GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

ARIZONA CORRECTIONS OFFICER RETIREMENT PLAN CONSOLIDATED REPORT

JUNE 30, 2009

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

October 30, 2009

Fund Manager
Arizona Corrections Officer Retirement Plan
Phoenix, Arizona

Re: Arizona Corrections Officer Retirement Plan Actuarial Valuation as of June 30, 2009

Ladies and Gentlemen:

The results of the **June 30, 2009 annual actuarial valuations of members** covered by the Arizona Corrections Officer Retirement Plan (CORP) are presented in this report. The purpose of the valuations is to measure CORP' funding progress and to establish contribution rates for the 2010-2011 fiscal year.

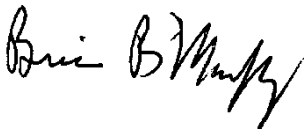
The valuations are based upon current plan provisions of the Arizona Corrections Officer Retirement Plan. All promised benefits are included in the actuarially calculated contribution rates. These provisions are summarized in Section F.

In preparing this report we relied, without audit, on information (some oral and some written) supplied by the State Retirement Plan. This information includes, but is not limited to, statutory provisions, employee and retiree census, and financial information. In our examination of this data, we have found it to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

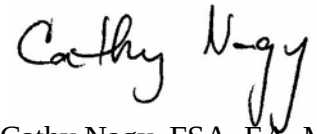
GRS's work product was prepared exclusively for the Arizona Correction's Officer Retirement Plan for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the Plan's operations, and uses System data, which GRS has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of GRS's work product who desires professional guidance should not rely upon GRS's work product, but should engage qualified professionals for advice appropriate to its own specific needs. Any distribution of this report must be provided in its entirety including this cover letter, unless prior written consent is obtained from GRS.

The valuations were completed by qualified actuaries in accordance with accepted actuarial procedures prescribed by the Actuarial Standards Board. All of the actuaries submitting this report 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. To the best of our knowledge, this report is complete and accurate and the actuarial methods and assumptions produced results that are reasonable.

Respectfully submitted,



Brian B. Murphy, FSA, EA, MAAA



Cathy Nagy, FSA, EA, MAAA

Mark Buis, FSA, EA, MAAA

BBM/CN/MB:mrb

1211

TABLE OF CONTENTS

EXECUTIVE SUMMARY/BOARD SUMMARY

1. Required Employer Contributions to Support Retirement Benefits

The computed employer contribution and funded status for the fiscal year beginning July 1, 2010 is shown below.

	Contribution	Funded Status
Average	8.57%	82.6%

2. Contribution Rate 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	Contribution	Funded Status
6/30/2008	7.49%	86.8%
6/30/2009	8.57%	82.6%

The 2008 results were calculated by the prior actuary.

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 or methods 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 June 30, 2009. In addition, there were no assumption changes. There was a change in actuary during the year which resulted in some technical adjustments to the actuarial methods that were applied.

EXECUTIVE SUMMARY/BOARD SUMMARY

4. Plan Experience

Experience during the year ended June 30, 2009 was unfavorable. During the year ended June 30, 2009, the return on fund assets was lower than expected. The market value smoothing techniques used in this valuation of the System recognize both past and present investment gains. While on a market value basis, the Plan's return was -18.7%, the resulting actuarial asset yield for the year ended June 30, 2009 was 3.2%. The asset losses were partially offset by gains attributable to demographic experience. Detailed information related to System experience is shown on page B-2.

5. Looking Ahead

Recent market turmoil has resulted in significant declines since June 30, 2008. Due to the smoothing method, only a portion of the current year asset loss was recognized this year. If the Market Value of Assets were used as the basis of our calculations (instead of the smoothed value), the employer contribution would have been approximately 13% of payroll (instead of 8.57% of payroll) and the funded status would have been 61.0% (instead of 82.6%). If equity markets do not improve significantly, the June 30, 2010 valuation will likely show an increase in the employer contribution amount (absent any liability gains).

6. Other Comments

The ratio of the Funding Value of Assets to Market Value of Assets as shown on Page C-1 is 137.8%. The Actuarial Standards of Practice require that the Funding Value fall within a reasonable range around the Market Value. Although some actuarial judgment is used to determine what is deemed 'reasonable', a ratio approaching 140% is on the high end. We recommend that consideration be given to establishing an asset corridor for the June 30, 2010 actuarial valuation. An asset corridor, sometimes called a "Collar", is a limitation on the amount by which the Funding Value is permitted to differ from Market Value. 20% is a common standard, although many systems have relaxed their standards in response to the extraordinary events of late 2008 and early 2009.

7. Conclusion

The effect of a very large loss was dampened by the 7 year smoothing period, and further offset by the effect of lower than expected pay increases. There remains $363 million of unrecognized investment losses that will, in the absence of other gains, drive the contribution rate up over the next several years.

SECTION A

INTRODUCTION

FUNDING OBJECTIVE

The purpose of the annual actuarial valuation of the Arizona Corrections Officer Retirement Plan as of June 30, 2009 is to:

- Compute the liabilities associated with benefits likely to be paid on behalf of current retired and active members. This information is contained in Section B.
- Compare accrued assets with accrued liabilities to assess the funded condition. This information is contained in Section B.
- Compute the employers' recommended contribution rates for the Fiscal Year beginning July 1, 2010. This information is contained in Section A.

This objective is stated in Article 4, Chapter 5, Title 38, Sections 843B and 848N of the Arizona Revised Statutes.

CONTRIBUTION RATES

The Retirement System is supported by member contributions, employer contributions and investment income from Retirement System assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

(1) Cover the actuarial present value of benefits allocated to the current year by the actuarial cost method described in Section E (the normal cost); and

(2) Finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (the unfunded actuarial accrued liability).

Computed contribution rates for the fiscal year beginning July 1, 2010 are shown on page A-2.

