



**CITY OF DETROIT
GENERAL RETIREMENT SYSTEM**

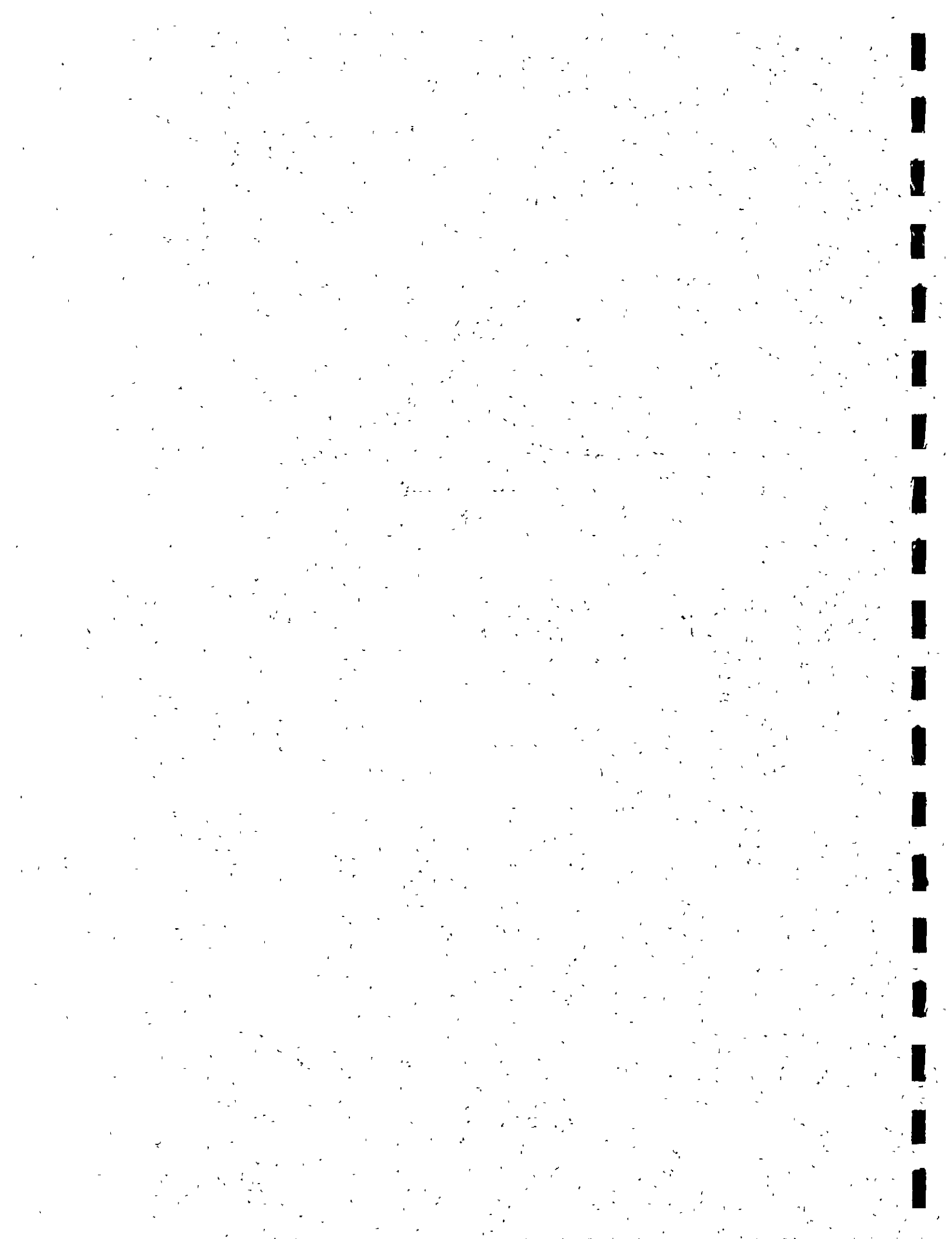
**63RD ANNUAL ACTUARIAL VALUATION
June 30, 2001**

