

# **STATE EMPLOYEES' RETIREMENT SYSTEM OF ILLINOIS** ANNUAL ACTUARIAL VALUATION AS OF JUNE 30, 2009

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# Introduction

The law governing the State Employees' Retirement System (SERS or System) requires the Actuary, as the technical advisor to the Board of Trustees to:

...make an annual valuation of the liabilities and reserves of the System, make an annual determination of the amount of contributions required from the State under this Article, and certify the results thereof to the board. (40 ILCS Section 5/14 - 138(c)).

Gabriel, Roeder, Smith & Company has been retained by the Board of Trustees to perform an actuarial valuation as of June 30, 2009. In this report, we present the results of the valuation and the appropriation requirements under Public Act 93-0839, Public Act 93-0002, Public Act 94-0004, and Public Act 96-0043 for fiscal year 2011. For purposes of disclosure, this report also includes the annual required contribution and schedule of funding progress as required by GASB Statement No. 25 and the development of the net pension obligation in accordance with GASB Statement No. 27.

The valuation was completed based upon membership and financial data provided by the administrative staff of the System. The actuarial assumptions used were based on an experience review for the five-year period ending June 30, 2006, and were adopted for use commencing with the June 30, 2006, valuation. The cost method used to determine the benefit liabilities is the Projected Unit Credit Cost Method. For valuation purposes, as well as projection purposes, an actuarial value of assets is used.

# **Changes Since Last Valuation**

# Legislative Changes

Public Act 95-1043 (effective March 26, 2009) provides an option to remove the Social Security offset on SERS survivor benefits. Survivors currently receiving a benefit may have had their benefit reduced by the Social Security offset. This offset will be removed on July 1, 2009, thus increasing their survivor benefit. All retirees who began receiving benefits before January 1, 1998, will have the offset removed from future benefits for their survivor at no cost to the retiree. Retirees who began receiving benefits after January 1, 1998, but before July 1, 2009, will have a one-time election period (April 16, 2009, through May 31, 2009) to reduce their retirement benefit by 3.825 percent, in exchange for removing the offset from future benefits for their survivor. Any member who retires on or after July 1, 2009, will have the option at the time of retirement to remove the offset provision. In exchange for the removal, SERS will reduce the member's retirement annuity by 3.825 percent.

Public Act 96-0043 (effective July 1, 2009) states that \$723,703,100, representing the total required State General Revenue Fund contribution for State fiscal year 2010, shall be made from the proceeds of bonds sold in fiscal year 2010 pursuant to Section 7.2 of the General Obligation Bond Act, less (i) the pro rata share of bond sale expenses determined by the System's share of total bond

proceeds, (ii) any amounts received from the General Revenue Fund in fiscal year 2010, and (iii) any reduction in bond proceeds due to the issuance of discounted bonds, if applicable. Also, for purposes of determining the required State contribution to the System, the value of the System's assets shall be equal to the actuarial value of the System's assets. As of June 30, 2008, the actuarial value of the System's assets as of that date. In determining the actuarial value of the System's assets for fiscal years after June 30, 2008, any actuarial gains or losses from investment return incurred in a fiscal year shall be recognized in equal annual amounts over the five-year period following that fiscal year. Furthermore, for purposes of determining the required State contribution to the System for a particular year, the actuarial value of assets shall be assumed to earn a rate of return equal to the System's actuarially assumed rate of return.

There were no other legislative changes in the past year that materially affect the valuation as of June 30, 2009.

### **Assumption and Methods**

The valuation now assumes that 50 percent of retirees on or after July 1, 2009, will elect to remove the offset provision. In exchange for the removal, the member's retirement annuity is reduced by 3.825 percent monthly.

The population projection was updated to reflect more recent trends. Last year, the ultimate population assumption was 70,000. This year, the ultimate population is assumed to be 68,000. The ultimate population is assumed to be reached by the year 2023.

## **Comparison of Key Results**

Summarized below are key results for this year's valuation as well as last year's results.

		June 30, 2009	June 30, 2008
1. N	Number of Active Members	65,599	66,237
2. C	Covered Payroll for Fiscal Year	\$4,027,263,000	\$3,967,704,000
3. E	Base Payroll at End of Year	\$3,745,116,941	\$3,709,826,734
(.	Average Annual Earnings)	57,091	56,008
4. N	Number of Members Receiving Payments	57,099	56,111
5. A	Annualized Benefit Payments	\$1,318,356,040	\$1,156,002,124
(.	Average Annual Benefit)	23,089	20,602
6. A	Accrued Actuarial Liability	\$25,298,346,092	\$23,841,280,102
7. F	Fair Value of Assets (FVA)	\$8,565,739,117	\$10,995,366,485
8. L	Jnfunded Accrued Actuarial Liability based on FVA	\$16,732,606,975	\$12,845,913,617
9. F	Funded Ratio based upon FVA	33.9%	46.1%
10. A	Actuarial Value of Assets (AVA)	\$10,999,953,527	\$10,995,366,485
11. U	Unfunded Accrued Actuarial Liability based on AVA	\$14,298,392,565	\$12,845,913,617
12. F	Funded Ratio based upon AVA	43.5%	46.1%

The actual rate of return on the fair value of assets for the fiscal year ended June 30, 2009, is (19.56) percent. This return was significantly less than the expected investment return of 8.50 percent. The actual rate of return on the actuarial value of assets for the fiscal year ended June 30, 2009, is 2.89 percent which is also less than the expected investment return of 8.50 percent.

# Appropriation Requirements Under P.A. 88-0593, P.A. 93-0002, P.A. 93-0839, P.A. 94-0004, and P.A. 96-0043

The law governing the System under P.A. 88-0593 provides that:

For fiscal years 2011 through 2045, the minimum contribution to the System for each fiscal year shall be an amount determined to be sufficient to cause the total assets of the System to equal 90 percent of the total actuarial liabilities of the System by the end of fiscal year 2045. In making these determinations, the required contribution shall be calculated each year as a level-percentage-of-payroll over the years remaining to and including fiscal year 2045 and shall be determined under the projected unit credit actuarial cost method. For fiscal years 1997 through 2010, the minimum contribution to the System, as a percentage of the payroll, shall be increased in equal annual increments so that by fiscal year 2010, the contribution rate is at the same level as the contribution rate for fiscal years 2011 through 2045.

The above calculation provides the basis for calculating the appropriation requirements under P.A. 93-0002. For fiscal years 2005 and later, the contributions under P.A. 93-0002 start with a calculation of the contribution based upon the hypothetical asset value which assumes no infusion from the proceeds of the GOB sale that were deposited July 1, 2003 (Table 4a). This contribution is then reduced by the debt service beginning in fiscal year 2005 to produce the maximum contribution. For fiscal years 2006 and 2007, the maximum contribution is equal to the contribution amounts stated in P.A. 94-0004 for each respective year. The contribution amounts stated in P.A. 94-0004 are \$203,783,900 for fiscal year 2006 and \$344,164,400 for fiscal year 2007. A second projection is performed to develop the P.A. 88-0593 formula rate, which includes the GOB deposit. The lower of this formula rate with the GOB assets included and the maximum contribution is the required state appropriation (Table 4b).

Pursuant to Public Active 96-0043, \$723,703,100 of the total required State contribution for fiscal year 2010 will be paid from the proceeds of a GOB sale.

Pursuant to Public Act 96-0043, for the calculation of the fiscal year 2011 contribution and beyond, the value of the System's assets shall be equal to the actuarial value of the System's assets. As of June 30, 2008, the actuarial value of the System's assets shall be equal to the market value of the assets as of that date. In determining the actuarial value of the System's assets for fiscal years after June 30, 2008, any actuarial gains or losses from investment return incurred in a fiscal year shall be recognized in equal annual amounts over the five-year period following that fiscal year. Furthermore, for purposes of determining the required State contribution to the System for a particular year, the actuarial value of assets shall be assumed to earn a rate of return equal to the System's actuarially assumed rate of return.

The following tables outline the reconciliation of the market value of assets and the development of the hypothetical asset value as of June 30, 2009. Also, the tables show the development of the actuarial value of assets under both the market value and the hypothetical value of assets.

# Market Value of Asset Reconciliation and the Development of the Actuarial Value of Assets based upon the Market Value of Assets

1. Actuarial Value of Assets 6/30/2008	\$ 10,995,366,485
2. Actual State Contribution Amount	774,910,344
3. Employee Contribution Amount	242,227,432
4. Benefit Payouts & Refunds	(1,315,073,162)
5. Administrative Expenses	(10,681,376)
6. Investment Return	(2,121,010,606)
7. Market Value of Assets 6/30/2009	\$ 8,565,739,117
8. Expected Investment Return at 8.5%	\$ 921,757,407
9. Investment Gain/(Loss)	\$ (3,042,768,013)
10. Deferred Investment Gains and (Losses)	\$ (2,434,214,410)
11. Actuarial Value of Assets 6/30/2009	\$ 10,999,953,527

# Development of the Hypothetical Value of Assets and the Development of the Actuarial Value of Assets based upon the Hypothetical Value of Assets

1. Hypothetical Actuarial Value of Assets 6/30/2008	\$ 9,269,430,440
2. State Contribution Amount <sup>1</sup>	880,520,782
3. Employee Contribution Amount	242,227,432
4. Benefit Payouts & Refunds	(1,315,073,162)
5. Administrative Expenses	(10,681,376)
6. Investment Return	(1,792,167,291)
7. Hypothetical Value of Assets 6/30/2009	\$ 7,274,256,825
8. Expected Investment Return at 8.5%	\$ 779,449,758
9. Investment Gain/(Loss)	\$ (2,571,617,049)
10. Deferred Investment Gains and (Losses)	\$ (2,057,293,639)
11. Actuarial Value of Assets 6/30/2009	\$ 9,331,550,464

<sup>1</sup>Represents 21.864 percent of payroll for the basic contribution.

Fiscal Year	B as e Contribution	Debt Service Contribution	Total Contribution	Assumed Payroll (billions)	Total Required Contribution
2010	26.535%	1.842%	28.377%	4.113	1,167,146,000
2011	28.452%	1.801%	30.253%	4.194	1,268,881,000
2012	29.346%	1.887%	31.233%	4.360	1,361,694,000
2013	30.379%	1.806%	32.185%	4.525	1,456,490,000
2014	31.324%	1.730%	33.054%	4.692	1,551,052,000
2015	32.187%	1.658%	33.845%	4.864	1,646,103,000
2016	32.280%	1.589%	33.869%	5.039	1,706,774,000
2017	32.280%	1.589%	33.869%	5.220	1,767,859,000
2018	32.286%	1.585%	33.871%	5.406	1,831,165,000
2019	32.298%	1.576%	33.874%	5.600	1,897,027,000
2020	32.238%	1.620%	33.858%	5.802	1,964,415,000

The fiscal year 2010 certified contribution and projected future year required State contribution rates and amounts are as follows:

For fiscal years 2011 through 2033, the base contribution is limited by the maximum contribution determined under the assumption that the proceeds of the GOB sale were not deposited; therefore, the contribution rate is not level a percent of pay.

Pursuant to Public Act 96-0043, the fiscal year 2011 contribution rate is calculated assuming the actuarial value of assets as of July 1, 2009, earns a rate of return equal to the System's actuarially assumed rate of return. The provisions of Public Act 96-0043 decreased the base contribution rate for fiscal year 2011 by approximately 3.1 percentage points, from 31.6 percent to 28.5 percent of pay.

The contributions for fiscal years 2012 and beyond as presented above are developed in Tables 4c and 4d in this report. In those projections, the actuarial valuations as of June 30 for years 2010 through 2013 have been projected as though a valuation in each of those years was performed. At each projected valuation, an additional 20 percent of the June 30, 2009, investment return shortfall is recognized. The market value of assets at June 30, 2009, is assumed to have a rate of return equal to the valuation interest rate going forward. Therefore, the actuarial value of assets is calculated by increasing the market value at each respective valuation date by the remaining percentage of the June 30, 2009, investment return shortfall (60% in the 2010 valuation, 40% in the 2011 valuation, 20% in the 2012 valuation). The actuarial value of assets converges to market value in 2013, when the full shortfall from June 30, 2009, has been recognized. Because the results of projected actuarial projections are incorporated into the projections, the projections found in Tables 4c and 4d do not show a stable contribution rate until the impact of the five-year asset smoothing has been fully realized.

# **Method of Calculation for Appropriation Requirements**

The results are based on the projected unit credit actuarial cost method, and on the data provided and assumptions used for the June 30, 2009, actuarial valuation. In order to determine projected contribution rates and amounts, the following additional assumptions were used:

- Projected annualized payroll of \$4,113,000,000 for fiscal year 2010. This amount was provided by the System.
- Total employer contributions of \$1,091,385,000 (including no payments from the unclaimed property fund) for fiscal year 2010, as provided by the System.
- Administrative expenses of \$14,034,100 for fiscal year 2010, as provided by the System.
- New entrants whose average age is 36.20 and average pay is \$44,879 (2009 dollars). These values are based on the average age and average pay of new entrants over the last 15 years.
- The active member population is assumed to increase annually until the member count is 68,000 in 2023. After 2023, the population remains level during the remainder of the 36-year projection.

