



**The Report of an Actuarial Valuation**  
June 30, 2000  
of the  
**Elected Officials' Retirement Plan**  
State of Arizona

Submitted to  
The Fund Manager

**Public Safety Personnel Retirement System**  
Phoenix, Arizona

Gabriel, Roeder, Smith & Company





August 21, 2000

The Fund Manager  
Public Safety Personnel Retirement System  
Phoenix, Arizona

Re: Arizona Elected Officials' Retirement Plan

This report contains the results of an actuarial valuation of the actuarial liability and contribution requirements associated with benefits provided by the Arizona Elected Officials' Retirement Plan.

The date of the valuation was June 30, 2000.

The valuation was based on data, submitted by your Administrator, concerning financial information and individual active elected officials, retired elected officials and their beneficiaries.

The valuation was made in accordance with generally recognized actuarial methods. It is our opinion that the actuarial information contained in this report is complete and accurate, being based on actuarial assumptions which are in the aggregate related to the experience of the Plan and are our best estimate of anticipated long-term future experience.

Disclosures required by Statements No. 25 and No. 27 of the Governmental Accounting Standards Board are contained in Section D.

The cooperation of the Plan Administrator and staff in providing the information needed for the valuation is acknowledged with appreciation.

Respectfully submitted,

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## **Section A**



**Purpose of the Valuation  
Valuation Results  
Comments and Conclusion**

## Purpose of the Actuarial Valuation

The statutory obligations of the Retirement Plan are:

- pension payments to current and future retired members, vested former members and survivor beneficiaries
- post-retirement health insurance subsidies to current and future retired members, vested former members and survivor beneficiaries
- refunds of member contributions to non-vested former members
- administrative and investment expenses incurred in the operation of the Plan.

The sources of funding to meet the statutory obligations are:

- member contributions
- a portion of court docket fees
- municipal employer contributions
- investment earnings on Plan assets.

Member contributions and the portion of docket fees are fixed by statute.

The basic funding objective of the Plan is to avoid transfers of the cost of statutory obligations between generations of taxpayers. This objective will be realized if the sources of funding are sufficient to:

- fund costs allocated to the current year on account of service rendered by elected officials in the current year (Normal Cost)
- fund over a finite period of years costs allocated to prior years on account of service rendered by elected officials in prior years (Unfunded Actuarial Accrued Liability).

The actuarial valuation measures the relationship between the statutory obligation and funding resources to determine if the funding objective is being met.

## Aggregate Contribution Requirements – 2001/2002 Fiscal Year

Computed Contributions for	Percents of Payroll of Present Elected Officials	Dollars Based on \$45,381,799 Val. Payroll
Normal Cost		
Service pensions (incl. survivors)	17.25%	\$ 7,828,360
Pre-ret. survivor pensions	0.99%	449,280
Disability pensions	0.56%	254,138
Termination benefits		
- deferred pensions	3.50%	1,588,363
- refunds of member contrib.	0.59%	267,753
Health insurance	0.80%	363,054
<b>Total Normal Cost</b>	<b>23.69%</b>	<b>10,750,948</b>
Unfunded Actuarial Accrued Liability*	(9.72)%	(4,411,111)
Total Required Contributions For FY 2001/2002	13.97%	6,339,837
Less: Elected Officials' Contributions	7.00%	3,176,726
<b>Employer Required Contributions for FY 2001/2002</b>	<b>6.97%</b>	<b>\$ 3,163,111</b>

\* Valuation assets exceeded actuarial accrued liability as of June 30, 2000. The difference, \$76,299,108, was amortized as a level percent of payroll over an open period of 20 years and applied as a credit to the computed normal cost. The 20 year open period is the same period used last year. This is in accordance with the statutory amendment effective in 1997. Please refer to Comment D on page A-5 concerning the long-term funding requirements.

## Historical Comparison (\$ in thousands)

Valuation Date	Actuarial Accrued Liability	Accrued Assets	Percent Funded	Unfunded Actuarial Accrued Liability		
				Dollar Amount	Financing Period	% of Member Payroll
6-30-82	\$ 18,357	\$ 13,162	71.7%	\$ 5,195	40 years	69.8%
6-30-83	19,013	15,350	80.7	3,663	39	45.3
6-30-84	19,694	17,694	89.8	2,000	38	24.7
6-30-85 *	48,969	49,900	101.9	(931)	-	-
6-30-86	53,427	58,757	110.0	(5,330)	-	-
6-30-87 **	66,642	65,818	98.8	824	35	4.0
6-30-88 ***	77,908	73,993	95.0	3,915	34	18.3
6-30-89 #	90,951	84,258	92.6	6,693	33	27.2
6-30-90 ##	100,433	92,421	92.0	8,012	32	31.1
6-30-91 ###	109,650	103,570	94.5	6,080	31	21.8
6-30-92 @	115,098	115,869	100.7	(771)	-	-
6-30-93	127,478	127,984	100.4	(506)	-	-
6-30-94 +	138,322	140,145	101.3	(1,823)	-	-
6-30-95 ++	149,366	159,111	106.5	(9,745)	-	-
6-30-96	158,126	181,754	114.9	(23,628)	-	-
6-30-97	169,593	214,035	126.2	(44,442)	-	-
6-30-98	199,662	241,884	121.1	(42,222)	-	-
6-30-99+++	227,100	283,337	124.8	(56,237)	-	-
6-30-00	253,478	329,777	130.1	(76,299)	-	-

\* Reflects the 1985 amendment consolidating the Judges' Retirement System and the Elected Officials' Retirement Plan.

