

***Arizona Corrections Officer
Retirement Plan***

Actuarial Valuation as of June 30, 2007

December 7, 2007

The Fund Manager
Arizona Corrections Officer Retirement Plan
Phoenix, Arizona

Re: Arizona Corrections Officer Retirement Plan

This report contains the consolidated results of the June 30, 2007 actuarial valuation of the Arizona Corrections Officer Retirement Plan. The valuations determine the 2008/2007 Fiscal Year employer contribution requirements and the June 30, 2007 actuarial present values associated with the Plan.

Participant data was provided by your Administrator. This data has been reviewed for reasonableness, but no attempt has been made to audit such information. Financial information was taken from the June 30, 2007 information submitted by your Administrator.

The valuations were based on the provisions of the Arizona Corrections Officer Retirement Plan as amended through June 30, 2007. The valuations were made in accordance with generally accepted actuarial principals and practices. They incorporate the changes in demographic assumptions and methods following in the experience study of the Retirement Plan for the 5-year period ended June 30, 2006 and the actuarial audit of the experience study and June 30, 2006 valuations.

Respectfully submitted,



Sandra W. Rodwan
Member, American Academy of Actuaries

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Section One:
Valuation Summary



Purpose of Valuation

The purpose of the annual actuarial valuation of the Arizona Corrections Officer Retirement Plan as of June 30, 2007 is to:

- ❖ Compute the liabilities associated with benefits likely to be paid on behalf of current retired and active members. This information is contained on page 9.
- ❖ Compare accrued assets with accrued liabilities to assess the funded condition. This information is contained on pages 8, 9 and 11.
- ❖ Compute the employers' recommended contribution rates for the Fiscal Year beginning July 1, 2008. This information is contained on page 6 and 12.

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

Liabilities and Funded Condition of Retirement Plan

Accrued liabilities of the Retirement Plan as of June 30, 2007, were computed to be \$1,110,801,013. The funding value of accrued assets was \$940,126,081. The ratio of the funding value of accrued assets to accrued liabilities was 84.6%.

Funding Value of Assets

A smoothed market value of assets was used for the June 30, 2007 valuation. This method spreads the difference between actual and expected investment return over seven years. Prior to the June 30, 2003 valuation, the difference was spread over four years.

Aggregate Computed Contribution Rate

Contribution rates are computed individually for each participating unit. In the aggregate, the normal cost contribution rate was computed to be 15.06% of member payroll. Deducting member contributions of 7.96% of payroll resulted in an aggregate employer normal cost of 7.10% of payroll.

The excess of accrued liabilities over accrued assets produced a 29-year level percent of payroll amortization payment of 1.55% of payroll.

The aggregate net employer contribution for FY 2008/2009 was therefore computed to be 8.65% of payroll. After the application of the minimum contribution required for each unit by Statute, the aggregate net employer contribution is 8.68% of payroll.

Retirement Plan Experience

Experience of the Retirement Plan during the year ended June 30, 2007 was less favorable than assumed. The primary sources of unfavorable experience were the recognized rate of investment return (based on the smoothed market value of assets), which was less than assumed, and salary increases which were greater than assumed.

Benefit Provision Changes

There were no benefit provision changes in this valuation.

Assumption and Method Changes

Pursuant to recommendations contained in the experience studies of the 5-year period ending June 30, 2006 and the actuarial audits, changes were made in the assumed rates of mortality, active member withdrawals, retirement, and disability rates. The actuarial cost method remained the same, but technical modifications were incorporated pursuant to the actuarial audits.

Participant Data

	<u>6/30/2007</u>	<u>6/30/2006</u>
Active Members	12,780	11,914
Active Member Payroll	\$515,427,641	\$437,743,658
Retirees and Beneficiaries	2,123	1,955
Annual Pensions	\$42,666,000	\$37,272,183

Financial Data

	<u>6/30/2007</u>	<u>6/30/2006</u>
Smoothed Valuation Assets	\$1,000,552,139*	\$953,160,640*
Market Value of Assets	\$1,012,937,536	\$861,782,725

** The net smoothed value of assets used for the valuation after deducting the Future Benefit Increase Reserve was \$940,126,078 in 2007 and \$919,867,995 in 2006.*

Comments, Recommendations and Conclusion

Comment 1: This report contains the consolidated results of the individual actuarial valuations of the 21 units in the Arizona Corrections Officer Retirement Plan as of June 20, 2007. The aggregate results are indicative of the overall condition of the Retirement Plan. The condition of each unit, however, is dependent upon its particular experience and characteristics.

Of the 21 units, 6 had accrued valuation assets in excess of actuarial accrued liabilities. The amount of this excess was amortized over a period of 20 years and applied as a temporary credit to the employer normal cost contribution rate. In the remaining 15 units, unfunded actuarial accrued liabilities were amortized over a 29-year period and added to the normal cost to produce the total employer contribution rate.

There were no new units included in this valuation.

Comment 2: The experience of the Retirement System during the year ended June 30, 2007, was less favorable than expected based upon the long-term assumptions. Although the actual rate of return during the year was favorable, the recognize rate of return based on the smoothed market value includes carry-forwards of less than assumed return in prior years. This was the primary source of unfavorable experience. Salary increases at rates greater than assumed also contributed to the experience loss.

Comment 3: The smoothed market value used for the valuation spreads differences between the assumed and actual investment return over 7 years. This method is unchanged from last year.

