Gabriel Roeder Smith & Company
Consultants & Actuaries

ARIZONA CORRECTIONS OFFICER RETIREMENT PLAN CONSOLIDATED REPORT

JUNE 30, 2012

GRS

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October 12, 2012

The Board of Trustees
Arizona Corrections Officer Retirement Plan
Phoenix, Arizona

Re: Arizona Corrections Officer Retirement Plan Actuarial Valuation as of June 30, 2012

Ladies and Gentlemen:

The results of the June 30, 2012 annual actuarial valuation of members covered by the Arizona Corrections Officer Retirement Plan (CORP) are presented in this report. The purpose of the valuation was to measure the System's funding progress, provide actuarial information in connection with applicable Governmental Accounting Standards Board Statements and to determine the employer contribution for the 2013-2014 fiscal year. This report should not be relied upon for any other purpose. This report may be distributed to parties other than the System only in its entirety and only with the permission of the Board.

The valuation was based upon information, furnished by the State Retirement System, concerning Retirement System benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. Data was checked for internal and year to year consistency, but was not otherwise audited by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the data provided.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

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. The undersigned are independent of the plan sponsor and are Members of the American Academy of Actuaries (MAAA) who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. It is our opinion that the actuarial assumptions used for the valuation produce results which are reasonable.

Respectfully submitted,

Brian B. Murphy, FSA, EA, MAAA

Mark Buis, FSA, EA, MAAA

BBM/MB:mrb

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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, 2013 is shown below.

	Contribution	Funded Status
Average	13.68%	67.8%

2. Contribution Rate Comparison

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

Valuation Date	Contribution	Funded Status
6/30/2011	11.31%	73.0%
6/30/2012	13.68%	67.8%

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.

EXECUTIVE SUMMARY/BOARD SUMMARY

The following method and assumption changes were reflected in the valuation:

- The recommendations of the assumption study completed in May 2012, including demographic assumption changes.
- The investment return assumption was decreased to 8.00% from 8.25%.
- For the June 30, 2013 valuation, the Board adopted an investment return of 7.85% and wage inflation of 4.50%.

The contribution rate increased from 11.31% of payroll last year to 13.68% of payroll this year for the following reasons:

- Continued phase-in of asset losses from prior years.
- Changes in the actuarial assumptions.

4. Plan Experience

Experience during the year ended June 30, 2012 was overall unfavorable. On a market value basis, the System's return for the year ended June 30, 2012 was -0.8%. However, the market value smoothing techniques used in this valuation of the System recognize both past and present investment gains and losses. The resulting actuarial asset yield for the year was 3.6%. The effects of the asset losses were partially offset by gains attributable to demographic experience. Detailed information related to System experience is shown on page B-2.

EXECUTIVE SUMMARY/BOARD SUMMARY

5. Looking Ahead

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 16% of payroll (instead of 13.68% of payroll) and the funded status would have been about 58% (instead of 67.8%). If equity markets do not improve significantly, the June 30, 2013 valuation will likely show yet another increase in the employer contribution amount (absent any liability gains).

6. Conclusion

The continuing effect of prior losses was dampened by the 7-year smoothing period, and further offset by the effect of lower than expected pay increases. There remains $226 million of unrecognized investment losses that will, in the absence of other gains, drive the contribution rate up over the next several years. It is most important that this plan receive contributions <u>at least</u> equal to the rates shown in this report.

SECTION A

INTRODUCTION

FUNDING OBJECTIVE

The purpose of the annual actuarial valuation of the Arizona Corrections Officer Retirement Plan as of June 30, 2012 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, 2013. 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, 2013 are shown on page A-2.

CONTRIBUTION REQUIREMENTS

Development of Employer Contributions for the Indicated Valuation Date

	June 30,	
	2011	**2012**
Contribution for Fiscal Year	2013	2014
Pension		
Normal cost requirement		
Service pensions	9.01%	11.17%
Disability pensions	0.34	0.25
Survivors of active members	1.51	1.06
Refunds of members' accumulated contributions	3.60	3.09
Total normal cost requirement	14.46%	15.57%
Less member contributions	8.38	8.40
Employer normal cost requirement	6.08%	7.17%
Amortization of unfunded liabilities	4.01%	5.41%
Total pension contribution requirement	10.09%	12.58%
Health		
Normal cost requirement	0.39%	0.33%
Amortization of unfunded liabilities	0.83%	0.77%
Total health contribution requirement	1.22%	1.10%
Total contribution requirement	**11.31%**	**13.68%**

Actuarial accrued liability, $2,231,544,260, exceeded the funding value of assets, which was $1,512,989,421. The unfunded actuarial accrued liabilities were amortized as a level percent of payroll over a closed period of 24 years and added to the employer normal cost. The 24 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.