GABRIEL, ROEDER, SMITH & COMPANY

GRS

ACTUARIES AND CONSULTANTS





OUTLINE OF CONTENTS

Section	Pages	Items
	1	Cover Letter
A		Retirement System Totals
	1	COMPUTED EMPLOYER CONTRIBUTIONS
	2	Actuarial accrued liabilities
	3	Comparative schedule of valuation results
	4	Comments
	5	Solvency tests
	6	Assets included in valuation
	7	Funding Value of Assets
	8	History of assets and accrued liabilities (graph)
	9-16	Member data included in valuation
	17-18	Summary of benefit provisions
B		Divisions Separately Experience Rated
	1	Member data included in valuation
	2	Assets included in valuation
	3	Actuarial accrued liabilities
	4	Experience gains/losses
	5	Member data - historical schedule
	6	Computed contributions - historical comparison
C		Financial Disclosures
	1-2	GASB Statement No. 25
D		Financial Principles
	1	Financing diagram
	2	Actuarial valuation process
	3-4	Financial objective
E		Appendix
	1-5	Summary of assumptions used in actuarial valuations
	6	Meaning of unfunded actuarial accrued liabilities
	7-8	Glossary



GABRIEL, ROEDER, SMITH & COMPANY

Consultants & Actuaries

1000 Town Center • Suite 1000 • Southfield, Michigan 48075 • 248-799-9000 • 800-521-0498 • fax 248-799-9020

November 27, 2001

The Board of Trustees
City of Detroit General Retirement System

Dear Board Members:

The results of the **63rd Annual Actuarial Valuations** of the annuity and pension liabilities of the City of Detroit General Retirement System are presented in this report. The purpose of the valuations was to measure the system's funding progress and to determine contribution rates for the ensuing fiscal year in accordance with the established funding policy. Six divisions are evaluated separately.

The date of the valuations was **June 30, 2001**.


The valuations were based upon records maintained and furnished by the retirement system staff concerning active members, retirees and beneficiaries, and financial accounts. The assumptions used in the valuations concerning future financial experience are summarized in the Appendix of this report.

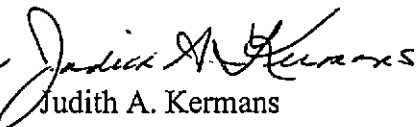
Your attention is directed particularly to the comments on page A-4 and the contribution rates on page A-1.

The valuation was completed using generally accepted actuarial principles and in accordance with standards of practice prescribed by the Actuarial Standards Board. To the best of our knowledge this report is complete and accurate and the actuarial methods and assumptions produce results which are reasonable.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

