GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

MICHIGAN STATE EMPLOYEES RETIREMENT SYSTEM

ANNUAL ACTUARIAL VALUATION REPORT

SEPTEMBER 30, 2007

GRS
Gabriel Roeder Smith & Company
Consultants & Actuaries
One Towne Square
Suite 800
Southfield, MI 48076-3723
248.799.9000 phone
248.799.9020 fax
www.gabrielroeder.com

April 14, 2008

The Retirement Board
Michigan State Employees Retirement System
General Office Building, Third Floor
P.O. Box 30171
Lansing, Michigan 48909

Re: Michigan State Employees Retirement System - Actuarial Valuation as of September 30, 2007

Dear Board Members:

The results of the annual actuarial valuation of the Michigan State Employees Retirement System pension benefits are presented in this report. The purpose of the valuation was to measure the System's funding progress and to determine the employer contribution for the next fiscal year.

The valuation was based upon information, furnished by the Office of Retirement Services, concerning Retirement System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries. Data was checked for internal and year-to-year consistency, but was not otherwise audited. Year 2005 and prior years' valuation results back to 1993 were not prepared by GRS and are reproduced for comparison with the current year's results.

The valuation results summarized in this report involve actuarial calculations that require making assumptions about future events. We believe that the assumptions and methods used in this report are reasonable and appropriate. However, other assumptions and methods could also be reasonable and could result in materially different results. Some of the numbers in this report are rounded. The use of rounded numbers for plan liabilities should not imply a lack of precision. In addition, because it is not possible or practical to consider every possible contingency, we may use summary information, estimates or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that we deem to be immaterial.

To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the applicable state statutes. All of the undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. It is our opinion that the actuarial assumptions used for the valuation produce results which are reasonable.

Sincerely,

Alan E. Sonnanstine　　　Louise Gates

Alan Sonnanstine, ASA, MAAA　　　Louise Gates, ASA, MAAA

AES/LG:lr

TABLE OF CONTENTS

EXECUTIVE SUMMARY/BOARD SUMMARY

1. Required Employer Contributions to Support Retirement Benefits

The computed employer contribution for the fiscal year beginning October 1, 2007 is shown below. Computed contributions are displayed as annual dollar amounts. The Retirement System is closed to new members and as a result, contributions expressed as percentages of active member payroll are not useful. We understand that the current policy is to contribute on the basis of the dollar amount shown below.

Contribution $
$308,019,761

2. Contribution Comparison

The chart below compares the results of this valuation of the Retirement System with the results of the prior year's valuation:

Valuation Date	9/30/2006	9/30/2007
Contribution $	$382,729,234	$308,019,761

3. Reasons for Change

There are three general reasons why contribution rates change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions used to predict future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions predicted.

There were no benefit changes reported to the actuary for the year ended September 30, 2007. There were no material assumption changes. The actuarial value of assets was increased to market value for the September 30, 2006 valuation after the valuation report was published. Experience for the year ended September 30, 2007 was overall favorable and is described in more detail in Section B of this report.

SECTION A

INTRODUCTION

CONTRIBUTION REQUIREMENTS

Development of Employer Contributions for the Indicated Valuation Date

	Contributions for	September 30 2006	September 30 2007
(1)	Total Normal Cost of Benefits (as a % of member pay)	8.22%	8.25%
(2)	Member Contribution %	0.00%	0.00%
(3)	Employer Normal Cost % = (1) - (2)	8.22%	8.25%
(4)	Projected Active Member Payroll for Coming Year	$ 1,861,837,336	$ 1,833,593,470
(5)	Employer Normal Cost $ = (3) x (4)	153,043,029	151,271,461
(6)	Total Accrued Liability	12,798,519,534	13,161,655,709
(7)	Funding Value of Assets	10,110,658,252	11,343,529,393
(8)	Unfunded Actuarial Accrued Liabilities (UAAL) = (6) - (7)	$ 2,687,861,282	$ 1,818,126,316
(9)	Amortization Period	30	29
(10)	Amortization Factor (level dollar payments)	11.70231918	11.59901773
(11)	Amortization Payment/(Credit) = (8) / (10)	$ 229,686,205	$ 156,748,300
(12)	Total Computed Employer Contribution = (5) + (11)	**$ 382,729,234**	**$ 308,019,761**

Computed Employer Contributions

Based on the assumptions outlined in Section E, the long term contribution rate for the Michigan State Employees Retirement System is expected to be 8.25% of payroll (the employer normal cost rate) until the last active member retires. However, for the current year there is also a contribution needed to fund the unfunded actuarial accrued liability (UAAL). The sum of these two contributions is the recommended employer contribution.

Determining Employer Dollar Contributions

For any period of time, the percent-of-payroll contribution rate needs to be converted to dollars, then promptly contributed to the Retirement System. The employer normal cost rate (expressed as a % of active member payroll) was 8.25%. Applying the employer normal cost contribution rate of 8.25% to the projected payroll for the coming fiscal year, produces annual employer normal cost contributions of $151,271,461. The amortization payment for funding the UAAL, $156,748,300, when added to the normal cost contributions produces a total employer contribution of $308,019,761.

DISCUSSION OF CHANGES

Revisions in Benefits

There have been no revisions in plan benefits.

Revisions in Actuarial Assumptions or Methods

There have been no material revisions in actuarial assumptions. As indicated on page 1, this valuation of the plan reflects a change from the prior year's valuation, namely, a beginning of year actuarial value of assets equal to the market value of assets. Five year asset value smoothing restarted October 1, 2006. In addition, after the 2006 valuation report was published, the legislature adopted, for one year only (fiscal year 2006/2007), an amortization payment equal to real-interest-only on the unfunded actuarial accrued liability (instead of 30 year principal and interest amortization). Unlike the change in the asset valuation method, the interest-only change does not affect the 2007 and later valuation reports (other than the impact of the smaller 2006/2007 employer contribution). The effects of these changes are reported on the following two pages.

Actuarial Experience

Actuarial Experience was more favorable than that anticipated by the actuarial assumptions. The total actuarial gain was approximately $182 million. The gain was primarily due to higher than expected investment return and more deaths than expected among inactive vested members.

MEASURES OF FINANCIAL SOUNDNESS

The purpose of this section of the report is to provide certain measures which indicate the financial soundness of the program. These measures relate to long term solvency and level funding.

The various percentages listed in this Section as of a single valuation date are not overly significant standing alone. What is more significant is the trend of the rates over a period of years. It is also important to keep in mind that each time benefits or assumptions are revised, actuarial liabilities are created or diminished. Any newly created liabilities are financed systematically over a period of future years. All actuarially computed values in this analysis are based on the actuarial assumptions utilized in the respective years' actuarial valuations.

