

Arizona Corrections Officer Retirement Plan

Actuarial Valuation as of June 30, 2003



Enrolled Actuaries and Consultants

December 8, 2003

The Fund Manager
Arizona Public Safety Personnel Retirement System
Phoenix, Arizona

Re: Arizona Corrections Officer Retirement Plan

This report contains the consolidated results of the June 30, 2003 actuarial valuation of the Arizona Corrections Officer Retirement Plan. The valuations determine the 2004-2005 Fiscal Year employer contribution requirements and the June 30, 2003 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, 2003 information submitted by your Administrator.

The valuations were made in accordance with generally accepted actuarial principles and practices. The valuation assumptions are the same as those used for the June 30, 2002 valuations. The actuarial assumptions used in the valuations are reasonably related to the past experience of the Plan and represent reasonable expectations of long-term future experience under the Plan.

Respectfully submitted,

Handwritten signature of Sandra W. Rodwan in cursive.

Sandra W. Rodwan

Handwritten signature of Joseph A. Nichols in cursive.

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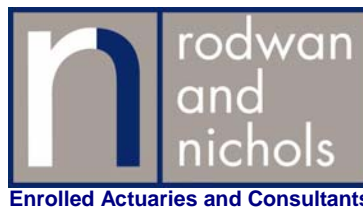
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Section One:
Valuation Summary



Enrolled Actuaries and Consultants

Purpose of Valuation

The purpose of the annual actuarial valuation of the Arizona Corrections Officer Retirement Plan as of June 30, 2003 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 6 and 11.
- ❖ Compute the employers' recommended contribution rates for the Fiscal Year beginning July 1, 2004. This information is contained on page 4 and 5.

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, 2003, were computed to be \$709,297,998. The funding value of accrued assets was \$811,791,293. The ratio of the funding value of accrued assets to accrued liabilities was 114.4%.

Funding Value of Assets

A smoothed market value of assets was used for the June 30, 2003 valuation. This method, which spreads the difference between actual and expected investment return over seven years. In previous years, 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 14.24% of member payroll. Deducting member contributions of 8.50% of payroll resulted in an aggregate employer normal cost of 5.74% of payroll.

In the aggregate, the excess of accrued assets over accrued liabilities produced a temporary 20-year amortization credit of 1.67% of payroll.

The aggregate net employer contribution for FY 2004/2005 was therefore computed to be 4.07% of payroll. After the application of the 2.00% minimum contribution required for each unit by Statute, the aggregate net employer contribution is 4.10% of payroll.

Retirement Plan Experience

Experience of the Retirement Plan during the year ended June 30, 2003 was significantly less favorable than assumed. Investment income was the primary source of unfavorable experience.

Benefit Provision Changes

There were no benefit provision changes in this valuation.

Assumption and Method Changes

There were no changes in assumptions and two changes in actuarial methods used for the valuation. Contribution rates are now determined using payroll projected one year. The difference between actual and expected investment return is now spread over seven years rather than four years.

Participant Data

	<u>6/30/2003</u>	<u>6/30/2002</u>
Active Members	10,964	10,464
Active Member Payroll	\$ 358,160,933	\$ 330,427,800
Retirees and Beneficiaries	1,363	1,218
Annual Pensions	\$ 21,653,042	\$ 17,660,064

Financial Data

	<u>6/30/2003</u>	<u>6/30/2002</u>
Smoothed Valuation Assets	\$842,500,476*	\$816,897,977*
Market Value of Assets	\$622,938,516	\$586,328,472

** The net smoothed value of assets used for the valuation after deducting the Future Benefit Increase Reserve was \$811,791,293 in 2003 and \$782,445,913 in 2002.*

Comments, Recommendations and Conclusion

Comment 1: This report contains the consolidated results of the individual actuarial valuations of the 15 units in the Arizona Corrections Officer Retirement Plan as of June 20, 2003. The aggregate results are indicative of the overall condition of the Retirement System. The condition of each unit, however, is dependent upon its particular experience and characteristics.

Of the 15 units, 13 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 2 units, unfunded actuarial accrued liabilities were amortized over a 20-year period and added to the normal cost to produce the total employer contribution rate.

