

**REVISED REPORT ON THE ACTUARIAL VALUATION OF
THE NORTH CAROLINA FIREMEN'S AND
RESCUE SQUAD WORKERS' PENSION FUND
PREPARED AS OF JUNE 30, 2011**

April 24, 2012

Board of Trustees
North Carolina Firemen's and Rescue
Squad Workers' Pension Fund
Raleigh, North Carolina

Members of the Board:

The North Carolina Firemen's and Rescue Squad Workers' Pension Fund became effective as of January 1, 1982. It is a continuation of the North Carolina Firemen's Pension Fund which became effective July 1, 1959. Contributions to provide the benefits under the Fund are made jointly by the members and by the State. The members' rate of contribution is fixed at \$10 per month, while the State's rate of contribution is to be determined annually on the basis of actuarial valuations, so that the total contributions of the members and the State, together with the interest earned on the investments of the Fund, will be sufficient to provide all benefits payable from the Fund.

An actuarial valuation of the Fund, prepared as of June 30, 2011, has now been completed and the results are presented in this report, together with our recommendations regarding contributions payable by the State.

The annual required contribution for the fiscal year ending June 30, 2013 is \$14,074,371. The Appropriations Act of 2011 changed the period over which the unfunded actuarial accrued liability is amortized from nine years to 12 years. The annual required contribution of \$14,074,371 reflects this change.

The Fund has a contribution deficit of \$2,524,845 as of June 30, 2011 for unpaid employer contributions in the fiscal years ending June 30, 2001 and June 30, 2011. If the current appropriation of \$15,416,599 for the fiscal year ending June 30, 2013 remains unchanged, the contribution deficit to the Fund could be reduced by \$1,342,228. Alternatively, this amount could be used for benefit improvements or contribution reductions.

The valuation has been prepared in accordance with the parameters of Statement Nos. 25 and 27 of the Governmental Accounting Standards Board (GASB). The annual required contribution (ARC) under GASB for the 2013 fiscal year is \$14,074,371 based on a twelve-year liquidation period of the unfunded accrued liability. The Fund has a Net Pension Obligation (NPO) of \$2,524,845.

The plan sponsor selected the assumptions used for the results in this report. We believe that these assumptions are reasonable and comply with the requirements of GASB Nos. 25 and 27. We prepared this report in accordance with the requirements of these standards.

The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about it.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,



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**REPORT ON THE ACTUARIAL VALUATION OF THE
NORTH CAROLINA FIREMEN'S AND
RESCUE SQUAD WORKERS' PENSION FUND
PREPARED AS OF JUNE 30, 2011**

SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30, 2011, presents the results of the actuarial valuation of the Fund. The principal results of the valuation and a comparison with previous year's results are summarized below.

**TABLE I
SUMMARY OF PRINCIPAL RESULTS**

VALUATION DATE	6/30/2011	6/30/2010
	FIREMEN	
Number of active members included in valuation	36,471	35,216
Retired membership		
Number	10,408	10,216
Annual pensions	\$ 21,232,320	\$ 20,840,640
Number of deferred disabled members	147	113
Assets		
Market related value	\$ 292,213,139	\$ 283,783,155
Market value	288,065,061	253,037,000
Unfunded accrued liability	\$ 62,902,341	\$ 50,635,822
Employer contributions		
Normal	\$ 5,631,487	\$ 6,884,024
Accrued liability	<u>7,826,149</u>	<u>8,134,525</u>
Total	\$ 13,457,636	\$ 15,018,549
	RESCUE SQUAD WORKERS	
Number of active members included in valuation	3,263	3,268
Retired membership		
Number	1,112	1,082
Annual pensions	\$ 2,268,480	\$ 2,207,280
Number of deferred disabled members	12	8
Assets		
Market related value	\$ 35,770,915	\$ 34,489,461
Market value	35,289,129	30,769,405
Unfunded accrued liability	\$ 950,687	\$ 1,327,549
Employer contributions		
Normal	\$ 503,839	\$ 638,828
Accrued liability	<u>112,896</u>	<u>213,268</u>
Total	\$ 616,735	\$ 852,096

TABLE I (continued)

VALUATION DATE	6/30/2011	6/30/2010
	TOTAL	
Number of active members included in valuation	39,734	38,484
Retired membership		
Number	11,520	11,298
Annual pensions	\$ 23,500,800	\$ 23,047,920
Number of deferred disabled members	159	121
Assets		
Market related value	\$ 327,984,054	\$ 318,272,616
Market value	323,354,190	283,806,405
Unfunded accrued liability	\$ 63,853,028	\$ 51,963,371
CONTRIBUTIONS FOR FISCAL YEAR ENDING	JUNE 30, 2013	JUNE 30, 2012
<u>Recommended Employer contributions</u>		
Normal	\$ 6,135,326	\$ 7,522,852
Accrued liability	<u>7,939,045</u>	<u>8,347,793</u>
Total	\$ 14,074,371	\$ 15,870,645
Impact of Legislative Changes	<u>N/A</u>	<u>(1,481,939)</u>
Final	\$ N/A	\$ 14,388,706
<u>GASB 25/27</u>		
Annual required contribution (ARC) of employer		
Normal	\$ 6,135,326	\$ 7,522,852
Accrued liability	<u>7,939,045</u>	<u>8,347,793</u>
Total	\$ 14,074,371	\$ 15,870,645
Impact of Legislative Changes	<u>N/A</u>	<u>(1,481,939)</u>
Final	\$ N/A	\$ 14,388,706

2. The following table shows a reconciliation of the change in the annual required contribution computed to be \$15,870,645 based on the June 30, 2010 valuation and \$14,074,371 based on the June 30, 2011 valuation.

