

ARIZONA CORRECTIONS OFFICER RETIREMENT PLAN CONSOLIDATED REPORT

JUNE 30, 2010



October 29, 2010

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

Re: Arizona Corrections Officer Retirement Plan Actuarial Valuation as of June 30, 2010

Ladies and Gentlemen:

The results of the **June 30, 2010 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 2011-2012 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.

Arizona Corrections Officer Retirement Plan October 29, 2010 Page 2

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, ĚX, MAAA

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## TABLE OF CONTENTS

	<u>P:</u>	age
Executive Sur	mmary/Board Summary	.1
Section A	Introduction Funding Objective and Contribution Rates. Contribution Requirements. Historical Summary of Employer Rates Employer Contribution Rate Changes Employer Contribution Rates	.2 .3 .4
Section B	Funding Results Present Value of Future Benefits and Accrued Liability Derivation of Experience Gain/(Loss) Unfunded Actuarial Accrued Liabilities Comparative Statement Short Condition Test Funded Percent Summary	.2 .3 .4
Section C	Fund Assets Development of Funding Value of Assets (7-Year Smoothing)	
Section D	Census Data June 30, 2010 Valuation Data Summary Active Members Terminated Vested Members Retirees and Beneficiaries Pensions Being Paid – Historical Schedule	.2 .3 .4
Section E	Methods & Assumptions	.1
Section F	Plan Provisions	.1
Section G	Glossary	.1
Appendix I	Accounting Disclosures Schedule of Funding Progress	.2 .3
Appendix II	Summary of Population Data by Individual Employers	.1
Appendix III	Summary of Liability and Asset Information by Individual Employers	.1
Appendix IV	Summary of Contribution Information by Individual Employers	.1

#### **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, 2011 is shown below.

	Contribution	Funded Status	
Average	9.50%	80.3%	

#### 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
6/30/2009	8.57%	82.6%
6/30/2010	9.50%	80.3%

#### 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 (other than cost-of-living increases for retirees) reported to the actuary for the year ended June 30, 2010. In addition, there were no assumption changes.

GRS -1-

#### **EXECUTIVE SUMMARY/BOARD SUMMARY**

The contribution rate increased from 8.57% last year of payroll to 9.50% of payroll this year for the following reasons:

- Continued phase-in of asset losses from prior years,
- Cost-of-living increases granted for retirees,
- A decline in the expected payroll base.

#### 4. Plan Experience

Experience during the year ended June 30, 2010 was unfavorable. During the year ended June 30, 2010, the actuarial 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 and losses. While on a market value basis, the Plan's return was 13.3%, the resulting actuarial asset yield for the year ended June 30, 2010 was 4.1% (this is the rate of return on the actuarial value of assets before the COLA reserve is subtracted). 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

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 12% of payroll (instead of 9.50% of payroll) and the funded status would have been about 65% (instead of 80.3%). If equity markets do not improve significantly, the June 30, 2011 valuation will likely show yet another increase in the employer contribution amount (absent any liability gains). Indeed, due to the operation of the COLA reserve and other factors, contribution rates are likely to continue to increase for an indefinite period.

GRS -2-

#### 6. Other Comments

The ratio of the Funding Value of Assets to Market Value of Assets as shown on Page C-1 is 125.9%. 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 126% is on the high end. However, the ratio has decreased from 138% in the June 30, 2009 valuation to 126% in the June 30, 2010 valuation. We recommend that consideration be given to establishing an asset corridor for the June 30, 2011 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 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 \$288 million of unrecognized investment losses that will, when combined with the operation of the COLA reserve, and in the absence of other gains, drive the contribution rate up over the next several years. It is important that this plan receive contributions at least equal to the rates shown in this report.

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# **SECTION A**INTRODUCTION

#### **FUNDING OBJECTIVE**

The purpose of the annual actuarial valuation of the Arizona Corrections Officer Retirement Plan as of June 30, 2010 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, 2011. 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, 2011 are shown on page A-2.

GRS A-1

#### **CONTRIBUTION REQUIREMENTS**

#### **Development of Employer Contributions for the Indicated Valuation Date**

	June	30,
	2009	2010
Contribution for Fiscal Year	2011	2012
Pension		
Normal cost requirement		
Service pensions	10.51%	10.92%
Disability pensions	0.21	0.20
Survivors of active members	1.08	1.03
Refunds of members' accumulated contributions	<u>2.43</u>	2.30
Total normal cost requirement	14.23%	14.45%
Less member contributions	8.41	8.40
Employer normal cost requirement	5.82%	6.05%
Amortization of unfunded liabilities	1.60%	2.23%
Total pension contribution requirement	7.42%	8.28%
Health		
Normal cost requirement	0.61%	0.62%
Amortization of unfunded liabilities	0.54%	0.60%
Total health contribution requirement	1.15%	1.22%
Total contribution requirement	8.57%	9.50%

Actuarial accrued liability, \$1,722,005,646, exceeded the funding value of assets, which was \$1,382,144,020. The unfunded actuarial accrued liabilities were amortized as a level percent of payroll over a closed period of 26 years and added to the employer normal cost. The 26 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).