Long Term Solvency

Over the longer term, the solvency of an ongoing plan can be measured by comparing the actuarial value of assets to an amount known as the actuarial accrued liability (AAL) under the Entry Age actuarial cost method. This item has often been called the "past service liability". The AAL is affected immediately by any revisions in benefits or assumptions. The accumulation of assets to equal the AAL can be considered a long range funding goal. Largely because of periodic benefit increases, very few retirement programs have attained this goal.

Valuation Date	Actuarial Value of Assets	Actuarial Liability	% of AAL Covered by Assets
9/30/2007	$11,343,529,393	$13,161,655,709	86.2%
9/30/2006 [1]	10,889,925,227	12,798,519,534	85.1
9/30/2006	10,110,658,252	12,798,519,534	79.0

[1] *Revised asset valuation method.*

MEASURES OF FINANCIAL SOUNDNESS

Level Contributions

The actuarial assumptions and cost methods have been chosen with the intent of producing required employer contributions which remain fairly level. In a closed plan, the normal cost dollar amount will eventually decline as active members retire and terminate employment.

Valuation Date	Normal Cost	Amortization Payment	Total Contribution
9/30/2007	$151,271,461	$156,748,300	$308,019,761
9/30/2006 [2]	153,043,029	85,886,744	238,929,773
9/30/2006 [1]	153,043,029	163,095,390	316,138,419
9/30/2006	153,043,029	229,686,205	382,729,234

[1] *Revised asset valuation method.*

[2] *Interest-only funding adopted for one year only.*

A major factor affecting the stability of the contribution requirements just shown is how well the actual plan experience compares to the actuarial assumptions. The value of the difference between what actually occurred and what was assumed to occur is called the actuarial gain or loss. Gains tend to lower the subsequent cost of the program while losses tend to cause subsequent costs to rise.

Year Ending	Actuarial Gain (Loss)
9/30/2007	$181,987,270
9/30/2006	26,951,265

Analysis of all the benchmarks listed above over a period of years will provide an indication of whether the program is becoming financially stronger or weaker.

SECTION B

FUNDING RESULTS

PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY

Determination of Unfunded Accrued Liability
as of September 30, 2007

	All Divisions
A. Accrued Liability	
1. For retirees and beneficiaries	$ 7,847,204,783
2. For vested terminated members	484,525,413
3. For present active members	
a. Value of expected future benefit payments	5,659,931,857
b. Value of future normal costs	830,006,344
c. Active member accrued liability: (a) - (b)	4,829,925,513
4. Total accrued liability	13,161,655,709
B. Present Assets (Funding Value)	11,343,529,393
C. Unfunded Accrued Liability: (A.4) - (B)	1,818,126,316
D. Funding Ratio: (B) / (A.4)	86.2%

EXPERIENCE GAIN/(LOSS)

A. Derivation of Actuarial Gain/(Loss)	
1. Unfunded Actuarial Accrued Liability (UAAL) - Previous Valuation	$2,687,861,282
2. Total Normal Cost (employer plus member) for Year Ending 9/30/2007	153,043,029
3. Total Contributions (employer plus member) for Year Ending 9/30/2007	211,858,669 [1]
4. Interest at 8% on:	
a. UAAL: .08 x (1)	215,028,903
b. Normal Cost and Contributions: .04 x [(2) - (3)]	(2,352,626)
c. Net Total: (a) + (b)	212,676,277
5. Change in UAAL due to Benefit Changes	0
6. Change in UAAL due to Assumption Changes	0
a. Change in UAAL due to Revised Asset Valuation Method	(841,608,333)
7. Expected UAAL Current Year: (1) + (2) - (3) + (4c) + (5) + (6) + (6a)	2,000,113,586
8. Actual UAAL Current Year	1,818,126,316
9. Experience Gain/(Loss): A.7 - A.8	181,987,270
B. Approximate Portion of Gain/(Loss) due to Investments	189,881,815
C. Approximate Portion of Gain/(Loss) due to Liabilities: (A.9) - (B)	(7,894,545)

[1] *Includes transfer from the Health Advance Funding Subaccount.*

The schedule above shows the net, aggregate experience for the System. The next page shows this experience in detail.

DETAILED EXPERIENCE GAIN/(LOSS)

Gains/(Losses) during the Year Ended September 30, 2007
Resulting from Differences between Assumed and Actual Experience

TYPE OF ACTIVITY

	Gain/(Loss)
1. **Retirements** (including disability retirement). If members retire at older ages or with lower final average pay than assumed, there is a gain. If younger ages or higher average pays, a loss.	$ (664,534)
2. **Withdrawal from Employment** (including death-in-service). If more liabilities are released by withdrawals and deaths than assumed, there is a gain. If smaller releases, a loss.	5,750,276
3. **Pay Increases.** If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(8,349,630)
4. **Investment Income.** If there is greater investment income than assumed, there is a gain. If less income, a loss.	189,881,815
5. **Death After Retirement.** If retirants and inactive vested members live longer than assumed, there is a loss. If not as long, a gain.	21,929,529
6. **Rehires.**	(6,790,534)
7. **Other.** Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc.	(19,769,652)
8. **Composite Gain (or Loss) During Year.**	$181,987,270

EXPERIENCE GAIN/(LOSS)

Five Year History
(Amounts Shown in Thousands)

Plan Year Ending September 30	Experience Gain/(Loss)	Gain/(Loss) Due to Investments	Actuarial Value of Investments	Investment Gain/(Loss) as % of Assets
2007	$ 181,987	$ 189,882	$11,343,529	1.67%
2006 [1]		779,267		
2006	26,951	(73,434)	10,110,658	(0.73)
2005	(600,525)	(583,958)	9,896,760	(5.90)
2004	(560,154)	(538,728)	10,149,275	(5.31)
2003	(460,905)	(442,911)	10,440,611	(4.24)

[1] *Assets reset to market value on September 30, 2006.*

Plan Year Ending September 30	Gain/(Loss) Due to Liabilties	Actuarial Accrued Liability	Liability Gain/(Loss) as % of Accrued Liability
2007	$ (7,895)	$13,161,656	(0.06)%
2006	100,385	12,798,520	0.78
2005	(16,567)	12,400,361	(0.13)
2004	(21,426)	12,003,995	(0.18)
2003	(17,994)	11,761,147	(0.15)

HISTORICAL FUNDING LEVELS FOR ACTUARIAL ACCRUED LIABILITIES

(Amounts Shown in Thousands)