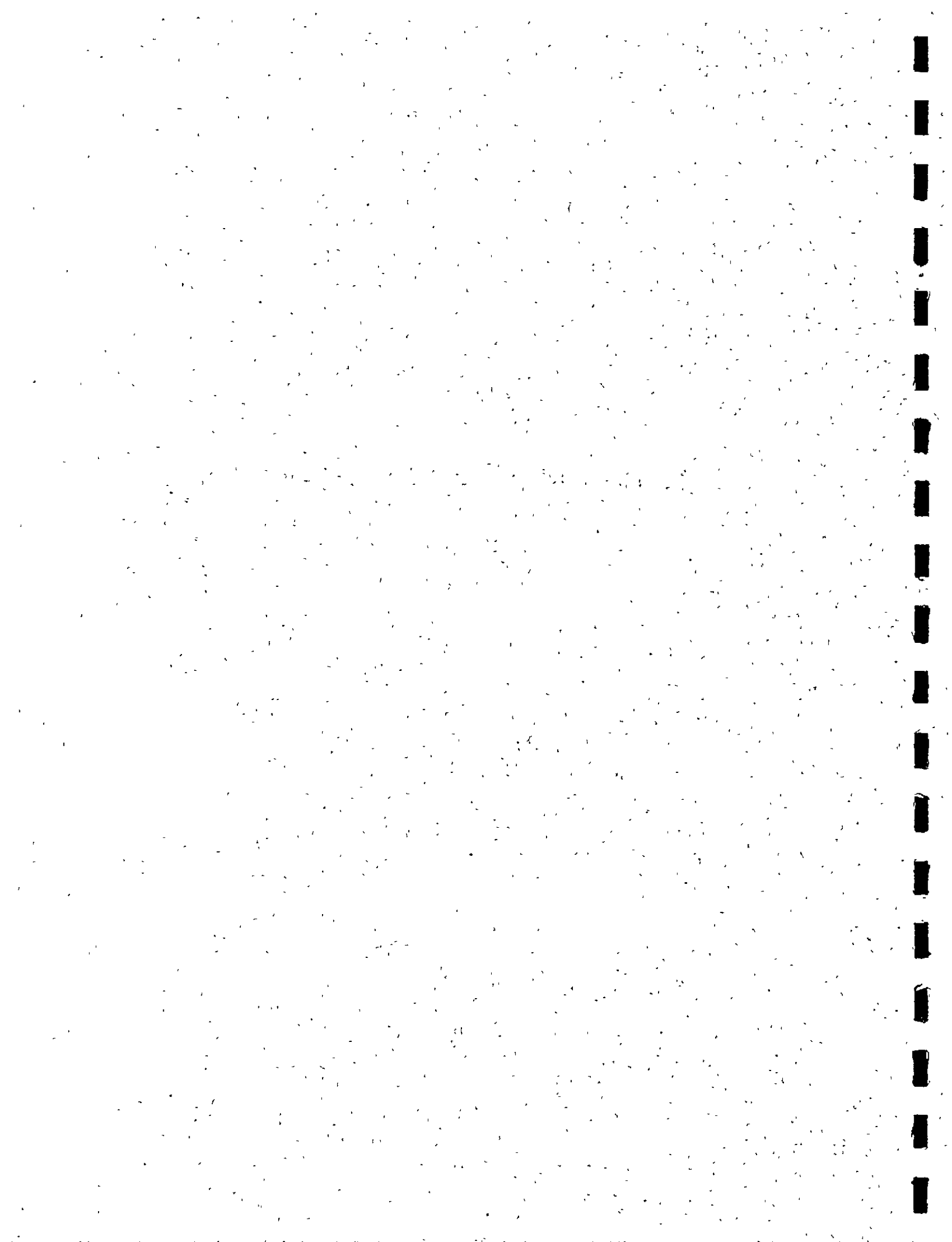

Norman L. Jones


Judith A. Kermans

NLJ/rgs

SECTION A

Retirement System Totals



**SUMMARY OF COMPUTED EMPLOYER CONTRIBUTION RATES
2002-2003 FISCAL YEAR**

Contributions for	Contributions Expressed as a Percent of Payroll					
	General City	D.O.T.	Water	Sewage	Housing	Library
Normal Cost:						
Age & Service Pensions	7.33 %	6.67 %	6.98 %	6.90 %	7.58 %	7.47 %
Disability Pensions	1.79 %	1.04 %	1.85 %	1.77 %	1.51 %	1.83 %
Death-in-Service Pensions	0.33 %	0.32 %	0.38 %	0.40 %	0.35 %	0.26 %
Employer Normal Cost	9.45 %	8.03 %	9.21 %	9.07 %	9.44 %	9.56 %
Unfunded Actuarial Accrued Liabilities#	6.47 %	7.33 %	9.91 %	(9.07)%	(0.19)%	(0.36)%
Computed Employer Contribution Rates	15.92 %	15.36 %	19.12 %	0.00 %	9.25 %	9.20 %
(Change from last yr.)	0.73 %	0.99 %	2.00 %	- 0.00 %	0.24 %	2.23 %

Unfunded actuarial accrued liabilities (UAAL) were amortized over various periods of future years as described on page A4.