\*\* Reflects the 1987 amendment which increased the formula factor to 4% from 3-1/3%.

\*\*\* Reflects the 1988 amendment which bases the reduction for early retirement on the normal retirement age rather than age 65 and provided a 3% cost-of-living increase for retired members and survivors.

# Reflects changes in the estimates of future experience (actuarial assumptions) and the 1989 amendment which provided a 3% increase in the pensions of retired members and survivors.

## Includes the 1990 amendment which provides a subsidy for post-retirement health insurance, and a 3% increase in pensions with effective dates between September 15, 1989 and September 15, 1990.

### Includes the 1991 amendment which provides a 3% increase in pensions with effective dates between September 15, 1990 and September 15, 1991, and the 1991 amendment increasing benefits for future duty-related deaths.

@ Includes the 1992 amendment which provides a 3% increase in pensions with effective dates between September 15, 1991 and October 31, 1992.

+ A 1994 amendment which generally will apply to new hires after July 17, 1994 changes the salary used to compute pensions from final salary to high 3 year average salary.

++ Reflects changes in the estimates of future experience (actuarial assumptions) and the adoption of the smoothed market value asset valuation method.

+++ Reflects changes in the estimates of future experience (actuarial assumptions) and benefit improvements effective in August and September, 1999.

*The book value of Retirement Plan assets* was reported to total \$285,234,761. The market value was \$402,244,021. The gross funding value of assets was computed to be \$376,685,296 (please refer to page B-4). For purposes of the actuarial valuation, \$46,908,586 was reserved for post-retirement pension increases, leaving net valuation assets of \$329,776,710 available to fund other prospective benefit payments. The portion of assets attributable to the contributions of present active elected officials was reported to be \$24,038,167.

*Actuarial accrued liability*, \$253,477,602, was 130.1% funded by present funding value of Plan assets.

## **Development of the Unfunded Actuarial Accrued Liability**

Actuarial present value of future benefit payments (APVFBP)

- retired members and survivors	\$126,895,258
- former members with vested benefits	3,200,729
- active members	174,272,339
- reserve for ad hoc pension increases	46,908,586
Total APVFBP	351,276,912
Present value of future normal cost payments	50,890,723
Liability for future ad hoc pension increases	46,908,586
Actuarial Accrued Liability	253,477,602
Valuation assets	329,776,710
Unfunded Actuarial Accrued Liability	\$ (76,299,108)

The excess of valuation assets over actuarial accrued liability, \$76,299,108, was amortized as a level percent of payroll over an open period of 20 years and applied as a credit to the computed normal cost.

*The present value of future normal costs* was financed over the present elected officials' periods of prospective service to retirement, termination or death.

## Comment A

Actual experience of the Retirement Plan during the year ended June 30, 2000 was more favorable than expected based upon long-term assumptions, generating an experience gain of \$17,446,040 (page A-8). The primary sources of the gain were greater than assumed investment return, fewer than assumed retirements and more active member terminations than assumed. The increase in the funded ratio and the decrease in the computed contribution rate reflect the combined experience.

## Comment B

The June 30, 2000 annual actuarial valuation includes the following changes in benefit provisions enacted by the State legislature in 2000:

- Require a minimum employer contribution rate of 2% of employee compensation for each employer in the Plan.
- A member who was employed before September 15, 1989 and who retired after October 31, 1996 but before November 1, 2000 would be entitled to receive a tax equity benefit allowance consisting of two percent of the member's base benefit retroactive to the date of retirement.

## Comment C

As of June 30, 2000, accrued assets exceeded actuarial accrued liabilities by \$76,299,108. This amount was amortized as a level percent of payroll over an open period of 20 years and applied as a credit to the computed normal cost.

In the absence of future gains (losses) and benefit provision changes, the computed contribution rate will gradually tend toward the normal cost rate over the long term as the credit is used up. Future experience losses would accelerate this process and future gains would slow the movement toward the normal cost.

In summary, the **normal cost** should be viewed as the **long-term** funding requirement.



## **Conclusion**

The results of the valuations indicate that Retirement Plan benefit obligations are being funded as incurred. Favorable economic experience over the last decade has significantly accelerated the funding progress. Current assets are 130.1% of actuarial accrued liability. We believe the assumptions produce a reasonable estimate of costs likely to emerge in the operation of the Retirement Plan.