Valuation Date September 30	Actuarial Accrued Liability	Actuarial Value of Assets	Funded Ratio	Unfunded/(Overfunded) Accrued Liability	Active Member Reported Payroll	Unfunded/(Overfunded) As % of Active Payroll
1992	$ 5,480,459	$ 4,533,757	82.7%	$ 946,702	$2,266,394	41.8%
1993 [1]	6,172,846	5,043,880	81.7	1,128,966	2,261,476	49.9
1994 [2]	6,559,708	5,475,533	83.5	1,084,175	2,350,649	46.1
1995	6,861,422	6,090,002	88.8	771,420	2,430,733	31.7
1996	7,147,279	6,678,011	93.4	469,268	2,515,420	18.7
1997	8,213,429	7,515,869	91.5	697,560	2,273,203	30.7
1997 [3]	8,100,552	8,834,424	109.1	(733,872)	2,273,203	(32.3)
1998	8,373,977	9,108,985	108.8	(735,008)	2,107,996	(34.9)
1998 [2]	8,496,974	9,108,985	107.2	(612,011)	2,107,996	(29.0)
1999	9,028,621	9,648,383	106.9	(619,762)	2,213,851	(28.0)
2000	9,473,873	10,336,872	109.1	(863,000)	2,253,818	(38.3)
2001	9,878,161	10,632,677	107.6	(754,516)	2,230,562	(33.8)
2002	10,752,684	10,616,278	98.7	136,406	2,133,477	6.4
2003	11,761,147	10,440,611	88.8	1,320,536	1,859,555	71.0
2004	12,166,603	10,149,275	83.4	2,017,328	1,889,410	106.8
2004 [2]	12,003,995	10,149,275	84.6	1,854,719	1,889,410	98.2
2005	12,400,361	9,896,760	79.8	2,503,601	1,880,179	133.2
2006	12,798,520	10,110,658	79.0	2,687,861	1,847,653	145.5
2006 [1]	12,798,520	10,889,925	85.1	1,908,595	1,847,653	103.3
2007	13,161,656	11,343,529	86.2	1,818,126	1,825,889	99.6

[1] *Revised asset valuation method.*
[2] *Revised actuarial assumptions.*
[3] *Revised actuarial assumptions and asset valuation method.*

RECOMMENDED AND ACTUAL STATE CONTRIBUTIONS
HISTORICAL COMPARISON

Fiscal Year Ending September 30	Valuation Date September 30	Contribution Rates As Percents of Valuation Payroll	Actual Payroll	Employer Contribution for Fiscal Year	
				Computed	Actual
1995	1994 [2]	10.71 %	$2,434,824,614	$260,769,716	$306,488,437
1996	1995	10.38	2,528,503,514	262,458,665	285,766,953
1997	1996	9.93	2,458,227,626	244,102,003	288,366,799
1998	1997	10.51	2,282,056,831	239,844,173	-
1998	1997 [3]	5.56	2,282,056,831	126,882,360	145,734,677
1999	1998	5.41	2,125,707,551	115,000,779	-
1999	1998 [2]	5.29	2,125,707,551	112,449,929	121,119,857
2000	1999	5.46	2,153,964,222	117,606,447	121,817,366
2001	2000	4.57	2,204,452,791	100,743,493	112,299,808
2002	2001	5.00	2,165,589,882	108,279,494	0 [5]
2003	2002	8.63	1,859,884,999	160,508,075	61,927,219 [5]
2004	2003	14.12	1,759,588,178	248,453,851	128,326,810 [5]
2005	2004	17.30	1,844,786,278	319,148,026	-
2005	2004 [2]	16.31	1,844,786,278	300,884,642	254,160,400
2006	2005	19.50	1,789,601,622	348,972,316	270,705,017
2007	2006	N/A [7]	1,783,386,714	380,308,846	-
2007	2006 [4]	N/A	1,783,386,714	382,729,234	-
2007	2006 [1]	N/A	1,783,386,714	316,138,419	-
2007	2006 [8]	N/A	1,783,386,714	238,929,773	192,162,537 [9]
2008 [6]	2007	N/A		308,019,761	

1 *Revised asset valuation method.*
2 *Revised actuarial assumptions.*
3 *Revised actuarial assumptions and asset valuation method.*
4 *Revised benefit provisions.*
5 *Net after transfer was made to the Health Advance Funding Subaccount from employer contributions.*
6 *For the year ending September 30, 2008 the actual payroll and actual contributions are not yet known.*
7 *For the 2006 and later valuations a contribution percentage is not computed because the Retirement System is closed.*
8 *Interest-only funding adopted for one year only.*
9 *Includes transfer from the Health Advance Funding Subaccount.*

HISTORICAL FUNDING LEVELS FOR PRIORITIZED ACTUARIAL ACCRUED LIABILITY

Valuation Date September 30	Actuarial Accrued Liability ($ in Millions) (1) Active Members Contributions	(2) Retirants and Beneficiaries	(3) Active and Inactive Members (Employer Financed Portion)	Valuation Assets ($ in Millions)	Portion of Actuarial Accrued Liability Covered by Assets (1)	(2)	(3)	(4) [3]
1992	$ 83	$2,413	$2,984	$ 4,533	100%	100%	68.3	82.7 %
1993 [1]	72	2,561	3,540	5,043	100	100	68.1	81.7
1994 [2]	73	2,778	3,709	5,476	100	100	70.8	83.5
1995	72	2,751	4,038	6,090	100	100	80.9	88.8
1996	55	2,844	4,248	6,678	100	100	89.0	93.4
1997	3	4,300	3,910	7,516	100	100	82.2	91.5
1997 [4]	3	4,300	3,798	8,834	100	100	119.3	109.0
1998	27	4,360	3,987	9,109	100	100	118.4	108.8
1998 [2]	27	4,484	3,986	9,109	100	100	115.4	107.2
1999	35	4,538	4,456	9,648	100	100	113.9	106.9
2000	29	4,659	4,786	10,337	100	100	118.0	109.1
2001	34	4,677	5,167	10,633	100	100	114.6	107.6
2002	123	5,512	5,118	10,616	100	100	97.3	98.7
2003	57	7,386	4,318	10,441	100	100	69.4	88.8
2004	78	7,503	4,586	10,149	100	100	56.0	83.4
2004 [2]	78	7,503	4,423	10,149	100	100	58.1	84.5
2005	97	7,607	4,696	9,896	100	100	46.7	79.8
2006	107	7,607	5,085	10,111	100	100	47.1	79.0
2006 [1]	107	7,607	5,085	10,890	100	100	62.5	85.1
2007	116	7,847	5,199	11,344	100	100	65.0	86.2

1 *Revised asset valuation method.*
2 *Revised actuarial assumptions.*
3 *Percent funded on a total valuation asset and total actuarial accrued liability basis.*
4 *Revised actuarial assumptions and asset valuation method.*

FINANCIAL OBJECTIVE ACHIEVEMENT INDICATORS – HISTORICAL COMPARISON (DOLLAR AMOUNTS IN THOUSANDS)