TABLE II
RECONCILIATION OF CHANGE IN ANNUAL REQUIRED CONTRIBUTION

Prior Year's Preliminary ARC (based on 6/30/10 valuation)	\$ 15,870,645
Impact of Legislative Changes	<u>(1,481,939)</u>
Prior Year's Final ARC	\$ 14,388,706
Change Due to Demographic Gain/Loss	(759,172)
Change Due to Investment Gain/Loss	152,934
Change Due to Contributions Less Than ARC	<u>291,903</u>
Current Year's Preliminary ARC (based on 6/30/11 valuation)	\$ 14,074,371

3. Tables summarizing the membership of the Fund as of the valuation date are shown in Section II.
4. The valuation balance sheet showing the assets and liabilities of the current and previous valuation dates is provided in Section III.
5. An allocation of investments by category is provided in Section IV.
6. Contributions payable by the State are provided in Section V.
7. Comments on experience and actuarial gains during the valuation year are provided in Section VI.
8. Accounting information to be disclosed in the financial statements of the Fund and the employer is provided in Section VII.
9. Schedule A of this report presents the development of the actuarial value of assets.
10. Schedule B of this report presents the development of the amortization of the unfunded accrued liability.
11. Schedule C of this report outlines the full set of actuarial assumptions and methods employed.
12. Schedule D gives a summary of the benefit and contribution provisions of the Fund.
13. Schedule E provides detailed tabulations of the membership of the Fund as of the valuation date.

SECTION II - MEMBERSHIP DATA

Data regarding the membership of the Fund for use as a basis for the valuation were furnished by the Retirement Fund office. The following table summarizes the membership of the Fund as of June 30, 2011 upon which the valuation was based. Detailed tabulations of the data are given in Schedule E.

TABLE III
THE NUMBER OF ACTIVE MEMBERS
AS OF JUNE 30, 2011

GROUP	NUMBER	AVERAGE AGE	AVERAGE SERVICE
Firemen	21,709	39.3	11.6
Volunteer Firemen	14,762	39.3	10.5
Rescue Squad Workers	<u>3,263</u>	<u>42.6</u>	<u>11.9</u>
Total	39,734	39.6	11.2

TABLE IV
THE NUMBER AND ANNUAL PENSIONS
OF RETIRED MEMBERS AS OF JUNE 30, 2011

GROUP	NUMBER	AVERAGE AGE	ANNUAL PENSIONS
Firemen	10,408	68.0	\$ 21,232,320
Rescue Squad Workers	<u>1,112</u>	<u>68.4</u>	<u>2,268,480</u>
Total	11,520	68.0	\$ 23,500,800

TABLE V
THE NUMBER AND ANNUAL PENSIONS OF DISABLED MEMBERS
ELIGIBLE FOR DEFERRED PENSION AS OF JUNE 30, 2011

GROUP	NUMBER	AVERAGE AGE	ANNUAL PENSIONS
Firemen	147	49.9	\$ 299,880
Rescue Squad Workers	<u>12</u>	<u>52.3</u>	<u>24,480</u>
Total	159	50.1	\$ 324,360

SECTION III - VALUATION BALANCE SHEET

The following valuation balance sheets show the assets and liabilities of the Pension Fund as of the current valuation date of June 30, 2011 and, for comparison purposes, as of the previous valuation date of June 30, 2010. The development of the actuarial value of assets is presented in Schedule A.

TABLE VI
VALUATION BALANCE SHEET
SHOWING THE ASSETS AND LIABILITIES OF THE
NORTH CAROLINA FIREMEN'S AND
RESCUE SQUAD WORKERS' PENSION FUND

FIREMEN

ASSETS	June 30, 2011	June 30, 2010
Current assets:		
Annuity Savings Fund	\$ 34,647,854	\$ 33,510,022
Pension Accumulation Fund	<u>257,565,285</u>	<u>250,273,133</u>
Total current assets	\$ 292,213,139	\$ 283,783,155
Future member contributions to Annuity Savings Fund	\$ 26,745,594	\$ 25,463,756
Prospective contributions to Pension Accumulation Fund:		
Normal contributions	\$ 38,470,763	\$ 47,561,837
Accrued liability contributions	<u>62,902,341</u>	<u>50,635,822</u>
Total prospective contributions	<u>\$ 101,373,104</u>	<u>\$ 98,197,659</u>
Total Assets	<u>\$ 420,331,837</u>	<u>\$ 407,444,570</u>
LIABILITIES		
Annuity Savings Fund:		
Past member contributions	\$ 34,647,854	\$ 33,510,022
Future member contributions	<u>26,745,594</u>	<u>25,463,756</u>
Total contributions to Annuity Savings Fund	\$ 61,393,448	\$ 58,973,778
Pension Accumulation Fund:		
Benefits currently in payment	\$ 180,320,651	\$ 174,957,949
Benefits to be paid to current active members	<u>178,617,738</u>	<u>173,512,843</u>
Total benefits payable from Pension Accumulation Fund	<u>\$ 358,938,389</u>	<u>\$ 348,470,792</u>
Total Liabilities	<u>\$ 420,331,837</u>	<u>\$ 407,444,570</u>