There were 3 new units included in this valuation.

Comment 2: The increase in the computed contribution rates and the decrease in the funded ratio are attributable primarily to recognized investment income, which was significantly less than assumed.

Comment 3: The funding of the Corrections Officer Retirement Plan continues to be ahead of schedule, largely as a result of favorable investment returns from past years. 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 5.74% of payroll.

Conclusion: The accrued overall actuarial condition of the Retirement Plan continues to be excellent.



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



Contribution Requirements – 2004/2005 Fiscal Year

Member: 8.50% of covered compensation

Employer: The aggregate computed contribution rate before application of the statutory minimum was 4.07% of covered compensation, consisting of 5.74% for normal cost, (1.67)% for amortization of unfunded actuarial accrued liability*.

Components of Computed Normal Cost

	Percents of Covered Compensation
Normal cost requirement	
Service pensions	9.14%
Disability pensions	0.67
Survivors of active members	1.18
Refunds of members' accumulated contributions	2.64
Health insurance	<u>0.61</u>
Total normal cost requirement	14.24%
Less member contribution	<u>8.50</u>
Employer normal cost requirement	5.74%

**In the aggregate, actuarial accrued liability, \$709,297,998, was exceeded by the funding value of accrued assets, \$811,791,293. Of the 15 units, 13 had assets in excess of accrued liabilities and 2 had unfunded accrued liabilities. The excess or the unfunded was amortized over 20 years and applied as a credit or an amortization payment, respectively.*

These contribution rates are prior to the minimum 2.00% rate established for each unit by the State Legislature beginning with the 2001/2002 fiscal year. The total aggregate computed contribution after application of the minimum is 4.10 % of payroll.

In past years, the experience of the Retirement Plan was significantly more favorable than assumed based on the long-term assumptions. This resulted in the credit which partially offsets the normal cost which otherwise would be payable. 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

* Computed contribution rates are before application of the 2.00% minimum employer contribution for each participating unit. Minimum rate established by State Legislature in 2000 for fiscal years beginning 2001/2002.

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 13 of the participating units, the valuation assets exceed the actuarial accrued liability so they have a credit against the normal cost. The remaining 2 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 over an open period of 20 years.

The aggregate valuation assets exceed the actuarial accrued liability by \$102,493,295.

	June 30, 2003
Actuarial Accrued Liability	
Retired members and survivors	\$219,736,565
Former members with vested benefits	7,295,335
Active members	<u>482,266,098</u>
Total	\$709,297,998
Valuation Assets*	811,791,293
Unfunded Actuarial Accrued Liability	\$(102,493,295)

** This amount excludes the \$30,709,183 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

Dollar amounts in \$000.

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

Aggregate Gain/Loss

	<u>Year Ended June 30, 2003</u>
(1) UAAL ^a at start of year	\$(150,208,099)
(2) Normal cost	50,522,411
(3) Funding method contributions	37,728,509
(4) Interest accrual	(10,669,495)
(5) Expected UAAL before changes	(148,083,692)
(6) Change from new groups added	1,006,817
(7) Change from assumption and method revisions	(53,211,855)
(8) Expected UAAL after changes	(200,288,730)
(9) Actual UAAL	(102,493,295)
(10) Gain(Loss)	(97,795,435)
(11) Percent of AAL ^b	15.5%

^a Unfunded Actuarial Accrued Liability

^b Actuarial Accrued Liability at beginning of year

Aggregate Actuarial Balance Sheet June 30, 2003**Actuarial Assets**

Accrued Assets

Member accumulated contributions	\$	152,453,715	
Employer and benefit payment reserves		465,573,818	
Funding value adjustment		224,472,943	
Total accrued assets*			\$ 842,500,476

Prospective assets (computed value)

Member contributions		236,183,709	
Employer normal costs		119,891,665	
Employer unfunded actuarial accrued liability		(102,493,295)	
Total prospective assets			<u>253,582,079</u>

Total Actuarial Assets \$ 1,096,082,555

* Includes \$30,709,183 reserve for payment of ad-hoc pension increases. The net funding value of assets is \$811,791,293.