		Termination Indicator		Experience Indicator
Valuation September 30	Valuation Assets [3]	Actuarial Present Value of Vested Benefits [3]	Funded Ratio	Actuarial Gain (Loss)
1993 [1]	$ 5,089,835	$ 4,394,179	115.8 %	$(286,259)
1994	5,514,735	4,731,537	116.6	23,872
1994 [2]	5,514,735	5,066,906	108.8	23,872
1995	6,132,233	5,255,984	116.7	333,511
1996	6,678,011	5,337,969	125.1	308,146
1997	7,515,869	6,528,114	115.1	279,245
1997 [4]	8,834,424	6,528,114	135.3	279,245
1998	9,108,985	6,607,380	137.9	(8,425)
1998 [2]	9,108,985	6,696,390	136.0	(8,425)
1999	9,648,383	7,351,103	131.3	6,923
2000	10,336,872	7,535,245	137.2	252,243
2001	10,632,677	7,917,271	134.3	(106,544)
2002	10,616,278	8,861,608	119.8	(553,528)
2003	10,440,611	10,146,046	102.9	(460,905)
2004	10,149,275	10,513,034	96.5	(560,154)
2004 [2]	10,149,275	10,503,835	96.6	(560,154)
2005	9,896,760	10,886,913	90.9	(600,525)
2006	10,110,658	12,122,695	83.4	26,951
2006 [1]	10,889,925	12,122,695	89.8	806,218
2007	11,343,529	12,516,362	90.6	181,987

[1] *Revised asset valuation method.*
[2] *Revised actuarial assumptions.*
[3] *Includes dental and vision benefit liabilities and assets prior to 1996.*
[4] *Revised actuarial assumptions and asset valuation method.*

SECTION C

FUND ASSETS

PLAN NET ASSETS (ASSETS AT MARKET OR FAIR VALUE)

	September 30	
	2006	**2007**
Cash	$ 10,588,129	$ 27,259,395
Total Receivables	117,167,984	92,984,884
Short-Term Investment Pool	231,794,399	183,233,342
Fixed Income Pool	1,753,282,015	1,988,414,292
Domestic Equity Pool	5,221,599,744	5,688,380,454
Real Estate Investment Pool	941,152,425	1,163,702,848
Alternative Investment Pool	1,296,337,558	1,579,357,778
International Investment Pool	1,321,361,318	1,383,468,408
Total Assets	10,893,283,572	12,106,801,401
Other Assets (Liabilities)	(3,358,345)	(3,744,750)
Net Assets Held in Trust for Pension Benefits	$10,889,925,227	$12,103,056,651

Note: Asset amounts exclude assets held for health benefits.

RECONCILIATION OF PLAN ASSETS

	September 30, 2006	September 30, 2007
Market Value, BOY	$10,130,839,539	$10,889,925,227
Additions		
Member Contributions	9,434,310	19,696,132
Employer Contributions	270,705,017	192,162,537 [2]
Net Investment Income	1,248,722,460	1,802,354,022
Adjustments	1,986,124 [1]	0
Total Additions	$ 1,530,847,911	$ 2,014,212,691
Deductions		
Benefit Payments	(767,000,706)	(795,842,013)
Contribution Refunds/Transfers	(133,474)	(124,028)
Administrative Expenses	(4,628,043)	(5,115,226)
Total Deductions	(771,762,223)	(801,081,267)
Market Value, EOY	$10,889,925,227	$12,103,056,651

[1] *Reflects adjustment made to September 30, 2005 assets (as reported in the published CAFR) after the 2005 actuarial report was published. Also see line 3h on page C-4.*

[2] *Includes transfers from the Health Advance Funding Subaccount.*

DEVELOPMENT OF VALUATION ASSETS

	2007	2008	2009	2010	2011
1. Beginning of Year Assets					
a. Market Value	$ 10,889,925,227				
b. Valuation Assets	10,889,925,227				
2. End of Year Assets at Market Value	12,103,056,651				
3. Net Additions to Market Value					
a. Member Contributions	19,696,132				
b. Employer Contributions	150,858,506				
c. Investment Income	1,802,354,022				
d. Benefit Payments	(795,842,013)				
e. Contribution Refunds/Transfers	(124,028)				
f. Administrative Expenses	(5,115,226)				
g. Transfer (to) from Stabilization Subaccount	41,304,031				
h. Adjustment from Prior Year	0				
i. Total Additions to Market Value	1,213,131,424				
4. Summary of Net Additions to Market Value					
a. Net Contributions = 3a + 3b + 3e + 3g	211,734,641				
b. Net Investment Income = 3c + 3f	1,797,238,796				
c. Benefit Payments = 3d	(795,842,013)				
d. Adjustment from Prior Year = 3h	0				
e. Total Additions to Market Value	1,213,131,424				
5. Average Valuation Assets =					
1b + .5 x (4a + 4c + 4d)	10,597,871,541				
6. Imputed Income at Valuation Rate = 8.00% x 5	847,829,723				
7. Gain (Loss) from investments = 4b - 6	949,409,073				
8. Portion of Gains (Losses) recognized from prior years					
a. From this year = .2 * 7	189,881,815				
b. From one year ago	0	$ 189,881,815			
c. From two years ago	0	0	$ 189,881,815		
d. From three years ago	0	0	0	$ 189,881,815	
e. From four years ago	0	0	0	0	$ 189,881,813
f. Total	189,881,815	189,881,815	189,881,815	189,881,815	189,881,813
9. Change in Valuation Assets = 4a + 4c + 4d + 6 + 8f	453,604,166				
10. End of Year Assets					
a. Market Value = 2	12,103,056,651				
b. Valuation Assets = 1b + 9	11,343,529,393				
11. Actuarial Rate of Return	9.79%				
12. Market Rate of Return	16.96%				

