

## NEW HAMPSHIRE RETIREMENT SYSTEM

ACTUARIAL VALUATION REPORT AS OF JUNE 30, 2011

May 31, 2012

Board of Trustees New Hampshire Retirement System 54 Regional Drive Concord, New Hampshire 03301-8509

Re: New Hampshire Retirement System Actuarial Valuation as of June 30, 2011

Dear Board Members:

The results of the June 30, 2011 Annual Actuarial Valuation of the New Hampshire Retirement System (NHRS) are presented in this report. The purposes of this valuation were:

- to measure the System's funding progress;
- to determine the employer contribution rate for Fiscal Years 2014 and 2015;
- to determine actuarial information for reporting purposes in compliance with Governmental Accounting Standards Statements No. 25 and No. 43 for the 2011 fiscal year.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. This report should not be relied on for any purpose other than the purpose described.

The valuation was based upon information, furnished by NHRS staff, concerning Retirement System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the data provided by NHRS.

The valuation results summarized in this report involve actuarial calculations that require assumptions about future events. We believe that the assumptions and methods used in this report are reasonable and appropriate for the purpose for which they have been used. However, other assumptions and methods could also be reasonable and could result in materially different results. In addition, because it is not possible or practical to consider every possible contingency, we may use summary information, estimates or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are deemed to be immaterial.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: plan experience differing from that anticipated by the economic and demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

If there is other information that you need in order to make an informed decision regarding the matters discussed in this report, please contact us.

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the New Hampshire Retirement System as of June 30, 2011. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

The actuaries submitting this report are independent of the plan sponsor and are Members of the American Academy of Actuaries (M.A.A.A.), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

David Tfausch

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# **SECTION A**INTRODUCTION

# Highlights of June 30, 2011 Actuarial Valuation

#### **Employer Contribution Rates to be Certified for the 2014/15 Biennium**

**Employer Contribution Rates as a Percent of Payroll** 

		State Members							
	Employees	Teachers	Police	Fire	NHRS Total				
Pension	10.51%	11.96%	21.45%	23.90%	12.83%				
Health	1.62%	2.20%	3.95%	3.95%	1.90%				
Total	12.13%	14.16%	25.40%	27.85%	14.73%				

**Employer Contribution Rates as a Percent of Payroll** 

		Political Subdivision Members							
					NHRS				
	<b>Employees</b>	Teachers	Police	Fire	Total				
Pension	10.44%	11.96%	21.35%	23.79%	12.78%				
Health	0.33%	2.20%	3.95%	3.95%	1.90%				
Total	10.77%	14.16%	25.30%	27.74%	14.68%				

The Funded Ratio is 57.4%.

#### Changes to the System included in the June 30, 2011 Actuarial Valuation:

- 1) The actuarial assumptions resulting from the July 1, 2005 through June 30, 2010 experience study adopted by the Board have been incorporated for actuarial valuation purposes. These changes increased the total employer contribution rate by 2.02% of payroll (pension and medical subsidy combined), and decreased the pension funded ratio by 4.3%.
- 2) The changes due to the adoption of HB No. 2 as Amended by 2011-2513-CofC were also incorporated into the actuarial valuation. These changes decreased the total employer contribution rate by 3.22% of payroll (pension and medical subsidy combined) and increased the pension funded ratio by 3.5%.
- 3) Overall, plan experience was unfavorable. Experience increased the employer contribution by 0.48% of payroll (pension and medical subsidy combined) and decreased the pension funded ratio by 0.3%.

Details of the impact of changes can be found in the Discussion and Comments section.

# Executive Summary Pension

Covered Group	p	Employees	Teachers	Police	Fire	Total
I. Number of Pa	articipants as of June 30, 2011					
a. Activ	/es	25,539	18,466	4,130	1,603	49,738
b. Retire	ees, Disabilities, and Beneficiaries	13,487	9,427	2,880	1,336	27,130
c. Veste	ed Terminations	811	613	60	12	1,496
d. Total	1	39,837	28,506	7,070	2,951	78,364
e. Total	Covered Annual Payroll	\$1,113,866,733	\$1,036,376,337	\$ 259,508,805	\$ 108,027,595	\$ 2,517,779,470
II. Long Range	e Pension Cost					
a. Actua	arial Present Value of Projected Benefits	\$4,133,464,129	\$4,620,472,001	\$2,182,930,079	\$1,054,894,614	\$11,991,760,823
b. Actua	arial Present Value of Future Normal Costs	778,982,711	711,503,902	323,430,447	179,592,545	1,993,509,605
c. Actua	arial Accrued Liability (AAL): a. – b.	3,354,481,418	3,908,968,099	1,859,499,632	875,302,069	9,998,251,218
d. Valua	ation Assets	1,834,609,057	2,153,181,585	1,179,798,349	572,927,302	5,740,516,293
e. Unfu	inded Actuarial Accrued Liability (UAAL): c. – d.	1,519,872,361	1,755,786,514	679,701,283	302,374,767	4,257,734,925
f. Funde	ed Status	54.7%	55.1%	63.4%	65.5%	57.4%

# Executive Summary (Continued) Medical Subsidy

	State	Political Subdivision		Police and	Grand
Covered Group	Employees	Employees	Teachers	Fire	Total
I. Number of Participants Covered by					
Post Retirement Medical Subsidy as of June 30, 2011					
a. Actives	-	-	-	5,732	5,732
b. Retirees, Disabilities, and Beneficiaries	2,147	1,420	4,453	2,557	10,577
c. Vested Terminations		-	-	-	
d. Total	2,147	1,420	4,453	8,289	16,309
e. Total NHRS Covered Annual Payroll	\$ 534,287,632	\$ 579,579,101	\$ 1,036,376,337	\$ 367,536,400	\$ 2,517,779,470
II. Long Range Post-Retirement Medical Subsidy Cost					
a. Actuarial Present Value of Projected Benefits	\$ 95,873,485	\$ 77,649,740	\$ 262,106,972	\$ 363,621,531	\$ 799,251,728
b. Actuarial Present Value of Future Normal Costs		-	-	21,679,033	21,679,033
c. Actuarial Accrued Liability (AAL): a. – b.	95,873,485	77,649,740	262,106,972	341,942,498	777,572,695
d. Valuation Assets	526,739	28,916,985	(6,130,673)	9,906,777	33,219,828
e. Unfunded Actuarial Accrued Liability (UAAL): c. – d.	95,346,746	48,732,755	268,237,645	332,035,721	744,352,867
f. Funded Status	0.5%	37.2%	(2.3%)	2.9%	4.3%

# Executive Summary (Continued) Pension State Members

Covered Group	Employees	Teachers	Police	Fire	Total
Current Cost					_
Total Normal Cost (% of Covered Payroll)	9.55%		17.55%	19.29%	10.60%
UAAL Contribution (% of Payroll)	7.96%		15.45%	16.41%	9.92%
Total Pension Contribution (% of Payroll)	17.51%		33.00%	35.70%	20.52%
Fiscal Year 2014					
Member Contributions (% of Payroll)	7.00%		11.55%	11.80%	7.69%
Employer Pension Contribution (% of Payroll)	10.51%		21.45%	23.90%	12.83%
Employer Health Contribution (% of Payroll)	1.62%		3.95%	3.95%	1.90%
<b>Total Contributions for Fiscal Year 2014</b>					
1. Percent of Payroll	12.13%	N/A	25.40%	27.85%	14.73%
2. Estimated Dollar Amount	\$ 72,376,943	N/A	\$ 20,484,419	\$ 1,162,667	\$ 94,024,029
Fiscal Year 2015					
Member Contributions (% of Payroll)	7.00%		11.55%	11.80%	7.69%
Employer Pension Contribution (% of Payroll)	10.51%		21.45%	23.90%	12.83%
Employer Health Contribution (% of Payroll)	1.62%		3.95%	3.95%	1.90%
<b>Total Contributions for Fiscal Year 2015</b>					
1. Percent of Payroll	12.13%	N/A	25.40%	27.85%	14.73%
2. Estimated Dollar Amount	\$ 75,091,079	N/A	\$ 21,252,584	\$ 1,206,267	\$ 97,549,930

# Executive Summary (Continued)

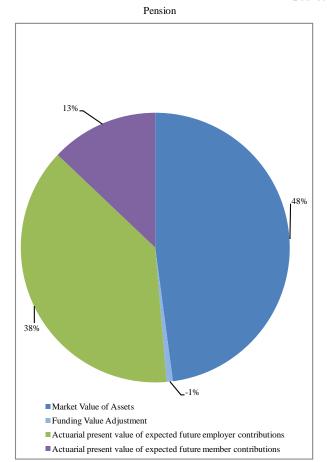
# Political Subdivision Members

Covered Group	<b>Employees</b>	Teachers	Police	Fire	Total
Current Cost					
Total Normal Cost (% of Covered Payroll)	9.48%	9.01%	17.45%	19.18%	10.55%
UAAL Contribution (% of Payroll)	7.96%	9.95%	15.45%	16.41%	9.92%
Total Pension Contribution (% of Payroll)	17.44%	18.96%	32.90%	35.59%	20.47%
Fiscal Year 2014					
Member Contributions (% of Payroll)	7.00%	7.00%	11.55%	11.80%	7.69%
Employer Pension Contribution (% of Payroll)	10.44%	11.96%	21.35%	23.79%	12.78%
Employer Health Contribution (% of Payroll)	0.33%	2.20%	3.95%	3.95%	1.90%
<b>Total Contributions for Fiscal Year</b>					
1. Percent of Payroll	10.77%	14.16%	25.30%	27.74%	14.68%
2. Estimated Dollar Amount	\$ 69,709,623	\$ 163,887,208	\$ 52,918,673	\$ 32,308,055	\$ 318,823,559
Fiscal Year 2015					
Member Contributions (% of Payroll)	7.00%	7.00%	11.55%	11.80%	7.69%
Employer Pension Contribution (% of Payroll)	10.44%	11.96%	21.35%	23.79%	12.78%
Employer Health Contribution (% of Payroll)	0.33%	2.20%	3.95%	3.95%	1.90%
<b>Total Contributions for Fiscal Year</b>					
1. Percent of Payroll	10.77%	14.16%	25.30%	27.74%	14.68%
2. Estimated Dollar Amount	\$ 72,323,734	\$ 170,032,979	\$ 54,903,123	\$ 33,519,607	\$ 330,779,443

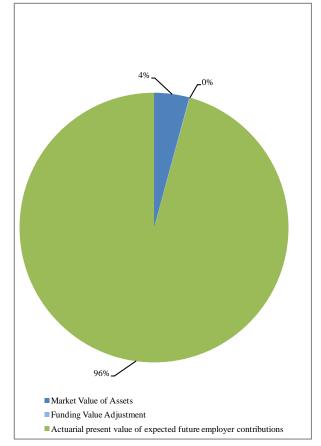
# **Total NHRS Members**

Covered Group	Employees	Teachers	Police	Fire	Total
Current Cost					
Fiscal Year 2014					
Estimated Dollar Amount	\$ 142,086,567	\$ 163,887,208	\$ 73,403,091	\$ 33,470,722	\$ 412,847,588
Fiscal Year 2015					
Estimated Dollar Amount	\$ 147,414,813	\$ 170,032,979	\$ 76,155,707	\$ 34,725,874	\$ 428,329,373

Sources of Funds

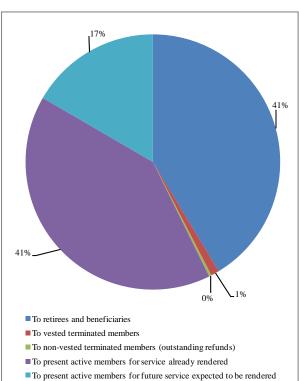


#### Medical Subsidy

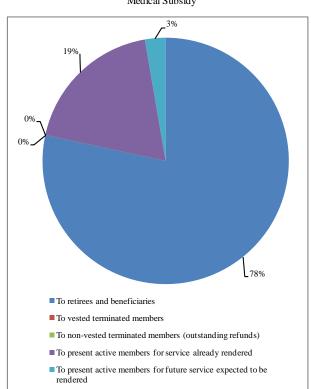


#### Uses of Funds

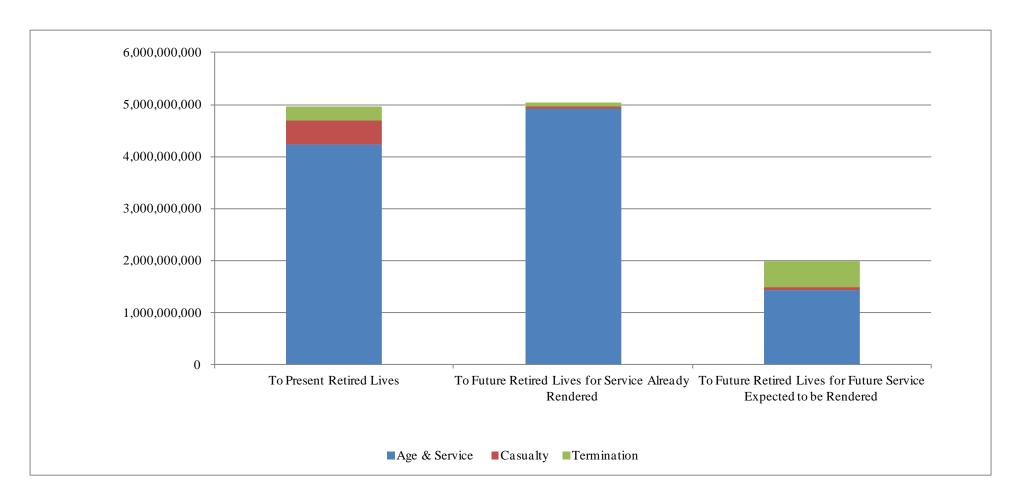
Pension

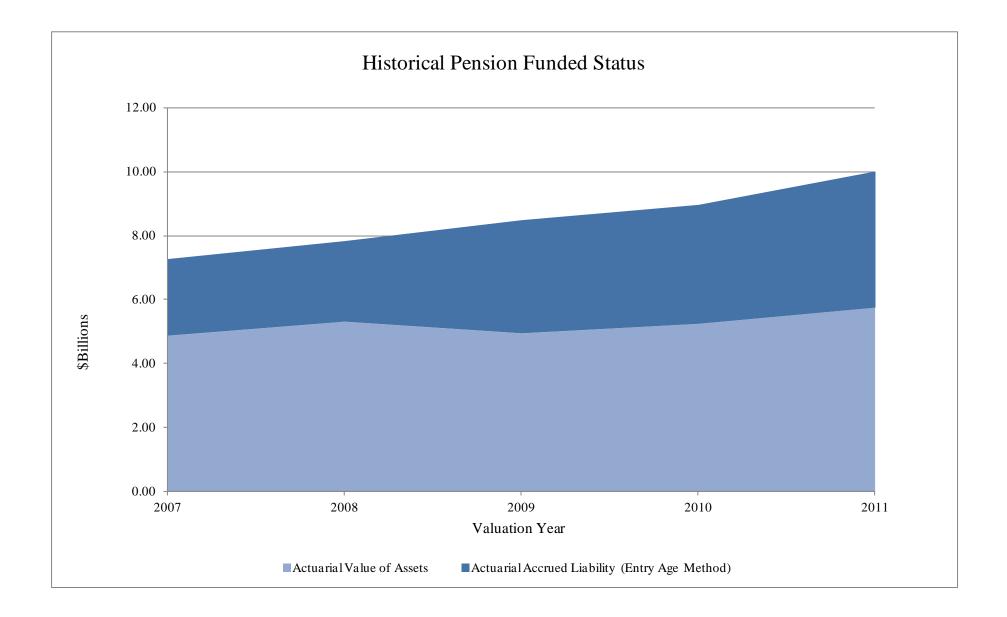


#### Medical Subsidy



# Comparison of Pension Liabilities by Type





#### Results of the Valuation

#### **Actuarial Valuation**

This is the actuarial valuation of the New Hampshire Retirement System, prepared as of June 30, 2011. Valuations for certifying contribution rates are prepared biennially, as of June 30 on the odd numbered years (2009, 2011, etc.). The June 30, 2011 actuarial valuation determines the FY 2014 and FY 2015 contribution rates.

The primary purposes of the valuation report are to measure the plan's liabilities, to compute the required employer contribution rate in accordance with actuarial standards and the New Hampshire State Statute, and to analyze changes in NHRS' actuarial position.

In addition, the report provides information in connection with Governmental Accounting Standards Board Statements No. 25 and No. 43 (GASB No. 25 and GASB No. 43), and it provides summaries of the member data, financial data, plan provisions, and actuarial assumptions and methods.

#### **Financing Objectives**

NHRS is supported by member contributions, employer contributions, and net earnings on the investments of the fund. The member contribution rate is set by statute at 7.00% of member compensation for Group I Members (Employees and Teachers), 11.55% of member compensation for Police Members and 11.80% of member compensation for Fire Members. The employer contributions are determined in accordance with statute by an actuarial valuation. Legislation was enacted in 2007 which requires the use of the entry-age actuarial cost method and a closed 30-year amortization of unfunded actuarial accrued liability in the determination of the employer contributions. The amortization period is 26 years for FY 2014 and 25 years for FY 2015.

We have computed the pension contribution rates that will satisfy the statute based on the June 30, 2011 valuation to be:

	Employer Contribution Rates - Pension					
					NHRS	
	<b>Employees</b>	Teachers	Police	Fire	Total	
2014-15 Biennium State	10.51%	11.96%	21.45%	23.90%	12.83%	
2014-15 Biennium Political Subdivisions	10.44%	11.96%	21.35%	23.79%	12.78%	

In order for the statute to be satisfied, this entire rate must be contributed to the pension fund. The statute also requires that employers contribute the lesser of the "solvency rate" or 25% of total employer contributions to the 401(h) account for the medical subsidy. This is equivalent to the lesser of the "solvency rate" or 33 1/3% of employer pension contributions.



The 401(h) plan is split into the following groups: 1) State Employees; 2) Political Subdivision Employees; 3) Teachers and 4) Police/Fire. The table below shows the pension and medical subsidy contribution rates for each subgroup.

#### Employer Contribution Rates to be Certified for the 2014/15 Biennium

	<b>Employer Contribution Rates as a Percent of Payroll</b>									
		State Members								
					NHRS					
	<b>Employees</b>	Teachers	Police	Fire	<u>Total</u>					
Pension	10.51%	11.96%	21.45%	23.90%	12.83%					
Health	1.62%	2.20%	3.95%	3.95%	1.90%					
Total	12.13%	14.16%	25.40%	27.85%	14.73%					

	<b>Employer Contribution Rates as a Percent of Payroll</b>								
		Political Subdivision Members							
					NHRS				
	<b>Employees</b>	Teachers	<b>Police</b>	Fire	Total				
Pension	10.44%	11.96%	21.35%	23.79%	12.78%				
Health	0.33%	2.20%	3.95%	3.95%	1.90%				
Total	10.77%	14.16%	25.30%	27.74%	14.68%				

The 401(h) account balance for Teachers is \$0 as of June 30, 2011. The June 30, 2012 projected 401(h) account balance for the State Employees is \$0. The medical subsidy contribution rates for State Employees and Teachers shown above are the computed amounts needed for pay-as-you-go financing of the retiree medical subsidy with a 20% margin for adverse experience. It is imperative that NHRS monitor collections closely to ensure the necessary funds are collected to provide the benefit.

The Political Subdivision Employees' 401(h) account is projected to reach pay-as-you-go status in the fiscal year ending June 30, 2026.

The Police and Fire 401(h) account is projected to reach pay-as-you-go status in the fiscal year ending June 30, 2021.

The pay-as-you-go contribution rates previously contained no margin for adverse experience. Please see Comment 1 on page 18 for further discussion.

#### **History of Contribution Rates**

#### **Pension**

_	Employer Contribution Rates						
Fiscal Year Ending	Employees	Teachers	Police	Fire	Total		
2010	9.09%	9.38%	17.34%	22.52%	10.70%		
2011	9.09%	9.38%	17.34%	22.52%	10.70%		
July 1, 2011 - July 30, 2011	10.71%	11.51%	22.92%	28.25%	13.11%		
Aug 1, 2011 - June 30, 2012	8.48%	8.99%	15.98%	18.92%	9.97%		
2013	8.48%	8.99%	15.98%	18.92%	9.97%		
2014-15#	10.44%	11.96%	21.35%	23.79%	12.78%		

	Employer Dollars (\$Millions)*								
Fiscal Year Ending	Employees	Teachers	Police	Fire	Total				
2010	\$101.2	\$97.1	\$46.4	\$25.0	\$269.7				
2011	\$103.5	\$98.0	\$46.9	\$26.2	\$274.6				
2012	\$100.1	\$98.9	\$44.6	\$22.1	\$265.7				
2013	\$101.7	\$100.3	\$44.6	\$22.0	\$268.6				
2014	\$130.3	\$138.4	\$62.0	\$28.7	\$359.4				
2015	\$135.2	\$143.6	\$64.3	\$29.8	\$372.9				

#### **Medical Subsidy**

_	Employer Contribution Rates								
Fiscal Year Ending	Employees	Political Sub	Teachers	Police & Fire	Total				
2010	3.03%	0.00%	1.32%	2.17%	1.47%				
2011	3.03%	0.00%	1.32%	2.17%	1.47%				
July 1, 2011 - July 30, 2011	1.60%	0.38%	2.44%	2.65%	1.82%				
Aug 1, 2011 - June 30, 2012	1.60%	0.32%	2.31%	3.97%	1.95%				
2013	1.60%	0.32%	2.31%	3.97%	1.95%				
2014-15	1.62%	0.33%	2.20%	3.95%	1.90%				

	Employer Dollars (\$Millions)*									
Fiscal Year Ending	Employees	Political Sub	Teachers	Police & Fire	Total					
2010	\$0.4	\$10.4	\$13.6	\$8.1	\$32.6					
2011	\$0.4	\$10.3	\$13.8	\$8.4	\$32.9					
2012	\$8.9	\$2.0	\$25.0	\$14.7	\$50.5					
2013	\$9.2	\$2.0	\$25.8	\$15.7	\$52.7					
2014	\$9.7	\$2.1	\$25.5	\$16.2	\$53.5					
2015	\$10.0	\$2.2	\$26.4	\$16.8	\$55.5					

#### **Member Contributions**

	Member Contribution Rates							
Fiscal Year Ending	Employees	Teachers	Police	Fire	Total			
2010	5.00%	5.00%	9.30%	9.30%	5.64%			
2011	5.00%	5.00%	9.30%	9.30%	5.64%			
2012	7.00%	7.00%	11.55%	11.80%	7.69%			
2013	7.00%	7.00%	11.55%	11.80%	7.69%			
2014-15	7.00%	7.00%	11.55%	11.80%	7.69%			

	Member Dollars (\$Millions)*									
Fiscal Year Ending	Employees	Teachers	Police	Fire	Total					
2010	\$59.6	\$54.2	\$25.4	\$10.2	\$149.5					
2011	\$59.3	\$56.2	\$26.2	\$10.7	\$152.4					
2012	\$80.9	\$75.3	\$31.1	\$13.2	\$200.5					
2013	\$83.9	\$78.1	\$32.3	\$13.7	\$208.0					
2014	\$87.1	\$81.0	\$33.5	\$14.2	\$215.8					
2015	\$90.3	\$84.1	\$34.7	\$14.8	\$223.9					

<sup>\*</sup> Dollar amounts for 2012 and beyond are estimated.

<sup>#</sup> State employer pension contribution rates are 10.52%, 11.96%, 21.47% and 23.91% for Employees, Teachers, Police and Fire, respectively.



#### **Special Contribution Requirement**

There are two political subdivisions that are completing an initial buy-in to NHRS. Their remaining buy-in contributions are as follows:

		UAAL as									Fiscal Year of
		of	2011/2012	UAAL as of	2012/2013	UAAL as of	2013/2014	UAAL as of	2014/2015	UAAL as of	Final
Fund	Agency	6/30/2011	Contribution	6/30/2012	Contribution	6/30/2013	Contribution	6/30/2014	Contribution	6/30/2015	Payme nt
Employees	Town of Raymond	\$ 14,068	\$ 2,667	\$ 12,597	\$ 2,667	\$ 11,001	\$ 2,362	\$ 9,492	\$ 2,362	\$ 7,866	2019
	Brookline Public Library	3,969	1,483	2,697	1,483	1,317	1,317	0	0	0	2014
	Total	\$ 18,037	\$ 4,150	\$ 15,294	\$ 4,150	\$ 12,318	\$ 3,679	\$ 9,492	\$ 2,362	\$ 7,866	

Contributions are assumed to occur at the end of the fiscal year for the Town of Raymond and the beginning of the fiscal year for Brookline Public Library. Amounts after June 30, 2013 are re-amortized under new assumptions.

#### **Funded Status**

As of the valuation date, the Unfunded Actuarial Accrued Liability (UAAL) is \$4,257.7 million (pension only), and the funded ratio (the ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability) is 57.4% (pension only). This valuation was prepared using the Entry-Age Actuarial Cost Method. For comparison, the funded ratio as of June 30, 2010 was 58.5% (pension only).

#### **Variability of Future Contribution Rates**

The Actuarial Cost Method used to determine the contribution rate is intended to produce contribution rates which are generally level as a percent of payroll. Even so, when experience differs from the assumptions, as it often does, the employer's contribution rate can vary significantly from year-to-year.

The level percent of payroll amortization of the UAAL assumes that the plan will remain open to new hires, that the size of the covered active population will remain constant, and that the covered payroll will continue to grow at 3.75% per year. Please see Comment 3 on page 19 for further discussion.

#### **Actuarial Value of Assets**

The Actuarial Value of Assets of the System is less than the Market Value of Assets by \$92 million as of the valuation date (see page 42). This difference will be gradually recognized over the next four years in the absence of future gains/losses.