GRS A-2

### HISTORICAL SUMMARY OF EMPLOYER RATES

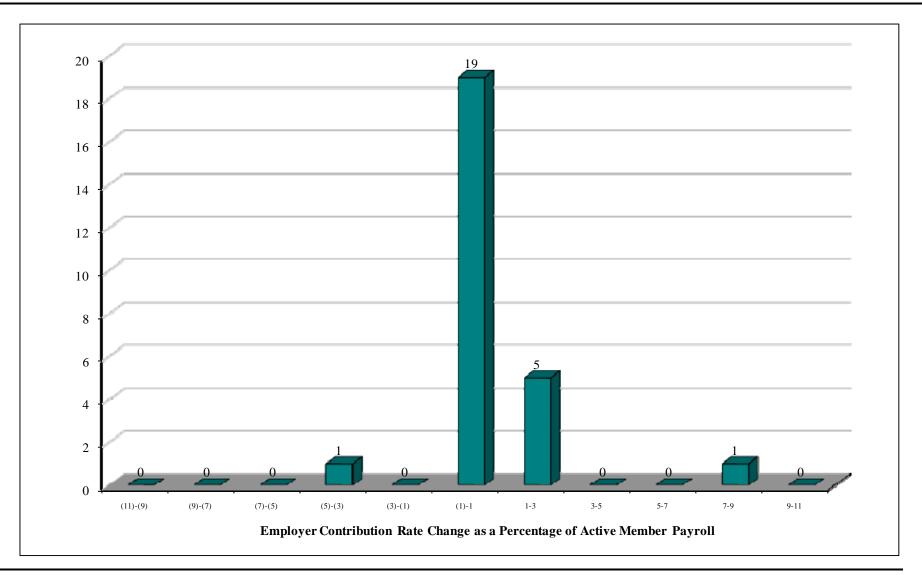
Valuation Date June 30	Fiscal Year	Normal Cost	Unfunded Actuarial Accrued Liability	Total
	<u> </u>	Norman Cost	Accrued Liability	Total
2001	2003	5.79%	(4.08)%	1.71%
2002	2004	6.79	(2.84)	3.95
2003	2005	5.74	(1.67)	4.07
2004	2006	6.05	(0.58)	5.47
2005	2007	4.64	(0.18)	4.46
2006	2008	6.07	0.65	6.72
2007	2009	7.10	1.55	8.65
2008	2010	6.10	1.39	7.49
2009	2011	6.43	2.14	8.57
2010	2012	6.67	2.83	9.50

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

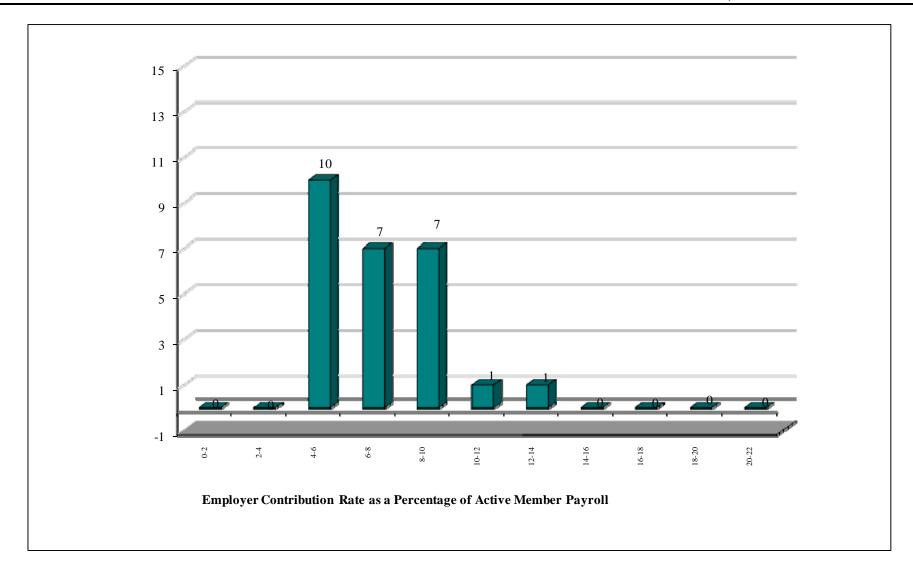
Results prior to 2009 were calculated by the prior actuary.

