

REPORT ON THE  
ACTUARIAL VALUATION  
OF THE VERMONT STATE EMPLOYEES'  
RETIREMENT SYSTEM  
PREPARED AS OF JUNE 30, 2011

OCTOBER 24, 2011

October 24, 2011

Board of Trustees  
Vermont State Employees' Retirement System  
Montpelier, Vermont 05609

Dear Board Members:

Section 471, subsection (k), of Title 3, Chapter 16, Vermont Statutes Annotated, relating to the Vermont State Employees' Retirement System, provides in part that the actuary shall make annual valuations of the system.

The actuarial valuation of the system, prepared as of June 30, 2011, has now been completed and the results are presented in this report, together with our recommendations in regard to contributions payable by the State. The Table of Contents, which immediately follows, outlines the material contained in this report.

The total recommended state contribution for the fiscal year beginning July 1, 2011, amounts to \$35,369,984. Schedule F contains the estimated contributions for the following two years.

I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the Academy to render the actuarial opinions contained herein. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and I am available to answer questions concerning it.

Respectfully submitted,



David L. Driscoll, F.S.A., E.A.  
Principal and Consulting Actuary

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REPORT ON THE ACTUARIAL VALUATION OF THE  
VERMONT STATE EMPLOYEES' RETIREMENT SYSTEM  
PREPARED AS OF JUNE 30, 2011

SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below:

Valuation Date	June 30, 2010	June 30, 2011
Active members		
Vested	5,628	5,693
Not vested	<u>2,154</u>	<u>2,075</u>
Total	7,782	7,768
Compensation	\$393,828,924	\$398,264,150
Average age	47.01	47.02
Average service	12.57	12.57
Average compensation	50,608	51,270
Retired members and beneficiaries		
Number	5,201	5,375
Annual retirement allowances	\$80,723,060	\$86,681,452
Inactive members	857	849
Terminated vested members	765	774
Adjusted assets for valuation	\$1,265,404,195	\$1,348,762,790
Unfunded actuarial accrued liability	\$293,920,094	\$346,537,738
Annual actuarial accrued liability contribution	\$15,992,619	\$19,479,244
Normal contribution rate	4.81%	3.99%

2. Under agreements reached by the State with its workers, salary decreases and freezes will continue to apply to several employee groups that participate in the System in the coming years. Salaries of all classified employees who are not public safety or judiciary employees were decreased by 3% effective July, 2010, and will not be restored to their prior levels until July of 2012. Salaries of all public safety employees, except for State Police, were decreased by 3% effective July, 2010, and will not be restored to their prior levels until July of 2012. Salaries of all Judiciary employees were decreased by 4.6% effective July, 2010, and will not be restored to their prior levels until July of 2012.

The data used in the valuation was adjusted to eliminate the effect of the 27th check in fiscal 2011 in the projection of future pay levels.

3. Schedule B outlines the full set of actuarial assumptions and methods employed in the current valuation. The assumptions were updated based on a recent experience study covering the period from July 1, 2005, through June 30, 2010.
4. Schedule C outlines the benefit provisions that were taken into account in the valuation. The required employee contribution rates were increased since the last valuation. Restrictions on the degree to which contributions made by the State may reflect additional amounts collected from members as a result of the increases in these rates are incorporated in the projection of State contributions in future fiscal years at the end of this report.
5. Schedule F provides a projection of recommended State contributions for the next two fiscal years. Restrictions on the degree to which contributions made by the State may reflect additional amounts collected from members as a result of the increases in these rates are incorporated in Schedule F.

SECTION II - MEMBER DATA

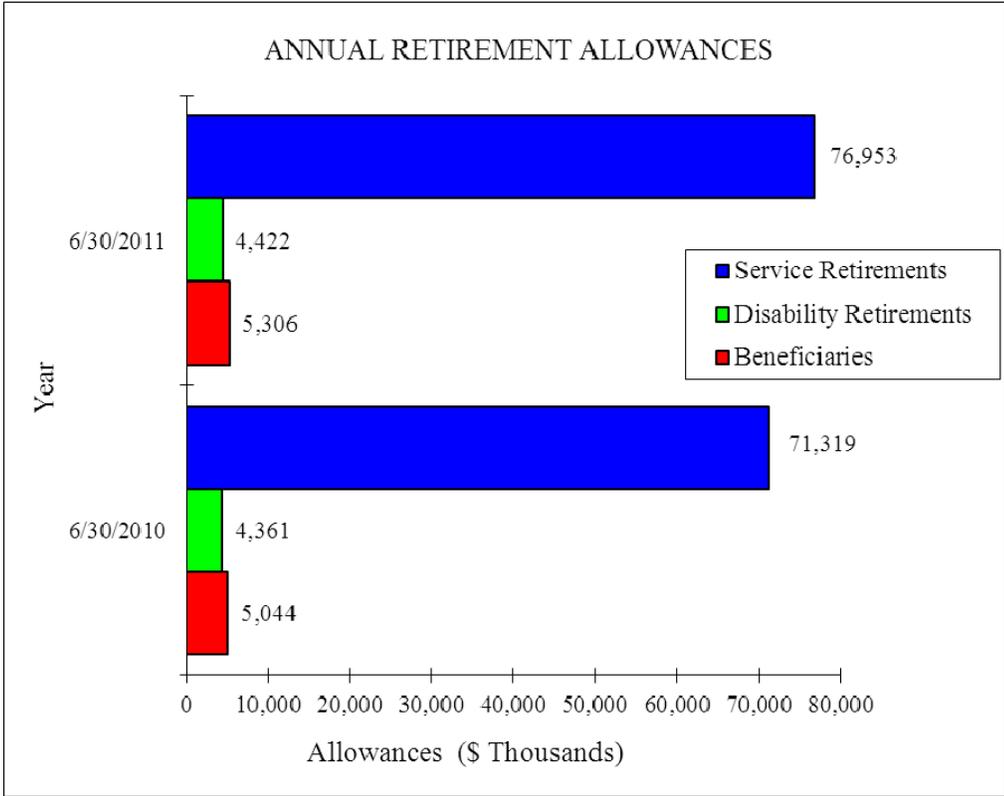
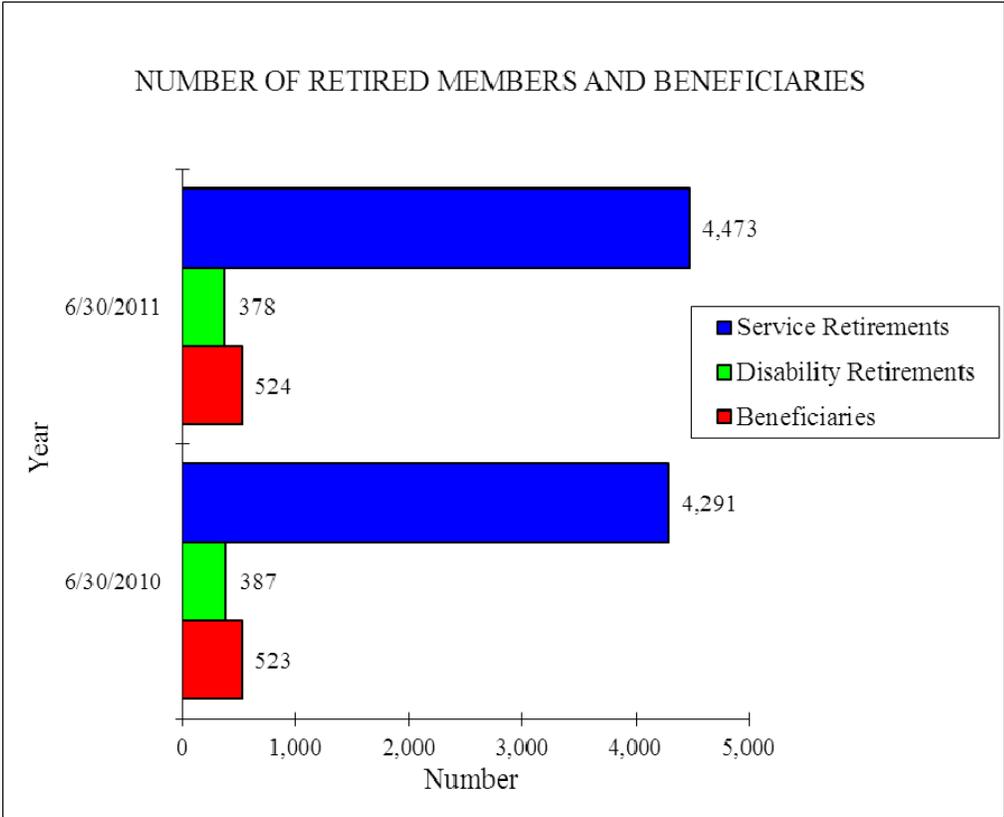
1. Member data were furnished in electronic format by the Retirement Division of the State Treasurer's Office.
2. Schedule D presents tables that summarize member data. Tables 1 through 5 summarize active member data by age and service. Tables 6 through 11 summarize service pensioners, disability pensioners and beneficiaries by age. Table 12 summarizes all pensioners by year of retirement.
3. The following tables show a summary of membership data:

THE NUMBER AND ANNUAL ALLOWANCES OF RETIRED MEMBERS  
AND BENEFICIARIES AS OF JUNE 30, 2011

Group	Number	Annual Allowances
Service Retirements	4,473	\$76,953,229
Disability Retirements	378	\$4,421,744
Beneficiaries of Deceased Members	524	\$5,306,479
<b>TOTAL</b>	<b>5,375</b>	<b>\$86,681,452</b>

BENEFITS PAYABLE AS OF JUNE 30, 2011  
TABULATED BY TYPE OF RETIREMENT AND OPTION

Group	Number	Annual Allowances
<b>Service Retirements</b>		
Life Only	1,467	17,205,135
50% Joint and Survivor	212	4,283,183
70% Joint and Survivor	46	2,236,606
100% Joint and Survivor	361	6,659,926
50% Joint and Survivor, pop-up	452	8,897,144
100% Joint and Survivor, pop-up	485	7,817,729
Return of Contributions	<u>1,450</u>	<u>29,853,506</u>
Total	4,473	76,953,229
<b>Disability Retirements</b>		
Life Only	186	1,856,453
50% Joint and Survivor	6	43,256
70% Joint and Survivor	14	457,146
100% Joint and Survivor	20	160,932
50% Joint and Survivor, pop-up	15	140,160
100% Joint and Survivor, pop-up	9	59,245
Return of Contributions	<u>128</u>	<u>1,704,552</u>
Total	378	4,421,744
Beneficiaries	524	5,306,479
<b>Grand Total</b>	<b>5,375</b>	<b>86,681,452</b>



THE NUMBER AND ANNUAL COMPENSATION OF  
ACTIVE MEMBERS AS OF JUNE 30, 2011

GROUP	NUMBER	ANNUAL COMPENSATION
Group A		
Men	11	\$741,471
Women	1	61,919
Total	12	\$803,390
Group C		
Men	377	\$26,986,883
Women	41	2,522,045
Total	418	\$29,508,928
Group D		
Men	32	\$3,132,433
Women	15	1,678,303
Total	47	\$4,810,736
Group F		
Men	3,451	\$179,792,008
Women	3,840	183,349,088
Total	7,291	\$363,141,096
All Members		
Men	3,871	\$210,652,795
Women	3,897	187,611,355
Total	7,768	\$398,264,150

SECTION III – ASSETS

1. The asset values and cash flow amounts shown below were taken from reports supplied by the Office of the State Treasurer. The information contained in the reports has not yet been audited but is believed to be sufficiently accurate for purposes of this valuation.
2. For actuarial purposes, the assets are valued using a method that reflects the market value of assets by gradual recognition of returns on assets that differ from the assumed rate of return, provided the adjusted asset value is within 20% of the market value. The following shows the development of the valuation assets:

Assets for valuation purposes, June 30, 2010		\$1,265,404,195
Cash flow during year (net of investment income)		
Contributions paid	\$60,584,812	
Benefit payouts	87,061,787	
Expenses	6,824,513	
Net		(33,301,488)
Expected investment income (8.25%)		108,699,097
Preliminary asset value		\$1,340,801,804
Market value, June 30, 2011	\$1,380,606,734	
Preliminary asset value	1,340,801,804	
Unrecognized appreciation	39,804,930	
Adjustment	x 20%	\$7,960,986
Assets for valuation purposes, June 30, 2011		\$1,348,762,790

- 3 The assets for valuation purposes are 97.7% of market value.
- 4 The investment rate of return for the year ending June 30, 2011 is 9.34%, based on the adjusted asset value.

SECTION IV - COMMENTS ON VALUATION

1. Schedule A of the report contains a valuation balance sheet that shows the present and prospective assets and liabilities of the system as of June 30, 2011.
2. The adjusted assets of the system are \$1,348,762,790.
3. The actuarial accrued liability for current retired members, terminated vested members and beneficiaries is \$953,911,779 and the actuarial accrued liability for current active and inactive members amounts to \$741,388,749, for a total actuarial accrued liability of \$1,695,300,528. Therefore, after subtracting assets of \$1,348,762,790, the unfunded actuarial accrued liability is \$346,537,738.
4. The State's contributions consist of a normal contribution and an accrued liability contribution. The accrued liability contribution represents the amount necessary to amortize the unfunded accrued liability as of June 30, 2011, over a period ending on June 30, 2038. These amounts are to rise by 5% per year over the term of the amortization period. Normal contributions represent the contributions needed to fund the benefits attributed by the funding method to service rendered in the coming year. Under the Entry Age Normal funding method, the normal contribution as of June 30, 2011, is \$15,890,740, or 3.99% of members' compensation.
5. The expected unfunded actuarial accrued liability as of June 30, 2011, may be compared to the actual actuarial accrued liability to determine the gain or loss during the year. The following table presents a summary of the approximate effects of major experience factors affecting the system's unfunded actuarial accrued liability since June 30, 2010:

1. Unfunded liability, 6/30/2010	\$293,902,094
2. Normal Cost	38,979,778
3. Contributions	(60,584,812)
4. Interest on 1, 2 and 3	25,013,153
5. Change in Actuarial Assumptions	26,425,205
6. Change in Plan Provisions	22,252
7. Expected Unfunded Liability, 6/30/2011	323,757,670
8. Accrued Liability, 6/30/2011	1,695,300,528
9. Actuarial Value of Assets, 6/30/2011	1,348,762,790
10. Actual Unfunded Liability, 8. - 9.	346,537,738
11. Total gain/(loss), 7. - 10.	(\$22,780,068)

Sources of Gain/(Loss)	
Investment experience	\$13,637,923
Expenses (other than investments)	(1,487,355)
Salary experience	(35,867,925)
COLA experience	7,391,265
New members and rehires	(4,398,342)
Mortality among retirees, beneficiaries and terminated vested participants.	(4,450,717)
Mortality among active participants	(373,483)
Retirement experience	(7,040,422)
Termination experience	2,435,328
Disability experience	487,913
Other (data corrections, purchased service, etc.)	<u>6,885,747</u>
Total	(\$22,780,068)

SECTION V - CONTRIBUTIONS PAYABLE UNDER THE SYSTEM

1. Section 471, Subsection (k), of Title 3, Chapter 16, Vermont Statutes Annotated, relating to the Vermont State Employees' Retirement System, indicates that the actuary shall submit to the Board of Trustees his recommendation as to the contributions payable by the State based on annual valuations of the assets and liabilities of the system.
2. On the basis of the results of the current valuation, the actuary recommends that the Board of Trustees certify the following contributions for the fiscal year commencing July 1, 2011:

Normal contribution	\$ 15,890,740
Accrued liability contribution	<u>19,479,244</u>
Total	\$ 35,369,984

3. Certain towns are participating in the system. Their contributions should be based on the following rates before administrative adjustments:

Normal	3.99%
Accrued liability	<u>4.89%</u>
Total	8.88%

SECTION VI - EXPERIENCE

Records are maintained whereby the actual experience of the system may be compared with the expected experience based on the tables adopted by the Board of Trustees. In accordance with Section 471, subsection (j), of Title 3, Chapter 16 of the Vermont Statutes Annotated, this experience is reviewed in regularly scheduled experience studies, and any changes in assumptions suggested by the cumulative experience of the system is brought to the Board's attention in reports prepared as part of such studies.

SECTION VII - ACCOUNTING INFORMATION

1. Based on our interpretation of Statement No. 25 of the Governmental Accounting Standards Board, we are providing the following Schedule of Funding Progress for accounting purposes:

**SCHEDULE OF FUNDING PROGRESS**  
(Dollar amounts in thousands)

Year Ending June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
2011	\$1,348,763	\$1,695,301	\$346,538	79.6%	\$398,264	87.0%
2010	1,265,404	1,559,324	293,920	81.2%	393,829	74.6%
2009	1,217,638	1,544,144	326,506	78.9%	404,516	80.7%
2008	1,377,101	1,464,202	87,101	94.1%	404,593	21.5%
2007	1,318,687	1,307,643	(11,044)	100.8%	386,917	-2.9%
2006	1,223,323	1,232,367	9,044	99.3%	369,310	2.5%
2005	1,148,908	1,174,796	25,889	97.8%	349,258	7.4%
2004	1,081,359	1,107,634	26,275	97.6%	336,615	7.8%
2003	1,025,469	1,052,004	26,535	97.5%	319,855	8.3%
2002	990,450	1,017,129	26,679	97.4%	300,994	8.9%
2001	954,821	1,026,993	72,172	93.0%	278,507	25.9%
2000	895,151	967,064	71,913	92.6%	266,519	27.0%
1999	804,970	876,412	71,442	91.9%	238,281	30.0%
1998	733,716	804,501	70,785	91.2%	235,956	30.0%
1997	639,128	753,883	114,755	84.8%	227,000	50.6%
1996	560,659	664,173	103,514	84.4%	226,792	45.6%
1995	480,049	679,427	199,378	70.7%	225,089	88.6%

Please note: the System's funding method was changed from Entry Age Normal with Frozen Initial Liability to Entry Age Normal effective with the 2006 actuarial valuation.