CONTRIBUTION REQUIREMENTS

Development of Employer Contributions for the Indicated Valuation Date

	June 30,	
	2008	**2009**
Contribution for Fiscal Year	2010	2011
Pension		
Normal cost requirement		
Service pensions	10.65%	10.51%
Disability pensions	0.69	0.21
Survivors of active members	1.15	1.08
Refunds of members' accumulated contributions	1.59	2.43
Total normal cost requirement	14.08%	14.23%
Less member contributions	8.41	8.41
Employer normal cost requirement	5.67%	5.82%
Amortization of unfunded liabilities	0.98%	1.60%
Total pension contribution requirement	6.65%	7.42%
Health		
Normal cost requirement	0.43%	0.61%
Amortization of unfunded liabilities	0.41%	0.54%
Total health contribution requirement	0.84%	1.15%
Total contribution requirement	**7.49%**	**8.57%**

Actuarial accrued liability, $1,584,293,344, exceeded the funding value of accrued assets, $1,309,124,035. The unfunded actuarial accrued liabilities were amortized as a level percent of payroll over a closed period of 27 years and added to the employer normal cost. The 27 year period is a one year decrease from last year. The results shown above are prior to the application of the statutory minimum of 6% of payroll (5% of payroll if the actual employer contribution rate is less than 5% for the 2006/2007 fiscal Year).

2008 results were calculated by prior actuary. Split amounts between pension and health were estimated.

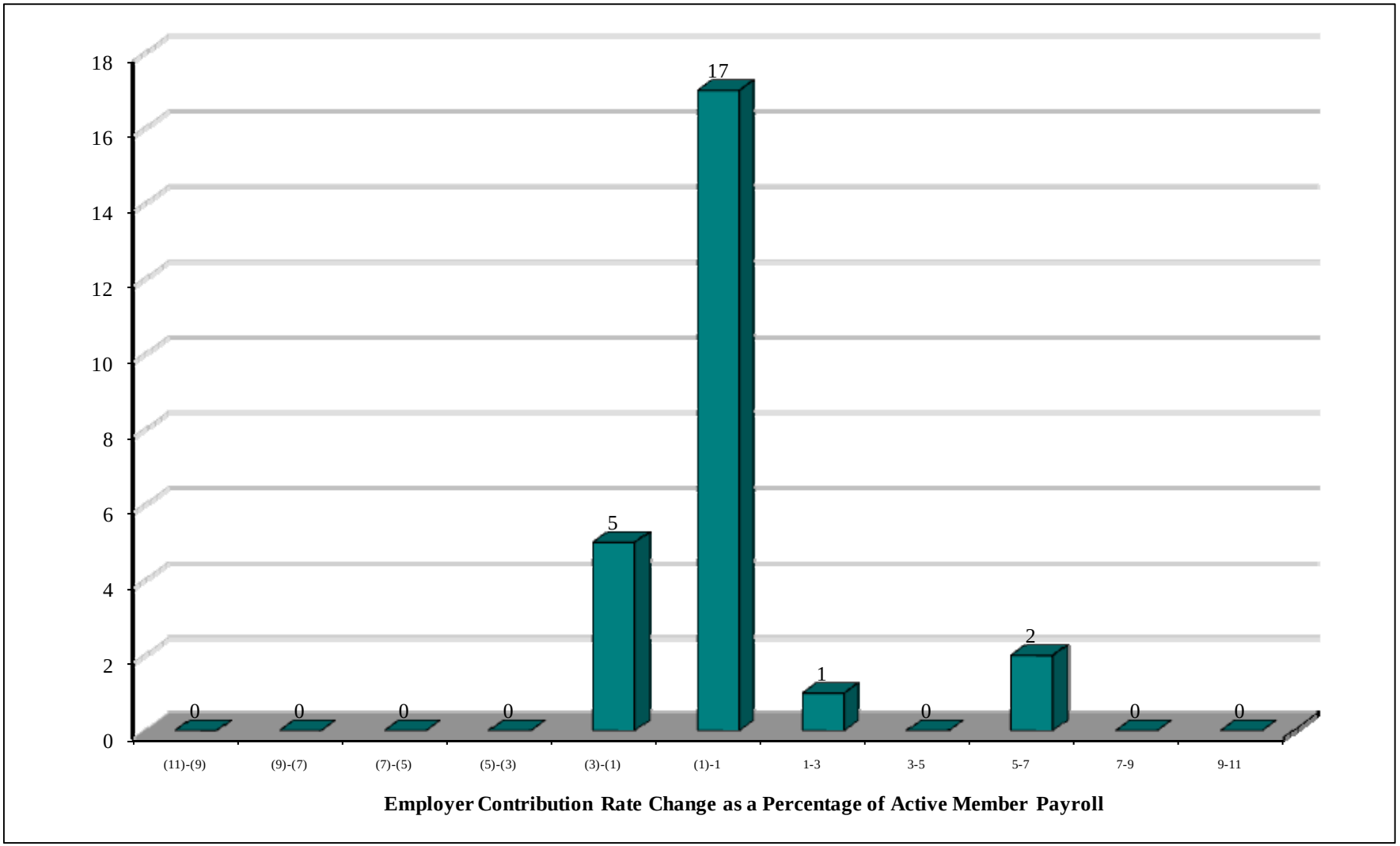
HISTORICAL SUMMARY OF EMPLOYER RATES

Valuation Date June 30	Fiscal Year	Normal Cost	Unfunded Actuarial Accrued Liability	Total
2000	2002	4.90	(3.75)	1.15
2001	2003	5.79	(4.08)	1.71
2002	2004	6.79	(2.84)	3.95
2003	2005	5.74	(1.67)	4.07
2004	2006	6.05	(0.58)	5.47
2005	2007	4.64	(0.18)	4.46
2006	2008	6.07	0.65	6.72
2007	2009	7.10	1.55	8.65
2008	2010	6.10	1.39	7.49
2009	**2011**	**6.43**	**2.14**	**8.57**