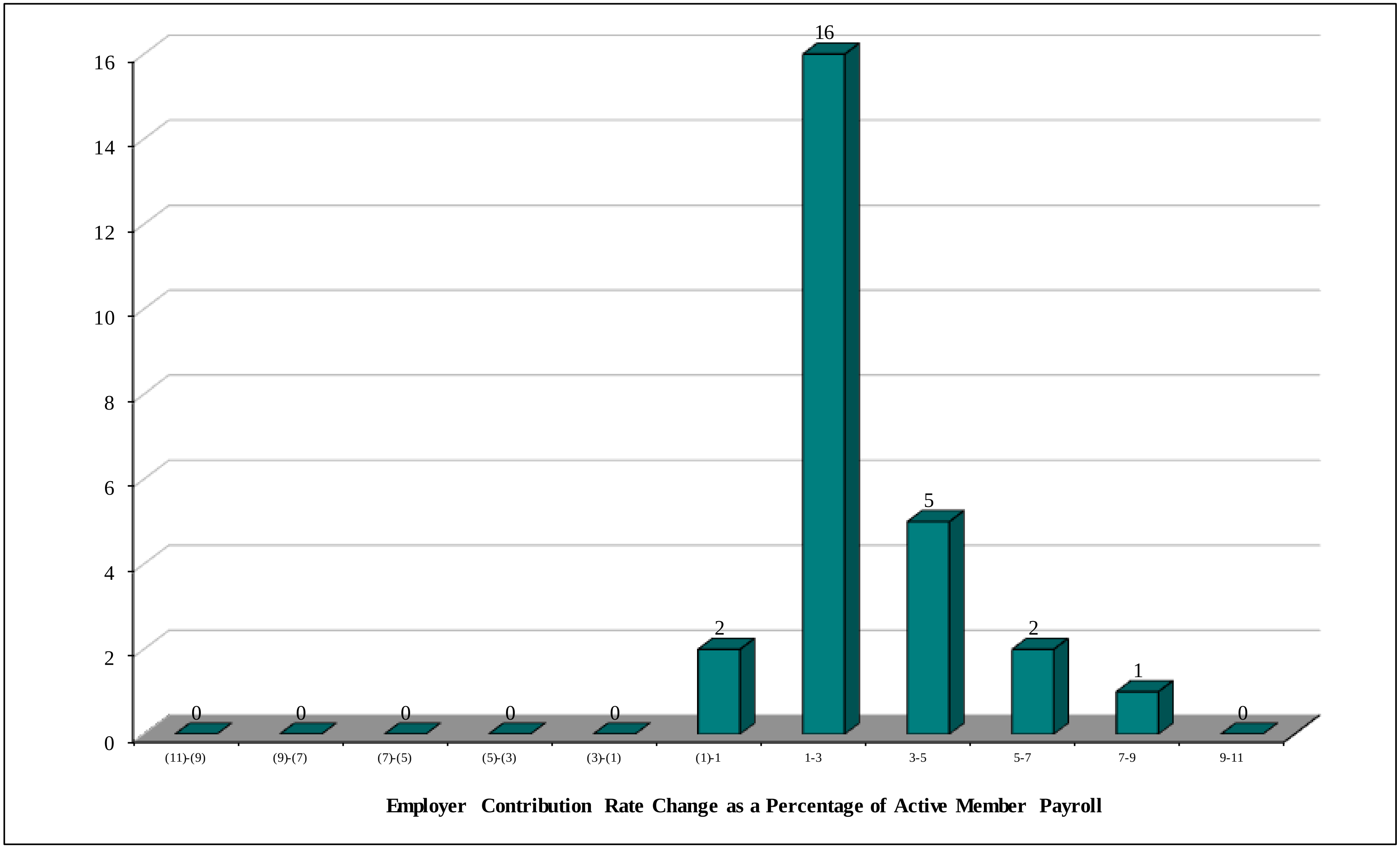
HISTORICAL SUMMARY OF EMPLOYER RATES

Valuation Date June 30	Fiscal Year Ending June 30	Normal Cost	Unfunded Actuarial Accrued Liability	Total
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
2010	2012	6.67	2.83	9.50
2011	2013	6.47	4.84	11.31
2012	**2014**	**7.50**	**6.18**	**13.68**

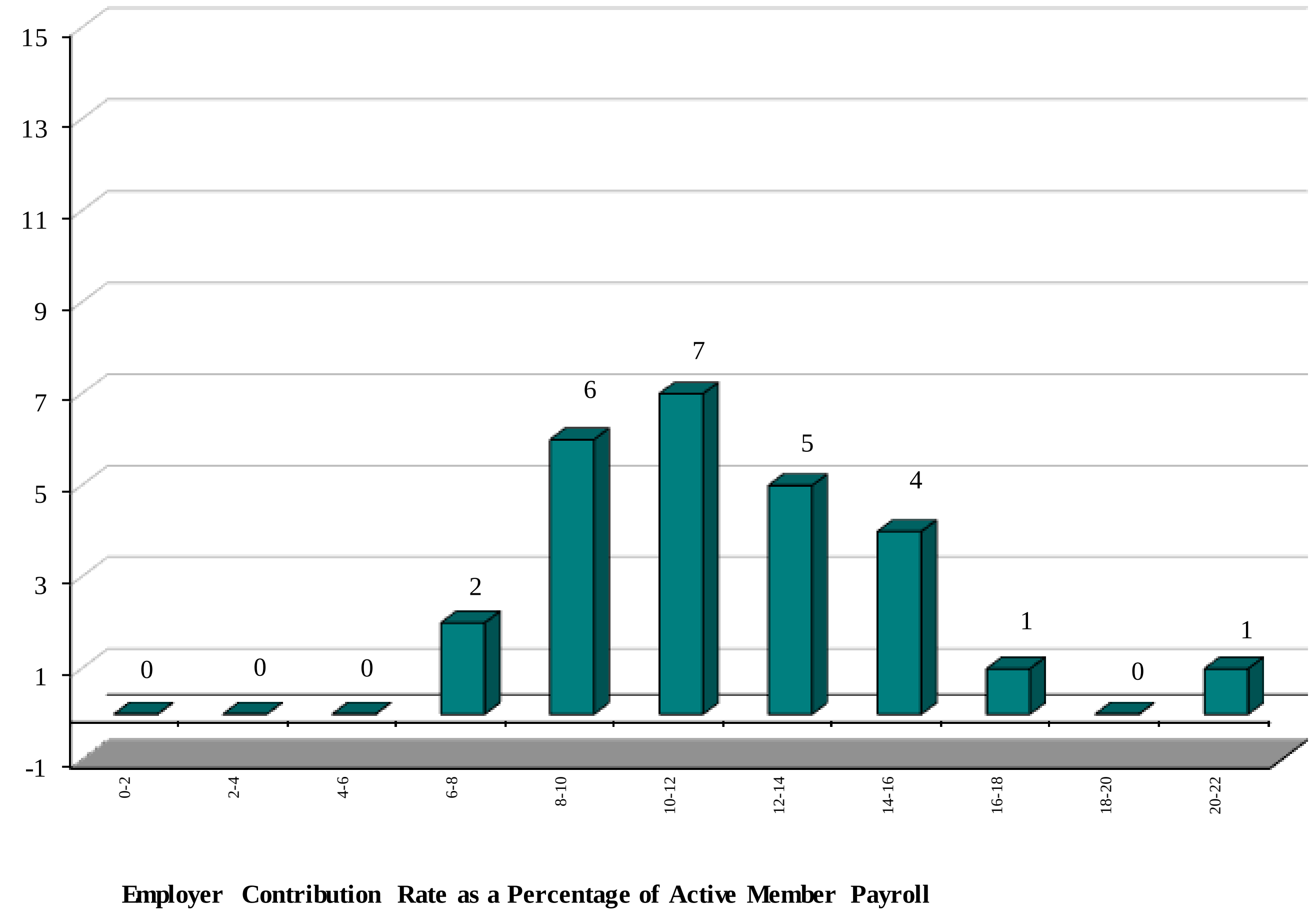
2005 results were revised pursuant to changes enacted by the 2006 Legislature and the CORP Board of Trustees.

Results prior to 2009 were calculated by the prior actuary.