	2002	2003	2004	2005	2006
1. Beginning of Year Assets					
a. Market Value	$ 9,616,516,845	$ 8,274,112,215	$ 8,924,266,601	$ 9,428,463,524	$ 10,130,839,539
b. Valuation Assets	10,632,677,141	10,616,278,373	10,440,610,630	10,149,275,470	9,896,760,033
2. End of Year Assets at Market Value	8,274,112,215	8,924,266,601	9,428,463,524	10,130,839,539	10,889,925,227
3. Net Additions to Market Value					
a. Member Contributions	173,232,835	80,185,475	37,682,883	30,583,004	9,434,310
b. Employer Contributions	87,486,128	79,291,845	103,873,294	254,160,400	270,705,017
c. Investment Income	(1,005,732,436)	1,215,018,189	1,073,759,972	1,168,692,345	1,248,722,460
d. Benefit Payments	(503,453,879)	(701,664,432)	(731,009,109)	(746,470,156)	(767,000,706)
e. Contribution Refunds/Transfers	(18,331)	(120,026)	(157,200)	(291,593)	(133,474)
f. Administrative Expenses	(6,432,819)	(5,192,039)	(4,316,433)	(4,297,985)	(4,628,043)
g. Transfer (to) from Stabilization Subaccount	(87,486,128)	(17,364,626)	24,363,516	0	0
h. Adjustment from Prior Year	0	0	0	0	1,986,124
i. Total Additions to Market Value	(1,342,404,630)	650,154,386	504,196,923	702,376,015	759,085,688
4. Summary of Net Additions to Market Value					
a. Net Contributions = 3a + 3b + 3e + 3g	173,214,504	141,992,668	165,762,493	284,451,811	280,005,853
b. Net Investment Income = 3c + 3f	(1,012,165,255)	1,209,826,150	1,069,443,539	1,164,394,360	1,244,094,417
c. Benefit Payments = 3d	(503,453,879)	(701,664,432)	(731,009,109)	(746,470,156)	(767,000,706)
d. Adjustment from Prior Year = 3h	0	0	0	0	1,986,124
e. Total Additions to Market Value	(1,342,404,630)	650,154,386	504,196,923	702,376,015	759,085,688
5. Average Valuation Assets = 1b + .5 x (4a + 4c + 4d)	10,467,557,453	10,336,442,491	10,157,987,322	9,918,266,297	9,654,255,669
6. Imputed Income at Valuation Rate = 8.00% x 5	837,404,596	826,915,399	812,638,986	793,461,304	772,340,454
7. Gain (Loss) from investments = 4b - 6	(1,849,569,851)	382,910,751	256,804,553	370,933,056	471,753,963
8. Portion of Gains (Losses) recognized from prior years					
a. From this year = .2 * 7	(369,913,970)	76,582,150	51,360,911	74,186,611	873,617,768 [1]
b. From one year ago	(416,174,097)	(369,913,970)	76,582,150	51,360,911	74,186,611
c. From two years ago	119,417,476	(416,174,097)	(369,913,970)	76,582,150	51,360,911
d. From three years ago	147,177,063	119,417,476	(416,174,097)	(369,913,970)	76,582,150
e. From four years ago	(4,070,461)	147,177,063	119,417,476	(416,174,097)	(369,913,971)
f. Total	(523,563,989)	(442,911,378)	(538,727,530)	(583,958,395)	705,833,469
9. Change in Valuation Assets = 4a + 4c + 4d + 6 + 8f	(16,398,768)	(175,667,743)	(291,335,160)	(252,515,436)	993,165,194
10. End of Year Assets					
a. Market Value = 2	8,274,112,215	8,924,266,601	9,428,463,524	10,130,839,539	10,889,925,227
b. Valuation Assets = 1b + 9	10,616,278,373	10,440,610,630	10,149,275,470	9,896,760,033	10,889,925,227
11. Actuarial Rate of Return	3.00 %	3.72 %	2.70 %	2.11 %	15.31 %
12. Market Rate of Return	(10.71)%	15.13 %	12.38 %	12.66 %	12.58 %

[1] *After adjusting to market value as of September 30, 2006.*

HISTORY OF APPROXIMATE INVESTMENT RETURN RATES

Plan Year Ending September 30	Approximate Rate of Return[1] Market	Actuarial
2000	13.48 %	10.77 %
2001	(11.46)	6.49
2002	(10.71)	3.00
2003	15.13	3.72
2004	12.38	2.70
2005	12.66	2.11
2006	12.58	7.24
2006[2]	12.58	15.31[2]
2007	16.96	9.79
Average Returns:		
Last five years:	13.93 %	6.61 %
Last eight years:	7.03 %	6.64 %

[1] *Approximate return based on ratio of total investment return to average asset value, using an assumed mid-year timing of asset flows (see previous two pages).*

[2] *After adjusting to market value as of September 30, 2006.*

HISTORICAL GROWTH OF ASSETS AT MARKET VALUE

Fiscal Year Ended September 30	Revenues by Source			Expenses by Type			Market Value of Assets
	Member Contributions	Employer Contributions	Net Investment Income	Retirement Benefits	Return of Contributions and Transfers	Administrative Expenses	
1988	$ 4,595,524	$198,535,629	$ (74,763,613)	$ 180,131,209	$ 196,462	$2,583,564	$ 3,541,540,993
1989	3,066,178	162,046,885	547,233,053	231,499,226	204,889	2,461,918	4,019,721,076
1990	2,733,598	188,863,034	(125,829,295)	246,339,702	125,828	2,993,159	3,836,029,724
1991	4,416,336	227,348,243	662,492,977	271,569,767	126,407	4,339,321	4,454,251,785
1992	4,810,700	285,424,632	397,363,808	333,082,769	123,793	5,223,109	4,803,421,254
1993	4,068,697	371,902,232	563,222,953	394,557,538	99,369	4,198,410	5,343,759,819
1994	2,257,176	389,728,590	128,583,844	409,975,307	92,153	5,101,168	5,449,160,801
1995	2,260,510	422,294,609	920,176,637	405,682,086	80,453	5,518,735	6,382,611,283
1996	2,619,067	431,094,371	959,236,243	439,056,604	30,082	6,721,163	7,329,753,115
1997	12,230,090	410,008,211	1,681,527,984	484,817,137	7,868,296	5,247,943	8,935,586,024
1998	11,549,990	257,934,304	686,386,228	593,453,929	134,441,035	4,248,894	9,159,312,688
1999	11,047,646	265,806,232	1,471,196,655	630,346,729	728,366	4,330,879	10,271,957,247
2000	9,663,634	289,224,539	1,363,375,124	667,431,376	222,171	3,954,992	11,262,612,005
2001	9,134,665	361,926,010	(1,263,116,077)	726,771,708	91,700	4,149,284	9,639,543,901
2002	179,559,102	345,216,945	(1,003,890,272)	782,452,212	18,331	6,432,819	8,371,526,314
2003	91,330,212	400,130,385	1,164,600,217	1,055,749,270	120,026	5,192,039	8,966,525,793
2004	47,406,113	461,427,993	1,077,140,707	1,085,658,774	157,200	4,316,433	9,462,368,199
2005	41,284,618	573,601,582	1,171,404,719	1,069,304,294	291,593	4,297,985	10,174,765,246
2006	20,962,351	629,365,384 [1]	1,259,247,083	1,129,598,391	133,474	4,628,043	10,949,980,156
2007	31,456,676	551,537,592	1,803,854,094	1,159,817,064	41,428,059	5,115,226	12,130,468,169

[1] *Includes audit adjustment (see page C-2).*

Note: Assets in this schedule include both pension and health insurance assets.