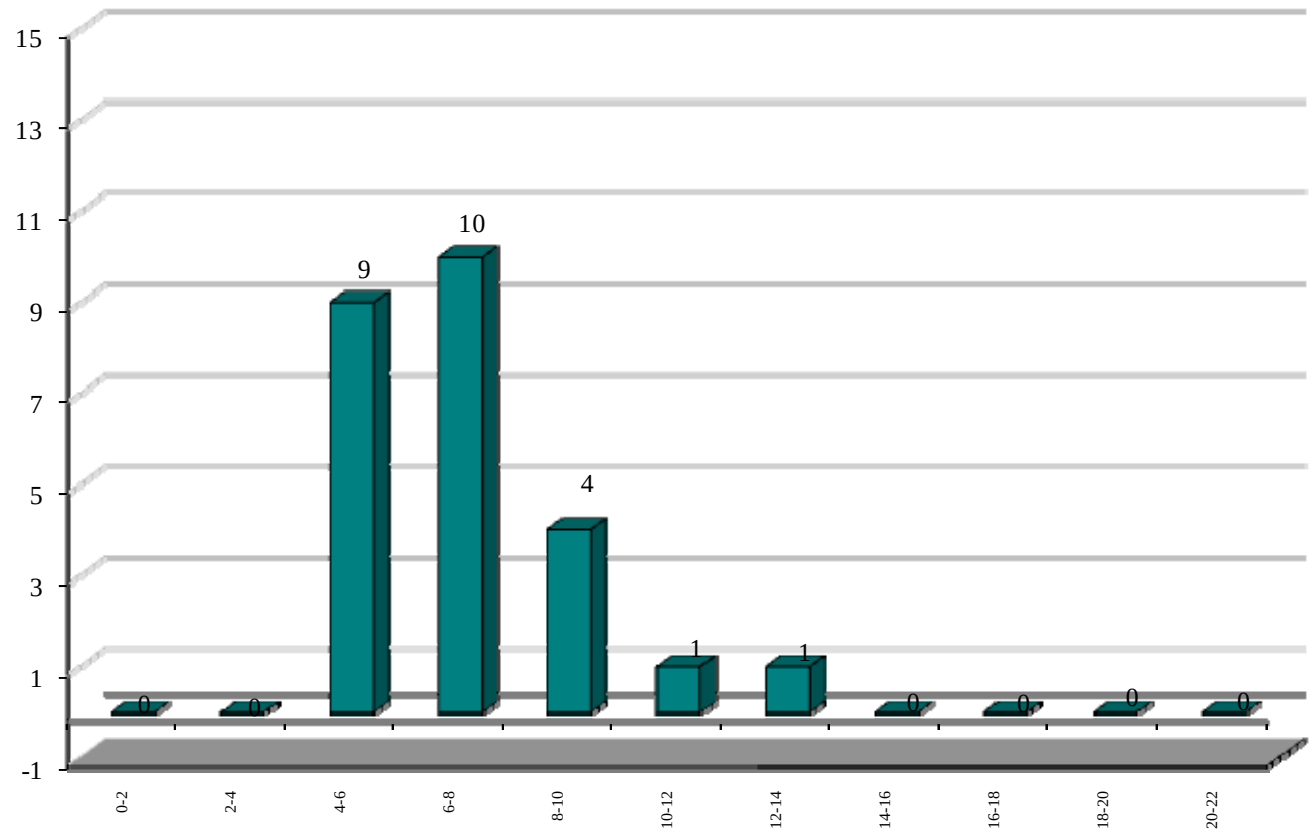
2005 results were revised pursuant to changes enacted by the 2006 Legislature and the CORP Fund Manager.

Results prior to 2009 were calculated by the prior actuary.

EMPLOYER CONTRIBUTION RATE CHANGES AT JUNE 30, 2009
ALL EMPLOYERS



EMPLOYER CONTRIBUTION RATES - ALL EMPLOYERS AT JUNE 30, 2009



Employer Contribution Rate as a Percentage of Active Member Payroll

SECTION B

FUNDING RESULTS

PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY

	June 30, 2008	June 30, 2009
A. Accrued Liability		
1. For retirees and beneficiaries	$ 504,461,874	$ 586,596,231
2. For vested terminated members	12,618,412	14,599,457
3. For present active members		
a. Value of expected future benefit payments	1,551,554,129	1,688,145,270
b. Value of future normal costs	678,271,073	705,047,614
c. Active member accrued liability: (a) - (b)	873,283,056	983,097,656
4. Total accrued liability	1,390,363,342	1,584,293,344
B. Present Assets (Funding Value)	1,207,026,191	1,309,124,035
C. Unfunded Accrued Liability: (A.4) - (B)	183,337,151	275,169,309
D. Stabilization Reserve	12,348,702	2,034,724
E. Net Unfunded Accrued Liability: (C) + (D)	195,685,853	277,204,034
F. Funding Ratio: (B) / (A.4)	86.8%	82.6%

2008 results were calculated by the prior actuary.

Present Assets exclude $15,124,946 in reserves held for future pension increases pursuant to state statute.

DERIVATION OF EXPERIENCE GAIN/(LOSS)

Actual experience will never (except by coincidence) exactly match assumed experience. Gains and losses often cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below, along with a year-by-year comparative schedule.

	June 30,	
	2008	2009
(1) UAAL at start of year	$170,674,932	$183,337,151
(2) Normal cost from last valuation	77,607,436	91,532,707
(3) Actual Contributions	97,632,464	106,905,385
(4) Interest Accrual	13,656,305	14,930,319
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	164,306,209	182,894,792
(6) Changes from benefit increases	10,000,000	18,197,108
(7) Changes in actuarial methods & actuary	-	78,118,530
(8) Change in Reserve for future pension increases	-	(28,133,467)
(9) Expected UAAL after changes: (5) + (6) + (7) + (8)	174,306,209	251,076,963
(10) Actual UAAL at end of year	183,337,151	275,169,309
(11) Experience Gain/(Loss): (9) -(10)	(9,030,942)	(24,092,346)

2008 results were calculated by the prior actuary.