Comment 4: This annual actuarial valuation includes assumption and methodology changes pursuant to the experience study covering the i) 5-year period ending June 30, 2006 and ii) the actuarial audits of the 5 year experience study and the annual actuarial valuation as of June 30, 2006.

The changes in assumptions include the rates of mortality, retirement, withdrawal and disability. The assumptions are summarized beginning on page 12.

Comment 5: It is important to note that the funding credits are not expected to continue indefinitely and are likely to decrease over the short term. ***For long-term budgeting, the employer normal cost should be viewed as the minimum annual cost.*** The normal cost is computed separately for each unit. In the aggregate, the employer normal cost has been computed to be 7.10% of payroll.

Comment 6: The June 30, 2007 annual actuarial valuation includes the Stabilization Reserve Account established by legislation enacted in 2006 and included for the first time in last year's valuation. One-half of increases (if any) in the excess of accrued assets over accrued liabilities for an employer are allocated to the Stabilization Reserve Account for that employer to be available to offset a portion of any future unfunded actuarial accrued liability. Five units had a Stabilization Reserve Account as of June 30, 2007. The total amount was \$150,841. The Stabilization Reserve Accounts were excluded from the computation of the employer contribution rates.

Conclusion: The increase in the computed contribution rate and the decrease in the funded ratio are primarily attributable to the experience during the year, the assumption changes, and methodology changes. These changes are expected to reduce demographic experience losses in the future. However, in the absence of investment return in excess of the assumed rate or favorable experience in other areas such as rates of salary increase, it is likely that the employer contribution rates may increase over the short term.

Section Two:
***Actuarial Calculations –
Funding***



Contribution Requirements – 2008/2009 Fiscal Year

Member: 7.96% of covered compensation

Employer: The aggregate computed contribution rate before application of the statutory minimum was 8.65% of covered compensation, consisting of 7.10% for normal cost, 1.55% for amortization of unfunded actuarial accrued liability as a level percent of payroll.*

Components of Computed Normal Cost

	Percents of Covered Compensation
Normal cost requirement	
Service pensions	11.03%
Disability pensions	0.27
Survivors of active members	1.27
Refunds of members' accumulated contributions	1.98
Health insurance	<u>0.51</u>
Total normal cost requirement	15.06%
Less member contribution	<u>7.96</u>
Employer normal cost requirement	7.10%

**In the aggregate, actuarial accrued liability, \$1,110,801,013, exceeded the funding value of accrued assets, \$940,126,078. Of the 21 units, 6 had assets in excess of accrued liabilities and 15 had unfunded accrued liabilities. The excess was amortized as a level percent of payroll over 20 years and applied as a credit to the employer normal cost. The unfunded actuarial accrued liabilities were amortized over 29 years and added to the employer normal cost.*

These contribution rates are prior to the minimum rate established for each unit by the State Legislature. The total aggregate computed contribution after application of the minimum is 8.68 % of payroll. Please refer to the note on page 7.

Note: The normal cost should be viewed as the minimum long-term ongoing cost.

Computed Employer Contribution Requirements

Valuation Date: <u>June 30</u>	<u>Normal Cost</u>	<u>Unfunded Actuarial Accrued Liability</u>	<u>Total</u>
1990	5.74%	0.42%	6.16%
1995	7.18	(0.25)	6.93
1996	7.23	(0.60)	6.63
1997	6.94	(0.96)	5.98
1998	6.92	(1.78)	5.14
1999	4.92	(3.04)	1.88
2000*	4.90	(3.75)	1.15
2001*	5.79	(4.08)	1.71
2002*	6.79	(2.84)	3.95
2003*	5.74	(1.67)	4.07
2004*	6.05	(0.58)	5.47
2005*	6.53	0.48	7.01
2005#	4.64	(0.18)	4.46
2006*	6.07	0.65	6.72
2007(b)	5.92	1.51	7.43
2007(a)	7.10	1.55	8.65

* *The computed contribution rates are before application of the minimum rates established by the Legislature.*

The minimum rate is 2% for fiscal years beginning with 2001/2002, 4% for the 2005/2006 fiscal year 5% for the 2006/2007 fiscal years beginning and 6% for the fiscal years beginning with 2007/2008. For any employer whose actual contribution rate is less than 5% for the 2006/2007 Fiscal Year, that employer's contribution rate will not be subject to the 6% minimum. Instead, such an employer's contribution rate for the 2006/2007 Fiscal Year, and for each year thereafter, shall be at least 5% and not more than that employer's actual contribution rate.

Revised pursuant to changes enacted by the 2006 Legislature and the CORP Fund Manager.

(b) *Before changes in actuarial assumptions and methods.*

(a) *After changes in actuarial assumptions and methods.*

Actuarial Accrued Liability

The total contribution is made up of two parts, the normal cost and the amortization of the unfunded actuarial accrued liability. For 6 of the participating units, the valuation assets exceed the actuarial accrued liability so they have a credit against the normal cost. The remaining 15 units have a contribution greater than the normal cost to pay for a portion of the past service liability. The Legislature has established a policy of amortizing, or funding, the unfunded actuarial accrued liability as a level percent of payroll over a period of 30 years, 29 years remaining as of June 30, 2007. The excess was amortized over 20 years as a level percent of payroll and applied as a credit.

The aggregate actuarial accrued liability exceeds the valuation assets by \$170,674,932.

