

***Arizona Corrections Officer
Retirement Plan***

Actuarial Valuation as of June 30, 2008

December 4, 2008

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, 2008 actuarial valuation of the Arizona Corrections Officer Retirement Plan. The valuations determine the 2009/2010 Fiscal Year employer contribution requirements and the June 30, 2008 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, 2008 information submitted by your Administrator.

The valuations were based on the provisions of the Arizona Corrections Officer Retirement Plan as amended through June 30, 2008. The valuations were made in accordance with generally accepted actuarial principals and practices.

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, 2008 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, 2009. 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, 2008, were computed to be \$1,390,363,342. The funding value of accrued assets was \$1,207,026,191. The ratio of the funding value of accrued assets to accrued liabilities was 86.8%.

Funding Value of Assets

A smoothed market value of assets was used for the June 30, 2008 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 14.51% of member payroll. Deducting member contributions of 8.41% of payroll resulted in an aggregate employer normal cost of 6.10% of payroll.

The excess of accrued liabilities over accrued assets produced a 28-year level percent of payroll amortization payment of 1.39% of payroll.

The aggregate net employer contribution for FY 2009/2010 was therefore computed to be 7.49% of payroll. After the application of the minimum contribution required for each unit by Statute, the aggregate net employer contribution is 8.38% of payroll.

Retirement Plan Experience

Experience of the Retirement Plan during the year ended June 30, 2008 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, salary increases which were greater than assumed, and the rates of retirement during the year.

Benefit Provision Changes

The ordinary disability benefit was extended to non-dispatchers pursuant to HB 2117 of 2008. Effective with the first pay period ending after 9/26/2008, non-dispatcher members contribute 8.41% until the Plan is 100% funded. When 100% funded, the contribution rate goes back to 7.96% for non-dispatchers.

Assumption and Method Changes

There were no changes in assumptions or actuarial cost methods in this valuation.

Participant Data

	<u>6/30/2008</u>	<u>6/30/2007</u>
Active Members	14,716	12,780
Active Member Payroll	\$642,621,478	\$515,427,641
Retirees and Beneficiaries	2,428	2,123
Annual Pensions	\$51,062,647	\$42,666,000

Financial Data

	<u>6/30/2008</u>	<u>6/30/2007</u>
Smoothed Valuation Assets	\$1,247,659,869*	\$1,000,552,139*
Market Value of Assets	\$1,141,587,845	\$1,012,937,536

** The net smoothed value of assets used for the valuation after deducting the Future Benefit Increase Reserve was \$1,207,026,191 in 2008 and \$940,126,078 in 2007.*

Comments, Recommendations and Conclusion

Comment 1: This report contains the consolidated results of the individual actuarial valuations of the 24 units in the Arizona Corrections Officer Retirement Plan as of June 20, 2008. 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 24 units, 8 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 16 units, unfunded actuarial accrued liabilities were amortized over a 28-year period and added to the normal cost to produce the total employer contribution rate.

There were three new units included in this valuation. The addition of the Office of the Courts Probation Officers added 2,257 active members plus 80 members who retired during FY 2007/2008. The total aggregate employer contribution rate excluding this group would have been 8.57% instead of 7.49%, and the total aggregate employer contribution rate with the statutory minimum would have been 8.87% instead of 8.38%.

Comment 2: The aggregate experience of the Retirement System during the year ended June 30, 2008, was less favorable than expected based upon the long-term assumptions. Salary increases were greater than assumed and the rate of retirements was greater than assumed. The negative investment experience during the year was partially offset by the drop-off of the large carry-forward of negative experience from FY 2000/2001 in the smoothed funding value of assets.

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. Carry-forwards of the FY 2007/2008 investment loss will be recognized annually through FY 2013/2014.

Comment 4: 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 6.10% of payroll.

Comment 5: The June 30, 2008 annual actuarial valuation includes the Stabilization Reserve Account established by legislation enacted in 2006 and included for the first time in the June 30, 2007 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, 2008. The total amount was \$12,348,702. The Stabilization Reserve Accounts were excluded from the computation of the employer contribution rates.

Conclusion: The decrease in the computed aggregate contribution rate and the increase in the funded ratio are largely attributable to the addition of a large new group. It is important to note that in the absence of investment return in excess of the assumed rate or favorable experience in other areas such as rates of salary increase or retirements, it is likely that employer contribution rates will increase in the future.

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



Contribution Requirements – 2009/2010 Fiscal Year

Member: 8.41% of covered compensation in the aggregate.