FY2009 Gains and Losses by Source

	Gain/(Loss)	% of Liability
Investment Return	$(66,722,832)	-4.8%
Salary Increases	59,082,145	4.2%
Retirement	4,477,510	0.3%
Turnover	(17,433,879)	-1.3%
Disability	363,878	0.0%
Death-in-service	(488,372)	0.0%
Retiree Mortality	1,136,681	0.1%
Other	(4,507,477)	-0.3%
Total	(24,092,346)	-1.7%

UNFUNDED ACTUARIAL ACCRUED LIABILITIES COMPARATIVE STATEMENT

(Dollar amounts in $'000s)

Valuation Date	(1) Actuarial Accrued Liabilities (AAL)	(2) Valuation Assets	(3) Unfunded AAL	(5) Funded Ratio (2)/(1)	(6) Financing Period
2000	$ 501,323	$ 704,991	$(203,668)	140.6	20 yrs.
2001	554,387	776,177	(221,790)	140.0	20
2002	632,238	782,446	(150,208)	123.8	20
2003	709,298	811,791	(102,493)	114.4	20
2004	795,775	833,621	(37,846)	104.8	20
2005	863,791	872,981	(9,190)	101.1	20
2006	981,208	919,868	61,340	93.7	30
2007	1,110,801	940,126	170,675	84.6	29
2008	1,390,363	1,207,026	183,337	86.8	28
2009	**1,584,293**	**1,309,124**	**275,169**	**82.6**	**27**

2005 Results revised pursuant to changes in assumptions and methods enacted by the 2006 Legislature and the CORP Fund Manager. Results prior to 2009 were calculated by prior actuary.

SHORT CONDITION TEST

If the contributions to CORP are soundly executed, the System will ***pay all promised benefits when due -- the ultimate test of financial soundness***.

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

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

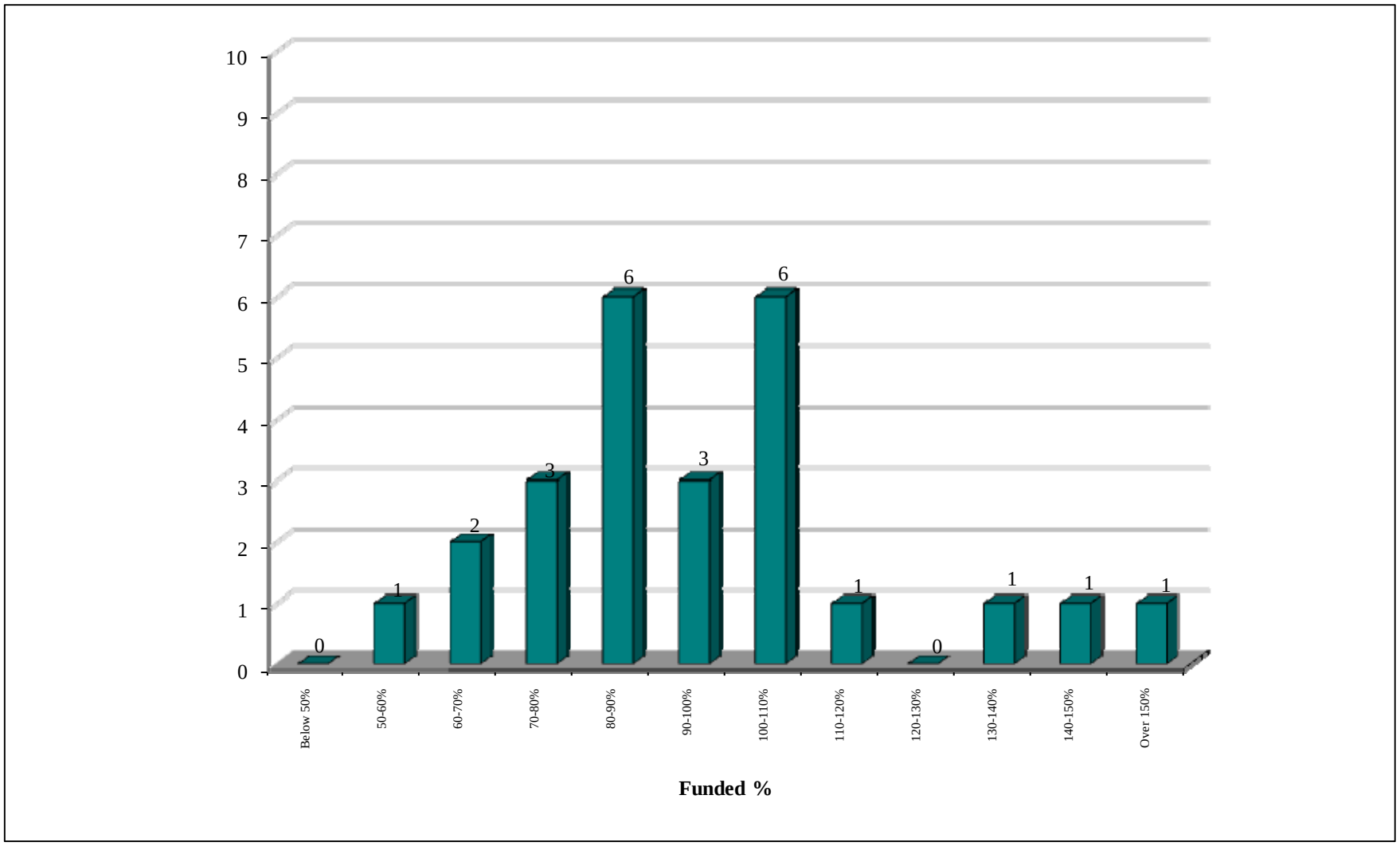
In a system that has been following the discipline of pre-funding, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the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

Short Condition Test (Including Heath Insurance Subsidy)