	<u>June 30, 2007</u>
Actuarial Accrued Liability	
Retired members and survivors	\$430,172,373
Former members with vested benefits	12,159,157
Active members	<u>668,469,483</u>
Total	\$1,110,801,013
 Valuation Assets*	 940,126,081
 Unfunded Actuarial Accrued Liability	 \$170,674,932

* This amount excludes the \$60,426,061 in investment income reserve held for future pension increases pursuant to state statute.

History of Assets and Accrued Liabilities

Valuation Date <u>June 30</u>	Valuation <u>Assets</u>	Actuarial Accrued <u>Liabilities</u>	Funded <u>Ratio</u>	Unfunded Actuarial Accrued <u>Liabilities</u>	Financing <u>Period</u>
1987	\$47,550	\$68,932	69%	\$21,382	40 yrs
1990	108,973	122,578	88.9	13,605	40
1995	265,006	254,189	104.3	(10,817)	34
1996	319,255	290,518	109.9	(28,737)	33
1997	393,904	355,590	110.8	(38,314)	20
1998	484,956	410,531	118.1	(74,425)	20
1999	592,152	443,676	133.5	(148,476)	20
2000	704,991	501,323	140.6	(203,668)	20
2001	776,177	554,387	140.0	(221,790)	20
2002	782,446	632,238	123.8	(150,208)	20
2003	811,791	709,298	114.4	(102,493)	20
2004	833,621	795,775	104.8	(37,946)	20
2005	872,981	906,025	96.4	33,044	20
2005#	872,981	863,791	101.1	(9,190)	20
2006	919,868	981,208	93.7	61,340	30
2007(b)	940,126	1,107,772	84.9	167,596	29
2007(a)	940,126	1,110,801	84.6	170,675	29

Dollar amounts in \$000.

Results shown throughout this report for years prior to 2001 were prepared by the previous actuarial firm.

Revised pursuant to changes enacted by the 2006 Legislature and the CORP Fund Manager.

(b) Before changes in actuarial assumptions and methods.

(a) After changes in actuarial assumptions and methods.

Aggregate Gain/Loss

	<u>Year Ended June 30, 2007</u>
(1) UAAL ^a at start of year	\$61,339,713
(2) Normal cost	65,035,651
(3) Funding method contributions	65,977,600
(4) Interest accrual	5,173,842
(5) Expected UAAL before changes	65,571,606
(6) Change from amendments	None
(7) Change from assumption and method revisions	3,079,263
(8) Expected UAAL after changes	68,650,869
(9) Actual UAAL	170,674,932
(9) Gain(Loss)	(102,024,063)
(10) Percent of AAL ^b	(10.4)%

^a Unfunded Actuarial Accrued Liability

^b Actuarial Accrued Liability at beginning of year.

In the aggregate, the experience during the year produced a net loss of \$102,024,063. The following are estimates of some of the gains and losses by source. It is important to note that these are estimates only. The absence of individual identifiers (e.g. social security numbers) in last year's data precluded tracking the actual experience by individual during the year.

Sources of gains/(losses):

Investment Return	\$(64,298,773)
Salary Increases	(21,209,796)
Other	<u>(16,515,494)</u>
Total	\$(102,024,063)

Aggregate Actuarial Balance Sheet June 30, 2007

Actuarial Assets

Accrued Assets		
Member accumulated contributions	\$213,688,264	
Employer and benefit payment reserves	686,831,775	
Funding value adjustment	<u>100,032,100</u>	
Total accrued assets*		\$1,000,552,139
Prospective assets (computed value)		
Member contributions	307,590,022	
Employer normal costs	316,893,414	
Employer unfunded actuarial accrued liability	<u>170,674,932</u>	
Total prospective assets		<u>795,158,368</u>
Total Actuarial Assets		<u><u>\$1,795,710,507</u></u>

* Includes \$60,426,061 reserve for payment of ad-hoc pension increases. The net funding value of assets is \$940,126,078.

Actuarial Present Values (Liability)

Pensions in payment status		
Service pensions	\$356,309,379	
Disability pensions	15,782,301	
Survivor pensions	40,815,201	
Health insurance	<u>17,265,492</u>	
Total benefit values		\$430,172,373
Prospective pension payments and refunds (future retirements)		1,251,926,122
Prospective health insurance payments (future retirements)		53,035,110
Reserve for future pension increases		60,426,061
Stabilization reserve account		<u>150,841</u>
Total Actuarial Present Values (Liability)		<u><u>\$1,795,710,507</u></u>

Employer Contribution Requirements
2008/2009 Fiscal Year
Expressed as Percents of Covered Compensation

<u>Employer</u>	<u>Normal Cost</u>	<u>Amort of Unf. Act. Accr. Liab UAAL*</u>	<u>Total Computed Emp. Contrib.</u>	<u>Total Required Emp. Contribution</u>
Apache County Corrections Officers	8.04%	0.34%	8.38%	8.38%
Cochise County Corrections Officers	7.73	0.77	8.50	8.50
Coconino County Corrections Officers	6.98	(0.83)	6.15	6.15
Department of Corrections	7.22	1.68	8.90	8.90
Department of Juvenile Corrections	7.31	1.11	8.42	8.42
Gila County Corrections Officers	6.87	0.24	7.11	7.11
Gila County Dispatchers	5.97	0.67	6.64	6.64
Graham County Corrections Officers	4.78	0.02	4.80	5.00
Graham County Dispatchers	4.09	(0.49)	3.60	5.00
Maricopa County Corrections Officers	6.72	1.85	8.57	8.57
Mohave County Corrections Officers	6.23	(2.96)	3.27	5.00
Navajo County Corrections Officers	6.62	(0.50)	6.12	6.12
Pima County Corrections Officers	7.01	2.41	9.42	9.42
Pinal County Corrections Officers	7.31	0.65	7.96	7.96
Pinal County Dispatchers	4.36	2.35	6.71	6.71
Santa Cruz County Corrections Officers	6.41	(5.88)	0.53	5.00
Town of Marana Dispatchers	3.56	0.84	4.40	5.00
Town of Oro Valley Dispatchers	5.05	2.35	7.40	7.40
Wickenburg Dispatchers	7.11	2.77	9.88	9.88
Yavapai County Corrections Officers	6.78	1.02	7.80	7.80
Yuma County Corrections Officers	6.44	(0.78)	5.66	5.66
Totals	7.10%	1.55%	8.65%	8.68%