EMPLOYER CONTRIBUTION RATE CHANGES AT JUNE 30, 2012
ALL EMPLOYERS



EMPLOYER CONTRIBUTION RATES - ALL EMPLOYERS AT JUNE 30, 2012



SECTION B

FUNDING RESULTS

PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY

	June 30, 2011	June 30, 2012
A. Accrued Liability		
1. For retirees and beneficiaries	$ 823,664,284	$ 918,771,303
2. For vested terminated members	16,179,895	20,424,520
3. For present active members		
a. Value of expected future benefit payments	1,704,972,283	1,966,726,356
b. Value of future normal costs	536,247,017	674,377,919
c. Active member accrued liability: (a) - (b)	1,168,725,266	1,292,348,437
4. Total accrued liability	2,008,569,445	2,231,544,260
B. Present Assets (Funding Value)	1,466,749,540	1,512,989,421
C. Unfunded Accrued Liability: (A.4) - (B)	541,819,905	718,554,839
D. Stabilization Reserve	1,495,268	858,113
E. Net Unfunded Accrued Liability: (C) + (D)	$ 543,315,173	$ 719,412,952
F. Funding Ratio: (B) / (A.4)	73.0%	67.8%

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,	
	2011	2012
(1) UAAL at start of year	$339,861,626	$541,819,905
(2) Normal cost from last valuation	92,997,730	92,994,125
(3) Actual contributions	103,670,636	111,911,164
(4) Interest accrual	28,434,638	43,919,813
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	357,623,358	566,822,679
(6) Changes from benefit increases	21,989,010	-
(7) Changes in actuarial methods and assumptions	186,735,447	112,394,447
(8) Change in reserve for future pension increases	(20,327,235)	-
(9) Expected UAAL after changes: (5) + (6) + (7) + (8)	546,020,580	679,217,126
(10) Actual UAAL at end of year	541,819,905	718,554,839
(11) Experience Gain/(Loss): (9) - (10)	$ 4,200,675	$ (39,337,713)

FY 2012 Gains and Losses by Source

	Gain/(Loss)	% of Liability
Investment Return	$(68,020,880)	-3.4%
Salary Increases	39,562,153	2.0%
Retirement	3,527,737	0.2%
Turnover	(11,473,403)	-0.6%
Disability	726,737	0.0%
Death-in-Service	2,564,488	0.1%
Retiree Mortality	(2,785,652)	-0.1%
Other	(3,438,893)	-0.2%
Total	$(39,337,713)	-2.0%

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	(7) Payroll	Liability Ratio (8) Unfunded (3)/(7)	Liability Ratio (9) Total (1)/(7)
2003	$ 709,298	$ 811,791	$(102,493)	114.4%	20 yrs.	$ 358,161	0.0%	198.0%
2004	795,775	833,621	(37,846)	104.8	20	381,942	0.0	208.3
2005	863,791	872,981	(9,190)	101.1	20	404,156	0.0	213.7
2006	981,208	919,868	61,340	93.7	30	437,744	14.0	224.2
2007	1,110,801	940,126	170,675	84.6	29	515,428	33.1	215.5
2008	1,390,363	1,207,026	183,337	86.8	28	642,621	28.5	216.4
2009	1,584,293	1,309,124	275,169	82.6	27	630,825	43.6	251.1
2010	1,722,006	1,382,144	339,862	80.3	26	616,481	55.1	279.3
2011	2,008,569	1,466,750	541,819	73.0	25	609,243	88.9	329.7
2012	**2,231,544**	**1,512,989**	**718,555**	**67.8**	**24**	**626,223**	**114.7**	**356.3**

The Unfunded Liability ratio gives a general measure of the ability to collect contributions to pay off the unfunded liabilities. The Total Liability ratio gives a longer term indication of the volatility of the contribution rate.

2005 Results revised pursuant to changes in assumptions and methods enacted by the 2006 Legislature and the CORP Board of Trustees. Results prior to 2009 were calculated by the 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; and
3) The liabilities for service already rendered by active and inactive members.

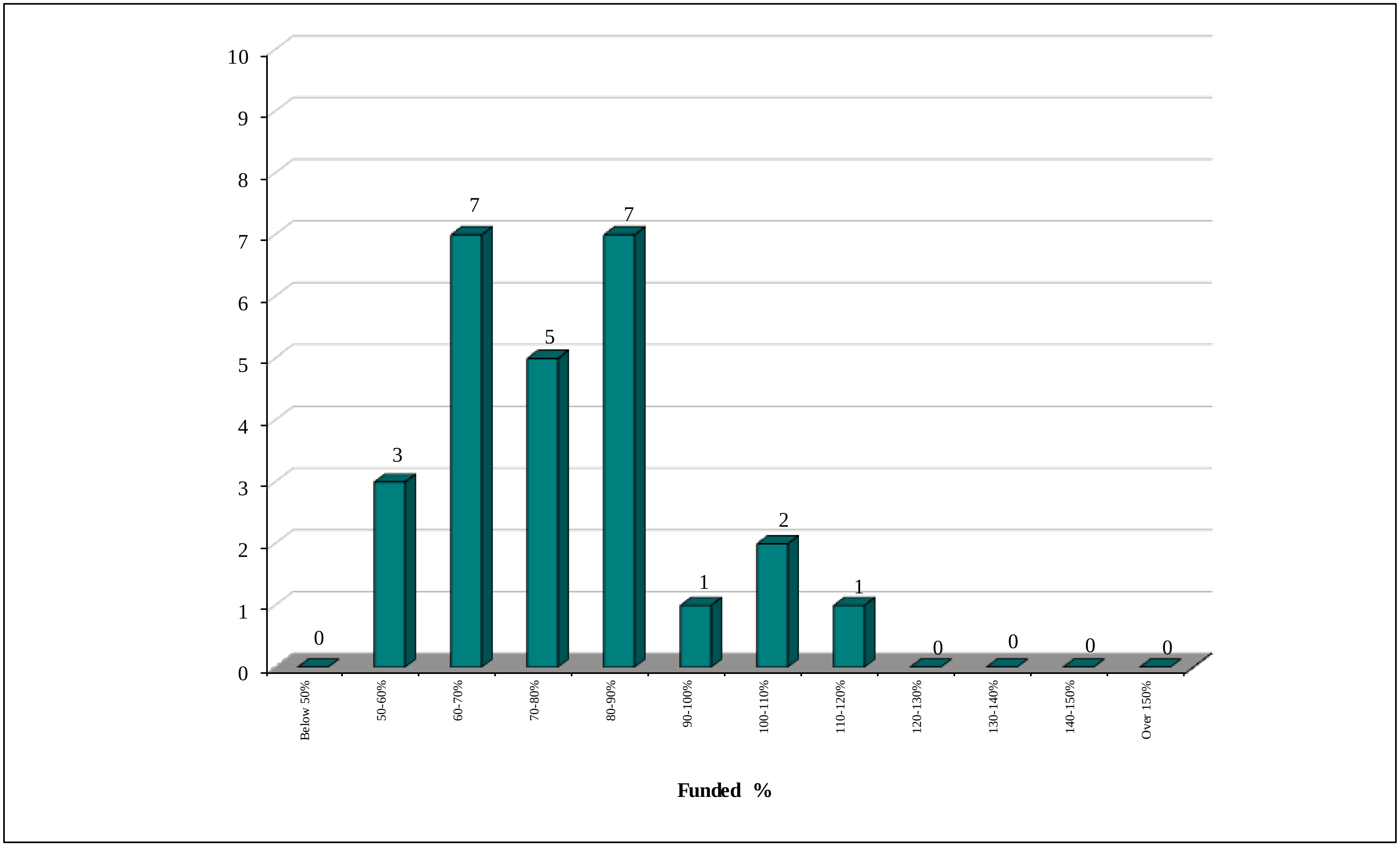
In a system that has been following the discipline of pre-funding, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the 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 Health Insurance Subsidy)