**Computed and Actual Contributions  
Historical Comparison**

Valuation Date	Fiscal Year	Computed Contributions			Actual Contributions####		
		Normal Cost	UAAL@	Total	Elected Officials	Employers *** (incl. Docket Fees)	Total
6-3-85	86/87	17.64%	(0.52)*%	17.12%	6.00%	12.41%	18.41%
6-30-86	87/88	17.63%	(2.99)*%	14.64%	6.00%	13.28%	19.28%
6-30-87 **	88/89	20.42%	0.16#%	20.58%	7.00%	11.78%	18.78%
6-30-88	89/90	20.72%	0.72%	21.44%	7.00%	13.17%	20.17%
6-30-89 **	90/91	21.84%	1.10%	22.94%	7.00%	11.43%	18.43%
6-30-90 ##	91/92	22.54%	1.29%	23.83%	7.00%	17.04%	24.04%
6-30-91 ##	92/93	22.62%	0.93%	23.55%	7.00%	17.39%	24.39%
6-30-92 ##	93/94	22.74%	(0.12)%	22.62%	7.00%	19.98%	26.98%
6-30-93	94/95	23.09%	(0.08)%	23.01%	7.00%	17.28%	24.28%
6-30-94 +	95/96	23.04%	(0.28)%	22.76%	7.00%	16.31%	23.31%
6-30-95 ++	96/97	23.22%	(1.46)%	21.76%	7.00%	15.17%	22.17%
6-30-96	97/98	23.33%	(3.69)%	19.64%	7.00%	13.54%	20.54%
6-30-97	98/99	23.48%	(7.58)+++%	15.90%	7.00%	10.09%	17.09%
6-30-98	99/00	23.26%	(6.04)%	17.22%	7.00%	12.24%	19.24%
6-30-99@@	00/01	23.49%	(7.55)%	15.94%	7.00%		
6-30-00##	01/02	23.69%	(9.72)%	13.97%	7.00%		

@ *Unfunded actuarial accrued liability.*

\* *10% of the excess of accrued assets over actuarial accrued liability were applied as a credit to the computed normal cost.*

\*\* *Includes statutory amendment and assumption change.*

# *35 year level percent of payroll amortization, with a one year decrease in amortization period for subsequent valuations through 6/30/96.*

## *Includes statutory amendments.*

### *As percents of valuation payroll.*

\*\*\* *A 1989 amendment provides that state and county employers contribute the difference between the total actuarially computed contribution and the amounts generated by elected officials' contributions and docket fees.*

+ *A 1994 statutory amendment changed the salary used to compute pensions from final salary to high 3 year average salary, generally applicable for elected officials whose membership commences on or after July 17, 1994.*

++ *Includes assumption changes and change in asset valuation method.*

+++ *Reflects statutory change to 20 year open amortization (26 year closed amortization in prior year).*

@@ *Reflects assumption and statutory changes.*

**Experience Gain/(Loss)**  
**Year Ended June 30, 2000**

(1) UAAL* at start of year	\$(56,236,792)
(2) Normal cost for year	10,121,037
(3) Funding Method Contribution	8,290,860
(4) Interest accrued on (1), (2) and (3)	(4,978,954)
(5) Expected UAAL before changes [(1)+(2)-(3)+(4)]	(59,385,569)
(6) Effect of assumption changes	0
(7) Effect of cost method changes	0
(8) Effect of benefit changes - COLA	0
- Others	532,501
(9) Expected UAAL after changes	(58,853,068)
(10) Actual UAAL	(76,299,108)
(11) Gain/(Loss) (9)-(10)	\$ 17,446,040
(12) As % of AAL** at beginning of year	7.7%

\* Unfunded actuarial accrued liability.

\*\* Actuarial accrued liability.

## Actuarial Balance Sheet June 30, 2000

### ACTUARIAL ASSETS

Accrued assets (accounting value)		
Member accumulated contributions	\$ 24,038,167	
Employer and benefit payment reserves	261,196,594	
Funding Value Adjustment	91,450,535	
Total accrued assets*		\$376,685,296
Prospective assets (computed value)		
Member contributions	15,751,804	
Employer normal costs	35,138,920	
Employer unfunded actuarial accrued liability	(76,299,108)	
Total prospective assets		(25,408,384)
Total Actuarial Assets		\$351,276,912

\* Includes \$46,908,586 reserve for payment of ad hoc pension increases. The net funding value of accrued assets is \$329,776,710.

### ACTUARIAL PRESENT VALUES (LIABILITY)

Pensions in payment status		
Retired elected officials	\$ 98,403,423	
Disabilities	5,477,630	
Beneficiaries	20,330,047	
Health insurance	2,684,158	
Total benefit values		\$126,895,258
Prospective pension payments for future retirements		
Attributable to service prior to July 1, 2000	126,206,080	
Attributable to service after June 30, 2000	50,602,377	
Total benefit values		176,808,457
Prospective refunds of member contributions		664,611
Reserve for ad hoc pension increases		46,908,586
Total Actuarial Present Values (Liability)		\$351,276,912

## **Section B**



### **Summary of Benefit Provisions and Valuation Data**

## Summary of Plan Provisions

**Normal Retirement (no reduction for age).** An elected official may retire upon meeting one of the following age and service requirements:

- i) Age 60 years with 25 or more years of credited service;
- ii) Age 62 years with 10 or more years of credited service;
- iii) Age 65 years with 5 or more years of credited service;

The amount of a normal retirement pension is 4 percent of average yearly salary multiplied by years of credited service. Maximum is 80 percent of average yearly salary. Effective July 17, 1994, average yearly salary is the elected official's highest average salary during a 3 consecutive year period within the final 10 years of service. For elected officials whose membership commenced before July 17, 1994, average yearly salary will generally be final salary at termination of service.

Effective August 6, 1999, a member may retire at any age with 20 or more years of credited service, but a 3-year average salary will be used in calculating benefits if none of the other regular retirement eligibility conditions are met.