The average increase in payroll for the 36-year projection period is approximately 4.0 percent per year.

To determine the contribution rates, the expected 2010 appropriation was converted to a percentage of the expected 2010 payroll. An amortization schedule was then determined on the assumption that:

- The ratio of total assets to total actuarial liabilities will be 90 percent by June 30, 2045.
- The actuarial value of assets shall be assumed to earn a rate of return equal to the System's actuarially assumed rate of return.
- The contribution rates for fiscal years 2010 through 2033 will not be uniform, but the rate for any one of these years will be the minimum of: the difference between the "without-GOB" contribution and the debt service, and the underlying formula rate as determined by Public Act 88-0593.
- The contribution rate for fiscal year 2010 will be 26.535 percent.
- The contribution rates for fiscal years 2034 through 2045 will be a uniform percentage of payroll.

# **GASB:** Financial Accounting Information

In an effort to enhance the understandability and usefulness of the pension information that is included in the financial reports of pension plans for state and local governments, the Governmental Accounting Standards Board (GASB) has issued Statement No. 25—Financial Reporting for Defined Benefit Pension Plans and Statement No. 27—Accounting for Pensions by State and Local Governmental Employers.

GASB Statement No. 25 establishes a financial reporting framework for defined benefit plans. In addition to two required statements regarding plan assets, the statement requires two schedules and accompanying notes disclosing information relative to the funded status of the plan and contribution patterns.

- The Schedule of Funding Progress includes information about the actuarially determined funded status from a long-term ongoing plan perspective and the progress made toward accumulating sufficient assets. For SERS, the liabilities are developed based on the Projected Unit Credit Cost Method. The assets are shown as an actuarial value as described on page 34. The funded ratio has decreased from 46.12 percent as of June 30, 2008, to 43.48 percent as of June 30, 2009. This decrease is primarily due to a rate of return on assets that was significantly lower than the assumed 8.50 percent.
- The Schedule of Employer Contributions provides information about the annual required contribution (ARC) and the percentage of the ARC that was actually contributed. For SERS, the ARC for fiscal year 2009 is equal to the employer normal cost plus a 30-year level-percentage-of-payroll amortization of the unfunded actuarial liability. The ARC is expected to be greater than the employer contribution required by State statute. For fiscal year 2009, State contributions of \$774,910,344 were approximately 77.2 percent of the ARC.

The annual required contribution as well as the statutory contribution for fiscal years 2010 and 2011 are shown below as a percentage of payroll. The ARC percentage and statutory contribution for 2010 are based on the results of the June 30, 2008, valuation. The dollar amount of the ARC and the statutory contribution for 2010 will be the product of the actual payroll for 2010 and the percentages shown below.

	Fiscal Year 2011	Fiscal Year 2010
1. Employer normal cost	\$380,007,802	\$362,912,309
2. Initial amount to amortize the unfunded liability over 30	002 785 554	812 600 622
years as a level percentage of payroli	903,783,334	812,090,035
3. ARC $[(1) + (2)]$	\$1,283,793,356	\$1,175,602,942
4. ARC as a percentage of payroll	30.609%	28.580%
5. Estimated statutory contribution	\$1,193,343,000	\$1,091,385,000
6. Estimated statutory contribution as a percentage of payroll	28.452%	26.535%
7. Estimated statutory contribution as a percentage of ARC $[(5) \div (3)]$	92.954%	92.836%

GASB Statement No. 27 establishes standards for the measurement, recognition, and display of pension expense and related liabilities. Annual pension cost is measured and disclosed on the accrual basis of accounting. In general, the annual pension cost is equal to the ARC with adjustments for past under-contributions or over-contributions. These adjustments are based on the net pension obligation (NPO) that represents the cumulative difference between the annual pension cost and the actual contribution to the plan. The first adjustment is equal to interest on the NPO, which is added to the ARC. The second adjustment is an amortization of the NPO, which is deducted from the ARC. This amortization is over an open 30-year period for fiscal year 2009 (i.e., the 30-year period is restarted each fiscal year).

These Statements were adopted by SERS (and the State of Illinois) for the 1997 fiscal year. A transition pension liability (asset) was developed under Statement No. 27 equal to the cumulative difference between the actuarially determined funding requirement and the actual amount contributed for fiscal years 1988 through 1996. As of the adoption date, all outstanding pension liabilities (assets) were adjusted to equal the transition NPO. The NPO as of June 30, 2008, of \$1,554,625,265 has increased to \$1,814,514,923 as of June 30, 2009, due to the 2009 APC of \$1,034,800,002 and actual 2009 employer contributions of \$774,910,344.

The GASB Statement Nos. 25 and 27 information is presented in draft form for review by the auditor. Please let us know if there are any changes so that we may maintain consistency with the State's financial statements.

To the best of our knowledge this actuarial statement is complete and accurate and has been prepared in accordance with generally accepted actuarial principles and practice.

The undersigned are members of the American Academy of Actuaries (MAAA), as indicated and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Respectfully submitted,

## Gabriel, Roeder, Smith & Company

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# Table 1

# **Results of Actuarial Valuation as of June 30, 2009**

1	Number of Members	
	a. Active	65,599
	b. Inactive:	
	i. Eligible for deferred vested pension benefits (4,375	
	based on SERS service alone. An additional 297 are	
	eligible when reciprocal service is added to SERS service).	4,672
	ii. Eligible for return of contributions only	16,185
	c. Current Benefit Recipients:	
	i. Retirement annuities	44,566
	ii. Survivor annuities	10,236
	iii. Disability annuities	2,297
	d. Eligible for Deferred Benefits:	
	i. Retirement annuities	110
	ii. Survivor annuities	172
	e. Total	143,837
2	Covered Payroll	\$4,027,263,000
3	Annualized Benefit Payments Currently Being Made	
	a. Retirement	\$1,188,282,580
	b. Survivor	89,122,444
	c. Disability	40,951,016
	d. Total	\$1,318,356,040
4	Actuarial Liability — Annuitants	
	a. Current Benefit Recipients:	
	i. Retirement annuities	\$13.829.810.216
	ii. Survivor annuities	827.964.844
	iii. Disability annuities	234,199,764
	b. Eligible for Deferred Benefits:	
	i. Retirement annuities	7.880.888
	ii. Survivor annuities	8,786.123
	c. Total	\$14,908,641,835

5	Actuarial Liability—Inactive Members		
	a. Eligible for Deferred Vested Pension Benefits		\$360,275,792
	b. Eligible for Return of Contributions Only		27,512,119
	c. Total		\$387,787,911
		Normal	Actuarial
		Cost	Liability
6	Active Members		
	a. Pension Benefits	\$386,082,487	\$7,017,381,310
	b. Cost-of-Living Adjustments	127,710,602	2,370,210,172
	c. Death Benefits		
	i. Occupational	\$2,105,209	\$24,354,553
	ii. Non-occupational	18,632,283	245,211,107
	iii. Refund	4,989,113	31,367,171
	iv. Total	\$25,726,605	\$300,932,831
	d. Disability		
	i. Occupational	\$5,436,805	\$0
	ii. Non-occupational	30,808,562	0
	iii. Total	\$36,245,367	\$0
	e. Withdrawal	24,831,118	313,392,033
	f. Expenses	14,034,100	0
	g. Total	\$614,630,279	\$10,001,916,346
7	Total Actuarial Liability (4 + 5 + 6)		\$25,298,346,092
8	Fair Value of Assets (FVA)		\$8,565,739,117
9	Unfunded Actuarial Liability Based on FVA (7 – 8)		\$16,732,606,975
10	Funded Percentage Based on FVA $(8 \div 7)$		33.86%
11	Actuarial Value of Assets (AVA)		\$10,999,953,527
12	Unfunded Actuarial Liability Based on AVA (7 – 11)		\$14,298,392,565
13	Funded Percentage Based on AVA $(11 \div 7)$		43.48%
14	Total Normal Cost	\$614,630,279	
15	Employee Contributions	\$234,622,477	
16	Annual Employer Normal Cost (% payroll)	\$380,007,802 9.44%	

# Analysis of Change in Unfunded Accrued Actuarial Liability

In addition to the expected change in the unfunded accrued actuarial liability, changes in membership demographics, and fund assets have affected the valuation results. The increase in the unfunded accrued actuarial liability (UAAL) of \$1,452,478,948 was due to the following:

1	UAAL at 06/30/2008	\$12,845,913,617
2	Contributions	
	a. Contributions due	
	i interest on 1)	\$ 1,091,902,657
	ii members contributions	242,227,432
	iii employer normal cost	362,912,309
	iv interest on ii and iii	25,193,984
	v total due	\$ 1,722,236,382
	b. Contributions paid	
	i member contributions	\$ 242,227,432
	ii state agencies	774,910,344
	iii interest on i and ii	42,346,836
	iv total paid	\$ 1,059,484,612
	c. Expected increase in UAAL	\$ 662,751,770
3	Expected UAAL at 06/30/2009	\$13,508,665,387
4	(Gains)/Losses	
	a. investment income	\$ 608,553,603
	b. demographic	103,159,374
	c. total	\$ 711,712,977
5	Plan Provision Changes	\$ 78,014,201
6	Assumption Changes	\$ -
7	Total change in UAAL	\$ 1,452,478,948
8	UAAL at 06/30/2009	\$14,298,392,565

# Analysis of Financial Gains and Losses in Unfunded Accrued Actuarial Liability for Fiscal Year Ending June 30, 2009

	Activity	 (Gain) Loss	% of 06/30/2008 AAL		
1	Actuarial (Gain)/Loss				
	a. Retirements	\$ 201,216,812	0.85%		
	b. Incidence of Disability	(577,146)	0.00%		
	c. In-Service Mortality	1,185,568	0.00%		
	d. Retiree Mortality	(110,682,645)	-0.46%		
	e. Salary Increases	(70,364,604)	-0.30%		
	f. Terminations	(28,294,267)	-0.12%		
	g. Investment	608,553,603	2.55%		
	h. New Entrant Liability	34,428,266	0.14%		
	i. Other	76,247,390	0.32%		
	j. Total Actuarial (Gain)/Loss	\$ 711,712,977	2.98%		
2	Plan Provision Changes	\$ 78,014,201	0.33%		
3	Assumption Changes	\$ -	0.00%		
4	Contribution (Excess)/Shortfall	\$ 662,751,770	2.78%		
5	Total Financial (Gain)/Loss	\$ 1,452,478,948	6.09%		

#### 36-Year Projection of Costs and Liabilities State Contribution Based on Public Act 88-0593, Public Act 94-0004, Public Act 96-0043 Maximum Contribution Calculation: Without GOB Proceeds Rate of Return on Assets = 8.5%

(All Dollar Amounts in Millions)

								Annual Normal Cost			State Co	_	
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employe Cont.	e Balance	Percent of Pay	Amount	Percent of Pay	Total Expenses
2010	65,770	26,642	10,203	16,439	38.30%	4,113	615	235	380	9.24%	1,194	29.04%	1,353
2011	65,941	28,074	11,176	16,898	39.81%	4,194	642	240	402	9.59%	1,296	30.90%	1,434
2012	66,112	29,559	12,201	17,358	41.28%	4,360	667	249	418	9.59%	1,347	30.89%	1,525
2013	66,283	31,092	13,270	17,822	42.68%	4,525	692	259	433	9.57%	1,398	30.91%	1,626
2014	66,454	32,667	14,381	18,286	44.02%	4,692	717	269	448	9.55%	1,450	30.90%	1,735
2015	66,625	34,279	15,530	18,749	45.30%	4,864	741	279	462	9.50%	1,503	30.90%	1,852
2016	66,796	35,922	16,713	19,209	46.53%	5,039	766	289	477	9.47%	1,557	30.90%	1,978
2017	66,967	37,592	17,926	19,666	47.69%	5,220	791	299	492	9.43%	1,613	30.90%	2,111
2018	67,139	39,287	19,172	20,115	48.80%	5,406	816	310	506	9.36%	1,670	30.89%	2,247
2019	67,312	41,002	20,448	20,554	49.87%	5,600	843	321	522	9.32%	1,730	30.89%	2,392
2020	67,485	42,733	21,751	20,982	50.90%	5,802	870	333	537	9.26%	1,793	30.90%	2,543
2021	67,657	44,475	23,082	21,393	51.90%	6,011	897	345	552	9.18%	1,857	30.90%	2,700
2022	67,829	46,223	24,439	21,784	52.87%	6,230	925	357	568	9.12%	1,925	30.90%	2,863
2023	68,000	47,974	25,825	22,149	53.83%	6,457	954	370	584	9.04%	1,995	30.90%	3,030
2024	68,000	49,728	27,241	22,487	54.78%	6,693	985	384	601	8.98%	2,068	30.90%	3,199
2025	68,000	51,477	28,685	22,792	55.72%	6,928	1,014	397	617	8.91%	2,141	30.90%	3,374
2026	68,000	53,227	30,165	23,062	56.67%	7,170	1,047	410	637	8.88%	2,215	30.89%	3,547
2027	68,000	54,977	31,685	23,292	57.63%	7,425	1,080	425	655	8.82%	2,294	30.90%	3,721
2028	68,000	56,731	33,256	23,475	58.62%	7,692	1,117	440	677	8.80%	2,377	30.90%	3,894
2029	68,000	58,497	34,889	23,608	59.64%	7,972	1,157	455	702	8.81%	2,463	30.90%	4,064
2030	68,000	60,207	36,546	23,661	60.70%	8,267	1,178	472	706	8.54%	2,555	30.91%	4,283

Normal cost rate includes administrative expenses.