ACTUARIAL ACCRUED LIABILITIES AS OF JUNE 30, 2001
RETIREMENT SYSTEM TOTALS

Present Value, June 30	
Accrued Pension Liabilities	
Retirees and beneficiaries	
Future pensions	\$1,264,523,435
Mortality reserve	0
Total	1,264,523,435
Inactive members future deferred pensions	103,365,878
Active members	1,063,815,597
Total accrued pensions	2,431,704,910
Pension fund balances	2,167,260,029
Unfunded accrued pension liabilities	\$ 264,444,881
Accrued Annuity Liabilities	
Retirees and beneficiaries	
Future annuities	\$ 27,095,040
Mortality reserve	0
Total	27,095,040
Member annuities & future refunds	720,801,264
Total accrued annuity liabilities	747,896,304
Annuity fund balances	744,886,360
Unfunded accrued annuity liabilities	\$ 3,009,944
Totals	
Actuarial Accrued Liabilities	\$3,179,601,214
Accrued Assets	2,912,146,389
Unfunded Actuarial Accrued Liabilities	\$ 267,454,825

VALUATION RESULTS - COMPARATIVE STATEMENT

----- \$ IN MILLIONS -----

RETIREMENT SYSTEM TOTALS

June 30	Active Payroll		% of Payroll Contributions For			Actuarial Accrued Liabilities			Unfunded/ Active Pay
			Normal Cost	UAAL	Total	Computed Total	Accrued Assets	Unfunded	
	Total	Average							
1985	\$281.4	\$22,123	8.85%	8.37%	17.22%	\$1,545.3	\$1,227.9	\$317.4	1.13
1986	299.9	22,339	8.61%	7.21%	15.82%	1,625.9	1,342.4	283.5	0.95
1987	321.4	23,563	9.05%	5.82%	14.87%	1,718.1	1,471.7	246.4	0.77
1988(a)	326.2	24,403	9.33%	5.57%	14.90%	1,816.9	1,585.9	231.0	0.71
1989	331.6	24,462	9.26%	4.76%	14.02%	1,869.8	1,678.3	191.5	0.58
1990	352.6	26,700	9.22%	5.24%	14.46%	1,983.0	1,768.9	214.1	0.61
1991	362.5	27,997	8.80%	5.09%	13.89%	2,034.7	1,832.4	202.3	0.56
1992(a)#	344.3	28,369	8.48%	1.13%	9.61%	1,998.8	1,930.3	68.5	0.20
1993(a)	331.0	28,763	8.02%	2.08%	10.10%	2,114.2	1,983.8	130.4	0.39
1994	325.4	28,591	8.06%	2.73%	10.79%	2,192.8	2,041.9	150.9	0.46
1995	327.6	28,451	8.11%	4.80%	12.91%	2,275.2	2,043.4	231.8	0.71
1996	360.1	29,729	8.14%	3.44%	11.58%	2,382.8	2,193.2	189.6	0.53
1997(a)	382.8	30,951	7.91%	3.93%	11.84%	2,528.5	2,333.4	195.1	0.51
1998(a)#	387.0	31,565	9.30%	4.45%	13.75%	2,814.9	2,582.1	232.8	0.60
1999#	383.4	31,989	9.29%	3.97%	13.26%	2,900.4	2,756.6	143.8	0.38
2000	417.2	34,345	9.22%	4.15%	13.37%	3,077.0	2,902.4	174.6	0.42
2001	439.6	34,497	9.22%	5.05%	14.27%	3,179.6	2,912.1	267.5	0.61

After plan amendments.

(a) After changes in actuarial assumptions.

COMMENTS

Experience During the Past Year

During the year ended June 30, 2001, overall Retirement System experience was less favorable than assumed. The recognized rate of investment return was substantially less than assumed, even with the recognition of gains phased-in from prior years (see page A-7). This year's market value loss of \$352 million will be phased in over a 3 year period.