**Early Retirement (reduction for age).** An elected official who is at least age 50 years and has 10 or more years of credited service may retire before meeting an age and service requirement for normal retirement. The amount of an early retirement pension is computed by determining the amount of accrued normal retirement pension and then reducing the amount determined by three-twelfths of one percent for each month early retirement precedes the member's normal retirement age.

Effective August 6, 1999, a member with at least 5 years of credited service may retire early at any age. For those members who retire under this August 6, 1999 provision, their benefits are calculated using a 3-year average salary, and the reduction for early retirement is capped at 30%.

**Vested Termination (deferred retirement).** An elected official with 5 or more years of credited service retains entitlement to a deferred pension upon ceasing to be an elected official if the official's accumulated contributions are left on deposit in the Retirement Plan. The amount of pension is determined in the same manner as a normal or early pension, whichever is applicable.

***Disability Retirement.*** An elected official who becomes incapacitated for the duties of office may be retired by the fund manager. The amount of pension is 80 percent of three year average salary if the elected official has at least 10 years of credited service, 40 percent of three year average salary if the elected official has 5 but less than 10 years of credited service, and 20 percent of three year average salary if the elected official has less than 5 years of credited service.

***Survivor Pensions.*** Payable to the eligible beneficiary of a retired elected official or an active and inactive elected official. An eligible beneficiary is a surviving spouse who was married to the retired, active or inactive elected official for at least 2 years; or, if there is no eligible spouse, a minor child. A surviving spouse's pension terminates upon death. A surviving child's pension terminates upon attainment of age 18 years, marriage, adoption or death, unless the child is a full time student under the age of 23 or was disabled prior to age 18. The amount of a surviving spouse's pension is three-fourths of the pension being paid the deceased retired elected official or three-fourths of the disability pension accrued by the deceased active elected official. The amount of a surviving child's pension is an equal share of the amount of a surviving spouse's pension.

***Other Terminations.*** The elected official is paid a refund of accumulated member contributions, plus an additional amount if the member has at least 5 years of service credit. The amount is a percent of the member contribution amount, ranging from 25% to 100% (with at least 10 years of service credit).

***Post-Retirement Health Insurance Subsidy.*** A retired member or survivor is eligible for a group health and accident insurance premium subsidy of \$60 per month plus \$25 per month for family coverage if the member or survivor has 8 or more years of credited service and either participates in coverage provided by the state or participates in coverage provided by a participating employer. Retired members or survivors who have between 5 and 8 years of credited service are eligible for a proportionate share of the full subsidy.

***Elected Officials Contributions.*** Seven percent of compensation.

***Employer Contributions.*** A designated portion of court docket fees. Municipal employers contribute the computed normal cost rate plus a payment to amortize their unfunded actuarial accrued liability (UAAL) over a period not to exceed 20 years (a lump sum payment for UAAL is required for municipal employers entering after September 15, 1989). Pursuant to 1989 legislation, state and county employers contribute the difference between the actuarially determined contribution requirement and designated docket fees.

# Accounting Information Submitted for Valuation

## REVENUES AND EXPENDITURES

	Year Ended 6-30-00	Year Ended 6-30-99
REVENUES:		
a. Member contributions	\$ 4,164,166	\$ 2,970,123
b. Employer contributions	4,126,694	3,941,018
c. Investment income		
1. Interest and dividends	8,661,515	9,525,494
2. Gain or (loss) on sales	38,187,523	44,457,009
3. Securities Lending Income	117,799	81,403
d. Transfers from other systems	2,083,450	47,862
e. Total revenues	57,341,147	61,022,909
EXPENDITURES:		
a. Refunds of member contributions	182,114	168,980
b. Benefits paid	14,347,496	11,991,654
c. Administrative and investment expenses	59,577	60,307
d. Total expenditures	14,589,187	12,220,941
RESERVE INCREASE:		
Total revenues minus total expenditures	\$42,751,960	\$48,801,968

## SUMMARY OF ASSETS

	June 30, 2000		June 30, 1999	
	Cost	Market	Cost	Market
Cash	\$ none	\$ none	\$ none	\$ none
Receivables (less payables)	2,643,105	2,643,105	3,329,536	3,329,536
Money market funds	956,288	956,288	578,475	578,475
U.S. notes and bills	none	none	none	none
Bonds - government	38,309,737	40,488,433	36,064,631	39,201,544
- corporate	51,249,926	47,846,203	47,665,611	48,017,939
Stocks - corporate	192,075,705	310,309,992	170,411,543	268,364,567
Accrued investment income	none	none	none	none
Miscellaneous (Fixed Assets)	none	none	none	none
Total Assets*	\$285,234,761	\$402,244,021	\$258,049,796	\$359,492,061

\* Includes reserve for payment of ad hoc pension increases.