Our estimate of the rate of return on the market value of assets was 23.70% for the year ending June 30, 2011. (Note: This measure may differ from investment manager calculations and should not be used as a measure of investment performance.) The recognized rate of return on the actuarial value of assets was 6.90% for the year ending June 30, 2011 resulting in recognition of a loss.

The Special Account was repealed and transferred into the main pension assets. As directed by NHRS, a Reserve of \$24.5 million for TSAs payable July 1, 2011 and July 1, 2012 is withheld from the main pension assets.

The total market value as of June 30, 2011 is \$5.89 billion. The actuarial value of assets as of June 30, 2011 is \$5.80 billion.

Please see Section C for additional asset information.

#### **Benefit Provisions**

Legislation enacted in 2011 is shown below and is also described in Section H of this report. The impact of those changes is shown on page 16.

A summary of the major changes follows:

(a) A change in the definition of Earnable Compensation for active members who begin service on or after July 1, 2011 or who are not in vested status on and after January 1, 2012.

- (b) For active members who commenced service on or after July 1, 2011 or who have non-vested status on or after January 1, 2012 AFC equals the average annual earnable compensation during the highest 5 years of creditable service.
- (c) For members who commenced service on or after July 1, 2009 or are non-vested as of January 1, 2012, a member's retirement benefit shall not exceed the lesser of 85% of the member's highest average final compensation or \$120,000.
- (d) Group I members commencing service on or after July 1, 2011 are eligible to retire at age 65 and are eligible for a reduced annuity at age 60 with 30 years of creditable service. Prior to age 65, the state annuity, together with the member annuity, shall be equal to 1/66th of AFC times creditable service reduced for each month prior to the month after the member attains age 65 by 1/4 of 1%. After age 65, the state annuity, together with the member annuity, shall be equal to 1/66th of AFC times creditable service, reduced for each month prior to the month after the member attains age 65 by 1/4 of 1%.
- (e) Group II members commencing service on or after July 1, 2011 are eligible to retire at age 52.5 with 25 years of creditable service or age 60. The benefit shall be equal to 2% of AFC times creditable service up to 42.5 years.
- (f) Group II members hired prior to July 1, 2011 who have non-vested status as of January 1, 2012 shall be subject to transition provisions for years of service required for regular service retirement, the minimum age for regular service retirement, and the multiplier used to calculate the retirement annuity, which shall be applicable on January 1, 2012.
- (g) Group II members commencing service on or after July 1, 2011 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. If a member has more than 33-1/3 years of service, the member will receive a supplemental disability benefit equal to 2% of AFC times years of creditable service in excess of 33-1/3 years but not in excess of 42.5 years.
- (h) Member Contributions

Group I members: 7.0% of earnable compensation.

Group II fire members: 11.80% of earnable compensation. Group II police members: 11.55% of earnable compensation.

- (i) *Medical Subsidy* After July 1, 2007 and including each July 1, thereafter, the rate payable shall not be increased.
- (j) Transfer the balance in each special account component (Employees, Teachers, Police and Fire) to the corresponding components of the State annuity accumulation fund except for funds necessary to comply with RSA 100-A:41-d, III as amended.

There was no post retirement COLA as of July 1, 2011. In addition, there was one special post retirement Temporary Supplemental Allowances (TSAs) paid out as of July 1, 2011 totaling approximately \$4.5 million. Assets equal to \$4.5 million were transferred from the Reserve for TSAs to the net pension assets as of July 1, 2011. For purposes of the June 30, 2011 valuation, no transfer was assumed to have occurred on June 30, 2011. As directed by NHRS, a TSA reserve of \$20 million remains for the July 1, 2012 TSAs allocated in proportion to the July 1, 2011 TSAs paid.

#### **Actuarial Assumptions and Methods**

The assumptions were revised in accordance with the July 1, 2005 – June 30, 2010 experience study. There were no changes in methods. Interest rate and wage inflation assumptions were changed from 8.5%/4.50% to 7.75%/3.75%. Section G summarizes the current assumptions. The changes in actuarial assumptions increased the employer contribution rate by 1.84% of payroll.

A summary of the changes to the major demographic assumptions follows:

#### Rates of Withdrawal

Separate service-based rates for the first five years of employment were added. In addition there were increases in the overall rates of termination.

*Rates of Disability* from active service with entitlement to a disability benefit had minor changes.

#### Rates of Retirement

In general, rates of retirement were lowered from current assumptions. However, no changes for male teachers and increases under the early retirement rule of 70 condition for Group I members over age 55 were made.

#### Mortality rates

The healthy mortality table has been updated to the RP 2000 mortality table, projected with future mortality improvements using projection scale AA to 2020.

*Merit and Longevity Salary Increases* were changed from an age-based pattern to a service-based pattern.

We believe the assumptions are internally consistent and are reasonable, based on the actual experience of NHRS. These actuarial assumptions and methods comply with the parameters for disclosure in GASB Statements No. 25 and No. 43.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can, and almost certainly will, differ as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates, and amortization periods.

#### Medical Subsidy Margin for Adverse Experience

A margin was added for adverse experience of 20% excess assets at the end of the rate setting biennium. Note that this assumption change was not part of the Experience Study.

A complete description of the assumptions used in the valuation is in section G.

#### **Demographic Experience**

Demographic experience during the year was more favorable than assumed. The primary sources of favorable experience were lower than expected pay increases and more terminations than expected, offset by less than favorable retiree experience. The active member population as well as the total active member payroll decreased during the year. While this decrease caused gains, the decrease in payroll resulted in an increase in the unfunded actuarial accrued liability contribution rate.



### Summary of Changes from June 30, 2010 to June 30, 2011

			Pension		
	Employees	Teachers	Police	Fire	Total
Reconciliation of UAAL					
Expected	N/A	N/A	N/A	N/A	\$3,880.0
Impact of (Gain)Loss	N/A	N/A	N/A	N/A	
Impact of Assumption Change	267.1	258.3	165.0	66.3	756.7
Impact of Plan Change	(89.6)	(88.0)	(163.1)	(89.4)	(430.1)
Total	\$1,519.9	\$1,755.8	\$679.7	\$302.4	\$4,257.7
Funded %					
Prior Valuation	57.7 %	57.7 %	61.0 %	59.4 %	58.5 %
Impact of Gain(Loss)	(0.2)%	(0.5)%	(0.2)%	1.0%	(0.3)%
Impact of Assumption Change	(4.5)%	(3.7)%	(5.3)%	(4.5)%	(4.3)%
Impact of Plan Change	1.7%	1.6%	7.9%	9.6%	3.5%
Total	54.7 %	55.1 %	63.4 %	65.5 %	57.4 %
Reconciliation of Employer					
Contribution Rate					
State Employees					
Prior Valuation*	11.04 %	11.81 %	23.69 %	28.39 %	13.45 %
Impact of (Gain)Loss	0.34 %	0.37 %	0.81 %	0.59 %	0.40 %
Impact of Assumption Change	1.01 %	2.05 %	4.00 %	3.39 %	1.84 %
Impact of Plan Change	(1.88)%	(2.27)%	(7.05)%	(8.47)%	(2.86)%
Total	10.51 %	11.96 %	21.45 %	23.90 %	12.83 %
Political Subdivision Employees					
Prior Valuation*	11.04 %	11.81 %	23.69 %	28.39 %	13.45 %
Impact of (Gain)Loss	0.34 %	0.37 %	0.81 %	0.59 %	0.40 %
Impact of Assumption Change	1.01 %	2.05 %	4.00 %	3.39 %	1.84 %
Impact of Plan Change	(1.95)%	(2.27)%	(7.15)%	(8.58)%	(2.91)%
Total	10.44 %	11.96 %	21.35 %	23.79 %	12.78 %

<sup>\*</sup> Based on the June 30, 2010 valuation prior to recertification.

## Summary of Changes from June 30, 2010 to June 30, 2011

	Medical Subsidy								
	State Employees	Political Subdivision Employees	Teachers	Police & Fire	Total				
Reconciliation of UAAL	1 0	ī							
Expected	N/A	N/A	N/A	N/A	\$1,046.1				
Impact of (Gain)Loss	N/A	N/A	N/A	N/A	(45.3)				
Impact of Assumption Change	14.1	12.2	15.3	123.0	164.7				
Impact of Plan Change	(37.5)	(34.2)	(117.4)	(232.1)	(421.1)				
Total	\$95.3	\$48.7	\$268.2	\$332.0	\$ 744.4				
Reconciliation of Employer									
Contribution Rate									
Prior Valuation*	1.56 %	0.49 %	1.80 %	5.51 %	2.00 %				
Impact of (Gain)Loss	0.06 %	(0.04)%	0.31 %	(0.26)%	0.08 %				
Impact of Assumption Change	0.22 %	0.08 %	0.23 %	0.18 %	0.18 %				
Impact of Plan Change	(0.22)%	(0.20)%	(0.14)%	(1.48)%	(0.36)%				
Total	1.62 %	0.33 %	2.20 %	3.95 %	1.90 %				

#### **Discussion and Comments**

#### **Comment 1:**

The Teachers' 401(h) Account is negative as of June 30, 2011. The primary reasons for this are:

- Contribution rates for the 2010-2011 biennium were set based on the June 30, 2007 valuation in the Fall of 2007 with no margin for adverse experience.
- Legislation in 2008 eliminated medical subsidy benefits for Employees and Teachers retiring on or after July 1, 2009.
- There were more Teacher retirements prior to July 1, 2009 than expected.
- Teacher payroll has been lower than expected resulting in smaller employer contributions.
- The System experienced significant losses on the market value of assets in 2008 and 2009.

The recently recertified contribution rates for the 2012-2013 biennium were set to replenish the Teachers 401(h) account and continue to fund benefits provided under Statute.

Given the 4-year lag between rate setting and the end of the respective biennium, we believe a margin is needed to provide for benefits promised under Statute. In order to reduce the risk of a future depletion in any of the accounts, we increased the solvency rate to provide a margin of 20% excess assets at the end of the biennium for which rates are set. Under this method, the 2014-2015 contribution rate for the State Employees increased from 1.49% of payroll to 1.62% of payroll and the contribution rate for the Teachers increased from 2.04% to 2.20% of payroll. Political Subdivision employees and Police and Fire rates were unchanged.

At the request of the Board, this assumption change is reflected in this valuation and in the employer contribution rates beginning with the 2014-15 biennium.

#### **Comment 2:**

Section 172 of House Bill 2 in the 2011 legislative session included a provision to increase member contributions beginning July 1, 2011 for all members other than State Employee members hired on or after July 1, 2009.

In the month of July 2011, there was an inconsistency in administrative practice of the scheduled member contribution increase. According to NHRS estimates, the difference in practice resulted in a total member contribution differential of \$824,922 for State members.

At the direction of the Board, the employer normal cost for State members has been increased for the 2014-15 biennium to replenish this difference. The increase in the employer normal cost for State members for the 2014-15 biennium is 0.07% for Employees, 0.10% for Police and 0.11% for Fire.

Our understanding is that certain State entities contributed consistently with other employers. We recommend that the NHRS apply the increased rates only to those State entities which contributed inconsistently. Excluding those State entities which contributed consistently with other employers will not have a material impact.

#### **Comment 3:**

House Bill No. 2 in the 2011 legislative session created a Defined Contribution Commission.

Our understanding is that the Commission and the Legislature have considered a Defined Contribution Plan for some or all new hires after a certain date. This effectively would close or partially close NHRS to new hires. GRS is neither for nor against defined contribution plans. The Board's duty is to secure funding for benefits promised to NHRS members.

Such a change will not impact the <u>benefits</u> of current NHRS members, but it could affect the funding of NHRS benefits.

This report does not contain analysis of any specific DC Proposals.

The UAAL for NHRS is \$4.3 billion as of June 30, 2011. The amortization of the UAAL as a level percent of payroll is 9.92% of payroll for NHRS in total. These results are based on the valuation assumptions including an assumed rate of return of 7.75% per year based on the asset allocation of NHRS as a going concern plan.

Fully or partially closing the DB plan to new members would change the demographic make-up of the covered NHRS population. During the transition period, the System would have a higher ratio of retirees to active members than if the System remained open to all new hires. The investment allocation may need to be adjusted to have more fixed income investments than the current NHRS allocation – a retiree-only plan's benefit payments tend to be more similar to income payments from bonds. Changing the asset allocation to a higher allocation of bonds would require a lower rate of return assumption with correspondingly higher actuarial accrued liabilities and employer contribution rates.

This potential change in investment allocation can be modeled by lowering the long-term rate of return on assets – for example from 7.75% to 6.65% per year. As a result, less investment income would result and additional funding would be required to secure NHRS benefits. Reflecting this more conservative asset allocation, total actuarial accrued liability of NHRS would increase by \$1.2 billion and the total employer contribution rate would increase by 3.97% of payroll (2.26% of payroll for employer normal cost and 1.71% for the UAAL amortization), both as of June 30, 2011.

The actual change in portfolio allocation may be made gradually over time and the actual plan experience will vary. The results under the single assumption of 6.65% rate of return are intended to illustrate one reasonable scenario only. This is not intended to be investment advice. Any change in investment policy should be discussed with NHRS' investment advisor.

#### Comment 4:

In July 2011, the Governmental Accounting Standards Board (GASB) issued Exposure Drafts of new pension accounting Standards No. 25 and No. 27 for retirement systems and sponsoring governmental entities respectively. The new standards are a dramatic change from the current GASB Statements No. 25 and No. 27. Some of the proposed changes are currently being modified by the GASB. Highlights of the changes are:

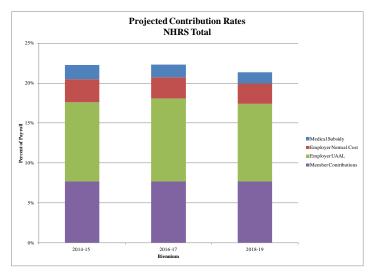
- Accounting calculations and disclosures that are separate from funding calculations effectively meaning valuations will now contain two distinct sets of plan financial calculations.
- Separate accounting for every GAAP reporting entity in a cost-sharing multi-employer plan such as NHRS,
- Disclosure of the Net Pension Liability (Liability less the Market Value of Assets) on the plan sponsors' balance sheets,
- Computation of annual Pension Expense for each plan sponsor,
- The proposed effective date has been pushed back to the first fiscal year following June 15, 2013 for Plan disclosures and the first fiscal year following June 15, 2014 for Employer disclosures.

The Pension Expense and Net Pension Liability are likely to be more volatile than the annual contribution rates as determined under New Hampshire Statute.

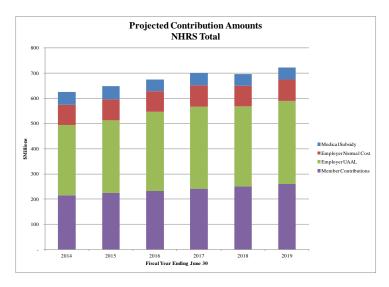
The increased administrative costs to the system for providing financial disclosure information to each GAAP reporting entity may be significant. It is possible that the GASB will relax some of the requirements before issuing the final versions of the new Standards, but it is quite clear that the GASB will require some form of disclosure for each GAAP reporting entity.

#### **Projections**

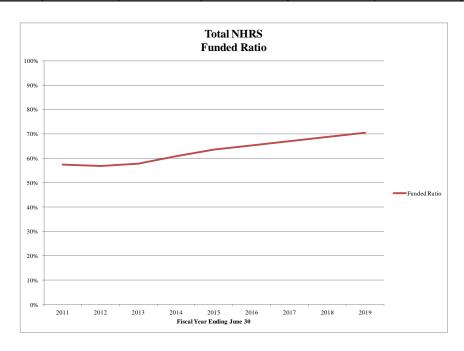
Projection results are useful in demonstrating changing relationships among key elements affecting system financial activity. For example, it demonstrates how benefits and system assets will grow in future decades. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. For instance, cash flow projected to occur 10 years in the future will not be exact (except by coincidence), but understanding the changing relationships between future benefit payout and future investment return can be very useful. It is important to understand that actual experience will differ from the projections.



Projected Contribution Rates - NHRS Total								
Biennium	2014-15	2016-17	2018-19					
Medical Subsidy	1.81%	1.57%	1.43%					
Employer Normal Cost	2.86%	2.67%	2.51%					
Employer UAAL	9.92%	10.38%	9.74%					
Employer Subtotal	14.59%	14.62%	13.68%					
Member Contributions	7.69%	7.69%	7.69%					
Grand Total	22.28%	22.31%	21.36%					



Projected Contribution Amounts - NHRS Total										
Fiscal Year Ending June 30 2014 2015 2016 2017 2018										
Medical Subsidy	50.9	52.8	47.5	49.3	46.5	48.2				
Employer Normal Cost	80.3	83.3	80.8	83.9	81.8	84.8				
Employer UAAL	278.6	289.0	314.2	325.9	317.4	329.3				
Employer Subtotal	409.8	425.1	442.5	459.1	445.6	462.3				
Member Contributions	215.8	223.9	232.6	241.4	250.4	259.8				
Grand Total	625.6	649.0	675.1	700.4	696.0	722.1				



Projected Funded Ratio - NHRS Total									
Fiscal Year Ending June 30   2011   2012   2013   2014   2015   2016   2017   2018   2019								2019	
NHRS Pension Total	57.4%	57.0%	57.8%	60.9%	63.7%	65.4%	67.1%	68.8%	70.5%

The actuarial projections of retirement and medical subsidy benefits are based on the regular valuation assumptions of NHRS including an open active group with constant population. The projections lead to some general observations:

- 1. Employer contribution rates are projected to be stable and gradually declining for the next two biennia. The expected gradual decline is due to the lower normal cost for post-July 1, 2011 hires and declining medical subsidy contributions as a percent of payroll. These declines offset projected increases from the asset smoothing method caused by past losses being phased into the actuarial value of assets.
- 2. The funded ratio is projected to increase steadily to above 70% by the end of the 2018-19 biennium. The statutory 30-year amortization period is projected to bring the plan to 100% funded by June 30, 2039.
- 3. The projection of the funded ratio above reflects certain factors not reflected in the funded ratio projections provided in Section B. For example, the projection above reflects the phase-in of unrecognized investment gains as of June 30, 2011.

**GRS** 



FUNDING RESULTS

# Development of Employer Contribution Rates State Employees

Division:	Employees	Teachers	Police	Fire	Total
Normal Cost					
Age and Service Retirement	6.65%		10.86%	15.59%	7.44%
Termination	2.09%		5.21%	2.21%	2.38%
Death-in-Service	0.18%		0.17%	0.14%	0.15%
Disability	0.21%		0.86%	0.89%	0.23%
Repayment of Member Contributions	0.07%		0.10%	0.11%	0.05%
Expenses	0.35%		0.35%	0.35%	0.35%
Total	9.55%		17.55%	19.29%	10.60%
UAAL Payment*	7.96%		15.45%	16.41%	9.92%
Total Pension Contribution	17.51%		33.00%	35.70%	20.52%
Fiscal Year 2014					
Member Contributions	7.00%		11.55%	11.80%	7.69%
Employer Pension Contribution	10.51%		21.45%	23.90%	12.83%
Employer Health Subsidy Contribution	1.62%		3.95%	3.95%	1.90%
<b>Total Employer Contribution</b>	12.13%	N/A	25.40%	27.85%	14.73%
Estimated Dollar Contribution	\$ 72,376,943	N/A	\$ 20,484,419 \$	1,162,667	94,024,029
Fiscal Year 2015					
Member Contributions	7.00%		11.55%	11.80%	7.69%
Employer Pension Contribution	10.51%		21.45%	23.90%	12.83%
Employer Health Subsidy Contribution	1.62%		3.95%	3.95%	1.90%
<b>Total Employer Contribution</b>	12.13%	N/A	25.40%	27.85%	14.73%
Estimated Dollar Contribution	\$ 75,091,079	N/A	\$ 21,252,584 \$	1,206,267 \$	97,549,930
<b>Contribution Rates from Prior Valuation</b>					
FY 2014#	12.60%		29.20%	33.90%	15.45%
FY 2015#	12.55%		29.20%	33.90%	15.43%

<sup>\*</sup> Unfunded Actuarial Accrued Liability, financed over a 26 year period from the contribution effective date -- 7/1/2013.

<sup>#</sup> Estimated in June 30, 2010 Actuarial Valuation before assumption and Plan changes.



# Development of Employer Contribution Rates Political Subdivision Members

Division:	Employees	Teachers	Police	Fire	Total
Normal Cost					
Age and Service Retirement	6.65%	6.56%	10.86%	15.59%	7.44%
Termination	2.09%	1.99%	5.21%	2.21%	2.38%
Death-in-Service	0.18%	0.09%	0.17%	0.14%	0.15%
Disability	0.21%	0.02%	0.86%	0.89%	0.23%
Expenses	0.35%	0.35%	0.35%	0.35%	0.35%
Total	9.48%	9.01%	17.45%	19.18%	10.55%
UAAL Payment*	7.96%	9.95%	15.45%	16.41%	9.92%
Total Pension Contribution	17.44%	18.96%	32.90%	35.59%	20.47%
Fiscal Year 2014					
Member Contributions	7.00%	7.00%	11.55%	11.80%	7.69%
Employer Pension Contribution	10.44%	11.96%	21.35%	23.79%	12.78%
Employer Health Subsidy Contribution	0.33%	2.20%	3.95%	3.95%	1.90%
<b>Total Employer Contribution</b>	10.77%	14.16%	25.30%	27.74%	14.68%
Estimated Dollar Contribution	\$ 69,709,623	\$ 163,887,208	\$ 52,918,673	\$ 32,308,055 \$	318,823,559
Fiscal Year 2015					
Member Contributions	7.00%	7.00%	11.55%	11.80%	7.69%
Employer Pension Contribution	10.44%	11.96%	21.35%	23.79%	12.78%
Employer Health Subsidy Contribution	0.33%	2.20%	3.95%	3.95%	1.90%
<b>Total Employer Contribution</b>	10.77%	14.16%	25.30%	27.74%	14.68%
Estimated Dollar Contribution	\$ 72,323,734	\$ 170,032,979	\$ 54,903,123	\$ 33,519,607 \$	330,779,443
<b>Contribution Rates from Prior Valuation</b>					
FY 2014#	12.60%	13.61%	29.20%	33.90%	15.45%
FY 2015#	12.55%	13.61%	29.20%	33.90%	15.43%

<sup>\*</sup> Unfunded Actuarial Accrued Liability, financed over a 26 year period from the contribution effective date -- 7/1/-1.

 $<sup>\# \</sup>quad \textit{Estimated in June 30, 2010 Actuarial Valuation before assumption and Plan changes}.$ 



# Development of Pension Actuarial Liabilities June 30, 2011

						ctuarial Accrued Liabilities
Actuarial Present Value of		(1)		(2)		(1) - (2)
Age and service allowances based on total service likely to be rendered by present active members	\$	6,353,080,091	\$	1,428,760,572	\$	4,924,319,519
Disability benefits likely to be paid to present active members		50,656,270		43,343,226		7,313,044
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)		56,699,425		25,694,227		31,005,198
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members		408,531,139		495,711,580		(87,180,441)
Benefits likely to be paid to current inactive and vested deferred members		162,928,511		-		162,928,511
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees		4,959,865,387				4,959,865,387
Total	\$	11,991,760,823	\$	1,993,509,605	\$	9,998,251,218
Actuarial Value of Assets	\$	5,740,516,293	\$		\$	5,740,516,293
Liabilities to be Covered by Future Contributions	\$	6,251,244,530	\$	1,993,509,605	\$	4,257,734,925

# NHRS Total Pension Unfunded Actuarial Accrued Liability Payoff Projection (\$Millions)

# Level Percent Amortization

	Fiscal Year -	Employer Contribution Rates		UAAL			
	Ending		- Projected	Beginning of	UAAL	UAAL End	Funded
Year	June 30,	UAAL Payment	Payroll	Year	Payment	of Year	Ratio
	2012	7.37%	\$ 2,612	\$ 4,258	\$ 193	\$ 4,388	57.4%
	2013	7.11%	2,710	4,388	193	4,528	57.1%
1	2014	9.92%	2,812	4,528	279	4,589	58.0%
2	2015	9.92%	2,917	4,589	289	4,644	59.1%
3	2016	9.92%	3,027	4,644	300	4,693	60.3%
4	2017	9.92%	3,140	4,693	311	4,733	61.5%
5	2018	9.92%	3,258	4,733	323	4,764	62.7%
6	2019	9.92%	3,380	4,764	335	4,785	63.9%
7	2020	9.92%	3,507	4,785	348	4,795	65.1%
8	2021	9.92%	3,638	4,795	361	4,792	66.4%
9	2022	9.92%	3,775	4,792	374	4,774	67.7%
10	2023	9.92%	3,916	4,774	388	4,741	69.0%
11	2024	9.92%	4,063	4,741	403	4,690	70.4%
12	2025	9.92%	4,216	4,690	418	4,619	71.9%
13	2026	9.92%	4,374	4,619	434	4,527	73.4%
14	2027	9.92%	4,538	4,527	450	4,410	75.0%
15	2028	9.92%	4,708	4,410	467	4,267	76.7%
16	2029	9.92%	4,884	4,267	485	4,094	78.4%
17	2030	9.92%	5,067	4,094	503	3,890	80.3%
18	2031	9.92%	5,258	3,890	522	3,650	82.2%
19	2032	9.92%	5,455	3,650	541	3,371	84.2%
20	2033	9.92%	5,659	3,371	561	3,049	86.3%
21	2034	9.92%	5,871	3,049	582	2,681	88.5%
22	2035	9.92%	6,092	2,681	604	2,261	90.7%
23	2036	9.92%	6,320	2,261	627	1,785	93.0%
24	2037	9.92%	6,557	1,785	650	1,248	95.3%
25	2038	9.92%	6,803	1,248	675	645	97.7%
26	2039	9.92%	7,058	645	700	-	100.0%

The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Actual experience will differ.