Actuarial Present Values (Liability)

Pensions in payment status

Service pensions	\$	163,050,042	
Disability pensions		11,174,217	
Survivor pensions		27,265,191	
Health insurance		18,247,115	
Total benefit values			\$ 219,736,565

Prospective pension payments (future retirements) 759,538,009

Prospective health insurance payments (future retirements) 39,797,167

Prospective refunds of member contributions 46,301,631

Reserve for future pension increases 30,709,183

Total Actuarial Present Values (Liability) \$ 1,096,082,555

**Employer Contribution Requirements
2004/2005 Fiscal Year
Expressed as Percents of Covered Compensation**

<u>Employer</u>	<u>Normal Cost</u>	<u>Amort. Of Unf. Act. Accr. Liability*</u>	<u>Total Computed Emp. Contrib. Requirements</u>	<u>Total Required Emp. Contrib. Requirements</u>
Apache County Corrections Officers	5.69%	-2.38%	3.31%	3.31%
Cochise County Corrections Officers	6.18	-2.28	3.90	3.90
Coconino County Corrections Officers	4.90	-1.62	3.28	3.28
Department of Corrections	5.73	-1.65	4.08	4.08
Department of Juvenile Corrections	6.66	-1.40	5.26	5.26
Maricopa County Corrections Officers	5.60	-2.42	3.18	3.18
Mohave County Corrections Officers	5.95	-5.71	0.24	2.00
Navajo County Corrections Officers	5.73	-3.67	2.06	2.06
Pima County Corrections Officers	5.20	-0.20	5.00	5.00
Pinal County Corrections Officers	4.47	0.64	5.11	5.11
Pinal County Dispatchers	3.97	-0.74	3.23	3.23
Santa Cruz County Corrections Officers	5.50	-5.50	0.00	2.00
Town of Oro Valley Dispatchers	5.10	3.64	8.74	8.74
Yavapai County Corrections Officers	6.04	-0.66	5.38	5.38
Yuma County Corrections Officers	4.65	-3.49	1.16	2.00
Totals	5.74%	-1.67%	4.07%	4.10%

* Twenty years from July 1, 2003.

Actuarial Accrued Liability – Valuation Assets – Amortization Payment

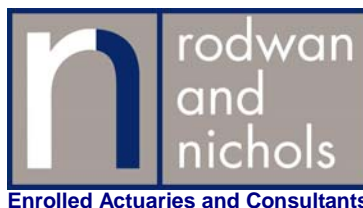
<u>Employer</u>	<u>Actuarial Accrued Liability</u>	<u>Valuation Assets</u>		<u>Emp. Unf Act. Acc. Liability</u>	<u>Amortization Payment*</u>
		<u>Members</u>	<u>Employers</u>		
Apache County Corrections Officers	\$690,178	\$206,515	\$729,885	\$-246,222	0.00%
Cochise County Corrections Officers	3,357,476	726,954	3,304,121	-673,599	0.00
Coconino County Corrections Officers	1,730,439	723,622	1,672,110	-665,293	0.00
Department of Corrections	502,831,328	108,925,189	467,100,828	-73,194,689	0.00
Department of Juvenile Corrections	49,908,362	11,149,747	45,458,975	-6,700,360	0.00
Maricopa County Corrections Officers	92,134,847	18,359,689	88,867,146	-15,091,988	0.00
Mohave County Corrections Officers	2,118,188	602,053	3,323,960	-1,807,825	0.00
Navajo County Corrections Officers	978,320	247,364	1,300,293	-569,337	0.00
Pima County Corrections Officers	37,799,925	7,229,219	31,068,264	-497,558	0.64
Pinal County Corrections Officers	4,112,088	846,385	2,849,187	416,516	0.00
Pinal County Dispatchers	623,612	138,041	524,902	-39,331	0.00
Santa Cruz County Corrections Officers	582,221	157,121	1,070,528	-645,428	0.00
Town of Oro Valley Dispatchers	749,710	308,033	126,202	315,475	3.64
Yavapai County Corrections Officers	5,835,586	1,351,236	4,935,364	-451,014	0.00
Yuma County Corrections Officers	5,845,718	1,482,547	7,005,813	-2,642,642	0.00
Totals	\$709,297,998	\$152,453,715	\$659,337,578	\$-102,493,295	0.00%

*Twenty years from July 1, 2003.