State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004, and Public Act 96-0043.

Total expenses shown include benefit payments, refunds and administrative expenses.

#### 36-Year Projection of Costs and Liabilities State Contribution Based on Public Act 88-0593, Public Act 94-0004, Public Act 96-0043 Maximum Contribution Calculation: Without GOB Proceeds Rate of Return on Assets = 8.5%

(All Dollar Amounts in Millions)

								Annual Normal Cost			State Co		
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Balance	Percent of Pay	Amount	Percent of Pay	Total Expenses
2031	68,000	61,933	38,272	23,661	61.80%	8,546	1,229	487	742	8.68%	2,641	30.90%	4,452
2032	68,000	63,685	40,102	23,583	62.97%	8,868	1,277	505	772	8.71%	2,740	30.90%	4,612
2033	68,000	65,483	42,061	23,422	64.23%	9,212	1,331	525	806	8.75%	2,846	30.89%	4,763
2034	68,000	67,339	44,175	23,164	65.60%	9,575	1,389	545	844	8.81%	2,959	30.90%	4,906
2035	68,000	69,268	46,470	22,798	67.09%	9,959	1,450	567	883	8.87%	3,077	30.90%	5,046
2036	68,000	71,283	48,974	22,309	68.70%	10,362	1,516	591	925	8.93%	3,202	30.90%	5,181
2037	68,000	73,398	51,713	21,685	70.46%	10,785	1,585	615	970	8.99%	3,332	30.89%	5,314
2038	68,000	75,625	54,716	20,909	72.35%	11,227	1,657	641	1,016	9.05%	3,469	30.90%	5,447
2039	68,000	77,972	58,009	19,963	74.40%	11,687	1,731	668	1,063	9.10%	3,611	30.90%	5,583
2040	68,000	80,448	61,621	18,827	76.60%	12,166	1,807	695	1,112	9.14%	3,759	30.90%	5,720
2041	68,000	83,062	65,581	17,481	78.95%	12,663	1,885	724	1,161	9.17%	3,913	30.90%	5,863
2042	68,000	85,820	69,918	15,902	81.47%	13,178	1,965	754	1,211	9.19%	4,072	30.90%	6,013
2043	68,000	88,729	74,665	14,064	84.15%	13,711	2,047	784	1,263	9.21%	4,237	30.90%	6,169
2044	68,000	91,797	79,856	11,941	86.99%	14,264	2,131	816	1,315	9.22%	4,407	30.90%	6,333
2045	68,000	95,027	85,525	9,502	90.00%	14,837	2,216	849	1,367	9.21%	4,584	30.90%	6,507

Normal cost rate includes administrative expenses.

State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004, and Public Act 96-0043.

Total expenses shown include benefit payments, refunds and administrative expenses.

# 36-Year Projection of Costs and Liabilities State Contribution Based on Public Act 88-0593, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043 Rate of Return on Assets = 8.5%

(All Dollar Amounts in Millions)

							Annual Normal Cost				t Required State Contribution						
											<b>(a)</b>	<b>(b</b> )	(c)=(a)-(b)	( <b>d</b> )	M inimum of	(c) and (d)	)
Plan		Actuarial								_	Withou	t		Formula		_	
Year End	Number	Accrued		Unfunded	Funded	Total		Employee		Percent	GOB	Debt	M aximum	Rate With	R e quire d	Percent	Total
6/30	Active	Liability	Assets	Liability	Ratio	Payroll	Total	Cont.	Balance	of Pay	Cont.	Service	Cont.	GOB	Cont.	of Pay	Expenses
2010	65 770	26 642	11 906	14 736	44 69%	4 1 1 3	615	235	380	9 24%	1 1 9 4	103	1 091	1 091	1 091	26 54%	1 353
2010	65 941	28,074	12,917	15 157	46.01%	4 194	642	233	402	9 59%	1,194	103	1 193	1 200	1 193	28.45%	1,333
2012	66.112	29,559	13,973	15,586	47.27%	4.360	667	249	418	9.59%	1,347	112	1,235	1,248	1,235	28.34%	1,131
2013	66.283	31.092	15.078	16.014	48.49%	4.525	692	259	433	9.57%	1.398	111	1.287	1.295	1.287	28.44%	1.626
2014	66,454	32,667	16,227	16,440	49.67%	4,692	717	269	448	9.55%	1,450	110	1,340	1,343	1,340	28.55%	1,735
2015	66,625	34,279	17,417	16,862	50.81%	4,864	741	279	462	9.50%	1,503	110	1,393	1,392	1,392	28.62%	1,852
2016	66,796	35,922	18,640	17,282	51.89%	5,039	766	289	477	9.47%	1,557	109	1,448	1,442	1,442	28.62%	1,978
2017	66,967	37,592	19,894	17,698	52.92%	5,220	791	299	492	9.43%	1,613	113	1,500	1,494	1,494	28.62%	2,111
2018	67,139	39,287	21,179	18,108	53.91%	5,406	816	310	506	9.36%	1,670	116	1,554	1,547	1,547	28.62%	2,247
2019	67,312	41,002	22,491	18,511	54.85%	5,600	843	321	522	9.32%	1,730	120	1,610	1,603	1,603	28.62%	2,392
2020	67,485	42,733	23,830	18,903	55.76%	5,802	870	333	537	9.26%	1,793	128	1,665	1,660	1,660	28.62%	2,543
2021	67,657	44,475	25,195	19,280	56.65%	6,011	897	345	552	9.18%	1,857	135	1,722	1,720	1,720	28.62%	2,700
2022	67,829	46,223	26,583	19,640	57.51%	6,230	925	357	568	9.12%	1,925	142	1,783	1,783	1,783	28.62%	2,863
2023	68,000	47,974	27,996	19,978	58.36%	6,457	954	370	584	9.04%	1,995	148	1,847	1,848	1,847	28.60%	3,030
2024	68,000	49,728	29,432	20,296	59.19%	6,693	985	384	601	8.98%	2,068	159	1,909	1,915	1,909	28.52%	3,199
2025	68,000	51,477	30,886	20,591	60.00%	6,928	1,014	397	617	8.91%	2,141	169	1,972	1,982	1,972	28.46%	3,374
2026	68,000	53,227	32,372	20,855	60.82%	7,170	1,047	410	637	8.88%	2,215	173	2,042	2,052	2,042	28.48%	3,547
2027	68,000	54,977	33,895	21,082	61.65%	7,425	1,080	425	655	8.82%	2,294	177	2,117	2,125	2,117	28.51%	3,721
2028	68,000	56,731	35,460	21,271	62.51%	7,692	1,117	440	677	8.80%	2,377	185	2,192	2,201	2,192	28.49%	3,894
2029	68,000	58,497	37,081	21,416	63.39%	7,972	1,157	455	702	8.81%	2,463	193	2,270	2,281	2,270	28.48%	4,064
2030	68,000	60,207	38,711	21,496	64.30%	8,267	1,178	472	706	8.54%	2,555	204	2,351	2,366	2,351	28.43%	4,283

Normal cost rate includes administrative expenses.

State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, and Public Act 96-0043.

Total expenses shown include benefit payments, refunds and administrative expenses.

#### Table 4b (Cont'd)

#### 36-Year Projection of Costs and Liabilities State Contribution Based on Public Act 88-0593, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043 Rate of Return on Assets = 8.5%

(All Dollar Amounts in Millions)

							Annual Normal Cost				Required State Contribution						
											(a)	<b>(b)</b>	(c)=(a)-(b)	( <b>d</b> )	M inimum of	(c) and (d	)
Plan		Actuarial									Without	t		Formula			
Year End	N umbe r	Accrued		Unfunded	Funded	Total	]	Employee	•	Percent	GOB	Debt	M aximum	Rate With	Required	Percent	Total
6/30	Active	Liability	Assets	Liability	Ratio	Payroll	Total	Cont.	Balance	of Pay	Cont.	Service	Cont.	GOB	Cont.	of Pay	Expenses
2031	68,000	61,933	40,397	21,536	65.23%	8,546	1,229	487	742	8.68%	2,641	215	2,426	2,445	2,426	28.38%	4,452
2032	68,000	63,685	42,178	21,507	66.23%	8,868	1,277	505	772	8.71%	2,740	220	2,520	2,538	2,520	28.42%	4,612
2033	68,000	65,483	44,086	21,397	67.32%	9,212	1,331	525	806	8.75%	2,846	219	2,627	2,636	2,627	28.52%	4,763
2034	68,000	67,339	46,145	21,194	68.53%	9,575	1,389	545	844	8.81%	2,959	0	N/A	2,740	2,740	28.62%	4,906
2035	68,000	69,268	48,370	20,898	69.83%	9,959	1,450	567	883	8.87%	3,077	0	N/A	2,850	2,850	28.62%	5,046
2036	68,000	71,283	50,788	20,495	71.25%	10,362	1,516	591	925	8.93%	3,202	0	N/A	2,965	2,965	28.62%	5,181
2037	68,000	73,398	53,425	19,973	72.79%	10,785	1,585	615	970	8.99%	3,332	0	N/A	3,086	3,086	28.62%	5,314
2038	68,000	75,625	56,307	19,318	74.46%	11,227	1,657	641	1,016	9.05%	3,469	0	N/A	3,213	3,213	28.62%	5,447
2039	68,000	77,972	59,457	18,515	76.25%	11,687	1,731	668	1,063	9.10%	3,611	0	N/A	3,344	3,344	28.62%	5,583
2040	68,000	80,448	62,903	17,545	78.19%	12,166	1,807	695	1,112	9.14%	3,759	0	N/A	3,481	3,481	28.62%	5,720
2041	68,000	83,062	66,670	16,392	80.27%	12,663	1,885	724	1,161	9.17%	3,913	0	N/A	3,623	3,623	28.62%	5,863
2042	68,000	85,820	70,787	15,033	82.48%	13,178	1,965	754	1,211	9.19%	4,072	0	N/A	3,771	3,771	28.62%	6,013
2043	68,000	88,729	75,281	13,448	84.84%	13,711	2,047	784	1,263	9.21%	4,237	0	N/A	3,923	3,923	28.62%	6,169
2044	68,000	91,797	80,185	11,612	87.35%	14,264	2,131	816	1,315	9.22%	4,407	0	N/A	4,082	4,082	28.62%	6,333
2045	68,000	95,027	85,529	9,498	90.00%	14,837	2,216	849	1,367	9.21%	4,584	0	N/A	4,246	4,246	28.62%	6,507

Normal cost rate includes administrative expenses.

State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, and Public Act 96-0043.

Total expenses shown include benefit payments, refunds and administrative expenses.