TABLE VI (continued)

**VALUATION BALANCE SHEET
SHOWING THE ASSETS AND LIABILITIES OF THE
NORTH CAROLINA FIREMEN'S AND
RESCUE SQUAD WORKERS' PENSION FUND**

RESCUE SQUAD WORKERS

ASSETS	June 30, 2011	June 30, 2010
Current assets:		
Annuity Savings Fund	\$ 3,076,108	\$ 3,137,794
Pension Accumulation Fund	<u>32,694,807</u>	<u>31,351,667</u>
Total current assets	\$ 35,770,915	\$ 34,489,461
Future member contributions to Annuity Savings Fund	\$ 2,210,015	\$ 2,166,323
Prospective contributions to Pension Accumulation Fund:		
Normal contributions	\$ 3,140,210	\$ 3,962,381
Accrued liability contributions	<u>950,687</u>	<u>1,327,549</u>
Total prospective contributions	<u>\$ 4,090,897</u>	<u>\$ 5,289,930</u>
Total Assets	<u>\$ 42,071,827</u>	<u>\$ 41,945,714</u>
LIABILITIES		
Annuity Savings Fund:		
Past member contributions	\$ 3,076,108	\$ 3,137,794
Future member contributions	<u>2,210,015</u>	<u>2,166,323</u>
Total contributions to Annuity Savings Fund	\$ 5,286,123	\$ 5,304,117
Pension Accumulation Fund:		
Benefits currently in payment	\$ 19,182,497	\$ 18,509,893
Benefits to be paid to current active members	<u>17,603,207</u>	<u>18,131,704</u>
Total benefits payable from Pension Accumulation Fund	<u>\$ 36,785,704</u>	<u>\$ 36,641,597</u>
Total Liabilities	<u>\$ 42,071,827</u>	<u>\$ 41,945,714</u>

TABLE VI (continued)

**VALUATION BALANCE SHEET
SHOWING THE ASSETS AND LIABILITIES OF THE
NORTH CAROLINA FIREMEN'S AND
RESCUE SQUAD WORKERS' PENSION FUND**

TOTAL

ASSETS	June 30, 2011	June 30, 2010
Current assets:		
Annuity Savings Fund	\$ 37,723,962	\$ 36,647,816
Pension Accumulation Fund	<u>290,260,092</u>	<u>281,624,800</u>
Total current assets	\$ 327,984,054	\$ 318,272,616
Future member contributions to Annuity Savings Fund	\$ 28,955,609	\$ 27,630,079
Prospective contributions to Pension Accumulation Fund:		
Normal contributions	\$ 41,610,973	\$ 51,524,218
Accrued liability contributions	<u>63,853,028</u>	<u>51,963,371</u>
Total prospective contributions	<u>\$ 105,464,001</u>	<u>\$ 103,487,589</u>
Total Assets	<u>\$ 462,403,664</u>	<u>\$ 449,390,284</u>
LIABILITIES		
Annuity Savings Fund:		
Past member contributions	\$ 37,723,962	\$ 36,647,816
Future member contributions	<u>28,955,609</u>	<u>27,630,079</u>
Total contributions to Annuity Savings Fund	\$ 66,679,571	\$ 64,277,895
Pension Accumulation Fund:		
Benefits currently in payment	\$ 199,503,148	\$ 193,467,842
Benefits to be paid to current active members	<u>196,220,945</u>	<u>191,644,547</u>
Total benefits payable from Pension Accumulation Fund	<u>\$ 395,724,093</u>	<u>\$ 385,112,389</u>
Total Liabilities	<u>\$ 462,403,664</u>	<u>\$ 449,390,284</u>

The valuation balance sheet gives the following information with respect to the funds of the system as of June 30, 2011.

Annuity Savings Fund

The Annuity Savings Fund is the fund to which are credited contributions made by members. When a member retires, the amount of his accumulated contributions is transferred from the Annuity Savings Fund to the Pension Accumulation Fund.

The assets credited to the Annuity Savings Fund on account of Firemen on June 30, 2011, which represent the accumulated contributions of members to that date, amounted to \$34,647,854. The balance sheet also shows that the future contributions by members have a present value of \$26,745,594. The present value of both past and future contributions of members is therefore equal to \$61,393,448. The liabilities of this fund are also shown to be equal to \$61,393,448.

The assets credited to the Annuity Savings Fund on account of Rescue Squad Workers on June 30, 2011 amounted to \$3,076,108. The balance sheet also shows that the future contributions by members have a present value of \$2,210,015. The present value of both past and future contributions of members is therefore equal to \$5,286,123. The liabilities of this fund are also shown to be equal to \$5,286,123.

Pension Accumulation Fund

The Pension Accumulation Fund is the fund to which the contributions made by the State are credited and from which are paid all benefits on account of pensioners.