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.

Employer Contributions. Level percent of payroll normal cost plus 20 year amortization of unfunded actuarial accrued liability.



Section Four:

***Actuarial Assumptions
And Methods***



Enrolled Actuaries and Consultants

Summary of Valuation Assumptions

Economic Assumptions

Interest Rate: 9.0% (net of expenses)

Salary Increases: 5.5% for inflation and 1% 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	5.5%	3.0%	1.0%	9.5%
25	5.5	3.0	1.0	9.5
30	5.5	2.6	1.0	9.1
35	5.5	1.1	1.0	7.6
40	5.5	0.2	1.0	6.7
45	5.5	0.2	1.0	6.7
50	5.5	0.2	1.0	6.7
55	5.5	0.1	1.0	6.6
60	5.5	-	1.0	6.5
65	5.5	-	1.0	6.5

Demographic Assumptions

Non-Disability Mortality rates: 1971 Group Annuity Mortality Table Projected to 2000 (Male), female ages set back six years. (first used for June 30, 1999 valuation.)

Disability Mortality Rates: 1971 Group Annuity Mortality Table Projected to 1984 (Male), female ages set back six years.

Sample Ages	Single Life Retirement Values							
	Non-Disability Table		Disability Table		Non-Disability Table		Disability Table	
	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					56.86	62.72	55.98	61.84
25					51.98	57.83	51.12	56.96
30					47.12	52.95	46.27	52.09
35					42.29	48.09	41.46	47.24
40	\$12,930	\$13,272	\$12,861	\$13,225	37.51	43.25	36.69	42.42
45	12,522	12,997	12,430	12,933	32.80	38.46	32.01	37.64
50	11,997	12,613	11,879	12,526	28.28	33.73	27.53	32.93
55	11,342	12,112	11,199	11,999	23.98	29.17	23.28	28.40
60	10,513	11,485	10,346	11,347	19.90	24.82	19.27	24.11
65	9,490	10,694	9,308	10,532	16.09	20.70	15.55	20.05
70	8,326	9,710	8,145	9,530	12.69	16.82	12.25	16.27
75	7,124	8,564	6,963	8,382	9.82	13.32	9.49	12.87
80	5,879	7,371	5,748	7,206	7.39	10.36	7.17	10.02
85	4,791	6,120	4,696	5,983	5.57	7.83	5.43	7.59
90	3,864	4,994	3,796	4,893	4.19	5.89	4.10	5.74

Termination of Employment: Service-related rates for first five years of employment and age-related rates after first five years of employment. 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	30.0%	(all years of service)
	1	25.0	
	2	20.0	
	3	15.0	
	4	12.0	
25	5 and over	7.0	0.08%
30		7.0	0.10
35		7.0	0.12
40		6.0	0.25
45		6.0	0.33
50		5.0	0.40
55		5.0	0.47
60	5.0	0.50	

Rates first used for June 30, 1999 valuation

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

**Percent of Active Members Retiring within Year
Following Attainment of Indicated Retirement Age**

Age	Percent of Active Members Retiring During Next Year
40-44	25%
45	25
46	25
47	25
48	25
49	25
50	25
51	25
52	25
53	25
54	25
55	25
56	25
57	25
58	25
59	25
60	30
61	30
62	40
63	40
64	40
65	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, 1999 valuations.

Actuarial Method Used for the Valuation

Normal Cost. Normal cost and the allocation of actuarial present values between service rendered before and after the valuation date were determined using an individual entry age 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 a constant percentage of the member's year-by-year projected covered pay.

Actuarial Accrued Liability. The actuarial accrued liability allocated to service rendered prior to the valuation date, including experience gains and losses, 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 an open period of 20 years. If accrued valuation assets exceed the actuarial accrued liability, the excess is 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 6.5% annually for the purpose of computing the amortization payment (credit) as a level percent of payroll.