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## EMPLOYER CONTRIBUTION RATE CHANGES AT JUNE 30, 2010 ALL EMPLOYERS



## EMPLOYER CONTRIBUTION RATES - ALL EMPLOYERS AT JUNE 30, 2010





FUNDING RESULTS

### PRESENT VALUE OF FUTURE BENEFITS AND ACCRUED LIABILITY

	June 30,		
	2009	2010	
A. Accrued Liability			
1. For retirees and beneficiaries	\$ 586,596,231	\$ 689,910,459	
2. For vested terminated members	14,599,457	18,066,609	
3. For present active members			
a. Value of expected future benefit payments	1,688,145,270	1,712,672,343	
b. Value of future normal costs	705,047,614	698,643,765	
c. Active member accrued liability: (a) - (b)	983,097,656	1,014,028,578	
4. Total accrued liability	1,584,293,344	1,722,005,646	
B. Present Assets (Funding Value)	1,309,124,035	1,382,144,020	
C. Unfunded Accrued Liability: (A.4) - (B)	275,169,309	339,861,626	
D. Stabilization Reserve	2,034,724	2,300,108	
E. Net Unfunded Accrued Liability: (C) + (D)	277,204,034	342,161,734	
F. Funding Ratio: (B) / (A.4)	82.6%	80.3%	

Present Assets exclude \$18,734,779 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,		
	2009	2010	
(1) UAAL at start of year	\$183,337,151	\$275,169,309	
(2) Normal cost from last valuation	91,532,707	92,401,214	
(3) Actual Contributions	106,905,385	109,651,320	
(4) Interest Accrual	14,930,319	22,656,261	
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	182,894,792	280,575,464	
(6) Changes from benefit increases	18,197,108	21,264,230	
(7) Changes in actuarial methods & actuary	78,118,530	-	
(8) Change in Reserve for future pension increases	\$(28,133,467)	2,324,213	
(9) Expected UAAL after changes: $(5) + (6) + (7) + (8)$	251,076,963	304,163,907	
(10) Actual UAAL at end of year	275,169,309	339,861,626	
(11) Experience Gain/(Loss): (9) -(10)	(24,092,346)	(35,697,719)	

FY2010 Gains and Losses by Source

	Gain/(Loss)	% of Liability
Investment Return	\$(59,393,847)	-3.7%
Salary Increases	44,934,577	2.8%
Retirement	4,633,635	0.3%
Turnover	(13,683,814)	-0.9%
Disability	965,510	0.1%
Death-in-service	(125,392)	0.0%
Retiree Mortality	(4,785,509)	-0.3%
Other	(8,242,879)	-0.5%
Total	(35,697,719)	-2.3%

## 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
2001	\$ 554,387	\$ 776,177	\$(221,790)	140.0	20 yrs.
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
2010	1,722,006	1,382,144	339,862	80.3	26

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 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:

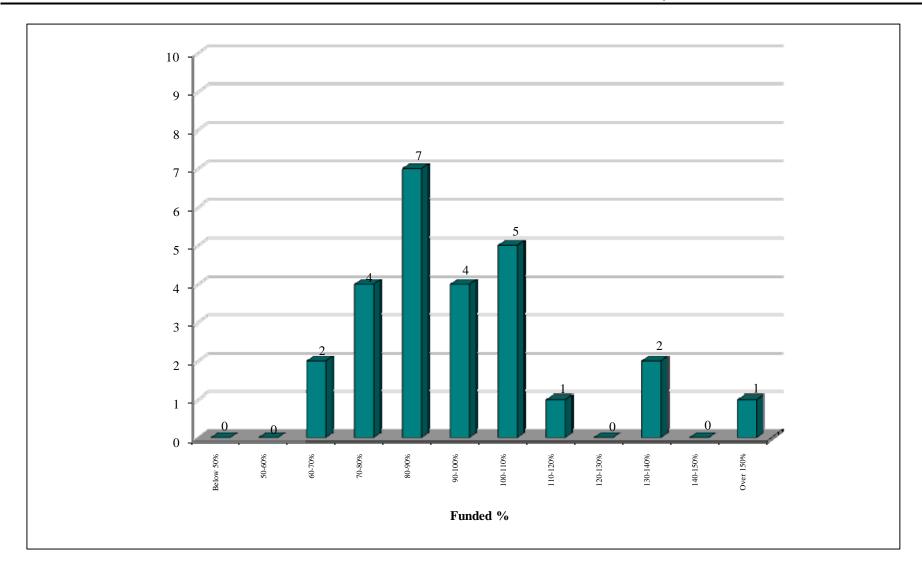
- 1) Member contributions on deposit;
- 2) The liabilities for future benefits to present retired lives;
- 3) The liabilities for service already rendered by active and inactive members.