2. GASB Statement No. 27 requires the development of Annual Pension Cost and Net Pension Obligation (NPO). This development is shown in the following table.

DEVELOPMENT OF PENSION COST AND NET PENSION OBLIGATION (NPO)

Year Ending June 30	Annual Required Contribution	Interest on NPO	Amortization of NPO	Pension Cost (1)+(2)-(3)	Actual Contribution	Change in NPO (4)-(5)	NPO Balance
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1997	24,098,495	3,239,493	3,201,381	24,136,607	23,972,879	163,728	38,275,409
1998	22,597,786	3,253,410	3,216,421	22,634,775	23,426,108	(791,333)	37,484,076
1999	23,268,197	3,186,146	3,288,077	23,166,266	22,956,245	210,021	37,694,097
2000	19,548,817	3,203,998	3,306,500	19,446,315	19,012,608	433,707	38,127,804
2001	19,679,398	3,240,863	3,344,544	19,575,717	19,548,598	27,119	38,154,924
2002	24,189,000	3,243,169	3,346,923	24,085,246	23,788,282	296,964	38,451,887
2003	24,715,309	3,076,151	3,372,972	24,418,488	24,394,934	23,554	38,475,441
2004	29,023,431	3,078,035	3,375,039	28,726,427	26,645,619	2,080,808	40,556,249
2005	36,019,056	3,244,500	3,686,932	35,576,624	36,493,435	(916,811)	39,639,438
2006	38,214,704	3,171,155	3,603,585	37,782,274	36,866,451	915,823	40,555,261
2007	40,189,812	3,244,421	4,179,681	39,254,552	39,297,002	(42,450)	40,512,811
2008	42,375,068	3,342,307	4,269,499	41,447,876	39,193,942	2,253,934	42,766,745
2009	28,997,554	3,528,257	3,110,436	29,415,375	25,134,235	4,281,140	47,047,885
2010	37,417,824	3,881,451	2,504,166	38,795,109	31,468,885	7,326,224	54,374,109
2011	44,491,459	4,485,864	2,958,574	46,018,749	37,572,599	8,446,150	62,820,259

3. The Annual Required Contribution for fiscal year 2011 is derived as follows:

\$21,651,656	product of the normal rate from the 2009 valuation report (5.52%) and estimated FY 2011 payroll, as modified by May 2010 Board vote
15,539,241	amortization of unfunded liability (see amortization chart in 2009 valuation report), as modified by May 2010 Board vote
<u>7,300,562</u>	administrative expenses (other than retiree medical) reimbursable by the state
<u>\$44,491,459</u>	

SCHEDULE A

VALUATION BALANCE SHEET  
SHOWING THE ASSETS AND LIABILITIES OF THE  
VERMONT STATE EMPLOYEES RETIREMENT SYSTEM  
PREPARED AS OF JUNE 30, 2011

VALUATION BALANCE SHEET  
 SHOWING THE ASSETS AND LIABILITIES OF THE  
 VERMONT STATE EMPLOYEES RETIREMENT SYSTEM  
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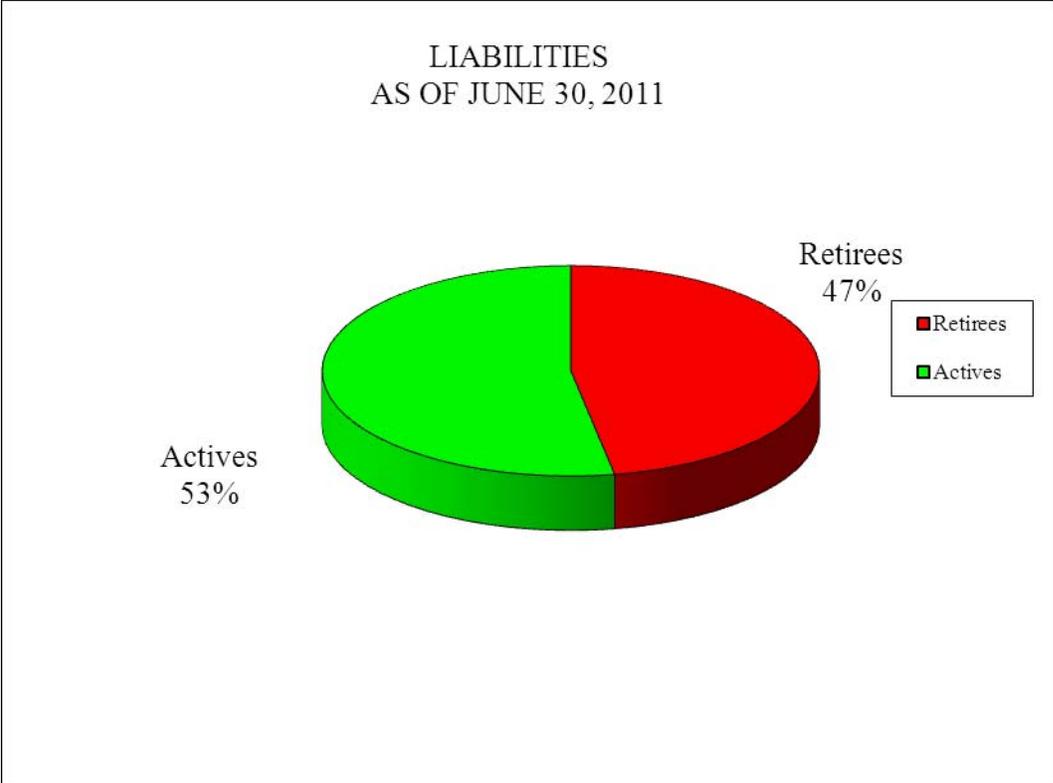
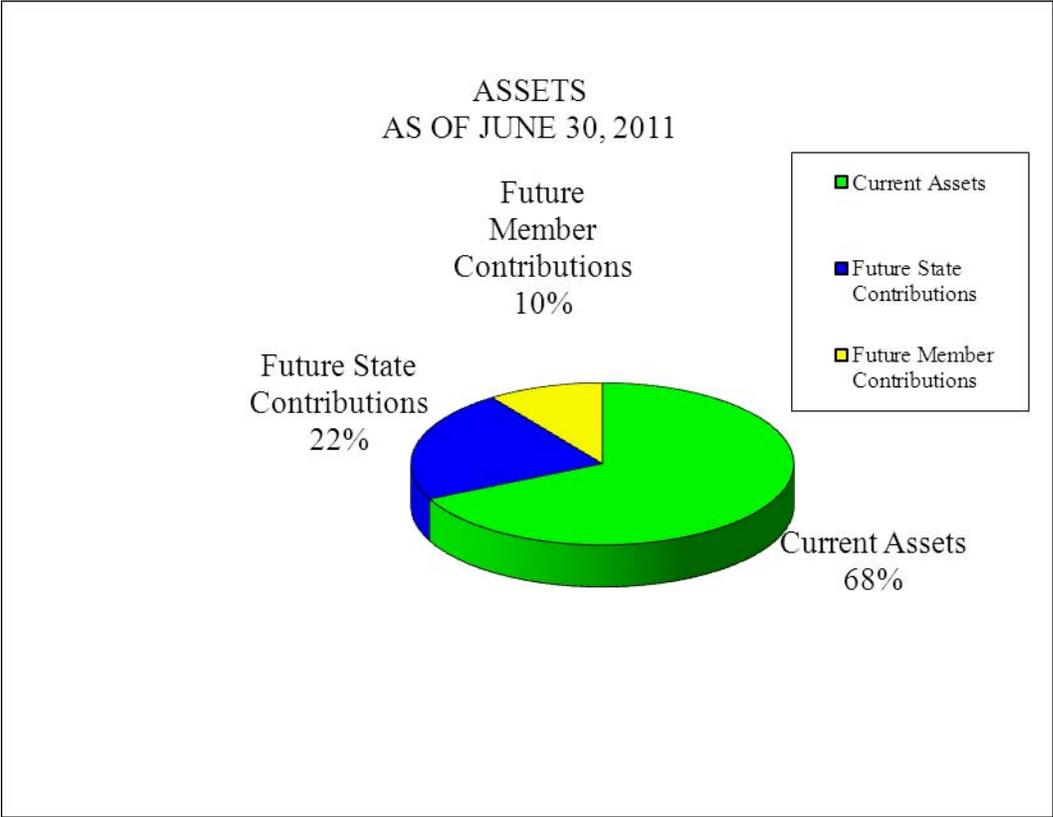
ASSETS

Adjusted assets of the system		\$1,348,762,790
Present value of prospective contributions		
Members		\$197,528,924
State		
Accrued liability contributions	346,537,738	
Normal contributions	<u>135,067,346</u>	
Total prospective contributions		<u>\$ 679,134,008</u>
Total assets		<u>\$2,027,896,798</u>

LIABILITIES

Actuarial present value of benefits payable on account of present retired members, terminated vested members and beneficiaries		\$ 953,911,779
Actuarial present value of benefits expected to become payable on account of active and inactive members		<u>1,073,985,019</u>
Total liabilities		<u>\$2,027,896,798</u>

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SCHEDULE B

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

## OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

### GROUPS A, D AND F

**INTEREST RATE:** A select-and-ultimate interest rate set, specified below. A constant rate of 8.25% was used in the prior valuation.