Section Five:
Valuation Data



Enrolled Actuaries and Consultants

Derivation of Funding Value of Pension Fund Assets

	Values as of June 30				
	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>
Beginning of Year					
(1) Book Value	\$519,862,469	\$588,205,472	\$631,938,840	\$646,861,802	\$587,318,350
(2) Market Value	696,231,350	807,765,880	683,192,443	586,328,472	622,938,516
(3) Funding Value	634,606,216	764,775,466	821,997,262	816,897,977	842,500,476
End of Year					
(4) Market Value	807,765,880	683,192,443	586,328,472	622,938,512	
(5) Net Addition to Assets, Exc. Inv. Income	18,762,353	13,986,319	4,322,458	(1,298,955)	
(6) Total Net Investment Income = (4) - (2) - (5)	92,772,177	(138,559,756)	(101,186,429)	37,908,995	-
(7) Projected Net Rate of Return	9.00%	9.00%	9.00%	9.00%	
(8) Projected Investment Income = (7) x [(3) + .5 x (5)]	57,958,865	69,459,176	74,174,264	73,462,365	
(9) Investment Income in Excess of Proj.	34,813,312	(208,018,932)	(175,360,693)	(35,553,370)	
(9a) Allocation to Future Benefit Increase Reserve (Actual)	14,971,383	-	-	-	
(9b) Allocation to Funding Value of Assets ((9) - (9a))	19,841,929	(208,018,932)	(175,360,693)	(35,553,370)	-
(10) Excess Investment Income Recognized *					
(10a) From Current Year = (9b) / 7 in 2003	4,960,482	(52,004,733)	(43,840,173)	(5,079,052)	-
(10b) From One Year Prior	7,288,417	4,960,482	(52,004,733)	(21,920,087)	(5,079,052)
(10c) From Two Years Prior	13,532,135	7,288,417	4,960,482	(20,801,893)	(21,920,087)
(10d) From Three Years Prior	12,695,615	13,532,135	7,288,417	1,240,121	(20,801,893)
(11) Change in Funding Value =(5) + (8) + (9a) + (10) [a..d]	130,169,250	57,221,796	(5,099,285)	25,602,499	
End of Year Values					
(12) Book Value	588,205,472	631,618,088	646,861,802	587,318,350	
(4) Market Value	807,765,880	683,192,443	586,328,472	622,938,516	
(13) Preliminary Funding Value (3) + (11)	764,775,466	821,997,262	816,897,977	842,500,476	
(14) Future Benefit Increase Reserve	59,784,889	45,820,054	34,452,064	30,709,183	
(15) Funding Value (13) - (14)	704,990,577	776,177,208	782,445,913	811,791,293	
(16) Funding Value Adjustment (15) - (12)	116,785,105	144,559,120	135,584,111	224,472,943	

* Four year recognition through June 30, 2002 valuation. Beginning with the June 30, 2003 valuation, seven year recognition was used for the current year and the remaining unrecognized amounts from the three prior years.

Participant Summary

**Summary of Retired Members and Survivors
June 30, 2003**

<u>Pensions Being Paid</u>	<u>Number</u>	<u>Annual Pensions</u>	<u>Average Pensions</u>
Retired Members			
Service Pensions	1,029	\$17,558,542	\$17,064
Disability Pensions	<u>70</u>	<u>1,089,808</u>	15,569
Totals	1,099	18,648,350	16,968
Survivors			
Spouses	247	2,845,017	11,518
Children with Guardians*	<u>17</u>	<u>159,675</u>	9,393
Totals	264	3,004,692	11,381
Total Pensions Being Paid	1,363	\$21,653,042	\$15,886

* Does not include pensions payable to children whose parent is being paid a survivor pension.