## Derivation of Funding Value of Pension Fund Assets Market to Market Basis

	Values as of June 30,			
	1997	1998	1999	2000
<b>Beginning of Year</b>				
(1) Book Value	\$161,523,416	\$179,812,180	\$209,247,828	\$258,049,796
(2) Market Value	211,744,700	260,313,893	311,329,191	359,492,061
(3) Funding Value	183,101,931	217,825,262	271,646,530	323,818,901
<b>End of Year</b>				
(4) Market Value	260,313,893	311,329,191	359,492,061	402,244,021
(5) Net Addition to Assets, Excluding Investment Income	(2,445,768)	(3,303,095)	(5,201,631)	(4,155,300)
(6) Total Net Investment Income = (4) - (2) - (5)	51,014,961	54,318,393	53,364,501	46,907,260
(7) Projected Net Rate of Return	9.00%	9.00%	9.00%	9.00%
(8) Projected Investment Income = (7) x [(3) + .5 x (5)]	16,369,114	19,455,634	24,214,114	28,956,713
(9) Invest. Income in Excess of Projected	34,645,847	34,862,759	29,150,387	17,950,547
(9a) Allocation to Future Benefits Increase Reserve (FBIR) (ACTUAL)		10,870,740	9,129,468	5,216,866
(9b) Allocation to Funding Value of Assets ((9) – (9a))		23,992,019	20,020,919	12,733,681
(10) Excess Investment Income Recognized (4 Year Recognition)				
(10a) From Current Year = .25 x (9b)	8,661,462	5,998,005	5,005,230	3,183,420
(10b) From One Year Prior	4,365,722	8,661,462	5,998,005	5,005,230
(10c) From Two Years Prior	4,005,976	4,365,722	8,661,462	5,998,005
(10d) From Three Years Prior	-	4,005,976	4,365,723	8,661,461
(11) Start Up Phase In*	3,766,824	3,766,824	0	0
(12) Changes in Funding Value = (5) + (8) + (9a)(10)[a..d] + (11)	34,723,330	53,821,268	52,172,371	52,866,395
<b>End of Year Values</b>				
(13) Book Value	179,812,180	209,247,828	258,049,796	285,234,761
(4) Market Value	260,313,893	311,329,191	359,492,061	402,244,021
(14) Preliminary Funding Value (3) + (12)	217,825,262	271,646,530	323,818,901	376,685,296
(15) Reserve for ad hoc pension increases (FBIR)	3,789,903	29,761,967	40,481,995	46,908,586
(16) Funding Value (14)-(15)	214,035,359	241,884,563	283,336,906	329,776,710
Funding Value Adjustment (14)-(13)	38,013,082	62,398,702	65,769,105	91,450,535

\* 25% of Initial year beginning of year difference between market and book value allocated from 1995 through 1998.

## Summaries of Retired Members and Survivors - June 30, 2000

Pensions Being Paid	Number	Annual Pensions	Average Pensions
Retired Members			
- Service Pensions	444	\$11,787,205	\$26,548
- Disability Pensions	15	642,741	42,849
- Totals	459	12,429,946	27,080
Children with Guardians	1	27,131	27,131
Survivors of Members	129	2,639,697	20,463
- Totals	130	2,666,828	20,514
<b>Total Pensions Being Paid</b>	<b>589</b>	<b>\$15,096,774</b>	<b>\$25,631</b>

### Type of Pensions - June 30, 2000

Attained Ages	Service		Disability		Survivors		Totals	
	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions
Children with Guardians		\$ -		\$ -	1	\$ 27,131	1	\$ 27,131
40-45	7	157,361			1	58,760	8	216,121
45-49	21	515,783	2	132,012	11	246,129	34	893,924
50-54	26	753,847	1	16,244	6	176,925	33	947,016
55-59	48	1,476,002	2	42,199	20	361,960	70	1,880,161
60-64	99	3,176,462	6	271,982	9	307,624	114	3,756,068
65-69	96	2,605,767	2	66,850	19	467,610	117	3,140,227
70-74	80	1,989,106	2	113,454	29	539,006	111	2,641,566
75-79	38	602,910			18	340,784	56	943,694
80-84	20	348,317			9	84,626	29	432,943
85-89	7	139,809			5	37,121	12	176,930
90-94	1	8,450			2	19,152	3	27,602
95-99							0	-
100-104	1	13,391					1	13,391
<b>Totals</b>	<b>444</b>	<b>\$11,787,205</b>	<b>15</b>	<b>\$642,741</b>	<b>130</b>	<b>\$2,666,828</b>	<b>589</b>	<b>\$15,096,774</b>

#### Group Averages:

Average Service: 14.1 years.  
Average Age Now: 71.2 years.

## Retired Members and Survivors Historical Comparison

Valuation Date	No. Removed from Rolls		No. Added to Rolls	Total	Retired		Annual Pensions
	A	E			Members	Survivors	
6-30-85 *				247	200	47	\$ 2,142,900
6-30-86				262	211	51	2,564,083
6-30-87				281	231	50	3,056,235
6-30-88				291	239	52	3,238,986
6-30-89	14	15	55	332	276	56	4,236,583
6-30-90	11	15	22	343	282	61	4,830,529
6-30-91	18	16	40	365	303	62	5,532,233
6-30-92	17	16	27	375	309	66	5,980,662
6-30-93	19	18	65	421	352	69	7,541,157
6-30-94	19	17	31	433	358	75	7,936,942
6-30-95	19	21	52	466	384	82	9,005,617
6-30-96	23	20	29	472	383	89	9,567,636
6-30-97	22	21	46	496	395	101	10,442,249
6-30-98	20	21	37	513	404	109	11,143,500
6-30-99	20	23	54	547	424	123	13,122,722
6-30-00	21	22	63	589	459	130	15,096,774