Year 1: 6.25%	Year 10: 8.50%
Year 2: 6.75%	Year 11: 8.50%
Year 3: 7.00%	Year 12: 8.50%
Year 4: 7.50%	Year 13: 8.50%
Year 5: 7.75%	Year 14: 8.50%
Year 6: 8.25%	Year 15: 8.50%
Year 7: 8.25%	Year 16: 8.50%
Year 8: 8.25%	Year 17 and later: 9.00%
Year 9: 8.50%	

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

#### Current Valuation

Age	Withdrawal and Vested Retirement <sup>1</sup>	Disability
25	4.1%	.03%
30	3.3	.04
35	2.7	.05
40	2.5	.08
45	2.2	.13
50	1.9	.21
55	N/A	.35
59	N/A	.52
60	N/A	.57
61	N/A	.62

<sup>1</sup> Increased during first 10 years of service.

**ACTIVE SERVICE MORTALITY:** RP-2000 Table for Employees using Scale AA to 2016

## OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS (Continued)

GROUPS A, D AND F

## Current Valuation

Retirement-Group F <sup>2</sup>			
Male Employee		Female Employee	
Age	Rate	Age	Rate
50	20.0%	50	6.0%
51	20.0	51	6.0
52	10.0	52	8.0
53	10.0	53	9.0
54	10.0	54	10.0
55	5.0	55	5.0
56	4.2	56	4.2
57	5.6	57	5.6
58	6.3	58	6.3
59	7.0	59	7.0
60	7.0	60	7.0
61	14.0	61	14.0
62	28.0	62	28.0
63	17.5	63	17.5
64	17.5	64	17.5
65	25.0	65	25.0
66	15.0	66	15.0
67	17.5	67	17.5
68	17.5	68	17.5
69	20.0	69	20.0
70	100.0	70	100.0

<sup>2</sup> All Group A and D members are assumed to retire when first eligible.

## OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS (Continued)

GROUPS A, D AND F

## Prior Valuation

Age	Withdrawal and Vested Retirement <sup>1</sup>	Disability	Death	
			Male Employee	Female Employee
25	3.1	.03%	.03%	.02%
30	2.5	.04	.04	.02
35	2.1	.05	.07	.04
40	1.9	.08	.10	.06
45	1.7	.13	.13	.09
50	1.4	.21	.18	.14
55	N/A	.35	.25	.23
59	N/A	.52	.37	.34
60	N/A	.57	.41	.37
61	N/A	.62	.46	.41

<sup>1</sup> Increased during first 10 years of service.

Retirement <sup>2</sup>					
Age	Rate	Age	Rate	Age	Rate
50	0.0%	57	5.6%	64	17.5%
51	1.0	58	6.3	65	25.0
52	2.0	59	7.0	66	15.0
53	3.0	60	7.0	67	17.5
54	4.0	61	14.0	68	17.5
55	5.0	62	28.0	69	20.0
56	4.2	63	17.5	70	100.0

<sup>2</sup> All Group A and D members are assumed to retire when first eligible.

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS (Continued)

GROUPS A, D AND F

SALARY INCREASES: Representative values of the assumed annual rates of future salary increase are as follows:

Age	Annual Rate of Salary Increase	Age	Annual Rate of Salary Increase
25	7.79%	50	5.70%
30	7.33%	55	5.20%
35	7.00%	60	4.67%
40	6.75%	64	4.50%
45	6.27%		

Salaries of several classes of employees in Groups D and F will be decreased and or frozen in accordance with the schedule shown below. These changes are incorporated in the valuation:

Annual Rate of Salary Adjustment				
Fiscal Year	Group D Judiciary	Group F Non Exempt Non Judiciary	Group F Exempt Non Judiciary	Group F Exempt Judiciary
2012	0%	0%	0%	0%
2013	4.6%	3%	5%	4.6%
2014	N/A	Valuation Salary Scale less 1.7%	N/A	N/A
2015	N/A	N/A	N/A	N/A

DEATHS AFTER RETIREMENT:

For service retirees and beneficiaries, the RP-2000 Mortality Tables for Employees and Healthy Annuitants projected with Scale AA to 2010 (The unadjusted RP-2000 Mortality Tables for Employees and Healthy Annuitants were used for these participants in the prior valuation).

For disabled retirees, the RP-2000 Combined Mortality Tables for Employees and Healthy Annuitants with a three-year set-forward (The RP-2000 Mortality Tables for Employees and Healthy Annuitants was used for these participants in the prior valuation).

The post-retirement mortality assumption was chosen to recognize improved longevity experienced as well as that expected prior to the next review of assumptions

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS (Continued)

GROUPS A, D AND F

**INFLATION:** The separately stated assumptions for investment return, salary increases and cost of living adjustments are consistent with an expected long term annual inflation rate of 3.00% to 3.25%.

**FUTURE EXPENSES:** No provision made; expenses of the system are paid by the State.

**ACTUARIAL COST METHOD:** The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

**SPOUSE'S AGE:** Husbands are assumed to be three years older than their wives.

**PERCENT MARRIED:** 75.4% (71.4% for Group F) of male members and 64.0% (63.1% for Group F) of female members are assumed to be married.

**COST-OF-LIVING ADJUSTMENTS:** Assumed to occur at the rate of 3% per annum for Groups A and D and 1½% per annum for Group F (beginning at age 62 for deferred retirements). For Group F employees retiring after July 1, 2009, the cost-of-living-adjustment is assumed to increase from 1.5% to 3% per annum effective January 1, 2014.

**ASSET VALUATION METHOD:** The amount of the assets for valuation purposes equals the preliminary asset value plus 20% of the difference between market and preliminary asset values. The preliminary asset value is equal to the previous year's asset value (for valuation purposes) adjusted for contributions less benefit payments and expenses plus expected investment income. If necessary, a further adjustment is made to ensure that the valuation assets are within 20% of the market value.

**INACTIVE MEMBERS:** Valuation liability equals 250% of accumulated contributions.

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS (Continued)

GROUP C

INTEREST RATE: A select-and-ultimate interest rate set, specified below. A constant rate of 8.25% was used in the prior valuation.

Year 1: 6.25%	Year 10: 8.50%
Year 2: 6.75%	Year 11: 8.50%
Year 3: 7.00%	Year 12: 8.50%
Year 4: 7.50%	Year 13: 8.50%
Year 5: 7.75%	Year 14: 8.50%
Year 6: 8.25%	Year 15: 8.50%
Year 7: 8.25%	Year 16: 8.50%
Year 8: 8.25%	Year 17 and later: 9.00%
Year 9: 8.50%	

SEPARATIONS BEFORE RETIREMENT: Representative values of the assumed annual rates of withdrawal, vested retirement, disability and death are as follows:

Current Valuation

Age	Withdrawal and Vested Retirement <sup>1</sup>		Disability <sup>1</sup>
	Men Employee	Female Employee	
25	3.60%	7.20%	.15%
30	3.60%	7.20%	.20
35	3.60%	7.20%	.27
40			.40
45			.65
50			1.09
55			1.82
60			2.93

ACTIVE SERVICE MORTALITY<sup>2</sup>: RP-2000 Table for Employees using Scale AA to 2016

<sup>1</sup> Increased during first 5 years of service.

<sup>2</sup> 20% of disabilities and 30% of deaths assumed to be accidental.

## OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS (Continued)

GROUP C

## Prior Valuation

Age	Withdrawal and Vested Retirement <sup>1</sup>	Disability <sup>1</sup>	Death <sup>2</sup>	
			Men	Women
25	3.60%	.15%	.03%	.02%
30	3.60%	.20	.04	.02
35	3.60%	.27	.07	.04
40		.40	.10	.06
45		.65	.13	.09
50		1.09	.18	.14
55		1.82	.25	.23
60		2.93	.41	.37

<sup>1</sup> Increased during first 5 years of service.

<sup>2</sup> 20% of disabilities and 30% of deaths assumed to be accidental.

**EARLY AND NORMAL RETIREMENT RATES:** All members are assumed to retire when first eligible to do so.

**SALARY INCREASES:** Representative values of the assumed annual rates of future salary increase are as follows:

Age	Annual Rate of Salary Increase
25	7.79%
30	7.33
35	7.00
40	6.75
45	6.27
50	5.70
55	5.20
60	4.67

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS (Continued)

GROUP C

Salaries will be decreased and or frozen in accordance with the schedule shown below. These changes are incorporated in the valuation:

Annual Rate of Salary Adjustment		
Fiscal Year	Non Exempt Non State Police	Non Exempt State Police
2012	0%	-3.0%
2013	3%	3%
2014	Valuation Salary Scale less 1.7%	Valuation Salary Scale less 2.4%
2015	N/A	N/A

**DEATHS AFTER RETIREMENT:**

For service retirees and beneficiaries, the RP-2000 Mortality Tables for Employees and Healthy Annuityants projected with Scale AA to 2010 (The unadjusted RP-2000 Mortality Tables for Employees and Healthy Annuityants were used for these participants in the prior valuation).