Averages

	<u>Average Age</u>	<u>Average Service</u>	<u>Average Retirement Age</u>
	(Years)	(Years)	(Years)
Service Retired Members	64.9	18.4	59.9
Disability Retired Members	51.0	10.4	45.2
Spouse Beneficiaries	59.8	11.2	51.5

**Summaries of Retired Members and Survivors
June 30, 2003
Tabulated by Attained Age of Recipient**

Attained Age	Service		Disability		Survivors		Totals			
No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions			
Children w/ Guardians	\$	-	\$	-	17	\$	159,675	17	\$	159,675
20-24			1	11,733				1	11,733	
25-29					4	40,910		4	40,910	
30-34			5	77,412	8	86,237		13	163,649	
35-39	2	47,698	4	60,664	7	74,720		13	183,082	
40-44	22	526,270	9	136,101	14	161,586		45	823,957	
45-49	42	1,101,289	15	231,422	16	176,570		73	1,509,281	
50-54	87	2,412,910	13	213,513	26	327,037		126	2,953,460	
55-59	121	3,398,584	10	164,455	44	547,949		175	4,110,988	
60-64	199	3,217,001	2	29,374	38	454,606		239	3,700,981	
65-69	286	3,849,969	5	88,511	43	474,987		334	4,413,467	
70-74	188	2,163,344	4	50,445	24	280,297		216	2,494,086	
75-79	67	690,457	1	19,487	18	166,646		86	876,590	
80 and Over	15	151,020	1	6,691	5	53,472		21	211,183	
Totals	1,029	\$ 17,558,542	70	\$ 1,089,808	264	\$ 3,004,692		1,363	\$ 21,653,042	

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

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. Spouse</u>	<u>Child with Guardian</u>	<u>Annual Pensions</u>	<u>No.</u>	<u>Annual Pensions</u>
	<u>No.</u>	<u>Annual Pensions</u>	<u>No.</u>	<u>Annual Pensions</u>					
Apache County	0	0	0	0	0	0	0	0	0
Cochise County	11	106,290	0	0	3	0	20,102	14	126,392
Coconino County	0	0	1	14,587	0	0	0	1	14,587
Department of Corrections	759	12,947,095	34	519,599	182	16	2,258,149	991	15,724,843
Department of Juvenile Corrections	63	1,271,520	2	24,393	15	1	168,914	81	1,464,827
Maricopa County	133	2,288,909	17	298,494	29	0	351,134	179	2,938,537
Mohave County	3	20,938	2	25,062	1	0	10,213	6	56,213
Navajo County	2	25,154	0	0	1	0	8,571	3	33,725
Pima County	38	641,828	12	177,214	11	0	132,604	61	951,646
Pinal County	0	0	0	0	0	0	0	0	0
Pinal County Dispatchers	0	0	0	0	0	0	0	0	0
Santa Cruz County	1	15,716	0	0	0	0	0	1	15,716
Town of Oro Valley Dispatchers	0	0	0	0	0	0	0	0	0
Yavapai County	14	172,315	1	15,099	4	0	45,936	19	233,350
Yuma County	5	68,777	1	15,360	1	0	9,069	7	93,206
Totals	1,029	\$17,558,542	70	\$1,089,808	247	17	\$3,004,692	1,363	\$21,653,042

**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

Active Members – June 30, 2003 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	38							38	\$ 1,022,332
20-24	874	3						877	23,688,412
25-29	1,492	259	2					1,753	50,862,827
30-34	1,226	558	119	1				1,904	59,084,709
35-39	816	392	271	81				1,560	50,824,869
40-44	651	339	219	213	18			1,440	49,238,836
45-49	517	245	190	191	62	12		1,217	43,072,829
50-54	379	224	161	172	49	17		1,002	36,472,985
55-59	244	181	120	153	37	13		748	27,970,456
60-64	111	89	57	75	15	5	1	353	13,065,889
65-69	16	14	13	13	4			60	2,407,778
70-74	8	1	2					11	385,386
75-79							1	1	63,625
Totals	6,372	2,305	1,154	899	185	47	2	10,964	\$ 358,160,933

Group Averages:

Age: 38.8 years
Service: 6.0 years
Annual Pay: \$32,667

Inactive Members as of June 30, 2003

Attained Age	Service						Total
	0-4	5-9	10-14	15-19	20-24	25-29	
Under 20	1						1
20-24	40	1					41
25-29	89	5					94
30-34	52	12	2				66
35-39	43	8	8				59
40-44	25	4	6	5			40
45-49	26	9	13	5			53
50-54	17	2	11	11			41
55-59	23	8	17	10	4		62
60-64	6	3	20	7	3		39
65-69	1						1
Totals	323	52	77	38	7		497