Employer: The aggregate computed contribution rate before application of the statutory minimum was 7.49% of covered compensation, consisting of 6.10% for normal cost, 1.39% 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	10.65%
Disability pensions	0.69
Survivors of active members	1.15
Refunds of members' accumulated contributions	1.59
Health insurance	<u>0.43</u>
Total normal cost requirement	14.51%
Less member contribution	<u>8.41</u>
Employer normal cost requirement	6.10%

**In the aggregate, actuarial accrued liability, \$1,390,363,342, exceeded the funding value of accrued assets, \$1,207,026,191. Of the 24 units, 8 had assets in excess of accrued liabilities and 16 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 28 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 8.38 % 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
2008	6.10	1.39	7.49

* 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 8 of the participating units, the valuation assets exceed the actuarial accrued liability so they have a credit against the normal cost. The remaining 16 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, 28 years remaining as of June 30, 2008. 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 \$183,337,151.

	<u>June 30, 2008</u>
Actuarial Accrued Liability	
Retired members and survivors	\$504,461,874
Former members with vested benefits	12,618,412
Active members	<u>873,283,056</u>
Total	\$1,390,363,342
Valuation Assets*	\$1,207,026,191
Unfunded Actuarial Accrued Liability	183,337,151
Stabilization Reserve	12,348,702
Net Unfunded Actuarial Accrued Liability	\$195,685,853

** This amount excludes the \$40,633,678 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
2008	1,207,026	1,390,363	86.8	183,337	28

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, 2008</u>
(1) UAAL ^a at start of year	\$170,674,932
(2) Normal cost	77,607,436
(3) Funding method contributions	97,632,464
(4) Interest accrual	13,656,305
(5) Expected UAAL before changes	164,306,209
(6) Change from amendments (est.)	10,000,000
(7) Change from assumption and method revisions	None
(8) Expected UAAL after changes	174,306,209
(9) Actual UAAL	183,337,151
(9) Gain(Loss)	(9,030,942)
(10) Percent of AAL ^b	(0.8)%

^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 \$9,030,942. 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	\$(7,521,008)
Salary Increases	(2,005,408)
Other	<u>495,474</u>
Total	\$(9,030,942)

Aggregate Actuarial Balance Sheet June 30, 2008

Actuarial Assets

Accrued Assets		
Member accumulated contributions	\$296,317,101	
Employer and benefit payment reserves	885,904,422	
Funding value adjustment	<u>65,438,346</u>	
Total accrued assets*		\$1,247,659,869
Prospective assets (computed value)		
Member contributions	340,013,233	
Employer normal costs	394,673,798	
Employer unfunded actuarial accrued liability	<u>195,685,853</u>	
Total prospective assets		<u>930,372,884</u>
Total Actuarial Assets		<u><u>\$ 2,178,032,753</u></u>

* Includes \$40,633,678 reserve for payment of ad-hoc pension increases. The net funding value of assets is \$1,207,026,191.

Actuarial Present Values (Liability)

Pensions in payment status		
Service pensions	\$422,968,684	
Disability pensions	16,481,065	
Survivor pensions	45,154,919	
Health insurance	<u>19,857,206</u>	
Total benefit values		\$504,461,874
Prospective pension payments and refunds (future retirements)		1,564,172,541
Prospective health insurance payments (future retirements)		56,415,958
Reserve for future pension increases		40,633,678
Stabilization reserve account		<u>12,348,702</u>
Total Actuarial Present Values (Liability)		<u><u>\$2,178,032,753</u></u>