# NHRS Total Pension Unfunded Actuarial Accrued Liability Payoff Projection (\$Millions)

Level Dollar Amortization (Not the Statutory Method)

(Hypothetical Illustration)

		UAAL			
	Fiscal Year	Beginning	<b>UAAL</b>	<b>UAAL End</b>	<b>Funded</b>
Year	Ending June 30,	of Year	Payment	of Year	Ratio
	2012	\$ 4,258	\$ 193	\$ 4,388	57.4%
	2013	4,388	193	4,528	57.1%
1	2014	4,528	395	4,469	58.6%
2	2015	4,469	395	4,405	60.8%
3	2016	4,405	395	4,336	63.0%
4	2017	4,336	395	4,263	65.1%
5	2018	4,263	395	4,183	67.2%
6	2019	4,183	395	4,097	69.2%
7	2020	4,097	395	4,005	71.2%
8	2021	4,005	395	3,905	73.1%
9	2022	3,905	395	3,798	75.0%
10	2023	3,798	395	3,682	76.9%
11	2024	3,682	395	3,557	78.7%
12	2025	3,557	395	3,423	80.5%
13	2026	3,423	395	3,278	82.2%
14	2027	3,278	395	3,122	83.9%
15	2028	3,122	395	2,954	85.6%
16	2029	2,954	395	2,773	87.2%
17	2030	2,773	395	2,578	88.7%
18	2031	2,578	395	2,368	90.3%
19	2032	2,368	395	2,142	91.7%
20	2033	2,142	395	1,898	93.1%
21	2034	1,898	395	1,635	94.4%
22	2035	1,635	395	1,351	95.7%
23	2036	1,351	395	1,046	96.9%
24	2037	1,046	395	717	98.0%
25	2038	717	395	363	99.1%
26	2039	363	395	0	100.0%

The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Actual experience will differ.

# Actuarial Balance Sheet as of June 30, 2011

# Assets and Present Value of Expected Future Contributions

		Pension	Medical Subsidy
A.	Present valuation assets		
	1. Net assets from system financial statements	\$ 5,857,424,682	\$ 33,754,510
	2. Reserve for TSAs	(24,513,200)	-
	3. Funding value adjustment	(92,395,189)	(534,682)
	4. Valuation assets	5,740,516,293	33,219,828
В.	Actuarial present value of expected future employer contributions		
	1. For normal costs	421,036,109	21,679,033
	2. For unfunded actuarial accrued liability	4,257,734,925	744,352,867
	3. Total	4,678,771,034	766,031,900
C.	Actuarial present value of expected future member	1 550 150 105	
	contributions	1,572,473,496	-
D.	Total Present and Expected Future Resources	\$11,991,760,823	\$ 799,251,728

# Present Value of Expected Future Benefit Payments

	Pension	Medical Subsidy
A. To retirees and beneficiaries	\$ 4,959,865,387	\$ 626,510,045
B. To vested terminated members	125,521,761	-
C. To non-vested terminated members (outstanding refunds)	37,406,750	-
<ul> <li>D. To present active members</li> <li>1. Allocated to service rendered prior to valuation date - actuarial accrued liability</li> <li>2. Allocated to service likely to be rendered</li> </ul>	4,875,457,320	151,062,650
after valuation date	1,993,509,605	21,679,033
3. Total	6,868,966,925	172,741,683
E. Total Actuarial Present Value of Expected Future Pension Payments	\$11,991,760,823	\$ 799,251,728

# Experience Gain/(Loss) -- June 30, 2011

	Pension	Medical Subsidy
(1) UAAL* at start of biennium	\$ 3,537,732,311	\$ 496,590,150
(2) Normal cost from last valuation for year 1	273,698,141	7,947,042
(3) Actual contributions (employer and employee) for year 1	419,189,535	32,559,729
(4) Interest accrual: $[(1)+1/2 [(2)-(3)]] \times .085$	294,523,862	41,164,124
(5) Expected UAAL end of year 1: (1)+(2)-(3)+(4)	3,686,764,779	513,141,587
(6) Change from legislation#	-	-
(7) Change from revised actuarial assumptions##	-	342,177,658
(8) VCP Transfer	-	89,505,000
(9) Expected UAAL after changes: (5)+(6)+(7)+(8)	3,686,764,779	944,824,245
(10) Actual UAAL at end of year	3,720,093,987	976,044,461
(11) Gain/(loss) for year 1: (9)-(10)	(33,329,208)	(31,220,216)
(12) Gain/(loss) as percent of actuarial accrued liabilities at start of year	(0.4)%	(4.6)%
(13) Normal cost from last valuation for year 2	277,054,013	20,507,133
(14) Actual contributions (employer and employee) for year 2	426,993,728	32,901,064
(15) Interest accrual: $[(10)+1/2 [(13)-(14)]] \times .085$	309,835,551	82,437,037
(16) Expected UAAL end of year 2: (10)+(13)-(14)+(15)	3,879,989,823	1,046,087,567
(17) Change from legislation###	(430,141,979)	(421,142,101)
(18) Change from revised actuarial assumptions	756,662,490	164,681,554
(19) Expected UAAL after changes: (16)+(17)+(18)	4,206,510,334	789,627,020
(20) Actual UAAL at end of year	4,257,734,925	744,352,867
(21) Gain/(loss) for year 2: (19)-(20)	(51,224,591)	45,274,153
(22) Gain/(loss) as percent of actuarial accrued		
liabilities at start of year	(0.6)%	4.4 %

<sup>\*</sup> Unfunded Actuarial Accrued Liabilities.

### Implementation of House Bill No. 2 and, House Bill No. 464.

<sup>#</sup> An ad-hoc COLA of 1.5% up to \$30,000 for retirees with 20 or more years of service was granted, effective July 1, 2010. In addition, there were three special COLA checks payable as of July 1, 2010. The increase in accrued liabilities attributable to these COLAs was approximately \$65.9 million. An amount equal to the increase in accrued liabilities was transferred from the Special Account to the net assets available for pension of approximately \$65.9 million to cover this increase in accrued liabilities.

<sup>##</sup> The valuation rate of return assumption for the medical subsidy was changed from 8.5% interest to 4.5% interest, for reporting of liabilities in accordance with GASB No. 43.

## Pension Solvency Test

The New Hampshire Retirement System funding objective is to meet long-term benefit promises through contributions that remain approximately level from year-to-year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will pay all promised benefits when due -- the ultimate test of financial soundness.

A solvency test is one means of checking a system's progress under its funding program. In a solvency test, the plan's present assets (cash and investments) are compared with:

- 1) Active member contributions on deposit;
- 2) The liabilities for future benefits to present retired lives;
- 3) The liabilities for service already rendered by active and inactive members.

In a System that has been following the discipline of level percent-of-payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the System.

Total of all Groups (\$ in Thousands)

_	Projec	_					
	(1) (2) (3)			Percen	tage of A	ccrued	
	Aggregate Current A		Active & Inactive	<b>Net Assets</b>	Liabilities Covered By		d By Net
Fiscal	Member	Retirees &	Members (Employer	Available	Ass	ets Avail	able
Year	Contributions	Beneficiaries	Financed Portion)	For Benefits	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>
2007 *	\$2,228,853	\$3,210,280	\$1,820,582	\$4,862,256	100%	82%	0%
2008	2,312,069	3,618,118	1,891,129	5,302,034	100%	83%	0%
2009 *	2,393,635	4,012,274	2,069,143	4,937,320	100%	63%	0%
2010	2,553,612	4,378,205	2,022,115	5,233,838	100%	61%	0%
2011 #*	2,631,430	4,959,865	2,406,956	5,740,516	100%	63%	0%

<sup>#</sup> After reflection of changes in assumptions.

<sup>\*</sup> After reflection of changes in legislation.

## Pension Solvency Test -- Comparative Statement (\$ in Thousands)

			Projec	cted Pension Li	abilities For				
		(1)	)	(2)	(3)		Perce	ntage of A	ccrued
		Aggreg	gate	Current	Active & Inactiv	ve Net Assets	Liabiliti	es Covered	l By Net
	Fiscal	Memb	er	Retirees &	Members (Emplo	yer Available	As	sets Availa	ıble
Group	Year	Contribu	tions	<b>Beneficiaries</b>	Financed Portio	n) For Benefits	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>
Employees	2007 *	\$ 79	7,627	\$ 997,992	\$ 528,538	\$ 1,539,196	100%	74%	0%
Teachers	2007 *	925	5,813	1,200,541	797,922	2 1,925,913	100%	83%	0%
Police	2007 *	344	4,485	655,803	339,086	934,744	100%	90%	0%
Fire	2007 *	160	0,927	355,944	155,036	6 462,403	100%	85%	0%
Employees	2008	83	7,375	1,124,075	581,109	9 1,696,189	100%	76%	0%
Teachers	2008	943	3,611	1,387,605	828,084	4 2,114,543	100%	84%	0%
Police	2008	359	9,611	727,584	339,186	5 1,014,088	100%	90%	0%
Fire	2008	17	1,471	378,854	142,75	1 477,214	100%	81%	0%
Employees	2009 *	899	9,364	1,217,430	666,232	2 1,600,150	100%	58%	0%
Teachers	2009 *	920	6,049	1,608,341	855,367	7 1,957,103	100%	64%	0%
Police	2009 *	38	1,273	790,433	378,409	940,825	100%	71%	0%
Fire	2009 *	186	6,949	396,070	169,135	5 439,241	100%	64%	0%
Employees	2010	955	5,735	1,344,902	680,958	8 1,721,002	100%	57%	0%
Teachers	2010	998	8,775	1,770,635	783,710	2,049,650	100%	59%	0%
Police	2010	39	7,440	851,136	386,62	1 997,325	100%	70%	0%
Fire	2010	20	1,661	411,532	170,827	7 465,861	100%	64%	0%
Employees	2011 #	* 99:	5,389	1,548,109	810,983	3 1,834,609	100%	54%	0%
Teachers	2011 #	* 1,04	1,699	1,893,862	973,40	7 2,153,182	100%	59%	0%
Police	2011 #	* 390	6,344	1,030,900	432,256	5 1,179,798	100%	76%	0%
Fire	2011 #	* 19'	7,998	486,994	190,310	572,927	100%	77%	0%

<sup>#</sup> After reflection of changes in assumptions.

<sup>\*</sup> After reflection of changes in legislation.

### Development of Pension Actuarial Liabilities June 30, 2011

### **Employees Pension**

Actuarial Present Value of	Total Present Value (1)		Portion Covered by Future Normal Cost Contributions (2)			Actuarial Accrued Liabilities (1) - (2)
Age and service allowances based on total service likely to be rendered by present active members	\$	2,354,331,058	\$	551,062,976	\$	1,803,268,082
Disability benefits likely to be paid to present active members		10,137,755		16,249,502		(6,111,747)
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)		30,718,890		14,619,119		16,099,771
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members		110,333,766		197,051,114		(86,717,348)
Benefits likely to be paid to current inactive and vested deferred members		79,833,500		-		79,833,500
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees		1,548,109,160		-		1,548,109,160
Total	\$	4,133,464,129	\$	778,982,711	\$	3,354,481,418
Actuarial Value of Assets	\$	1,834,609,057	\$	_	\$	1,834,609,057
Liabilities to be Covered by Future Contributions	\$	2,298,855,072	\$	778,982,711	\$	1,519,872,361



## Employees Pension Unfunded Actuarial Accrued Liability Payoff Projection (\$Millions)

	Fiscal Year	<b>Employer Contribution Rates</b>			τ	J <b>AAL</b>			
	Ending		Pro	ojected	Be	ginning	<b>UAAL</b>	End of	<b>Funded</b>
Year	June 30,	<b>UAAL Payment</b>	P	ayroll	0	f Year	<b>Payment</b>	Year	Ratio
	2012	6.19%	\$	1,156	\$	1,520	72	1,563	54.7%
	2013	6.00%		1,199		1,563	72	1,609	54.8%
1	2014	7.96%		1,244		1,609	99	1,631	56.0%
2	2015	7.96%		1,291		1,631	103	1,650	57.5%
3	2016	7.96%		1,339		1,650	107	1,667	59.0%
4	2017	7.96%		1,389		1,667	111	1,681	60.5%
5	2018	7.96%		1,441		1,681	115	1,692	61.9%
6	2019	7.96%		1,495		1,692	119	1,700	63.4%
7	2020	7.96%		1,551		1,700	123	1,704	64.9%
8	2021	7.96%		1,609		1,704	128	1,703	66.3%
9	2022	7.96%		1,669		1,703	133	1,697	67.8%
10	2023	7.96%		1,732		1,697	138	1,685	69.3%
11	2024	7.96%		1,797		1,685	143	1,667	70.8%
12	2025	7.96%		1,864		1,667	148	1,643	72.4%
13	2026	7.96%		1,934		1,643	154	1,610	74.0%
14	2027	7.96%		2,007		1,610	160	1,569	75.6%
15	2028	7.96%		2,082		1,569	166	1,518	77.3%
16	2029	7.96%		2,160		1,518	172	1,457	79.1%
17	2030	7.96%		2,241		1,457	178	1,385	80.9%
18	2031	7.96%		2,325		1,385	185	1,300	82.8%
19	2032	7.96%		2,412		1,300	192	1,201	84.8%
20	2033	7.96%		2,502		1,201	199	1,087	86.8%
21	2034	7.96%		2,596		1,087	207	956	88.9%
22	2035	7.96%		2,693		956	214	808	91.1%
23	2036	7.96%		2,794		808	222	640	93.3%
24	2037	7.96%		2,899		640	231	450	95.5%
25	2038	7.96%		3,008		450	239	237	97.8%
26	2039	7.96%		3,121		237	248	=	100.0%

The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Actual experience will differ.

**GRS** 

### Development of Pension Actuarial Liabilities June 30, 2011

### **Teachers Pension**

Actuarial Present Value of	Т	Total Present Value (1)	Portion Covered by Future Normal Cost Contributions (2)		Actuarial Accrued Liabilities (1) - (2)
Age and service allowances based on total service likely to be rendered by present active members	\$	2,520,615,557	\$	528,823,250	\$ 1,991,792,307
Disability benefits likely to be paid to present active members		1,559,008		1,272,949	286,059
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)		17,800,238		6,467,872	11,332,366
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members		118,063,341		174,939,831	(56,876,490)
Benefits likely to be paid to current inactive and vested deferred members		68,572,553		-	68,572,553
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees		1,893,861,304			1,893,861,304
Total	\$	4,620,472,001	\$	711,503,902	\$ 3,908,968,099
Actuarial Value of Assets	\$	2,153,181,585	\$	-	\$ 2,153,181,585
Liabilities to be Covered by Future Contributions	\$	2,467,290,416	\$	711,503,902	\$ 1,755,786,514



Teachers Pension
Unfunded Actuarial Accrued Liability Payoff Projection
(\$Millions)

	Fiscal								
	Year	<b>Employer Contribution Rates</b>			Į	UAAL			
	Ending		Pro	jected	Ве	ginning	UAAL	End of	<b>Funded</b>
Year	June 30,	UAAL Payment	Pa	yroll	0	f Year	Payment	Year	Ratio
	2012	7.19%	\$	1,075	\$	1,756	77	1,812	55.1%
	2013	6.98%		1,116		1,812	78	1,871	54.6%
1	2014	9.95%		1,158		1,871	115	1,897	55.3%
2	2015	9.95%		1,201		1,897	119	1,920	55.9%
3	2016	9.95%		1,246		1,920	124	1,940	56.6%
4	2017	9.95%		1,293		1,940	129	1,956	57.3%
5	2018	9.95%		1,341		1,956	133	1,970	58.0%
6	2019	9.95%		1,391		1,970	138	1,979	58.7%
7	2020	9.95%		1,443		1,979	144	1,983	59.5%
8	2021	9.95%		1,497		1,983	149	1,982	60.3%
9	2022	9.95%		1,553		1,982	155	1,975	61.2%
10	2023	9.95%		1,611		1,975	160	1,962	62.2%
11	2024	9.95%		1,671		1,962	166	1,942	63.3%
12	2025	9.95%		1,734		1,942	173	1,913	64.4%
13	2026	9.95%		1,799		1,913	179	1,875	65.7%
14	2027	9.95%		1,866		1,875	186	1,827	67.2%
15	2028	9.95%		1,936		1,827	193	1,768	68.8%
16	2029	9.95%		2,009		1,768	200	1,697	70.6%
17	2030	9.95%		2,084		1,697	207	1,614	72.5%
18	2031	9.95%		2,162		1,614	215	1,516	74.6%
19	2032	9.95%		2,243		1,516	223	1,402	77.0%
20	2033	9.95%		2,327		1,402	232	1,270	79.5%
21	2034	9.95%		2,414		1,270	240	1,119	82.3%
22	2035	9.95%		2,505		1,119	249	947	85.3%
23	2036	9.95%		2,599		947	259	751	88.6%
24	2037	9.95%		2,696		751	268	531	92.2%
25	2038	9.95%		2,797		531	278	284	95.9%
26	2039	9.95%		2,902		284	298	-	100.0%

The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Actual experience will differ.

**GRS** 

### Development of Pension Actuarial Liabilities June 30, 2011

#### Police Pension

Actuarial Present Value of	Т	Total Present Value (1)	ortion Covered by Future Normal Cost Contributions (2)	Actuarial Accrued Liabilities (1) - (2)
Age and service allowances based on total service likely to be rendered by present active members	\$	955,536,515	\$ 201,461,005	\$ 754,075,510
Disability benefits likely to be paid to present active members		26,179,489	16,958,554	9,220,935
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)		5,870,325	3,266,937	2,603,388
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members		152,983,208	101,743,951	51,239,257
Benefits likely to be paid to current inactive and vested deferred members		11,460,057	-	11,460,057
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees		1,030,900,485	-	1,030,900,485
Total	\$	2,182,930,079	\$ 323,430,447	\$ 1,859,499,632
Actuarial Value of Assets	\$	1,179,798,349	\$ -	\$ 1,179,798,349
Liabilities to be Covered by Future Contributions	\$	1,003,131,730	\$ 323,430,447	\$ 679,701,283



Police Pension
Unfunded Actuarial Accrued Liability Payoff Projection
(\$Millions)

	<b>Fiscal</b>							
	Year	<b>Employer Contribution Rates</b>	ı		UAAL			
	<b>Ending</b>		<b>Projected</b>	B	eginning	UAAL	End of	<b>Funded</b>
Year	June 30,	UAAL Payment	Payroll	(	of Year	Payment	Year	Ratio
	2012	10.66%	\$ 269	\$	680	29	702	63.4%
_	2013	10.08%	279		702	28	727	62.9%
1	2014	15.45%	289		727	45	737	63.6%
2	2015	15.45%	300		737	46	746	64.5%
3	2016	15.45%	311		746	48	754	65.4%
4	2017	15.45%	323		754	50	761	66.3%
5	2018	15.45%	335		761	52	766	67.3%
6	2019	15.45%	348		766	54	769	68.3%
7	2020	15.45%	361		769	56	771	69.3%
8	2021	15.45%	375		771	58	770	70.4%
9	2022	15.45%	389		770	60	768	71.4%
10	2023	15.45%	404		768	62	763	72.5%
11	2024	15.45%	419		763	65	754	73.7%
12	2025	15.45%	435		754	67	743	75.0%
13	2026	15.45%	451		743	70	728	76.3%
14	2027	15.45%	468		728	72	710	77.7%
15	2028	15.45%	486		710	75	687	79.1%
16	2029	15.45%	504		687	78	659	80.7%
17	2030	15.45%	523		659	81	626	82.3%
18	2031	15.45%	543		626	84	588	84.0%
19	2032	15.45%	563		588	87	543	85.8%
20	2033	15.45%	584		543	90	491	87.7%
21	2034	15.45%	606		491	94	432	89.6%
22	2035	15.45%	629		432	97	365	91.6%
23	2036	15.45%	653		365	101	288	93.7%
24	2037	15.45%	677		288	105	201	95.8%
25	2038	15.45%	702		201	108	105	97.9%
26	2039	15.45%	728		105	112	-	100.0%

The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Actual experience will differ.

**GRS** 

### Development of Pension Actuarial Liabilities June 30, 2011

#### Fire Pension

Actuarial Present Value of	Т	Total Present Value (1)		ttion Covered by Future Normal Cost ontributions (2)	Actuarial Accrued Liabilities (1) - (2)		
Age and service allowances based on total service likely to be rendered by present active members	\$	522,596,961	\$	147,413,341	\$	375,183,620	
Disability benefits likely to be paid to present active members		12,780,018		8,862,221		3,917,797	
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)		2,309,972		1,340,299		969,673	
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members		27,150,824		21,976,684		5,174,140	
Benefits likely to be paid to current inactive and vested deferred members		3,062,401		-		3,062,401	
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees		486,994,438		-		486,994,438	
Total	\$	1,054,894,614	\$	179,592,545	\$	875,302,069	
Actuarial Value of Assets	\$	572,927,302	\$		\$	572,927,302	
Liabilities to be Covered by Future Contributions	\$	481,967,312	\$	179,592,545	\$	302,374,767	



Fire Pension
Unfunded Actuarial Accrued Liability Payoff Projection
(\$Millions)

	<b>Fiscal</b>							
	Year	<b>Employer Contribution Rates</b>		UA	AL			
	<b>Ending</b>		Projected	Begi	nning	<b>UAAL</b>	End of	<b>Funded</b>
Year	June 30,	UAAL Payment	Payroll	of Y	<i>l</i> ear	Payment	Year	Ratio
	2012	12.32%	\$ 112	\$	302	14	311	65.5%
_	2013	11.54%	116		311	13	322	65.0%
1	2014	16.41%	120		322	20	326	65.7%
2	2015	16.41%	125		326	21	329	66.6%
3	2016	16.41%	130		329	21	333	67.4%
4	2017	16.41%	135		333	22	336	68.3%
5	2018	16.41%	140		336	23	338	69.2%
6	2019	16.41%	145		338	24	339	70.2%
7	2020	16.41%	150		339	25	339	71.2%
8	2021	16.41%	156		339	26	338	72.2%
9	2022	16.41%	162		338	27	336	73.3%
10	2023	16.41%	168		336	28	333	74.4%
11	2024	16.41%	174		333	29	329	75.5%
12	2025	16.41%	181		329	30	323	76.7%
13	2026	16.41%	188		323	31	316	77.9%
14	2027	16.41%	195		316	32	307	79.2%
15	2028	16.41%	202		307	33	297	80.6%
16	2029	16.41%	210		297	34	285	81.9%
17	2030	16.41%	218		285	36	270	83.5%
18	2031	16.41%	226		270	37	253	85.0%
19	2032	16.41%	234		253	38	233	86.7%
20	2033	16.41%	243		233	40	210	88.4%
21	2034	16.41%	252		210	41	184	90.2%
22	2035	16.41%	261		184	43	154	92.1%
23	2036	16.41%	271		154	44	120	94.1%
24	2037	16.41%	281		120	46	82	96.1%
25	2038	16.41%	292		82	48	39	98.2%
26	2039	16.41%	303		39	50	-	100.0%

The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Actual experience will differ.

**GRS** 

# **SECTION C**FUND ASSETS

## Statement of System Assets (Assets at Market or Fair Value)

	Jun	e 30
Item	2011	2010
Net System Assets	\$ 5,891,179,192	\$ 4,898,338,838

Assets were reported by NHRS in total for all member classification and in the aggregate for pension and medical subsidy benefits.

#### Reconciliation of System Assets

June 30, 2011 Police# Fire# **Item Employees** Teachers **Total** A. Market Value of Assets at Beginning of Year 1,560,594,156 1,846,797,899 1.000.494,262 490,452,521 4,898,338,838 B. Revenues and Expenditures 1. Contributions a. Employee Contributions \$ 59.312.515 \$ 56,199,808 \$ 26,211,988 \$ 10.687,385 \$ 152,411,696 b. Employer Contributions 114,218,170 111,822,371 52,773,066 307,483,096 28,669,489 c. Total 173,530,685 168,022,179 \$ \$ \$ 78,985,054 \$ 39,356,874 \$ 459,894,792 2. Investment Return a. Interest, Dividends, and Other Income \$ 47,616,730 \$ 55,308,659 30,392,249 14.891.045 148.208.683 b. Net Realized and Unrealized Gains/(Losses) 325,496,869 102,171,079 1,015,333,092 379,250,282 208,414,862 c. Investment Expenses (5,862,054)(6,808,299)(3,741,947)(1,833,390)(18,245,690)d. Net Investment Income \$ 367,251,545 \$ \$ \$ 427,750,642 235,065,164 115,228,734 1,145,296,085 3. Benefits and Refunds a. Refunds (12,724,291)\$ (6,032,404)\$ (3.516.411)\$ (556,608)(22,829,714)b. Regular Monthly Benefits (169,097,219)(209,909,079)(93,023,989)(45,561,301)(517,591,588)c. Partial Lump-Sum Benefits Paid (1,448,061)(609,557)(239,888)(80,800)(2,378,306)Medical Premium Subsidy Payments (17,078,388)(59,863,647) (26,766,608)(10,538,200)(5,480,451)(200,347,959) e. Total \$ (243,317,648)\$ (602,663,255)(107,318,488)(51,679,160)\$ (7,378,161)4. Administrative Expenses (2,368,236)\$ (2,754,468)(741,856)\$ \$ (1.513,601)\$ \$ Miscellaneous Expenses \$ (861,979) \$ (2,309,107)\$ (741,580)\$ (473,490)(232,058)6. Transfers \$ \$ \$ \$ \$ C. Market Value of Assets at End of Year 1,897,918,611 2,195,636,625 1,205,238,901 592,385,055 5,891,179,192

<sup># 401(</sup>h) subsidy income and expense reported by NHRS in total for Police and Fire was allocated approximately 40% to Police and 60% to Fire for purposes of this schedule.