For disabled retirees, the RP-2000 Combined Mortality Tables for Employees and Healthy Annuityants with a three-year set-forward (The RP-2000 Mortality Tables for Employees and Healthy Annuityants was used for these participants in the prior valuation).

The post-retirement mortality assumption was chosen to recognize improved longevity experienced as well as that expected prior to the next review of assumptions

**INFLATION:** The separately stated assumptions for investment return, salary increases and cost of living adjustments are consistent with an expected long term annual inflation rate of 3.00% to 3.25%.

**FUTURE EXPENSES:** No provision made; expenses of the system are paid by the State.

**ACTUARIAL COST METHOD:** Individual entry age normal actuarial cost method. For actuarial valuations prior to June 30, 2006, the entry age normal cost method with frozen initial liability was used.

**SPOUSE'S AGE:** Husbands are assumed to be three years older than their wives.

**PERCENT MARRIED:** 73.3% of male members and 61.0% of female members are assumed to be married.

**COST-OF-LIVING ADJUSTMENTS:** Assumed to occur at the rate of 3% per annum.

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS (Continued)

GROUP C

ASSET VALUATION METHOD: The amount of the assets for valuation purposes equals the preliminary asset value plus 20% of the difference between market and preliminary asset values. The preliminary asset value is equal to the previous year's asset value (for valuation purposes) adjusted for contributions less benefit payments and expenses plus expected investment income. If necessary, a further adjustment is made to ensure that the valuation assets are within 20% of the market value.

INACTIVE MEMBERS: Liability equals 250% of accumulated contributions.

HEALTH AND MEDICAL BENEFITS FOR RETIREES: Not included in this valuation.

SCHEDULE C

BRIEF SUMMARY OF PRINCIPAL PLAN PROVISIONS  
AS INTERPRETED FOR VALUATION PURPOSES

**BRIEF SUMMARY OF BENEFIT PROVISIONS  
AS INTERPRETED FOR VALUATION PURPOSES**

Effective Date	July 1, 1972 (for consolidated system).
Creditable Service	Service as a member plus purchased service.
Membership	<p>Group A - General employees who did not join noncontributory system on July 1, 1981.</p> <p>Group C - State police and motor vehicle inspectors.</p> <p>Group D - Judges.</p> <p>Group F - All other general employees.</p>
Average Final Compensation (AFC)	<p>Groups A and F - average annual compensation during highest 3 consecutive years.</p> <p>Group C - average annual compensation during highest 2 consecutive years.</p> <p>Group D - annual compensation at retirement.</p>
Service Retirement Allowance	
Eligibility	<p>Group A – Earlier of age 65, with five years of service for members hired after July 1, 2004, and age 62 with 20 years of service.</p> <p>Group C - Age 55.</p> <p>Group D - Age 62 with 5 years of service.</p> <p>Group F - Age 62 or 30 years of service. For members hired after June 30, 2008, age 65 or a sum of age plus service greater than or equal to 87.</p>

Amount

Group A - 1.67% of AFC times service.

Group C - 2.5% of AFC times service up to 20 years.

Group D - 3.33% of AFC times service up to 30 years.

Group F - 1.25% of AFC times service prior to January 1, 1991, plus 1.67% of AFC times service after 1990, up to a maximum benefit of 50% of AFC. For members hired on or after July 1, 2008, the maximum benefit is 60% of AFC.

The above amounts include the portion of the allowance provided by member contributions.

Early Retirement Allowance

Eligibility

Groups A and D - Age 55 with 5 years of service or 30 years of service.

Group C - Age 50 with 20 years of service.

Group F - Age 55 with 5 years of service.

Amount

Group A - Actuarial equivalent of normal retirement allowance. For members with 30 years of service, there is no reduction.

Group C - Same as normal retirement allowance.

Group D - Normal allowance reduced by 3% for each year commencement precedes age 62.

Group F – For members hired prior to July 1, 2008, no reduction if 30 years of service; otherwise normal allowance reduced by 6% for each year commencement precedes age 62. For members hired on or after July 1, 2008, no reduction if combination of years and service equal to 87; otherwise reduced from age 65 based on the following table.

<u>Years of Service</u>	<u>Reduction in Benefit</u>
35	One eighth of 1% per year
30	One quarter of 1% per year
25	One third of 1% per year
20	Five twelfths of 1% per year
Less than 20	Five ninths of 1% per year

#### Vested Retirement Allowance

##### Eligibility

All Groups - 5 years of service.

Allowance beginning at normal retirement age based on AFC and service at termination.

#### Ordinary Disability Retirement

##### Allowance

##### Eligibility

All Groups - 5 years of service and incapacitated, not work related, for performance of duty.

##### Amount

Immediate allowance based on service to date of disability. Benefit is the greater of 25% of AFC and unreduced accrued benefit as of date of disability.

#### Accidental Disability Retirement Allowance

##### Eligibility

All Groups - incapacitated as a result of work related accident.

##### Amount

Groups A, D and F - immediate allowance based on service projected to normal retirement. Benefit is the greater of 25% of AFC and unreduced accrued benefit as of date of disability.

Group C - Immediate allowance equal to 50% of AFC with additional 10% of AFC for each dependent child (up to 30%).

### Ordinary Death Benefit

Eligibility	<p>Groups A and F - Death after eligibility for early retirement or 10 years of service.</p> <p>Group C - Death after normal retirement age or 10 years of service.</p> <p>Group D - Death after normal retirement age or 10 years of service.</p>
Amount	<p>Groups A, D and F – maximum of reduced allowance under 100% survivor option and disability allowance under 100% disability survivor option, commencing immediately.</p> <p>Group C - 70% of the allowance which would have been payable to the member plus additional allowance equal to 10% of AFC for each dependent child (up to 30%).</p>

### Accidental Death Benefit

Eligibility	All Groups - Death as a result of work related accident.
Amount	<p>Groups A, D and F - Allowance equal to 25% of AFC payable to spouse.</p> <p>Group C - Allowance equal to 35% of AFC payable to spouse plus 10% of AFC for each dependent child (up to 30%).</p>

### Optional Benefit and Death after Retirement

Lifetime allowance or actuarially equivalent allowance with survivor benefit as elected by member upon retirement.

Upon death of a Group C member, an allowance equal to 70% of the member's allowance is continued to the surviving spouse.

### Refund of Contribution

Upon termination, if the member so elects or if no other benefit is payable, the member's accumulated contributions are refunded.

Post-Retirement Adjustments

Groups A, C and D - allowances in payment for at least one year increased on each January 1 by the percentage increase in Consumer Price Index but not more than 5%.

Group F – Same, but increase is based on half of the Consumer Price Index increase. Increase is based on the full Consumer Price index Increase starting in 2014 for employees retiring after July 1, 2008.

Member Contributions

Groups A and D – 6.40% (increased from 5.10% until June 30, 2016).

Group C – 8.28% (increased from 6.98% until June 30, 2016).

Group F

– 6.40% through June 30, 2016

– 5.10% from July 1, 2016 through June 30, 2019

– 4.85% thereafter

SCHEDULE D

SUMMARY TABLES OF MEMBER DATA AS OF JUNE 30, 2011

TABLE 1  
THE NUMBER AND ANNUAL COMPENSATION OF  
ACTIVE MEMBERS DISTRIBUTED BY AGE AND SERVICE  
AS OF JUNE 30, 2011

AGE	<i>Years of Service</i>																<i>Total</i>			
	<i>0 to 4</i>		<i>5 to 9</i>		<i>10 to 14</i>		<i>15 to 19</i>		<i>20 to 24</i>		<i>25 to 29</i>		<i>30 to 34</i>		<i>35 to 39</i>				<i>40 &amp; up</i>	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Under 20	4	49,383	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	49,383
20 to 24	156	4,234,054	1	54,970	0	0	0	0	0	0	0	0	0	0	0	0	0	0	157	4,289,024
25 to 29	377	13,232,605	109	4,869,702	0	0	0	0	0	0	0	0	0	0	0	0	0	0	486	18,102,308
30 to 34	322	11,815,312	287	14,381,763	72	3,890,147	0	0	0	0	0	0	0	0	0	0	0	0	681	30,087,222
35 to 39	263	10,616,137	277	14,172,921	199	11,257,828	50	2,691,546	6	305,513	0	0	0	0	0	0	0	0	795	39,043,945
40 to 44	250	10,147,924	249	12,545,234	244	14,028,207	160	9,565,680	142	9,038,350	4	249,358	0	0	0	0	0	0	1,049	55,574,752
45 to 49	204	7,978,881	274	13,976,347	218	11,504,729	137	8,110,284	218	14,346,592	128	7,567,604	19	1,085,550	0	0	0	0	1,198	64,569,986
50 to 54	237	9,681,367	231	11,700,317	218	11,276,324	116	6,474,376	203	11,957,891	137	8,350,962	115	6,656,113	4	267,544	0	0	1,261	66,364,895
55 to 59	155	6,213,863	201	10,300,155	193	10,299,461	126	7,046,214	177	10,388,503	153	9,673,882	123	8,213,252	59	3,919,664	4	261,993	1,191	66,316,987
60 to 64	83	3,441,347	107	5,425,527	125	6,680,992	73	4,298,890	102	5,925,492	90	5,825,643	100	6,570,701	59	4,040,048	24	1,555,663	763	43,764,302
65 to 69	20	690,608	24	1,170,763	22	1,084,504	12	712,820	16	996,895	14	926,947	18	1,252,280	8	472,556	14	1,080,788	148	8,388,163
70 & up	4	150,368	2	73,430	14	647,670	3	103,151	3	165,246	1	62,655	1	70,362	2	103,354	5	336,948	35	1,713,183
TOTAL	2,075	78,251,849	1,762	88,671,129	1,305	70,669,863	677	39,002,961	867	53,124,482	527	32,657,049	376	23,848,258	132	8,803,166	47	3,235,392	7,768	398,264,150