Pension Funding Policy

The Board policy for financing unfunded actuarial accrued liabilities (UAAL) is as follows:

1. The remaining portion of June 30, 1992 and June 30, 1998 unfunded actuarial accrued liabilities are financed over a closed amortization period with 20 years remaining as of June 30, 2001.
2. Actuarial experience gains and losses incurred after June 30, 1992 are over a 15 year open (perpetual) amortization period.
3. Changes in unfunded actuarial accrued liabilities due to increased benefits to present retired lives are amortized over a 15 year closed amortization period beginning with the effective date of the increase.
4. Changes in unfunded actuarial accrued liabilities due to increased benefits for active members are financed over a 25 year closed amortization period beginning with the effective date of the increase.

Overall Financial Condition

The Retirement System is in good actuarial condition in accordance with the principles of level percent-of-payroll financing.

SOLVENCY TESTS

The DGRS funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will pay all promised benefits when due -- the ultimate test of financial soundness. Testing for level contribution rates is *the long-term solvency test*.

A *short-term solvency test* is one means of checking a system's progress under its funding program. In a short-term solvency test, the plan's present assets (cash and investments) are compared with:

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

In a system that has been following the discipline of level percent-of-payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the System.

SHORT-TERM SOLVENCY TEST 5 YEAR COMPARATIVE STATEMENT

June 30	Actuarial Accrued Liabilities			Valuation Assets	Portion of Accrued Liabilities Covered by Assets			
	(1) Active Member Contr.	(2) Retirees and Benef.	(3) Present Members (Employer-Financed Portion)		(1)	(2)	(3)	Total
	1997(a)	\$ 524	\$ 1,187		\$ 817	\$ 2,333	100%	100%
1998(a)#	626	1,211	978	2,582	100%	100%	76%	92%
1999#	706	1,214	981	2,757	100%	100%	85%	95%
2000	726	1,265	1,086	2,902	100%	100%	84%	94%
2001	721	1,292	1,167	2,912	100%	100%	77%	92%

(a) After changes in actuarial assumptions.

After plan amendments.

**ASSET INFORMATION
FURNISHED FOR VALUATION
RETIREMENT SYSTEM TOTALS**

Reserve Accounts

Funds	Fund Balances	
	June 30, 2001	June 30, 2000
Annuity Savings	\$ 720,801,264	\$ 725,956,047
Annuity Reserve	24,085,096	25,576,021
Pension Accumulation	942,566,848	912,057,915
Pension Reserve	1,224,693,181	1,238,843,080
Total Fund Balances	\$2,912,146,389	\$2,902,433,063