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 Health Insurance Subsidy)

	Aggreg	ate Actuarial Lial	bilities For (3)		on of Acti ties Cove		
			Non-Retired		Assets		
	(1)		Members				
Calendar	Non-Retired	(2)	(Employer	Actuarial			
Year	Contributions	Annuitants	Financed Portion)	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%

## FUNDED PERCENTS - ALL EMPLOYERS AT JUNE 30, 2010



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## **SECTION C**

FUND ASSETS

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

Year Ended June 30:	2010	2011	2012	2013	2014	2015	2016
A. Funding Value Beginning of Year (Including Future Benefit Increases)	\$1,324,248,981						
B. Market Value End of Year	1,112,789,303						
C. Market Value Beginning of Year	961,016,116						
D. Non Investment Net Cash Flow	22,505,997						
E. Investment Income							
E1. Total: B-C-D	129,267,190						
E2. Amount for Immediate Recognition (8.50%)	113,517,668						
E3. Amount for Phased in Recognition: E1-E2	15,749,522						
F. Phased in Recognition of Investment Income							
F1. Current Year: E3 / 7	2,249,932						
F2. First Prior Year	(46,269,096)	\$ 2,249,932					
F3. Second Prior Year	(22,975,892)	(46,269,096)	\$ 2,249,932				
F4. Third Prior Year	9,080,499	(22,975,892)	(46,269,096)	\$ 2,249,932			
F5. Fourth Prior Year	(1,985,127)	9,080,499	(22,975,892)	(46,269,096)	\$ 2,249,932		
F6. Fifth Prior Year	(1,611,273)	(1,985,127)	9,080,499	(22,975,892)	(46,269,096)	\$ 2,249,932	
F7. Sixth Prior Year	2,117,110	(1,611,274)	(1,985,130)	9,080,496	(22,975,892)	(46,269,097)	\$2,249,930
F8. Total Recognized Investment Gain	\$ (59,393,847)	\$ (61,510,958)	\$ (59,899,687)	\$ (57,914,560)	\$ (66,995,056)	\$ (44,019,165)	\$2,249,930
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: (A+D+E2+F8)	\$1,400,878,799						
G2. Future Benefit Increases	18,734,779						
G3. End of Year: (G1-G2)	1,382,144,020						
H. Difference Between Market Value & Funding Value: (B-G1)	\$ (288,089,496)	\$(226,578,538)	\$(166,678,851)	\$ (108,764,291)	\$ (41,769,235)	\$ 2,249,930	0
I. Market Rate of Return	13.3%						
J. Recognized Rate of Return	4.1%						
K. Ratio of Funding Value to Market Value	125.9%						

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.

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## REVENUES AND DISBURSEMENTS

	2009	2010
Market Value at the Beginning of Year:	\$ 1,141,587,845	\$ 961,016,116
Revenues:		
a. Member contributions	\$ 53,527,634	\$ 55,214,242
b. Employer contributions	56,015,138	54,437,078
c. Interest income (net of expenses)	(217,378,381)	128,351,811
d. Net Transfers	(159,999)	(43,294)
e. Total	\$ (107,995,608)	\$ 237,959,837
Disbursements:		
a. Refunds of member contributions	14,879,342	19,774,873
b. Pension Benefits (including DROP)	55,488,890	64,039,673
c. Health Subsidy	2,207,889	2,372,104
d. Total	72,576,120	86,186,650
Reserve Increase:		
Total revenues minus total disbursements	(180,571,729)	151,773,187
Market Value at the End of Year:	\$ 961,016,116	\$1,112,789,303

GRS C-2

## **SECTION D**

CENSUS DATA

## **JUNE 30, 2010 VALUATION DATA SUMMARY**

For purposes of the June 30, 2010 valuation, information on 18,828 covered persons was furnished. These people may be briefly described as follows.