TABLE 2  
 THE NUMBER AND ANNUAL COMPENSATION OF  
 ACTIVE MEMBERS DISTRIBUTED BY AGE AND SERVICE  
 AS OF JUNE 30, 2011

GENERAL EMPLOYEES - GROUP A

AGE	Years of Service																					
	0 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 & up		Total			
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary		
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
30 to 34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
35 to 39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
40 to 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
45 to 49	0	0	0	0	0	0	0	0	0	0	1	61,919	0	0	0	0	0	0	0	0	1	61,919
50 to 54	0	0	0	0	0	0	0	0	0	0	1	56,236	1	66,746	0	0	0	0	0	0	2	122,981
55 to 59	0	0	0	0	0	0	0	0	0	0	1	48,709	0	0	1	97,098	0	0	0	0	2	145,807
60 to 64	0	0	0	0	0	0	0	0	0	0	1	80,970	2	133,332	1	77,700	0	0	0	0	4	292,002
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	1	55,386	0	0	0	0	0	0	1	55,386
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	125,294	0	0	2	125,294
TOTAL	0	0	0	0	0	0	0	0	0	0	4	247,833	4	255,464	2	174,798	2	125,294	12	803,390	12	803,390

TABLE 3  
 THE NUMBER AND ANNUAL COMPENSATION OF  
 ACTIVE MEMBERS DISTRIBUTED BY AGE AND SERVICE  
 AS OF JUNE 30, 2011

LAW ENFORCEMENT PERSONNEL - GROUP C

AGE	Years of Service																				
	0 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 & up		Total		
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	17	664,775	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	664,775	
25 to 29	34	1,552,140	10	590,045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	2,142,185	
30 to 34	21	937,895	38	2,456,012	10	758,849	0	0	0	0	0	0	0	0	0	0	0	0	69	4,152,756	
35 to 39	9	493,331	33	2,168,443	32	2,535,434	2	165,689	0	0	0	0	0	0	0	0	0	0	76	5,362,896	
40 to 44	6	221,447	27	1,759,614	37	2,791,675	20	1,661,060	25	2,489,586	0	0	0	0	0	0	0	0	115	8,923,384	
45 to 49	1	42,306	6	415,596	10	742,366	6	494,900	43	4,100,975	10	971,114	0	0	0	0	0	0	76	6,767,258	
50 to 54	0	0	5	273,838	5	308,433	0	0	4	313,963	5	445,484	0	0	1	97,771	0	0	20	1,439,490	
55 to 59	0	0	1	56,185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	56,185	
60 to 64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	88	3,911,894	120	7,719,735	94	7,136,758	28	2,321,649	72	6,904,524	15	1,416,598	0	0	1	97,771	0	0	418	29,508,928	

TABLE 4  
 THE NUMBER AND ANNUAL COMPENSATION OF  
 ACTIVE MEMBERS DISTRIBUTED BY AGE AND SERVICE  
 AS OF JUNE 30, 2011

JUDGES - GROUP D

AGE	Years of Service																				
	0 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 & up		Total		
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	
Under 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20 to 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45 to 49	2	181,463	1	121,920	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	303,384
50 to 54	0	0	3	283,962	2	243,841	0	0	1	121,920	0	0	0	0	0	0	0	0	0	6	649,723
55 to 59	3	198,531	4	487,682	2	187,313	3	291,947	1	77,550	2	243,841	1	121,920	0	0	0	0	0	16	1,608,784
60 to 64	1	55,354	2	256,287	2	175,298	1	121,920	4	374,906	3	372,077	3	378,393	0	0	0	0	0	16	1,734,236
65 to 69	2	110,171	1	47,482	0	0	1	106,799	0	0	1	128,236	1	121,920	0	0	0	0	0	6	514,609
70 & up	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	8	545,519	11	1,197,334	6	606,453	5	520,666	6	574,377	6	744,155	5	622,234	0	0	0	0	0	47	4,810,736

TABLE 5  
THE NUMBER AND ANNUAL COMPENSATION OF  
ACTIVE MEMBERS DISTRIBUTED BY AGE AND SERVICE  
AS OF JUNE 30, 2011

## GENERAL EMPLOYEES - GROUP F

AGE	Years of Service														Total					
	0 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34				35 to 39		40 & up	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Under 20	4	49,383	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	49,383
20 to 24	139	3,569,280	1	54,970	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140	3,624,249
25 to 29	343	11,680,466	99	4,279,657	0	0	0	0	0	0	0	0	0	0	0	0	0	0	442	15,960,123
30 to 34	301	10,877,417	249	11,925,751	62	3,131,298	0	0	0	0	0	0	0	0	0	0	0	0	612	25,934,467
35 to 39	254	10,122,807	244	12,004,478	167	8,722,394	48	2,525,858	6	305,513	0	0	0	0	0	0	0	0	719	33,681,049
40 to 44	244	9,926,477	222	10,785,620	207	11,236,532	140	7,904,619	117	6,548,764	4	249,358	0	0	0	0	0	0	934	46,651,369
45 to 49	201	7,755,112	267	13,438,830	208	10,762,362	131	7,615,384	175	10,245,617	117	6,534,570	19	1,085,550	0	0	0	0	1,118	57,437,425
50 to 54	237	9,681,367	223	11,142,517	211	10,724,050	116	6,474,376	198	11,522,008	131	7,849,242	114	6,589,367	3	169,773	0	0	1,233	64,152,700
55 to 59	152	6,015,332	196	9,756,288	191	10,112,148	123	6,754,267	176	10,310,953	150	9,381,332	122	8,091,332	58	3,822,566	4	261,993	1,172	64,506,210
60 to 64	82	3,385,993	105	5,169,240	123	6,505,694	72	4,176,970	98	5,550,586	86	5,372,596	95	6,058,976	58	3,962,348	24	1,555,663	743	41,738,064
65 to 69	18	580,437	23	1,123,281	22	1,084,504	11	606,022	16	996,895	13	798,711	16	1,074,973	8	472,556	14	1,080,788	141	7,818,168
70 & up	4	150,368	2	73,430	14	647,670	3	103,151	3	165,246	1	62,655	1	70,362	2	103,354	3	211,654	33	1,587,888
TOTAL	1,979	73,794,437	1,631	79,754,061	1,205	62,926,652	644	36,160,646	789	45,645,582	502	30,248,463	367	22,970,560	129	8,530,597	45	3,110,098	7,291	363,141,096

TABLE 6

SUMMARY OF RETIRED MEMBER AND BENEFICIARY DATA  
BY ATTAINED AGE AS OF JUNE 30, 2011

ALL EMPLOYEES

Age	Service Pensioners		Disability Pensioners		Beneficiaries	
	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance
30 and Under	-	\$ -	10	\$ 80,469	35	\$ 175,722
31	-	-	1	8,571	-	-
32	-	-	-	-	1	6,862
34	-	-	1	10,205	1	5,399
37	-	-	1	7,766	-	-
38	-	-	2	34,502	-	-
39	-	-	1	9,402	2	21,597
40	1	2,426	2	25,875	2	21,326
41	-	-	1	13,812	-	-
42	-	-	1	10,540	-	-
43	2	27,856	3	60,931	-	-
44	1	27,560	3	58,669	-	-
45	-	-	3	58,287	-	-
46	-	-	5	93,008	1	18,179
47	-	-	2	20,873	3	43,864
48	4	69,830	4	46,746	-	-
49	3	67,896	7	104,259	2	17,478
50	10	370,285	7	100,035	-	-
51	24	1,026,791	4	52,386	2	7,913
52	22	747,125	7	65,352	1	8,815
53	29	1,196,197	7	83,240	4	67,620
54	40	1,605,236	8	126,955	3	43,910
55	55	1,389,684	6	92,425	4	42,992
56	71	2,136,441	13	137,507	7	71,941
57	80	1,693,322	16	166,901	9	130,677
58	71	2,004,855	17	225,596	9	136,645
59	110	2,492,301	23	211,864	4	36,262
60	121	2,745,421	14	165,197	10	107,892
61	158	3,656,972	20	245,214	6	59,022
62	185	3,102,025	23	282,130	8	56,702
63	261	4,493,150	13	146,269	9	124,687
64	297	5,619,381	14	218,536	8	122,699
65	206	3,714,861	13	147,457	9	101,588
66	204	3,406,841	8	90,225	13	112,014
67	193	3,038,104	13	159,896	18	243,703
68	221	3,857,395	13	122,385	16	200,264
69	185	3,263,813	10	90,934	15	163,066
70	161	2,395,271	7	75,255	19	259,490
71	144	2,106,748	9	133,047	15	118,570
72	141	1,986,436	4	34,757	18	161,709
73	112	1,623,464	10	116,292	9	119,732
74	122	1,815,415	7	53,857	11	121,622
75	136	2,043,144	4	29,487	16	184,354