The current assets creditable to the Pension Accumulation Fund on account of Firemen on June 30, 2011 amounted to \$257,565,285. The liabilities on account of active members amounted to \$178,617,738. In addition, the balance sheet indicates liabilities of \$180,320,651 on account of all benefits payable to pensioners as of June 30, 2011. The total liabilities of the Pension Accumulation Fund for Firemen, therefore, amounted to \$358,938,389. The difference between these liabilities and the current assets credited to this Fund is \$101,373,104 which represents the present value of future contributions to be made by the State. Of this amount, \$38,470,763 represents the present value of prospective normal contributions by the State, and the balance of \$62,902,341 represents the present value of prospective accrued liability contributions.

The current assets creditable to the Pension Accumulation Fund on account of Rescue Squad Workers on June 30, 2011 amounted to \$32,694,807. The liabilities on account of active members amounted to \$17,603,207. In addition, the balance sheet indicates liabilities of \$19,182,497 on account of all benefits payable to pensioners as of June 30, 2011. The total liabilities of the Pension Accumulation Fund for Rescue Squad Workers, therefore, amounted to \$36,785,704. The difference between these liabilities and the current assets credited to this Fund is \$4,090,897 which represents the present value of future contributions to be made by the State. Of this amount, \$3,140,210 represents the present value of prospective normal contributions by the State, and the balance of \$950,687 represents the present value of prospective accrued liability contributions.

SECTION IV – ASSET ALLOCATION

The following table shows an allocation of investments by category for the Annuity Savings Fund and Pension Accumulation Fund as of June 30, 2011.

TABLE VII

**ALLOCATION OF INVESTMENTS BY CATEGORY
FOR THE ANNUITY SAVINGS FUND AND
PENSION ACCUMULATION FUND AS OF JUNE 30, 2011**

Cash and Receivables	0.2%
Fixed Income (LTIF)	37.7
Public Equity	45.1
Other*	<u>17.0</u>
Total	100.0%

* Real Estate, Alternatives, Inflation and Credit.

SECTION V – COMMENTS ON VALUATION

The Appropriations Act of 2011 also changed the period over which the unfunded actuarial accrued liability is amortized from nine years to 12 years.

SECTION VI - CONTRIBUTIONS PAYABLE BY THE STATE

The normal contribution covers the State's share of the cost of benefits based on current service. The valuation indicates that the annual normal contribution payable by the State is equal to \$154.41 multiplied by the number of active members. Based on 36,471 active members included in the valuation, the normal contribution for Firemen is \$5,631,487. Based on 3,263 active members included in the valuation, the normal contribution for Rescue Squad Workers is \$503,839. The valuation also indicated that the annual accrued liability contribution per active member is \$199.80.

The accrued liability is amortized over a period of years through an annual accrued liability contribution. Based on the amortization schedule for the unfunded actuarial accrued liability shown in Schedule B, the annual accrued liability contributions are \$7,826,149 for Firemen and \$112,896 for Rescue Squad Workers.

The total contributions on this basis are \$13,457,636 for Firemen and \$616,735 for Rescue Squad Workers.

The following table shows the annual contributions payable by the State.

TABLE VIII
ANNUAL CONTRIBUTIONS PAYABLE BY THE STATE

CONTRIBUTION	FIREMEN	RESCUE SQUAD WORKERS	TOTAL
Normal	\$ 5,631,487	\$ 503,839	\$ 6,135,326
Accrued Liability	<u>7,826,149</u>	<u>112,896</u>	<u>7,939,045</u>
Total	\$ 13,457,636	\$ 616,735	\$ 14,074,371

The annual required contribution for the fiscal year ending June 30, 2013 is \$14,074,371.

The Fund has a contribution deficit of \$2,524,845 as of June 30, 2011 for unpaid employer contributions in the fiscal years ending June 30, 2001 and June 30, 2011. If the current appropriation of \$15,416,599 for the fiscal year ending June 30, 2013 remains unchanged, the contribution deficit to the Fund could be reduced by \$1,342,228. Alternatively, this amount could be used for benefit improvements or contribution reductions.

The following table shows the annual contribution payable per active member.

TABLE IX
ANNUAL CONTRIBUTION PAYABLE PER ACTIVE MEMBER

CONTRIBUTION	RATE
State	
Normal	\$ 154.41
Accrued Liability	<u>199.80</u>
Total	\$ 354.21
Member*	<u>120.00</u>
Grand Total	\$ 474.21

* Member rate is payable until member has contributed for 20 years.

SECTION VII - COMMENTS ON EXPERIENCE AND GAINS

The following table shows a detailed reconciliation of the change in unfunded accrued liability since the prior valuation.

