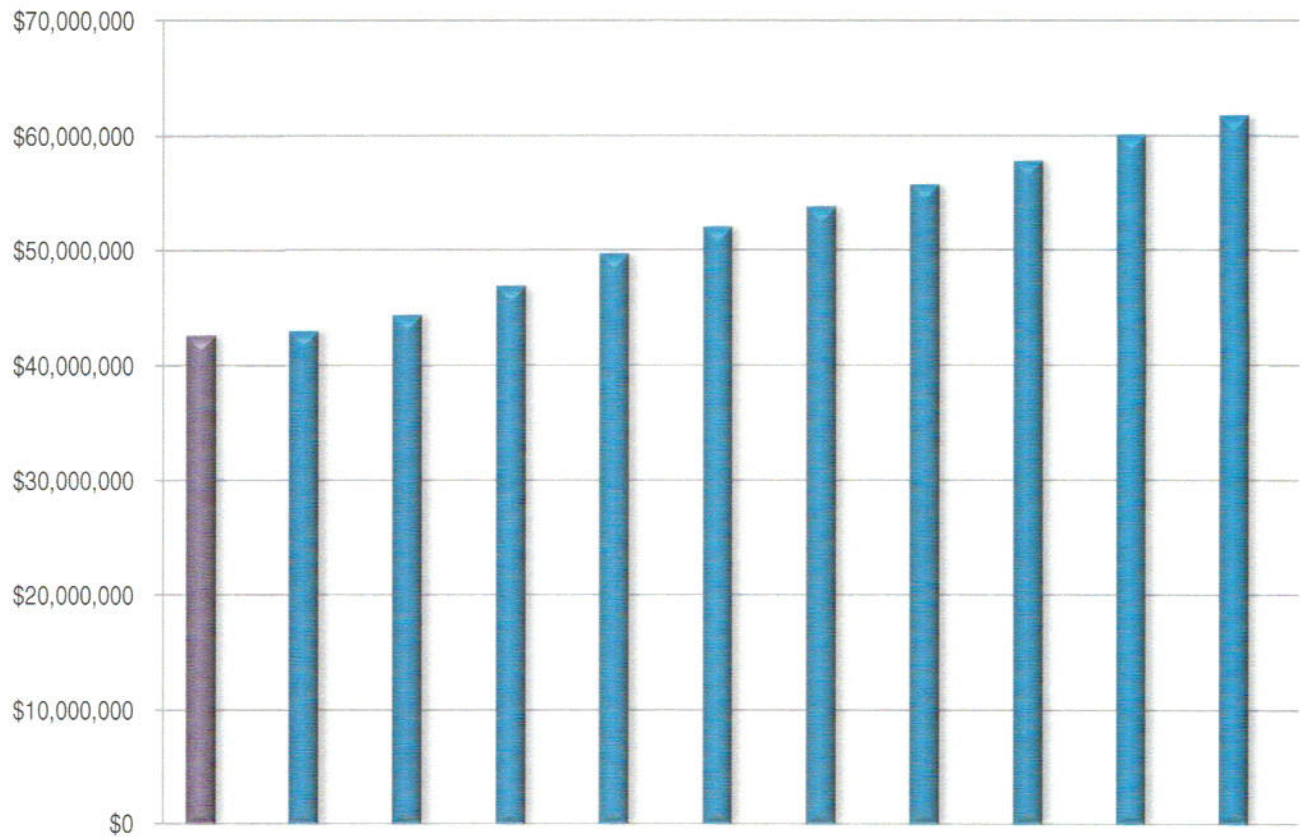
Service Retirements	\$4,143.21
Disability Retirements	\$3,350.41
Beneficiaries Receiving	\$1,850.84
DROP Participants	Not applicable