### 36-Year Projection of Costs and Liabilities State Contribution Based on Public Act 88-0593, Public Act 94-0004, Public Act 96-0043 Maximum Contribution Calculation: Without GOB Proceeds Rate of Return on Assets = 8.5%

Phase-In of Deferred Asset Gains and Losses Recognized in the Projected Actuarial Value of Assets

(All Dollar Amounts in Millions)

								Annual No	ormal Cost		State Co	ntribution	
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Balance	Percent of Pay	Amount	Percent of Pay	Total Expenses
2010	65 770	26 642	9 514	17 128	35 71%	4 113	615	235	380	9 2 4 %	1 1 9 /	29.03%	1 353
2010	65 941	28,074	9 783	18 291	34 85%	4,113	642	235	402	9 59%	1,174	30.90%	1,555
2012	66 112	29,579	10 133	19,221	34 28%	4 360	667	240	402	9 59%	1 391	31.90%	1,434
2012	66 283	31,092	10,155	20 532	33.96%	4 525	692	259	433	9.57%	1 486	32.84%	1,525
2013	66.454	32.667	11.576	21,091	35.44%	4.692	717	269	448	9.55%	1,100	33.67%	1,735
2015	66,625	34,279	12,666	21,613	36.95%	4,864	741	279	462	9.50%	1,675	34.44%	1,852
2016	66,796	35,922	13,791	22,131	38.39%	5,039	766	289	477	9.47%	1,736	34.45%	1,978
2017	66,967	37,592	14,949	22,643	39.77%	5,220	791	299	492	9.43%	1,798	34.44%	2,111
2018	67,139	39,287	16,142	23,145	41.09%	5,406	816	310	506	9.36%	1,862	34.44%	2,247
2019	67,312	41,002	17,366	23,636	42.35%	5,600	843	321	522	9.32%	1,929	34.45%	2,392
2020	67,485	42,733	18,621	24,112	43.58%	5,802	870	333	537	9.26%	1,998	34.44%	2,543
2021	67,657	44,475	19,908	24,567	44.76%	6,011	897	345	552	9.18%	2,070	34.44%	2,700
2022	67,829	46,223	21,225	24,998	45.92%	6,230	925	357	568	9.12%	2,146	34.45%	2,863
2023	68,000	47,974	22,575	25,399	47.06%	6,457	954	370	584	9.04%	2,224	34.44%	3,030
2024	68,000	49,728	23,963	25,765	48.19%	6,693	985	384	601	8.98%	2,305	34.44%	3,199
2025	68,000	51,477	25,383	26,094	49.31%	6,928	1,014	397	617	8.91%	2,386	34.44%	3,374
2026	68,000	53,227	26,846	26,381	50.44%	7,170	1,047	410	637	8.88%	2,469	34.44%	3,547
2027	68,000	54,977	28,358	26,619	51.58%	7,425	1,080	425	655	8.82%	2,557	34.44%	3,721
2028	68,000	56,731	29,930	26,801	52.76%	7,692	1,117	440	677	8.80%	2,649	34.44%	3,894
2029	68,000	58,497	31,575	26,922	53.98%	7,972	1,157	455	702	8.81%	2,745	34.43%	4,064
2030	68,000	60,207	33,255	26,952	55.23%	8,267	1,178	472	706	8.54%	2,847	34.44%	4,283

Normal cost rate includes administrative expenses.

State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004, and Public Act 96-0043.

Total expenses shown include benefit payments, refunds and administrative expenses.

#### Table 4c (Cont'd)

#### **36-Year Projection of Costs and Liabilities**

#### State Contribution Based on Public Act 88-0593, Public Act 94-0004, Public Act 96-0043

**Maximum Contribution Calculation: Without GOB Proceeds** 

#### **Rate of Return on Assets = 8.5%**

#### Phase-In of Deferred Asset Gains and Losses Recognized in the Projected Actuarial Value of Assets

(All Dollar Amounts in Millions)

								Annual No	rmal Cost		State Co	ntribution	
Plan Year End 6/30	Number Active	Actuarial Accrued Liability	Assets	Unfunded Liability	Funded Ratio	Total Payroll	Total	Employee Cont.	Balance	Percent of Pay	Amount	Percent of Pay	Total Expenses
2031	68,000	61,933	35,017	26,916	56.54%	8,546	1,229	487	742	8.68%	2,943	34.44%	4,452
2032	68,000	63,685	36,897	26,788	57.94%	8,868	1,277	505	772	8.71%	3,054	34.44%	4,612
2033	68,000	65,483	38,923	26,560	59.44%	9,212	1,331	525	806	8.75%	3,172	34.43%	4,763
2034	68,000	67,339	41,124	26,215	61.07%	9,575	1,389	545	844	8.81%	3,298	34.44%	4,906
2035	68,000	69,268	43,527	25,741	62.84%	9,959	1,450	567	883	8.87%	3,430	34.44%	5,046
2036	68,000	71,283	46,162	25,121	64.76%	10,362	1,516	591	925	8.93%	3,569	34.44%	5,181
2037	68,000	73,398	49,060	24,338	66.84%	10,785	1,585	615	970	8.99%	3,714	34.44%	5,314
2038	68,000	75,625	52,251	23,374	69.09%	11,227	1,657	641	1,016	9.05%	3,867	34.44%	5,447
2039	68,000	77,972	55,766	22,206	71.52%	11,687	1,731	668	1,063	9.10%	4,025	34.44%	5,583
2040	68,000	80,448	59,636	20,812	74.13%	12,166	1,807	695	1,112	9.14%	4,190	34.44%	5,720
2041	68,000	83,062	63,894	19,168	76.92%	12,663	1,885	724	1,161	9.17%	4,361	34.44%	5,863
2042	68,000	85,820	68,574	17,246	79.90%	13,178	1,965	754	1,211	9.19%	4,538	34.44%	6,013
2043	68,000	88,729	73,713	15,016	83.08%	13,711	2,047	784	1,263	9.21%	4,722	34.44%	6,169
2044	68,000	91,797	79,348	12,449	86.44%	14,264	2,131	816	1,315	9.22%	4,912	34.44%	6,333
2045	68,000	95,027	85,521	9,506	90.00%	14,837	2,216	849	1,367	9.21%	5,110	34.44%	6,507

Normal cost rate includes administrative expenses.

State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 94-0004, and Public Act 96-0043.

Total expenses shown include benefit payments, refunds and administrative expenses.

#### **36-Year Projection of Costs and Liabilities**

State Contribution Based on Public Act 88-0593, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043 Rate of Return on Assets = 8.5%

#### Phase-In of Deferred Asset Gains and Losses Recognized in the Projected Actuarial Value of Assets

(All Dollar Amounts in Millions)

							Annual Normal Cost				Required State Contribution						
											<b>(a)</b>	<b>(b)</b>	(c)=(a)-(b)	( <b>d</b> )	M inimum of	(c) and (d	)
Plan		Actuarial									Without	t		Formula			
Year End	Number	Accrued		Unfunded	Funded	Total		Employee		Percent	GOB	Debt	M aximum	Rate With	R e quire d	Percent	Total
6/30	Active	Liability	Assets	Liability	Ratio	Payroll	Total	Cont.	Balance	of Pay	Cont.	Service	Cont.	GOB	Cont.	of Pay	Expenses
2010	65 770	26.642	11.001	15 55 1	41 620/	4 1 1 2	615	225	290	0.240/	1 104	102	1 00 1	1 00 1	1 00 1	26 5 4 0/	1 252
2010	05,770	20,042	11,091	15,551	41.05%	4,115	615	255	300	9.24%	1,194	105	1,091	1,091	1,091	20.34%	1,555
2011	65,941	28,074	11,269	10,805	40.14%	4,194	642	240	402	9.59%	1,296	103	1,193	1,200	1,193	28.45%	1,434
2012	66,112	29,559	11,518	18,041	38.97%	4,360	667	249	418	9.59%	1,391	112	1,279	1,326	1,279	29.35%	1,525
2013	66,283	31,092	11,845	19,247	38.10%	4,525	692	259	433	9.57%	1,486	111	1,375	1,454	1,375	30.38%	1,626
2014	66,454	32,667	12,856	19,811	39.35%	4,692	717	269	448	9.55%	1,580	110	1,470	1,580	1,470	31.32%	1,735
2015	66,625	34,279	13,940	20,339	40.67%	4,864	741	279	462	9.50%	1,675	110	1,565	1,703	1,565	32.19%	1,852
2016	66,796	35,922	15,060	20,862	41.92%	5,039	766	289	477	9.47%	1,736	109	1,627	1,765	1,627	32.28%	1,978
2017	66,967	37,592	16,208	21,384	43.12%	5,220	791	299	492	9.43%	1,798	113	1,685	1,828	1,685	32.28%	2,111
2018	67,139	39,287	17,387	21,900	44.26%	5,406	816	310	506	9.36%	1,862	116	1,746	1,893	1,746	32.29%	2,247
2019	67,312	41,002	18,592	22,410	45.34%	5,600	843	321	522	9.32%	1,929	120	1,809	1,961	1,809	32.30%	2,392
2020	67,485	42,733	19,818	22,915	46.38%	5,802	870	333	537	9.26%	1,998	128	1,870	2,032	1,870	32.24%	2,543
2021	67,657	44,475	21,066	23,409	47.37%	6,011	897	345	552	9.18%	2,070	135	1,935	2,105	1,935	32.19%	2,700
2022	67,829	46,223	22,333	23,890	48.32%	6,230	925	357	568	9.12%	2,146	142	2,004	2,182	2,004	32.16%	2,863
2023	68,000	47,974	23,623	24,351	49.24%	6,457	954	370	584	9.04%	2,224	148	2,076	2,261	2,076	32.14%	3,030
2024	68,000	49,728	24,934	24,794	50.14%	6,693	985	384	601	8.98%	2,305	159	2,146	2,344	2,146	32.06%	3,199
2025	68,000	51,477	26,261	25,216	51.02%	6,928	1,014	397	617	8.91%	2,386	169	2,217	2,426	2,217	32.00%	3,374
2026	68,000	53,227	27,618	25,609	51.89%	7,170	1,047	410	637	8.88%	2,469	173	2,296	2,511	2,296	32.02%	3,547
2027	68,000	54,977	29,011	25,966	52.77%	7,425	1,080	425	655	8.82%	2,557	177	2,380	2,601	2,380	32.05%	3,721
2028	68,000	56,731	30,445	26,286	53.67%	7,692	1,117	440	677	8.80%	2,649	185	2,464	2,694	2,464	32.03%	3,894
2029	68,000	58,497	31,933	26,564	54.59%	7,972	1,157	455	702	8.81%	2,745	193	2,552	2,792	2,552	32.02%	4,064
2030	68,000	60,207	33,431	26,776	55.53%	8,267	1,178	472	706	8.54%	2,847	204	2,643	2,896	2,643	31.97%	4,283
		,	-,	.,		.,	,				,- ,		,	,	,- ,-		,

Normal cost rate includes administrative expenses.

State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, and Public Act 96-0043.

Total expenses shown include benefit payments, refunds and administrative expenses.

#### Table 4d (Cont'd)

#### **36-Year Projection of Costs and Liabilities**

State Contribution Based on Public Act 88-0593, Public Act 93-0002, Public Act 94-0004, Public Act 96-0043 Rate of Return on Assets = 8.5%

#### Phase-In of Deferred Asset Gains and Losses Recognized in the Projected Actuarial Value of Assets

(All Dollar Amounts in Millions)

							Annual Normal Cost				Required State Contribution						
											<b>(a)</b>	<b>(b)</b>	(c)=(a)-(b)	( <b>d</b> )	M inimum of	f (c) and (d	)
Plan		Actuarial									Without	t		Formula			
Year End	Number	Accrued		Unfunded	Funded	Total	J	Employee	9	Percent	GOB	Debt	M aximum	Rate With	R e quire d	Percent	Total
6/30	Active	Liability	Assets	Liability	Ratio	Payroll	Total	Cont.	Balance	of Pay	Cont.	Service	Cont.	GOB	Cont.	of Pay	Expenses
2031	68,000	61,933	34,984	26,949	56.49%	8,546	1,229	487	742	8.68%	2,943	215	2,728	2,993	2,728	31.93%	4,452
2032	68,000	63,685	36,632	27,053	57.52%	8,868	1,277	505	772	8.71%	3,054	220	2,834	3,106	2,834	31.96%	4,612
2033	68,000	65,483	38,408	27,075	58.65%	9,212	1,331	525	806	8.75%	3,172	219	2,953	3,226	2,953	32.06%	4,763
2034	68,000	67,339	40,623	26,716	60.33%	9,575	1,389	545	844	8.81%	3,298	0	N/A	3,354	3,354	35.02%	4,906
2035	68,000	69,268	43,044	26,224	62.14%	9,959	1,450	567	883	8.87%	3,430	0	N/A	3,488	3,488	35.02%	5,046
2036	68,000	71,283	45,701	25,582	64.11%	10,362	1,516	591	925	8.93%	3,569	0	N/A	3,629	3,629	35.02%	5,181
2037	68,000	73,398	48,626	24,772	66.25%	10,785	1,585	615	970	8.99%	3,714	0	N/A	3,777	3,777	35.02%	5,314
2038	68,000	75,625	51,849	23,776	68.56%	11,227	1,657	641	1,016	9.05%	3,867	0	N/A	3,932	3,932	35.02%	5,447
2039	68,000	77,972	55,400	22,572	71.05%	11,687	1,731	668	1,063	9.10%	4,025	0	N/A	4,093	4,093	35.02%	5,583
2040	68,000	80,448	59,313	21,135	73.73%	12,166	1,807	695	1,112	9.14%	4,190	0	N/A	4,261	4,261	35.02%	5,720
2041	68,000	83,062	63,621	19,441	76.59%	12,663	1,885	724	1,161	9.17%	4,361	0	N/A	4,435	4,435	35.02%	5,863
2042	68,000	85,820	68,358	17,462	79.65%	13,178	1,965	754	1,211	9.19%	4,538	0	N/A	4,615	4,615	35.02%	6,013
2043	68,000	88,729	73,561	15,168	82.91%	13,711	2,047	784	1,263	9.21%	4,722	0	N/A	4,802	4,802	35.02%	6,169
2044	68,000	91,797	79,271	12,526	86.35%	14,264	2,131	816	1,315	9.22%	4,912	0	N/A	4,996	4,996	35.02%	6,333
2045	68,000	95,027	85,528	9,499	90.00%	14,837	2,216	849	1,367	9.21%	5,110	0	N/A	5,196	5,196	35.02%	6,507

Normal cost rate includes administrative expenses.