TABLE X

**RECONCILIATION OF CHANGE IN UNFUNDED ACCRUED LIABILITY
SINCE THE PRIOR VALUATION
(IN MILLIONS)**

Unfunded accrued liability as of 6/30/10	\$ 52.0
Normal cost	10.5
Reduction due to actual employer and member contributions	(13.1)
Interest on unfunded accrued liability, normal cost and contributions	4.1
Asset (gain)/loss	1.2
Accrued liability (gain)/loss	<u>9.2</u>
Unfunded accrued liability as of 6/30/11	\$ 63.9

SECTION VIII - ACCOUNTING INFORMATION

- Statement Nos. 25 and 27 of the Governmental Accounting Standards Board (GASB) set forth certain items of information to be disclosed in the financial statements of the Fund and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED PARTICIPANTS
AS OF JUNE 30, 2011**

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	11,520
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	159
Active Participants	<u>39,734</u>
Total	51,413

- Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
6/30/06	\$287,933,056	\$304,339,206	\$16,406,150	94.6%	N/A	N/A
6/30/07	305,869,434	322,453,973	16,584,539	94.9	N/A	N/A
6/30/08	316,973,296	339,022,147	22,048,851	93.5	N/A	N/A
6/30/09	315,697,259	351,324,586	35,627,327	89.9	N/A	N/A
6/30/10	318,272,616	370,235,987	51,963,371	86.0	N/A	N/A
6/30/11	327,984,054	391,837,082	63,853,028	83.7	N/A	N/A

3. Following is a reconciliation of the preliminary employer annual required contribution rate to the final employer annual required contribution for fiscal year ending June 30, 2011.

	Fiscal Year Ending June 30, 2011
Preliminary Annual Required Contribution	
Normal	\$ 6,716,315
Accrued Liability	<u>5,526,611</u>
Total	\$ 12,242,926
Impact of Legislative Changes	<u>0</u>
Final Annual Required Contribution	\$ 12,242,926

4. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2011.

Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending 6/30/2011

(a)	Employer annual required contribution	\$ 12,242,926
(b)	Interest on net pension obligation	31,135
(c)	Adjustment to annual required contribution	(68,989)
(d)	Annual pension cost: (a) + (b) + (c)	\$ 12,205,072
(e)	Employer contributions made for fiscal year ending 6/30/2011	10,109,671
(f)	Increase (decrease) in net pension obligation: (d) – (e)	\$ 2,095,401
(g)	Net pension obligation beginning of fiscal year	429,444
(h)	Net pension obligation end of fiscal year: (f) + (g)	\$ 2,524,845

TREND INFORMATION

<u>Year Ending</u>	<u>Annual Pension Cost (APC)</u>	<u>Percentage of APC Contributed</u>	<u>Net Pension Obligation</u>
June 30, 2009	\$9,713,436	100%	\$473,819
June 30, 2010	10,035,296	100	429,444
June 30, 2011	12,205,072	83	2,524,845

5. The annual required contribution (ARC) of the employer, determined in accordance with the parameters of GASB 25/27, is shown below. The accrued liability rate is based on amortization schedule below.

**2012/2013 FISCAL YEAR
ANNUAL REQUIRED CONTRIBUTION (ARC)
BASED ON THE VALUATION AS OF JUNE 30, 2011**

ANNUAL REQUIRED CONTRIBUTION (ARC)	AMOUNT
Normal	\$ 6,135,326
Accrued liability	7,939,045
Total	\$ 14,074,371

**AMORTIZATION SCHEDULE
FOR UNFUNDED ACTUARIAL ACCRUED LIABILITY**

<u>DATE ESTABLISHED</u>	<u>OUTSTANDING BALANCES</u>		<u>ANNUAL PAYMENT</u>
	<u>INCEPTION</u>	<u>JUNE 30, 2011</u>	
June 30, 2010	\$ 51,963,371	\$ 55,730,715	\$ 6,865,854
June 30, 2011	\$ 8,122,313	\$ 8,122,313	\$ 1,073,191
Total		\$ 63,853,028	\$ 7,939,045

6. Additional information as of June 30, 2011 follows.

Valuation date	6/30/2011
Actuarial cost method	Entry age
Amortization method	Level dollar closed
Amortization period	12 years
Asset valuation method	20% of market value plus 80% of expected actuarial value (not greater than 120% of market value and not less than 80% of market value)
Actuarial assumptions:	
Investment rate of return*	7.25%
Projected salary increases	N/A
*Includes inflation at	3.50%
Cost-of-living adjustments	N/A

SCHEDULE A**DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
FOR THE YEAR ENDING JUNE 30, 2011**

	<u>Firemen</u>	<u>Rescue Squad Workers</u>	<u>Total</u>
1. Actuarial Value of Assets as of June 30, 2010:	\$ 283,783,155	\$ 34,489,461	\$ 318,272,616
2. 2010/2011 Net Cash Flow			
a. Contributions	11,705,040	1,359,362	13,064,402
b. Disbursements	<u>22,423,762</u>	<u>2,419,517</u>	<u>24,843,279</u>
c. Net Cash Flow: (a) - (b)	(10,718,722)	(1,060,155)	(11,778,877)
3. Expected Investment Return: [(1) x .0725] + [(2)c x .03625]	20,185,725	2,462,055	22,647,780
4. Expected Actuarial Value of Assets as of June 30, 2011: (1) + (2)c + (3)	293,250,158	35,891,361	329,141,519
5. Market Value of Assets as of June 30, 2011:	288,065,061	35,289,129	323,354,190
6. Excess of Market Value over Expected Actuarial Value of Assets: (5) - (4)	(5,185,097)	(602,232)	(5,787,329)
7. 20% Adjustment towards Market Value: (6) * .20	(1,037,019)	(120,446)	(1,157,465)
8. Preliminary Actuarial Value of Assets as of June 30, 2011: (4) + (7)	\$ 292,213,139	\$ 35,770,915	\$ 327,984,054
9. Final Actuarial Value of Assets as of June 30, 2011: [(8) not less than 80% of (5) and not greater than 120% of (5)]	\$ 292,213,139	\$ 35,770,915	\$ 327,984,054
10. Rate of investment return on actuarial value	6.88%	6.90%	6.88%
11. Rate of investment return on market value	18.47%	18.45%	18.47%