**Employer Contribution Requirements
2009/2010 Fiscal Year
Expressed as Percents of Covered Compensation**

<u>Employer</u>	<u>Normal Cost</u>	<u>Amort of Unf. Act. Acc. Liab. UAAL*</u>	<u>Total Computed Emp. Contrib.</u>	<u>Total Required Emp. Contrib.</u>
Administrative Office of the Courts Probation Officers	2.04%	(1.35)%	0.69%	6.00%
Apache County Corrections Officers	7.66	0.81	8.47	8.47
Cochise County Corrections Officers	6.33	0.96	7.29	7.29
Coconino County Corrections Officers	7.11	(0.33)	6.78	6.78
Department of Corrections	7.10	2.09	9.19	9.19
Department of Juvenile Corrections	7.11	1.30	8.41	8.41
Gila County Corrections Officers	6.90	0.11	7.01	7.01
Gila County Dispatchers	4.23	1.38	5.61	5.61
Graham County Corrections Officers	6.67	(0.14)	6.53	6.53
Graham County Dispatchers	3.86	(2.22)	1.64	5.00
Maricopa County Corrections Officers	6.63	2.02	8.65	8.65
Mohave County Corrections Officers	6.56	(2.80)	3.76	5.00
Navajo County Corrections Officers	7.21	(0.25)	6.96	6.96
Pima County Corrections Officers	6.87	2.78	9.65	9.65
Pinal County Corrections Officers	6.18	0.66	6.84	6.84
Pinal County Dispatchers	4.92	1.92	6.84	6.84
Santa Cruz County Corrections Officers	5.75	(3.47)	2.28	5.00
Somerton Dispatchers	4.25	4.80	9.05	9.05
Town of Marana Dispatchers	3.74	0.81	4.55	5.00
Town of Oro Valley Dispatchers	5.27	4.25	9.52	9.52
Wickenburg Dispatchers	9.11	3.19	12.30	12.30
Yavapai County Corrections Officers	6.52	1.41	7.93	7.93
Yavapai County Dispatchers	5.09	0.35	5.44	6.00
Yuma County Corrections Officers	6.47	(0.56)	5.91	5.91
Totals	6.10%	1.39%	7.49%	8.38%

* Twenty-eight years from July 1, 2008 (20 years credit).

Total Actuarial Accrued Liability – Valuation Assets

Employer	(1) Actuarial Value of Assets	(2) Actuarial Acc. Liability	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2)-(1)	(5) Annual Covered Payroll	(4)/(5)
Administrative Office of the Courts						
Probation Officers	\$205,281,974	\$181,051,909	113.4%	\$(24,230,065)	\$110,623,732	0.0%
Apache County Corrections Officers	1,189,066	1,322,708	89.9%	133,642	798,548	16.7%
Cochise County Corrections Officers	4,578,474	4,972,094	92.1%	393,620	2,035,605	19.3%
Coconino County Corrections Officers	4,030,514	3,854,127	104.6%	(176,387)	3,230,049	0.0%
Department of Corrections	688,803,228	833,803,459	82.6%	145,000,231	341,320,153	42.5%
Department of Juvenile Corrections	66,755,407	76,134,503	87.7%	9,379,096	35,498,846	26.4%
Gila County Corrections Officers	1,846,700	1,896,083	97.4%	49,383	2,189,021	2.3%
Gila County Dispatchers	1,214,315	1,415,791	85.8%	201,476	755,451	26.7%
Graham County Corrections Officers	1,207,810	1,191,203	101.4%	(16,607)	711,404	0.0%
Graham County Dispatchers	318,814	176,561	180.6%	(142,253)	390,402	0.0%
Maricopa County Corrections Officers	144,634,516	182,084,991	79.4%	37,450,475	90,038,577	41.6%
Mohave County Corrections Officers	4,581,742	3,278,559	139.7%	(1,303,183)	2,876,277	0.0%
Navajo County Corrections Officers	2,100,462	2,029,249	103.5%	(71,213)	1,743,730	0.0%
Pima County Corrections Officers	45,956,905	58,323,169	78.8%	12,366,264	21,455,360	57.6%
Pinal County Corrections Officers	11,063,981	12,745,535	86.8%	1,681,554	12,229,488	13.7%
Pinal County Dispatchers	945,198	1,335,706	70.8%	390,508	980,770	39.8%
Santa Cruz County Corrections Officers	1,898,222	1,422,552	133.4%	(475,670)	831,787	0.0%
Somerton Dispatchers	230,998	533,526	43.3%	302,528	301,852	100.2%
Town of Marana Dispatchers	351,435	440,578	79.8%	89,143	536,422	16.6%
Town of Oro Valley Dispatchers	1,026,134	1,666,353	61.6%	640,219	729,262	87.8%
Wickenburg Dispatchers	278,971	439,878	63.4%	160,907	245,980	65.4%
Yavapai County Corrections Officers	8,396,376	10,391,822	80.8%	1,995,446	6,839,698	29.2%
Yavapai County Dispatchers	445,714	488,821	91.2%	43,107	598,257	7.2%
Yuma County Corrections Officers	9,889,235	9,364,165	105.6%	(525,070)	5,660,807	0.0%
Totals	\$1,207,026,191	\$1,390,363,342	86.8%	\$183,337,151	\$642,621,478	28.5%

*Twenty-eight years from July 1, 2008 (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 member may be eligible for deferred retirement after completion of 10 or more years of credited service if member contributions are left on deposit in the plan. The amount of deferred pension is determined in the same manner as a normal retirement pension based on credited service, compensation and benefit provisions at the time of termination.