		Averages			
				Annua	l Pay or
			Years of	Retiremen	t Allowance
	No.	Age	Service	2010	2009
Actives	14,319	40.3	7.8	\$43,053	\$43,266
Retirees & Beneficiaries	2,908	62.7		23,992	22,806
Inactive Vested	1,601	39.1			
	18,828				

## **ACTIVE MEMBERS**

## Members in Active Service as of June 30, 2010 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	812	14						826	\$ 27,831,351	\$33,694
25 - 29	1,605	436	2					2,043	76,306,918	37,350
30 - 34	1,063	836	206					2,105	85,456,194	40,597
35 - 39	878	691	634	109				2,312	100,116,277	43,303
40 - 44	656	535	449	350	62			2,052	92,558,525	45,106
45 - 49	437	400	340	302	210	16		1,705	79,266,036	46,490
50 - 54	310	345	283	221	150	65	7	1,381	64,941,530	47,025
55 - 59	235	254	238	156	106	37	19	1,045	49,535,629	47,403
60 - 64	114	172	143	114	78	24	6	651	31,214,726	47,949
65 and over	42	68	43	22	17	5	2	199	9,254,189	46,503
Total	6,152	3,751	2,338	1,274	623	147	34	14,319	\$ 616,481,375	\$43,053

## TERMINATED VESTED MEMBERS

		,	Years of Service	ee		Total
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 & Up	Count
Under 30	462	8				470
30 - 39	417	61	10			488
40 - 44	122	17	12	2	1	154
45 - 49	103	13	15	3	3	137
50 - 54	83	19	18	6		126
55 - 59	72	12	31	10	2	127
60 - 69	55	14	17	9	2	97
70 and over	2					2
Total	1,316	144	103	30	8	1,601

## RETIREES AND BENEFICIARIES

						m
A44 • 3		Males		Females		Total
Attained	**	Annual Pension		Annual Pension	**	Annual Pension
Ages	No.	Benefits	No.	Benefits	No.	Benefits
Under 25	2	\$ 31,555	3	\$ 55,505	5	\$ 87,060
25-29	3	51,533	9	130,592	12	182,125
30-34	3	50,834	9	129,190	12	180,024
35-39	8	138,716	21	333,744	29	472,460
40-44	50	1,140,024	25	468,826	75	1,608,850
45-49	171	4,480,773	71	1,822,076	242	6,302,849
50-54	231	7,025,915	104	2,842,018	335	9,867,933
55-59	266	8,703,314	118	3,311,914	384	12,015,228
60-64	361	10,792,058	169	4,129,278	530	14,921,336
65-69	376	8,563,625	162	2,995,391	538	11,559,016
70-74	282	5,308,987	123	2,105,503	405	7,414,490
75-79	145	2,339,990	73	1,062,823	218	3,402,813
80-84	63	897,742	31	456,928	94	1,354,670
85-89	16	219,949	9	106,807	25	326,756
90-94	2	22,546	2	50,900	4	73,446
95-99	0	0	0	0	0	0
100 and Over	0	0	0	0	0	0
Totals	1,979	\$49,767,561	929	\$20,001,495	2,908	\$69,769,056

Pension Being Paid		Number	Annual Pensions	Average Pensions
Retired Members	Service Pensions	2,363	\$60,741,300	\$25,705
	Disability Pensions	97	1,986,635	20,481
Totals		2,460	62,727,935	25,499
Survivors of Members	Spouses	408	6,471,818	15,862
	Children with Guardians	40	569,303	14,233
Total		448	7,041,121	15,717
Total Pension being Pa	id	2,908	\$69,769,056	\$23,992
		Average Age	Average Service	Average Age at Retirement
Normal retired members		63.3	19.3	57.1
Disability retired member	rs	53.8	9.6	44.6
Spouse beneficiaries		63.6	11.6	51.9

## PENSIONS BEING PAID HISTORICAL SCHEDULE

Valuation Date		Annual	% Incr. in Annual	Average	Present Value	of Pensions
June 30	No.	Pensions	Pensions	Pension	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

Results prior to 2009 were calculated by the prior actuary.



#### **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 26 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 overfunded. 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. When viewed in the context of the COLA reserve, this assumption is extremely aggressive.

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.

	Salary Increase Assumptions For an Individual Member			
Sample	Merit &	Base	Increase	
Ages	Seniority	(Economy)	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%	
	0.204		<b>5 5</b> 0/	
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	Probab	oility of	Futur	e Life
Attained	Dying N	ext Year	Expectan	cy (years)
Ages	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	703 x 1.00		
	2 year set forward	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	Probab	oility of	Future Life	
Attained	Dying N	ext Year	Expectan	cy (years)
Ages	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	664 x 1.00		
	3 year set forward	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	Years of	% of Active Members
Ages	Service	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	% of Active Members Becoming
Ages	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, 2010

#### 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.

**Pay Increase Timing:** Six months after the valuation date.

**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. 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.



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).