Valuation Date	Actuarial Present Value of Pensions		Average Pension	Ratio of Active Members to Pension Recipients	Pension Payroll as Percent of Member Payroll
	Total	Average			
6-30-85 **	\$ 16,396,272	\$ 66,382	\$ 8,676	2.1 to 1	12.1%
6-30-86	19,653,312	75,013	9,787	2.0 to 1	14.4%
6-30-87	23,659,836	84,199	10,876	1.9 to 1	15.0%
6-30-88	25,046,232	86,070	11,131	1.8 to 1	15.1%
6-30-89	34,564,836	104,111	12,761	1.8 to 1	17.2%
6-30-90	38,245,692	111,503	14,083	1.8 to 1	18.7%
6-30-91	43,269,134	118,546	15,157	1.8 to 1	19.9%
6-30-92	46,419,132	123,784	15,948	1.8 to 1	21.5%
6-30-93	59,612,988	141,599	17,912	1.7 to 1	25.4%
6-30-94	63,402,708	146,427	18,330	1.6 to 1	26.8%
6-30-95 **	73,796,676	155,224	19,325	1.6 to 1	29.7%
6-30-96	77,021,628	163,181	20,270	1.4 to 1	31.9%
6-30-97	84,334,344	170,029	21,053	1.5 to 1	31.0%
6-30-98	88,885,866	173,267	21,722	1.4 to 1	27.6%
6-30-99 ***	107,153,382	195,893	23,990	1.3 to 1	30.5%
6-30-00	124,211,100	210,885	25,631	1.2 to 1	36.6%

\* Reflects the 1985 amendment consolidating the Judges' Retirement System and the Elected Officials' Retirement Plan.

\*\* Reflects assumption changes.

\*\*\* Reflects assumption and benefit provision changes.

A: Actual number.

E: Expected number based on estimates of future experience (actuarial assumptions).

## Active Members Included in Valuation Historical Comparison

Valuation Date	Active Members	Valuation Payroll	Averages *		
			Age	Service	Pay
6-30-85 **	525	\$17,691,284	51.0 yrs.	7.5 yrs.	\$33,698
6-30-86	517	17,841,908	51.3	7.9	34,510
6-30-87	526	20,409,034	51.2	7.7	38,800
6-30-88 #	583	21,444,316	52.1	7.6	36,783
6-30-89	596	24,604,684	51.5	7.6	41,283
6-30-90	624	25,775,539	52.0	8.0	41,307
6-30-91	671	27,837,828	51.6	7.6	41,487
6-30-92	658	27,777,496	52.2	8.1	42,215
6-30-93	713	29,708,430	51.8	7.2	41,667
6-30-94	710	29,633,460	52.2	7.8	41,737
6-30-95	725	30,323,760	51.7	7.5	41,826
6-30-96	684	29,967,247	52.0	7.8	43,913
6-30-97	726	33,895,676	52.0	7.5	46,688
6-30-98	713	40,440,812	52.4	7.9	56,719
6-30-99	709	43,086,578	52.6	7.7	60,771
6-30-00	720	45,381,799	53.0	8.0	63,030

\* Group averages are not used in the actuarial computations but are computed and shown because of their general interest.

\*\* Reflects the 1985 amendment consolidating the Judges' Retirement System and the Elected Officials' Retirement Plan.

# Includes participating municipalities pursuant to a 1987 amendment beginning with the June 30, 1988 valuation.

## Number Added to and Removed from Active Membership

Year Ended	Number Added		Terminations During Year										Members End of Year
	During Year		Normal Retirement		Disability Retirement		Died-in Service		Termination				
	A	E	A	E	A	E	A	E	Vested	Other	Total		
	A	E	A	E	A	E	A	E	A	A	A	E	
6-30-90	64	36	9	33	3	1	2	4	13	9	22	24	624
6-30-91	105	58	31	39	0	1	2	5	5	20	25	24	671
6-30-92	50	63	15	47	0	1	4	5	8	36	44	25	658
6-30-93	139	84	51	47	3	1	0	5	2	28	30	25	713
6-30-94	28	31	12	39	2	1	3	5	0	14	14	29	710
6-30-95	93	90	37	46	0	1	0	5	12	29	41	28	725
6-30-96	42	83	15	45	1	1	2	3	34	31	65	22	684
6-30-97	104	62	30	48	0	2	4	3	5	23	28	30	726
6-30-98	57	70	11	47	5	3	0	3	22	32	54	32	713
6-30-99	96	100	38	50	0	3	4	3	38	20	58	30	709
6-30-00	62	51	20	75	1	2	1	3	14	15	29	19	720

## Active Members as of June 30, 2000 By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	1	1						2	\$ 46,570
25-29	3							3	55,200
30-34	10	3						13	317,344
35-39	22	9	1					32	1,563,859
40-44	45	29	3	3				80	4,837,730
45-49	57	45	21	4				127	9,160,894
50-54	57	40	34	18	9	3		161	11,616,635
55-59	41	44	20	18	5	2		130	8,862,821
60	4	4	2	5	1	2		18	1,116,508
61	6	6	2	3	4	1		22	947,011
62	4	4	7	5	3			23	1,555,156
63	2	8	1	2				13	741,408
64	3	7	1	2	1	1		15	849,540
65	6	4	2	3	2	1		18	972,500
66	2	4	2	2				10	561,850
67	2	3		3				8	457,675
68	3	7		1	3			14	713,184
69		2	2	1				5	226,516
70 & Over	8	6	3	4	1	3	1	26	779,398
<b>Totals</b>	<b>276</b>	<b>226</b>	<b>101</b>	<b>74</b>	<b>29</b>	<b>13</b>	<b>1</b>	<b>720</b>	<b>\$45,381,799</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

### Group Averages:

Age: 53.0 years.  
Service: 8.0 years.  
Annual Pay: \$63,030.