State contribution based on the requirements of Public Act 88-0593, as amended by Public Act 90-0065, Public Act 93-0002, Public Act 94-0004, and Public Act 96-0043. Total expenses shown include benefit payments, refunds and administrative expenses.

#### Table 5

# **Financial Accounting Information in Accordance with GASB Statement No. 25**

#### A. Schedule of Funding Progress

			<u>6/30/2009</u>		<u>6/30/2008</u>
1	Actuarial Value of Assets	\$	10,999,953,527	\$	10,995,366,485
2	2 Actuarial Accrued Liability (AAL)		25,298,346,092		23,841,280,102
3	3 Unfunded AAL (UAAL) [(2) - (1)]		14,298,392,565		12,845,913,617
2	Funded Ratio $[(1) \div (2)]$		43.48%		46.12%
4	5 Covered Payroll		4,027,263,000		3,967,704,000
e	5 UAAL as a Percentage of Covered Payroll		355.04%		323.76%
B.	Schedule of Employer Contributions for the Fiscal Y	ea	r Ended June 30	, 2	009
1	Annual Required Contribution (ARC) per GASB 25				
	(a) Percentage of payroll				24.916%
	(b) Covered payroll for fiscal year 2009				\$4,027,263,000
	(c) ARC for fiscal year 2009				\$1,003,432,849
2	2 Total Employer Contribution				\$774,910,344
3	B Percentage of ARC Contributed $[(2) \div (1)]$				77.23%
۷	Annual Contribution Required per State Statute				
	(a) Percentage of payroll				19.116%
	(b) Covered payroll for fiscal year 2009				\$4,027,263,000
	(c) Total required contribution				\$769,851,595
4	5 Employer Contribution				\$774,910,344
e	5 Percentage of (4) Contributed $[(5) \div (4)]$				100.66%

#### C. Notes to Required Schedules

- 1. The cost method used to determine the ARC is the Projected Unit Credit Cost Method. The ARC (as percentage of payroll) for the 2009 fiscal year was determined as of June 30, 2007, based on the assumptions then in effect.
- 2. The assets are shown at actuarial value.
- 3. Economic assumptions include an inflation rate of 3.0 percent; an investment return rate of 8.50 percent; salary increase rates based on age-related productivity and merit rates plus inflation; and postretirement benefit increases of 3.0 percent.
- 4. The amortization method is an open 30-year period, level-percentage-of-payroll.