GRS F-1

**DROP**: This provision expires on June 30, 2011.

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.

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

GRS F-2

**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.* Percent of payroll normal cost plus 30 year (26 years remaining as of June 30, 2010) 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).

GRS F-3

#### **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.

GRS G-1

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

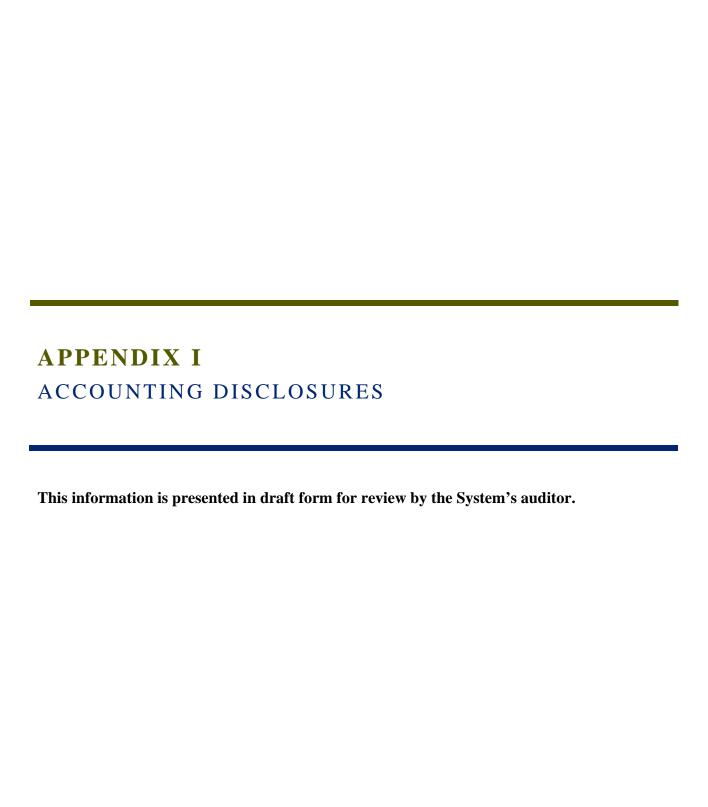
assets. Sometimes referred to as "unfunded accrued liability."

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.

GRS G-2



#### GASB STATEMENT NO. 25 SUPPLEMENTARY INFORMATION

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

						UAAL as a
	Actuarial	Actuarial	Unfunded			Percent of
Year	Value	Accrued	AAL	Funded	Covered	Covered
Ended	of Assets	Liability (AAL)	(UAAL)	Ratio	Payroll	Payroll
June 30	(a)	<b>(b)</b>	(b)-(a)	(a)/(b)	(c)	[(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 %
2010	1,382,144,020	1,648,733,153	266,589,133	83.8 %	616,481,375	43.24 %

Results before 2009 were calculated by the prior actuary.

#### GASB STATEMENT NO. 25 SUPPLEMENTARY INFORMATION

#### SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal	Annual
Year Ended	Required
June 30	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.)

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, 2010

Actuarial cost method Projected Unit Credit

Amortization method Level percent-of-pay closed

Remaining amortization period 26 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

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.

Please note the liabilities in the schedules below were calculated based on the 8.5% interest rate assumption. 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 8.5% 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%

#### 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

Fiscal Years prior to 2011 provided by the prior actuary.