SCHEDULE B**AMORTIZATION SCHEDULE FOR
UNFUNDED ACTUARIAL ACCRUED LIABILITY****FIREMEN**

DATE ESTABLISHED	OUTSTANDING BALANCES		ANNUAL PAYMENT
	INCEPTION	JUNE 30, 2011	
June 30, 2010	\$ 50,635,822	\$ 54,306,920	\$ 6,690,447
June 30, 2011	\$ 8,595,421	<u>\$ 8,595,421</u>	<u>\$ 1,135,702</u>
Total		\$ 62,902,341	\$ 7,826,149

RESCUE SQUAD WORKERS

DATE ESTABLISHED	OUTSTANDING BALANCES		ANNUAL PAYMENT
	INCEPTION	JUNE 30, 2011	
June 30, 2010	\$ 1,327,549	\$ 1,423,795	\$ 175,407
June 30, 2011	\$ (473,108)	<u>\$ (473,108)</u>	<u>\$ (62,511)</u>
Total		\$ 950,687	\$ 112,896

TOTAL

DATE ESTABLISHED	OUTSTANDING BALANCES		ANNUAL PAYMENT
	INCEPTION	JUNE 30, 2011	
June 30, 2010	\$ 51,963,371	\$ 55,730,715	\$ 6,865,854
June 30, 2011	\$ 8,122,313	<u>\$ 8,122,313</u>	<u>\$ 1,073,191</u>
Total		\$ 63,853,028	\$ 7,939,045

SCHEDULE C**OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

INTEREST RATE: 7.25% per annum, compounded annually.

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed annual rates of withdrawal and vesting, retirement, death and disability are as follows:

<u>Service</u>	<u>Withdrawal</u>		<u>Age</u>	<u>Retirement*</u>	
	<u>Firefighters</u>	<u>Rescue Squad Workers</u>		<u>Firefighters and Rescue Squad Workers</u>	<u>Volunteer Firefighters</u>
0	.030	.05	25		
1	.030	.05	30		
2	.030	.05	35		
3	.030	.05	40		
4	.030	.05	45		
5+	.015	.02	50		
			55	0.75	1.00
			60	0.75	1.00
			65	1.00	1.00
			69	1.00	1.00

* These rates apply only after 20 years of membership in the system.

<u>Age</u>	<u>Base Mortality*</u>		<u>Disability</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	.0004	.0002	.0016	.0016
30	.0006	.0004	.0030	.0030
35	.0009	.0006	.0050	.0050
40	.0012	.0009	.0068	.0068
45	.0017	.0013	.0083	.0083
50	.0024	.0020	.0120	.0120
55	.0036	.0030	.0150	.0150
60	.0059	.0047	.0200	.0200
65	.0086	.0066		
69	.0109	.0083		

* Base mortality rates as of December 31, 2003.

Representative values of the assumed post-retirement mortality rates as of December 31, 2003 prior to any mortality improvements are as follows:

Annual Rate of Death after Retirement

<u>Age</u>	<u>Male Healthy Retirees</u>	<u>Female Healthy Retirees</u>	<u>Male Beneficiaries of Deceased Members</u>	<u>Female Beneficiaries of Deceased Members</u>	<u>Male Disabled Retirees</u>	<u>Female Disabled Retirees</u>
55	.0064	.0044	.0061	.0044	.0277	.0176
60	.0099	.0077	.0090	.0077	.0342	.0229
65	.0165	.0125	.0149	.0125	.0407	.0296
70	.0273	.0207	.0246	.0207	.0483	.0401
75	.0469	.0341	.0422	.0341	.0596	.0558
80	.0805	.0563	.0720	.0563	.0775	.0771

MORTALITY IMPROVEMENTS: Representative values of the assumed mortality improvement rates (applied to pre-retirement mortality rates for active members and post-retirement mortality rates for healthy retirees and beneficiaries of deceased members after such tables have been set back or set forward) are as follows:

<u>Age</u>	<u>Male Projection Scale</u>	<u>Female Projection Scale</u>
25	0.010	0.014
30	0.005	0.010
35	0.005	0.011
40	0.008	0.015
45	0.013	0.016
50	0.018	0.017
55	0.019	0.008
60	0.016	0.005
65	0.014	0.005
70	0.015	0.005
75	0.014	0.008
80	0.010	0.007

DEATHS AFTER RETIREMENT (NON-DISABLED): According to the RP-2000 Mortality tables for retirees. These tables are set forward two years for all employees. These tables are also set forward one year for male beneficiaries of deceased members and set forward two years for female beneficiaries of deceased members. The base retiree RP-2000 tables have no rates prior to age 50. The active employee rates of RP-2000 are used for ages less than 50 prior to any adjustments for setbacks.