# Development of Net Pension Obligation in Accordance with GASB Statement No. 27 (Date of Transition is July 1, 1996)

		able Actuariar va	aluation			
	As-of	Investment	Annual Required	Actual	Amortiz	ation
Fiscal Year	Date	Assumption	Contribution*	Contribution**	Years	Factor
(1)	(2)	(3)	(4)	(5)	(6)	(7)
7/1/87 - 6/30/88	6/30/1986	8%	\$ 186,935,353	\$ 99,990,922	40	11.92461333
7/1/88 - 6/30/89	6/30/1987	8%	179,420,448	98,471,993	40	11.92461333
7/1/89 - 6/30/90	6/30/1988	8%	184,689,149	107,938,094	40	11.92461333
7/1/90 - 6/30/91	6/30/1989	8%	191,296,277	115,979,568	40	11.92461333
7/1/91 - 6/30/92	6/30/1990	8%	208,717,019	98,532,783	40	11.92461333
7/1/92 - 6/30/93	6/30/1991	8%	227,588,508	114,413,597	40	11.92461333
7/1/93 - 6/30/94	6/30/1992	8%	277,518,586	127,649,961	40	11.92461333
7/1/94 - 6/30/95	6/30/1993	8%	306,006,674	136,589,471	40	11.92461333
7/1/95 - 6/30/96	6/30/1994	8%	335,219,027	146,397,934	40	11.92461333
7/1/96 - 6/30/97	6/30/1995	8%	211,125,012	158,179,514	40	19.84983174
7/1/97 - 6/30/98	6/30/1996	8%	206,725,718	200,741,736	40	19.53100753
7/1/98 - 6/30/99	6/30/1997	8.5%	319,746,993	315,525,007	40	15.55212396
7/1/99 - 6/30/00	6/30/1998	8.5%	299,081,856	340,872,521	40	15.38193387
7/1/00 - 6/30/01	6/30/1999	8.5%	294,351,538	366,028,937	40	15.17924930
7/1/01 - 6/30/02	6/30/2000	8.5%	306,509,801	386,116,583	40	15.53675931
7/1/02 - 6/30/03	6/30/2001	8.5%	449,348,585	396,067,236	40	16.01251393
7/1/03 - 6/30/04	6/30/2002	8.5%	576,219,951	1,864,673,411	40	20.17751836
7/1/04 - 6/30/05	6/30/2003	8.5%	727,428,010	427,434,612	40	19.34057660
7/1/05 - 6/30/06	6/30/2004	8.5%	672,555,569	210,499,791	40	18.52371012
7/1/06 - 6/30/07	6/30/2005	8.5%	823,802,760	358,786,650	30	14.85458369
7/1/07 - 6/30/08	6/30/2006	8.5%	986,410,891	587,732,407	30	14.91835797
7/1/08 - 6/30/09	6/30/2007	8.5%	1,003,432,849	774,910,344	30	15.42654344
	Roginning			Annual Pansion	Increase	End of
	Degnining			Annual I Chilon	mercase	
	of Year	Interest on	Amortization	Cost (APC)***	in NPO	Year NPO
Fiscal Year	of Year NPO	Interest on NPO	Amortization of NPO	Cost (APC)*** (4 + 9 - 10)	in NPO (11 - 5)	Year NPO (8 + 12)
Fiscal Year (1)	of Year NPO (8)	Interest on NPO (9)	Amortization of NPO (10)	Cost (APC)*** (4 + 9 - 10) (11)	in NPO (11 - 5) (12)	Year NPO (8 + 12) (13)
<b>Fiscal Year</b> (1) 7/1/87 - 6/30/88	of Year <u>NPO</u> (8) \$ 0	Interest on NPO (9) \$ 0	Amortization           of NPO           (10)           \$         0	Cost (APC)*** (4 + 9 - 10) (11) \$186,935,353	in NPO (11 - 5) (12) \$ 86,944,431	Year NPO (8 + 12) (13) \$ 86,944,431
Fiscal Year (1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89	beginning of Year           NPO           (8)           \$ 0           86,944,431	Interest on NPO (9) \$ 0 6,955,554	Amortization of NPO (10) \$ 0 7,291,174	$\frac{\text{Cost (APC)}^{***}}{(4+9-10)}$ (11) \$186,935,353 179,084,828	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835	Year NPO           (8 + 12)           (13)           \$ 86,944,431           167,557,267
Fiscal Year (1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267	Interest on NPO (9) \$ 0 6,955,554 13,404,581	Amortization of NPO (10) \$ 0 7,291,174 14,051,379	$\frac{\text{Cost} (APC)^{***}}{(1+9-10)}$ (11) \$186,935,353 179,084,828 184,042,351	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257	Year NPO           (8 + 12)           (13)           \$ 86,944,431           167,557,267           243,661,524
Fiscal Year           (1)           7/1/87 - 6/30/88           7/1/88 - 6/30/89           7/1/89 - 6/30/90           7/1/90 - 6/30/91	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267           243,661,524	Interest on NPO           (9)           \$ 0           6,955,554           13,404,581           19,492,922	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495	$\frac{\text{Cost} (APC)^{***}}{(11)}$ $\frac{(4 + 9 - 10)}{(11)}$ $\$186,935,353$ $179,084,828$ $184,042,351$ $190,355,705$	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137	Year NPO           (8 + 12)           (13)           \$ 86,944,431           167,557,267           243,661,524           318,037,660
Fiscal Year           (1)           7/1/87 - 6/30/88           7/1/88 - 6/30/89           7/1/89 - 6/30/90           7/1/90 - 6/30/91           7/1/91 - 6/30/92	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267           243,661,524           318,037,660	Interest on NPO           (9)           \$ 0           6,955,554           13,404,581           19,492,922           25,443,013	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690	$\frac{\text{Cost} (APC)^{***}}{(1+9-10)}$ $\frac{(4+9-10)}{(11)}$ $\$186,935,353$ $179,084,828$ $184,042,351$ $190,355,705$ $207,489,343$	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560	Year NPO (8 + 12)           (13)           \$ 86,944,431           167,557,267           243,661,524           318,037,660           426,994,220
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220	Interest on NPO           (9)           \$         0           6,955,554           13,404,581           19,492,922           25,443,013           34,159,538	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804	$\frac{\text{Cost} (APC)^{***}}{(1+9-10)}$ $\frac{(4+9-10)}{(11)}$ $\$186,935,353$ $179,084,828$ $184,042,351$ $190,355,705$ $207,489,343$ $225,940,241$	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644	Year NPO           (8 + 12)           (13)           \$ 86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864	Interest on NPO (9) \$ 0 6,955,554 13,404,581 19,492,922 25,443,013 34,159,538 43,081,669	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447	Cost (APC)*** $(4+9-10)$ $(11)$ \$186,935,353179,084,828184,042,351190,355,705207,489,343225,940,241275,439,808	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711	Interest on NPO           (9)           \$ 0           6,955,554           13,404,581           19,492,922           25,443,013           34,159,538           43,081,669           54,904,857	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127	Cost (APC)***(4 + 9 - 10)(11)\$186,935,353179,084,828184,042,351190,355,705207,489,343225,940,241275,439,808303,357,404	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644	Interest on NPO           (9)           \$ 0           6,955,554           13,404,581           19,492,922           25,443,013           34,159,538           43,081,669           54,904,857           68,246,292	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313	Cost (APC)***(4 + 9 - 10)(11)\$186,935,353179,084,828184,042,351190,355,705207,489,343225,940,241275,439,808303,357,404331,926,005	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716	Interest on NPO           (9)           \$ 0           6,955,554           13,404,581           19,492,922           25,443,013           34,159,538           43,081,669           54,904,857           68,246,292           83,088,537	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200	Cost (APC)***(4 + 9 - 10)(11)\$186,935,353179,084,828184,042,351190,355,705207,489,343225,940,241275,439,808303,357,404331,926,005241,890,349	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716 1,122,317,551
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97 7/1/97 - 6/30/98	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716           1,122,317,551	Interest on (9)           \$ 0           6,955,554           13,404,581           19,492,922           25,443,013           34,159,538           43,081,669           54,904,857           68,246,292           83,088,537           89,785,404	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200 57,463,372	Cost (APC)***(4 + 9 - 10)(11)\$186,935,353179,084,828184,042,351190,355,705207,489,343225,940,241275,439,808303,357,404331,926,005241,890,349239,047,750	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835 38,306,014	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716 1,122,317,551 1,160,623,565
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97 7/1/97 - 6/30/98 7/1/98 - 6/30/99	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716           1,122,317,551           1,160,623,565	Interest on (9) \$ 0 6,955,554 13,404,581 19,492,922 25,443,013 34,159,538 43,081,669 54,904,857 68,246,292 83,088,537 89,785,404 98,653,003	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200 57,463,372 74,627,978	Cost (APC)*** $(4 + 9 - 10)$ $(11)$ \$186,935,353179,084,828184,042,351190,355,705207,489,343225,940,241275,439,808303,357,404331,926,005241,890,349239,047,750343,772,018	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835 38,306,014 28,247,011	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716 1,122,317,551 1,160,623,565 1,188,870,576
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97 7/1/97 - 6/30/98 7/1/98 - 6/30/99 7/1/99 - 6/30/00	beginning of Year           NPO           (8)           \$         0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716           1,122,317,551           1,160,623,565           1,188,870,576	Interest on NPO           (9)           \$ 0           6,955,554           13,404,581           19,492,922           25,443,013           34,159,538           43,081,669           54,904,857           68,246,292           83,088,537           89,785,404           98,653,003           101,053,999	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200 57,463,372 74,627,978 77,290,059	Cost (APC)*** $(4 + 9 - 10)$ $(11)$ \$186,935,353179,084,828184,042,351190,355,705207,489,343225,940,241275,439,808303,357,404331,926,005241,890,349239,047,750343,772,018322,845,796	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835 38,306,014 28,247,011 (18,026,725)	Year NPO $(8 + 12)$ $(13)$ \$ 86,944,431167,557,267243,661,524318,037,660426,994,220538,520,864686,310,711853,078,6441,038,606,7161,122,317,5511,160,623,5651,188,870,5761,170,843,851
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97 7/1/97 - 6/30/98 7/1/98 - 6/30/99 7/1/99 - 6/30/00 7/1/00 - 6/30/01	beginning of Year           NPO           (8)           \$         0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716           1,122,317,551           1,160,623,565           1,188,870,576           1,170,843,851	Interest on (9)           \$         0           6,955,554         13,404,581           19,492,922         25,443,013           34,159,538         43,081,669           54,904,857         68,246,292           83,088,537         89,785,404           98,653,003         101,053,999           99,521,727         101,053,999	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200 57,463,372 74,627,978 77,290,059 77,134,503	Cost (APC)*** $(4 + 9 - 10)$ $(11)$ \$186,935,353179,084,828184,042,351190,355,705207,489,343225,940,241275,439,808303,357,404331,926,005241,890,349239,047,750343,772,018322,845,796316,738,762	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835 38,306,014 28,247,011 (18,026,725) (49,290,175)	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716 1,122,317,551 1,160,623,565 1,188,870,576 1,170,843,851 1,121,553,676
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97 7/1/97 - 6/30/98 7/1/98 - 6/30/99 7/1/99 - 6/30/00 7/1/00 - 6/30/01 7/1/01 - 6/30/02	beginning of Year           NPO           (8)           \$         0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716           1,122,317,551           1,160,623,565           1,188,870,576           1,170,843,851           1,121,553,676	Interest on (9) \$ 0 6,955,554 13,404,581 19,492,922 25,443,013 34,159,538 43,081,669 54,904,857 68,246,292 83,088,537 89,785,404 98,653,003 101,053,999 99,521,727 95,332,062	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200 57,463,372 74,627,978 77,290,059 77,134,503 72,187,105	Cost $(APC)^{***}$ (4 + 9 - 10) (11) \$186,935,353 179,084,828 184,042,351 190,355,705 207,489,343 225,940,241 275,439,808 303,357,404 331,926,005 241,890,349 239,047,750 343,772,018 322,845,796 316,738,762 329,654,758	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835 38,306,014 28,247,011 (18,026,725) (49,290,175) (56,461,825)	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716 1,122,317,551 1,160,623,565 1,188,870,576 1,170,843,851 1,121,553,676 1,065,091,851
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97 7/1/97 - 6/30/98 7/1/98 - 6/30/99 7/1/99 - 6/30/00 7/1/00 - 6/30/01 7/1/01 - 6/30/02 7/1/02 - 6/30/03	beginning of Year           NPO           (8)           \$         0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716           1,122,317,551           1,160,623,565           1,188,870,576           1,70,843,851           1,121,553,676           1,065,091,851	Interest on NPO           (9)           \$         0           6,955,554           13,404,581           19,492,922           25,443,013           34,159,538           43,081,669           54,904,857           68,246,292           83,088,537           89,785,404           98,653,003           101,053,999           99,521,727           95,332,062           90,532,807	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200 57,463,372 74,627,978 77,290,059 77,134,503 72,187,105 66,516,217	Cost (APC)*** $(4 + 9 - 10)$ (11)\$186,935,353179,084,828184,042,351190,355,705207,489,343225,940,241275,439,808303,357,404331,926,005241,890,349239,047,750343,772,018322,845,796316,738,762329,654,758473,365,175	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835 38,306,014 28,247,011 (18,026,725) (49,290,175) (56,461,825) 77,297,939	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716 1,122,317,551 1,160,623,565 1,188,870,576 1,170,843,851 1,121,553,676 1,065,091,851 1,142,389,790
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97 7/1/97 - 6/30/98 7/1/98 - 6/30/99 7/1/99 - 6/30/00 7/1/00 - 6/30/01 7/1/01 - 6/30/02 7/1/02 - 6/30/03 7/1/03 - 6/30/04	beginning of Year           NPO           (8)           \$         0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716           1,122,317,551           1,160,623,565           1,188,870,576           1,70,843,851           1,121,553,676           1,065,091,851           1,142,389,790	Interest on NPO           (9)           \$         0           6,955,554           13,404,581           19,492,922           25,443,013           34,159,538           43,081,669           54,904,857           68,246,292           83,088,537           89,785,404           98,653,003           101,053,999           99,521,727           95,332,062           90,532,807           97,103,132	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200 57,463,372 74,627,978 77,290,059 77,134,503 72,187,105 66,516,217 56,616,962	Cost (APC)*** $(4 + 9 - 10)$ (11)\$186,935,353179,084,828184,042,351190,355,705207,489,343225,940,241275,439,808303,357,404331,926,005241,890,349239,047,750343,772,018322,845,796316,738,762329,654,758473,365,175616,706,121	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835 38,306,014 28,247,011 (18,026,725) (49,290,175) (56,461,825) 77,297,939 (1,247,967,290)	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716 1,122,317,551 1,160,623,565 1,188,870,576 1,170,843,851 1,121,553,676 1,065,091,851 1,142,389,790 (105,577,500)
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97 7/1/97 - 6/30/98 7/1/98 - 6/30/99 7/1/99 - 6/30/00 7/1/00 - 6/30/01 7/1/01 - 6/30/02 7/1/02 - 6/30/03 7/1/03 - 6/30/04 7/1/04 - 6/30/05	beginning of Year           NPO           (8)           \$         0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716           1,122,317,551           1,160,623,565           1,188,870,576           1,70,843,851           1,121,553,676           1,065,091,851           1,142,389,790           (105,577,500)	Interest on NPO           (9)           \$         0           6,955,554           13,404,581           19,492,922           25,443,013           34,159,538           43,081,669           54,904,857           68,246,292           83,088,537           89,785,404           98,653,003           101,053,999           99,521,727           95,332,062           90,532,807           97,103,132           (8,974,088)	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200 57,463,372 74,627,978 77,290,059 77,134,503 72,187,105 66,516,217 56,616,962 (5,458,860)	Cost $(APC)^{***}$ (4 + 9 - 10) (11) \$186,935,353 179,084,828 184,042,351 190,355,705 207,489,343 225,940,241 275,439,808 303,357,404 331,926,005 241,890,349 239,047,750 343,772,018 322,845,796 316,738,762 329,654,758 473,365,175 616,706,121 723,912,782	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835 38,306,014 28,247,011 (18,026,725) (49,290,175) (56,461,825) 77,297,939 (1,247,967,290) 296,478,170	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716 1,122,317,551 1,160,623,565 1,188,870,576 1,170,843,851 1,121,553,676 1,065,091,851 1,142,389,790 (105,577,500) 190,900,670
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97 7/1/97 - 6/30/98 7/1/98 - 6/30/99 7/1/99 - 6/30/00 7/1/00 - 6/30/01 7/1/01 - 6/30/03 7/1/02 - 6/30/03 7/1/03 - 6/30/04 7/1/04 - 6/30/05 7/1/05 - 6/30/06	beginning of Year           NPO           (8)           \$         0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716           1,122,317,551           1,160,623,565           1,188,870,576           1,70,843,851           1,121,553,676           1,065,091,851           1,142,389,790           (105,577,500)           190,900,670	Interest on NPO (9) \$ 0 6,955,554 13,404,581 19,492,922 25,443,013 34,159,538 43,081,669 54,904,857 68,246,292 83,088,537 89,785,404 98,653,003 101,053,999 99,521,727 95,332,062 90,532,807 97,103,132 (8,974,088) 16,226,557	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200 57,463,372 74,627,978 77,290,059 77,134,503 72,187,105 66,516,217 56,616,962 (5,458,860) 10,305,747	Cost $(APC)^{***}$ (4 + 9 - 10) (11) \$186,935,353 179,084,828 184,042,351 190,355,705 207,489,343 225,940,241 275,439,808 303,357,404 331,926,005 241,890,349 239,047,750 343,772,018 322,845,796 316,738,762 329,654,758 473,365,175 616,706,121 723,912,782 678,476,379	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835 38,306,014 28,247,011 (18,026,725) (49,290,175) (56,461,825) 77,297,939 (1,247,967,290) 296,478,170 467,976,588	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716 1,122,317,551 1,160,623,565 1,188,870,576 1,170,843,851 1,121,553,676 1,065,091,851 1,142,389,790 (105,577,500) 190,900,670 658,877,258
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97 7/1/97 - 6/30/98 7/1/98 - 6/30/00 7/1/00 - 6/30/01 7/1/01 - 6/30/02 7/1/02 - 6/30/04 7/1/04 - 6/30/05 7/1/05 - 6/30/06 7/1/06 - 6/30/07	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716           1,122,317,551           1,160,623,565           1,188,870,576           1,70,843,851           1,121,553,676           1,065,091,851           1,142,389,790           (105,577,500)           190,900,670           658,877,258	Interest on NPO (9) \$ 0 6,955,554 13,404,581 19,492,922 25,443,013 34,159,538 43,081,669 54,904,857 68,246,292 83,088,537 89,785,404 98,653,003 101,053,999 99,521,727 95,332,062 90,532,807 97,103,132 (8,974,088) 16,226,557 56,004,567	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200 57,463,372 74,627,978 77,290,059 77,134,503 72,187,105 66,516,217 56,616,962 (5,458,860) 10,305,747 44,355,148	Cost $(APC)^{***}$ (4 + 9 - 10) (11) \$186,935,353 179,084,828 184,042,351 190,355,705 207,489,343 225,940,241 275,439,808 303,357,404 331,926,005 241,890,349 239,047,750 343,772,018 322,845,796 316,738,762 329,654,758 473,365,175 616,706,121 723,912,782 678,476,379 835,452,179	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835 38,306,014 28,247,011 (18,026,725) (49,290,175) (56,461,825) 77,297,939 (1,247,967,290) 296,478,170 467,976,588 476,665,529	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716 1,122,317,551 1,160,623,565 1,188,870,576 1,170,843,851 1,121,553,676 1,065,091,851 1,142,389,790 (105,577,500) 190,900,670 658,877,258 1,135,542,787
(1) 7/1/87 - 6/30/88 7/1/88 - 6/30/89 7/1/89 - 6/30/90 7/1/90 - 6/30/91 7/1/91 - 6/30/92 7/1/92 - 6/30/93 7/1/93 - 6/30/94 7/1/94 - 6/30/95 7/1/95 - 6/30/96 7/1/96 - 6/30/97 7/1/97 - 6/30/98 7/1/98 - 6/30/00 7/1/00 - 6/30/01 7/1/01 - 6/30/02 7/1/02 - 6/30/04 7/1/04 - 6/30/05 7/1/05 - 6/30/06 7/1/06 - 6/30/07 7/1/06 - 6/30/07 7/1/07 - 6/30/08	beginning of Year           NPO           (8)           \$ 0           86,944,431           167,557,267           243,661,524           318,037,660           426,994,220           538,520,864           686,310,711           853,078,644           1,038,606,716           1,122,317,551           1,160,623,565           1,188,870,576           1,065,091,851           1,124,389,790           (105,577,500)           190,900,670           658,877,258           1,135,542,787	Interest on NPO (9) \$ 0 6,955,554 13,404,581 19,492,922 25,443,013 34,159,538 43,081,669 54,904,857 68,246,292 83,088,537 89,785,404 98,653,003 101,053,999 99,521,727 95,332,062 90,532,807 97,103,132 (8,974,088) 16,226,557 56,004,567 96,521,137	Amortization of NPO (10) \$ 0 7,291,174 14,051,379 20,433,495 26,670,690 35,807,804 45,160,447 57,554,127 71,539,313 52,323,200 57,463,372 74,627,978 77,290,059 77,134,503 72,187,105 66,516,217 56,616,962 (5,458,860) 10,305,747 44,355,148 76,117,143	Cost $(APC)^{***}$ (4 + 9 - 10) (11) \$186,935,353 179,084,828 184,042,351 190,355,705 207,489,343 225,940,241 275,439,808 303,357,404 331,926,005 241,890,349 239,047,750 343,772,018 322,845,796 316,738,762 329,654,758 473,365,175 616,706,121 723,912,782 678,476,379 835,452,179 1,006,814,885	in NPO (11 - 5) (12) \$ 86,944,431 80,612,835 76,104,257 74,376,137 108,956,560 111,526,644 147,789,847 166,767,933 185,528,071 83,710,835 38,306,014 28,247,011 (18,026,725) (49,290,175) (56,461,825) 77,297,939 (1,247,967,290) 296,478,170 467,976,588 476,665,529 419,082,478	Year NPO (8 + 12) (13) \$ 86,944,431 167,557,267 243,661,524 318,037,660 426,994,220 538,520,864 686,310,711 853,078,644 1,038,606,716 1,122,317,551 1,160,623,565 1,188,870,576 1,170,843,851 1,121,553,676 1,065,091,851 1,142,389,790 (105,577,500) 190,900,670 658,877,258 1,135,542,787 1,554,625,265

\* The annual required contributions for FYE 6/30/1988 through 6/30/1996 were determined based on the APB8 percentages provided by the System. Thereafter, the annual required contribution was obtained by adding the normal cost and an amortization over the period disclosed in column (6) (constant percent of payroll) of the UAAL (AAL - MVA) at the valuation date shown in column (2). The resulting percentage of payroll is applied to the actual covered payroll for the applicable fiscal year.