(in $'000s)

	Aggregate Actuarial Liabilities For				Portion of Actuarial Liabilities Covered by Assets		
Calendar Year	(1) Non-Retired Contributions	(2) Annuitants	(3) Non-Retired Members (Employer Financed Portion)	Actuarial Assets	(1)	(2)	(3)
2009	$314,100	$586,596	$683,597	$1,309,124	100%	100%	59.7%

FUNDED PERCENTS - ALL EMPLOYERS AT JUNE 30, 2009



SECTION C

FUND ASSETS

DEVELOPMENT OF FUNDING VALUE OF ASSETS (7-YEAR SMOOTHING)

Year Ended June 30:	2009	2010	2011	2012	2013	2014	2015
A. Funding Value Beginning of Year (Including Future Benefit Increases)	$ 1,247,659,869						
B. Market Value End of Year	961,016,116						
C. Market Value Beginning of Year	1,141,587,845						
D. Non Investment Net Cash Flow	35,741,827						
E. Investment Income							
E1. Total: B-C-D	(216,313,556)						
E2. Amount for Immediate Recognition (8.50%)	107,570,117						
E3. Amount for Phased in Recognition: E1-E2	(323,883,673)						
F. Phased in Recognition of Investment Income							
F1. Current Year: E3 / 7	$ (46,269,096)						
F2. First Prior Year	(22,975,892)	$ (46,269,096)					
F3. Second Prior Year	9,080,499	(22,975,892)	$ (46,269,096)				
F4. Third Prior Year	(1,985,127)	9,080,499	(22,975,892)	$ (46,269,096)			
F5. Fourth Prior Year	(1,611,273)	(1,985,127)	9,080,499	(22,975,892)	$ (46,269,096)		
F6. Fifth Prior Year	2,117,111	(1,611,273)	(1,985,127)	9,080,499	(22,975,892)	$ (46,269,096)	
F7. Sixth Prior Year	(5,079,054)	2,117,110	(1,611,274)	(1,985,130)	9,080,496	(22,975,892)	$ (46,269,097)
F8. Total Recognized Investment Gain	$ (66,722,832)	$ (61,643,779)	$ (63,760,890)	$ (62,149,619)	$ (60,164,492)	$ (69,244,988)	$ (46,269,097)
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D3+E2+F6)	1,324,248,981						
G2. Future Benefit Increases	15,124,946						
G3. End of Year: (G1-G2)	1,309,124,035						
H. Difference Between Market Value & Funding Value	(363,232,865)						
I. Market Rate of Return	-18.7%						
J. Recognized Rate of Return	3.2%						
K. Ratio of Funding Value to Market Value	137.8%						

The funding value of assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment return (line E3) are phased in over a closed 7-year period. During periods when investment performance exceeds the assumed rate, funding value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than market value. The funding value of assets is **unbiased** with respect to market value. At any time it may be either greater or less than market value. If actual and assumed rates of investment return are exactly equal for 7 consecutive years, the funding value will become equal to market value.

SECTION D

CENSUS DATA

JUNE 30, 2009 VALUATION DATA SUMMARY

For purposes of the June 30, 2009 valuation, information on 18,647 covered persons was furnished. These people may be briefly described as follows.

June 30, 2009

	No.	Averages			
		Age	Service	Annual Pay or Retirement Allowance	
				2009	2008
Actives	14,580	40.2	7.4	$43,266	$43,668
Retirees & Beneficiaries	2,591	62.6		22,806	21,031
Inactive Vested	1,476	38.4			
	18,647				

ACTIVE MEMBERS

Members in Active Service as of June 30, 2009
by Years of Service

Age	Years of Service							Total Count	Total Pay	Average Pay
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 & Up			
Under 25	895	6						901	$ 31,750,071	$35,239
25 - 29	1,700	374	2					2,076	78,606,351	37,864
30 - 34	1,201	789	188					2,178	89,562,719	41,122
35 - 39	989	702	580	103	1			2,375	103,504,814	43,581
40 - 44	675	545	424	306	49			1,999	90,195,232	45,120
45 - 49	504	385	331	301	181	19		1,721	80,004,969	46,487
50 - 54	350	366	267	206	156	42	7	1,394	64,879,246	46,542
55 - 59	285	252	209	173	94	38	22	1,073	50,825,018	47,367
60 - 64	131	173	147	108	78	25	7	669	32,405,041	48,438
65 and over	45	67	41	17	16	8		194	9,091,397	46,863
Total	6,775	3,659	2,189	1,214	575	132	36	14,580	$ 630,824,858	$43,266

TERMINATED VESTED MEMBERS

Age	Years of Service					Total Count
	0 - 4	5 - 9	10 - 14	15 - 19	20 & Up	
Under 30	475	8				483
30 - 39	368	49	10			427
40 - 44	100	13	15	4		132
45 - 49	99	9	14	3		125
50 - 54	75	13	17	6		111
55 - 59	55	16	27	10	1	109
60 - 69	50	10	15	8		83
70 and over	6					6
Total	1228	118	98	31	1	1476

RETIREES AND BENEFICIARIES

Attained Ages	Males		Females		Total	
	No.	Annual Pension Benefits	No.	Annual Pension Benefits	No.	Annual Pension Benefits
Under 25	2	$ 30,341	2	$ 33,668	4	$ 64,009
25-29	4	62,466	9	118,844	13	181,310
30-34	2	36,720	7	96,395	9	133,115
35-39	13	218,904	20	310,690	33	529,594
40-44	48	1,096,092	25	421,426	73	1,517,518
45-49	156	4,146,726	59	1,346,094	215	5,492,820
50-54	195	5,653,016	93	2,489,693	288	8,142,709
55-59	249	8,011,167	100	2,507,795	349	10,518,962
60-64	306	8,710,494	140	3,327,994	446	12,038,488
65-69	338	7,198,041	151	2,614,712	489	9,812,753
70-74	269	4,632,635	103	1,685,947	372	6,318,582
75-79	135	2,028,258	64	910,727	199	2,938,985
80-84	55	780,202	23	312,286	78	1,092,488
85-89	12	149,001	8	128,777	20	277,778
90-94	2	21,679	1	8,801	3	30,480
95-99	0	0	0	0	0	0
100 and Over	0	0	0	0	0	0
Totals	**1,786**	**$42,775,742**	**805**	**$16,313,849**	**2,591**	**$59,089,591**