(in $'000s)

Calendar Year	Aggregate Actuarial Liabilities For: (1) Non-Retired Contributions	(2) Annuitants	(3) Non-Retired Members (Employer Financed Portion)	Actuarial Assets	Portion of Actuarial Liabilities Covered by Assets: (1)	(2)	(3)
2009	$314,100	$586,596	$683,597	$1,309,124	100%	100%	59.7%
2010	345,122	689,910	686,973	1,382,144	100%	100%	50.5%
2011	353,892	823,664	831,013	1,466,750	100%	100%	34.8%
2012	**373,726**	**918,771**	**939,047**	**1,512,989**	**100%**	**100%**	**23.5%**

FUNDED PERCENTS - ALL EMPLOYERS AT JUNE 30, 2012



SECTION C

FUND ASSETS

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

Year Ended June 30:	2012	2013	2014	2015	2016	2017	2018
A. Funding Value Beginning of Year	$ 1,466,749,540						
B. Market Value End of Year	1,286,978,947						
C. Market Value Beginning of Year	1,303,797,792						
D. Non Investment Net Cash Flow	(6,478,825)						
E. Investment Income							
E1. Total: B-C-D	(10,340,020)						
E2. Amount for Immediate Recognition: (8.25%)	120,739,586						
E3. Amount for Phased in Recognition: E1-E2	(131,079,606)						
F. Phased in Recognition of Investment Income							
F1. Current Year: E3 / 7	(18,725,658)						
F2. First Prior Year	10,604,465	$ (18,725,658)					
F3. Second Prior Year	2,249,932	10,604,465	$ (18,725,658)				
F4. Third Prior Year	(46,269,096)	2,249,932	10,604,465	$ (18,725,658)			
F5. Fourth Prior Year	(22,975,892)	(46,269,096)	2,249,932	10,604,465	$ (18,725,658)		
F6. Fifth Prior Year	9,080,499	(22,975,892)	(46,269,096)	2,249,932	10,604,465	$ (18,725,658)	
F7. Sixth Prior Year	(1,985,130)	9,080,496	(22,975,892)	(46,269,097)	2,249,930	10,604,465	$ (18,725,658)
F8. Funding Value Corridor Adjustment	0						
F9. Total Recognized Investment Gain	(68,020,880)	(66,035,753)	(75,116,249)	(52,140,358)	(5,871,263)	(8,121,193)	(18,725,658)
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D+E2+F1:F7)	1,512,989,421						
G2. Upper Corridor: (120% x B)	1,544,374,736						
G3. Lower Corridor: (80% x B)	1,029,583,158						
G4. End of Year: (G1 subject to max of G2 and min of G3)	1,512,989,421						
H. Difference Between Market Value & Funding Value: (B-G4)	(226,010,474)	(159,974,721)	(84,858,472)	(32,718,114)	(26,846,851)	(18,725,658)	0
I. Market Rate of Return	-0.8%						
J. Recognized Rate of Return	3.6%						
K. Ratio of Funding Value to Market Value	117.6%						

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.

REVENUES AND DISBURSEMENTS

	2011	2012
Market Value at the Beginning of Year:	$1,112,789,303	$1,303,797,792
Revenues:		
a. Member contributions	$ 51,667,905	$ 52,818,760
b. Employer contributions	52,002,731	59,092,404
c. Interest income (net of expenses)	192,027,535	(11,522,712)
d. Net transfers	(703,623)	(595,549)
e. Total	$ 294,994,548	$ 99,792,903
Disbursements:		
a. Refunds of member contributions	$ 24,927,660	$ 25,743,514
b. Pension benefits (including DROP)	76,359,270	87,977,793
c. Health Subsidy	2,699,129	2,890,441
d. Total	$ 103,986,059	$ 116,611,748
Reserve Increase:		
Total revenues minus total disbursements	$ 191,008,489	$ (16,818,845)
Market Value at the End of Year:	$1,303,797,792	$1,286,978,947

SECTION D

CENSUS DATA

JUNE 30, 2012 VALUATION DATA SUMMARY

For purposes of the June 30, 2012 valuation, information on 19,568 covered persons was furnished. These people may be briefly described as follows.

		Averages			
				Annual Pay or Retirement Allowance	
	No.	Age	Years of Service	2011	2010
Actives	14,991	39.8	7.7	$41,773	$41,829
Retirees & Beneficiaries	3,476	62.7		25,293	25,073
Inactive Vested	1,101	38.7			
	19,568				

ACTIVE MEMBERS

Members in Active Service as of June 30, 2012
by 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
Under 25	1,103	18						1,121	$ 37,389,181	$33,353
25 - 29	1,690	567	2					2,259	81,410,389	36,038
30 - 34	1,033	998	199	2				2,232	87,679,716	39,283
35 - 39	704	786	588	123				2,201	93,333,244	42,405
40 - 44	629	585	515	413	47			2,189	97,268,599	44,435
45 - 49	410	410	338	313	199	14	1	1,685	76,584,380	45,451
50 - 54	300	337	292	255	134	67	7	1,392	63,360,141	45,517
55 - 59	201	255	236	172	98	46	13	1,021	46,970,392	46,004
60 - 64	102	166	143	126	54	42	12	645	30,735,073	47,651
65 and over	32	79	67	37	22	6	3	246	11,491,951	46,715
Total	6,204	4,201	2,380	1,441	554	175	36	14,991	$ 626,223,066	$41,773

TERMINATED VESTED MEMBERS

Age	Years of Service 0 - 4	5 - 9	10 - 14	15 - 19	20 & Up	Total Count
Under 30	276	18				294
30 - 39	255	65	14	1		335
40 - 44	88	19	18	4		129
45 - 49	58	14	17	7	1	97
50 - 54	42	15	18	5	2	82
55 - 59	33	18	30	8		89
60 - 69	20	13	27	11	1	72
70 and over	2	1				3
Total	774	163	124	36	4	1,101