* Twenty-nine years from July 1, 2007 (20 years credit).

Actuarial Accrued Liability – Valuation Assets – Amortization Payment

Employer	Actuarial	Valuation Assets		Emp./ Unf. Act.	Amortization
	Accrued	Members	Employers	Acc. Liability	
	Liability				Payment*
Apache County Corrections Officers	\$1,128,276	\$257,747	\$823,712	\$46,817	0.34%
Cochise County Corrections Officers	4,846,201	1,065,836	3,454,324	326,041	0.77
Coconino County Corrections Officers	3,318,359	1,224,181	2,505,822	(411,644)	0.00
Department of Corrections	766,696,009	145,960,658	503,738,882	116,996,469	1.68
Department of Juvenile Corrections	72,184,973	14,069,299	49,613,102	8,502,572	1.11
Gila County Corrections Officers	1,617,012	447,994	1,062,074	106,944	0.24
Gila County Dispatchers	1,177,455	257,944	806,287	113,224	0.67
Graham County Corrections Officers	1,078,322	200,147	875,048	3,127	0.02
Graham County Dispatchers	114,920	61,886	82,887	(29,853)	0.00
Maricopa County Corrections Officers	165,763,785	31,560,897	100,757,608	33,445,280	1.85
Mohave County Corrections Officers	2,923,117	714,809	3,530,963	(1,322,655)	0.00
Navajo County Corrections Officers	1,770,024	482,517	1,418,639	(131,132)	0.00
Pima County Corrections Officers	54,488,124	9,504,524	34,691,724	10,291,876	2.41
Pinal County Corrections Officers	9,879,753	2,511,486	5,993,385	1,374,882	0.65
Pinal County Dispatchers	1,164,459	230,694	595,130	338,635	2.35
Santa Cruz County Corrections Officers	1,253,272	317,834	1,578,450	(643,012)	0.00
Town of Marana Dispatchers	378,816	118,927	141,347	118,542	0.84
Town of Oro Valley Dispatchers	1,278,537	369,785	590,531	318,221	2.35
Wickenburg Dispatchers	398,624	63,448	184,338	150,838	2.77
Yavapai County Corrections Officers	10,318,766	2,430,174	6,258,530	1,630,062	1.02
Yuma County Corrections Officers	8,858,038	1,837,478	7,735,033	(714,473)	0.00

*Twenty-nine years from July 1, 2007 (20 years credit).



Section Three:

***Retirement Plan
Benefit Provisions***



Summary of Plan Provisions Valued and/or Considered

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

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

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

Early Retirement: (reduction for age). No provision.

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

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 credit. The additional amount is a percent, based on service credit, of the member contribution amount, ranging from 25% (with five years of service credit) to 100% (with 10 or more years of service credit).

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

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

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

Member Contributions. 8.50 % of base salary. For Fiscal Years 2007/2008 and 2008/2009, the member contribution rate is 7.96% pursuant to legislation adopted in 2005.

Employer Contributions. Level percent of payroll normal cost plus 29 year amortization of unfunded actuarial accrued liability (20 year amortization for accrued assets in excess of accrued liabilities). The minimum employer contribution rate is 6% for fiscal years beginning with FY 2007/2008 (5% for units under 5% as of June 30, 2005 valuation).

Section Four:

***Actuarial Assumptions
And Methods***



Summary of Valuation Assumptions

Economic Assumptions

Interest Rate: 8.50% (net of expenses)

Salary Increases: 5.00% for inflation and 0.50% for other across-the-board increases, plus age-related merit and longevity.

Sample Annual Rates of Salary Increase

Age	Across-the-Board	Merit and Longevity	Other	Total
20	5.00%	3.0%	0.5%	8.50%
25	5.00	3.0	0.5	8.50
30	5.00	2.6	0.5	8.10
35	5.00	1.1	0.5	6.60
40	5.00	0.2	0.5	5.70
45	5.00	0.2	0.5	5.70
50	5.00	0.2	0.5	5.70
55	5.00	0.1	0.5	5.60
60	5.00	-	0.5	5.50
65	5.00	-	0.5	5.50

Demographic Assumptions

Retiree Non-Disability Mortality rates: RP 2000 Healthy Annuitant Mortality Table, male ages set forward 2 years and female ages set forward 2 years (first used for June 30, 2007 valuation).

Active Member Non-Disability Mortality Rates: RP 2000 Employees Mortality Table, male ages set forward 3 years and female ages set forward 3 years (first used for June 30, 2007 valuation).