Health Insurance Subsidy Payment Reported for FY 2010: \$2,372,104

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

#### **APPENDIX II**

SUMMARY OF POPULATION DATA BY INDIVIDUAL EMPLOYERS

<b>5.1.1</b>		<b>.</b>	A	N. 1. 0	Annual	Number	Annual
Division	Employer	Number of	Active	Number of	Retiree	of Vested	Vested
Number	Name	Actives	Payroll	Retirees	Benefits	Inactive	Benefits
	NISTRATIVE OFFICE OF THE COURTS	2,021	97,042,154	197	7,438,290	157	2,783,888
	CHE COUNTY - Detention	23	690,673	3	55,415	13	79,191
	OF AVONDALE - Detention	9	538,885	-	-	-	-
	OF SOMERTON - Dispatchers	9	268,078	-	-	2	10,037
	ISE COUNTY - Detention	63	2,137,663	22	307,538	23	166,443
530 COCO	NINO COUNTY - Detention	88	3,394,056	2	39,962	35	267,034
	RTMENT OF CORRECTIONS - Detention	8,054	340,660,645	1,957	43,830,391	465	8,943,195
501 DEPT	OF JUVENILE CORRECTIONS - Detention	552	23,338,853	172	4,353,359	286	2,546,571
563 DEPA	RTMENT OF PUBLIC SAFETY - Dispatchers	67	3,232,229	1	40,927	-	-
503 GILA	COUNTY - Detention	63	2,268,346	3	44,606	31	61,730
558 GILA	COUNTY - Dispatchers	18	726,419	1	14,748	12	7,269
504 GRAH	IAM COUNTY - Detention	31	1,108,719	3	78,044	10	34,328
560 GRAH	IAM COUNTY - Dispatchers	12	373,831	-	-	9	24,911
505 MARI	COPA COUNTY - Detention	2,030	87,326,372	320	8,219,699	248	1,379,545
535 MOH	AVE COUNTY - Detention	86	2,947,082	10	151,861	34	101,081
545 NAVA	AJO COUNTY - Detention	49	1,700,382	4	73,958	17	26,935
515 PIMA	COUNTY - Detention	463	19,884,674	142	3,534,985	92	685,355
502 PINAI	LCOUNTY - Detention	272	13,374,351	6	170,680	42	405,690
555 PINAI	LCOUNTY - Dispatchers	29	1,056,162	2	50,730	9	50,849
540 SANT	A CRUZ COUNTY - Detention	26	808,476	4	93,643	11	38,458
557 TOW	N OF MARANA - Dispatchers	13	593,407	-	-	5	6,018
556 TOW	N OF ORO VALLEY - Dispatchers	11	513,337	2	58,814	8	8,141
559 TOW	N OF WICKENBURG - Dispatchers	5	212,743	1	16,131	3	8,847
550 YAVA	PAI COUNTY - Detention	159	6,141,309	33	627,504	59	235,281
561 YAVA	PAI COUNTY - Dispatchers	12	439,894	-	-	4	19,359
510 YUMA	A COUNTY - Detention	154	5,702,635	23	567,771	26	176,454
TOTA	L	14,319	616,481,375	2,908	69,769,056	1,601	18,066,609

#### APPENDIX III

SUMMARY OF LIABILITIES AND ASSET INFORMATION BY INDIVIDUAL EMPLOYERS

Division	Employer	Total	Total	Reserve for future	Net	Funded	Unfunded
Number	Name	AAL	Assets	Pension Increases	Assets	Percent	Liability
575 ADMI	NISTRATIVE OFFICE OF THE COURTS	335,858,423	250,463,255	5,979,824	244,483,431	72.80%	91,374,993
520 APACI	HE COUNTY - Detention	1,434,823	1,402,114	26,921	1,375,193	95.80%	59,630
506 CITY C	OF A VONDALE - Detention	684,631	621,227	9,636	611,591	89.30%	73,040
562 CITY C	OF SOMERTON - Dispatchers	538,695	376,155	21,501	354,654	65.80%	184,041
525 COCHI	SE COUNTY - Detention	5,978,269	5,211,547	51,716	5,159,831	86.30%	818,437
530 COCON	NINO COUNTY - Detention	4,936,210	5,458,965	197,810	5,261,155	106.60%	(324,945)
500 DEPAR	RTMENT OF CORRECTIONS - Detention	945,173,867	775,696,647	7,352,909	768,343,738	81.30%	176,830,129
501 DEPT (	OF JUVENILE CORRECTIONS - Detention	82,370,466	70,879,847	674,663	70,205,184	85.20%	12,165,283
563 DEPAR	RTMENT OF PUBLIC SAFETY - Dispatchers	7,207,228	6,676,325	59,130	6,617,195	91.80%	590,033
	COUNTY - Detention	2,507,758	2,705,639	95,602	2,610,037	104.10%	(102,280)
558 GILA C	OUNTY - Dispatchers	1,493,000	1,413,298	54,969	1,358,329	91.00%	134,671
504 GRAH	AM COUNTY - Detention	1,476,499	1,508,004	21,267	1,486,737	100.70%	(10,238)
560 GRAH	AM COUNTY - Dispatchers	280,173	472,847	18,243	454,604	162.30%	(174,431)
505 MARIO	COPA COUNTY - Detention	211,633,233	175,629,027	2,919,152	172,709,875	81.60%	38,923,358
535 MOHA	VE COUNTY - Detention	3,807,734	5,317,671	116,696	5,200,975	136.60%	(1,393,242)
545 NAVA	JO COUNTY - Detention	2,694,238	2,877,018	87,915	2,789,103	103.50%	(94,864)
515 PIMA	COUNTY - Detention	67,706,845	50,077,286	-	50,077,286	74.00%	17,629,559
502 PINAL	COUNTY - Detention	17,100,488	17,114,923	658,465	16,456,458	96.20%	644,030
555 PINAL	COUNTY - Dispatchers	1,364,268	1,206,496	24,263	1,182,233	86.70%	182,035
540 SANTA	A CRUZ COUNTY - Detention	1,518,153	2,019,259	30,888	1,988,371	131.00%	(470,218)
557 TOWN	OF MARANA - Dispatchers	618,718	573,495	28,419	545,076	88.10%	73,642
556 TOWN	OF ORO VALLEY - Dispatchers	1,394,719	1,074,267	16,909	1,057,358	75.80%	337,361
559 TOWN	OF WICKENBURG - Dispatchers	528,881	350,801	2,294	348,507	65.90%	180,374
550 YAVAI	PAI COUNTY - Detention	12,265,499	9,896,698	105,932	9,790,766	79.80%	2,474,733
561 YAVA	PAI COUNTY - Dispatchers	548,056	638,057	30,230	607,827	110.90%	(59,771)
510 YUMA	COUNTY - Detention	10,884,773	11,217,931	149,424	11,068,507	101.70%	(183,734)
TOTAL	L	1,722,005,646	1,400,878,799	18,734,779	1,382,144,020		339,861,626