DEATH AFTER DISABILITY: According to the RP-2000 Mortality tables for disabled annuitants set back six years for males and set forward one year for females.

DEATHS PRIOR TO RETIREMENT: According to the RP-2000 Mortality tables for active employees. These tables are set forward two years for all employees. The base RP-2000 tables for active employees have no rates after age 70. A blend of active rates and retired rates are used from ages 70 to 80 prior to any set back and adjustments.

MORTALITY PROJECTION (NON-DISABLED): All mortality rates are projected from December 31, 2003 using Scale AA.

TIMING OF ASSUMPTIONS: All withdrawals, deaths, disabilities, retirements and salary increases are assumed to occur January 1 of each year.

FUTURE EXPENSES: Equal to prior year actual administrative expenses.

VALUATION METHOD: Entry age normal cost method. Entry age is established on an individual basis. Gains and losses are reflected in the unfunded accrued liability.

ASSET VALUATION METHOD: Actuarial value, as developed in Schedule A. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value. The actuarial value of assets is not allowed to be greater than 120% of the market value of assets or less than 80% of the market value of assets.

SCHEDULE D**SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS**

All regular and volunteer firemen of the State of North Carolina whose qualifications are certified by their respective Boards of County Commissioners are eligible to be members of the Fund. All rescue squad workers who are eligible for membership in the North Carolina Association of Rescue Squads, Inc. are eligible to be members of the Fund. Credit for prior service (that is, service rendered prior to July 1, 1959) is granted to firemen who were eligible on July 1, 1959 and became members on or before June 30, 1961. Credit may also be given for certain special purchased service.

BENEFITS**Service Retirement Pension****Condition for Pension**

A member who retires after he has attained age 55 and has credit for 20 years of service as a fireman or rescue squad worker in North Carolina is entitled to a monthly pension.

Amount of Pension

The amount of the pension is equal to \$170 per month.

Deferred Early Retirement Pension**Condition for Pension**

A member whose service is terminated after he has credit for 20 years of service as a fireman or rescue squad worker in North Carolina but before he has attained age 55 is eligible to receive a deferred retirement pension, starting at age 55, provided he continues to make regular contributions until age 55 or until he has contributed for a total of 20 years, whichever event occurs earlier. Any member who is totally and permanently disabled while in the discharge of his official duties and leaves service as a result of such disability is eligible for a deferred retirement pension commencing at age 55 without continuing to make contributions. Any member who becomes totally and permanently disabled for any cause, other than line of duty, after 10 years of credited service under the Pension Fund may continue to make monthly contributions until he has paid \$2,400 into the Fund and receive a pension upon attainment of age 55.

Amount of Pension	The deferred pension is \$170 per month.
Return of Contributions	Upon the death or withdrawal of a member prior to retirement, his aggregate contributions are refunded in a lump sum. Upon the death of a retired member, the excess, if any, of his aggregate contributions over the total of the pension payments he has received is refunded.

CONTRIBUTIONS

By Members	Each member contributes \$10 per month until retirement or until he has contributed for a total of 20 years, whichever event occurs earlier.
By State	The State makes annual contributions sufficient, with the members' contributions, to meet the cost of the benefits under the Fund.

SCHEDULE D**TABLE 1**

**THE NUMBER OF ACTIVE MEMBERS
DISTRIBUTED BY AGE AND SERVICE
AS OF JUNE 30, 2011**

AGE	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	593	3,138	250	0	0	0	0	0	0	0	3,981
25 to 29	342	2,800	1,552	143	0	0	0	0	0	0	4,837
30 to 34	243	2,242	1,679	1,014	104	0	0	0	0	0	5,282
35 to 39	194	1,948	1,493	1,222	811	92	0	0	0	0	5,760
40 to 44	174	1,618	1,327	1,120	976	866	71	0	0	0	6,152
45 to 49	96	1,078	947	895	771	1,140	452	43	0	0	5,422
50 to 54	61	661	635	545	610	1,217	735	299	27	0	4,790
55 to 59	30	350	332	324	407	289	173	79	24	0	2,008
60 to 64	17	202	171	167	181	73	31	9	8	1	860
65 to 69	25	88	86	59	87	24	5	5	0	4	383
70 & up	10	75	75	55	37	3	0	4	0	0	259
Total	1,785	14,200	8,547	5,544	3,984	3,704	1,467	439	59	5	39,734

SCHEDULE D**TABLE 2****THE NUMBER OF ACTIVE MEMBERS
DISTRIBUTED BY AGE
AS OF JUNE 30, 2011**

Age	Firemen	Rescue Squad Workers
16	13	0
17	22	1
18	57	0
19	106	2
20	261	8
21	437	21
22	534	28
23	731	30
24	837	33
25	823	37
26	843	49
27	879	59
28	895	59
29	938	66
30	976	73
31	978	62
32	992	60
33	999	71
34	970	78
35	982	90
36	1,016	101
37	987	97
38	1,081	91
39	1,098	94
40	1,084	111
41	1,162	120
42	1,196	86
43	1,124	105
44	1,105	107
45	1,048	99
46	1,021	91
47	971	94
48	1,046	96
49	959	88
50	971	85
51	939	106
52	873	105
53	871	90
54	839	79
55	775	113