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

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

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. Effective after 9/26/2008, non-dispatcher members contribute 8.41% until the Plan is 100% funded.

Employer Contributions. Level percent of payroll normal cost plus 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 28 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

	2004	2005	2006	2007	2008
Beginning of Year					
(1) Book Value	\$587,318,350	\$615,695,876	\$662,258,326	\$744,246,872	\$840,093,978
(2) Market Value	622,938,516	719,235,235	788,873,785	861,782,725	1,012,937,536
(3) Funding Value*	842,500,476	879,533,619	914,396,008	953,160,640	1,000,552,139
End of Year					
(4) Market Value	719,235,235	788,873,785	861,782,725	1,012,937,536	1,141,587,845
(5) Net Addition to Assets, Excluding Investment Income	5,408,517	3,792,355	8,710,956	6,304,716	196,100,356
(6) Total Net Investment Income = (4) - (2) - (5)	90,888,202	65,846,195	64,197,984	144,850,095	(67,450,047)
(7) Projected Net Rate of Return	9.00%	8.75%	8.50%	8.50%	8.50%
(8) Projected Investment Income = (7) x[(3) + .5 x (5)]	76,068,426	77,125,107	78,093,876	81,286,605	93,381,197
(9) Investment Income in Excess of Proj.	14,819,776	(11,278,912)	(13,895,892)	63,563,490	(160,831,244)
(10) Excess Investment Income Recognized*					
(10a) From Current Year =(9)/7 in 2003 and after	2,117,111	(1,611,273)	(1,985,127)	9,080,499	(22,975,892)
(10b) From One Year Prior	(5,079,052)	2,117,111	(1,611,273)	(1,985,127)	9,080,499
(10c) From Two Years Prior	(21,920,087)	(5,079,052)	2,117,111	(1,611,273)	(1,985,127)
(10d) From Three Years Prior	(20,801,893)	(21,920,087)	(5,079,052)	2,117,111	(1,611,273)
(10e) From Four Years Prior	1,240,121	(20,801,893)	(21,920,087)	(5,079,052)	2,117,111
(10 f) From Five Years Prior		1,240,121	(20,801,893)	(21,920,087)	(5,079,052)
(10g) From Six Years Prior			1,240,121	(20,801,893)	(21,920,089)
(11) Change in Funding Value =(5) + (8) + (10) [a..g]	37,033,143	34,862,389	38,764,632	47,391,499	247,107,730
End of Year Values					
(12) Book Value	\$615,695,876	\$662,258,326	\$744,246,872	\$840,093,978	\$1,161,524,203
(4) Market Value	719,235,235	788,873,785	861,782,725	1,012,937,536	1,141,587,845
(13) Preliminary Funding Value (3) + (11)	879,533,619	914,396,008	953,160,640	1,000,552,139	1,247,659,869
(14) Future Benefit Increase Reserve	45,912,625	41,415,092	33,292,645	60,426,061	40,633,678
(15) Funding Value (13) - (14)	833,620,994	872,980,916	919,867,995	940,126,078	1,207,026,191
(16) Funding Value Adjustment (15) - (12)	217,925,118	210,722,590	175,621,123	100,032,100	45,501,988

* 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	1,949	\$43,829,121	\$22,488
Disability Pensions	<u>89</u>	<u>1,682,001</u>	18,899
Totals	2,038	45,511,122	22,331
Survivors			
Spouses	351	5,073,011	14,453
Children with Guardians*	<u>39</u>	<u>478,514</u>	12,270
Totals	390	5,551,525	14,235
Total Pensions Being Paid	2,428	\$51,062,647	\$21,031

Averages

	<u>Average Age</u>	<u>Average Service (Years)</u>	<u>Average Retirement Age</u>
Service	63.1	19.1	57.2
Disability	53.6	9.6	44.8
Spouse Beneficiary	62.6	11.3	51.7