RETIREES AND BENEFICIARIES

Attained Ages	Males No.	Males Annual Pension Benefits	Females No.	Females Annual Pension Benefits	Total No.	Total Annual Pension Benefits
Under 25	0	$ 0	2	$ 38,386	2	$ 38,386
25-29	0	0	2	32,595	2	32,595
30-34	4	70,067	11	161,897	15	231,964
35-39	6	99,187	15	225,224	21	324,411
40-44	54	1,296,222	47	945,402	101	2,241,624
45-49	210	5,581,709	70	1,784,267	280	7,365,976
50-54	277	8,239,573	145	4,262,379	422	12,501,952
55-59	307	9,918,711	148	4,549,579	455	14,468,290
60-64	438	13,699,904	196	5,075,731	634	18,775,635
65-69	434	11,083,882	197	4,236,415	631	15,320,297
70-74	306	6,306,149	145	2,592,842	451	8,898,991
75-79	189	3,512,069	101	1,649,896	290	5,161,965
80-84	81	1,268,740	47	634,563	128	1,903,303
85-89	25	335,379	12	185,328	37	520,707
90-94	3	41,205	4	91,047	7	132,252
95-99	0	0	0	0	0	0
100 and Over	0	0	0	0	0	0
Totals	**2,334**	**$61,452,797**	**1,142**	**$26,465,551**	**3,476**	**$87,918,348**

Pension Being Paid		Number	Annual Pensions	Average Pensions
Retired Members	Service Pensions	2,879	$77,707,783	$26,991
	Disability Pensions	111	2,270,452	20,455
Totals		2,990	79,978,235	26,749
Survivors of Members	Spouses	455	7,501,504	16,487
	Children with Guardians	31	438,609	14,149
Total		486	7,940,113	16,338
Total Pension being Paid		**3,476**	**$87,918,348**	**$25,293**

	Average Age	Average Service	Average Age at Retirement
Normal retired members	63.3	19.7	56.7
Disability retired members	55.4	9.7	45.6
Spouse beneficiaries	64.9	11.9	52.0

PENSIONS BEING PAID
HISTORICAL SCHEDULE

Valuation Date June 30	No.	Annual Pensions	% Incr. in Annual Pensions	Average Pension	Present Value of Pensions Total	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
2010	2,908	69,769,056	18.1	23,992	666,416,976	229,167
2011	3,256	81,637,650	17.0	25,073	796,704,561	244,688
2012	**3,476**	**87,918,348**	**26.0**	**25,293**	**889,093,751**	**255,781**

Results prior to 2009 were calculated by the prior actuary.

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 were determined using an individual entry-age actuarial cost method having the following characteristics:

(i) the annual normal costs for each individual active member, payable from the date of hire to the date of retirement, are sufficient to accumulate to the value of the member's benefits.

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

The entry-age actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's compensation between the entry age of the member and the assumed exit ages.

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 subject to a 20% corridor. 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 24 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 5.0% 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 excess 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 8.00% 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 8.00% nominal rate translates to a net real return over wage growth of 3.00% 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.

	Salary Increase Assumptions For an Individual Member		
Sample Ages	Merit & Seniority	Base (Economy)	Increase Next Year
20	3.2%	5.0%	8.2%
25	3.0%	5.0%	8.0%
30	2.2%	5.0%	7.2%
35	1.3%	5.0%	6.3%
40	0.7%	5.0%	5.7%
45	0.5%	5.0%	5.5%
50	0.4%	5.0%	5.4%
55	0.2%	5.0%	5.2%
60	0.0%	5.0%	5.0%
Ref:			382

Active Member Payroll is assumed to grow at 5.0% per year. Although no specific price inflation assumption is required to perform this valuation, since no benefits are linked to prices, a price inflation assumption on the order of 3.0% to 4.0% would be consistent with the other economic assumptions.

VALUATION ASSUMPTIONS

The healthy mortality table used to evaluate death after retirement in this valuation of the System was the RP 2000 Mortality table (adjusted by 105% for both males and females). This assumption was first used for the June 30, 2012 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	0.21%	0.17%	30.37	33.14
55	0.36	0.27	25.76	28.47
60	0.67	0.51	21.35	23.95
65	1.27	0.97	17.24	19.72
70	2.22	1.67	13.54	15.86
75	3.78	2.81	10.27	12.40
80	6.44	4.59	7.50	9.38
Ref:	506 x 1.05 0 year set forward	507 x 1.05 0 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.

The disabled mortality table used to evaluate death after retirement in this valuation of the System was the RP 2000 Mortality table (set forward 10 years for both males and females). This assumption was first used for the June 30, 2012 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	0.67%	0.51%	21.74	24.38
55	1.27	0.97	17.61	20.12
60	2.22	1.67	13.88	16.23
65	3.78	2.81	10.57	12.74
70	6.44	4.59	7.75	9.68
75	11.08	7.74	5.49	7.09
80	18.34	13.17	3.86	5.15
Ref:	506 x 1.00 10 year set forward	507 x 1.00 10 year set forward		

VALUATION ASSUMPTIONS

For actives, the sample rates of mortality for death-in-service are shown below, and were first used for the June 30, 2012 valuation of the System.

Sample Attained Ages	Probability of Dying Next Year	
	Men	Women
50	0.21%	0.17%
55	0.36	0.27
60	0.67	0.51
65	1.27	0.97
Ref:	506 x 0.80 0 year set forward	507 x 0.80 0 year set forward

The rates of regular retirement used to measure the probability of eligible members retiring during the next year are shown below. These assumptions was first used for the June 30, 2012 valuation of the System.

Retirement Rates: Age-related rates for members hired before January 1, 2012 are shown below:

Age at Retirement	Rates
60	60%
61	60%
62	60%
63	60%
64	60%
65	60%
66	60%
67	60%
68	60%
69	60%
70	60%
71	60%
72	60%
73	60%
74	60%
75	100%
Ref.	2153

These retirement rates are applicable to employees attaining age 62 before attaining 20 (25 for dispatchers) years of service.

VALUATION ASSUMPTIONS

Service-related rates for members hired before January 1, 2012 are shown below:

Service at Retirement	Rates
20	28%
21	28%
22	22%
23	20%
24	17%
25	33%
26	33%
27	25%
28	17%
29	17%
30	30%
31	30%
32	50%
33	50%
34	75%
35	75%
36	75%
37	100%
Ref.	2154

These retirement rates are applicable to employees attaining 20 (25 for dispatchers) years of service before attaining age 62.

Age-related rates for members hired after January 1, 2012 are shown below:

Age at Retirement	Rates
53	40%
54	40%
55	30%
56	15%
57	15%
58	30%
59	30%
60	65%
61	65%
62	100%
Ref.	1744

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, 2012 valuation of the System.