Active Members – By Employer

Employer	No.	Annual Compensation	Average Compensation		Average	
			Amount	% Change	Age (Yrs.)	Service (Yrs.)
Apache County	23	\$599,622	\$26,071	3.9%	37.2	4.8
Cochise County	66	1,716,580	26,009	3.2	39.6	5.7
Coconino County	77	2,371,616	30,800	-2.9	31.4	3.3
Department of Corrections	7,943	258,209,301	32,508	4.2	39.0	6.0
Department of Juvenile Corrections	849	27,987,412	32,965	2.9	40.8	5.4
Maricopa County	1,089	36,431,139	33,454	-3.0	37.3	7.0
Mohave County	73	1,870,693	25,626	10.4	39.2	3.8
Navajo County	38	899,408	23,669	0.3	36.3	3.0
Pima County	379	14,635,601	38,616	7.2	38.2	7.8
Pinal County	120	3,785,345	31,545		34.8	5.2
Pinal County Dispatchers	14	310,904	22,207		38.9	9.8
Santa Cruz County	15	395,222	26,348	3.3	32.1	4.8
Town of Oro Valley Dispatchers	12	504,064	42,005		39.8	7.0
Yavapai County	130	4,073,025	31,331	3.0	40.4	4.3
Yuma County	136	4,371,001	32,140	8.9	31.9	4.8
Totals	10,964	\$358,160,847	\$32,667	3.4%	38.8	6.0

Section Six:
Accounting Disclosures



Enrolled Actuaries and Consultants

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, 2003
Actuarial Cost Method:	Individual Entry Age
Amortization method:	Level percent open
Remaining amortization period:	20 years
Asset valuation method:	Smoothed market value
Actuarial assumptions:	
Investment rate of return	9.0%
Projected salary increases	6.5-9.5%
Includes inflation at	5.5%

Membership data as of June 30, 2003, 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	-

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	14,254,805	

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

Actuarial Accrued Liability – Valuation Assets – Amortization Payment

<u>Employer</u>	<u>(1) Actuarial Value of Assets</u>	<u>(2) Actuarial Acc Liability Entry Age</u>	<u>(3) Percent Funded (1)/(2)</u>	<u>(4) Unfunded AAL (2)-(1)</u>	<u>(5) Annual Covered Payroll</u>	<u>(4)/(5)</u>
Apache County	\$936,400	\$690,178	135.7%	\$(246,222)	\$599,622	0.0%
Cochise County	4,031,075	3,357,476	120.1	(673,599)	1,716,580	0.0%
Coconino County	2,395,732	1,730,439	138.4	(665,293)	2,371,616	0.0%
Dept of Corr.	576,026,017	502,831,329	114.6	(73,194,688)	258,209,301	0.0%
Dept. of Juv. Corr.	56,608,722	49,908,362	113.4	(6,700,360)	27,987,412	0.0%
Maricopa County	107,226,835	92,134,847	116.4	(15,091,988)	36,431,139	0.0%
Mohave County	3,926,013	2,118,188	185.3	(1,807,825)	1,870,693	0.0%
Navajo County	1,547,657	978,320	158.2	(569,337)	899,408	0.0%
Pima County	38,297,483	37,799,925	101.3	(497,558)	14,635,601	0.0%
Pinal County	3,695,572	4,112,088	89.9	416,516	3,785,345	11.0%
Pinal County Disp.	662,943	623,612	106.3	(39,331)	310,904	0.0%
Santa Cruz	1,227,649	582,221	210.9	(645,428)	395,222	0.0%
Town of Oro Valley Disp.	434,235	749,710	57.9	315,475	504,064	62.6%
Yavapai County	6,286,600	5,835,586	107.7	(451,014)	4,073,025	0.0%
Yuma County	8,488,360	5,845,718	145.2	(2,642,642)	4,371,001	0.0%
Totals	811,791,293	709,297,998	114.4	(102,493,295)	358,160,933	0.0%