Revenues and Expenditures

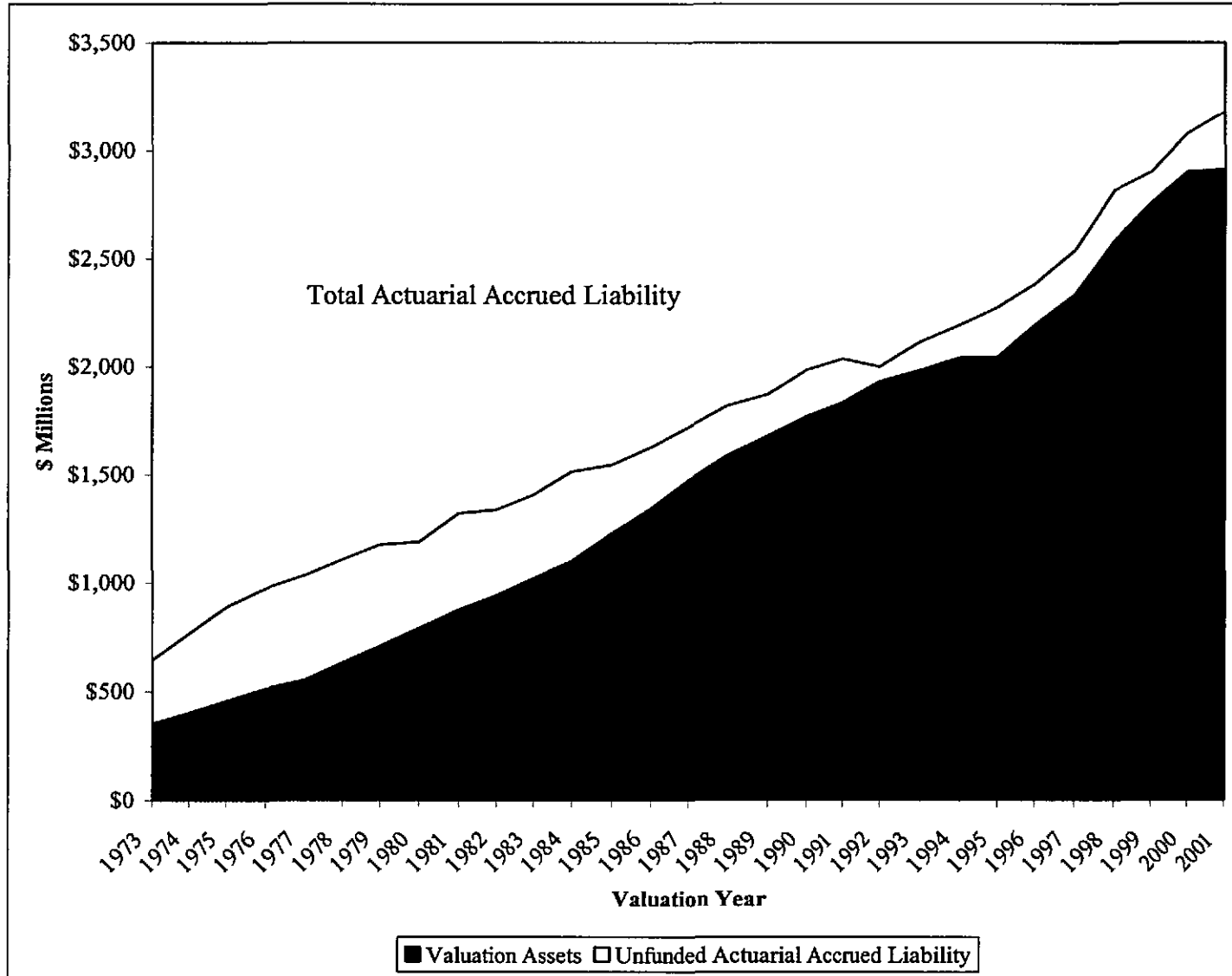
	Pension Funds	Annuity Funds	Total Funds
Balance, July 1, 2000	\$2,150,900,995	\$751,532,068	\$2,902,433,063
Revenues			
Member contributions	46,618	25,432,043	25,478,661
Employer contributions	68,139,535	0	68,139,535
Recognized investment income	84,049,805	54,369,984	138,419,789
Transfers	1,098,266	(1,098,266)	0
Total	\$ 153,334,224	\$ 78,703,761	\$ 232,037,985
Expenditures			
Benefit payments	132,808,650	3,195,254	136,003,904
Refund of member contributions	1,016,843	82,154,215	83,171,058
Administrative expenses	3,149,697	0	3,149,697
Total	\$ 136,975,190	\$ 85,349,469	\$ 222,324,659
Balance, June 30, 2001	\$2,167,260,029	\$744,886,360	\$2,912,146,389
Funding Value Rate of Return	3.8%	7.5%	4.8%