**Summaries of Retired Members and Survivors
June 30, 2008
Tabulated by Attained Age of Recipient**

Attained Age	Service Annual No. Pensions	Disability Annual No. Pensions	Survivors Annual No. Pensions	Totals Annual No. Pensions
Children w/ Guardians	\$ -	\$ -	39 \$478,514	39 \$478,514
25-29		2 32,036	3 40,054	5 72,090
30-34		1 18,250	6 85,741	7 103,991
35-39	2 37,057	7 126,321	11 162,507	20 325,885
40-44	50 1,159,114	8 138,685	16 233,565	74 1,531,364
45-49	168 4,254,277	12 228,685	26 390,502	206 4,873,464
50-54	220 6,105,733	19 352,352	27 395,358	266 6,853,443
55-59	257 7,708,439	17 350,051	43 741,165	317 8,799,655
60-64	352 9,465,049	11 222,014	60 936,938	423 10,624,001
65-69	400 7,399,598	4 57,685	54 756,090	458 8,213,373
70-74	292 4,824,648	5 107,687	48 654,330	345 5,586,665
75-79	149 2,100,740	3 48,235	32 387,142	184 2,536,117
80 and Over	59 774,466		25 289,619	84 1,064,085
Totals	1,949 \$43,829,121	89 \$1,682,001	390 \$5,551,525	2,428 \$51,062,647

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
2008	2,428	51,062,647	19.7	21,031	504,461,674	207,768

Retired Members and Survivors – By Employer

<u>Employer</u>	<u>Retired Members</u>				<u>Survivors</u>			<u>Totals</u>	
	<u>No.</u>	<u>Service</u>	<u>Disability</u>		<u>No.</u>	<u>Child</u>		<u>No.</u>	<u>Annual Pensions</u>
		<u>Annual Pensions</u>	<u>No.</u>	<u>Annual Pensions</u>		<u>Spouse</u>	<u>with Guardian</u>		
Administrative Office of the Courts	81	\$3,083,375			1			82	\$3,096,245
Apache County Corrections Officers	1	28,657	1	\$14,267				2	42,924
Cochise County Corrections Officers	17	209,517			4		30,330	21	239,847
Coconino County Corrections Officers	1	19,200	1	17,747				2	36,947
Department of Corrections	1,366	29,128,302	39	732,395	263	35	4,277,516	1,703	34,138,213
Department of Juvenile Corrections	113	2,881,459	2	26,326	24	1	345,681	140	3,253,466
Gila County Corrections Officers			1	15,123				1	15,123
Gila County Dispatchers								-	-
Graham County Corrections Officers	3	52,290						3	52,290
Maricopa County Corrections Officers	223	5,176,548	20	398,534	35		501,278	278	6,076,360
Mohave County Corrections Officers	5	73,335	2	30,492	2		19,449	9	123,276
Navajo County Dispatchers	2	30,603				1	10,428	3	41,031
Pima County Corrections Officers	90	2,146,912	19	375,966	13	1	208,809	123	2,731,687
Pinal County Corrections Officers	3	80,537				1	13,306	4	93,843
Pinal County Dispatchers	2	46,902						2	46,902
Santa Cruz County Corrections Officers	4	92,576						4	92,576
City of Somerton Dispatchers									
Town of Marana Dispatchers								-	-
Town of Oro Valley Dispatchers	2	61,392						2	61,392
Wickenburg Dispatchers						1	14,914	1	14,914
Yavapai County Corrections	21	362,229	3	52,464	5	1	94,220	30	508,913
Yavapai Dispatchers									
Yuma County Corrections Officers	15	355,287	1	18,687	1	1	22,724	18	396,698
Totals	1,949	\$43,829,121	89	\$1,682,001	351	39	\$5,551,525	2,428	\$51,062,647

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
6-30-08	24	14,716	642,621	39.6	7.0	43,668	8.3

**Active Members – June 30, 2008
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	70							70	\$2,410,968
20-24	1,231	10						1,241	44,828,679
25-29	1,838	364	4					2,206	85,604,003
30-34	1,288	807	201	2				2,298	96,171,443
35-39	966	688	480	124	1			2,259	100,529,946
40-44	661	495	361	345	64	1		1,927	88,720,845
45-49	537	374	295	264	170	18		1,658	77,558,062
50-54	402	343	216	194	149	40	10	1,354	64,537,474
55-59	278	236	178	182	97	33	18	1,022	49,247,331
60-64	108	143	126	89	54	13	3	536	26,096,392
65-69	26	42	23	13	9	2		115	5,496,357
70-74	12	3	2	4	3			24	1,179,083
75-79	1	2	1				1	5	207,718
80-84		1						1	33,176
Totals	7,418	3,508	1,887	1,217	547	108	31	14,716	\$642,621,477

Group Averages:

Age: 39.6 years
Service: 7.0 years
Annual Pay: \$43,668

Inactive Members as of June 30, 2008

Attained Age	Service						Total
	0-4	5-9	10-14	15-19	20-24	25-29	
Under 20	10						10
20-24	270						270
25-29	361	11					372
30-34	245	33	2				280
35-39	206	23	13				242
40-44	133	14	12	4			163
45-49	129	13	12	4	2		160
50-54	95	8	26	5	2		136
55-59	83	16	23	12	1		135
60-64	56	7	15	7	1		86
65-69	15	3	3				21
70-74	4			1			5
75-79	1						1
Totals	1,608	128	106	33	6		1,881

Active Members – By Employer

<u>Employer</u>	<u>No.</u>	<u>Annual Compensation</u>	Average Compensation		Average	
			<u>Amount</u>	<u>% Change</u>	<u>Age (Yrs.)</u>	<u>Service (Yrs.)</u>
Administrative Office of the Courts Probation Officers	2,257	\$110,623,732	\$49,014		40.9	9.8
Apache County Corrections Officers	24	798,548	33,273	22.0	38.9	5.3
Cochise County Corrections Officers	62	2,035,605	32,832	10.0	38.7	6.4
Coconino County Corrections Officers	87	3,230,049	37,127	5.0	33.5	4.4
Department of Corrections	7,889	341,320,153	43,265	6.1	40.7	7.0
Department of Juvenile Corrections	871	35,498,846	40,756	4.0	10.3	5.6
Gila County Corrections Officers	63	2,189,021	34,746	9.3	44.2	3.7
Gila County Dispatchers	21	755,451	35,974	16.2	42.7	7.8
Graham County Corrections Officers	20	711,404	11,292	(0.3)	36.5	4.8
Graham County Dispatchers	13	390,402	30,031	5.2	31.1	3.2
Maricopa County Corrections Officers	2,052	90,038,577	43,878	5.7	36.5	5.8
Mohave County Corrections Officers	85	2,876,277	33,839	4.5	35.6	3.8
Navajo County Corrections	56	1,743,730	31,138	4.5	40.5	4.1
Pima County Corrections Officers	515	21,455,360	41,661	1.9	35.3	6.2
Pinal County Corrections Officers	258	12,229,488	47,401	16.6	37.5	4.8
Pinal County Dispatchers	27	980,770	36,325	1.5	36.8	4.4
Santa Cruz County Corrections Officers	25	831,787	33,271	(0.3)	32.3	3.2
Somerton Dispatchers	10	301,852	30,185		28.7	6.8
Town of Marana Dispatchers	12	536,422	44,702	6.8	40.3	5.6
Town of Oro Valley Dispatchers	16	729,262	45,579	(0.2)	40.5	6.9
Wickenburg Dispatchers	6	245,980	40,997	10.8	53.2	5.4
Yavapai County Corrections	178	6,839,698	38,425	4.2	39.1	4.2
Yavapai County Dispatchers	17	598,257	35,192		31.8	3.2
Yuma County Corrections Officers	152	5,660,807	37,242	5.3	31.2	4.3
Totals	14,716	\$642,621,478	\$43,668	8.3	39.6	7.0

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, 2008
Actuarial Cost Method:	Projected Unit Credit
Amortization method:	Level Percent closed
Remaining amortization period:	28 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, 2008, 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
2008	1,207,026,191	1,336,662,478	90.3	129,636,287	642,621,478	20.17

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	45,932,170	100.0
2009	58,657,464	

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
2008	45,932,170	100.0	

GASB Statement 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 25.

Actuarial Accrued Liability

Valuation Date <u>June 30</u>	(1) Valuation Value of <u>Assets</u>	(2) Actuarial Accrued <u>Liability</u>	(3) Percent Funded <u>(1)/(2)</u>	(4) Unfunded AAL <u>(2)-(1)</u>	(5) Annual Covered <u>Payroll</u>	(6) UAAL As a % Of Covered <u>Payroll</u>
2006	\$0	\$45,454,331	0.00%	\$45,454,331	\$437,743,658	10.4%
2007	0	48,990,212	0.00%	48,990,212	515,427,641	9.5
2008	0	53,700,864	0.00%	53,700,864	642,621,478	8.4

Annual Required Contribution

Fiscal Year Ended <u>June 30</u>	Valuation Date <u>June 30</u>	(1) Normal <u>Cost</u>	(2) Actuarial Accrued <u>Liability</u>	(3) Total <u>(1) + (2)</u>	(4) <u>Dollar Amount</u>
2007	2005	0.59%	0.59%	1.18%	\$5,742,051
2008	2006	0.43	0.41	0.84	\$5,398,020

Health Insurance Subsidy Payments Reported for FY 07/08: \$2,073,245.

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