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#### Development of Actuarial Value of Assets

Year Ended June 30:	2009	2010	2011	2012	2013	2014	2015
A. Funding Value Beginning of Year	\$5,701,579,805	\$5,353,452,797	\$5,569,340,728				
B. Market Value End of Year	4,461,210,664	4,898,338,838	5,891,179,192				
C. Market Value Beginning of Year	5,597,046,574	4,461,210,664	4,898,338,838				
D. Non-Investment Net Cash Flow	(130,204,266)	(126,689,841)	(150,146,624)				
E. Investment Income							
E1. Market Total: B - C - D	(1,005,631,644)	563,818,015	1,142,986,978				
E2. Amount for Immediate Recognition (8.5%)	479,100,602	449,659,170	467,012,730				
E3. Amount for Phased-In Recognition: E1-E2	(1,484,732,246)	114,158,845	675,974,248				
F. Phased-In Recognition of Investment Income							
F1. Current Year: 0.20 x E3	(296,946,449)	22,831,769	135,194,850				
F2. First Prior Year	(149,296,007)	(183,524,414)	22,831,769	\$135,194,850			
F3. Second Prior Year	86,836,289	(149,296,007)	(183,524,414)	22,831,769	\$135,194,850		
F4. Third Prior Year	116,070,964	86,836,289	(149,296,007)	(183,524,414)	22,831,769	\$135,194,850	
F5. Fourth Prior Year		116,070,965	86,836,289	(149,296,007)	(183,524,414)	22,831,769	\$135,194,849
F6. Total Recognized Investment Gain	(243,335,203)	(107,081,398)	(87,957,513)	(174,793,802)	(25,497,795)	158,026,619	135,194,849
G. Preliminary Funding Value End of Year: $A + D + E2 + F6$	5,807,140,938	5,569,340,728	5,798,249,321				
H. Additional Recognized G/L due to Corridor	(453,688,141)	-	-				
I. Final Funding Value after 20% Corridor	5,353,452,797	5,569,340,728	5,798,249,321				
J. Difference between Market & Funding Value: B-I	(892,242,133)	(671,001,890)	92,929,871				
K. Recognized Rate of Return	(3.87%)	6.48%	6.90%				
L. Market Rate of Return	(18.18%)	12.82%	23.70%				
M. Ratio of Funding Value to Market Value	120.00%	113.70%	98.42%				

The Funding Value of Assets recognizes assumed investment income (line E2) fully each year. Differences between actual and assumed investment income (line E3) are phased in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than market value. The Funding Value of Assets is unbiased with respect to Market Value. At any time it may be either greater or less than Market Value. If assumed rates are exactly realized for 4 consecutive years, it will become equal to Market Value. Final Funding Value of Assets may not be less than 80% nor more than 120% of Market Value of Assets.

## Allocation of Assets June 30, 2011

		<b>Employees</b>	Teachers	Police	Fire	Total
Allocated Fund Assets (Actuarial Value)	5	1,867,916,168	\$ 2,161,079,250	\$ 1,186,203,971	\$ 583,049,932	\$ 5,798,249,321
Less Reserve for TSAs		(3,863,387)	(14,028,338)	(3,563,028)	(3,058,447)	(24,513,200)
Less 401(h) Account		(29,443,724)	6,130,673	(2,842,594)	(7,064,183)	(33,219,828)
Net Pension Valuation Assets	\$	1,834,609,057	\$ 2,153,181,585	\$ 1,179,798,349	\$ 572,927,302	\$ 5,740,516,293

#### Reserve for TSA's Reconciliation

(1) Classification	(2) Balance as of June 30, 2010	(3) Benefits Purchased	(4) Estimated Transfer From 401(h) Account Due to VCP Filing	(5) Balance as of July 1, 2010 (2) - (3) + (4)	(6) Interest	(7) Asset Gain	(8) June 30, 2011 (5) + (6) + (7)	(9) Estimated July 1, 2011 COLA in Valuation	(10) Transfer to State Annuity Accumulation Fund	(11) Final Valuation Assets as of June 30, 2011 (8) - (9) - (10)	(12) Estimated TSA Payable July 1, 2011	(13) Estimated Balance 7/1/2011 # (11) - (12)
Employees State	\$ 23,931,141	\$ 13,620,500	\$ -	\$ 10,310,641	\$ 711,434	\$ -	\$ 11,022,075	\$ -	\$ 11,022,075	\$ -	\$ -	s -
Political Subd.	21,120,903	10,068,900	·	11,052,003	762,588		11,814,591	*	7,951,204	3,863,387	711,300	3,152,087
Pollucai Subu.	21,120,903	10,008,900	-	11,032,003	/02,388	-	11,814,391	-	7,931,204	3,803,387	/11,300	3,132,087
Teachers	72,019,389	27,304,386	-	44,715,003	3,085,335	-	47,800,338	-	33,772,000	14,028,338	2,582,800	11,445,538
Police Officers												
State	18,988,299	3,112,500	12,978,000	28,853,799	1,990,912	_	30,844,711	_	30,844,711	0	_	0
Political Subd.	57,863,404	6,709,000	42,159,000	93,313,404	6,438,625	_	99,752,029	_	96,189,001	3,563,028	656,000	2,907,028
1 ometi susui	27,002,101	0,703,000	.2,10,,000	,5,515,.0.	0,100,020		>>,,,02,02>		>0,10>,001	5,505,020	020,000	2,507,020
Firefighters												
State	1,312,466	130,000	998,000	2,180,466	150,452	_	2,330,918	_	2,330,918	0	-	0
Political Subd.	43,863,480	4,947,500	33,370,000	72,285,980	4,987,733	-	77,273,713	-	74,215,266	3,058,447	563,100	2,495,347
Totals	\$ 239,099,082	\$ 65,892,786	\$ 89,505,000	\$262,711,296	\$18,127,079	\$ -	\$ 280,838,375	\$ -	\$ 256,325,175	\$ 24,513,200	\$ 4,513,200	\$ 20,000,000

<sup>#</sup> Estimated Balance allocated in proportion to July 1, 2011 TSAs.

Classification	Estimated Present Value of Supplemental Annuities Payable July 1, 2011											
				Temporary Suppler	nental A	Annuities						
	1.5% up to \$30,000		\$1,000 for				Total					
			< \$20,000	\$500 for <1993	\$5	500/\$1,000			Grand Total			
Employees												
State	\$	-			\$	-	\$	-	\$	-	0.00%	
Political Subd.		-				711,300	71	1,300	71	1,300	15.76%	
Teachers		-				2,582,800	2,58	2,800	2,58	2,800	57.23%	
Police Officers												
State		-				-		-		-	0.00%	
Political Subd.		-				656,000	65	6,000	65	6,000	14.54%	
Firefighters												
State		-				-		-		-	0.00%	
Political Subd.						563,100	563	3,100	56	3,100	12.48%	
Totals	\$	-	\$ -	\$ -	\$	4,513,200	\$ 4,51	3,200	\$ 4,51	3,200	100.00%	

<sup># 2011</sup> House Bill 2 repealed the Special Account. At the direction of NHRS, \$20 million is held in reserve for July 1, 2011 and July 1, 2012 TSAs in proportion to the TSAs paid July 1, 2011.

# SECTION D ACCOUNTING DISCLOSURES

This information is presented in draft form for review by the System's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the System's financial statements.

# Schedule of Pension Funding Progress (As Required by GASB Statement No. 25)

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 Percent of Covered Payroll [(b)-(a)]/(c)
June 30, 2007*	\$4,862,256,315	\$7,259,715,170	\$ 2,397,458,855	67.0%	\$ 2,195,339,382	109.2 %
June 30, 2008	5,302,034,006	7,821,316,352	2,519,282,346	67.8%	2,308,320,669	109.1 %
June 30, 2009*	4,937,319,506	8,475,051,817	3,537,732,311	58.3%	2,448,287,042	144.5 %
June 30, 2010	5,233,838,359	8,953,932,346	3,720,093,987	58.5%	2,481,383,620	149.9 %
June 30, 2011#*	5,740,516,293	9,998,251,218	4,257,734,925	57.4%	2,517,779,470	169.1 %

<sup>\*</sup> After Benefit/Legislative changes.

<sup>#</sup> After Assumption changes/methods.

#### Schedule of Employer Pension Contributions

GASB No. 25 Annual Required

	Co	ntribution (ARC)*	<b>k</b>	<b>Employer C</b>	ontributions	_		
			Projected		Actual			
Fiscal Year	<b>Projected Payroll</b>	ARC as	$\mathbf{ARC}^{\#\#}$	<b>Actual Payroll</b>	Contribution	% of GASB ARC		
Ending June 30:	(\$ Thousands)	% of Payroll	(\$ Thousands)	(\$ Thousands)	(\$ Thousands)	Contributed		
(1)	(2)	(3)	(4)	(5)	(6)	(7)		
2008#	2,294,130	10.52 %	241,456	2,308,321	249,898	75 %		
2009#	2,397,365	10.52 %	252,321	2,448,287	261,450	75 %		
2010	2,505,247	10.70 %	268,061	2,481,384	269,677	100 %		
2011	2,617,983	10.70 %	280,124	2,517,779	274,582	100 %		
2012	2,793,902	10.23 %	285,816					
2013	2,919,628	9.97 %	291,087					
2014	2,811,784	12.79 %	359,627					
2015	2,917,226	12.79 %	373,113					

<sup>\*</sup> ARC Amounts for 2008 through 2011 are estimated based on the contribution rate in effect in the year indicated and the June 30, 2007 valuation payroll projected at the assumed wage inflation rate of 4.50% per year. ARC Amounts for 2012 and 2013 are estimated based on the contribution rate in effect in the year indicated and the June 30, 2009 valuation payroll projected at the assumed wage inflation rate of 4.50% per year.

<sup>#</sup> Developed by prior actuary. Actual contributions are based on the ARC % times actual payroll. For FY 2008 and 2009 25% of the total contribution was paid to the 401(h) subtrust and 75% to the pension trust.

<sup>##</sup> ARC is computed as a percent of payroll. Projected dollar amounts are illustrative.

## Notes to Required Supplementary Information (As Required by GASB Statement No. 25)

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date June 30, 2011

Actuarial Cost Method Entry Age Normal

Amortization Method Level Percentage of Payroll, Closed

Equivalent Single Amortization Period 26 Years

Valuation Asset Method 5-Year Smoothed Market

**Actuarial Assumptions:** 

Investment Rate of Return \* 7.75%

Projected Salary Increase \* 4.15% to 24.55%

\* Includes Price Inflation at 3.00%

Rate of Payroll Growth 3.75%

Cost-of-Living Adjustments None



### Post-Retirement Medical Subsidy GASB Statement No. 43 Reporting

## Contributions Expressed as Percents of Payroll

			/ <del></del>	
	Political	-	Police	
State	Subdivision		&	
<b>Employees</b>	<b>Employees</b>	Teachers	Fire	Total
0.00%	0.00%	0.00%	0.73%	0.11%
0.00%	0.00%	0.00%	0.03%	0.00%
0.00%	0.00%	0.00%	0.02%	0.00%
0.00%	0.00%	0.00%	0.06%	0.01%
0.00%	0.00%	0.00%	0.84%	0.12%
1.62%	0.33%	2.20%	3.12%	1.78%
1.62%	0.33%	2.20%	3.96%	1.90%
1.62%	0.33%	2.20%	3.96%	1.90%
\$ 9,666,171	\$ 2,135,949	\$ 25,462,702	\$ 16,253,985	\$53,518,807
1.62%	0.33%	2.20%	3.96%	1.90%
\$10,028,652	\$2,216,048	\$26,417,553	\$16,863,510	\$55,525,763
	0.00% 0.00% 0.00% 0.00% 0.00% 1.62% 1.62% \$ 9,666,171	State Employees         Subdivision Employees           0.00%         0.00%           0.00%         0.00%           0.00%         0.00%           0.00%         0.00%           0.00%         0.00%           1.62%         0.33%           1.62%         0.33%           \$ 9,6666,171         \$ 2,135,949           1.62%         0.33%	State Employees         Subdivision Employees         Teachers           0.00%         0.00%         0.00%           0.00%         0.00%         0.00%           0.00%         0.00%         0.00%           0.00%         0.00%         0.00%           0.00%         0.00%         0.00%           1.62%         0.33%         2.20%           1.62%         0.33%         2.20%           \$ 9,666,171         \$ 2,135,949         \$ 25,462,702           1.62%         0.33%         2.20%	State Employees         Subdivision Employees         Teachers         & Fire           0.00%         0.00%         0.00%         0.73%           0.00%         0.00%         0.00%         0.03%           0.00%         0.00%         0.00%         0.02%           0.00%         0.00%         0.00%         0.06%           0.00%         0.00%         0.00%         0.84%           1.62%         0.33%         2.20%         3.96%           \$ 9,666,171         \$ 2,135,949         \$ 25,462,702         \$ 16,253,985           1.62%         0.33%         2.20%         3.96%

Accrued Medical Subsidy Liabilities, \$777,572,695 were more than applicable assets of \$33,219,828.

The calculations above show the estimated employer's Annual Required Contribution (ARC) for the years ended June 30, 2014 and June 30, 2015.

<sup># 26-</sup>year amortization of UAAL, but not less than solvency rate.

## Determination of Unfunded Actuarial Accrued Liability (Medical) as of June 30, 2011

		State	9	Political Subdivision		Police &	
	]	Employees	]	Employees	Teachers	Fire	Total
A. Present Value of Future Medical Benefits							
1. Retirees and Beneficiaries	\$	95,873,485	\$	77,649,740	\$ 262,106,972	\$ 190,879,848	\$ 626,510,045
2. Vested Terminated Members		-		-	-	-	-
3. Active Members		_		_		172,741,683	172,741,683
Total Present Value of Future Medical Benefits		95,873,485		77,649,740	262,106,972	363,621,531	799,251,728
B. Present Value of Future Employer Normal Costs		-		-	-	21,679,033	21,679,033
C. Present Value of Future Contributions from Current Active Members		-		-	-	-	-
D. Actuarial Medical Accrued Liability (ABC.)		95,873,485		77,649,740	262,106,972	341,942,498	777,572,695
E. 401(h) Subtrust Actuarial Value of Assets		526,739		28,916,985	(6,130,673)	9,906,777	33,219,828
F. Unfunded Actuarial Accrued Liability (DE.)	\$	95,346,746	\$	48,732,755	\$ 268,237,645	\$ 332,035,721	\$ 744,352,867

The Unfunded Actuarial Accrued Liability (UAAL) is not booked as an expense all in one-year under GASB Statement No. 43 and does not appear in the System's Statement of Net Assets. Nevertheless, it is reported in the Notes to the Financial Statements and in the Required Supplementary Information. These are information sections within the System's financial statements.

## Notes to Required Supplementary Information (As Required by GASB Statement No. 43)

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date June 30, 2011

Actuarial Cost Method Entry Age Normal

Amortization Method Level Percentage of Payroll, Closed

Equivalent Single Amortization Period 15 Years\*

Valuation Asset Method 5-Year Smoothed Market

**Actuarial Assumptions:** 

Investment Rate of Return @ 3.75%

Projected Salary Increase @ 4.15% to 24.55%

@ Includes Price Inflation at 3.00%

Rate of Payroll Growth 3.75%

Increase in Medical Supplement None

<sup>\*</sup> The ARC is based on the greater of a 26 year amortization or the amount necessary to meet cash flow.

## NHRS - 401(h) Cash Flow Projections June 30, 2011

#### **State Employees**

	Valuation		<b>Employer Contril</b>	outions	Benefits	Solvency
Year Ending	Pay	Rate Total	Rate Health	<b>Dollars Health</b>	Paid	Assets
6/30/2011	\$ 534,287,632					\$ 535,217
6/30/2012	554,323,418	10.45%	1.60%	\$ 8,869,175	\$9,864,241	-
6/30/2013	575,110,546	10.08%	1.60%	9,201,769	9,372,819	-
6/30/2014	596,677,191	12.13%	1.62%	9,666,170	8,888,597	-
6/30/2015	619,052,586	12.13%	1.62%	10,028,652	8,430,873	-
6/30/2016	642,267,058	11.75%	1.24%	7,986,799	7,986,799	-
6/30/2017	666,352,073	11.64%	1.13%	7,549,786	7,549,786	-
6/30/2018	691,340,276	11.54%	1.03%	7,130,098	7,130,098	-
6/30/2019	717,265,536	11.45%	0.94%	6,717,305	6,717,305	-
6/30/2020	744,162,994	11.36%	0.85%	6,318,111	6,318,111	-
6/30/2021	772,069,106	11.28%	0.77%	5,926,083	5,926,083	-
6/30/2022	801,021,697	11.20%	0.69%	5,541,167	5,541,167	-
6/30/2023	831,060,011	11.13%	0.62%	5,164,639	5,164,639	-
6/30/2024	862,224,761	11.07%	0.56%	4,790,817	4,790,817	-
6/30/2025	894,558,190	11.00%	0.49%	4,422,074	4,422,074	-
6/30/2026	928,104,122	10.95%	0.44%	4,061,596	4,061,596	-
6/30/2027	962,908,027	10.90%	0.39%	3,709,134	3,709,134	-
6/30/2028	999,017,078	10.85%	0.34%	3,369,743	3,369,743	-
6/30/2029	1,036,480,218	10.80%	0.29%	3,042,715	3,042,715	-
6/30/2030	1,075,348,226	10.76%	0.25%	2,739,668	2,739,668	-
6/30/2031	1,115,673,784	10.73%	0.22%	2,446,441	2,446,441	-
6/30/2032	1,157,511,551	10.70%	0.19%	2,167,654	2,167,654	-
6/30/2033	1,200,918,234	10.67%	0.16%	1,911,218	1,911,218	-
6/30/2034	1,245,952,668	10.64%	0.13%	1,674,265	1,674,265	-
6/30/2035	1,292,675,893	10.62%	0.11%	1,457,300	1,457,300	-
6/30/2036	1,341,151,239	10.60%	0.09%	1,260,621	1,260,621	-

### NHRS - 401(h) Cash Flow Projections June 30, 2011

#### **Political Subdivision Employees (7.75% Interest Assumption)**

		Valuation		Employer Contrib	oution	Benefits	Solvency
_	Year Ending	Pay	Rate Total	Rate Health	<b>Dollars Health</b>	Paid	Assets
	6/30/2011	\$ 579,579,101					\$ 29,382,412
1	6/30/2012	601,313,317	9.18%	0.33%	\$ 1,984,334	\$7,229,186	26,211,459
2	6/30/2013	623,862,566	8.80%	0.32%	1,996,360	6,821,397	23,230,840
3	6/30/2014	647,257,412	10.84%	0.33%	2,135,949	6,486,572	20,512,020
4	6/30/2015	671,529,565	10.84%	0.33%	2,216,048	6,210,492	17,952,472
5	6/30/2016	696,711,924	10.84%	0.33%	2,299,149	5,942,072	15,559,702
6	6/30/2017	722,838,621	10.84%	0.33%	2,385,367	5,717,486	13,304,341
7	6/30/2018	749,945,069	10.84%	0.33%	2,474,819	5,498,645	11,194,428
8	6/30/2019	778,068,009	10.84%	0.33%	2,567,624	5,288,487	9,235,700
9	6/30/2020	807,245,559	10.84%	0.33%	2,663,910	5,078,508	7,443,302
10	6/30/2021	837,517,267	10.84%	0.33%	2,763,807	4,862,118	5,840,538
11	6/30/2022	868,924,165	10.84%	0.33%	2,867,450	4,643,308	4,448,508
12	6/30/2023	901,508,821	10.84%	0.33%	2,974,979	4,418,440	3,293,872
13	6/30/2024	935,315,402	10.84%	0.33%	3,086,541	4,186,736	2,406,320
14	6/30/2025	970,389,730	10.84%	0.33%	3,202,286	3,949,436	1,816,707
15	6/30/2026	1,006,779,345	10.84%	0.33%	3,322,372	3,709,228	1,555,656
16	6/30/2027	1,044,533,570	10.84%	0.33%	3,446,961	3,466,046	-
17	6/30/2028	1,083,703,579	10.81%	0.30%	3,218,781	3,218,781	-
18	6/30/2029	1,124,342,463	10.77%	0.26%	2,970,586	2,970,586	-
19	6/30/2030	1,166,505,305	10.74%	0.23%	2,724,550	2,724,550	-
20	6/30/2031	1,210,249,254	10.72%	0.21%	2,483,928	2,483,928	-
21	6/30/2032	1,255,633,601	10.69%	0.18%	2,247,700	2,247,700	-
22	6/30/2033	1,302,719,861	10.66%	0.15%	2,018,737	2,018,737	-
23	6/30/2034	1,351,571,856	10.64%	0.13%	1,799,354	1,799,354	-
24	6/30/2035	1,402,255,801	10.62%	0.11%	1,589,322	1,589,322	-
25	6/30/2036	1,454,840,394	10.61%	0.10%	1,391,293	1,391,293	-

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## NHRS - 401(h) Cash Flow Projections June 30, 2011

#### **Teachers**

	Valuation		Valuation	]	Employer Contrib	utions	Benefits	Solve	ency
_	Year Ending		Pay	Rate Total	Rate Health	<b>Dollars Health</b>	Paid	Ass	ets
	6/30/2011	\$	1,036,376,337					\$	-
1	6/30/2012		1,075,240,450	11.74%	2.33%	\$ 25,053,102	\$25,043,020		-
2	6/30/2013		1,115,561,967	11.30%	2.31%	25,769,481	23,424,090		-
3	6/30/2014		1,157,395,541	14.16%	2.20%	25,462,702	21,950,979		-
4	6/30/2015		1,200,797,874	14.16%	2.20%	26,417,553	20,741,733		-
5	6/30/2016		1,245,827,794	13.54%	1.58%	19,722,209	19,722,209		-
6	6/30/2017		1,292,546,336	13.41%	1.45%	18,806,043	18,806,043		-
7	6/30/2018		1,341,016,824	13.30%	1.34%	17,991,805	17,991,805		-
8	6/30/2019		1,391,304,955	13.20%	1.24%	17,293,415	17,293,415		-
9	6/30/2020		1,443,478,891	13.11%	1.15%	16,628,932	16,628,932		-
10	6/30/2021		1,497,609,349	13.03%	1.07%	15,980,761	15,980,761		-
11	6/30/2022		1,553,769,700	12.95%	0.99%	15,322,767	15,322,767		-
12	6/30/2023		1,612,036,064	12.87%	0.91%	14,643,584	14,643,584		-
13	6/30/2024		1,672,487,416	12.79%	0.83%	13,943,706	13,943,706		-
14	6/30/2025		1,735,205,694	12.72%	0.76%	13,224,817	13,224,817		-
15	6/30/2026		1,800,275,908	12.65%	0.69%	12,489,222	12,489,222		-
16	6/30/2027		1,867,786,255	12.59%	0.63%	11,739,762	11,739,762		-
17	6/30/2028		1,937,828,240	12.53%	0.57%	10,979,659	10,979,659		-
18	6/30/2029		2,010,496,799	12.47%	0.51%	10,211,620	10,211,620		-
19	6/30/2030		2,085,890,429	12.41%	0.45%	9,440,918	9,440,918		-
20	6/30/2031		2,164,111,320	12.36%	0.40%	8,673,644	8,673,644		-
21	6/30/2032		2,245,265,495	12.31%	0.35%	7,913,563	7,913,563		-
22	6/30/2033		2,329,462,951	12.27%	0.31%	7,166,123	7,166,123		-
23	6/30/2034		2,416,817,812	12.23%	0.27%	6,437,181	6,437,181		-
24	6/30/2035		2,507,448,480	12.19%	0.23%	5,732,782	5,732,782		-
25	6/30/2036		2,601,477,798	12.15%	0.19%	5,058,911	5,058,911		-



### NHRS - 401(h) Cash Flow Projections June 30, 2011

#### **Police and Fire (7.75% Interest Rate Assumption)**

Valuation			]	Employer Contribu	ıtions	Benefits	Solvency
_	Year Ending	Pay	Rate Total	Rate Health	<b>Dollars Health</b>	Paid	Assets
	6/30/2011	\$ 367,536,400					\$ 10,066,229
1	6/30/2012	381,319,015	N/A	3.75%	\$ 14,299,463	\$16,584,975	8,472,286
2	6/30/2013	395,618,478	N/A	3.97%	15,706,054	17,207,421	7,569,343
3	6/30/2014	410,454,171	N/A	3.95%	16,212,940	17,843,966	6,461,739
4	6/30/2015	425,846,202	N/A	3.95%	16,820,925	18,445,740	5,274,747
5	6/30/2016	441,815,435	N/A	3.95%	17,451,710	18,994,384	4,081,087
6	6/30/2017	458,383,514	N/A	3.95%	18,106,149	19,507,296	2,941,929
7	6/30/2018	475,572,896	N/A	3.95%	18,785,129	19,940,863	1,969,409
8	6/30/2019	493,406,880	N/A	3.95%	19,489,572	20,417,907	1,157,731
9	6/30/2020	511,909,638	N/A	3.95%	20,220,431	20,872,441	570,180
10	6/30/2021	531,106,249	N/A	3.95%	20,978,697	21,230,386	352,927
11	6/30/2022	551,022,733	N/A	3.89%	21,443,881	21,443,881	-
12	6/30/2023	571,686,085	N/A	3.76%	21,499,609	21,499,609	-
13	6/30/2024	593,124,313	N/A	3.61%	21,388,257	21,388,257	-
14	6/30/2025	615,366,475	N/A	3.44%	21,161,498	21,161,498	-
15	6/30/2026	638,442,718	N/A	3.26%	20,831,667	20,831,667	-
16	6/30/2027	662,384,320	N/A	3.08%	20,419,429	20,419,429	-
17	6/30/2028	687,223,732	N/A	2.90%	19,935,077	19,935,077	-
18	6/30/2029	712,994,622	N/A	2.72%	19,376,505	19,376,505	-
19	6/30/2030	739,731,920	N/A	2.53%	18,749,042	18,749,042	-
20	6/30/2031	767,471,867	N/A	2.35%	18,057,598	18,057,598	-
21	6/30/2032	796,252,062	N/A	2.18%	17,341,967	17,341,967	-
22	6/30/2033	826,111,514	N/A	2.01%	16,602,838	16,602,838	-
23	6/30/2034	857,090,696	N/A	1.85%	15,837,445	15,837,445	-
24	6/30/2035	889,231,597	N/A	1.69%	15,071,921	15,071,921	-
25	6/30/2036	922,577,782	N/A	1.55%	14,302,915	14,302,915	-



# SECTION E PARTICIPANT DATA

## Retirees and Beneficiaries Reconciliation (In Thousands)

										Average Annua	1
	Adde	ed to	Rolls	Remov	emoved from Rolls Rolls			s End of Year		% Increase	Average
<b>Fiscal</b>	Annual			Annual			Annual		in Annual	Annual	
Year	No.**	Alle	owances*	No.	Al	lowances	No.	A	llowances	Allowances	Allowances
2005							18,950	\$	296,354		\$ 15,639
2007	3,211	\$	73,490	913	\$	12,081	21,248		357,763	9.87%	16,837
2008	2,216		53,600	594		10,923	22,870		400,440	3.99%	17,509
2009	2,152		51,234	521		8,349	24,501		443,325	3.34%	18,094
2010	2,161		50,732	817		12,002	25,845		482,055	3.08%	18,652
2011	1,965		42,344	680		10,051	27,130		514,348	1.65%	18,959

<sup>\*</sup> Includes additional COLA allowances. The benefit amounts shown are the monthly benefits as of the valuation date annualized and are not the actual benefits paid during the fiscal year.