## Inactive Members as of June 30, 2000 By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
30-34	2							2
35-39	7	1						8
40-44	7	5						12
45-49	13	14	2	1				30
50-54	10	17	9	4				40
55-59	8	17	7	2		1		35
60		2	2					4
61	1	1	2					4
62	1	1	1					3
63	3	2	1					6
64			2					2
65	2	2	1					5
66	1	2	1					4
67		2						2
69			1					1
70	1							1
71	1							1
73	1		1	1				3
75			1					1
<b>Totals</b>	<b>58</b>	<b>66</b>	<b>31</b>	<b>8</b>		<b>1</b>		<b>164</b>

## **Section C**



### **Summary of Valuation Methods and Assumptions**

## Summary of Valuation Methods

The *actuarial cost method* used for the valuation was the individual entry age normal cost method.

*Normal cost contributions* were computed as follows:

The series of contributions, payable from date of employment, sufficient to accumulate at time of retirement the discounted value of each member's projected pension and potential survivors pension was computed, using the assumptions summarized on the following pages, so that each contribution in the series is a constant percentage of the member's year by year projected compensation (entry age normal cost).

*Actuarial accrued liability* was computed and financed as follows:

- (1) Retirants and beneficiaries. The discounted value of pensions likely to be paid retired members and their potential survivors was computed using the investment return and mortality assumptions. The computed amount was fully funded by applicable accrued assets.
- (2) Active members and former members. The actuarial accrued liability associated with service rendered prior to the valuation date was computed using the investment return, mortality and other factors outlined on the following pages. Applicable accrued assets exceeded the computed actuarial accrued liability. The difference, including actuarial gains (losses), was amortized as a level percent of payroll over an open period of 20 years and applied as a credit to the computed employer normal cost.



## Summary of Valuation Assumptions

*The rate of investment return* used was 9.0 percent a year, compounded annually. The assumption consists of 3.5% for assuming maturity and principal risks and 5.5% in recognition of inflation. These components, adopted by the Fund Manager, as recommended by the Plan's actuary, were first used for the June 30, 1989 annual valuation.

This assumption is used to discount the value of future payments.

*The rates of salary increase* used are in accordance with the following table. The assumption is used to project current salaries to those upon which pension amounts will be based. These components, adopted by the Fund Manager, as recommended by the Plan's actuary, were first used for the June 30, 1989 annual valuation.

Sample Ages	Percent Increase in Salary During Following Year		
	Inflation	Other	Total
20	5.5%	1.5%	7.0%
25	5.5%	1.5%	7.0%
30	5.5%	1.5%	7.0%
35	5.5%	1.5%	7.0%
40	5.5%	1.5%	7.0%
45	5.5%	1.5%	7.0%
50	5.5%	1.5%	7.0%
55	5.5%	1.5%	7.0%
60	5.5%	1.5%	7.0%
65	5.5%	1.5%	7.0%

## Summary of Valuation Assumptions

*The mortality table* used was the 1971 Group Annuity Mortality Table Projected to 2000 (Male), female ages set back 6 years.

Sample Ages	Single Life Retirement Values					
	Deaths		Present Value of			
	Per 1000		\$100 Monthly for Life		Expectancy (Years)	
	Men	Women	Men	Women	Men	Women
20	0.4	0.3			56.86	62.72
25	0.5	0.4			51.98	57.83
30	0.7	0.5			47.12	52.95
35	0.9	0.6			42.29	48.09
40	1.4	0.9	\$12,930	\$ 3,272	37.51	43.25
45	2.4	1.2	12,522	12,997	32.80	38.46
50	4.4	2.1	11,997	12,613	28.28	33.73
55	7.1	3.9	11,342	12,112	23.98	29.17
60	10.9	6.5	10,513	11,485	19.90	24.82
65	17.7	9.9	9,490	10,694	16.09	20.70
70	30.7	15.9	8,326	9,710	12.69	16.82
75	48.4	27.4	7,124	8,564	9.82	13.32
80	78.7	44.6	5,880	7,371	7.39	10.36
85	120.6	71.4	4,791	6,120	5.57	7.83
90	171.3	111.7	3,864	4,994	4.19	5.89

This assumption, adopted by the Fund Manager, as recommended by the Plan's actuary, is used to measure the probabilities of members dying before retirement and the probabilities of each pension payment being made after retirement and was first used for the June 30, 1999 annual valuation.

## Summary of Valuation Assumptions

*The rates of retirement* used to measure the probability of eligible members retiring during the next year were as follows:

<b>Age</b>	<b>Percent of Active Members Retiring During Next Year</b>
40	8%
41	8%
42	8%
43	8%
44	8%
45	8%
46	8%
47	8%
48	8%
49	8%
50	8%
51	8%
52	8%
53	8%
54	8%
55	5%
56	5%
57	5%
58	5%
59	5%
60	15%
61	10%
62	25%
63	15%
64	10%
65	20%
66	20%
67	20%
68	20%
69	20%
70	100%

Active members are eligible to retire early at any age with 5 years of service, or normally at any age with 20 years of service, at 60 with 25 years of service, at age 62 with 10 years of service, or age 65 with 5 years of service. The probability of retiring during each future year is 20% for those members who become eligible for normal retirement via the any age with 20 years of service eligibility condition. Pensions were assumed to be decreased 3/12 of 1% for each month age at early retirement precedes normal retirement age, with a maximum reduction of 30%.