Sample Ages	Years of Service	% of Active Members Separating Within Next Year
All	0	25.00%
	1	20.00%
	2	16.00%
	3	14.00%
	4	12.00%
	5	9.00%
	6	9.00%
	7	9.00%
	8	8.00%
	9	8.00%
	10	8.00%
	11	5.00%
	12	4.00%
	13	4.00%
	14	3.00%
	15	3.00%
	16	3.00%
	17	2.00%
	18	2.00%
	19	2.00%
Ref.		729

VALUATION ASSUMPTIONS

Rates of disability among active members used in the valuation are shown below, and were first used for the June 30, 2012 valuation of the System.

Sample Ages	% of Active Members Becoming Disabled within Next Year
20	0.03%
25	0.03%
30	0.03%
35	0.04%
40	0.05%
45	0.06%
50	0.08%
55	0.08%
Ref	592 75%

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2012
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption:	80% 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.
Pay Increase Timing:	Six months after the valuation date. This means that the pays received are assumed to be annual rates of pay on the valuation date as opposed to W-2 type earnings for the prior 12 months.
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 80% Joint and Survivor form of payment with no reduction, for married members. 80% 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.
Health Care Utilization:	70% of future retirees are expected to utilize retiree health care. 80% of those are assumed to be married.
Future Cost of Living Increases:	Future cost of living increases are not reflected in the liabilities. The 2012 Experience Study recommended reducing the expected rate of return by approximately 0.5% to account for this contingency.

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.

Dispatchers hired on or after November 24, 2009 participate in the Arizona State Retirement System.

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 Board of Trustees 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 Board of Trustees 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 and through June 30, 2016, the CORP shall offer the Reverse Deferred Retirement Option Plan (Reverse DROP) to members that are eligible for a normal pension (based on service and age) applicable to a membership date that is either prior to, or after January 1, 2012 (who is not awarded an accidental, ordinary or total and permanent disability pension). 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 Reverse DROP date is the first day of the month immediately following completion of required credited service, or a date not more than sixty (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. The lump sum distribution is credited as though it accrued monthly from the Reverse DROP date to the date the member elected to participate in the Reverse DROP (plus interest equal to the yield on a five (5) year Treasury note as of the first day of the month as published by the Federal Reserve Board).

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: Contingent upon the excess investment earnings, effective July 1 of each year, eligible retired members or survivors may be entitled to a permanent benefit increase in their base benefit. To be eligible for the increase, the retired member or survivor must be either age 55 or older on July 1 of the current year and receiving benefits on or before July 31 of the previous year, or the retired member or survivor has been receiving benefits on or before July 31 of the previous two years. The maximum amount of the increase is 4% of the average normal benefit being received on the preceding June 30.

Prior to July 1, 2013 a COLA reserve is maintained and used to pay for the post-retirement adjustment. The investment return on the COLA reserve is the same as the return on the market value of assets (whether the return is positive or negative). Additional amounts are added to the COLA reserve in years when the investment return on the market value of assets exceeds 9.0%. Each year the present value of that year's post-retirement adjustment is subtracted from the COLA reserve. A post-retirement adjustment is paid as long as there is a positive balance in the COLA reserve.

Post-Retirement Health Insurance Subsidy: Payable on behalf of retired members and survivors who elect coverage provided by the state or participating employer. The monthly 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. Percent of payroll normal cost plus 30 year (25 years remaining as of June 30, 2011) amortization of unfunded actuarial accrued liability (20 year amortization for credit). 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).

Changes in Plan Provisions for Existing Members and New Hires effective January 1, 2012

Existing Members

- Contribution rates are 8.41% (7.96% for dispatchers) for FY 2010-2011. For fiscal years 2011-2012 and after, 8.41% (7.96% for dispatchers), or a 50/50 split between employer and employee, whichever is lower. Minimum employee contribution rate of 7.65%, minimum employer contribution rate of 6%.
- Dispatcher contribution rate is .45% less than the non-dispatcher rate until the plan is 100% funded then rates are equal thereafter.
- Employer will contribute at the alternate contribution rate (ARC which is the amortization portion of the required rate) to System when members retire and return to work.

New Hires on or after January 1, 2012

Average Monthly Compensation: One-sixtieth of total compensation paid to member during the five years, out of the last 10 years of credited service, in which the amount paid was highest. Compensation is the amount including base salary, overtime pay, shift differential pay and holiday pay, paid to an employee on a regular payroll basis and longevity pay paid at least every six months for which contributions are made to the System.

Normal Retirement: First day of month following the attainment of age 52.5 and completion of 25 years of service or the attainment of age 62 and completion of 10 years of service.

The amount of monthly normal pension is based on credited service and average monthly compensation as follows:

- ***Age 62 and 10 years of service,*** 2.5% of average monthly compensation per year of credited service.

- ***Age 52.5 with 25 or more years of credited service,*** 62.5% of average monthly compensation, plus 2.5% of average monthly compensation for each year of credited service over 25.

- ***Age 52.5 with 25 years of service, but less than 25 years of credited service,*** 2.5% of average monthly compensation multiplied total credited service.

The maximum amount payable as a normal retirement pension is 80% of the average monthly compensation.

- If ceases to hold office for any reason other than death or retirement, member can withdraw accumulated member contributions (no employer match of refund contributions) with interest at rate set by Board.
- Contribution rates are 8.41% (7.96% for dispatchers) for FY 2010-2011. For fiscal years 2011-2012 and after, 8.41% (7.96% for dispatchers), or a 50/50 split between employer and employee, whichever is lower. Minimum employee contribution rate of 7.65%, minimum employer contribution rate of 6%.
- Dispatcher contribution rate is .45% less than the non-dispatcher rate until the plan is 100% funded then rates are equal thereafter.
- Employer will contribute to System when members retire and return to work.

Existing Members and New Hires

- COLA provision – effective July 1, 2013

    - Effective May 31, 2011 no more excess investment earnings will be transferred to the current COLA reserve. Any remaining COLA reserve will be used to pay future COLA increases until the COLA reserve is depleted.
    - A COLA is only paid in a year when the return on the market value of assets exceeds 10.5% and the plan is at least 60% funded. 100% of the excess earnings is used to determine whether a COLA can be paid and the size of the COLA for that year.
    - No COLA reserve accumulates. The present value of that year's COLA for eligible retirees cannot exceed 100% of the earnings in excess of 10.5%. If the excess earnings is high enough to exceed the present value of that year's COLA, the excess stays in the fund.
    - To be eligible for an increase the retiree or the survivor must be:
        - In the case of a retired member who became a member of the plan before January 1, 2012, the retired member or survivor was receiving benefits on or before July 31 of the two previous years or
        - In the case of a retired member who became a member of the plan before January 1, 2012, the retired member or survivor was 55 or older on July 1 of the current year and was receiving benefits on or before July 31 of the previous year.