<sup>\*\*</sup> Includes beneficiaries in receipt but excludes deferred vested terminations.

## Retirees and Beneficiaries Age Distribution Employees

#### SERVICE RETIREMENTS

Age	Age N				<b>Females</b>	
Group	Number	Amount	Average	Number	Amount	Average
40 - 44				2	\$ 18,105	\$ 9,053
45 - 49	6	\$ 209,409	\$34,902	10	110,249	11,025
50 - 54	49	800,194	16,330	100	1,180,419	11,804
55 - 59	313	6,545,153	20,911	334	4,934,599	14,774
60 - 64	1,023	20,491,616	20,031	1,405	20,038,963	14,263
65 - 69	1,177	17,866,070	15,179	1,573	16,567,783	10,533
70 - 74	894	11,942,383	13,358	1,102	10,207,367	9,263
75 - 79	729	9,556,233	13,109	811	7,180,436	8,854
80 - 84	472	5,874,809	12,447	551	4,280,241	7,768
85 - 89	263	2,894,811	11,007	331	2,464,020	7,444
90 - 94	71	595,785	8,391	118	700,745	5,939
95 - 99	12	102,994	8,583	21	125,095	5,957
100 & Over	3	24,750	8,250	4	33,226	8,307
TOTAL	5,012	\$76,904,207	\$15,344	6,362	\$67,841,248	\$ 10,664

#### **DISABILITY RETIREMENTS**

Age		Males			<b>Females</b>	
Group	Number	Amount	Average	Number	Amount	Average
30 - 34				1	\$ 13,478	\$13,478
35 - 39	2	\$ 27,264	\$ 13,632	3	34,572	11,524
40 - 44	9	126,780	14,087	13	152,806	11,754
45 - 49	32	427,461	13,358	27	345,895	12,811
50 - 54	54	764,184	14,152	60	687,893	11,465
55 - 59	78	1,071,861	13,742	105	1,360,599	12,958
60 - 64	94	1,263,705	13,444	110	1,281,287	11,648
65 - 69	71	1,010,708	14,235	73	883,262	12,099
70 - 74	41	448,175	10,931	37	507,637	13,720
75 - 79	19	231,232	12,170	21	284,036	13,526
80 - 84	7	106,432	15,205	9	94,180	10,464
85 - 89	4	73,258	18,315	2	17,405	8,703
90 - 94				3	44,124	14,708
95 - 99						
100 & Over						
TOTAL	411	\$5,551,060	\$13,506	464	\$5,707,174	\$12,300

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## Retirees and Beneficiaries Age Distribution Employees

#### BENEFICIARIES OF DECEASED MEMBERS

Age		Males			<b>Females</b>	
Group	Number	Amount	Average	Number	Amount	Average
Under 20				1	\$ 5,065	\$ 5,065
20 - 24				1	5,913	5,913
25 - 29	2	\$ 6,039	\$ 3,020			
30 - 34	2	6,039	3,020			
35 - 39	2	16,636	8,318	3	21,760	7,253
40 - 44	4	9,848	2,462	11	121,079	11,007
45 - 49	8	37,812	4,727	15	76,589	5,106
50 - 54	12	55,470	4,623	35	368,432	10,527
55 - 59	21	106,819	5,087	46	497,642	10,818
60 - 64	18	121,222	6,735	103	1,234,587	11,986
65 - 69	21	168,584	8,028	102	1,284,545	12,594
70 - 74	26	171,942	6,613	141	1,830,353	12,981
75 - 79	24	173,907	7,246	184	1,909,560	10,378
80 - 84	23	216,458	9,411	193	1,920,058	9,948
85 - 89	13	92,590	7,122	146	1,231,004	8,432
90 - 94	1	1,584	1,584	59	393,768	6,674
95 - 99				18	132,442	7,358
100 & Over				3	13,222	4,407
TOTAL	177	\$1,184,950	\$ 6,695	1,061	\$11,046,019	\$ 10,411

### Retirees and Beneficiaries Age Distribution Teachers

#### SERVICE RETIREMENTS

Age		Males			<b>Females</b>	
Group	Number	Amount	Average	Number	Amount	Average
45 - 49				5	\$ 54,403	\$10,881
50 - 54	11	\$ 163,407	\$14,855	34	392,114	11,533
55 - 59	164	4,466,681	27,236	479	10,029,687	20,939
60 - 64	853	22,955,471	26,911	1,955	45,267,373	23,155
65 - 69	713	16,953,558	23,778	1,609	30,902,998	19,206
70 - 74	399	9,713,086	24,344	825	15,799,231	19,151
75 - 79	305	7,635,234	25,034	528	10,337,520	19,579
80 - 84	147	3,302,385	22,465	320	5,792,639	18,102
85 - 89	56	996,441	17,794	196	3,035,107	15,485
90 - 94	18	297,756	16,542	130	1,642,614	12,635
95 - 99	2	21,076	10,538	50	529,256	10,585
100 & Over				11	105,020	9,547
TOTAL	2,668	\$ 66,505,095	\$24,927	6,142	\$123,887,962	\$20,171

#### **DISABILITY RETIREMENTS**

Age		Males			<b>Females</b>	
Group	Number	Amount	Average	Number	Amount	Average
40 - 44				1	\$ 14,163	\$ 14,163
45 - 49				4	45,467	11,367
50 - 54	2	\$ 34,547	\$17,274	7	113,260	16,180
55 - 59	5	77,320	15,464	21	368,540	17,550
60 - 64	7	112,922	16,132	31	518,243	16,718
65 - 69	11	268,703	24,428	26	432,150	16,621
70 - 74	7	114,970	16,424	15	248,733	16,582
75 - 79	9	167,328	18,592	8	128,010	16,001
80 - 84	4	47,037	11,759	7	85,074	12,153
85 - 89	2	22,103	11,052	7	80,530	11,504
90 - 94		,	,	3	43,517	14,506
95 - 99					- 7-	,
100 & Over						
TOTAL	47	\$844,930	\$17,977	130	\$2,077,687	\$ 15,982

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## Retirees and Beneficiaries Age Distribution Teachers

#### BENEFICIARIES OF DECEASED MEMBERS

Age		Males			Females	
Group	Number	Amount	Average	Number	Amount	Average
20 - 24		\$ 0	\$ 0			
25 - 29	1	4,741	4,741	1	\$ 13,182	\$ 13,182
30 - 34	1	3,246	3,246	1	4,741	4,741
35 - 39	3	41,241	13,747	2	6,400	3,200
40 - 44	3	34,633	11,544	1	9,512	9,512
45 - 49	4	32,756	8,189	3	23,204	7,735
50 - 54	5	42,122	8,424	9	109,260	12,140
55 - 59	8	106,387	13,298	23	349,130	15,180
60 - 64	21	319,010	15,191	47	864,965	18,404
65 - 69	23	341,816	14,862	46	1,030,299	22,398
70 - 74	24	345,118	14,380	49	1,041,796	21,261
75 - 79	19	266,474	14,025	46	979,338	21,290
80 - 84	11	178,982	16,271	42	919,315	21,888
85 - 89	6	92,253	15,376	21	287,021	13,668
90 - 94	2	19,586	9,793	15	165,494	11,033
95 - 99	1	10,402	10,402	2	31,149	15,575
100 & Over		•	,		•	
TOTAL	132	\$1,838,767	\$13,930	308	\$5,834,806	\$18,944

## Retirees and Beneficiaries Age Distribution Police

#### SERVICE RETIREMENTS

Age		Males			<b>Females</b>	
Group	Number	Amount	Average	Number	Amount	Average
40 - 44				5	\$ 25,254	\$ 5,051
45 - 49	206	\$ 10,127,605	\$49,163	35	866,390	24,754
50 - 54	360	17,604,325	48,901	59	1,526,674	25,876
55 - 59	351	15,785,059	44,972	67	1,515,322	22,617
60 - 64	367	14,473,736	39,438	54	1,131,913	20,961
65 - 69	255	8,116,613	31,830	46	618,566	13,447
70 - 74	169	5,038,969	29,816	23	386,643	16,811
75 - 79	102	2,506,900	24,577	20	323,361	16,168
80 - 84	62	1,572,103	25,357	5	54,747	10,949
85 - 89	13	392,495	30,192	3	52,264	17,421
90 - 94	9	229,335	25,482	2	18,108	9,054
95 - 99	2	32,774	16,387			
100 & Over	1	17,828	17,828			
TOTAL	1,897	\$75,897,742	\$40,009	321	\$6,537,300	\$20,365

#### **DISABILITY RETIREMENTS**

Age		Males			<b>Females</b>	
Group	Number	Amount	Average	Number	Amount	Average
Under 20						
20 - 24						
25 - 29	1	\$ 31,479	\$ 31,479			
30 - 34	4	101,454	25,364	1	\$ 38,119	\$38,119
35 - 39	3	116,447	38,816	1	30,165	30,165
40 - 44	15	585,345	39,023	3	84,680	28,227
45 - 49	37	1,270,095	34,327	5	152,055	30,411
50 - 54	36	1,185,310	32,925	8	252,710	31,589
55 - 59	50	1,658,917	33,178	5	132,408	26,482
60 - 64	51	1,514,212	29,690	13	358,901	27,608
65 - 69	46	1,348,766	29,321	5	108,248	21,650
70 - 74	21	548,687	26,128	1	13,172	13,172
75 - 79	12	318,485	26,540	2	34,352	17,176
80 - 84	8	206,547	25,818			
85 - 89	2	41,482	20,741			
90 - 94	2	24,381	12,191			
95 - 99						
100 & Over						
TOTAL	288	\$8,951,607	\$31,082	44	\$1,204,810	\$27,382

**GRS** 

## Retirees and Beneficiaries Age Distribution Police

#### BENEFICIARIES OF DECEASED MEMBERS

Age		Males			Females	
Group	Number	Amount	Average	Number	Amount	Average
Under 20	1	\$ 10,821	\$ 10,821	1	\$ 30,418	\$ 30,418
20 - 24	1	10,821	10,821			
25 - 29						
30 - 34						
35 - 39						
40 - 44	2	12,272	6,136	5	75,384	15,077
45 - 49	3	49,528	16,509	4	109,067	27,267
50 - 54	3	24,693	8,231	12	246,550	20,546
55 - 59	2	75,765	37,883	14	323,630	23,116
60 - 64	6	80,905	13,484	31	690,417	22,272
65 - 69				39	729,838	18,714
70 - 74	3	16,367	5,456	49	544,811	11,119
75 - 79	4	25,454	6,364	44	708,633	16,105
80 - 84	4	39,709	9,927	50	558,167	11,163
85 - 89	1	16,543	16,543	31	392,616	12,665
90 - 94				12	117,227	9,769
95 - 99	1	12,498	12,498	7	69,940	9,991
100 & Over						
TOTAL	31	\$ 375,376	\$ 12,109	299	\$ 4,596,698	\$ 15,374

## Retirees and Beneficiaries Age Distribution Fire

#### SERVICE RETIREMENTS

Age		Males			<b>Females</b>	
Group	Number	Amount	Average	Number	Amount	Average
35 - 39						
40 - 44				2	\$ 14,458	\$ 7,229
45 - 49	51	\$ 2,400,455	\$47,068	9	192,785	21,421
50 - 54	138	7,249,511	52,533	14	253,582	18,113
55 - 59	244	11,400,425	46,723	21	300,495	14,309
60 - 64	166	7,146,126	43,049	9	162,512	18,057
65 - 69	126	4,741,014	37,627	7	99,977	14,282
70 - 74	81	2,834,171	34,990	4	52,348	13,087
75 - 79	54	1,432,598	26,530			
80 - 84	35	937,694	26,791	1	25,849	25,849
85 - 89	19	481,563	25,345			
90 - 94	5	106,446	21,289			
95 - 99	2	39,228	19,614			
100 & Over						
TOTAL	921	\$38,769,231	\$42,095	67	\$1,102,006	\$16,448

#### **DISABILITY RETIREMENTS**

Age		Males			<b>Females</b>	
Group	Number	Amount	Average	Number	Amount	Average
35 - 39	2	\$ 42,453	\$21,227			
40 - 44	4	130,595	32,649			
45 - 49	7	251,558	35,937	1	\$31,795	\$31,795
50 - 54	13	425,227	32,710	1	40,899	40,899
55 - 59	20	607,842	30,392	1	26,454	26,454
60 - 64	16	508,641	31,790			
65 - 69	18	505,056	28,059			
70 - 74	21	518,535	24,692			
75 - 79	10	282,769	28,277			
80 - 84	7	175,137	25,020			
85 - 89	4	77,601	19,400			
90 - 94	2	32,346	16,173			
95 - 99						
100 & Over						
TOTAL	124	\$3,557,760	\$28,692	3	\$99,148	\$33,049

GRS June 30, 2011 Valuation 62

## Retirees and Beneficiaries Age Distribution Fire

#### BENEFICIARIES OF DECEASED MEMBERS

Age		Males			Females	
Group	Number	Amount	Average	Number	Amount	Average
Under 20	1	\$ 5,913	\$ 5,913			
20 - 24	1	5,913	5,913			
25 - 29		,	,			
30 - 34						
35 - 39	1	13,198	13,198			
40 - 44	1	13,198	13,198	2	\$ 80,834	\$ 40,417
45 - 49				1	3,499	3,499
50 - 54				6	88,722	14,787
55 - 59				12	239,550	19,963
60 - 64				20	477,727	23,886
65 - 69				27	581,797	21,548
70 - 74				26	463,892	17,842
75 - 79	1	15,853	15,853	23	440,503	19,152
80 - 84	2	33,751	16,876	41	720,411	17,571
85 - 89	1	25,074	25,074	40	585,673	14,642
90 - 94				14	222,673	15,905
95 - 99						
100 & Over				1	13,733	13,733
TOTAL	8	\$112,900	\$14,113	213	\$3,919,014	\$18,399

## Active Members by Valuation Division

Valuation	Active	Valuation		Average	
Group	Members	Payroll	Age	Service	Pay
Employees:					
Male	9,821	\$ 487,016,910	48.6	11.1	\$49,589
Female	15,718	626,849,823	48.6	10.1	39,881
Total	25,539	1,113,866,733	48.6	10.5	43,614
Teachers:					
Male	4,119	244,851,420	45.7	13.3	59,444
Female	14,347	791,524,917	46.0	12.6	55,170
Total	18,466	1,036,376,337	45.9	12.7	56,123
Police:					
Male	3,606	230,141,091	39.1	11.0	63,822
Female	524	29,367,714	39.0	9.0	56,045
Total	4,130	259,508,805	39.1	10.8	62,835
Fire:					
Male	1,555	105,204,154	40.7	12.7	67,655
Female	48	2,823,441	39.2	9.4	58,822
Total	1,603	108,027,595	40.7	12.6	67,391
Total:					
Male	19,101	1,067,213,575	45.6	11.7	55,872
Female	30,637	1,450,565,895	47.2	11.2	47,347
Grand Total	49,738	\$2,517,779,470	46.6	11.4	\$50,621

Valuation	Active	Valuation
Group	Members	Payroll
Employees:		
State	10,490	\$ 534,287,632
Political Subdivisions	15,049	579,579,101
Subtotal	25,539	1,113,866,733
Teachers:	18,466	1,036,376,337
Police:		
State	1,091	72,214,700
Political Subdivisions	3,039	187,294,104
Subtotal	4,130	259,508,804
Fire:		
State	60	3,738,228
Political Subdivisions	1,543	104,289,368
Subtotal	1,603	108,027,596
Total	49,738	\$ 2,517,779,470

Employees June 30, 2011

								Totals					
Attained		Years	of Serv	ice to V	aluation	Date			Valuation				
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No	Payroll				
15-19	15							15	\$ 327,908				
20-24	498	12						510	13,742,755				
25-29	1,056	269	2					1,327	43,330,358				
30-34	825	543	188	1				1,557	61,882,586				
35-39	777	557	366	84	4			1,788	75,255,764				
40-44	1,051	754	576	284	185	19		2,869	125,021,683				
45-49	1,222	1,056	716	414	408	173	27	4,016	178,980,596				
50-54	1,232	1,227	890	514	429	263	227	4,782	211,972,120				
55-59	899	1,062	896	580	540	332	345	4,654	217,078,126				
60-64	558	706	574	378	360	166	204	2,946	138,937,055				
65-69	92	260	202	108	88	55	57	862	39,206,266				
70+	26	64	54	25	22	13	9	213	8,131,516				
TOTAL	8,251	6,510	4,464	2,388	2,036	1,021	869	25,539 \$1,113,866,733					

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 48.6 years Service: 10.5 years Annual Pay: \$43,614

Teachers June 30, 2011

								Totals					
Attained		Years	of Serv	ice to V	aluation	Date			Valuation				
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No	Payroll				
20-24	149							149	\$ 5,037,084				
25-29	1,294	293						1,587	62,978,908				
30-34	748	1,218	199	2				2,167	100,597,275				
35-39	432	698	821	77				2,028	107,700,406				
40-44	515	542	647	466	61	1		2,232	125,111,894				
45-49	417	523	498	340	401	94	6	2,279	131,928,246				
50-54	301	542	598	359	383	458	121	2,762	165,654,881				
55-59	168	390	587	471	448	373	578	3,015	190,337,848				
60-64	120	174	313	306	320	234	413	1,880	123,178,961				
65-69	19	36	50	62	63	46	59	335	21,878,023				
70+	2	7	6	3	5	3	6	32	1,972,811				
TOTAL	4,165	4,423	3,719	2,086	1,681	1,209	1,183	18,466 \$1,036,376,3					

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 45.9 years Service: 12.7 years Annual Pay: \$56,123

Police June 30, 2011

				Totals					
Attained _		Years	s of Serv	ice to V	aluation	Date			Valuation
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No	Payroll
20-24	159							159	\$ 6,330,060
25-29	445	132						577	29,924,779
30-34	199	347	120					666	40,085,490
35-39	127	203	326	100	7			763	48,965,893
40-44	97	125	213	250	125	9		819	55,523,441
45-49	57	80	98	127	164	69		595	42,193,321
50-54	30	47	46	57	46	54	16	296	20,308,242
55-59	16	37	26	28	34	10	13	164	10,402,454
60-64	8	13	16	20	9	6	5	77	4,779,305
65-69	1			5	4	1	2	13	914,803
70+					1			1	81,017
TOTAL	1,139	984	845	587	390	149	36	4,130	\$259,508,805

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 39.1 years Service: 10.8 years Annual Pay: \$62,835

Fire June 30, 2011

								Totals					
Attained		Years	of Serv	ice to V	aluation	Date			Valuation				
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No	Payroll				
20-24	46							46	\$ 2,200,321				
25-29	105	57						162	8,737,135				
30-34	69	104	45	1				219	13,267,946				
35-39	31	93	95	22	1			242	15,522,206				
40-44	35	88	110	87	56	2		378	26,198,678				
45-49	18	41	57	40	98	40		294	21,417,393				
50-54	4	22	21	19	37	48	18	169	13,316,640				
55-59	2	7	15	10	14	11	14	73	5,667,529				
60-64	4	1	1	1		2	8	17	1,455,017				
65-69					2			2	137,296				
70+							1	1	107,434				
TOTAL	314	413	344	180	208	103	41	1,603	\$ 108,027,595				

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 40.7 years Service: 12.6 years Annual Pay: \$67,391

Total June 30, 2011

									Totals					
Attained		Years	of Serv	rice to V	aluation	Date			Valuation					
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No	Payroll					
15-19	15							15	\$ 327,908					
20-24	852	12						864	27,310,220					
25-29	2,900	751	2					3,653	144,971,180					
30-34	1,841	2,212	552	4				4,609	215,833,297					
35-39	1,367	1,551	1,608	283	12			4,821	247,444,269					
40-44	1,698	1,509	1,546	1,087	427	31		6,298	331,855,696					
45-49	1,714	1,700	1,369	921	1,071	376	33	7,184	374,519,556					
50-54	1,567	1,838	1,555	949	895	823	382	8,009	411,251,883					
55-59	1,085	1,496	1,524	1,089	1,036	726	950	7,906	423,485,957					
60-64	690	894	904	705	689	408	630	4,920	268,350,338					
65-69	112	296	252	175	157	102	118	1,212	62,136,388					
70+	28	71	60	28	28	16	16	247	10,292,778					
TOTAL	13,869	12,330	9,372	5,241	4,315	2,482	2,129	49,738	\$ 2,517,779,470					

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 46.6 years Service: 11.4 years Annual Pay: \$50,621

## Historical Summary of Active Member Data

### Total

<b>Valuation</b>	Active M	[embers	Covered Pag	yroll	_ Average	Salary	Av	erage
Date	No.	% Inc.*	\$ Amount	% Inc.*	\$ Amount	% Inc.*	Age	Service
2005	51,060	N/A	\$2,043,568,262	N/A	\$ 40,023	N/A	45.2	9.9
2007	50,802	(0.3%)	2,195,339,382	3.6%	43,214	3.9%	45.6	10.6
2008	50,988	0.2%	2,308,320,669	5.1%	45,272	4.8%	45.7	10.6
2009	51,032	0.0%	2,448,287,042	6.1%	47,976	6.0%	46.0	10.9
2010	50,467	(0.6%)	2,481,383,620	1.4%	49,168	2.5%	46.3	11.1
2011	49,738	(0.7%)	2,517,779,470	1.5%	50,621	3.0%	46.6	11.4

<sup>\*</sup> Average annual increase.

## By Valuation Group (Valuation Payroll in Thousands)

	<b>Fiscal</b>	Active	Valuation	Average	
	Year	Members#	Payroll	Compensation	% Inc.*
Employees	2011	25,539	\$1,113,867	\$43,614	3.68 %
Teachers		18,466	1,036,376	56,123	2.28 %
Police		4,130	259,509	62,835	2.86 %
Fire		1,603	108,028	67,391	1.75 %
Total		49,738	\$2,517,780	\$50,621	2.95 %

	<b>Fiscal</b>	Active	Valuation	Average	
	Year	Members#	Payroll	Compensation	% Inc.*
Employees	2010	25,987	\$1,093,147	\$42,065	2.72 %
Teachers		18,603	1,020,745	54,870	2.30 %
Police		4,231	258,472	61,090	2.27 %
Fire		1,646	109,020	66,233	1.67 %
Total		50,467	\$2,481,384	\$49,168	2.49 %

<sup>#</sup> Excludes temporary inactive members.

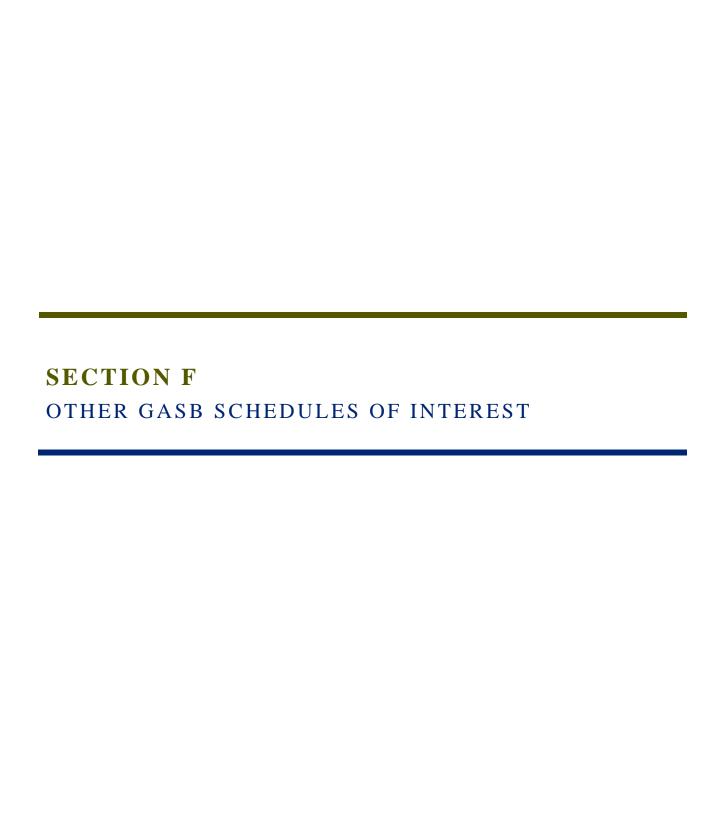
**GRS** 

<sup>\*</sup> Average annual increase.