Pension Being Paid		Number	Annual Pensions	Average Pensions
Retired Members	Service Pensions	2,090	$51,110,430	$24,455
	Disability Pensions	93	1,856,642	19,964
Totals		2,183	52,967,072	24,263
Survivors of Members	Spouses	370	5,606,169	15,152
	Children with Guardians	38	516,350	13,588
Total		408	6,122,519	28,740
Total Pension being Paid		**2,591**	**$59,089,591**	**$22,806**

	Average Age	Average Service	Average Age at Retirement
Normal retired members	63.3	19.1	57.2
Disability retired members	53.4	9.8	44.6
Spouse beneficiaries	63.1	11.4	51.7

PENSIONS BEING PAID
HISTORICAL SCHEDULE

Valuation Date June 30	No.	Annual Pensions	% Incr. in Annual Pensions	Average Pension	Present Value of Pensions Total	Present Value of Pensions Average
1990	115	$ 765,738	34.0%	$ 6,659	$ 7,150,080	$ 62,175
1995	435	3,456,705	27.5	7,946	34,140,660	78,484
1996	504	4,274,602	23.7	8,481	41,777,424	82,892
1997	598	5,305,705	24.1	8,872	52,028,400	87,004
1998	708	6,884,614	29.8	9,724	66,342,827	93,705
1999	825	9,642,797	40.1	11,688	89,514,713	108,503
2000	925	11,042,151	14.5	11,937	107,650,253	116,379
2001	1,040	13,446,069	21.8	12,929	124,247,094	119,468
2002	1,218	17,660,065	31.3	14,499	166,073,532	136,349
2003	1,363	21,653,042	22.6	15,886	201,489,450	147,828
2004	1,536	26,261,143	21.3	17,097	255,272,652	166,193
2005	1,733	31,329,225	19.3	18,078	332,199,210	191,690
2006	1,955	37,272,183	19.0	19,065	384,512,841	196,682
2007	2,123	42,666,000	14.5	20,097	430,172,373	202,625
2008	2,428	51,062,647	19.7	21,031	504,461,674	207,768
2009	**2,591**	**59,089,591**	**15.7**	**22,806**	**566,228,807**	**218,537**

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 using the Projected Unit Credit Cost Method having the following characteristics:

(i) The annual normal costs for each individual active member, payable from date of hire to date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;

(ii) Each annual normal cost is the portion of the actuarial present value allocated to the current year. The normal cost is expected to increase as accrued service increases.

This method tends to be less stable than the Entry Age Normal Method particularly if the group size changes.

Actuarial Accrued Liability **-** The actuarial accrued liability is the portion of actuarial present value allocated to service rendered prior to the valuation date, including experience gains and losses. The actuarial accrued liability was computed using the assumptions summarized in this report.

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 seven 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 the assumed rate, the actuarial value of assets will tend to be greater than market value.

Financing of Unfunded Actuarial Accrued Liabilities **–** The actuarial value of assets were subtracted from the computed actuarial accrued liability. Any unfunded amount would be amortized as level percent of payroll over a closed period of 27 years. If the actuarial value of assets exceeded the actuarial accrued liability, the excess was amortized over an open period of 20 years and applied as a credit to reduce the normal cost which otherwise would be payable.

Active member payroll was assumed to increase 5.5% annually for the purpose of computing the amortization payment (credit) as a level percent of payroll.

VALUATION ASSUMPTIONS

Beginning with the June 30, 2007 valuation and with each subsequent valuation, if the actuarial value of assets exceeds the actuarial accrued liabilities, one half of this excees in each year is allocated to a Stabilization Reserve. The Stabilization Reserve is excluded from the calculation of the employer contribution rates. The Stabilization Reserve continues to accumulate as long as the plan is over-funded. Once the plan becomes under-funded, the Stabilization Reserve will be used to dampen increases in the employer contribution rates.

The rate of investment return was 8.5% a year, compounded annually net of investment and administrative expenses.

The assumed real return is the rate of return in excess of wage growth. Considering other assumptions used in the valuation, the 8.5% nominal rate translates to a net real return over wage growth of 3.0% a year.

The rates of pay increase used for individual members are shown below. This assumption is used to project a member's current pay to the pay upon which System benefits will be based.

Sample Ages	Salary Increase Assumptions For an Individual Member		
	Merit & Seniority	Base (Economy)	Increase Next Year
20	3.0%	5.5%	8.5%
25	3.0%	5.5%	8.5%
30	2.2%	5.5%	7.7%
35	0.9%	5.5%	6.4%
40	0.2%	5.5%	5.7%
45	0.2%	5.5%	5.7%
50	0.2%	5.5%	5.7%
55	0.1%	5.5%	5.6%
60	0.0%	5.5%	5.5%
Ref:			320

Active Member Payroll is assumed to grow at 5.5% per year. There is no specific price inflation assumption used for this valuation since no benefits are linked to prices.

The healthy mortality table used in this valuation of the System was the RP 2000 Healthy Annuity Mortality table for males with 2 years set forward, and the female table with two years set forward. This assumption was first used for the June 30, 2007 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	0.56%	0.26%	28.39	31.42
55	0.64	0.44	24.16	26.89
60	0.99	0.77	20.00	22.58
65	1.65	1.25	16.09	18.55
70	2.73	2.07	12.54	14.82
75	4.69	3.41	9.42	11.50
80	8.05	5.63	6.81	8.62
Ref:	702 x 1.00 2 year set forward	703 x 1.00 2 year set forward		

This assumption is used to measure the probabilities of each benefit payment being made after retirement. For disabled members, non-disability rates with a five year set forward were used.