- In the case of a retired member who became a member of the plan on or after January 1, 2012, the retired member or survivor was at least 55 or older on July 1 and receiving benefits.
- In the case of a retired member who became a member of the plan on or after January 1, 2012, if under 55 on July 1, was receiving accidental disability benefits for the preceding 2 years.
- In the case of a member who became a member of the plan on or after January 1, 2012, if the survivor is under 55 on July 1, is the survivor of the member who was killed in the line of duty, and has been receiving a survivor benefits for the preceding 2 years.

- The amount of the COLA to be paid is determined as follows:

  - Funded ratio is 60-64%, COLA is 2%
  - Funded ratio is 65-69%, COLA is 2.5%
  - Funded ratio is 70-74%, COLA is 3%
  - Funded ratio is 75-79%, COLA is 3.5%
  - Funded ratio is 80% or more, COLA is 4%

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)
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 %
2010	1,382,144,020	1,648,733,153	266,589,133	83.8 %	616,481,375	43.24 %
2011	1,466,749,540	1,914,464,397	447,714,857	76.6 %	609,243,354	73.49 %
2012	**1,512,989,421**	**2,140,662,415**	**627,672,994**	**70.7 %**	**626,223,066**	**100.23 %**

Results before 2009 were calculated by the 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	56,015,138
2010	54,437,078
2011	52,097,600 (est.)
2012	56,813,980 (est.)
2013	67,773,601 (est.)
2014	86,853,695 (est.)

Fiscal Years prior to 2011 provided by the prior actuary.

Beginning with the 2011 fiscal year, this schedule shows the estimated annual required contribution (calculated based on recommended contribution rate and the projected payroll for the fiscal year). Actual amounts reported in the employer's financial statements may be different, due to differences between the projected payroll and the actual payroll during the fiscal year.

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, 2012
Actuarial cost method	Entry Age Normal
Amortization method	Level percent-of-pay closed
Remaining amortization period	24 years
Asset valuation method	7-year smoothed market 80%/120% market
Actuarial assumptions:	
Investment rate of return	8.00%
Projected salary increases	5.0% - 8.25%
Payroll growth	5.0%
Cost-of-living adjustments	None

GASB STATEMENT NO. 45 SUPPLEMENTARY INFORMATION

The following information is presented concerning the post-retirement health insurance subsidy. The liabilities and computed contribution for the post-retirement health insurance subsidy were based on the same assumptions and actuarial cost methods as indicated for GASB Statement No. 25.

As of the June 30, 2012 valuation, an 8.00% interest rate assumption was used. It is our understanding that currently assets are not segregated to fund these liabilities. As a result, according to GASB Statement No. 45, these benefits may not be considered to be pre-funded. In that case the 8.00% interest rate assumption may not be appropriate. This issue should be discussed with the auditors and with legal counsel.

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%
2010	0	73,272,493	73,272,493	0.00	616,481,375	11.9%
2011	0	94,105,048	94,105,048	0.00	609,243,354	15.4%
2012	**0**	**90,881,845**	**90,881,845**	**0.00**	**626,223,066**	**14.5%**

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	0.51%	0.44%	0.95%	6,245,994
2008	2010	0.43%	0.41%	0.84%	5,178,444
2009	2011	0.61%	0.54%	1.15%	8,074,426
2010	2012	0.62%	0.60%	1.22%	8,371,142
2011	2013	0.39%	0.83%	1.22%	8,194,628
2012	**2014**	**0.33%**	**0.77%**	**1.10%**	**7,594,520**

Fiscal Years prior to 2011 provided by the prior actuary.

Health Insurance Subsidy Payment Reported for FY 2012: $2,890,441

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

APPENDIX II

SUMMARY OF POPULATION DATA BY INDIVIDUAL EMPLOYERS

Division Number	Employer Name	Number of Actives		Active Payroll	Number of Retirees		Annual Retiree Benefits	Number of Vested Inactive		Annual Vested Benefits
575	ADMINISTRATIVE OFFICE OF THE COURTS	2,069	$	99,993,909	318	$	11,983,134	149	$	2,527,931
520	APACHE COUNTY - Detention	25		726,536	5		91,338	6		32,607
506	CITY OF AVONDALE - Detention	9		513,216	-		-	-		-
562	CITY OF SOMERTON - Dispatchers	6		169,726	1		31,707	1		7,507
525	COCHISE COUNTY - Detention	60		2,040,244	23		341,601	9		92,077
530	COCONINO COUNTY - Detention	92		3,334,290	5		129,182	27		179,981
500	DEPARTMENT OF CORRECTIONS - Detention	8,701		350,701,871	2,264		52,906,676	394		11,184,223
501	DEPT OF JUVENILE CORRECTIONS - Detention	506		19,339,530	212		5,407,786	143		2,648,424
563	DEPARTMENT OF PUBLIC SAFETY - Dispatchers	59		2,884,224	4		158,699	3		71,110
503	GILA COUNTY - Detention	64		2,286,873	5		66,402	12		65,292
558	GILA COUNTY - Dispatchers	9		372,217	2		50,231	5		84,594
504	GRAHAM COUNTY - Detention	32		1,203,742	4		102,304	7		88,591
560	GRAHAM COUNTY - Dispatchers	9		307,905	-		-	2		6,055
505	MARICOPA COUNTY - Detention	2,010		86,771,260	372		10,228,805	118		1,203,750
535	MOHAVE COUNTY - Detention	116		4,017,855	11		169,110	27		140,363
545	NAVAJO COUNTY - Detention	51		1,722,806	6		129,908	11		134,265
515	PIMA COUNTY - Detention	504		21,743,079	159		4,132,380	69		764,329
502	PINAL COUNTY - Detention	268		13,102,063	13		429,508	29		390,039
555	PINAL COUNTY - Dispatchers	22		861,529	2		52,470	8		69,556
540	SANTA CRUZ COUNTY - Detention	48		1,486,605	4		96,856	12		71,815
557	TOWN OF MARANA - Dispatchers	11		530,695	-		-	3		9,488
556	TOWN OF ORO VALLEY - Dispatchers	9		451,808	3		64,891	2		1,875
559	TOWN OF WICKENBURG - Dispatchers	4		179,348	2		28,213	1		2,322
550	YAVAPAI COUNTY - Detention	150		5,759,053	37		694,941	41		357,487
561	YAVAPAI COUNTY - Dispatchers	8		298,012	1		37,760	2		13,933
510	YUMA COUNTY - Detention	149		5,424,670	23		584,446	20		276,906
	TOTAL	14,991	$	626,223,066	3,476	$	87,918,348	1,101	$	20,424,520