SECTION D

CENSUS DATA

SUMMARY OF PARTICIPANT DATA BY CATEGORY

	2006	2007
Retirees and beneficiaries currently receiving benefits:		
Regular benefits	36,271	36,963
Survivor benefits	6,121	6,308
Disability benefits	3,588	3,615
Total	45,980	46,886
Current Employees:		
Vested	31,161	29,991
Non-vested	1,414	873
Total	32,575	30,864
Inactive employees entitled to benefits and not yet receiving them:	7,217	6,663
Total Participants	85,772	84,413

RETIREES AND BENEFICIARIES – HISTORICAL COMPARISON

Year Ended September 30	Number Added	Number Removed	Rolls End of Year Number	Rolls End of Year Annual Benefit [1]	% Increase in Annual Benefits	Average Annual Benefit
1988			23,008	$149,237	23.3	$ 6,486
1989			24,187	168,795	13.1	6,979
1990			24,863	180,696	7.1	7,268
1991			25,566	194,928	7.9	7,625
1992			28,856	243,612	25.0	8,442
1993			29,175	257,193	5.6	8,816
1994	1,888	1,101	29,962	273,387	6.3	9,124
1995	1,566	966	30,562	290,694	6.3	9,512
1996	1,595	1,064	31,093	307,933	5.9	9,904
1997	6,098	1,068	36,123	421,060	36.7	11,656
1998	1,279	1,217	36,185	432,456	2.7	11,951
1999	1,409	1,248	36,346	444,167	2.7	12,221
2000	1,540	1,181	36,705	463,969	4.5	12,640
2001	1,648	1,242	37,111	471,407	1.6	12,703
2002	3,806	1,251	39,666	546,968	16.0	13,789
2003	6,448	623	45,491	708,607	29.6	15,577
2004	1,561	1,433	45,619	729,087	2.9	15,982
2005	1,542	1,360	45,801	747,428	2.5	16,319
2006	1,728	1,549	45,980	769,096	2.9	16,727
2007	2,206	1,300	46,886	802,018	4.3	17,106

[1] *Amounts shown in thousands of dollars.*

Note: Data related to additions and removals before 1994 is not available.

RETIREES AND BENEFICIARIES AS OF SEPTEMBER 30, 2007 BY TYPE OF RETIREMENT AND SELECTED OPTION

Amount of Monthly Benefit	Number of Retirees	Type of Retirement* 1	2	3	4	5	6	7	8
$ 1 - 200	588	269	223	12	61	0	10	0	13
201 - 400	2,925	1,697	641	7	363	0	71	1	145
401 - 600	5,141	2,824	684	346	750	17	201	9	310
601 - 800	5,024	2,942	605	5	849	0	257	20	346
801 - 1,000	4,325	2,614	448	9	709	1	218	66	260
1,001 - 1,200	3,921	2,523	327	7	581	0	206	93	184
1,201 - 1,400	4,004	2,940	294	6	392	0	162	84	126
1,401 - 1,600	3,674	2,898	253	1	201	0	119	125	77
1,601 - 1,800	3,280	2,734	157	1	116	0	73	164	35
1,801 - 2,000	2,877	2,484	113	0	55	0	41	165	19
Over 2,000	11,127	9,757	211	2	36	0	82	1,003	36
Totals	46,886	33,682	3,956	396	4,113	18	1,440	1,730	1,551

Amount of Monthly Benefit	Number of Retirees	Selected Option** Reg.	Opt. A	Opt. B	Opt. C	Opt. E	Opt. E1	Opt. E2	Opt. E3
$ 1 - 200	588	140	166	201	4	50	12	13	2
201 - 400	2,925	1,101	765	657	34	242	61	65	0
401 - 600	5,141	2,192	1,349	798	73	451	110	162	6
601 - 800	5,024	2,069	1,344	835	77	471	74	151	3
801 - 1,000	4,325	1,807	1,201	783	71	308	62	90	3
1,001 - 1,200	3,921	1,788	1,126	659	77	156	49	64	2
1,201 - 1,400	4,004	1,855	1,188	690	77	107	44	40	3
1,401 - 1,600	3,674	1,499	1,185	713	105	92	38	37	5
1,601 - 1,800	3,280	1,294	1,005	631	145	86	60	47	12
1,801 - 2,000	2,877	1,063	829	544	142	144	64	69	22
Over 2,000	11,127	3,727	2,951	2036	713	868	284	429	119
Totals	46,886	18,535	13,109	8,547	1,518	2,975	858	1,167	177

* Type of Retirement

1 – Normal retirement for age & service
2 – Survivor payment – normal or early retirement
3 – Duty disability retirement (incl. survivors)
4 – Non-duty disability retirement (incl. survivors)
5 – Survivor payment – duty death in service
6 – Survivor payment – non-duty death in service
7 – Retirees with supplemental benefits for early retirement incentive factors
8 – Retirees with reduced benefits for early retirement reduction factors

** Selected Option

Reg. – Straight life allowance
Opt. A – 100% survivor option
Opt. B – 50% survivor option
Opt. C – 75% survivor option
Opt. E – Social Security equated
Opt. E1 – Social Security equated w/100% survivor option
Opt. E2 – Social Security equated w/50% survivor option
Opt. E3 – Social Security equated w/75% survivor option

ACTIVE MEMBERS BY CLASSIFICATION

	September 30, 2006	September 30, 2007
Conservation Officers		
Number	132	128
Average Age	43.8	44.7
Average Service	17.1	15.9
Reported Payroll	$ 8,635,988	$ 8,362,824
Average Annual Payroll	65,424	65,335
Corrections Officers		
Number	8,984	8,426
Average Age	47.3	47.9
Average Service	17.8	18.5
Reported Payroll	$ 517,233,691	$ 511,141,882
Average Annual Payroll	57,573	60,662
All Other		
Number	23,459	22,310
Average Age	51.3	52.0
Average Service	22.3	23.1
Reported Payroll	$1,321,783,551	$1,306,384,704
Average Annual Payroll	56,344	58,556
Total		
Number	32,575	30,864
Average Age	50.1	50.8
Average Service	21.0	21.8
Reported Payroll	$1,847,653,230	$1,825,889,410
Average Annual Payroll	56,720	59,159

ACTIVE MEMBERS

Members in Active Service as of September 30, 2007
by Age and Years of Service

	Years of Service							Total	Total	Average
Age	**0 - 4**	**5 - 9**	**10 - 14**	**15 - 19**	**20 - 24**	**25 - 29**	**30 & up**	**Count**	**Pay**	**Pay**
20 - 24	2							2	$ 31,824	$15,912
25 - 29	5	7	-					12	467,548	38,962
30 - 34	23	79	220	2				324	17,727,402	54,714
35 - 39	27	118	1,411	354	12			1,922	110,914,364	57,708
40 - 44	30	106	1,246	1,729	718	11		3,840	225,342,721	58,683
45 - 49	23	97	1,025	1,921	1,905	908	135	6,014	351,996,914	58,530
50 - 54	37	92	851	1,543	1,887	2,511	1,938	8,859	519,780,442	58,673
55 - 59	37	81	620	1,162	1,257	1,577	2,122	6,856	412,808,002	60,211
60 - 64	17	52	286	453	464	390	744	2,406	148,791,479	61,842
65 - 69	5	10	65	74	62	70	201	487	30,021,492	61,646
70 & up	14	11	13	15	6	9	74	142	8,007,222	56,389
Total	220	653	5,737	7,253	6,311	5,476	5,214	30,864	1,825,889,410	59,159