GRS
Appendix III-1

# APPENDIX IV SUMMARY OF CONTRIBUTION INFORMATION BY INDIVIDUAL EMPLOYERS

Division	<b>Employer</b>	ER	UAL	Calculated	Required
Number	Name	NC%	Pmt %	ER Cont	ER Cont
575 ADMI	NISTRATIVE OFFICE OF THE COURTS	8.33%	4.80%	13.13%	13.13%
520 APAC	HE COUNTY - Detention	5.57%	0.39%	5.96%	5.96%
506 CITY (	OF A VONDALE - Detention	6.05%	0.72%	6.77%	6.77%
562 CITY (	OF SOMERTON - Dispatchers	5.46%	3.47%	8.93%	8.93%
525 COCH	ISE COUNTY - Detention	5.92%	2.00%	7.92%	7.92%
530 COCO	NINO COUNTY - Detention	5.83%	-0.09%	5.74%	5.74%
500 DEPA	RTMENT OF CORRECTIONS - Detention	6.51%	2.64%	9.15%	9.15%
501 DEPT	OF JUVENILE CORRECTIONS - Detention	7.18%	2.74%	9.92%	9.92%
563 DEPA	RTMENT OF PUBLIC SAFETY - Dispatchers	6.20%	1.30%	7.50%	7.50%
503 GILA (	COUNTY - Detention	5.62%	0.00%	5.62%	5.62%
558 GILA (	COUNTY - Dispatchers	5.51%	0.95%	6.46%	6.46%
504 GRAH	AM COUNTY - Detention	4.05%	0.00%	4.05%	6.00%
560 GRAH	AM COUNTY - Dispatchers	3.43%	-0.57%	2.86%	5.00%
505 MARI	COPA COUNTY - Detention	6.21%	2.28%	8.49%	8.49%
535 MOHA	AVE COUNTY - Detention	5.24%	-0.67%	4.57%	5.00%
545 NAVA	JO COUNTY - Detention	6.33%	-0.05%	6.28%	6.28%
515 PIMA	COUNTY - Detention	6.16%	4.52%	10.68%	10.68%
502 PINAL	COUNTY - Detention	5.58%	0.26%	5.84%	5.84%
555 PINAL	COUNTY - Dispatchers	3.74%	0.84%	4.58%	5.00%
540 SANT	A CRUZ COUNTY - Detention	4.06%	-0.51%	3.55%	5.00%
557 TOWN	NOF MARANA - Dispatchers	4.56%	0.63%	5.19%	5.19%
556 TOWN	NOF ORO VALLEY - Dispatchers	5.86%	3.27%	9.13%	9.13%
559 TOWN	NOF WICKENBURG - Dispatchers	5.44%	4.03%	9.47%	9.47%
550 YAVA	PAI COUNTY - Detention	5.94%	2.07%	8.01%	8.01%
561 YAVA	PAI COUNTY - Dispatchers	4.71%	-0.40%	4.31%	6.00%
510 YUMA	A COUNTY - Detention	4.69%	0.00%	4.69%	5.00%
ТОТА	L	6.67%	2.83%	9.50%	9.53%

October 29, 2010

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

Re: Report of the June 30, 2010 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,

Cathy V-gy
Cathy Nagy, FSA, EX, MAAA

CN:sac Enclosures