Sample Ages	Single Life Retirement Values							
	Retirees		Active Members		Retirees		Active Members	
	Present Value of \$100 Monthly For Life		Present Value of \$100 Monthly For Life		Future Life Expectancy (Years)		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women	Men	Women
20	\$14,470	\$14,548	\$14,500	\$14,563	57.08	60.55	59.11	63.24
25	14,353	14,456	14,399	14,478	52.19	55.61	54.22	58.30
30	14,181	14,321	14,253	14,357	47.29	50.67	49.34	53.38
35	13,945	14,134	14,060	14,191	42.45	45.78	44.52	48.50
40	13,618	13,870	13,795	13,961	37.65	40.92	39.75	43.67
45	13,153	13,504	13,431	13,650	32.90	36.12	35.03	38.90
50	12,585	13,012	12,929	13,225	28.39	31.42	30.38	34.20
55	11,927	12,377	12,239	12,648	24.16	26.89	25.81	29.61
60	11,028	11,578	11,317	11,875	20.00	22.58	21.38	25.14
65	9,924	10,610	10,072	10,821	16.09	18.55	17.11	20.81
70	8,634	9,454	8,570	9,552	12.54	14.82	13.29	16.93
75	7,206	8,156	7,305	8,485	9.42	11.50	10.57	14.13
80	5,741	6,748	6,284	7,613	6.81	8.62	8.77	12.22
85	4,394	5,348	6,095	7,438	4.80	6.27	8.42	11.69
90	3,338	4,221	6,084	7,341	3.43	4.64	8.30	11.30

Disability Retiree Mortality Rates: Non-disability rates set-forward 5 years.

Termination of Employment: Service-related rates,

Disability Rates: Age related rates.

The sample rates are as follows:

Sample Ages	Years of Service	Percent of Active Members	
		Separating Within the Year	Disabled Within the Year
All	0	25.0%	(all years of service)
	1	20.0	
	2	18.0	
	3	15.0	
	4	14.0	
	5-10	10.0	
	10 Plus	4.0	
25	All		0.04%
30		0.04	
35		0.05	
40		0.07	
45		0.08	
50		0.10	
55		0.10	
60		0.15	

Rates first used for June 30, 2007 valuation

Married assumption: 90%

Health subsidy utilization assumption: 80%

Retirement Rates: Age-related rates based on the following schedule:

**Percent of Active Members Retiring Within Year
Following Attainment of Indicated service**

Service	Percent of Active Members Retiring During Next Year
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

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

These rates, adopted by the Fund Manager, as recommended by the Plan's actuary, were first used for the June 30, 2007 valuations.

Actuarial Method Used for the Valuation

Normal Cost. Normal cost and the actuarial present values between service rendered before and after the valuation date were determined using the projected unit credit actuarial cost method having the following characteristics:

- ❖ 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;
- ❖ 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.

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. Accrued valuation assets were subtracted from the computed actuarial accrued liability. Any unfunded amount would be amortized as level percent of payroll over a period of 29 years. If accrued valuation 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.



Section Five:
Valuation Data



Derivation of Funding Value of Pension Fund Assets
Values as of June 30

	2003	2004	2005	2006	2007
Beginning of Year					
(1) Book Value	\$646,861,802	\$587,318,350	\$615,695,876	\$662,258,326	\$744,246,872
(2) Market Value	586,328,472	622,938,516	719,235,235	788,873,785	861,782,725
(3) Funding Value*	816,897,977	842,500,476	879,533,619	914,396,008	953,160,640
End of Year					
(4) Market Value	622,938,516	719,235,235	788,873,785	861,782,725	1,012,937,536
(5) Net Addition to Assets, Excluding Investment Income	(1,298,955)	5,408,517	3,792,355	8,710,956	6,304,716
(6) Total Net Investment Income = (4) - (2) - (5)	37,908,999	90,888,202	65,846,195	64,197,984	144,850,095
(7) Projected Net Rate of Return	9.00%	9.00%	8.75%	8.50%	8.50%
(8) Projected Investment Income = (7) x[(3) + .5 x (5)]	73,462,365	76,068,426	77,125,107	78,093,876	81,286,605
(9) Investment Income in Excess of Proj.	(35,553,366)	14,819,776	(11,278,912)	(13,895,892)	63,563,490
(10) Excess Investment Income Recognized*					
(10a) From Current Year =(9)/7 in 2003 and after	(5,079,052)	2,117,111	(1,611,273)	(1,985,127)	9,080,499
(10b) From One Year Prior	(21,920,087)	(5,079,052)	2,117,111	(1,611,273)	(1,985,127)
(10c) From Two Years Prior	(20,801,893)	(21,920,087)	(5,079,052)	2,117,111	(1,611,273)
(10d) From Three Years Prior	1,240,121	(20,801,893)	(21,920,087)	(5,079,052)	2,117,111
(10e) From Four Years Prior	0	1,240,121	(20,801,893)	(21,920,087)	(5,079,052)
(10 f) From Five Years Prior			1,240,121	(20,801,893)	(21,920,087)
(10g) From Six Years Prior				1,240,121	(20,801,893)
(11) Change in Funding Value =(5) + (8) + (10) [a..g]	25,602,499	37,033,143	34,862,389	38,764,632	47,391,499
End of Year Values					
(12) Book Value	\$587,318,350	\$615,695,876	\$662,258,326	\$744,246,872	\$840,093,978
(4) Market Value	622,938,516	719,235,235	788,873,785	861,782,725	1,012,937,536
(13) Preliminary Funding Value (3) + (11)	842,500,476	879,533,619	914,396,008	953,160,640	1,000,552,139
(14) Future Benefit Increase Reserve	30,709,183	45,912,625	41,415,092	33,292,645	60,426,061
(15) Funding Value (13) - (14)	811,791,293	833,620,994	872,980,916	919,867,995	940,126,078
(16) Funding Value Adjustment (15) - (12)	224,472,943	217,925,118	210,722,590	175,621,123	100,032,100

* Four year recognition through June 30, 2002. Beginning with the June 30, 2003 valuation, seven year recognition was used for the current year. The remaining amount from the prior year is recognized over 6 years, from the second prior year over 5 years, from the third prior year over 4 years, from the fourth prior year over 3 years, from the fifth prior year over 2 years, and from the sixth prior year over 1 year.