Deferred Vested Participants	\$1,738.14
Deferred Beneficiaries	Not applicable



Projected Benefit Payments

Table III-F

Actual

For the period July 1, 2014 through June 30, 2015

\$42,590,000

Projected

For the period July 1, 2015 through June 30, 2016

\$42,986,566

For the period July 1, 2016 through June 30, 2017

\$44,378,470

For the period July 1, 2017 through June 30, 2018

\$46,886,702

For the period July 1, 2018 through June 30, 2019

\$49,716,385

For the period July 1, 2019 through June 30, 2020

\$52,078,052

For the period July 1, 2020 through June 30, 2021

\$53,824,411

For the period July 1, 2021 through June 30, 2022

\$55,811,283

For the period July 1, 2022 through June 30, 2023

\$57,859,739

For the period July 1, 2023 through June 30, 2024

\$60,126,269

For the period July 1, 2024 through June 30, 2025

\$61,796,439



Summary of Actuarial Methods and Assumptions

Table IV-A

1. **Actuarial Cost Method**

Individual entry age normal cost method. Under this actuarial cost method, a level funding cost is developed with respect to each benefit for each participant. The level funding cost for each benefit applies to the period beginning when the participant's service commences and ending when the participant is assumed to cease active participation due to each respective decrement. The actuarial accrued liability is equal to the accumulated level funding cost to the valuation date for all participants. The normal cost is equal to the level funding cost for the year immediately following the valuation date for all active participants.

2. **Asset Method**

The actuarial value of assets is equal to the market value of assets

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

7.50% per annum

4. **Salary Increases**

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

5. **Decrement**

- Pre-retirement mortality: 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; deaths prior to retirement are assumed not to be service-connected; future generational improvements in mortality have not been reflected.
- Post-retirement mortality: 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 mortality have not been reflected.
- Disability: Sex-distinct rates set forth in the Wyatt 1985 Disability Study (Class 4); 67% of disabilities are assumed to be service-connected.



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

- Termination: Withdrawal rates were derived from a study of actual plan experience covering the period 1982 through 1986. A sample of the withdrawal rates is set forth in the following table:

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	5.454%	30	3.615%	40	1.804%	50	1.210%
25	4.218%	35	2.866%	45	1.313%	55	0.000%

- Retirement: Retirement is assumed to occur at normal retirement age.

6. Unused Vacation

All participants are assumed to have accumulated 30 days of unused vacation upon termination of employment, retirement, or death.

7. Payroll Increase and Amortization Period

Total payroll has been assumed to grow at the rate of 4.00% per year for purposes of amortizing the unfunded actuarial accrued liability as a level percentage of payroll; the amortization period is established by City ordinance as a closed 30-year period beginning July 1, 2011.

8. Expenses

Administrative expenses are assumed to be 1.00% of future payroll. In addition, the interest rate set forth in item 3. above is assumed to be net of investment expenses and commissions.

9. Cost-of-Living Adjustment

We have assumed that all eligible retirees will receive an automatic cost-of-living adjustment equal to 3.00% per annum.

10. Surviving Beneficiaries

Those active participants who are making the additional 1% employee contribution to provide a survivor benefit to their eligible beneficiaries are assumed to have only one surviving beneficiary of the opposite gender of the employee. Males are assumed to be three years older than females for this purpose.



Changes in Actuarial Methods and Assumptions

Table IV-B

No assumptions or methods have been changed since the previous valuation was completed.



Summary of Plan Provisions

Table V-A

1. Monthly Accrued Benefit

For participants who are hired after August 31, 2011:

1% of Average Monthly Earnings multiplied by up to 80 years of Creditable Service

For participants who are hired during the period July 1, 2010 through August 31, 2011:

2% of Average Monthly Earnings multiplied by up to 50 years of Creditable Service

For all other participants who are covered by the '05 Amendment:

3% of Average Monthly Earnings multiplied by up to 26.667 years of Creditable Service

For all other participants who are not covered by the '05 Amendment:

2% of Average Monthly Earnings multiplied by Creditable Service earned through February 28, 2001 plus 3% of Average Monthly Earnings multiplied by Creditable Service earned thereafter

2. Normal Retirement Age and Benefit

• Age

Any age with at least 30 years of Creditable Service *(only for participants who are covered by the '05 Amendment); or*

Age 55 with at least 10 years of Creditable Service *(only for participants who are hired prior to July 1, 2010); or*

Age 55 with at least 15 years of Creditable Service *(only for participants who are hired prior to September 1, 2011); or*

Age 57 with at least 15 years of Creditable Service; or

Age 65 with at least 5 years of Creditable Service

• Amount

Monthly Accrued Benefit

• Form of Payment

Life annuity *(for those participants without an eligible beneficiary); or*

75% joint and contingent annuity *(for those participants with an eligible beneficiary; benefits continue in equal shares to the participant's dependent children upon the death of the participant's spouse or domestic partner or, for participants not covered by the '86 Amendment, upon the remarriage of the participant's spouse or domestic partner; survivor benefits are actuarially adjusted with respect to participants who are hired after August 31, 2011)*

Note: All annuity forms of payment include an automatic cost-of-living adjustment effective each January 1 based on the increase in the Consumer Price Index as of the preceding November 1 and limited to 3% *(limited to 1% with respect to participants who are hired after August 31, 2011)*. All annuity forms of payment also provide a minimum payout equal to the employee's accumulated contributions, with interest credited after 1985 at the rate of 5% per year *(or less than 5% with respect to any year during which the trust fund earns less than 5% on its investments)*.