TABLE 6, continued

SUMMARY OF RETIRED MEMBER AND BENEFICIARY DATA  
BY ATTAINED AGE AS OF JUNE 30, 2011

ALL EMPLOYEES

Age	Service Pensioners		Disability Pensioners		Beneficiaries	
	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance
76	112	1,756,300	4	33,445	20	168,626
77	103	1,495,549	3	44,474	10	70,854
78	114	1,473,290	3	17,769	13	119,897
79	84	896,116	4	40,475	12	120,403
80	97	1,161,935	2	9,893	19	236,775
81	90	1,161,903	3	25,275	17	185,427
82	67	823,325	2	19,554	17	123,200
83	54	657,482	4	42,813	23	195,112
84	54	628,170	3	38,806	6	49,896
85	60	751,698	1	7,422	13	129,116
86	40	411,472	-	-	14	111,935
87	43	376,357	3	33,486	10	44,207
88	42	368,705	2	23,153	8	90,211
89	24	222,603	2	13,699	5	56,124
90	27	226,120	2	22,091	11	102,633
91	28	212,940	-	-	8	70,833
92	16	152,849	1	8,870	7	63,092
93	13	154,223	1	8,736	5	42,506
94	11	79,216	-	-	3	57,606
95	10	85,733	-	-	2	21,861
96	3	51,983	-	-	3	17,713
97	2	8,303	1	14,669	3	21,493
98	1	12,929	-	-	1	24,843
99	3	17,677	-	-	1	9,780
100	2	12,929	-	-	2	56,034
101	2	22,696	-	-	-	-
104	1	4,480	-	-	-	-
108	-	-	-	-	1	1,986
Total	4,473	76,953,229	378	4,421,744	524	5,306,479

TABLE 7

SUMMARY OF RETIRED MEMBER AND BENEFICIARY DATA  
BY ATTAINED AGE AS OF JUNE 30, 2011

GENERAL EMPLOYEES - GROUP A

Age	Service Pensioners		Disability Pensioners		Beneficiaries	
	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance
30 and Under	-	\$ -	-	\$ -	-	\$ -
56	2	75,832	1	13,133	-	-
57	1	1,116	-	-	-	-
58	-	-	1	15,213	1	8,291
59	3	82,009	1	6,329	-	-
60	3	68,598	-	-	-	-
62	4	93,058	1	19,044	-	-
63	5	114,500	1	7,053	1	21,039
64	2	18,422	-	-	1	34,356
65	6	154,422	1	16,435	-	-
66	-	-	-	-	2	8,291
67	3	81,634	-	-	1	13,953
68	1	39,280	-	-	1	12,823
69	6	173,241	-	-	2	21,835
70	6	121,067	-	-	3	34,461
71	3	52,309	-	-	-	-
72	8	219,192	-	-	-	-
73	4	81,509	1	9,767	-	-
74	7	127,874	2	18,524	1	16,432
75	4	94,964	1	9,135	-	-
76	12	315,478	-	-	1	4,010
77	5	105,440	-	-	-	-
78	3	74,778	-	-	-	-
79	6	98,164	1	17,310	2	18,768
80	6	129,708	1	5,400	4	48,816
81	8	149,539	1	15,925	4	30,887
82	6	102,486	1	14,912	3	28,996
83	4	80,189	2	31,665	3	27,465
84	2	15,621	3	38,806	2	12,076
85	8	110,010	1	7,422	7	52,583
86	6	61,785	-	-	4	30,995
87	10	113,910	3	33,486	4	19,851
88	9	57,990	2	23,153	-	-
89	3	34,626	2	13,699	3	21,027
90	4	34,615	2	22,091	7	70,252
91	10	72,019	-	-	2	9,097
92	9	105,899	1	8,870	5	46,742
93	10	128,770	1	8,736	4	30,970
94	9	71,254	-	-	2	21,548
95	10	85,733	-	-	1	5,493
96	3	51,983	-	-	3	17,713
97	2	8,303	1	14,669	3	21,493
98	1	12,929	-	-	-	-

TABLE 7, continued

SUMMARY OF RETIRED MEMBER AND BENEFICIARY DATA  
BY ATTAINED AGE AS OF JUNE 30, 2011

GENERAL EMPLOYEES - GROUP A

Age	Service Pensioners		Disability Pensioners		Beneficiaries	
	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance
99	3	17,677	-	-	1	9,780
100	2	12,929	-	-	1	21,207
101	2	22,696	-	-	-	-
104	1	4,480	-	-	-	-
108	-	-	-	-	1	1,986
Total	222	3,678,038	32	370,777	81	729,536

TABLE 8

SUMMARY OF RETIRED MEMBER AND BENEFICIARY DATA  
BY ATTAINED AGE AS OF JUNE 30, 2011

STATE POLICE AND MOTOR VEHICLE INSPECTORS - GROUP B

Age	Service Pensioners		Disability Pensioners		Beneficiaries	
	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance
41	-	\$ -	-	\$ -	1	\$ 18,179
57	1	8,821	-	-	-	-
60	1	4,489	-	-	-	-
62	-	-	1	18,901	-	-
64	1	34,562	-	-	-	-
65	2	59,786	-	-	-	-
66	1	23,764	-	-	-	-
67	-	-	1	19,730	-	-
68	2	31,488	-	-	-	-
69	2	58,647	-	-	-	-
Total	10	221,557	2	38,631	1	18,179

TABLE 9

SUMMARY OF RETIRED MEMBER AND BENEFICIARY DATA  
BY ATTAINED AGE AS OF JUNE 30, 2011

LAW ENFORCEMENT PERSONNEL - GROUP C

Age	Service Pensioners		Disability Pensioners		Beneficiaries	
	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance
30 and Under	-	\$ -	10	\$ 80,469	7	\$ 54,584
38	-	-	1	29,181	-	-
39	-	-	-	-	1	11,104
40	1	2,426	-	-	-	-
43	-	-	1	35,952	-	-
44	-	-	1	40,978	-	-
45	-	-	1	39,040	-	-
46	-	-	1	44,692	-	-
47	-	-	1	14,638	1	21,442
48	-	-	1	23,754	-	-
50	3	191,798	1	50,455	-	-
51	14	799,327	-	-	-	-
52	8	389,388	-	-	-	-
53	13	780,546	1	33,904	1	18,619
54	13	870,690	1	41,502	1	25,609
55	13	594,125	1	34,972	1	32,667
56	17	949,822	-	-	1	20,673
57	6	353,643	-	-	1	28,363
58	13	728,802	2	67,238	2	39,138
59	8	430,998	-	-	1	10,724
60	5	258,506	-	-	1	27,674
61	14	678,571	1	32,052	-	-
62	4	132,754	1	28,170	-	-
63	10	343,692	1	40,566	-	-
64	13	536,967	2	73,722	2	40,289
65	11	408,991	1	39,040	-	-
66	1	25,003	1	31,409	-	-
67	5	173,304	1	30,116	3	78,950
68	11	472,915	-	-	1	36,799
69	7	275,350	-	-	1	25,873
70	5	172,566	-	-	4	116,714
71	4	160,387	2	57,807	1	18,850
72	3	120,828	1	18,537	1	31,652
73	4	167,932	1	26,074	2	33,235
74	3	136,074	-	-	1	17,115
75	2	67,836	-	-	1	27,308
76	4	178,567	-	-	2	46,344
77	3	105,205	1	30,701	-	-
78	5	182,264	-	-	3	62,426
79	2	60,038	-	-	1	27,872
80	5	155,293	-	-	6	102,458
81	5	215,788	-	-	3	61,501
82	5	184,943	-	-	2	46,171
83	-	-	-	-	3	51,853
84	2	60,103	-	-	-	-
85	3	98,034	-	-	2	41,132
86	-	-	-	-	3	40,361
88	-	-	-	-	2	20,325
90	2	45,037	-	-	1	20,969
91	-	-	-	-	1	18,167
92	-	-	-	-	-	-
95	-	-	-	-	1	16,368
Total	247	11,508,513	36	944,969	66	1,281,566