Participant Summary

<u>Pensions Being Paid</u>	<u>Number</u>	<u>Annual Pensions</u>	<u>Average Pensions</u>
Retired Members			
Service Pensions	1,698	\$36,454,517	\$21,469
Disability Pensions	<u>85</u>	<u>1,557,917</u>	18,328
Totals	1,783	38,012,434	21,319
Survivors			
Spouses	312	4,114,575	13,188
Children with Guardians*	<u>31</u>	<u>398,096</u>	12,842
Totals	340	4,653,566	13,687
Total Pensions Being Paid	2,123	\$42,666,000	\$20,097

Averages

	<u>Average Age</u>	<u>Average Service (Years)</u>	<u>Average Retirement Age</u>
Service	63.5	18.5	57.7
Disability	52.7	9.3	44.6
Spouse Beneficiary	61.2	10.6	50.2

**Summaries of Retired Members and Survivors
June 30, 2007
Tabulated by Attained Age of Recipient**

Attained Age	<u>Service</u>		<u>Disability</u>		<u>Survivors</u>		<u>Totals</u>	
	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions
Children w/ Guardians		\$ -		\$ -	31	\$ 398,096	31	\$ 398,096
Under 20					1	14,211	1	14,211
25-29			2	30,804	2	22,500	4	53,304
30-34					6	82,444	6	82,444
35-39	1	24,247	10	171,406	13	179,678	24	375,331
40-44	52	1,250,873	8	136,915	16	237,327	76	1,625,115
45-49	123	3,258,750	11	202,231	23	310,960	157	3,771,941
50-54	179	5,001,876	20	354,572	24	346,384	223	5,702,832
55-59	230	6,754,198	15	305,237	44	722,628	289	7,782,063
60-64	298	7,183,931	9	166,460	54	783,549	361	8,133,940
65-69	376	6,584,997	3	59,160	40	507,714	419	7,151,871
70-74	262	4,092,199	7	131,132	45	574,723	314	4,798,054
75-79	131	1,708,393			27	306,767	158	2,015,160
80 and Over	46	595,053			14	166,585	60	761,638
Totals	1,698	\$36,454,517	85	\$1,557,917	340	\$4,653,566	2,123	\$42,666,000

Pensions Being Paid

Valuation Date June 30	No.	Annual Pensions	% Incr. in Annual Pensions	Average Pension	Present Value of Pensions	
					Total	Average
1987	15	\$ 103,522	- %	\$6,901	\$982,116	\$65,474
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	17,660,064	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

Retired Members and Survivors – By Employer

<u>Employer</u>	<u>Retired Members</u>		<u>Survivors</u>				<u>Totals</u>		
	<u>Service</u>	<u>Disability</u>	<u>No.</u>	<u>Child with Guardian</u>	<u>Spouse</u>	<u>Annual Pensions</u>	<u>No.</u>	<u>Annual Pensions</u>	
Apache County Corrections Officers	1	\$27,555	1	\$13,718			2	\$41,273	
Cochise County Corrections Officers	13	147,956			4	\$29,162	17	177,118	
Coconino County Corrections Officers			1	17,065			1	17,065	
Department of Corrections	1,248	26,335,060	39	704,231	229	27	3,522,630	1,543	30,561,921
Department of Juvenile Corrections	100	2,559,368	2	25,314	23	1	319,705	126	2,904,387
Gila County Corrections Officers			1	14,541			1	14,541	
Gila County Dispatchers							-	-	
Graham County Corrections Officers	1	34,210					1	34,210	
Maricopa County Corrections Officers	209	4,693,525	19	383,427	32		444,181	260	5,521,133
Mohave County Corrections Officers	6	78,368	2	29,318	1		11,948	9	119,634
Navajo County Dispatchers	2	29,427			1		10,027	3	39,454
Pima County Corrections Officers	78	1,773,167	16	301,276	11	1	176,336	106	2,250,779
Pinal County Corrections Officers	3	77,440			1		12,794	4	90,234
Pinal County Dispatchers	1	15,057						1	15,057
Santa Cruz County Corrections Officers	2	34,686						2	34,686
Town of Marana Dispatchers							-	-	
Town of Oro Valley Dispatchers	1	33,726						1	33,726
Wickenburg Dispatchers					1		14,340	1	14,340
Yavapai County Corrections	20	322,379	3	51,058	5	1	90,593	29	464,030
Yuma County Corrections Officers	13	292,593	1	17,969	1	1	21,850	16	332,412
Totals	1,698	\$36,454,517	85	\$1,557,917	309	31	\$4,653,566	2,123	\$42,666,000