## Summary of Membership Data by Category

	 Jur	ne 30	
	2011		2010
Active Members			
Number	49,738		50,467
Average age (years)	46.6		46.3
Average service (years)	11.4		11.1
Average salary	\$ 50,621	\$	49,168
Total payroll supplied, annualized	\$ 2,517,779,470	\$	2,481,383,620
Vested Inactive Members			
Number	1,496		1,515
Average age (years)	52		52
Non-Vested Inactive Members			
Number	5,677		5,677
Service Retirees			
Number	23,390		22,248
Average age (years)	69		68
Total annual benefits	\$ 457,444,791	\$	427,718,788
Average annual benefit	\$ 19,557	\$	19,225
Disability Retirees			
Number	1,511		1,474
Average age (years)	62		61
Total annual benefits	\$ 27,994,176	\$	26,945,959
Average annual benefit	\$ 18,527	\$	18,281
Beneficiaries			
Number	2,229		2,123
Average age (years)	73		73
Total annual benefits	\$ 28,908,530	\$	27,390,320
Average annual benefit	\$ 12,969	\$	12,902
Total Covered Lives	84,041		83,504





### Other Schedules of Interest Distribution of Retirees by Years of Service

#### **Employees**

Service	0 -	4 yrs.*	<u>5</u>	- 9 <u>yrs .</u>	10	- 14 yrs.	15	5 - 19 yrs.	20	) - 24 yrs.	<u>25</u>	- 29 <u>yrs.</u>	<u>30</u>	or more yrs.	<u>Total</u>
Average annual benefit	\$	4,032	\$	4,719	\$	6,856	\$	10,049	\$	13,517	\$	18,228	\$	27,079	\$ 12,474
Average monthly benefit	\$	336	\$	393	\$	571	\$	837	\$	1,126	\$	1,519	\$	2,257	\$ 1,039
Average final average salary	\$	32,512	\$	37,153	\$	38,954	\$	43,438	\$	45,838	\$	51,964	\$	61,282	\$ 46,178
Number of retired members		936		1,341		3,334		2,144		2,226		1,277		2,229	13,487 **

<sup>\*</sup> Includes 172 members who did not have service reported.

#### Teachers

Service	0 -	4 yrs.*	<u>5</u>	- 9 <u>yrs .</u>	10	- 14 yrs.	15	5 - 19 <u>yrs.</u>	20	) - 24 yrs.	<u>25</u>	- 29 yrs.	<u>30 c</u>	or more yrs.	<u>Total</u>
Average annual benefit	\$	5,185	\$	5,804	\$	8,044	\$	12,271	\$	17,272	\$	22,178	\$	31,972	\$ 21,321
Average monthly benefit	\$	432	\$	484	\$	670	\$	1,023	\$	1,439	\$	1,848	\$	2,664	\$ 1,777
Average final average salary	\$	50,528	\$	53,243	\$	45,371	\$	53,207	\$	58,790	\$	63,226	\$	69,426	\$ 61,398
Number of retired members		188		214		1,111		1,021		1,859		1,608		3,426	9,427 **

<sup>\*</sup> Includes 79 members who did not have service reported.

#### **Police**

Service	0 -	4 yrs.*	<u>5</u>	- 9 <u>yrs .</u>	10	- 14 yrs.	15	5 - 19 yrs.	20	) - 24 yrs.	<u>25</u>	- 29 yrs.	30	or more yrs.	<u>Total</u>	
Average annual benefit	\$	11,485	\$	16,635	\$	17,788	\$	24,867	\$	34,719	\$	48,981	\$	65,188	\$ 33,876	
Average monthly benefit	\$	957	\$	1,386	\$	1,482	\$	2,072	\$	2,893	\$	4,082	\$	5,432	\$ 2,823	
Average final average salary	\$	47,377	\$	52,498	\$	46,123	\$	58,423	\$	74,403	\$	87,050	\$	97,076	\$ 75,213	
Number of retired members		230		149		314		251		1,218		523		195	2,880	**

<sup>\*</sup> Includes 140 members who did not have service reported.

#### Fire

Service	<u>0 -</u>	4 yrs.*	<u>5</u>	- 9 yrs.	10	- 14 yrs.	15	5 - 19 yrs.	20	) - 24 yrs.	<u>25</u>	- 29 yrs.	<u>30 c</u>	or more yrs.	<u>Total</u>	
Average annual benefit	\$	12,751	\$	18,225	\$	19,194	\$	24,749	\$	31,877	\$	46,151	\$	59,651	\$ 35,599	
Average monthly benefit	\$	1,063	\$	1,519	\$	1,600	\$	2,062	\$	2,656	\$	3,846	\$	4,971	\$ 2,967	
Average final average salary	\$	50,146	\$	51,114	\$	49,051	\$	64,919	\$	73,582	\$	86,853	\$	90,415	\$ 79,520	
Number of retired members		90		30		73		111		555		328		149	1,336	**

<sup>\*</sup> Includes 71 members who did not have service reported.

<sup>\*\*</sup> Includes 942 members who did not have FAS reported.



<sup>\*\*</sup> Includes 7,913 members who did not have FAS reported.

<sup>\*\*</sup> Includes 5,148 members who did not have FAS reported.

<sup>\*\*</sup> Includes 1,794 members who did not have FAS reported.

## Other Schedules of Interest Schedule of Retired Members by Type of Benefits

**Employees** 

								June	30, 2011										
			Ty	pe of F	Retirei	ment*	*						Option S	Selected	l #				
Amount of	Number of								No										
<b>Monthly Benefit</b>	Retirees*	1	2	3	4	5	6	7	Option	1	2	3	4	5	6	7	8	9	Other&
\$1 - \$500	4,213	3,463	45	2	6	-	517	180	2,514	215	286	72	766	167	11	2	-	-	180
501 - 1,000	4,054	3,093	256	137	7	2	363	196	2,283	147	263	88	789	274	10	4	-	-	196
1,001 - 1,500	2,579	1,885	71	224	5	4	142	248	1,233	99	199	77	511	209	2	1	-	-	248
1,501 - 2,000	1,455	1,151	19	78	4	2	73	128	612	45	136	52	360	118	2	2	-	-	128
2,001 - 2,500	835	711	5	22	-	2	49	46	324	16	78	36	261	72	1	1	-	-	46
2,501 - 3,000	475	418	2	8	1	1	34	11	175	14	58	20	133	64	-	-	-	-	11
3,001 - 3,500	286	268	1	2	-	-	13	2	99	5	40	14	91	35	-	-	-	-	2
3,501 - 4,000	198	186	1	1	-	-	10	-	63	4	27	13	64	26	1	-	-	-	-
Over 4,000	203	199	1	-	1	-	2	-	45	3	32	21	71	29	1	1	-	-	_
Totals	14,298	11,374	401	474	24	11	1,203	811	7,348	548	1,119	393	3,046	994	28	11	-	-	811

**Teachers** 

								June	30, 2011										
			Тур	e of F	Retirei	nent**	<b>k</b>						Option S	Selected	l #				
Amount of	Number of								No										
<b>Monthly Benefit</b>	Retirees*	1	2	3	4	5	6	7	Option	1	2	3	4	5	6	7	8	9	Other&
\$1 - \$500	1,114	945	-	-	-	-	61	108	536	44	61	23	261	72	4	5	-	-	108
501 - 1,000	1,479	1,247	46	-	1	-	104	81	831	116	72	26	283	64	5	1	-	-	81
1,001 - 1,500	1,624	1,195	66	5	4	-	85	269	708	65	97	39	340	103	3	-	-	-	269
1,501 - 2,000	1,532	1,346	24	5	4	1	57	95	637	60	114	44	431	144	1	6	-	-	95
2,001 - 2,500	1,490	1,367	15	7	-	1	51	49	611	42	106	54	454	170	2	2	-	-	49
2,501 - 3,000	1,187	1,136	7	1	2	-	32	9	471	43	110	42	358	148	1	5	-	-	9
3,001 - 3,500	901	879	1	-	-	-	19	2	376	28	79	33	286	92	1	4	-	-	2
3,501 - 4,000	434	421	-	-	2	-	11	-	172	18	42	18	127	57	-	-	-	-	-
Over 4,000	279	274	-	-	-	-	5	-	110	7	30	10	88	34	-	-	-	-	_
Totals	10,040	8,810	159	18	13	2	425	613	4,452	423	711	289	2,628	884	17	23	-	-	613

See Page 58 for footnotes.

## Other Schedules of Interest Schedule of Retired Members by Type of Benefits

**Police** 

								Ju	ne 30, 20	11									
			Ту	pe of l	Retire	ment*	*						Optio	n Select	ted#				
Amount of	Number of								No										
<b>Monthly Benefit</b>	Retirants*	1	2	3	4	5	6	7	Option	1	2	3	4	5	6	7	8	9	Other&
\$1 - \$500	156	111	1	-	-	2	32	10	98	1	6	15	6	20	-	-	-		- 10
501 - 1,000	284	147	5	-	-	1	123	8	212	5	12	12	15	20	-	-	-		- 8
1,001 - 1,500	289	163	20	11	-	2	81	12	188	14	12	10	14	39	-	-	-		- 12
1,501 - 2,000	290	183	18	35	-	1	35	18	157	17	7	22	15	53	1	-	-		- 18
2,001 - 2,500	341	245	9	66	-	1	13	7	160	20	12	45	20	77	-	-	-		- 7
2,501 - 3,000	363	263	-	78	-	2	17	3	146	22	8	61	20	103	-	-	-		- 3
3,001 - 3,500	299	251	-	39	1	3	4	1	104	14	3	77	8	92	-	-	-		- 1
3,501 - 4,000	237	212	-	18	-	-	6	1	75	8	1	53	8	91	-	-	-		- 1
Over 4,000	681	643	-	32	-	1	5	-	165	17	8	212	12	266	1	-	-		
Totals	2,940	2,218	53	279	1	13	316	60	1,305	118	69	507	118	761	2	-	-		- 60

Fire

								Ju	ne 30, 20	11									
			Ту	pe of l	Retire	ment*	*						Optio	n Select	ted#				
Amount of	Number of								No										
<b>Monthly Benefit</b>	Retirants*	1	2	3	4	5	6	7	Option	1	2	3	4	5	6	7	8	9	Other&
\$1 - \$500	39	23	-	1	-	2	11	2	26	-	2	-	2	7	-	-	-	-	2
501 - 1,000	88	30	1	-	-	-	56	1	77	-	2	1	1	6	-	-	-	-	1
1,001 - 1,500	146	61	7	10	-	5	62	1	110	10	8	6	6	5	-	-	-	-	1
1,501 - 2,000	119	64	9	14	-	2	27	3	73	10	5	10	8	10	-	-	-	-	3
2,001 - 2,500	184	121	3	26	1	3	27	3	95	14	8	24	7	33	-	-	-	-	3
2,501 - 3,000	159	123	2	25	-	-	8	1	61	8	4	27	11	47	-	-	-	-	1
3,001 - 3,500	147	128	1	14	-	1	2	1	38	7	3	32	2	64	-	-	-	-	1
3,501 - 4,000	123	115	-	6	-	1	1	-	36	6	1	27	2	51	-	-	-	-	_
Over 4,000	343	323	-	8	1	-	11	-	94	13	2	80	3	149	1	1	-	_	_
Totals	1,348	988	23	104	2	14	205	12	610	68	35	207	42	372	1	1	-	-	12

See Page 58 for footnotes.

**Type of	Retirement
-----------	------------

1-Service & early retirement
2-Ordinary disability retirement
3-Accidental disability retirement
4-Ordinary death in active service
5-Accidental death in active service

<sup>6-</sup>Beneficiaries of deceased members who retired on a service or disability allowance

No option - Straight life Option 1 - Cash refund

Option 2 - 100% Joint & Survivorship Option 3 - 50% Joint & Survivorship

Option 4 - 100% Pop-Up Option 5 - 50% Pop-Up

Option 6 - Other % Joint & Survivorship

Option 7 - Other % Pop-Up

Option 8 - Fixed amount to Beneficiaries

Option 9 - Widow's benefit (accidental disability) 50%

<sup>7-</sup>Vested member with future benefit

<sup>#</sup>Option Selected

<sup>\*</sup> Excluding Vested members with a future benefit.

<sup>&</sup>amp; Elections for Vested members are made at the time of commencement.

# Other Schedules of Interest Distribution of Retirees by Years of Service Medical Benefits

State Employee
----------------

Service	<u>0 - 4 yrs.*</u>	<u>5 - 9 yrs.</u>	<u>10 - 14 yrs.</u>	<u>15 - 19 yrs.</u>	<u>20 - 24 yrs.</u>	<u>25 - 29 yrs.</u>	30 or more yrs.	<u>Total</u>
Average annual benefit	\$ 4,898	\$ 5,464	\$ 5,186	\$ 4,859	\$ 4,439	\$ 4,534	\$ 4,835	\$ 4,717
Average monthly benefit	\$ 408	\$ 455	\$ 432	\$ 405	\$ 370	\$ 378	\$ 403	\$ 393
Annual Benefits	\$724,932	\$382,467	\$482,302	\$208,938	\$2,503,738	\$1,772,785	\$4,052,072	\$10,127,234
Number of retired members	148	70	93	43	564	391	838	2,147
* Includes 69 members who di	id not have ser	vice reported.						

#### Political Subdivision Employees

Service	<u>0 - 4 yrs.*</u>	<u>5 - 9 yrs.</u>	<u>10 - 14 yrs.</u>	<u>15 - 19 yrs.</u>	<u>20 - 24 yrs.</u>	<u>25 - 29 yrs.</u>	30 or more yrs.	<u>Total</u>
Average annual benefit	\$ 3,960	\$ 4,181	\$ 4,852	\$ 4,679	\$ 4,980	\$ 4,987	\$ 5,919	\$ 5,221
Average monthly benefit	\$ 330	\$ 348	\$ 404	\$ 390	\$ 415	\$ 416	\$ 493	\$ 435
Annual Benefits	\$67,317	\$41,814	\$58,229	\$18,717	\$3,257,086	\$1,655,639	\$2,314,398	\$7,413,200
Number of retired members	17	10	12	4	654	332	391	1,420

<sup>\*</sup> Includes 8 members who did not have service reported.

#### Teachers

Service	<u>0 - 4 yrs.*</u>	<u>5 - 9 yrs.</u>	<u>10 - 14 yrs.</u>	<u>15 - 19 yrs.</u>	<u>20 - 24 yrs.</u>	<u>25 - 29 yrs.</u>	30 or more yrs.	<u>Total</u>
Average annual benefit	\$ 3,854	\$ 4,507	\$ 5,806	\$ 5,684	\$ 5,143	\$ 5,264	\$ 6,299	\$ 5,807
Average monthly benefit	\$ 321	\$ 376	\$ 484	\$ 474	\$ 429	\$ 439	\$ 525	\$ 484
Annual Benefits	\$38,535	\$4,507	\$23,224	\$5,684	\$5,214,828	\$5,032,007	\$15,538,525	\$25,857,310
Number of retired members	10	1	4	1	1,014	956	2,467	4,453

<sup>\*</sup> Includes 8 members who did not have service reported.

#### Police and Fire

Service	<u>0 - 4 yrs.*</u>	<u>5 - 9 yrs.</u>	<u>10 - 14 yrs.</u>	<u> 15 - 19 yrs.</u>	<u>20 - 24 yrs.</u>	<u>25 - 29 yrs.</u>	30 or more yrs.	<u>Total</u>
Average annual benefit	\$ 5,198	\$ 5,513	\$ 5,697	\$ 5,460	\$ 6,546	\$ 6,689	\$ 6,553	\$ 6,374
Average monthly benefit	\$ 433	\$ 459	\$ 475	\$ 455	\$ 545	\$ 557	\$ 546	\$ 531
Annual Benefits	\$327,489	\$512,666	\$991,312	\$988,209	\$7,868,124	\$3,972,987	\$1,638,323	\$16,299,110
Number of retired members	63	93	174	181	1,202	594	250	2,557

<sup>\*</sup> Includes 18 members who did not have service reported.



## Other Schedules of Interest Schedule of Retired Members by Type of Benefits Medical Benefits

**State Employees** 

June 30, 2011									
Monthly	No. of	1 Person		1 Person		2 Pe	rson		
Benefit	Retirees	Pre-65	Pre-65 Post-65		Post-65				
\$1-\$500	1,805	122	1,649	0	34				
501-1,000	338	48	138	118	34				
1,001-1,500	3	2	1	0	0				
1,501-2,000	1	0	0	1	0				
Over 2,000	0	0	0	0	0				
Total	2,147	172	1,788	119	68				

**Political Subdivision Employees** 

June 30, 2011									
Monthly	No. of	1 Person		1 Person		2 Pe	rson		
Benefit	Retirees	Pre-65	Pre-65 Post-65		Post-65				
\$1-\$500	1,115	139	972	1	3				
501-1,000	286	83	109	77	17				
1,001-1,500	13	2	3	7	1				
1,501-2,000	6	3	0	3	0				
Over 2,000	0	0	0	0	0				
Total	1,420	227	1,084	88	21				

## Other Schedules of Interest Schedule of Retired Members by Type of Benefits Medical Benefits

#### **Teachers**

June 30, 2011									
Monthly	No. of	1 Person		2 Pe	rson				
Benefit	Retirees	Pre-65	Post-65	Pre-65	Post-65				
\$1-\$500	3,092	558	2,508	1	25				
501-1,000	1,180	361	306	344	169				
1,001-1,500	131	27	21	49	34				
1,501-2,000	49	12	0	37	0				
Over 2,000	1	1	0	0	0				
Total	4,453	959	2,835	431	228				

#### **Police and Fire**

June 30, 2011									
Monthly	No. of	1 Person		1 Person		2 Pe	rson		
Benefit	Retirees	Pre-65	Post-65	Pre-65	Post-65				
\$1-\$500	1,383	401	956	20	6				
501-1,000	1,145	150	180	803	12				
1,001-1,500	21	3	2	12	4				
1,501-2,000	8	0	0	8	0				
Over 2,000	0	0	0	0	0				
Total	2,557	554	1,138	843	22				



#### Valuation Methods

#### Pension

**Actuarial Cost Method** - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- (i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gain/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

*Financing of Unfunded Actuarial Accrued Liabilities* - Unfunded Actuarial Accrued Liabilities were amortized by level (principal & interest combined) percent-of-payroll contributions over 26 years from the contribution effective date (Fiscal Year 2014).

#### **Medical Subsidy**

Liabilities are determined under the entry-age actuarial cost method.

Contribution rates to the 401(h) sub-trust are determined as the lesser of 25% of the employers' total contributions (other than those used to fund past service credits) or the actuarial required contribution rate that is projected to keep the medical subsidy sub-trust solvent (the "solvency rate").

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#### Valuation Methods

Actuarial Value of Assets - The Actuarial Value of Assets recognizes assumed investment return fully each year. Differences between actual and assumed investment income are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than Market Value. The Funding Value of Assets is unbiased with respect to Market Value. At any time it may be either greater or less than Market Value. If assumed rates are exactly realized for 4 consecutive years, it will become equal to Market Value. Funding Value is limited to a 20% corridor around the Market Value.

The actuarial value of assets, net of the Reserve for TSAs, was allocated to the pension and medical subsidy plans based on the market value of those plans, net of the Reserve for TSAs. The actuarial value of assets was then further allocated to each fund (either pension or medical subsidy) based on the market value of those funds, net of the Reserve for TSAs.

For purposes of determining the solvency rate, the market value of assets was used for all group funds due to the short time horizon before these closed group funds become pay-as-you-go with a declining annual obligation. The assets used for the Annual Required Contribution under GASB Statement No. 43 are the Actuarial Value of Assets.

### **Development of Amortization Payment**

The employer contribution rate determined by this valuation will not be effective until two years after the valuation date. The unfunded actuarial accrued liability (UAAL) was determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date. The UAAL amortization payment (one component of the contribution requirement), is the level percent of pay required to fully amortize the UAAL over a 26 year period beginning on July 1, 2013. This UAAL payment reflects any payments expected to be made and interest to be accrued between the valuation date and the date contributions determined by this report are scheduled to begin. It was assumed that the entire pension contribution as calculated in the June 30, 2009 valuation effective from July 1, 2011 to July 31, 2011 and the recertified rates adopted in House Bill 2 effective beginning August 1, 2011 would be contributed to the net pension assets.

The actuarial assumptions used in the valuation are shown in this Section.

#### **Economic Assumptions**

The investment return rate assumed in the valuations is 7.75% per year, compounded annually (net after investment expenses). The investment return rate assumed in the medical subsidy valuations is 3.75% per year, compounded annually (net after investment expenses) for purposes of computing accrued liabilities and other disclosures required by GASB Statement 43 (where applicable). However, for determining the solvency contribution rate for the medical subsidy account, the investment return rate assumption was 7.75%, where applicable.

The **Wage Inflation Rate** assumed in this valuation was 3.75% per year. The Wage Inflation Rate is defined to be the portion of total pay increases for an individual that are due to macroeconomic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes related to individual merit and seniority effects.

No specific **Price Inflation** assumption is required to perform this valuation, since there are no benefits that are linked to price increases. However, a price inflation assumption on the order of 3.0% would be consistent with the other economic assumptions.

The assumed **real rate of return** over wage inflation is defined to be the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 7.75% investment return rate translates to an assumed real rate of return over wage inflation of 4.00%. The assumed real rate of return over price inflation would be higher – on the order of 4.75%, considering both an inflation assumption and an average expense provision.

The active member population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at the wage inflation rate -3.75% per year.

**Pay increase assumptions** for individual active members are shown for sample ages on the following pages. Part of the assumption for each age is for merit and/or seniority increase, and the other 3.75% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

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## **Employees**

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

#### Salary Increase Assumptions For an Individual Member

_	Tot an individual Member						
Service	Merit &	Base	Increase				
Index	Seniority	(Economy)	Next Year				
1	7.55%	3.75%	11.30%				
2	5.25%	3.75%	9.00%				
3	3.55%	3.75%	7.30%				
4	2.25%	3.75%	6.00%				
5	1.75%	3.75%	5.50%				
6	1.55%	3.75%	5.30%				
7	0.75%	3.75%	4.50%				
8	0.75%	3.75%	4.50%				
9	0.75%	3.75%	4.50%				
10	0.75%	3.75%	4.50%				
11	0.75%	3.75%	4.50%				
12	0.75%	3.75%	4.50%				
13	0.75%	3.75%	4.50%				
14	0.75%	3.75%	4.50%				
15	0.75%	3.75%	4.50%				
16	0.75%	3.75%	4.50%				
17	0.75%	3.75%	4.50%				
18	0.75%	3.75%	4.50%				
19	0.75%	3.75%	4.50%				
20	0.75%	3.75%	4.50%				
21	0.75%	3.75%	4.50%				
22	0.75%	3.75%	4.50%				
23	0.75%	3.75%	4.50%				
24	0.75%	3.75%	4.50%				
25	0.75%	3.75%	4.50%				
Ref·	34 50%						

Ref: 3 - -4.50%

## Employees (Continued)

**The standard mortality table for death after retirement** is the RP 2000 mortality table, projected to 2020 using projection scale AA. The proposed healthy mortality tables include a margin of 15% for men and 17% for women for mortality improvements.

Sample	Probabilit	y of Dying	Futu	re Life	
Attained	Next	Year	Expectancy (years)		
Ages	Men	Women	Men	Women	
35	0.070%	0.038%	47.16	49.23	
40	0.092%	0.052%	42.34	44.33	
45	0.116%	0.081%	37.54	39.46	
50	0.149%	0.119%	32.77	34.63	
55	0.247%	0.231%	28.04	29.88	
60	0.489%	0.457%	23.47	25.31	
65	0.961%	0.878%	19.17	21.02	
70	1.641%	1.515%	15.22	17.06	
75	2.854%	2.393%	11.58	13.47	
80	5.265%	3.987%	8.42	10.23	
Ref:	454 x 1.00	455 x 1.00			

This assumption is used to measure the probabilities of each benefit payment being made after retirement.