For actives, the sample rates of mortality and years of life expectancy are shown below, and were first used for the June 30, 2007 valuation of the System.

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.26%	0.21%	30.38	34.23
55	0.40	0.33	25.80	29.63
60	0.65	0.50	21.37	25.17
65	0.91	0.69	17.09	20.84
70	3.04	2.30	13.27	16.96
75	5.21	3.76	10.55	14.17
80	8.97	6.25	8.74	12.26
Ref:	663 x 1.00 3 year set forward	664 x 1.00 3 year set forward		

VALUATION ASSUMPTIONS

The rates of regular retirement used to measure the probability of eligible members retiring during the next year are shown below. This assumption was first used for the June 30, 2007 valuation of the System.

Retirement Rates: Service-related rates based in the following schedule:

Service at Retirement	Percent
20	30%
21	30%
22	25%
23	25%
24	25%
25	40%
26	40%
27	30%
28	15%
29	15%
30	30%
31	30%
32	65%
33	65%
34	100%
Ref.	1741

Active members are eligible to retire at any age with 20 years of service (25 for dispatchers), at age 62 with 10 years of service, or when the sum of age and service equals at least 80.

VALUATION ASSUMPTIONS

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. This assumption was first used for the June 30, 2007 valuation of the System.

Sample Ages	Years of Service	% of Active Members Separating Within Next Year
All	0	25.00%
	1	20.00%
	2	18.00%
	3	15.00%
	4	14.00%
	5 & Over	10.00%
	10 Plus	4.00%
Ref.		606

Rates of disability among active members used in the valuation are shown below, and were first used for the June 30, 2007 valuation of the System.

Sample Ages	% of Active Members Becoming Disabled within Next Year
20	0.04%
25	0.04%
30	0.04%
35	0.05%
40	0.07%
45	0.08%
50	0.10%
55	0.10%
Ref	592

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2009
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption:	90% of males and females are 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.
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.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and turnover decrements do not operate during retirement eligibility.
Service Credit Accruals:	It is assumed that members accrue one year of service credit per year.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Normal Form of Benefit:	A straight life payment is the assumed normal form of benefit for members who are not married, and the 75% Joint and Survivor form of payment with no reduction, for married members. 90% of members are assumed to be married at the time of retirement.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Normal Cost Percentage:	For the purposes of calculating the Normal Cost as a percent of payroll under the Projected Unit Credit Cost Method, the Normal Cost was projected with interest to the applicable Fiscal Year and divided by the Payroll projected with wage base to the applicable Fiscal Year.
Health Care Utilization	80% of future retirees are expected to utilize retiree health care. 90% of those are assumed to be married.

SECTION F

PLAN PROVISIONS

Summary of Plan Provisions Valued and/or Considered

Normal Retirement (no reduction for age). A corrections officer may retire upon meeting one of the following age and service requirements:

a) Any age with 20 (25 for dispatchers) or more years of credited service (effective August 9, 2001);
b) Age 62 years with 10 or more years of credited service;
c) A combination of age and credited service equal to 80 (effective July 1, 1995).

The amount of normal pension at 20 years of credited service is 50% of average monthly salary with 2% increments for every year over 20 years of credited service up to 25 years of credited service. With 25 or more years of credited service the accrual rate is 2.5% for each year. Maximum is 80% of average monthly salary.

Early Retirement (reduction for age). No provision

Vested Termination (deferred retirement). A member may be eligible for deferred retirement after completion of 10 or more years of credited service if member contributions are left on deposit in the plan. The amount of deferred pension is determined in the same manner as a normal retirement pension based on credited service, compensation and benefit provisions at the time of termination.

Disability Retirement. A member who is injured in the performance of his duties which totally and permanently prevent him from performing a reasonable range of duties in his department and was the result of either physical contact with an inmate, responding to a confrontational situation with an inmate or a job-related motor vehicle accident may be retired under accidental disability. A corrections officer who becomes incapacitated for any gainful employment, as the direct and proximate result of performance of duty as a corrections officer, may be retired by the fund manager under total and permanent disability. The amount of pension for both types of disability is 50 percent of average monthly salary.

A member who has a total and permanent disability that prevents the performance of a reasonable range of duties in his department may be retired by the fund manager under an ordinary disability (non-duty related). The amount of the pension is a percentage of normal retirement benefit. The percentage based on credited service divided by 20 (25 for dispatchers).

DROP: Beginning July 1, 2006, through June 30, 2011, the Fund Manager shall offer the Reverse DROP plan to members on a voluntary basis. Any member who is eligible for a normal pension and who has at least 24 or more years of credited service under the Plan may elect to participate in the Reverse DROP. Under the Reverse DROP, the member must voluntarily and irrevocably elect to terminate employment and receive a normal retirement upon participation in the Reverse DROP. The member elects a "Reverse DROP Date" that is the first day of the month immediately following completion of 24 years of credited service or a date not more than 60 consecutive months before the date the member elects to participate in the Reverse DROP, whichever is later. The member's pension will be calculated using the factors of credited service and average monthly benefit compensation in effect on the Reverse DROP Date. In addition, a lump sum distribution reflecting an amount that is credited as though accrued monthly from the Reverse DROP Date to the date the member elected to participate in the Reverse DROP is paid out. This amount is credited with an interest rate equal to the yield on a 5 year Treasury note as of the first day of the month as published by the Federal Reserve Board, and can either be paid to the member or paid to an eligible retirement plan or individual retirement account. Neither the member, nor the employer, are entitled to a refund of contributions made between the Reverse DROP Date and the date the member elects to participate in the Reverse DROP

Survivor Pensions. Payable to the eligible beneficiary of a retired corrections officer or an active corrections officer. An eligible beneficiary is a surviving spouse who was married to the retired or active corrections officer for at least two years. A surviving spouse's pension terminates upon death. The amount of a surviving spouse's pension is 80% of the pension being paid the deceased retired corrections officer and 40% (100% if duty-related) of the average monthly salary of the deceased active corrections officer. Eligible surviving children are paid equal shares of the pension which would have been payable to a surviving spouse if a surviving spouse pension is not being paid. If no pension is payable because of the death of an active member, a refund of twice the member's accumulated contributions is paid to the beneficiary.