ACTIVE AND INACTIVE MEMBERS REPORTED FOR VALUATION
HISTORICAL COMPARISON

Valuation Date September 30	Number of Inactive Vested Members	Active Members					
				Average			
		Number	Reported Payroll [1]	Annual Pay	Incr. in Pay	Age	Service
1988	811	63,511	$1,861,675	$29,313	3.8 %	41.1	10.9
1989	753	66,388	1,996,039	30,066	2.6	40.9	10.7
1990	2,458	69,558	2,227,755	32,027	6.5	41.2	10.9
1991	3,030	65,595	2,236,336	34,093	6.5	42.1	11.9
1992	4,367	64,248	2,189,752	34,083	0.0	42.2	11.9
1993	4,359	63,906	2,185,036	34,191	0.3	42.6	12.1
1994	4,540	64,923	2,271,158	34,982	2.3	43.1	12.6
1995	5,276	65,133	2,348,534	36,058	3.1	43.2	12.7
1996	6,667	63,807	2,515,420	39,422	9.3	43.8	13.0
1997	7,656	55,434	2,273,203	41,007	4.0	43.7	13.1
1998	8,021	49,717	2,107,996	42,400	3.4	44.8	14.8
1999	7,376	49,612	2,213,851	44,623	5.2	45.9	15.8
2000	7,556	47,778	2,253,818	47,173	5.7	46.7	16.7
2001	8,809	45,852	2,230,562	48,647	3.1	47.4	17.7
2002	7,917	43,064	2,133,477	49,542	1.8	48.0	18.6
2003	7,528	36,536	1,859,555	50,897	2.7	47.7	17.9
2004	7,397	34,749	1,889,410	54,373	6.8	48.4	19.0
2005	7,200	33,770	1,880,179	55,676	2.4	49.3	20.0
2006	7,217	32,575	1,847,653	56,720	1.9	50.1	21.0
2007	6,663	30,864	1,825,889	59,159	4.3	50.8	21.8

[1] *Amounts shown in thousands of dollars.*

SECTION E

METHODS AND ASSUMPTIONS

VALUATION METHODS

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

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member’s benefit at the time of retirement;

(ii) each annual normal cost is a constant percentage of the member’s year by year projected covered pay.

Normal Cost contributions for death and disability benefits were determined using the term cost method. This method produces normal cost contributions that are expected to be sufficient to fund the value of both pre-retirement death and disability benefits likely to be paid during the next year.

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

Financing of Unfunded Actuarial Accrued Liabilities - Unfunded actuarial accrued liabilities (full funding credit if assets exceed liabilities) were amortized by level (principal and interest combined) dollar contributions over a reasonable period of future years.

Actuarial Value of System Assets - The actuarial value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased in over a closed five year period. During periods when investment performance exceeds the assumed rate, actuarial value of assets will tend to be less than market value. During periods when investment performance is less than assumed rate, actuarial value of assets will tend to be greater than market value. The actuarial value of assets was reset to market value as of September 30, 2006, with five-year smoothing restarted at that time.

VALUATION ASSUMPTIONS

The rate of investment return was 8.0% a year, compounded annually net of investment and administrative expenses.

The assumed real return is the rate of return in excess of wage inflation. Considering other assumptions used in the valuation, the 8.0% nominal rate translates to a net real return of 4.5% a year.

The rates of pay increase used for individual members are in accordance with the table below. This assumption is used to project a member's current pay to the pay upon which System benefits will be based. These rates were first used for the September 30, 2004 valuation of the System.

	Salary Increase Assumptions For an Individual Member		
Sample Ages	**Merit & Seniority**	**Base (Economy)**	**Increase Next Year**
20	10.9%	3.5%	14.4%
25	7.2	3.5	10.7
30	3.1	3.5	6.6
35	1.4	3.5	4.9
40	0.9	3.5	4.4
45	0.6	3.5	4.1
50	0.4	3.5	3.9
55	0.4	3.5	3.9
60	0.0	3.5	3.5
65	0.0	3.5	3.5
Ref	270		

The charts shown in this section of the report may include a reference number (for example, 270 is used above). These reference numbers are used by GRS to track and identify assumption tables.

VALUATION ASSUMPTIONS

The healthy life mortality table used in this valuation of the System was the 1994 Group Annuity Mortality table set forward one year for both men and women. This assumption was first used for the September 30, 1998 valuation of the System. Sample rates of mortality and years of life expectancy are shown below:

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.29%	0.16%	29.77	33.94
55	0.49	0.26	25.26	29.24
60	0.90	0.51	21.00	24.70
65	1.62	0.97	17.10	20.46
70	2.60	1.50	13.63	16.54
75	4.09	2.53	10.53	12.90
80	6.86	4.40	7.89	9.71
Ref:	261 x 1.00	262 x 1.00		

This assumption is used to measure the probabilities of each benefit payment being made after retirement. For active members, the probabilities of dying before retirement were based upon the same mortality table as members dying after retirement.

The disabled life mortality table used in this valuation was developed by the prior actuary pursuant to an experience study. For disabled retirees, the sample rates of mortality and years of life expectancy are shown below.

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	2.50%	1.72%	20.94	25.31
55	2.68	2.04	18.48	22.51
60	3.16	2.44	15.95	19.86
65	3.94	2.84	13.51	17.30
70	5.02	3.24	11.24	14.74
75	6.58	3.76	9.15	12.07
80	8.74	5.32	7.26	9.35
Ref:	476 x 1.00	477 x 1.00		

VALUATION ASSUMPTIONS

The rates of regular retirement used to measure the probability of eligible members retiring with an unreduced benefit during the next year are shown below. This assumption was first used for the September 30, 2004 valuation of the System.

Retirement Ages	Percent of Eligible Members Retiring: Conservation Officers	Corrections Officers	Others
45	16%		
46	16		
47	16		
48	16		
49	16		
50	16		
51	16	25%	
52	16	18	
53	16	12	
54	16	15	
55	16	15	18%
56	16	25	15
57	15	12	12
58	15	12	12
59	15	12	12
60	18	18	16
61	15	15	14
62	30	30	25
63	22	22	20
64	22	22	20
65	35	35	35
66	25	25	25
67	25	25	25
68	25	25	25
69	25	25	25
70	50	50	50
71	60	60	60
72	70	70	70
73	80	80	80
74	90	90	90
75	100	100	100
Ref	1343	1344	1345

Note: For Conservation Officers, 50% are assumed to retire in their first year of eligibility for unreduced benefits (completion of 25 years of service).

VALUATION ASSUMPTIONS

The rates of early retirement used to measure the probability of eligible members retiring with reduced retirement benefits during the next year are shown below. These rates were first used for the September 30, 2004 valuation of the System.

Retirement Age	Percent of Eligible Members Retiring
55	4.5%
56	3.0
57	4.0
58	4.0
59	4.0
Ref	1346

The rates of separation from active membership used in the valuation are shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment, and was first used for the September 30, 2004 actuarial valuation of the System.