Disabled pension mortality was based on 80% of the PBGC Disabled Mortality tables. The probabilities of disabled mortality at sample attained ages were as follows:

#### **Probability of Occurrence**

	Next Year						
Sample	Disabled Death						
Ages	Men	Women					
20	3.86%	3.86%					
25	3.86%	3.86%					
30	2.90%	2.90%					
35	2.22%	2.22%					
40	2.26%	2.26%					
45	2.58%	2.58%					
50	3.06%	3.06%					
55	3.86%	3.86%					
Ref	250	250					
	0.80	0.80					

## Employees (Continued)

For active members dying before retirement, 98% percent are assumed to be ordinary death and 2% percent are assumed to be accidental death. The probabilities of dying prior to retirement at sample attained ages were as follows:

#### **Probability of Occurrence Next**

	Year						
Sample	I	e tire me	nt				
Ages		Men	l		Wome	n	
20	(	0.00%			0.01%		
25	(	0.04%			0.02%		
30	(	0.04%			0.02%		
35	(	0.05%			0.03%		
40	(	0.08%			0.04%		
45	(	0.12%			0.06%		
50	(	0.18% 0.08%					
55	(	0.25%			0.13%		
Ref	124	X	1.00	92	X	0.40	
	10			2			

## Employees (Continued)

*The rates of retirement* used to measure the probability of eligible members retiring during the next year were as follows:

## For Members Hired Prior to July 1, 2011

#### % of Active Members Retiring Within Next Year

_		Retirii	ng Within Next Y	<u>(ear                                    </u>		
Retirement	Male	e		Fen	nale	
Ages	Normal	Early	Early Rule X	Normal	Early	Early Rule X
45			1.0%			1.0%
46			1.0%			1.0%
47			1.0%			1.5%
48			1.0%			1.5%
49			1.0%			1.0%
50		1.0%	1.5%		1.0%	2.0%
51		1.0%	3.0%		1.0%	2.5%
52		1.0%	3.0%		1.0%	2.0%
53		1.0%	4.0%		1.0%	3.5%
54		1.0%	4.5%		1.5%	5.5%
55		2.0%	8.0%		2.5%	10.0%
56		2.5%	10.0%		3.5%	6.0%
57		2.5%	11.0%		3.0%	13.0%
58		3.5%	11.0%		4.0%	15.0%
59		5.0%	18.0%		5.5%	15.0%
60	12.0%			12.0%		
61	12.0%			12.0%		
62	17.0%			15.0%		
63	16.0%			15.0%		
64	15.0%			15.0%		
65	15.0%			20.0%		
66	25.0%			20.0%		
67	20.0%			20.0%		
68	20.0%			16.0%		
69	20.0%			17.0%		
70	100.0%			100.0%		
Ref.	1930	1932	1934	1931	1933	1935

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## Employees (Continued)

*The rates of retirement* used to measure the probability of eligible members retiring during the next year were as follows:

## For Members Hired On or After July 1, 2011

#### % of Active Members Retiring Within Next Year

_	1/(	aı			
Retirement	Ma	ale	Female		
Ages	Normal Early		Normal	Early	
60		12.0%		12.0%	
61		12.0%		12.0%	
62		17.0%		15.0%	
63		16.0%		15.0%	
64		15.0%		15.0%	
65	46.0%		45.0%		
66	46.0%		45.0%		
67	20.0%		20.0%		
68	20.0%		16.0%		
69	20.0%		17.0%		
70	100.0%		100.0%		

## Employees (Concluded)

**Rates of separation from active membership** were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

		% of Active Members		
Sample	Years of	Separating Wi	thin Next Year	
Ages	Service	Male	Female	
	0	30.00%	30.00%	
	1	22.00%	22.00%	
	2	16.00%	16.00%	
	3	12.00%	12.00%	
	4	8.00%	8.00%	
25	5+	5.00%	8.00%	
30		5.00%	8.00%	
35		5.00%	5.60%	
40		5.00%	5.60%	
45		5.00%	5.60%	
50		5.00%	4.40%	
55		5.00%	4.00%	
60		5.00%	4.00%	
Ref.		142	256	
		1.0	2.0	
		36	36	

**Rates of disability** among active members. 50% are assumed to be ordinary disability and 50% are assumed to be accidental disability.

% of Active Members Becoming Disabled

Sample	Within Next Year		
Ages	Men	Women	
20	0.02%	0.00%	
25	0.02%	0.01%	
30	0.02%	0.02%	
35	0.03%	0.02%	
40	0.08%	0.05%	
45	0.15%	0.09%	
50	0.25%	0.19%	
55	0.43%	0.35%	
Ref	7	19	
	1.30	0.75	

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#### **Teachers**

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

#### Salary Increase Assumptions For an Individual Member

rora	n mariauai menik	ЭСГ
Merit &	Base	Increase
Seniority	(Economy)	Next Year
6.00%	3.75%	9.75%
4.00%	3.75%	7.75%
3.00%	3.75%	6.75%
2.50%	3.75%	6.25%
2.50%	3.75%	6.25%
2.20%	3.75%	5.95%
1.70%	3.75%	5.45%
1.40%	3.75%	5.15%
1.20%	3.75%	4.95%
1.20%	3.75%	4.95%
1.00%	3.75%	4.75%
1.00%	3.75%	4.75%
0.80%	3.75%	4.55%
0.80%	3.75%	4.55%
0.80%	3.75%	4.55%
0.80%	3.75%	4.55%
0.80%	3.75%	4.55%
0.80%	3.75%	4.55%
0.80%	3.75%	4.55%
0.80%	3.75%	4.55%
0.80%	3.75%	4.55%
0.80%	3.75%	4.55%
0.70%	3.75%	4.45%
0.70%	3.75%	4.45%
0.70%	3.75%	4.45%
	Merit & Seniority  6.00% 4.00% 3.00% 2.50% 2.50% 2.50% 1.70% 1.40% 1.20% 1.00% 1.00% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80% 0.80%	Seniority         (Economy)           6.00%         3.75%           4.00%         3.75%           3.00%         3.75%           2.50%         3.75%           2.50%         3.75%           2.20%         3.75%           1.70%         3.75%           1.20%         3.75%           1.20%         3.75%           1.00%         3.75%           1.00%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.80%         3.75%           0.70%         3.75%           0.70%         3.75%

Ref: 13 - -3.75%

## Teachers (Continued)

The standard mortality table for death after retirement is the RP 2000 mortality table, projected to 2020. The proposed healthy mortality tables include a margin of 15% for men and 17% for women for mortality improvements.

Sample	Probability of Dying		Futu	re Life
Attained	Next	Next Year		ıcy (years)
Ages	Men	Women	Men	Women
35	0.070%	0.038%	47.16	49.23
40	0.092%	0.052%	42.34	44.33
45	0.116%	0.081%	37.54	39.46
50	0.149%	0.119%	32.77	34.63
55	0.247%	0.231%	28.04	29.88
60	0.489%	0.457%	23.47	25.31
65	0.961%	0.878%	19.17	21.02
70	1.641%	1.515%	15.22	17.06
75	2.854%	2.393%	11.58	13.47
80	5.265%	3.987%	8.42	10.23
Ref:	454 x 1.00	455 x 1.00		

This assumption is used to measure the probabilities of each benefit payment being made after retirement.

Disabled pension mortality was based on 80% of the PBGC Disabled Mortality tables. The probabilities of disabled mortality at sample attained ages were as follows:

	Probability of Dying Next Year			
Sample	Disabled Death			
Ages	Men	Women		
20	3.86%	3.86%		
25	3.86%	3.86%		
30	2.90%	2.90%		
35	2.22%	2.22%		
40	2.26%	2.26%		
45	2.58%	2.58%		
50	3.06%	3.06%		
55	3.86%	3.86%		
Ref	250	250		
	0.80	0.80		

## Teachers (Continued)

For active members dying before retirement, 98% percent are assumed to be ordinary death and 2% percent are assumed to be accidental death. The probabilities of dying prior to retirement at sample attained ages were as follows:

	Probability of Dying Next Year					ar	
Sample	Death Before Retirement						
Ages		Men			Women		
20		0.01%			0.01%		
25		0.01%			0.01%		
30		0.02%			0.01%		
35		0.03%			0.02%		
40		0.04%			0.02%		
45		0.05%			0.03%		
50	0.07%			0.05%			
55	0.11% 0.09%				0.09%		
Ref	454	х	0.45	455	X	0.40	

## Teachers (Continued)

*The rates of retirement* used to measure the probability of eligible members retiring during the next year were as follows:

## For Members Hired Prior to July 1, 2011

% of Active Members
Retiring Within Next Year

		Retiring V	Vithin Next Year			
Retirement	Ma	ale		Fen	nale	
Ages	Normal	Early	Early Rule X	Normal	Early	Early Rule X
45			1.5%			1.0%
46			1.5%			1.0%
47			1.5%			1.0%
48			1.5%			1.0%
49			1.5%			1.0%
50		1.0%	1.5%		0.5%	1.0%
51		1.0%	1.5%		0.5%	1.0%
52		1.0%	1.5%		0.5%	1.0%
53		1.0%	1.5%		0.5%	1.0%
54		1.0%	3.0%		1.5%	3.0%
55		1.0%	9.0%		2.5%	8.0%
56		3.5%	15.0%		2.5%	13.0%
57		2.0%	16.0%		5.0%	13.0%
58		8.5%	20.0%		6.0%	20.0%
59		6.0%	20.0%		10.0%	20.0%
60	20.5%			17.0%		
61	22.0%			18.0%		
62	23.0%			22.0%		
63	24.0%			23.0%		
64	25.0%			24.0%		
65	26.0%			25.0%		
66	27.0%			30.0%		
67	28.0%			24.0%		
68	29.0%			28.0%		
69	30.0%			29.0%		
70	100.0%			100.0%		
Ref.	1936	1925	1927	1929	1926	1928

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## Teachers (Continued)

*The rates of retirement* used to measure the probability of eligible members retiring during the next year were as follows:

## For Members Hired On or After July 1, 2011

% of Active Members
Retiring Within Next Year

	Retiring Within Next Year			
Retirement	Male		Fen	ale
Ages	Normal	Early	Normal	Early
60		20.5%		17.0%
61		22.0%		18.0%
62		23.0%		22.0%
63		24.0%		23.0%
64		25.0%		24.0%
65	60.0%		60.0%	
66	50.0%		60.0%	
67	40.0%		24.0%	
68	30.0%		28.0%	
69	30.0%		29.0%	
70	100.0%		100.0%	

## Teachers (Concluded)

**Rates of separation from active membership** were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

		% of Active Members		
Sample	Years of	Separating Wi	thin Next Year	
Ages	Service	Male	Female	
	0	35.00%	33.00%	
	1	17.00%	18.00%	
	2	14.00%	13.00%	
	3	10.00%	11.00%	
	4	8.00%	9.00%	
25	5+	3.50%	4.50%	
30		3.50%	4.50%	
35		3.50%	4.50%	
40		3.50%	4.50%	
45		3.50%	4.50%	
50		3.50%	4.50%	
55		3.50%	4.50%	
60	_	3.50%	4.50%	
Ref.		61	48	
		1.75	0.45	
		184	676	

*Rates of disability* among active members. 92% percent are assumed to be ordinary disability and 8% percent are assumed to be accidental disability.

% of Active Members Becoming Disabled

0.141%

66

0.30

2000111119 21000100			
Within Next Year			
Male	Female		
0.006%	0.000%		
0.006%	0.000%		
0.007%	0.000%		
0.008%	0.003%		
0.017%	0.015%		
0.035%	0.024%		
0.082%	0.045%		
	Within N  Male  0.006% 0.006% 0.007% 0.008% 0.017% 0.035%		

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0.181%

2

0.12

55

Ref

#### Police

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

#### Salary Increase Assumptions For an Individual Member

_	гог а	n individuai Memi	Je i
Service	Merit &	Base	Increase
Index	Seniority	(Economy)	Next Year
1	20.40%	3.75%	24.15%
2	10.40%	3.75%	14.15%
3	7.90%	3.75%	11.65%
4	5.40%	3.75%	9.15%
5	2.90%	3.75%	6.65%
6	2.90%	3.75%	6.65%
7	1.20%	3.75%	4.95%
8	0.90%	3.75%	4.65%
9	0.70%	3.75%	4.45%
10	0.70%	3.75%	4.45%
11	0.60%	3.75%	4.35%
12	0.60%	3.75%	4.35%
13	0.50%	3.75%	4.25%
14	0.50%	3.75%	4.25%
15	0.50%	3.75%	4.25%
16	0.50%	3.75%	4.25%
17	0.50%	3.75%	4.25%
18	0.50%	3.75%	4.25%
19	0.50%	3.75%	4.25%
20	0.50%	3.75%	4.25%
21	0.40%	3.75%	4.15%
22	0.40%	3.75%	4.15%
23	0.40%	3.75%	4.15%
24	0.40%	3.75%	4.15%
25	0.40%	3.75%	4.15%

Ref: 15 - -4.15%

## Police (Continued)

The standard mortality table for death after retirement is the RP 2000 mortality table, projected to 2020. The proposed healthy mortality tables include a margin of 15% for men and 17% for women for mortality improvements.

Sample	Probability of Dying		Futu	re Life
Attained	Nex	t Year	Expectancy (years)	
Ages	Men	Women	Men	Women
35	0.070%	0.038%	47.16	49.23
40	0.092%	0.052%	42.34	44.33
45	0.116%	0.081%	37.54	39.46
50	0.149%	0.119%	32.77	34.63
55	0.247%	0.231%	28.04	29.88
60	0.489%	0.457%	23.47	25.31
65	0.961%	0.878%	19.17	21.02
70	1.641%	1.515%	15.22	17.06
75	2.854%	2.393%	11.58	13.47
80	5.265%	3.987%	8.42	10.23
Ref:	454 x 1.00	455 x 1.00		

This assumption is used to measure the probabilities of each benefit payment being made after retirement.

Disabled pension mortality was based on 80% of the PBGC Disabled Mortality tables. The probabilities of disabled mortality at sample attained ages were as follows:

	Probability of I	robability of Dying Next Year				
Sample	Disabled Death					
Ages	Men	Women				
20	3.86%	3.86%				
25	3.86%	3.86%				
30	2.90%	2.90%				
35	2.22%	2.22%				
40	2.26%	2.26%				
45	2.58%	2.58%				
50	3.06%	3.06%				
55	3.86%	3.86%				
Ref	250	250				
	0.80	0.80				

## Police (Continued)

For active members dying before retirement and disabled retirees, the probabilities of dying at sample attained ages were as follows:

	Probability of Dying Next Year									
	Death Before Retirement									
Sample	Men				Women					
Ages	Ordinary	7	Duty	O	rdinary		Duty			
20	0.009%		0.009%	(	0.005%	C	0.005%			
25	0.012%	1	0.012%	(	0.006%	0	0.006%			
30	0.015%		0.015%	(	0.008%	0	0.008%			
35	0.026%		0.026%	(	0.014%	C	0.014%			
40	0.034%		0.034%	(	0.020%	C	0.020%			
45	0.044%		0.044%	(	0.031%	C	0.031%			
50	0.056%		0.056%	(	0.045%	C	0.045%			
55	0.093%	ı	0.093%	(	0.087%	C	0.087%			
Ref	454 x	0 45	54 x	0 455	x 0	455	X	0		
	0.375	0.	375	0.375		0.375				

# Police (Continued)

*The rates of retirement* used to measure the probability of eligible members retiring during the next year were as follows:

For Members Hired Prior to July 1, 2011 Who Have Vested Status as of January 1, 2012

For Members Hired on or After July 1, 2011 and for Members Hired Prior to July 1, 2011 Who Have Non-Vested Status as of January 1, 2012

Retirement Ages	% of Active Members Retiring Within Next Year	Age 46 with 21 years	Age 47 with 22 years	Age 48 with 23 years	Age 49 with 24 years	Age 50 with 25 years
45	25%					
46	25%	28%				
47	25%	28%	35%			
48	25%	28%	35%	35%		
49	25%	28%	30%	35%	40%	
50	25%	28%	30%	35%	40%	50%
51	25%	28%	30%	35%	40%	50%
52	25%	28%	30%	35%	40%	50%
53	30%	30%	30%	35%	35%	35%
54	30%	30%	30%	35%	35%	35%
55	30%	30%	30%	30%	35%	35%
56	25%	25%	25%	25%	25%	25%
57	25%	25%	25%	25%	25%	25%
58	30%	30%	30%	30%	30%	30%
59	25%	25%	25%	25%	25%	25%
60	25%	25%	25%	25%	25%	25%
61	20%	20%	20%	20%	20%	20%
62	20%	20%	20%	20%	20%	20%
63	25%	25%	25%	25%	25%	25%
64	25%	25%	25%	25%	25%	25%
65	25%	25%	25%	25%	25%	25%
66	100%	100%	100%	100%	100%	100%

# Police (Concluded)

**Rates of separation from active membership** were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

		% of Active Members		
Sample	Years of	Separating Wi	thin Next Year	
Ages	Service	Male	Female	
	0	30.00%	40.00%	
	1	15.00%	17.00%	
	2	9.00%	14.00%	
	3	6.00%	11.00%	
	4	4.00%	9.00%	
25	5+	4.00%	4.00%	
30		4.00%	4.00%	
35		4.00%	4.00%	
40		4.00%	4.00%	
45		4.00%	4.00%	
50		4.00%	4.00%	
55		4.00%	4.00%	
60		4.00%	4.00%	
Ref.		61	61	
		2.0	2.0	
		7	233	

Rates of disability among active members.

Commle	% of Active Members Becoming Disabled within Next Year			
Sample Ages	Ordinary	Accidental		
20	0.04%	0.02%		
25	0.04%	0.02%		
30	0.04%	0.02%		
35	0.08%	0.05%		
40	0.18%	0.12%		
45	0.32%	0.21%		
50	0.50%	0.34%		
55	0.75%	0.50%		
Ref	35	35		
	0.45	0.30		

## Fire

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

## Salary Increase Assumptions For an Individual Member

	ror an individual Member			
Service Merit & Base			Increase	
Index	Seniority	(Economy)	Next Year	
1	20.80%	3.75%	24.55%	
2	10.80%	3.75%	14.55%	
3	8.30%	3.75%	12.05%	
4	5.80%	3.75%	9.55%	
5	3.30%	3.75%	7.05%	
6	3.30%	3.75%	7.05%	
7	1.60%	3.75%	5.35%	
8	1.30%	3.75%	5.05%	
9	1.10%	3.75%	4.85%	
10	1.10%	3.75%	4.85%	
11	1.00%	3.75%	4.75%	
12	1.00%	3.75%	4.75%	
13	0.90%	3.75%	4.65%	
14	0.90%	3.75%	4.65%	
15	0.90%	3.75%	4.65%	
16	0.90%	3.75%	4.65%	
17	0.90%	3.75%	4.65%	
18	0.90%	3.75%	4.65%	
19	0.90%	3.75%	4.65%	
20	0.90%	3.75%	4.65%	
21	0.80%	3.75%	4.55%	
22	0.80%	3.75%	4.55%	
23	0.80%	3.75%	4.55%	
24	0.80%	3.75%	4.55%	
25	0.80%	3.75%	4.55%	

Ref: 15 - -4.55%

# Fire (Continued)

*The standard mortality table for death after retirement* is the RP 2000 mortality table, projected to 2020. The proposed healthy mortality tables include a margin of 15% for men and 17% for women for mortality improvements.

Sample	Sample Probability of Dying		Futu	re Life
Attained	Nex	t Year	Expectar	ıcy (years)
Ages	Men	Women	Men	Women
35	0.070%	0.038%	47.16	49.23
40	0.092%	0.052%	42.34	44.33
45	0.116%	0.081%	37.54	39.46
50	0.149%	0.119%	32.77	34.63
55	0.247%	0.231%	28.04	29.88
60	0.489%	0.457%	23.47	25.31
65	0.961%	0.878%	19.17	21.02
70	1.641%	1.515%	15.22	17.06
75	2.854%	2.393%	11.58	13.47
80	5.265%	3.987%	8.42	10.23
Ref:	454 x 1.00	455 x 1.00		

This assumption is used to measure the probabilities of each benefit payment being made after retirement.

Disabled pension mortality was based on 80% of the PBGC Disabled Mortality tables. The probabilities of disabled mortality at sample attained ages were as follows:

Probability of Dying Next Year					
Disabled Death					
Men	Women				
3.86%	3.86%				
3.86%	3.86%				
2.90%	2.90%				
2.22%	2.22%				
2.26%	2.26%				
2.58%	2.58%				
3.06%	3.06%				
3.86%	3.86%				
250	250				
0.80	0.80				
	Disable Men  3.86% 3.86% 2.90% 2.22% 2.26% 2.58% 3.06% 3.86% 250				

Ref

454

0.25 454

# Valuation Assumptions

# Fire (Continued)

Disabled pension mortality was based on 80% of the PBGC Disabled Mortality tables. For active members dying before retirement and disabled retirees, the probabilities of dying at sample attained ages were as follows:

_	Probability of Dying Next Year					
_	Death Before Retirement					
Sample	M	en	Women			
Ages	Ordinary	Duty	Ordinary	Duty		
20	0.01%	0.01%	0.00%	0.00%		
25	0.01%	0.01%	0.00%	0.00%		
30	0.01%	0.01%	0.01%	0.01%		
35	0.02%	0.02%	0.01%	0.01%		
40	0.02%	0.02%	0.01%	0.01%		
45	0.03%	0.03%	0.02%	0.02%		
50	0.04%	0.04%	0.03%	0.03%		
55	0.06%	0.06%	0.06%	0.06%		

0.25 455

0.25 455

0.25

# Fire (Continued)

*The rates of retirement* used to measure the probability of eligible members retiring during the next year were as follows:

For Members Hired Prior to July 1, 2011 Who Have Vested Status as of January 1, 2012 For Members Hired on or After July 1, 2011 and for Members Hired Prior to July 1, 2011 Who Have Non-Vested Status as of January 1, 2012

Retirement	% of Active Members	Age 46	Age 47	Age 48	Age 49	Age 50
Ages	Retiring Within Next Year	with 21 years	with 22 years	with 23 years	with 24 years	with 25 years
45	15%					
46	12%	15%				
47	12%	15%	17%			
48	12%	15%	17%	21%		
49	12%	15%	17%	21%	25%	
50	15%	15%	18%	21%	25%	32%
51	15%	15%	18%	21%	25%	32%
52	15%	15%	18%	21%	25%	32%
53	25%	25%	25%	25%	25%	25%
54	20%	20%	20%	20%	20%	20%
55	30%	30%	30%	30%	30%	30%
56	30%	30%	30%	30%	30%	30%
57	25%	25%	25%	25%	25%	25%
58	25%	25%	25%	25%	25%	25%
59	25%	25%	25%	25%	25%	25%
60	25%	25%	25%	25%	25%	25%
61	40%	40%	40%	40%	40%	40%
62	30%	30%	30%	30%	30%	30%
63	30%	30%	30%	30%	30%	30%
64	30%	30%	30%	30%	30%	30%
65	100%	100%	100%	100%	100%	100%

# Fire (Concluded)

**Rates of separation from active membership** were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

		% of Active Members		
Sample	Years of	Separating W	ithin Next Year	
Ages	Service	Male	Female	
	0	8.00%	8.00%	
	1	6.00%	6.00%	
	2	4.50%	4.50%	
	3	3.00%	3.00%	
	4	2.00%	2.00%	
25	5 & Over	1.50%	1.50%	
30		1.50%	1.50%	
35		1.50%	1.50%	
40		1.50%	1.50%	
45		1.50%	1.50%	
50		1.50%	1.50%	
55		1.50%	1.50%	
60		1.50%	1.50%	
Ref.		151	151	
		1.5	1.5	
		13	13	

Rates of disability among active members.

	% of Active Members Becoming				
Sample	Disabled within Next Year				
Ages	Ordinary	Accidental			
20	0.04%	0.02%			
25	0.04%	0.02%			
30	0.05%	0.02%			
35	0.06%	0.02%			
40	0.11%	0.07%			
45	0.23%	0.07%			
50	0.54%	0.33%			
55	1.21%	0.33%			
Ref	2	28			
	0.80	0.30			

105

## Miscellaneous and Technical Assumptions

Administrative & Investment

Expenses

The investment return assumption is intended to be the return net of investment expenses. Annual administrative expenses are assumed to be equal to the prior year's administrative expenses. Assumed administrative expenses are added to the Normal Cost, and were 0.35% of payroll in the June 30, 2011 valuation to be revised based on the 2014-2015 administrative budget.

Benefit Service

Exact Fractional service is used to determine the amount of benefit

payable.

COLA None assumed.

**Decrement Operation** Disability decrements do not operate during retirement eligibility.

Only withdrawal operates in the select withdrawal period.

**Decrement Timing** Normal and early retirement decrements for the Teachers group are

assumed to occur at the beginning of the year. All other decrements

for all groups were assumed to occur mid-year.

Eligibility Testing Eligibility for benefits is determined based upon the age nearest

birthday and service nearest whole year on the date the decrement is

assumed to occur.

Forfeitures It is assumed that 25% of members who quit before retirement with

10-15 years of service will elect to refund and forfeit their pension.

Incidence of Contributions Contributions are assumed to be received continuously throughout

the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are

made.

Medical Subsidy Margin for

Adverse Experience

A margin was added for adverse experience of 20% excess assets a

the end of the rate setting biennium.

#### Liability Adjustments

Normal, early and vesting retirement liabilities are increased by 9.0%, 7.0%, 12.0% and 12.0% for Employees, Teachers, Police and Fire respectively to account for lump sum payouts. Future hires are assumed to have no adjustment for end of career payments.

#### Marriage Assumption

Group I: 70% of males and 70% of females are assumed to be married for purposes of death-in-service benefits. Group II: 50% of males and 50% of females are assumed to be married for purposes of death-in-service and death after retirement benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.

## Normal Form of Benefit

Group I: The assumed normal form of benefit is a straight life benefit. Group II: The assumed normal form of benefit is straight life for single members and joint and 50% survivor for married members.

## Pay Increase Timing

Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

## Service Credit Accruals

It is assumed that members accrue one year of service credit per year.

## Data Adjustments

For the June 30, 2011 valuation, adjustments to the active data for Plan ID 1: State Police, Plan ID 2: State Fire, and Plan ID 3: State Employees (excluding those hired on or after July 1, 2009), are as follows:

- Added one month of service for the month of June 2011,
- Pro-rated reported pay by 12/11 to adjust for the month of June 2011,
- Adjusted the reported May 31, 2011 member balances by one month of interest at the assumed 8.50% and member contribution based on estimated pay for the month of June and the applicable member contribution rate from HB2: 7.00% for Employees, 11.55% for Police, and 11.80% for Fire.



Statute Amended and Restated under New Hampshire Revised Statutes

Annotated (RSA) Chapter 100-A. Most recently amended under

legislation passed in the year ending June 30, 2011.

Effective Date July 1, 1967

Plan Year July 1 through June 30

Type of Plan Qualified, governmental defined benefit retirement plan; it is a

single plan for financial reporting purposes.

Eligibility Requirements Any employee or teacher becomes a Group I member as a

condition of employment. Membership is optional for elected officials, officials appointed for fixed terms, unclassified state

employees or employees of the general court.

Creditable Service Service measured from date of employment to date of retirement

or prior termination plus service credited under one or more of

the predecessor systems.

Earnable Compensation Full base rate of compensation paid plus any overtime pay, holiday

and vacation pay, sick pay, longevity or severance pay, cost of living bonus, additional pay for extracurricular and instructional activities or for other extra or special duty, and other compensation paid to the member by the employer, plus the fair market value of non-cash compensation such as meals or living quarters if subject to federal income tax. Earnable compensation in the final 12 months prior to termination shall be limited to 1 ½ times the higher of the earnable compensation in the 12 month period preceding the final

months.