Summary of Plan Provisions

Table V-A

(continued)

3. Early Retirement Age and Benefit

- **Age**
Any age with at least 10 years of Creditable Service *(15 years of Creditable Service for participants who are hired after June 30, 2010; minimum age of 47 for participants who are hired after August 31, 2011)*
- **Amount**
Monthly Accrued Benefit *(payable at Normal Retirement Age); or*
Monthly Accrued Benefit reduced by ½% for each of the first 60 months and by ¼% for each additional month by which the participant's Early Retirement Age precedes Normal Retirement Age *(payable at Early Retirement Age and applicable only to those participants who are hired prior to September 1, 2011); or*
Monthly Accrued Benefit reduced by ½% for each month by which the participant's Early Retirement Age precedes Normal Retirement Age *(payable at Early Retirement Age and applicable only to those participants who are hired after August 31, 2011); or*
Monthly Accrued Benefit reduced by ¼% for each month by which the participant's Early Retirement Age precedes age 55 *(payable at Early Retirement Age and only applicable if the participant was hired prior to April 1, 1978 and has earned at least 25 years of Creditable Service)*
- **Form of Payment**
Same as for Normal Retirement

4. 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)

5. Disability Retirement Eligibility and Benefit

- **Eligibility**

All active participants are eligible if the disability is service-connected;
At least five years of Creditable Service is required otherwise.

- **Condition**

The participant must become "totally and permanently disabled" and must remain so disabled until Normal Retirement Age. "Totally and permanently disabled" means the participant is in a continuous state of incapacity due to illness or injury, is prevented from performing his regular assigned or comparable duties during the first 12 months of his disability, and is thereafter prevented from engaging in any occupation for which he is or becomes reasonably qualified by education, training, or experience. With respect to participants who are not covered by the '86 Amendment, the participant must only be prevented from performing his regular assigned or comparable duties during the entire period of his disability.

- **Amount**

For participants who incur a catastrophic injury in the line of duty:

100% of the top salary for the grade and position occupied by the participant at the time of disability

For participants who are covered by the '86 Amendment:

Greater of 50% of Average Monthly Earnings at the time of disability or Monthly Accrued Benefit, offset by worker's compensation payments such that the combination of payments does not exceed 75% of the participant's salary at the time of disability (*payable until the earlier of recovery from disability or Normal Retirement Age*); and

Monthly Accrued Benefit based on Average Monthly Earnings at the time of disability and Creditable Service including the period during which the participant was disabled, but excluding any cost-of-living adjustments that were previously applied to the participant's disability payments (*payable at Normal Retirement Age*)

For all other participants with a service-connected disability:

Greater of 70% of the top salary for the grade and position occupied by the participant at the time of disability or Monthly Accrued Benefit, offset by worker's compensation payments such that the combination of payments does not exceed 100% of the participant's salary at the time of disability

For all other participants:

Monthly Accrued Benefit, offset by worker's compensation payments such that the combination of payments does not exceed 100% of the participant's salary at the time of disability

- **Form of Payment**

Same as for Normal Retirement



Summary of Plan Provisions

Table V-A

(continued)

6. Deferred Vested Benefit

- **Age**
Any age with at least five years of Creditable Service
- **Amount**
Monthly Accrued Benefit multiplied by the participant's Vested Percentage and payable at age 60
- **Form of Payment**
Same as for Normal Retirement

7. Pre-Retirement Death Benefit

For participants who die in the line of duty and who are covered by the '86 Amendment:

- 100% of the participant's base salary at the time of his death, offset by worker's compensation or other payments received for line of duty injuries prior to the participant's death (*payable for the first two years after the participant's death*); and
- 75% of the Monthly Accrued Benefit (*payable thereafter*)

For all other participants who die in the line of duty:

- 100% of the participant's base salary at the time of his death, offset by worker's compensation or other payments received for line of duty injuries prior to the participant's death (*payable for the first two years after the participant's death*); and
- 75% of the greater of: (a) the Monthly Accrued Benefit, or (b) 70% of the top salary for the grade and position occupied by the participant at his death (*payable thereafter*)

For all other participants:

- 75% of the Monthly Accrued Benefit



Summary of Plan Provisions

Table V-A

(continued)

8. Vested Percentage

Retirement benefits with respect to those participants who are hired prior to July 1, 2010 become vested in accordance with the following schedule:

Years of Creditable Service	Vested Percentage
Less than five	0%
At least five, but less than six	25%
At least six, but less than seven	30%
At least seven, but less than eight	35%
At least eight, but less than nine	40%
At least nine, but less than 10	45%
At least 10	100%

Retirement benefits with respect to those participants who are hired after June 30, 2010 become vested in accordance with the following schedule:

Years of Creditable Service	Vested Percentage
Less than five	0%
At least five, but less than six	25%
At least six, but less than seven	30%
At least seven, but less than eight	35%
At least eight, but less than nine	40%
At least nine, but less than 10	45%
At least 10, but less than 11	50%
At least 11, but less than 12	55%
At least 12, but less than 13	60%
At least 13, but less than 14	65%
At least 14, but less than 15	70%
At least 15	100%



Summary of Plan Provisions

Table V-A

(continued)

9. Average Monthly Earnings

The participant's Average Monthly Earnings is equal to: (a) the average of the participant's Base Salary for the highest 36 consecutive months during his period of Creditable Service; plus (b) the difference between the highest and lowest daily rate of pay during such 36-month period multiplied by the days of unused sick leave and divided by 36; plus (c) a credit based on accumulated unused vacation. *(The averaging period is 120 months with respect to participants who are hired after August 31, 2011 and average monthly earnings does not include unused sick leave for these participants.)*

10. Base Salary

The employee's basic salary excluding overtime pay and other special compensation; pursuant to Internal Revenue Code (IRC) section 401(a)(17), total annual plan compensation is limited to \$200,000 as indexed.

11. Employee Contribution

All participating employees must make the required pre-tax contribution to the plan. The required contribution for participants who were hired prior to 1984 is 8% of basic salary for those participants who have an eligible beneficiary and 7% of basic salary for those participants who do not have an eligible beneficiary. The required contribution for participants who were hired during the period 1984 through August 31, 2011 is 13% of basic salary (8% prior to November 1, 2011) for those participants who have an eligible beneficiary and 12% of basic salary (7% prior to November 1, 2011) for those participants who do not have an eligible beneficiary. The required contribution for participants who are hired after August 31, 2011 is 8% of basic salary. An eligible beneficiary is the participant's legal spouse, registered domestic partner, or unmarried child under the age of 18. The participant must have been married or registered to his legal spouse or domestic partner for at least one year prior to his death in order for such individual to be an eligible beneficiary. *(During the period March, 1994 through June, 2009, the required contribution was 1% lower for all participants; prior to March, 1994, the contribution was made on an after-tax basis.)*



Summary of Plan Provisions

Table V-A

(continued)

12. Creditable Service

Creditable Service includes “base creditable service” (*plus an “unused sick leave service credit” for those participants who were hired prior to September 1, 2011*) plus military service as required by federal law. Base creditable service is granted for all periods of full-time employment as a firefighter with the City of Atlanta provided that the employee has made the required contribution for such period of service. With respect to eligible participants, an unused sick leave service credit is granted by dividing the participant’s days of unused sick leave by the number of work days set forth in the following chart:

Years of Base Creditable Service	Work Days
Less than five	239
At least five, but less than 10	236
At least 10, but less than 15	233
At least 15, but less than 20	230
At least 20	226

Creditable Service also includes other service with the City of Atlanta if the relevant contributions are transferred into this plan and may include prior service with the State of Georgia, Fulton County, DeKalb County, or as a teacher in a public school system or private college or university within the State of Georgia if the required contribution is made to the plan.

13. Participation Requirement

All full-time firefighters employed by the City of Atlanta are eligible to participate in the plan.

14. Plan Effective Date

April 1, 1978



Summary of Plan Amendments

Table V-B

No plan changes have been adopted since the previous valuation was completed.