TABLE 10

SUMMARY OF RETIRED MEMBER AND BENEFICIARY DATA  
BY ATTAINED AGE AS OF JUNE 30, 2011

JUDGES - GROUP D

Age	Service Pensioners		Disability Pensioners		Beneficiaries	
	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance
47	-	-	-	-	1	10,221
61	1	77,048	-	-	-	-
62	1	42,323	-	-	-	-
64	2	173,779	-	-	-	-
65	2	40,849	-	-	1	24,338
66	1	15,306	-	-	-	-
67	1	31,473	-	-	-	-
68	4	258,880	-	-	-	-
69	3	233,704	-	-	-	-
71	1	69,003	-	-	-	-
72	1	32,369	-	-	-	-
73	1	73,869	-	-	-	-
74	3	157,689	-	-	-	-
75	2	136,192	-	-	-	-
76	1	91,301	-	-	-	-
78	2	150,805	-	-	-	-
79	2	59,690	-	-	-	-
81	1	36,842	-	-	1	26,372
83	3	144,046	-	-	-	-
84	2	123,399	-	-	-	-
85	2	97,123	-	-	-	-
86	2	62,562	-	-	-	-
87	1	9,177	-	-	-	-
88	1	52,813	-	-	1	43,586
89	2	81,324	-	-	2	35,097
91	-	-	-	-	1	20,659
93	1	20,360	-	-	-	-
94	-	-	-	-	1	36,058
98	-	-	-	-	1	24,843
100	-	-	-	-	1	34,827
Total	43	2,271,926	-	-	10	256,001

TABLE 11

SUMMARY OF RETIRED MEMBER AND BENEFICIARY DATA  
BY ATTAINED AGE AS OF JUNE 30, 2011

GENERAL EMPLOYEES - GROUPS E/F

Age	Service Pensioners		Disability Pensioners		Beneficiaries	
	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance
30 and Under	-	\$ -	-	\$ -	28	\$ 121,138
31	-	-	1	8,571	-	-
32	-	-	-	-	1	6,862
34	-	-	1	10,205	1	5,399
37	-	-	1	7,766	-	-
38	-	-	1	5,321	-	-
39	-	-	1	9,402	1	10,493
40	-	-	2	25,875	2	21,326
41	-	-	1	13,812	-	-
42	-	-	1	10,540	-	-
43	2	27,856	2	24,979	-	-
44	1	27,560	2	17,691	-	-
45	-	-	2	19,247	-	-
46	-	-	4	48,316	-	-
47	-	-	1	6,235	1	12,201
48	4	69,830	3	22,992	-	-
49	3	67,896	7	104,259	2	17,478
50	7	178,487	6	49,580	-	-
51	10	227,464	4	52,386	2	7,913
52	14	357,737	7	65,352	1	8,815
53	16	415,651	6	49,336	2	42,701
54	27	734,546	7	85,453	2	18,301
55	42	795,559	5	57,453	3	10,325
56	52	1,110,787	12	124,374	6	51,268
57	72	1,329,742	16	166,901	8	102,314
58	58	1,276,053	14	143,145	6	89,216
59	99	1,979,294	22	205,535	3	25,538
60	112	2,413,828	14	165,197	9	80,218
61	143	2,901,353	19	213,162	6	59,022
62	176	2,833,890	20	216,015	8	56,702
63	246	4,034,958	11	98,650	8	103,648
64	279	4,855,651	12	144,814	5	48,054
65	185	3,050,813	11	91,982	8	77,250
66	201	3,342,768	7	58,816	11	103,723
67	184	2,751,693	11	110,050	14	150,800
68	203	3,054,832	13	122,385	14	150,642
69	167	2,522,871	10	90,934	12	115,358
70	150	2,101,638	7	75,255	12	108,315
71	136	1,825,049	7	75,240	14	99,720
72	129	1,614,047	3	16,220	17	130,057
73	103	1,300,154	8	80,451	7	86,497
74	109	1,393,778	5	35,333	9	88,075
75	128	1,744,152	3	20,352	15	157,046

TABLE 11, continued

SUMMARY OF RETIRED MEMBER AND BENEFICIARY DATA  
BY ATTAINED AGE AS OF JUNE 30, 2011

GENERAL EMPLOYEES - GROUPS E/F

Age	Service Pensioners		Disability Pensioners		Beneficiaries	
	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance
76	95	1,170,954	4	33,445	17	118,272
77	95	1,284,904	2	13,773	10	70,854
78	104	1,065,443	3	17,769	10	57,471
79	74	678,224	3	23,165	9	73,763
80	86	876,934	1	4,493	9	85,501
81	76	759,734	2	9,350	9	66,667
82	56	535,896	1	4,642	12	48,033
83	47	433,247	2	11,148	17	115,794
84	48	429,047	-	-	4	37,820
85	47	446,531	-	-	4	35,401
86	32	287,125	-	-	7	40,579
87	32	253,270	-	-	6	24,356
88	32	257,902	-	-	5	26,300
89	19	106,653	-	-	-	-
90	21	146,468	-	-	3	11,412
91	18	140,921	-	-	4	22,910
92	7	46,950	-	-	1	8,113
93	2	5,093	-	-	1	11,536
94	2	7,962	-	-	-	-
Total	3,951	59,273,195	308	3,067,367	366	3,021,197

TABLE 12

SUMMARY OF RETIRED MEMBER AND BENEFICIARY DATA  
BY YEAR OF RETIREMENT

Year of Retirement	Number	Annual Allowance	Average Allowance
1957	1	\$ 5,103	\$ 5,103
1967	1	9,780	9,780
1970	3	12,999	4,333
1971	1	3,691	3,691
1972	3	43,856	14,619
1973	2	19,913	9,957
1974	5	38,657	7,731
1975	2	25,489	12,745
1976	6	45,346	7,558
1977	17	217,014	12,766
1978	13	136,223	10,479
1979	14	162,856	11,633
1980	28	277,772	9,920
1981	17	175,094	10,300
1982	26	210,021	8,078
1983	35	333,145	9,518
1984	46	632,742	13,755
1985	53	569,569	10,747
1986	45	505,176	11,226
1987	67	804,646	12,010
1988	68	867,660	12,760
1989	69	917,563	13,298
1990	119	1,260,616	10,593
1991	122	1,744,563	14,300
1992	83	747,603	9,007
1993	114	1,497,212	13,133
1994	90	1,134,943	12,610
1995	137	1,646,090	12,015
1996	409	6,063,822	14,826
1997	121	1,880,152	15,538
1998	123	1,902,392	15,467
1999	148	2,164,863	14,627
2000	182	2,561,953	14,077
2001	185	2,635,873	14,248
2002	199	3,294,399	16,555
2003	225	4,096,590	18,207
2004	284	5,152,007	18,141
2005	281	4,803,231	17,093
2006	278	5,086,491	18,297
2007	316	5,723,580	18,113
2008	326	6,129,744	18,803
2009	540	10,417,104	19,291
2010	387	7,290,249	18,838
2011	184	3,433,660	18,661

SCHEDULE E

AMORTIZATION SCHEDULE FOR THE UNFUNDED ACTUARIAL ACCRUED  
LIABILITY

**AMORTIZATION SCHEDULE  
FOR THE UNFUNDED ACTUARIAL ACCRUED LIABILITY**

Date	Balance	Amortization Payment (Year Following)
6/30/2011	346,537,738	19,479,245
6/30/2012	348,717,102	20,453,207
6/30/2013	351,802,299	21,475,867
6/30/2014	354,952,593	22,549,661
6/30/2015	359,024,377	23,677,144
6/30/2016	363,171,622	24,861,001
6/30/2017	368,272,280	26,104,051
6/30/2018	372,550,692	27,409,254
6/30/2019	375,876,871	28,779,716
6/30/2020	379,046,688	30,218,702
6/30/2021	381,046,955	31,729,637
6/30/2022	381,706,309	33,316,119
6/30/2023	380,835,226	34,981,925
6/30/2024	378,224,296	36,731,021
6/30/2025	373,642,340	38,567,572
6/30/2026	366,834,366	40,495,951
6/30/2027	358,436,423	42,520,748
6/30/2028	348,174,952	44,646,786
6/30/2029	334,863,912	46,879,125
6/30/2030	318,122,539	49,223,081
6/30/2031	297,530,486	51,684,235
6/30/2032	272,623,995	54,268,447
6/30/2033	242,891,707	56,981,870
6/30/2034	207,770,091	59,830,963
6/30/2035	166,638,436	62,822,511
6/30/2036	118,813,384	65,963,637
6/30/2037	63,542,952	69,261,819
6/30/2038	0	0

SCHEDULE F

PROJECTION OF CONTRIBUTIONS FOR  
FOLLOWING TWO FISCAL YEARS

**PROJECTION OF CONTRIBUTIONS FOR  
FOLLOWING TWO FISCAL YEARS**

On the basis of the June 30, 2011 actuarial valuation, the recommended contribution for the fiscal year ending June 30, 2012, is \$35,369,984, which is based on the following:

Payroll	\$398,264,150
Normal rate	3.99%
Accrued liability contribution	\$19,479,244

The projections for the following two years are as follows:

Fiscal Year	Projected Payroll	Normal Rate*	CONTRIBUTIONS		
			Normal	Accrued Liability	Total
2013	\$ 416,186,037	3.99%	\$ 16,628,726	\$20,453,207	\$37,081,933
2014	434,914,409	3.99%	17,615,519	\$21,475,867	39,091,386

\*In these projections, total payroll is assumed to increase by 4.5% each year. The offset to normal cost paid by the State is constrained in accordance with the provisions of Act 63, Section 473 of the 2011 Legislative Session, and as a result the state's projected net normal contributions in fiscal years 2013 and 2014 are slightly larger as a percentage of payroll than the normal rate shown.