Other Terminations. The member is paid a refund of accumulated member contributions, plus an additional amount if the member has at least five years of service credited. The additional amount is a percent, based on service credit, of the member contribution amount, ranging from 25% (with five years of service credited) to 100% (with 10 or more years of service credited).

Post-Retirement Adjustments: Pensions payable to retirees or beneficiaries who have been on the retirement rolls for at least two years or are age 55 or older and were on the retirement rolls on June 30 of the previous year may receive pension increases up to 4%. Increases are subject to the level of investment income earned.

Post-Retirement Health Insurance Subsidy: Payable on behalf of retired members and survivors who elect coverage provided by the state or participating employer. The amounts cannot exceed:

Member Only		With Dependents		
Not Medicare Eligible	**Medicare Eligible**	**All Not Medicare Eligible**	**All Medicare Eligible**	**One With Medicare**
$150	$100	$260	$170	$215

Member Contributions. 8.50% of base salary. For Fiscal Years 2007/2008 and 2008/2009, the member contribution rate is 7.96% pursuant to legislation adopted in 2005. Effective after 9/26/2008, non-dispatcher members contribute 8.41% until the Plan is 100% funded.

Employer Contributions. Level percent of payroll normal cost plus 27 year amortization of unfunded actuarial accrued liability (20 year amortization for accrued assets in excess of accrued liabilities). The minimum employer contribution rate is 6% for fiscal years beginning with FY 2007/2008 (5% for units under 5% as of June 30, 2005 valuation).

SECTION G

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.

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.

APPENDIX I

ACCOUNTING DISCLOSURES

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

GASB STATEMENT NO. 25 SUPPLEMENTARY INFORMATION

SCHEDULE OF FUNDING PROGRESS (EXCLUDING HEALTH INSURANCE SUBSIDY BEGINNING JUNE 30, 2008)

SCHEDULE OF FUNDING PROGRESS

Year Ended June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll [(b)-(a)]/(c)
2000	$ 704,990,577	$ 501,322,987	$(203,667,590)	140.6 %	$339,439,892	0.00 %
2001	776,177,208	554,386,854	(221,790,354)	140.0 %	339,782,697	0.00 %
2002	782,445,913	632,237,814	(150,208,099)	123.8 %	330,427,800	0.00 %
2003	811,791,293	709,297,998	(102,493,295)	114.4 %	358,160,933	0.00 %
2004	833,620,994	795,774,862	(37,846,132)	104.8 %	381,942,220	0.00 %
2005	872,980,916	906,025,039	33,044,123	96.4 %	404,155,903	8.18 %
2006	919,867,995	981,207,708	61,339,713	93.7 %	437,743,658	14.01 %
2007	940,126,081	1,110,801,013	170,674,932	84.6 %	515,427,641	33.11 %
2008	1,207,026,191	1,336,662,478	129,636,287	90.3 %	642,621,478	20.17 %
2009	**1,309,124,035**	**1,515,562,589**	**206,438,554**	**86.4 %**	**630,824,994**	**32.73 %**

Results before 2009 were calculation by prior actuary.

GASB STATEMENT NO. 25 SUPPLEMENTARY INFORMATION

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ended June 30	Annual Required Contribution
2000	$16,876,163
2001	14,927,396
2002	7,101,111
2003	7,397,596
2004	14,555,335
2005	16,291,914
2006	24,028,050
2007	24,622,693
2008	45,932,170
2009	58,657,464
2010	N/A
2011	52,097,600 (est.)

Fiscal Years prior to 2011 provided by the prior actuary.

Actual Required Contribution dollar amount will be based on the recommended contribution rate and the actual pensionable payroll for the period.

GASB STATEMENT NO. 25 SUPPLEMENTARY INFORMATION

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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

Valuation date	June 30, 2009
Actuarial cost method	Projected Unit Credit
Amortization method	Level percent-of-pay closed
Remaining amortization period	27 years
Asset valuation method	7-year smoothed market
Actuarial assumptions:	
Investment rate of return	8.5%
Projected salary increases	5.5% - 8.5%
Payroll Growth	5.5%
Cost-of-living adjustments	None

GASB STATEMENT NO. 45 SUPPLEMENTARY INFORMATION

SCHEDULE OF FUNDING PROGRESS

Valuation Date June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Annual Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
2006	$0	$45,454,331	$45,454,331	0.00%	$437,743,658	10.4%
2007	0	48,990,212	48,990,212	0.00	515,427,641	9.5%
2008	0	53,700,864	53,700,864	0.00	642,621,478	8.4%
2009	**0**	**68,730,755**	**68,730,755**	**0.00**	**630,824,994**	**10.9%**

ANNUAL REQUIRED CONTRIBUTION

Valuation Date June 30	Fiscal Year Ended June 30	Normal Cost (a)	Actuarial Accrued Liability (b)	Total (a+b)	Dollar Amount
2005	2007	0.59%	0.59%	1.18%	$5,742,051
2006	2008	0.43%	0.41%	0.84%	5,398,020
2007	2009	N/A	N/A	N/A	N/A
2008	2010	N/A	N/A	N/A	N/A
2009	**2011**	**0.61%**	**0.54%**	**1.15%**	**8,074,426**

Fiscal Years prior to 2011 provided by the prior actuary.

Health Insurance Subsidy Payment Reported for FY 2009: $2,207,889

Note: GASB Statement No. 45 Supplementary information is shown individually the separate reports for each participating unit.