Active Members Included in Valuation

Historical Schedule

Valuation Date	Partic. Units	Active Members	Valuation Payroll (+000)	Average			
				Age (Yrs.)	Service (Yrs.)	Pay	% Increase in Avg. Pay
6-30-87		4,936	\$102,910	38.0	3.5	\$ 20,849	- %
6-30-90	11	6,478	136,693	37.8	4.4	21,101	(2.0)
6-30-95	12	8,365	198,603	38.2	5.3	23,742	4.6
6-30-96	12	8,945	224,686	38.0	5.2	25,119	5.8
6-30-97	12	9,728	249,203	38.1	5.3	25,617	2.0
6-30-98	12	9,571	261,700	38.2	5.5	27,343	6.7
6-30-99	12	10,901	305,478	37.8	5.2	28,023	2.5
6-30-00	12	11,290	339,440	38.1	5.3	30,066	7.3
6-30-01	12	11,047	339,783	38.1	5.6	30,758	2.3
6-30-02	12	10,464	330,428	38.7	6.0	31,578	2.7
6-30-03	15	10,964	358,161	38.8	6.0	32,667	3.4
6-30-04	18	11,583	381,942	38.7	6.0	32,974	0.9
6-30-05	19	11,752	404,156	39.6	6.0	34,390	4.3
6-30-06	21	11,914	437,744	39.3	6.2	36,742	6.8
6-30-07	21	12,780	515,428	39.0	6.0	40,331	9.8

Active Members – June 30, 2007
Age and Service Distribution

Attained Age	Service							No.	Valuation Payroll
	0-4	5-9	10-14	15-19	20-24	25-29	Over 30		
Under 20	87							87	\$ 2,829,600
20-24	1,359	8						1,367	46,900,508
25-29	1,636	285	2					1,923	70,278,810
30-34	1,178	613	153					1,944	76,061,740
35-39	969	505	320	95				1,889	77,786,225
40-44	674	362	301	243	29	1		1,610	67,712,892
45-49	535	369	245	194	78	12	1	1,434	61,546,047
50-54	407	268	185	155	66	21	1	1,103	48,048,142
55-59	274	203	161	134	78	21	4	875	39,221,241
60-64	119	127	89	72	24	6	2	439	20,119,003
65-69	25	28	19	7	5	1		85	3,889,395
70-74	9	1	4	4	3			21	928,783
75-79		2						2	74,583
80-84		1						1	30,672
Totals	7,272	2,772	1,479	904	283	62	8	12,780	\$515,427,641

Group Averages:

Age: 39.0 years
Service: 6.0 years
Annual Pay: \$40,331

Inactive Members as of June 30, 2007

Attained Age	Service						Total
	0-4	5-9	10-14	15-19	20-24	25-29	
Under 20	1						1
20-24	210	1					211
25-29	221	9					230
30-34	170	31	2				203
35-39	125	17	14				156
40-44	94	10	6	4			114
45-49	77	8	8	2			95
50-54	68	12	23	7			110
55-59	57	10	23	11			101
60-64	28	5	17	7	1		58
65-69	9	3	1				13
70-74	4	1					5
Totals	1,064	107	94	31	1		1,297

Active Members – By Employer

<u>Employer</u>	<u>No.</u>	<u>Annual Compensation</u>	<u>Average Compensation</u>		<u>Average</u>	
			<u>Amount</u>	<u>% Change</u>	<u>Age (Yrs.)</u>	<u>Service (Yrs.)</u>
Apache County Corrections Officers	24	\$ 654,758	\$27,282	(7.3)	35.2	4.3
Cochise County Corrections Officers	68	2,029,657	29,848	8.1	42.0	7.0
Coconino County Corrections Officers	86	3,041,984	35,372	3.1	34.3	3.7
Department of Corrections	8,166	332,996,748	40,778	1.1	40.1	6.5
Department of Juvenile Corrections	927	36,340,266	39,202	5.6	42.0	5.6
Gila County Corrections Officers	69	2,193,427	31,789	1.7	42.1	3.0
Gila County Dispatchers	26	804,833	30,955	8.0	43.3	5.6
Graham County Corrections Officers	20	713,554	35,678	17.5	42.1	3.0
Graham County Dispatchers	13	371,264	28,559	9.9	45.8	5.1
Maricopa County Corrections Officers	2,064	85,695,836	41,519	8.8	35.8	4.8
Mohave County Corrections Officers	85	2,753,573	32,395	9.7	34.8	3.3
Navajo County Corrections	54	1,608,605	29,789	8.4	37.5	3.2
Pima County Corrections Officers	494	20,190,122	40,871	8.3	37.1	7.3
Pinal County Corrections Officers	246	10,003,093	40,663	9.8	37.3	6.6
Pinal County Dispatchers	19	680,179	35,799	1.5	41.7	9.1
Santa Cruz County Corrections Officers	20	667,194	33,360	2.1	33.1	5.4
Town of Marana Dispatchers	16	669,650	41,853	0.8	42.1	5.3
Town of Oro Valley Dispatchers	14	639,247	45,661	6.3	40.3	8.4
Wickenburg Dispatchers	7	258,922	36,989	3.3	45.8	5.1
Yavapai County Corrections	205	7,562,846	36,892	4.3	38.7	3.5
Yuma County Corrections Officers	157	5,551,883	35,362	7.0	31.4	4.5
Totals	12,780	\$515,427,641	\$40,331	9.9	39.0	6.0

Section Six:
Accounting Disclosures



GASB Statement No. 25 Supplementary Information

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, 2007
Actuarial Cost Method:	Projected Unit Credit
Amortization method:	Level Percent closed
Remaining amortization period:	29 years for unfunded actuarial accrued liability, 20 years for excess.
Asset valuation method:	Smoothed market value
Actuarial assumptions:	
Investment rate of return	8.50%
Projected salary increases	5.50-9.00%
Includes inflation at	5.00%

Membership data as of June 30, 2007, is indicated in Section Five of this report.