\*\* The actual contributions for FYE 6/30/1988 through 6/30/2008 were obtained from the comprehensive annual financial report. The actual contribution for FYE 6/30/2009 was provided by the System.

\*\*\* APC = (4) +[(8)\*(3)] - [(8)/(7)]

# **Actuarial Methods and Assumptions**

# **Actuarial Cost Method Adopted June 30, 1989**

The projected unit credit normal cost method is used. Under this method, the projected pension at retirement age is first calculated and the value thereof at the individual member's current or attained age is determined. The normal cost for the member for the current year is equal to the value so determined divided by the member's projected service at retirement. The normal cost for the plan for the year is the sum of the individual normal costs.

The actuarial liability at any point in time is the value of the projected pensions at that time less the value of future normal costs.

For ancillary benefits for active members, in particular death and survivor benefits, termination benefits, and the postretirement increases, the same procedure as outlined above is followed.

Estimated annual administrative expenses are added to the normal cost.

For valuation purposes, as well as projection purposes, an actuarial value of assets is used.

# **Actuarial Assumptions Adopted June 30, 2006**

# Mortality

1994 Group Annuity Mortality Table for males and for females. Five percent of deaths among active employees are assumed to be in the performance of their duty.

# Interest

8.50 percent per annum, compounded annually.

# **Marriage Assumption**

85.0 percent of active male participants and 65.0 percent of active female participants are assumed to be married. Actual marital status at benefit commencement is used for retirees.

# Social Security Offset for Survivor Benefits

No offset assumption for male surviving spouses because it is assumed their own PIA is as great as their spouses' PIA. Sixty percent of married male members are assumed to have a dual income household. For the dual income household, it is assumed the offset at age 60 is 45.0 percent of the original survivor benefit. It is assumed the offset at age 62 is 10.0 percent of the original survivor benefit. Furthermore, it is assumed that 50 percent of retirees on or after July 1, 2009, will elect to remove the offset provision. In exchange for the removal, the member's retirement annuity is reduced by 3.825 percent monthly.

# Termination

Illustrative rates of withdrawal from the plan are as follows:

Select Withdrawal of General Formula Employees								
Year of Service	Males	Females						
0	0.2000	0.2000						
1	0.0800	0.0800						

Ultimate W ithdrawal of General Formula Employees								
Age	Males	Females						
25	0.0375	0.0450						
30	0.0350	0.0400						
35	0.0250	0.0300						
40	0.0175	0.0200						
45	0.0150	0.0150						
50	0.0125	0.0150						
55	0.0125	0.0150						
60	0.0125	0.0150						
65	0.0125	0.0150						

Select Withdrawal of Alternate Formula Employees								
Years of Service	Males	Females						
0	0.0600	0.1100						
1	0.0450	0.0550						

Ultimate Withdrawal of Alternate Formula Employees								
Age	Males	Females						
25	0.0250	0.0375						
30	0.0200	0.0300						
35	0.0150	0.0225						
40	0.0100	0.0170						
45	0.0100	0.0160						
50	0.0100	0.0140						
55	0.0100	0.0140						
60	0.0100	0.0140						
65	0.0100	0.0140						

It is assumed that terminated employees will not be rehired. The rates apply only to employees who have not fulfilled the service requirement necessary for retirement at any given age.

## **Salary Increases**

Age	Annual Increase		
25	8.35%		
30	7.22%		
35	6.41%		
40	5.80%		
45	5.33%		
50	4.95%		
55	4.65%		
60	4.39%		
65	4.17%		
70	4.00%		

Illustrative rates of increase per individual employee per annum, compounded annually:

These increases include a component for inflation of 3.0 percent per annum.

### Disability

Disability is valued as a term cost only. Because members who receive disability benefits typically spend less than one year on disability, they are considered active members. Therefore a load of 0.90 percent of pay on the normal cost is applied to reflect the near-term cash flow.

# **Population Projection**

For purposes of determining annual appropriation as a percent of total covered payroll, the size of the active group is assumed to increase such that the fiscal year 2023 population is 68,000. New entrants are assumed to enter with an average age of 36.20 years and an average pay of \$44,879 (2009 dollars). These values are based on the average age and average pay of new entrants over the last 15 years. The average increase in payroll for the 36-year projection period is 4.0 percent per annum.

# Retirement

Employees are assumed to retire in accordance with the rates shown below. The rates apply only to employees who have fulfilled the service requirement necessary for retirement at any given age.

Retirement Rates for General Formula Employees				
	Males	Females		
50	5.00%	5.00%		
51	5.00%	5.00%		
52	12.00%	12.00%		
53	10.00%	15.00%		
54	11.70%	15.00%		
55	12.60%	15.00%		
56	15.00%	15.00%		
57	15.00%	15.00%		
58	15.00%	15.00%		
59	15.00%	15.00%		
60	12.50%	15.00%		
61	12.50%	10.00%		
62	15.00%	20.00%		
63	15.00%	15.00%		
64	10.00%	20.00%		
65	20.00%	30.00%		
66	15.00%	20.00%		
67	15.00%	20.00%		
68	10.00%	15.00%		
69	20.00%	15.00%		
70	100.00%	100.00%		

Early Retirement Rates for General Formula Employees				
Age	Males	Females		
55	6.00%	6.00%		
56	7.00%	8.00%		
57	8.00%	10.00%		
58	9.00%	12.00%		
59	10.00%	14.00%		

Retirement Rates for Alternate Formula Employees				
Age	Males	Females		
50	20.00%	25.00%		
51	20.00%	10.00%		
52	20.00%	10.00%		
53	20.00%	20.00%		
54	20.00%	20.00%		
55	20.00%	20.00%		
56	15.00%	15.00%		
57	15.00%	15.00%		
58	15.00%	15.00%		
59	15.00%	15.00%		
60	35.00%	20.00%		
61	36.50%	15.00%		
62	38.00%	25.00%		
63	39.50%	40.00%		
64	41.00%	40.00%		
65	80.00%	55.00%		
66	40.00%	55.00%		
67	55.00%	45.00%		
68	55.00%	45.00%		
69	40.00% 45.00%			
70	100.00%	100.00%		

### Assets

Assets available for benefits are used as described on page 34.

#### **Expenses**

As estimated and advised by SERS staff, based on current expenses with an allowance for expected increases.

# Spouse's Age

The female spouse is assumed to be three years younger than the male spouse.

# Children

It is assumed that married members have 2.2 children, one year apart in age.

The age of the youngest child of a deceased employee at his date of death is assumed to be as follows:

Age at Death	Age of Youngest	Age at Death	Age of Youngest
of Employee	Child	of Employee	Child
20	2	40	6
25	3	45	8
30	4	50	10
35	5	55	12
		60	14

## **Overtime and Shift Differentials**

Reported earnings include base pay alone. It is assumed that overtime and shift differentials will increase total payroll by 3.5 percent over reported earnings.

## **Missing Data**

If earnings were not available, the annual rate of pay was assumed to be \$35,000. If a birth date was not available, the member was assumed to be age 35.

# **Projection Methodology Adopted June 30, 2005, and Amended June 30, 2009**

# Appropriation Requirements Under P.A. 93-0002, P.A. 94-0004, and P.A. 96-0043

#### State Contributions under P.A. 93-0002

In general, for each year during the life of the GOB program, the state contributions to the System are to be calculated as follows:

- 1. Calculation of the contribution maximum
  - a. A projection of contributions will be made from the valuation date to June 30, 2045. Such projection will be based on hypothetical asset values determined using the following assumptions:
    - i) That the System had received no portion of the general obligation bond proceeds in excess of the scheduled contributions for the remainder of fiscal 2003 and for the entirety of 2004,
    - ii) That hypothetical state contributions had been made each fiscal year from 2005 through the valuation date, based on the funding process in place prior to P.A. 93-0002 (without regard to prior state minimum requirements),
    - iii) That the actual amounts of member contributions and the actual cash outflows (benefit payments, refunds and administrative expenses) for each year prior to the valuation date were realized, and
    - iv) That the hypothetical fund earned returns in each prior fiscal year equal to the rate of total return actually earned by the retirement fund in that year.
  - b. The hypothetical asset values developed in a., above, will not exceed the actual assets of the fund.
  - c. A projection of maximum contributions for each year of the GOB program will be performed each year, by reducing the contributions produced in a., above, by the respective amount of debt service allocated to the System for each year.
- 2. Calculation of the contribution with GOB proceeds
  - a. The basic projection of state contributions from the valuation date through June 30, 2045, will be made, taking into account all assets of the System, including the GOB proceeds.
  - b. State contribution rates (expressed as a percentage of covered pay), in the pattern required by the funding sections of the statutes, are calculated.
  - c. In those projections, the dollars of state contributions which are added to assets each year during the GOB program are limited by the contribution maximum. Because the bonds are to be liquidated by the end of fiscal 2033, there is no contribution maximum thereafter.

#### State Contributions under P.A. 94-0004

The following is an excerpt from the Illinois Compiled statutes 40 ILCS 5/14-108.3 (f)-(g):

(f) The System shall determine the amount of the increase in the present value of future benefits resulting from the granting of early retirement incentives under this Section and shall report that amount to the Governor and the Commission on Government Forecasting and Accountability on or after the effective date of this amendatory Act of the 93rd General Assembly and on or before November 15, 2004. Beginning with State fiscal year 2008, the increase reported under this subsection (f) shall be included in the calculation of the required State contribution under Section 14-131.

(g) In addition to the contributions otherwise required under this Article, the State shall appropriate and pay to the System an amount equal to \$70,000,000 in State fiscal years 2004 and 2005.

#### State Contributions under P.A. 96-0043

The following is an excerpt from the Illinois Compiled statutes 40 ILCS 5/14-131:

(g) For purposes of determining the required State contribution to the System, the value of the System's assets shall be equal to the actuarial value of the System's assets, which shall be calculated as follows:

As of June 30, 2008, the actuarial value of the System's assets shall be equal to the market value of the assets as of that date. In determining the actuarial value of the System's assets for fiscal years after June 30, 2008, any actuarial gains or losses from investment return incurred in a fiscal year shall be recognized in equal annual amounts over the five-year period following that fiscal year.

(h) For purposes of determining the required State contribution to the System for a particular year, the actuarial value of assets shall be assumed to earn a rate of return equal to the System's actuarially assumed rate of return.

Following the above legislation we have calculated the required contribution and the results are shown in the summary section of this report.

#### Appendix B

# Summary of Retirement System Plan (As of June 30, 2009)

# Purpose

The State Employees' Retirement System of Illinois, a State Agency, provides an orderly means whereby aged or disabled employees may be retired from active service without prejudice or hardship and enables the employees to accumulate reserves for old age, disability, death and termination of employment.

## Administration

Responsibility for the operation of the System and the direction of its policies is vested in a Board of Trustees of seven members. The administration of the detailed affairs of the System is the responsibility of the Executive Secretary who is appointed by the Board of Trustees. Administrative policies and procedures are designed to ensure an accurate accounting of funds of the System and prompt payment of claims for benefits within the applicable statute.

## Membership

All persons entering State service on or after January 1, 1984, become members upon completion of six months of continuous service except that, beginning July 1, 1991, employees in police positions become members on their first day of employment. Persons entering State service from January 1, 1972, to January 1, 1984, became members on their first day of employment. Excluded from membership are: any employee whose position is subject to membership under another State-supported system, any person who becomes an employee after June 30, 1979, as a public service employment program participant under the federal CETA program, or any enrollee of the Young Adult Conservation Corps. Prior to January 1, 1984, emergency and temporary employees were excluded from membership. Persons appointed by the Governor with the advice and consent of the Senate may elect to become members of the System. Other exceptions are identified in State law.

# **Membership Service**

Membership service includes all service rendered while a member of the System for which credit is allowable. Persons entering service on or after January 1, 1984, or after July 1, 1982, in the case of emergency or temporary employees, may also receive membership service credit for periods of employment prior to membership by making contributions for such periods.