SCHEDULE D**TABLE 2****THE NUMBER OF ACTIVE MEMBERS
DISTRIBUTED BY AGE
AS OF JUNE 30, 2011**

CONTINUED

Age	Firemen	Rescue Squad Workers
56	639	84
57	342	52
58	308	51
59	257	34
60	201	40
61	195	36
62	153	26
63	161	22
64	105	26
65	116	20
66	89	19
67	69	7
68	65	14
69	55	12
70	48	5
71	42	8
72	28	5
73	34	4
74	23	3
75	15	2
76	18	2
77	15	3
78	11	0
79	7	0
80	9	1
81	6	0
82	4	0
83	3	0
84	5	1
85	9	1
Total	36,471	3,263

SCHEDULE D**TABLE 3****THE NUMBER OF ACTIVE MEMBERS
DISTRIBUTED BY SERVICE
AS OF JUNE 30, 2011**

Years of Service	Firemen	Rescue Squad Workers
0	1,681	104
1	4,772	350
2	3,052	217
3	3,056	210
4	2,321	222
5	1,972	213
6	1,657	169
7	1,502	166
8	1,325	148
9	1,266	129
10	1,214	94
11	1,124	99
12	955	105
13	933	89
14	827	104
15	753	73
16	647	64
17	713	84
18	779	75
19	730	66
20	793	69
21	819	56
22	701	58
23	568	40
24	552	48
25	421	35
26	327	32
27	236	24
28	164	35
29	171	22
30	145	25
31	103	9
32	59	9
33	49	8
34	28	4
35	21	5
36	18	1
37	9	1
38	3	0
39	1	0
40	1	0
41	1	0
42	0	1
43	1	0
44	1	0
Total	36,471	3,263

SCHEDULE D**TABLE 4**

**THE NUMBER AND ANNUAL PENSIONS OF
RETIRED MEMBERS DISTRIBUTED BY AGE
AS OF JUNE 30, 2011**

Age	Firemen		Rescue Squad Workers	
	Number	Amount	Number	Amount
35	1	\$ 2,040		
46	1	2,040		
55	136	277,440	14	\$ 28,560
56	432	881,280	47	95,880
57	485	989,400	54	110,160
58	469	956,760	42	85,680
59	515	1,050,600	42	85,680
60	477	973,080	55	112,200
61	467	952,680	48	97,920
62	450	918,000	49	99,960
63	458	934,320	40	81,600
64	516	1,052,640	50	102,000
65	431	879,240	45	91,800
66	382	779,280	32	65,280
67	399	813,960	35	71,400
68	429	875,160	47	95,880
69	388	791,520	46	93,840
70	320	652,800	29	59,160
71	326	665,040	45	91,800
72	312	636,480	43	87,720
73	277	565,080	28	57,120
74	243	495,720	32	65,280
75	245	499,800	37	75,480
76	282	575,280	20	40,800
77	231	471,240	38	77,520
78	213	434,520	24	48,960
79	196	399,840	24	48,960
80	180	367,200	25	51,000
81	163	332,520	16	32,640
82	153	312,120	20	40,800
83	125	255,000	18	36,720
84	134	273,360	9	18,360
85	116	236,640	17	34,680
86	113	230,520	15	30,600
87	92	187,680	6	12,240
88	66	134,640	7	14,280
89	46	93,840	1	2,040
90	46	93,840	5	10,200
91	32	65,280	2	4,080
92	17	34,680	2	4,080
93	21	42,840	2	4,080
94	9	18,360		
95	6	12,240	1	2,040
96	4	8,160		
97	2	4,080		
98				
99				
100+	2	4,080		
Total	10,408	\$ 21,232,320	1,112	\$ 2,268,480

SCHEDULE D**TABLE 5****THE NUMBER AND ANNUAL PENSIONS OF
DISABLED MEMBERS ELIGIBLE FOR DEFERRED PENSION
DISTRIBUTED BY AGE AS OF JUNE 30, 2011**

Age	Firemen		Rescue Squad Workers	
	Number	Amount	Number	Amount
26	1	\$ 2,040		
31	1	2,040		
33	1	2,040		
35	1	2,040		
36	3	6,120		
37				
38				
39	1	2,040		
40	2	4,080		
41	2	4,080	1	\$ 2,040
42	2	4,080	1	2,040
43	5	10,200		
44	5	10,200		
45	6	12,240		
46	5	10,200		
47	9	18,360		
48	13	26,520		
49	6	12,240	2	4,080
50	9	18,360		
51	11	22,440		
52	17	34,680	2	4,080
53	10	20,400	1	2,040
54	9	18,360	1	2,040
55	7	14,280		
56	3	6,120		
57	2	4,080	2	4,080
58	8	16,320	1	2,040
59	1	2,040		
60	2	4,080		
61	1	2,040		
62	1	2,040		
63				
64			1	2,040
65				
66	1	2,040		
67	1	2,040		
68	1	2,040		
Total	147	\$ 299,880	12	\$ 24,480