These rates, adopted by the Fund Manager, as recommended by the Plan's actuary, were first used for the June 30, 1999 annual valuation.

## Summary of Valuation Assumptions

*The rates of separation for active membership* were as follows:

Rates do not apply to members eligible to retire and do not include separation on account of death. This assumption measures the probabilities of members remaining in employment. These rates, adopted by the Fund Manager, as recommended by the Plan's actuary, were first used for the June 30, 1999 annual valuation.

Sample Ages	Years of Service	Percent of Active Members Separating within Next Year	Percent of Active Members Becoming Disabled within Next Year (all years of service)
ALL	0	8.0%	
	1	8.0%	
	2	8.0%	
	3	8.0%	
	4	8.0%	
25	5 & Over	6.0%	0.04%
30		6.0%	0.04%
35		6.0%	0.04%
40		6.0%	0.10%
45		6.0%	0.13%
50		6.0%	0.25%
55		6.0%	0.45%
60	6.0%	0.71%	

## **Section D**



**Disclosures and Supplementary Information  
Required by Statements No. 25 and  
No. 27 of the Governmental  
Accounting Standards Board**

## Actuarial Accrued Liability

The actuarial accrued liability is a measure intended to help users assess (i) a pension fund's funded status on a going concern basis, and (ii) progress being made toward accumulating the assets needed to pay benefits as due. Allocation of the actuarial present value of projected benefits between past and future service was based on service using the individual entry-age actuarial cost method. Assumptions, including projected pay increases, were the same as used to determine the System's level percent of payroll annual required contribution between entry-age and assumed exit age. Entry-age was established by subtracting credited service from current age on the valuation date.

The preceding methods comply with the financial reporting standards established by the Governmental Accounting Standards Board.

The entry age actuarial accrued liability was determined as part of an actuarial valuation of the plan as of June 30, 2000. Significant actuarial assumptions used in determining the entry age actuarial accrued liability include (a) a rate of return on the investment of present and future assets of 9.00% per year compounded annually, (b) projected salary increases of 5.5% per year compounded annually, and (c) additional projected salary increases of 1.5% per year attributable to seniority/merit.

### Actuarial Accrued Liability:

Active members	\$123,381,615
Retired members and beneficiaries currently receiving benefits	126,895,258
Vested terminated members not yet receiving benefits	<u>3,200,729</u>
Total Actuarial Accrued Liability	253,477,602
Actuarial Value of Assets (market value was \$402,244,021)	<u>329,776,710</u>
Assets in Excess of Actuarial Accrued Liability	<u>\$ 76,299,108</u>

## Required Supplementary Information

### Schedule of Employer Contributions

Fiscal Year July 1,	Actuarial Valuation Date June 30	Annual Required Contribution	Percent Contributed
1992	1991	\$4,941,470	100.0 %
1993	1992	5,555,890	100.0
1994	1993	5,224,545	100.0
1995	1994	4,886,479	100.0
1996	1995	4,934,939	100.0
1997	1996	3,668,144	100.0
1998	1997	3,941,018	100.0
1999	1998	4,126,694	100.0
2000	1999	3,851,940*	
2001	2000	3,163,111*	

\* Projected amount: Actual required contribution dollar amount will be based on the statutory contribution rate and the actual pensionable payroll for the period.

## Required Supplementary Information

### Schedule of Funding Progress

Valuation Date June 30	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2)-(1)	(5) Annual Covered Payroll	(6) Unfunded AAL as a Percentage of Covered Payroll (4)/(5)
1996	\$181,754,055	\$158,125,654	114.9%	\$(23,628,401)	\$29,967,247	-%
1997	214,035,359	169,592,781	126.2%	(44,442,577)	33,895,676	-%
1998	241,884,563	199,662,358	121.1%	(42,222,205)	40,440,812	-%
1999	283,336,906	227,100,114	124.8%	(56,236,792)	43,086,578	-%
2000	329,776,710	253,477,602	130.1%	(76,299,108)	45,381,799	-%

## Three Year Trend Information

Fiscal Year Ended June 30,	Annual Pension Cost (APC)	Percent Contributed	Net Pension Obligation
1995	\$5,224,545	100%	0
1996	4,886,479	100%	0
1997	4,934,939	100%	0
1998	3,668,144	100%	0
1999	3,941,018	100%	0
2000	4,126,694	100%	0

## Notes to Required Supplementary Information Summary of Actuarial Methods and Assumptions

Valuation Date	June 30, 2000
Actuarial Cost Method	Individual Entry Age
Amortization Method	Level Percent of payroll, open
Remaining Amortization Period	20 years
Asset Valuation Method	4-year smoothed market
Actuarial Assumptions:	
Investment Rate of Return*	9.00%
Projected Salary Increases*	7.00%
*Includes Inflation	5.50%

Membership data as of June 30, 2000 is contained in Section B of this report.