## **Member Contributions**

Members are required to contribute a percentage of salary as their share of meeting the cost of the various benefits. Contribution rates are as shown below:

- Members covered by Social Security 4.0 percent of Salary.
- Members not covered by Social Security 8.0 percent of Salary.
- Members covered by Social Security who are serving in a position in which service toward the Alternative Retirement Annuity may be earned 8.5 percent of Salary.
- Members not covered by Social Security who are serving in a position in which service toward the Alternative Retirement Annuity may be earned 12.5 percent of Salary.

Members covered by Social Security also pay the current Social Security tax rate.

Credit for regular interest each fiscal year on a member's individual contribution account is computed on the accumulated balance in the account at the beginning of each fiscal year.

#### **Retirement Pension**

#### Qualification of Member

Upon termination of State service, a member is eligible for a pension at age 60 with at least eight years of pension credit or at any age with 35 or more years of credit.

General formula members are eligible for a retirement annuity if the sum of the member's age plus years (and whole months) of pension credit equals or exceeds 85. General formula members between ages 55 and 60 with at least 25 years of pension credit are eligible for a retirement annuity reduced by one-half of 1 percent for each month the member is under age 60. Certain positions in the Department of Corrections were placed under the general formula effective July 1, 2005.

Members serving in a position in which service toward the Alternative Retirement Annuity may be earned are eligible to receive the alternative retirement annuity at age 50 with at least 25 years of pension credit or at age 55 with at least 20 years of pension credit in such a position. Security employees of the Department of Human Services were placed under the alternative formula effective January 1, 2001. Certain members of the Department of Transportation and the Toll Highway Authority were placed under the alternative formula effective August 1, 2001.

#### Amount of Pension

The pension is based on the member's final average compensation and the number of years of pension credit that has been established.

Final Average Compensation is the average of the highest 48 consecutive months in the last 10 years. All employees whose benefit is calculated under the alternative formula will have their benefit based on the greater of (i) the salary rate in effect on their last day of service, provided the last day salary does not exceed 115 percent of the average monthly compensation received by the member for the last 24 months of service, or (ii) the average monthly compensation for the last 48 months prior to retirement.

The general formula for members retiring on or after January 1, 1998, (regardless of termination date) is as follows:

- 1.67 percent of final average salary per year of credited service for members covered by Social Security.
- 2.20 percent of final average salary per year of credited service for members not covered by Social Security.

The alternative formula for members retiring on or after January 1, 2001 (regardless of termination date) is as follows:

- 2.50 percent of final average salary per year of credited service for members covered by Social Security.
- 3.00 percent of final average salary per year of credited service for members not covered by Social Security.

The maximum pension payable is 75 percent of final average compensation for general formula members and 80 percent of final average compensation for alternative formula members.

### **Optional Forms of Payment**

<u>Reversionary Annuity</u>—A member may elect to receive a smaller pension during his lifetime in order to provide a spouse or a designated dependent with a lifetime income. That payment would be in addition to any other benefit payable by the System.

<u>Level Income</u>—A member who contributes to Social Security as a State employee may elect to have his pension payments increased before Social Security Normal Retirement Age and reduced thereafter. To be eligible for this election the member must have established eligibility for a Social Security pension.

#### Annual Increases in Pension

Postretirement increases of 3.0 percent of the current pension (i.e., increases are compounded) are granted to members effective each January 1 occurring on or after the first anniversary of the pension.

## **Survivors Annuity**

#### Qualification of Survivor

If death occurs while in State employment, the member must have established at least 18 months of pension credit. If death occurs after termination of State service and the member was not receiving a retirement pension, the member must have established at least eight years of pension credit.

An eligible spouse qualifies at age 50 or at any age if there is, in the care of the spouse, any unmarried children of the member under age 18 (age 22 if full-time student); unmarried children under age 18 (age 22 if full-time student) qualify if no spouse survives; dependent parents at age 50 qualify if neither an eligible spouse nor children survive the member.

### Amount of Payment

If the member's death occurs before retirement, the named beneficiary receives a lump sum refund of all of the member's pension contributions plus interest, excluding contributions for widows and survivors benefits. A single lump sum payment of \$1,000 is also made immediately to the survivor beneficiary of the member.

An eligible spouse receives a monthly annuity equal to 30 percent of the member's final average compensation subject to a maximum of \$400. If children of the member are under the care of the spouse, the annuity is increased for each child, subject to a monthly maximum of \$600 or 80 percent of final average compensation. If only eligible children survive, the monthly annuity may not exceed the lesser of \$600 or 80 percent of final average compensation. The maximum combined monthly payment to parents may not exceed \$400. If the member's death occurs after retirement or after termination of State employment but before the member receives a pension, the monthly benefit is further limited to 80 percent of the pension received or earned by the member. Monthly benefits payable to survivors of a member who was covered by Social Security as a State employee are reduced by one-half of the Social Security benefits for which the survivors are eligible. For benefits granted on or after January 1, 1992, the reduction may not exceed 50 percent of the amount of survivors annuity otherwise payable. If death of the member occurs on or after January 1, 1984, the minimum total survivors annuity benefit payable (before any reduction for Social Security benefits) is equal to 50 percent of the member's earned pension without regard to the member's age at death. Any member who retires on or after July 1, 2009, will have the option at the time of retirement to remove the offset provision. In exchange for the removal, SERS will reduce the member's retirement annuity by 3.825 percent.

## **Duration of Payment**

The monthly annuity payable to a spouse continues for his/her lifetime without regard to remarriage. The monthly annuity to children terminates upon death, marriage or attainment of age 18 (age 22 if full-time student). However, the monthly annuity will continue for a child who at age 18, is physically or mentally disabled and unable to accept gainful employment.

#### Annual Increases in Annuity

If the member's death occurs before retirement, increases of 3.0 percent of the current annuity are granted to survivors effective each January 1 occurring on or after the first anniversary of the annuity (i.e., increases are compounded). If the member's death occurs after retirement, the initial 3.0 percent increase applies on the January 1 on or after the survivor annuity begins.

## Widow's Annuity Option

The widow of a male member who was a participant in the System prior to July 19, 1961, may have the option of taking a Widow's Annuity rather than the Survivor's Annuity.

#### Qualification of Widow

An eligible widow receives a Widow's Annuity if she is age 50 or over or has in her care any of the member's unmarried children under age 18. If she is not age 50 and has no such children in her care, she becomes eligible at age 50.

#### Amount of Payment

The Widow's Annuity consists of a lump sum payment of \$500, plus a monthly annuity equal to 50 percent of the pension earned or received by the member at the date of death. If the widow has in her care eligible children of the member, the monthly annuity is increased because of each child, subject to a maximum payment equal to 66-2/3 percent of the earned pension. Monthly benefits payable to a widow of a member who was covered by Social Security as a State employee are reduced by one-half of the amount of benefits she is entitled to as a widow from Social Security (reduced by one-half of the amount of benefits she is entitled to based on her own Primary Insurance Amount). For benefits granted on or after January 1, 1992, the reduction may not exceed 50 percent of the amount of widow's annuity otherwise payable. Any member who retires on or after July 1, 2009, will have the option at the time of retirement to remove the offset provision. In exchange for the removal, SERS will reduce the member's retirement annuity by 3.825 percent.

#### **Duration of Payment**

The monthly payment to the widow continues for her lifetime whether or not she remarries. If the amount of benefit was increased because of eligible children, it is adjusted downward as these children's benefits are terminated (death, marriage or attainment of age 18 or 22).

#### Annual Increases in Annuity

If the member's death occurs before retirement, increases of 3.0 percent of the current annuity are granted to widows effective each January 1 occurring on or after the first anniversary of the annuity (i.e., increases are compounded). If the member's death occurs after retirement, the initial 3.0 percent increase applies on the January 1 on or after the widow's annuity begins.

# **Occupational Death Benefit**

#### Qualification of Survivors

If a member's death results from an injury on the job or a job related cause, the spouse may be eligible for an Occupational Death benefit. If only unmarried children under age 18 (age 22 if full-time student) survive, they would be eligible for the benefit. If neither a spouse nor eligible children survive, a dependent father or mother would be eligible.

#### Amount and Duration of Payment

The nominated beneficiary receives a lump sum payment consisting of all contributions made by the member plus interest credited to his account.

A surviving spouse is entitled to a monthly benefit equal to 50 percent of the member's final average compensation. The benefit is payable for the remaining lifetime of the spouse without regard to remarriage. If children under age 18 (age 22 if full-time student) also survive, the annuity is increased by 15 percent of such average because of each child, subject to a maximum of 75 percent. If there is no spouse, or if the spouse dies before all children have attained age 18 (age 22 if full-time student), each child receives a monthly allowance of 15 percent of final average compensation.

The combined payment to children may not exceed 50 percent of the member's final average compensation. Payments to or on account of children terminate upon their death, marriage or attainment of age 18 (age 22 if full-time student).

If there is no spouse or eligible children, a benefit of 25 percent of final average compensation is payable to each surviving dependent parent for life.

#### Annual Increases in Annuity

Increases of 3.0 percent of the current annuity are granted effective each January 1 occurring on or after the first anniversary of the annuity (i.e., increases are compounded).

#### **Reductions**

The monthly benefit is reduced by any payments awarded under the Workmen's Compensation or Occupational Diseases Acts.

# **Other Death Benefits**

If the survivor beneficiaries of the member do not qualify for any of the previously described death benefits, one of the following benefits is payable to the nominated beneficiary on file with the System at the date of death.

### **Before Retirement**

If the member's death occurred while in State service the benefit consists of: (1) a refund of all contributions plus interest credited to the member's account; and (2) a payment equal to one month's salary for each full year of pension credit not to exceed six month's salary. The minimum payment is equal to one month's salary.

If the member had terminated State service but not yet qualified for a pension, the benefit consists of a refund of all of the member's contributions to the System plus the interest credited to the member's account.

### After Retirement

The benefit consists of a lump sum payment equal to the excess of contributions plus interest credited to the member's account over the total amount of pension payments made to the member. The minimum payment is \$500.00.

## **Non-Occupational Disability Benefits**

#### Qualification and Amount of Payment

Available to any member who has established at least one and one-half years of creditable service and who has been granted a disability leave of absence by his employing agency. The benefit is 50 percent of the member's final average compensation plus a credit to the member's account of service and contributions. It begins on the 31st day of absence from service on account of disability.

If the member has Social Security coverage as a State employee, the benefit payable by the System is reduced by the amount of any disability payment to which he is entitled under Social Security.

### **Duration of Payment**

The member is eligible for the monthly benefit until the occurrence of any of the following events: (1) disability ceases; (2) resumption of gainful employment; (3) payments are made for a period of time equal to one-half of the service credit established as of the date disability began; or (4) attainment of age 65 if the benefit commences prior to age 60, or payment for 5 years if benefit commences after age 60.

If termination of the benefit is due to the member receiving benefits for a period of time equal to one-half of the service credit established at the date of disability, he shall be eligible for a retirement annuity if he has attained age 55 and has 15 years of service, or if he has attained age 50 and has 20 years of service.

### Annual Increases in Annuity

A one time increase of 7.0 percent of the original annuity is granted to members on the January 1 following the fourth anniversary of the annuity. Increases of 3.0 percent of the current annuity are then granted to members each January 1 following the 7.0 percent increase (i.e., the 3.0 percent increases are compounded).

## **Occupational Disability Benefit**

### Qualification and Amount of Payment

Provided for any member who becomes disabled as the direct result of injury or diseases arising out of and in the course of State employment.

The benefit is 75 percent of final average compensation plus a credit to the member's account of service and contributions. The cash benefit is reduced by any payment received under the Workmen's Compensation or Occupational Diseases Acts.

## **Duration of Payment**

Monthly benefits are payable until the occurrence of any of the following events: (1) disability ceases; (2) resumption of gainful employment; or (3) attainment of age 65 if the benefit commences prior to age 60, or payment for 5 years if the benefit commences after age 60.

If termination of the benefit is due to the member having attained age 65 or having received benefits for five years after age 60, the member is entitled to a retirement pension based upon service credit established as of that date.

#### Annual Increases in Annuity

A one-time increase of 7.0 percent of the original annuity is granted to members on the January 1 following the fourth anniversary of the annuity. Increases of 3.0 percent of the current annuity are

then granted to members each January 1 following the 7.0 percent increase (i.e., the 3.0 percent increases are compounded).

## Temporary Disability Benefit

A member who is initially denied Workers' Compensation benefits and is appealing the denial may receive payment at the non-occupational rate, 50 percent of pay, providing all eligibility requirements for the non-occupational benefit are met, until the determination is made.

## **Separation Benefits**

Upon termination of State employment by resignation, discharge, dismissal, or layoff, a member may obtain a refund of the contributions made to the System. By accepting a refund, a member forfeits all accrued rights and benefits in the System for himself and his beneficiaries.