APPENDIX III

SUMMARY OF LIABILITY AND ASSET INFORMATION BY INDIVIDUAL EMPLOYERS

Division Number	Employer Name	Total AAL	Total Assets	Reserve for future Pension Increases	Net Assets	Funded Percent	Unfunded Liability
575	ADMINISTRATIVE OFFICE OF THE COURTS	$ 443,125,469	$ 288,936,048	-	$ 288,936,048	65.20%	$ 154,189,421
520	APACHE COUNTY - Detention	1,777,708	1,483,800	-	1,483,800	83.50%	293,908
506	CITY OF AVONDALE - Detention	1,084,456	807,901	-	807,901	74.50%	276,555
562	CITY OF SOMERTON - Dispatchers	802,020	404,239	-	404,239	50.40%	397,781
525	COCHISE COUNTY - Detention	7,458,134	5,424,907	-	5,424,907	72.70%	2,033,227
530	COCONINO COUNTY - Detention	7,125,625	6,105,365	-	6,105,365	85.70%	1,020,260
500	DEPARTMENT OF CORRECTIONS - Detention	1,207,820,816	821,350,701	-	821,350,701	68.00%	386,470,115
501	DEPT OF JUVENILE CORRECTIONS - Detention	95,447,303	67,528,600	-	67,528,600	70.70%	27,918,703
563	DEPARTMENT OF PUBLIC SAFETY - Dispatchers	11,133,660	7,880,376	-	7,880,376	70.80%	3,253,284
503	GILA COUNTY - Detention	3,710,361	3,396,424	-	3,396,424	91.50%	313,937
558	GILA COUNTY - Dispatchers	1,725,476	1,426,850	-	1,426,850	82.70%	298,626
504	GRAHAM COUNTY - Detention	2,363,701	1,903,185	-	1,903,185	80.50%	460,516
560	GRAHAM COUNTY - Dispatchers	447,233	452,760	-	452,760	101.20%	(5,527)
505	MARICOPA COUNTY - Detention	284,594,043	194,081,165	-	194,081,165	68.20%	90,512,878
535	MOHAVE COUNTY - Detention	5,516,552	6,208,354	-	6,208,354	112.50%	(691,802)
545	NAVAJO COUNTY - Detention	3,789,772	3,397,424	-	3,397,424	89.60%	392,348
515	PIMA COUNTY - Detention	86,686,756	51,797,240	-	51,797,240	59.80%	34,889,516
502	PINAL COUNTY - Detention	27,812,698	21,767,215	-	21,767,215	78.30%	6,045,483
555	PINAL COUNTY - Dispatchers	2,084,535	1,417,935	-	1,417,935	68.00%	666,600
540	SANTA CRUZ COUNTY - Detention	2,052,859	2,213,643	-	2,213,643	107.80%	(160,784)
557	TOWN OF MARANA - Dispatchers	1,185,335	757,933	-	757,933	63.90%	427,402
556	TOWN OF ORO VALLEY - Dispatchers	1,966,574	1,173,314	-	1,173,314	59.70%	793,260
559	TOWN OF WICKENBURG - Dispatchers	640,365	397,001	-	397,001	62.00%	243,364
550	YAVAPAI COUNTY - Detention	15,989,487	10,194,348	-	10,194,348	63.80%	5,795,139
561	YAVAPAI COUNTY - Dispatchers	807,849	683,940	-	683,940	84.70%	123,909
510	YUMA COUNTY - Detention	14,395,473	11,798,753	-	11,798,753	82.00%	2,596,720
	TOTAL	$ 2,231,544,260	$ 1,512,989,421	-	$ 1,512,989,421		$ 718,554,839

APPENDIX IV

SUMMARY OF CONTRIBUTION INFORMATION BY INDIVIDUAL EMPLOYERS

Division Number	Employer Name	ER NC%	UAL Pmt %	Calculated ER Cont	Required ER Cont
575	ADMINISTRATIVE OFFICE OF THE COURTS	7.32%	8.26%	15.58%	15.58%
520	APACHE COUNTY - Detention	7.60%	2.18%	9.78%	9.78%
506	CITY OF AVONDALE - Detention	7.15%	2.88%	10.03%	10.03%
562	CITY OF SOMERTON - Dispatchers	7.61%	12.70%	20.31%	20.31%
525	COCHISE COUNTY - Detention	7.70%	5.38%	13.08%	13.08%
530	COCONINO COUNTY - Detention	7.72%	1.67%	9.39%	9.39%
500	DEPARTMENT OF CORRECTIONS - Detention	7.52%	5.93%	13.45%	13.45%
501	DEPT OF JUVENILE CORRECTIONS - Detention	7.59%	7.80%	15.39%	15.39%
563	DEPARTMENT OF PUBLIC SAFETY - Dispatchers	6.84%	6.15%	12.99%	12.99%
503	GILA COUNTY - Detention	8.80%	0.77%	9.57%	9.57%
558	GILA COUNTY - Dispatchers	6.79%	4.41%	11.20%	11.20%
504	GRAHAM COUNTY - Detention	7.77%	2.11%	9.88%	9.88%
560	GRAHAM COUNTY - Dispatchers	7.76%	0.00%	7.76%	7.76%
505	MARICOPA COUNTY - Detention	7.56%	5.61%	13.17%	13.17%
535	MOHAVE COUNTY - Detention	8.16%	0.00%	8.16%	8.16%
545	NAVAJO COUNTY - Detention	8.07%	1.27%	9.34%	9.34%
515	PIMA COUNTY - Detention	7.25%	8.61%	15.86%	15.86%
502	PINAL COUNTY - Detention	7.70%	2.50%	10.20%	10.20%
555	PINAL COUNTY - Dispatchers	6.93%	4.22%	11.15%	11.15%
540	SANTA CRUZ COUNTY - Detention	7.94%	0.00%	7.94%	7.94%
557	TOWN OF MARANA - Dispatchers	6.78%	4.41%	11.19%	11.19%
556	TOWN OF ORO VALLEY - Dispatchers	6.80%	9.49%	16.29%	16.29%
559	TOWN OF WICKENBURG - Dispatchers	8.30%	7.27%	15.57%	15.57%
550	YAVAPAI COUNTY - Detention	7.63%	5.41%	13.04%	13.04%
561	YAVAPAI COUNTY - Dispatchers	7.93%	2.31%	10.24%	10.24%
510	YUMA COUNTY - Detention	7.68%	2.61%	10.29%	10.29%
	TOTAL	7.50%	6.18%	13.68%	13.68%

October 12, 2012

Mr. James Hacking
Administrator
Arizona Corrections Officer Retirement Plan
3010 E. Camelback Road, Suite 200
Phoenix, Arizona 85016

Re: Report of the June 30, 2012 Actuarial Valuation of CORP

Dear Mr. Hacking:

Enclosed please find 5 copies of this report.

Any questions or comments you may develop will be welcomed.

Sincerely,

Mark Buis

Mark Buis, FSA, EA, MAAA

MB:mrb
Enclosures