For active members who begin service on or after July 1, 2011 or

12 months or the highest compensation year excluding the final 12

who are not in vested status on and after January 1, 2012 –

Full base rate of compensation paid plus any overtime pay, holiday and vacation pay, sick pay, longevity pay, cost of living bonus, additional pay for extracurricular and instructional activities, and any military differential pay, plus the fair market value of non-cash compensation such as meals or living quarters if subject to federal income tax, but excluding other compensation except supplemental pay paid by the employer while the member is receiving workers' compensation and teacher development pay that is not part of the contracted annual salary. Compensation for extra and special duty, as determined by the employer, shall be eliminated for those hired after July 1, 2011 and shall be included but limited during the highest 5 years of creditable service as provided in paragraph RSA 100-A:1 XVIII as amended.

**GRS** 

Earnable compensation shall not include incentives to encourage members to retire, severance pay, or end-of-career longevity payments and pay for unused sick or vacation time. Earnable compensation in the final 12 months prior to termination shall be limited to 1½ times the higher of the earnable compensation in the 12 month period preceding the final 12 months or the highest compensation year excluding the final 12 months. The new definition of earnable compensation is effective immediately for those hired on or after July 1, 2011 and effective January 1, 2012 for those hired before July 1, 2011 who are not vested as of January 1, 2012.

# Average Final Compensation (AFC)

Average annual earnable compensation during the highest 3 years of creditable service.

For active members who commenced service on or after July 1, 2011 or who have non-vested status on or after January 1, 2012 – Average annual earnable compensation during the highest 5 years of creditable service.

#### Service Retirement

Eligibility: Age 60 years (Age 65 for members commencing service on or after July 1, 2011).

Benefit: A member annuity that is the actuarial equivalent of the member's accumulated contributions plus a state annuity.

Prior to age 65, the state annuity, together with the member annuity, shall be equal to  $1/60^{th}$  of AFC times creditable service ( $1/66^{th}$  of AFC times creditable service for members commencing service on or after July 1, 2011).

After age 65, the state annuity, together with the member annuity, shall be equal to 1/66<sup>th</sup> of AFC times creditable service.

Normal Form: straight life annuity.

#### Early Retirement

Eligibility: Completion of 20 years of creditable service and age plus service at least 70, or attainment of age 50. (Age 60 with 30 years of creditable service for members commencing service on or after July 1, 2011.)

Benefit: Service Retirement Benefit accrued to date of retirement, reduced for each month prior to age 60 by 1/8 of 1% if the member has 35 years or more of creditable service, by 1/4 of 1% if the member has 30 years but less than 35, by 1/3 of 1% if the member has at least 25 years but not 30, by 5/12 of 1% if the member has at least 20 years but not 25, and by 5/9 of 1% if the member has less than 20 years of creditable service

For members commencing service on or after July 1, 2011, normal retirement benefit is reduced 1/4 of 1% for each month prior to age 65.

**GRS** 

**Ordinary Disability** 

Eligibility: 10 or more years of creditable service.

Benefit: Service Retirement Benefit if at least age 60. Under age 60, a member annuity plus state annuity that shall be equal to 1.5% times AFC times years of creditable service. The disability retirement

allowance shall not be less than 25% of AFC.

Accidental Disability

Eligibility: Permanently disabled in the performance of duty.

Benefit: Service Retirement Benefit if at least age 60, not less than 50% of AFC. Under age 60, a member annuity plus state annuity that

shall be equal to 50% times AFC.

Accidental Death Benefits

Eligibility: Accidental death in the performance of duty.

Benefit: 50% times AFC.

**Ordinary Death Benefits** 

Eligibility: Death other than accidental death

Benefit: If 10 years creditable service or eligible for service retirement, surviving spouse receives 50% of the service retirement benefit until death or remarriage. If no surviving spouse, designated beneficiary receives a lump sum equal to the greater of \$3,600 or the member's annual compensation.

If less than 10 years creditable service and not eligible for service retirement, the member's spouse or designated beneficiary receives a lump sum equal to the greater of \$3,600 or the member's annual

compensation.

Post Retirement Death

Not applicable.

**Optional Forms** 

Each of the following options shall be of equivalent actuarial value to the allowance payable in the absence of election of an option.

Option 1. Full cash refund.

Option 2. 100% Joint and Survivor. Option 3. 50% Joint and Survivor. Option 4. Other Joint and Survivor.

Vested Termination

If a member terminates with less than 10 years of service, the Member's own contributions are refunded. If a Member terminates with 10 or more years of service, the Member either receives his service retirement or reduced early service retirement benefit beginning at any age after age 50 (age 60 for members hired after July 1, 201) or the member may apply for a refund of accumulated contributions.

### Maximum Benefit

For members who were hired prior to July 1, 2009, a member's retirement benefit shall not exceed 100% of the member's highest year of earnable compensation. For members who commenced service on or after July 1, 2009 or are non-vested as of January 1, 2012, a member's retirement benefit shall not exceed the lesser of 85% of the member's highest average final compensation or \$120,000.

#### Refunds

- 1. Termination for reasons other than retirement or death and the member has not elected a vested deferred retirement benefit.
- 2. Upon death in service other than accidental death described above, the member's accumulated contributions are payable to the beneficiary or estate.
- 3. Upon death prior to commencing benefits of a member electing vested deferred retirement, the member's accumulated contributions are payable to the beneficiary or estate.
- 4. Upon death of a retired member prior to electing an optional allowance, any excess of the member's accumulated contributions at retirement over the sum of retirement allowance payments received.

#### Member Contributions

7.0% of earnable compensation. Interest on member contributions shall be 2 percentage points less than either the most recent board of trustees approved assumed rate of return determined under RSA 100-A:16, II(h) or the actual rate of return, whichever is lower.

#### **Employer Contributions**

As prescribed in RSA 100-A:16.

# Temporary Supplemental Allowances

Provided by the legislature. A Reserve for TSAs payable July 1, 2012 is maintained.

#### Other Ancillary Benefits

There are no ancillary benefits - retirement type benefits not required by statutes but which might be deemed a liability if continued beyond the availability of funding by the current funding source.

Statute Amended and Restated under New Hampshire Revised Statutes

Annotated (RSA) Chapter 100-A. Most recently amended under

legislation passed in the year ending June 30, 2011.

Effective Date July 1, 1967

Plan Year July 1 through June 30

Type of Plan Qualified, governmental defined benefit retirement plan; it is a single

plan for financial reporting purposes.

Eligibility Requirements Any permanent policeman or permanent fireman becomes a Group II

member as a condition of employment.

Creditable Service Service measured from date of employment to date of retirement or prior

termination plus service credited under one or more of the predecessor

systems.

Earnable Compensation Full base rate of compensation paid plus any overtime pay, holiday and

vacation pay, sick pay, longevity or severance pay, cost of living bonus, additional pay for extracurricular and instructional activities or for other extra or special duty, and other compensation paid to the member by the employer, plus the fair market value of non-cash compensation such as meals or living quarters if subject to federal income tax. Earnable compensation in the final 12 months prior to termination shall be limited to 1 ½ times the higher of the earnable compensation in the 12 month period preceding the final 12 months or the highest compensation year

excluding the final 12 months.

For active members who begin service on or after July 1, 2011 or who are not in vested status on and after January 1, 2012 –

Full base rate of compensation paid plus any overtime pay, holiday and vacation pay, sick pay, longevity pay, cost of living bonus, additional pay for extracurricular and instructional activities, and any military differential pay, plus the fair market value of non-cash compensation such as meals or living quarters if subject to federal income tax, but excluding other compensation except supplemental pay paid by the employer while the member is receiving workers' compensation and teacher development pay that is not part of the contracted annual salary. Compensation for extra and special duty, as determined by the employer, shall be eliminated for those hired after July 1, 2011 and shall be included but limited during the highest 5 years of creditable service as provided in paragraph RSA 100-A:1 XVIII as amended.

Earnable compensation shall not include incentives to encourage members to retire, severance pay, or end-of-career longevity payments and pay for unused sick or vacation time. Earnable compensation in the final 12 months prior to termination shall be limited to 1 ½ times the higher of the earnable compensation in the 12 month period preceding the final 12 months or the highest compensation year excluding the final 12 months. The new definition of earnable compensation is effective immediately for those hired on or after July 1, 2011 and effective January 1, 2012 for those hired before July 1, 2011 who are not vested as of January 1, 2012.

Average Final Compensation (AFC)

Average annual earnable compensation during the highest 3 years of creditable service.

For active members who commenced service on or after July 1, 2011 or who have non-vested status on or after January 1, 2012 – Average annual earnable compensation during the highest 5 years of creditable service.

Service Retirement

Eligibility: Age 45 and 20 years of creditable service or age 60 (age 52.5 with 25 years of creditable service or age 60 for members commencing service on or after July 1, 2011).

Benefit: A member annuity that is the actuarial equivalent of the member's accumulated contributions plus a state annuity.

The state annuity, together with the member annuity, shall be equal to 2-1/2% of AFC times creditable service up to 40 years (2% of AFC times creditable service up to 42.5 years for members commencing service on or after July 1, 2011 However, a member who commenced service on or after July 1, 2011 shall not receive a service retirement allowance until attaining the age of 52.5, but may receive a reduced allowance after age 50 if the member has at least 25 years of creditable service where the allowance shall be reduced, for each month by which the benefit commencement date precedes the month after which the member attains 52.5 years of age, by ¼ of 1%.).

Members hired prior to July 1, 2011 who have non-vested status as of January 1, 2012 shall be subject to the following transition provisions for years of service required for regular service retirement, the minimum age for regular service retirement, and the multiplier used to calculate the retirement annuity, which shall be applicable on January 1, 2012 according to the following table:

Creditable Service on January 1, 2012	Minimum Years of Service	Minimum Age Attained	Annuity Multiplier
(1) Less than 4 years	24 Years	Age 49	2.1%
(2) At least 4 years but less than 6 years	23 Years	Age 48	2.2%
(3) At least 6 years but less than 8 years	22 Years	Age 47	2.3%
(4) At least 8 years but less than 10 years	21 Years	Age 46	2.4%

A member retiring at age 45 with 20 years of service shall receive a minimum annual service retirement allowance of \$10,000.

Normal Form: straight life annuity (with surviving spouse's benefit payable as described under post-retirement death benefit).

### **Ordinary Disability**

Eligibility: 10 or more years of creditable service.

Benefit: Service Retirement Benefit. The disability retirement allowance shall not be less than 25% of the member's final compensation at the date of the member's disability.

## Accidental Disability

Eligibility: Permanently disabled in the performance of duty.

#### Benefit:

Members hired prior to July 1, 2011 who have vested status as of January 1, 2012 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. If a member has more than 26-2/3 years of service, the member will receive a supplemental disability benefit equal to 2-1/2% of AFC times years of creditable service in excess of 26-2/3 years but not in excess of 40 years.

Members commencing service on or after July 1, 2011 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. If a member has more than 33-1/3 years of service, the member will receive a supplemental disability benefit equal to 2% of AFC times years of creditable service in excess of 33-1/3 years but not in excess of 42.5 years.

Members hired prior to July 1, 2011 who have non-vested status as of January 1, 2012 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. The calculation of the supplemental allowance shall be as provided in the transition provisions with the number of years for the supplement adjusted proportionally.

## Accidental Death Benefits

Eligibility: Accidental death in the performance of duty.

Benefit: 50% times the member's annual rate of earnable compensation at the date of the member's death.

### **Ordinary Death Benefits**

Eligibility: Death other than accidental death.

Benefit: If 10 years creditable service or eligible for service retirement, surviving spouse receives 50% of the service retirement benefit until death or remarriage. If no surviving spouse, designated beneficiary receives a lump sum equal to the greater of \$3,600 or the member's annual compensation.

If less than 10 years creditable service and not eligible for service retirement, the member's spouse or designated beneficiary receives a lump sum equal to the greater of \$3,600 or the member's annual compensation.

#### Post Retirement Death

Retired prior to April 1, 1987, lump sum of \$3,600 or in the case of accidental disability, 50% of the accidental disability benefit payable to surviving spouse.

Retired on or after April 1, 1987, benefit payable to surviving spouse until death or remarriage equal to 50% of the member's service, ordinary disability or accidental disability retirement allowance plus a lump sum as defined below.

Retired on or after April 1, 1987, but before July 1, 1988, hired before July 1, 1988, lump sum of \$3,600.

Retired on or after July 1, 1988, hired before July 1, 1988, lump sum of \$10,000.

Retired on or after July 1, 1988, hired on or after July 1, 1988 but before July 1, 1993, lump sum of \$3,600.

#### **Optional Forms**

Each of the following options shall be of equivalent actuarial value to the straight life allowance payable in the absence of election of an option.

Option 1. Full cash refund.

Option 2. Not applicable.

Option 3. 50% Joint and Survivor.

Option 4. Other Joint and Survivor, not to exceed 50%.

#### **Vested Termination**

If a member terminates with less than 10 years of service, the Member's own contributions are refunded. If a Member terminates with 10 or more years of service, the Member either receives his service retirement at the age the member would have attained service or reduced early service retirement eligibility requirement, or age 60 or the member may apply for a refund of accumulated contributions.

#### Maximum Benefit

For members who were hired prior to July 1, 2009, a member's retirement benefit shall not exceed 100% of the member's highest year of earnable compensation. For members who commenced service on or after July 1, 2009 or are non-vested as of January 1, 2012, a member's retirement benefit shall not exceed the lesser of 85% of the member's highest average final compensation or \$120,000.

### Refunds

- 1. Termination for reasons other than retirement or death and the member has not elected a vested deferred retirement benefit.
- 2. Upon death in service other than accidental death described above, the member's accumulated contributions are payable to the beneficiary or estate.
- 3. Upon death prior to commencement of benefits of a member electing vested deferred retirement, the member's accumulated contributions are payable to the beneficiary or estate.
- 4. Upon death of a survivor of a member retired on accidental disability with spouse receiving accidental disability survivor benefits, the excess of the member's accumulated contributions at retirement over the sum of payments received.
- 5. Upon death of a retired member prior to electing an optional allowance, any excess of the member's accumulated contributions at retirement over the sum of retirement allowance payments received.

#### **Member Contributions**

Fire members: 11.80% of earnable compensation. Police members: 11.55% of earnable compensation.

Member contributions cease for members who are in vested status before January 1, 2012 with creditable service in excess of 40 years. Member contributions cease for all other Group II members with creditable service in excess of 42.5 years.

Interest on member contributions shall be 2 percentage points less than either the most recent board of trustees approved assumed rate of return determined under RSA 100-A:16, II(h) or the actual rate of return, whichever is lower.

#### **Employer Contributions**

As prescribed in RSA 100-A:16.

#### Temporary Supplemental Allowances

Provided by the legislature. A Reserve for TSAs payable July 1, 2012 is maintained.

#### Other Ancillary Benefits

There are no ancillary benefits - retirement type benefits not required by statutes but which might be deemed a liability if continued beyond the availability of funding by the current funding source.

## History of Recent Changes in Plan Provisions

### **2011 Legislative Session:**

Legislation enacted in the 2011 legislative session is summarized below:

### **House Bill No. 2 as Amended by 2011-2513-CofC:**

- (a) Change the definition of Earnable Compensation for active members who begin service on or after July 1, 2011 or who are not in vested status on and after January 1, 2012.
- (b) For active members who commenced service on or after July 1, 2011 or who have non-vested status on or after January 1, 2012 AFC equals the average annual earnable compensation during the highest 5 years of creditable service.
- (c) For members who commenced service on or after July 1, 2009 or are non-vested as of January 1, 2012, a member's retirement benefit shall not exceed the lesser of 85% of the member's highest average final compensation or \$120,000.
- (d) Group I members commencing service on or after July 1, 2011 are eligible to retire at age 65 and are eligible for a reduced annuity at age 60 with 30 years of creditable service. Prior to age 65, the state annuity, together with the member annuity, shall be equal to 1/66th of AFC times creditable service reduced for each month prior to the month after the member attains age 65 by 1/4 of 1%. After age 65, the state annuity, together with the member annuity, shall be equal to 1/66th of AFC times creditable service, reduced for each month prior to the month after the member attains age 65 by 1/4 of 1%.
- (e) Group II members commencing service on or after July 1, 2011 are eligible to retire at age 52.5 with 25 years of creditable service or age 60. The benefit shall be equal to 2% of AFC times creditable service up to 42.5 years. However, a member who commenced service on or after July 1, 2011 shall not receive a service retirement allowance until attaining the age of 52.5, but may receive a reduced allowance after age 50 if the member has at least 25 years of creditable service where the allowance shall be reduced, for each month by which the benefit commencement date precedes the month after which the member attains 52.5 years of age, by ¼ of 1%.
- (f) Group II members hired prior to July 1, 2011 who have non-vested status as of January 1, 2012 shall be subject to transition provisions for years of service required for regular service retirement, the minimum age for regular service retirement, and the multiplier used to calculate the retirement annuity, which shall be applicable on January 1, 2012.
- (g) Group II members commencing service on or after July 1, 2011 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. If a member has more than 33-1/3 years of service, the member will receive a supplemental disability benefit equal to 2% of AFC times years of creditable service in excess of 33-1/3 years but not in excess of 42.5 years.

## History of Recent Changes in Plan Provisions

(h) Member Contributions

Group I members: 7.0% of earnable compensation.

Group II fire members: 11.80% of earnable compensation.

Group II police members: 11.55% of earnable compensation.

Group II member contributions cease for members who are in vested status before January 1, 2012 with creditable service in excess of 40 years. Member contributions cease for all other Group II members with creditable service in excess of 42.5 years.

- (i) *Medical Subsidy* After July 1, 2007 and including each July 1, thereafter, the rate payable shall not be increased.
- (j) Interest on the individual accounts of members in the member annuity savings fund shall be credited interest at 2 percentage points less than either the most recent board of trustees approved assumed rate of return determined under RSA 100-A:16, II(h) or the actual rate of return, whichever is lower for the immediately preceding fiscal year as reported in the CAFR as approved and accepted by the board of trustees by December 1, of each year, provided the rate shall not be less than zero.
- (k) Any retired member who is receiving a medical subsidy under RSA 100-A:52 or RSA 100-A:52-a shall be entitled to receive an additional supplemental allowance. The amount of the additional temporary supplemental allowance shall be \$500 for retirees taking a one-person medical benefit and \$1,000 for retirees taking a 2-person medical benefit, paid from the respective component of the reserve for TSAs. The supplemental allowance shall apply only for the fiscal years beginning July 1, 2008 up to and including the fiscal year beginning July 1, 2012.
- (1) Transfer the balance in each special account component (Employees, Teachers, Police and Fire) to the corresponding components of the State annuity accumulation fund except for funds necessary to comply with RSA 100-A:41-d, III as amended.

## History of Recent Changes in Plan Provisions

## **2010 Legislative Session:**

Legislation enacted in the 2010 legislative session is summarized below:

- (a) **Special Session House Bill 1: COLA, TSA approved** Provides cost-of-living adjustments (COLAs) and temporary supplemental allowances (TSAs) for eligible retirees or beneficiaries;
- (b) **Senate Bill 504: "Spiking" provision deferred** Extends the effective date of the 2008 legislation creating the so-called "spiking" provision (125% assessment) from July 1, 2010 to July 1, 2011. A study commission continues to evaluate proposals for the assessment methodology;
- (c) House Bill 1668: State Medical Subsidy insurance for Group II members [RSA 21-I30] Requires Group II (Police and Fire) members whose service with a state agency or department began on or after July 1, 2010, complete at least 20 years of creditable service with the state in order to qualify for post-retirement state medical subsidy insurance coverage.

## Medical Plan Provisions

Subsidy Benefits as of July 1, 2011 and thereafter are as follows:

	Monthly Amounts			
	Pre-65 Post-65			
Single	\$375.56	\$236.84		
Couple	\$751.12	\$473.68		

The above amounts will not increase.

The following Group I members and their qualified spouses are eligible for coverage under the postretirement medical plan:

- Employee and teacher members of political subdivisions who are eligible to retire as of July 1, 2008, on Service, Early Service or Ordinary Disability, have at least 20 years of credited service as of July 1, 2008 and who actually retire on or before July 1, 2009 would become eligible for the medical subsidy at age 60 with at least 20 years of creditable service; or as early as age 55 with at least 30 years of creditable service.
- Employee and teacher members of political subdivisions who are eligible to retire as of July 1, 2008, on Vested Deferred retirement and who actually retire on or before July 1, 2009 would become eligible for the medical subsidy at age 60 with at least 20 years of creditable service; or as early as age 55 with at least 30 years of creditable service.
- Employee and teacher members of political subdivisions who retired on Accidental Disability Retirement on or before July 1, 2004.
- Employee members of the State who retired on or before July 1, 2004, on Service, Ordinary Disability or Vested Deferred Retirement would become eligible for the medical subsidy at age 60 with at least 20 years of creditable service; or as early as age 55 with at least 30 years of creditable service.
- Employee and teacher members of political subdivisions who are eligible to retire as of July 1, 2008 and who actually retire on or before July 1, 2009, on Service, Early Service, Vested Deferred or Ordinary Disability retirement after completing at least 20 years of creditable service and who subsequently attain age 60 or after completing at least 30 years of creditable service and who subsequently attain age 55.
- Surviving spouses of deceased employee and teacher members of political subdivisions who die while in service, provided that such surviving spouse was covered as the member's spouse in the employer-sponsored plan before the member's death and is entitled to a monthly allowance under Accidental Death, Ordinary Death, or an Optional Allowance.
- Surviving spouses and children of employee and teacher members of political subdivisions who die as the natural and proximate result of injuries suffered while in the performance of duty. Eligibility for the medical subsidy ceases when the dependent child attains age 18 or age 23, if attending school on a full-time basis.

## Medical Plan Provisions

- Surviving spouses and children of employee members of the State who died as the natural and proximate result of injuries suffered while in the performance of duty. Payment of the subsidy ceases when the dependent child attains age 18 or age 23, if attending school on a full-time basis.
- Vested terminated employee members of the State (and spouses) who completed at least 20 years of creditable service and prior to July 1, 2004 receives an allowance and who subsequently attains age 60.
- Employee members of the State (and spouses) who retire after completing at least 20 years of creditable service and who subsequently attains age 60 before July 1, 2004 or after completing at least 30 years of creditable service and who subsequently attains age 55 before July 1, 2004.
- Surviving spouses of deceased employee members of the State who died while in service on or before July 1, 2004, provided that such surviving spouse was covered as the member's spouse in the employer-sponsored plan before the member's death and is entitled to a monthly allowance under Accidental Death, Ordinary Death, or an Optional Allowance.
- Any certifiably dependent child with a disability living in the household and being cared for by the qualified retired member, member's spouse, or qualified surviving spouse would also qualify:

The following Group II members are eligible for the postretirement medical premium subsidy:

- Active or Retired Group II police officer members (or beneficiaries) as of June 30, 2000.
- Active or Retired Group II firefighter members (or beneficiaries) as of June 30, 2000.
- Persons who prior to July 1, 1988 had completed at least 20 years of Group II service and are eligible as of July 1, 1993 for a vested deferred retirement benefit.
- Group II members retired as of July 1, 1991 with a split benefit under RSA 100-A:19-c who have at least 10 years of Group II service.
- Group II members as of June 30, 2005 who subsequently became disabled while in the performance of duty at any time in the future.
- Surviving spouses of deceased Group II members who retired prior to April 1, 1987 and who are not receiving a monthly allowance.

The System subsidy covers the retired member's spouse and any of the retired member's certifiably dependent and disabled children.

# SECTION I GLOSSARY

# Glossary

Actuarial Accrued Liability (AAL)

The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.

**Actuarial Assumptions** 

Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.

Actuarial Cost Method

A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of future Normal Costs and the Actuarial Accrued Liability.

Actuarial Equivalent

Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.

Actuarial Present Value (APV)

The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.

Actuarial Present Value of Future Benefits (APVFB)

The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.

**Actuarial Valuation** 

The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB Statement No. 25, such as the Funded Ratio and the Annual Required Contribution (ARC).

Actuarial Value of Assets

The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially required contribution (ARC).

## Glossary

#### Amortization Method

A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.

**Amortization Payment** 

That portion of the plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

**Amortization Period** 

The period used in calculating the Amortization Payment.

Annual Required Contribution (ARC)

The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB Statement No. 25. The ARC consists of the Employer Normal Cost and Amortization Payment.

Closed Amortization Period

A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.

**Employer Normal Cost** 

The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.

Equivalent Single Amortization Period

For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.

Experience Gain/Loss

A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.

## Glossary

Funded Ratio The ratio of the Actuarial Value of Assets to the Actuarial Accrued

Liability.

**GASB** Governmental Accounting Standards Board.

GASB No. 25 and GASB No. 27

These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 27 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 25 sets the rules for the systems themselves.

Normal Cost The annual cost assigned, under the Actuarial Cost Method, to the

current plan year.

*Open Amortization Period* An open amortization period is one which is used to determine the

Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar

amount or in relation to covered payroll.

Unfunded Actuarial
Accrued Liability

The difference between the Actuarial Accrued Liability and

crued Liability Actuarial Value of Assets.

Solvency Rate The minimum contribution necessary to prevent insolvency (a fund

balance less than \$0) during or after the biennium in which contributions are being calculated. If fund balances are projected to be less than \$0 prior to the beginning of the biennium (due to the lag between the valuation date and contribution certification), then the solvency rate is the minimum contribution necessary to bring the balance back to \$0 by the end of the biennium. After the fund balance reaches \$0, the solvency rate is becomes the pay-as-you-go

rate.

Valuation Date The date as of which the Actuarial Present Value of Future Benefits

are determined. The benefits expected to be paid in the future are

discounted to this date.