Sample Ages	Years of Service	Percent Separating Within Next Year
All	0	12.00%
	1	8.50
	2	6.50
	3	5.00
	4	4.00
20	5 & Over	4.00%
25		3.50
30		3.00
35		2.50
40		2.25
45		2.00
50		1.75
55		1.75
60		1.75
Ref	405	794

VALUATION ASSUMPTIONS

Rates of disability among active members used in the valuation are shown below, and were first used for the September 30, 2004 valuation of the System.

Sample Ages	Percent Becoming Disabled Within Next Year: Non-Duty Disability	Percent Becoming Disabled Within Next Year: Duty Disability
25	0.03%	0.05%
30	0.05	0.05
35	0.10	0.05
40	0.20	0.05
45	0.34	0.05
50	0.47	0.05
55	0.62	0.05
60	0.82	0.05
65	1.16	0.05
Ref.	395	396

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Benefit Service	Exact Fractional service is used to determine the amount of benefit payable.
Decrement Operation	Disability and withdrawal decrements do not operate during retirement eligibility.
Decrement Timing	Decrements of all types are assumed to occur mid-year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Forfeitures	For vested separations from service, it is assumed that 0% of members separating will withdraw their contributions and forfeit an employer financed benefit. It was further assumed that the liability at termination is the greater of the vested deferred benefit (if any) or the member's accumulated contributions.
Incidence of Contributions	Contributions are assumed to be received continuously throughout the year.
Liability Adjustments	Retirement liabilities were increased by 1% to account for unused vacation time.
Marriage Assumption	75% of males and 60% of females were assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Normal Form of Benefit	A straight life benefit is the normal form of benefit.
Pay Increase Timing	Pay increases were assumed to be at the beginning of the fiscal year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
Service Credit Accruals	Members were assumed to accrue one year of service credit per year.

SECTION F

PLAN PROVISIONS

PLAN PROVISIONS

Our actuarial valuation of the System as of September 30, 2007 is based on the present provisions of Public Act No. 240 of 1943.

Regular Retirement (no reduction factor for age):

Eligibility - Age 55 with 30 years of service; or age 60 with 10 or more years service. Corrections Officers may retire at age 51 with 25 or more years service; or age 56 with 10 or more years service. Conservation Officers may retire after 25 years of service regardless of age.

Final Average Compensation - Regular retirement benefit is based on final average compensation (FAC), which is usually the average of highest 3 consecutive years (2 years for Conservation Officers).

Annual Amount - Total service times 1.5% of FAC. For members with 20 or more years of service, a $3,000 minimum annual benefit is payable. Corrections Officers receive an additional temporary supplement to age 62 equal to the product of supplemental service times 0.5% of FAC. Conservation Officers retiring after 25 years receive a benefit equal to 60% of FAC.

Early Retirement (age reduction factor used):

Eligibility - Age 55 with 15 or more years service.

Annual Amount - Computed as regular retirement benefit but reduced by ½ % for each month under age 60.

Deferred Retirement (vested benefit):

Eligibility - 10 years service (5 years for unclassified persons in the executive or legislative branch). Benefit commences at age 60.

Annual Amount - Computed as regular retirement benefit based on service and FAC at termination.

PLAN PROVISIONS

Duty Disability Retirement:

Eligibility - No age or service requirement.

Annual Amount - Disability age 60+: Computed as regular retirement benefit with minimum benefit based on 10 years service. Disability prior to age 60: To age 60, benefit is computed as a regular retirement benefit using service at the time of disability retirement with a minimum benefit of $6,000 per year. Additional limitation such that benefit plus workers' compensation does not exceed final compensation. At age 60, benefit is recomputed as a regular retirement benefit with service granted for period in receipt of disability benefit before age 60. If the member dies before age 60, benefits are payable to a surviving spouse computed as a regular retirement benefit but based on service at time of disability retirement plus elapsed time between date of retirement and age 60.

Non-Duty Disability Retirement:

Eligibility - 10 years of service.

Annual Amount - Computed as regular retirement benefit based on service and FAC at time of disability. Minimum annual benefit is $600.

Duty Death Before Retirement:

Eligibility - No age or service requirement.

Annual Amount - Surviving spouse receives annual benefit computed as a regular retirement benefit as if the deceased member retired the day before date of death and elected Option A. Benefit is based on member's service at time of death, or 10 years of service, whichever is greater. A minimum benefit of $6,000 per year is payable. Children under age 21 each receive an equal share of 1/2 of the benefit payable (surviving spouse receives the other 1/2), to a maximum of 1/2 for all children. A given child's share of benefits terminates upon the child's marriage, death or attainment of age 21. In the event that there is no surviving spouse, the benefit is allocated equally among all children subject to the limitations described above. In the event that there is no surviving spouse or eligible children, benefits may be paid to an eligible, dependent parent. Benefits end upon the marriage or death of the surviving parent. Additional limitation such that benefit plus workers' compensation does not exceed final compensation.

PLAN PROVISIONS

Non-Duty Death Before Retirement:

Eligibility - 10 years of service. In the case of a deceased vested former member, the survivor benefit commences when the deceased former member would have attained age 60.

Annual Amount - Computed as a regular retirement benefit but reduced in accordance with a 100% Joint and Survivor form of payment.

Post Retirement Cost-of-Living Adjustments:

One-time upward adjustments have been made in 1972, 1974, 1976, 1977, and 1987. Beginning in 1983 some benefit recipients share in a distribution of a portion of investment income earned in excess of 8% annually (supplemental payment). Beginning in 1988 all benefit recipients are eligible for automatic 3% annual (non-compounded) benefit increases, with a maximum $300 annual increase. Eligibility for the above benefits:

Retired before October 1, 1987 - Greater of supplemental payment or the combination of the 1987 one-time adjustment and the automatic increases.

Retired on or after October 1, 1987 - Automatic increases only.

Member Contributions:

None

Defined Contribution Legislation (Public Act 487 of 1996)

New state employees hired on or after March 31, 1997 become participants in Tier 2 (*i.e.*, a defined contribution plan) rather than Tier 1 (*i.e.*, the above described defined benefit plan).

Active members on March 30, 1997 could irrevocably elect to terminate membership in Tier 1 and become participants in Tier 2. Elections had to be in writing and submitted between January 2, 1998 and April 30, 1998. Such members became Tier 2 participants on June 1, 1998, and had the actuarial present value of their Tier 1 accrued benefit transferred into Tier 2 by November 30, 1998.

SECTION G

GLOSSARY

GLOSSARY

Actuarial Accrued Liability The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Accrued Service The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss) A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

GLOSSARY

Normal Cost The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Reserve Account An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses.

Unfunded Actuarial Accrued Liability The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets The value of current plan assets recognized for valuation purposes. Generally based on market value plus a portion of unrealized appreciation or depreciation.