Analysis of Funding Progress

Valuation Date June 30	(1) Valuation Value of Assets	(2) Actuarial Accrued Liability	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2)-(1)	(5) Annual Covered Payroll	(6) UAAL As a % Of Covered Payroll
1998	\$484,955,951	\$410,530,787	118.1%	\$(74,425,164)	\$261,700,318	-
1999	592,151,804	443,675,999	133.5	(148,475,805)	305,477,946	-
2000	704,990,577	501,322,987	140.6	(203,667,590)	339,439,892	-
2001	776,177,208	554,386,854	140.0	(221,790,354)	339,782,697	-
2002	782,445,913	632,237,814	123.8	(150,208,099)	330,427,800	-
2003	811,791,293	709,297,998	114.4	(102,493,295)	358,160,933	-
2004	833,620,994	795,774,862	104.8	(37,846,132)	381,942,220	-
2005	872,980,916	906,025,039	96.4	33,044,123	404,155,903	8.18
2006	919,867,995	981,207,708	93.7	61,339,713	437,743,658	14.01
2007	940,126,081	1,110,801,013	84.6	170,674,932	515,427,641	33.11

Required Supplementary Information
Schedule of Employer Contributions

Year Ended June 30	Annual Required Contribution	Percent Contributed
1992	\$ 9,492,656	100.0
1993	10,099,143	100.0
1994	10,032,668	100.0
1995	10,565,831	100.0
1996	14,371,254	100.0
1997	16,704,445	100.0
1998	17,063,015	100.0
1999	17,109,704	100.0
2000	16,876,163	100.0
2001	14,927,396	100.0
2002	7,101,111	100.0
2003	7,397,596	100.0
2004	14,555,335	100.0
2005	16,291,914	100.0
2006	24,028,050	100.0
2007	24,622,693	100.0
2008	36,569,885	

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

Trend Information

Year Ended June 30	Annual Pension Cost	Percent Contributed	Net Pension Obligation
1995	\$10,565,831	100.0	0
1996	14,371,254	100.0	0
1997	16,704,445	100.0	0
1998	17,063,015	100.0	0
1999	17,109,704	100.0	0
2000	16,897,163	100.0	0
2001	14,927,396	100.0	0
2002	7,101,111	100.0	0
2003	7,397,596	100.0	0
2004	14,555,335	100.0	0
2005	16,291,914	100.0	0
2006	24,028,050	100.0	0
2007	24,622,693	100.0	0

Actuarial Accrued Liability – Valuation Assets – Amortization Payment

Employer	(1) Actuarial Value of Assets	(2) Actuarial Acc. Liability Entry Age	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2)-(1)	(5) Annual Covered Payroll	(4)/(5)
Apache County Corrections Officers	\$1,081,459	\$1,128,276	95.9%	\$46,817	\$654,758	7.2%
Cochise County Corrections Officers	4,520,160	4,846,201	93.3	326,041	2,029,657	16.1
Coconino County Corrections Officers	3,730,003	3,318,359	112.4	(411,644)	3,041,984	0.00
Department of Corrections	649,699,540	766,696,009	84.7	116,996,469	332,996,748	35.1
Department of Juvenile Corrections	63,682,401	72,184,973	88.2	8,502,572	36,340,266	23.4
Gila County Corrections Officers	1,510,068	1,617,012	93.4	106,944	2,193,427	4.9
Gila County Dispatchers	1,064,231	1,177,455	90.4	113,224	804,833	14.1
Graham County Corrections Officers	1,075,195	1,078,322	99.7	3,127	713,554	0.40
Graham County Dispatchers	144,773	114,920	126.0	(29,853)	371,264	0.00
Maricopa County Corrections Officers	132,318,505	165,763,785	79.8	33,445,280	85,695,836	39.0
Mohave County Corrections Officers	4,245,772	2,923,117	145.2	(1,322,655)	2,753,573	0.00
Navajo County Corrections Officers	1,901,156	1,770,024	107.4	(131,132)	1,608,605	0.00
Pima County Corrections Officers	44,196,248	54,488,124	81.1	10,291,876	20,190,122	51.0
Pinal County Corrections Officers	8,504,871	9,879,753	86.1	1,374,882	10,003,093	13.7
Pinal County Dispatchers	825,824	1,164,459	70.9	338,635	680,179	49.8
Santa Cruz County Corrections Officers	1,896,284	1,253,272	151.3	(643,012)	667,194	0.00
Town of Marana Dispatchers	260,274	378,816	68.7	118,542	669,650	17.7
Town of Oro Valley Dispatchers	960,316	1,278,537	75.1	318,221	639,247	49.8
Wickenburg Dispatchers	247,786	398,624	62.2	150,838	258,922	58.3
Yavapai County Corrections Officers	8,688,704	10,318,766	84.2	1,630,062	7,562,846	21.6
Yuma County Corrections Officers	9,572,511	8,858,038	108.1	(714,473)	5,551,883	0.00
Totals	\$940,126,081	\$1,110,636,842	84.6%	\$170,510,761	\$515,427,641	33.1%