FUNDING VALUE OF ASSETS

Year Ended June 30:	1999	2000	2001	2002	2003
A. Funding Value Beginning of Year	\$2,582,099,884	\$2,756,614,458	\$2,902,433,063		
B. Market Value End of Year	2,845,862,826	2,947,791,076	2,691,006,082		
C. Market Value Beginning of Year	2,729,527,412	2,845,862,826	2,947,791,076		
D. Non-Investment Net Cash Flow(Contribution-Benefits)	(127,925,812)	(153,124,675)	(125,556,767)		
E. Investment Income					
E1. Market Total: B - C - D	244,261,226	255,052,925	(131,228,227)		
E2. Amount for Immediate Recogn: (A+D/2) x .079	190,184,262	214,054,389	220,981,501		
E3. Amount for Phased-In Recognition: E1-E2	54,076,964	40,998,536	(352,209,728)		
F. Phased-In Recognition of Investment Income					
F1. Current Year: E3/3	18,025,655	13,666,179	(117,403,243)		
F2. First Prior Year	53,197,057	18,025,655	13,666,179	\$(117,403,243)	
F3. Second Prior Year	41,033,413	53,197,057	18,025,656	13,666,178	\$(117,403,242)
F4. Total Recognized Investment Gain	112,256,125	84,888,891	(85,711,408)	(103,737,064)	(117,403,242)
G. Total Recognized Investment Income: (E2+F4)	302,440,387	298,943,280	135,270,093		
H. Funding Value End of Year: A + D + G	2,756,614,458	2,902,433,063	2,912,146,389		
I. Difference between Market & Funding Value: B - H	89,248,367	45,358,013	(221,140,307)	(117,403,242)	(0)
J. Recognized Rate of Return: G / [1/2(A+H-G)]	12.0%	11.2%	4.8%		
K. Market Value Rate of Return (net)	9.2%	9.2%	(4.5%)		

The Funding Value of Assets recognizes assumed investment income (line E2) fully each year. Differences between actual and assumed investment income (line E3) are phased in over a closed 3 year period. During periods when investment performance exceeds the assumed rate, the Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than market value. The Funding Value of Assets is unbiased with respect to Market Value. At any time it may be either greater or less than Market Value. If assumed rates are exactly realized for 2 consecutive years, it will become equal to Market Value.

ASSETS AND ACCRUED LIABILITIES



PERSONS IN VALUATIONS - COMPARATIVE STATEMENTS
RETIREMENT SYSTEM TOTALS

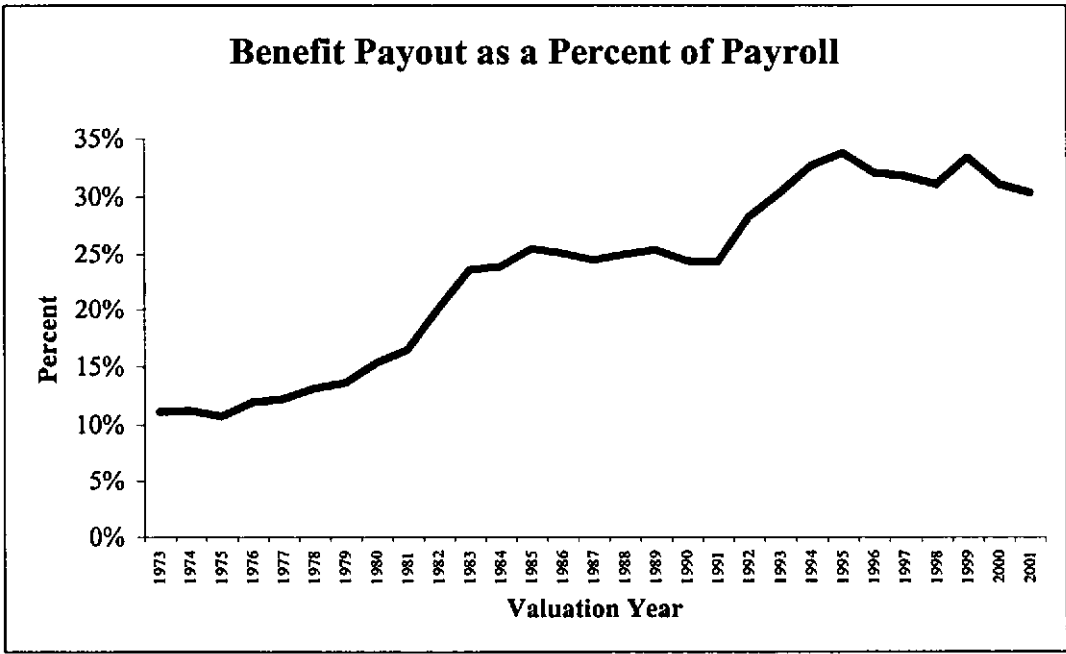
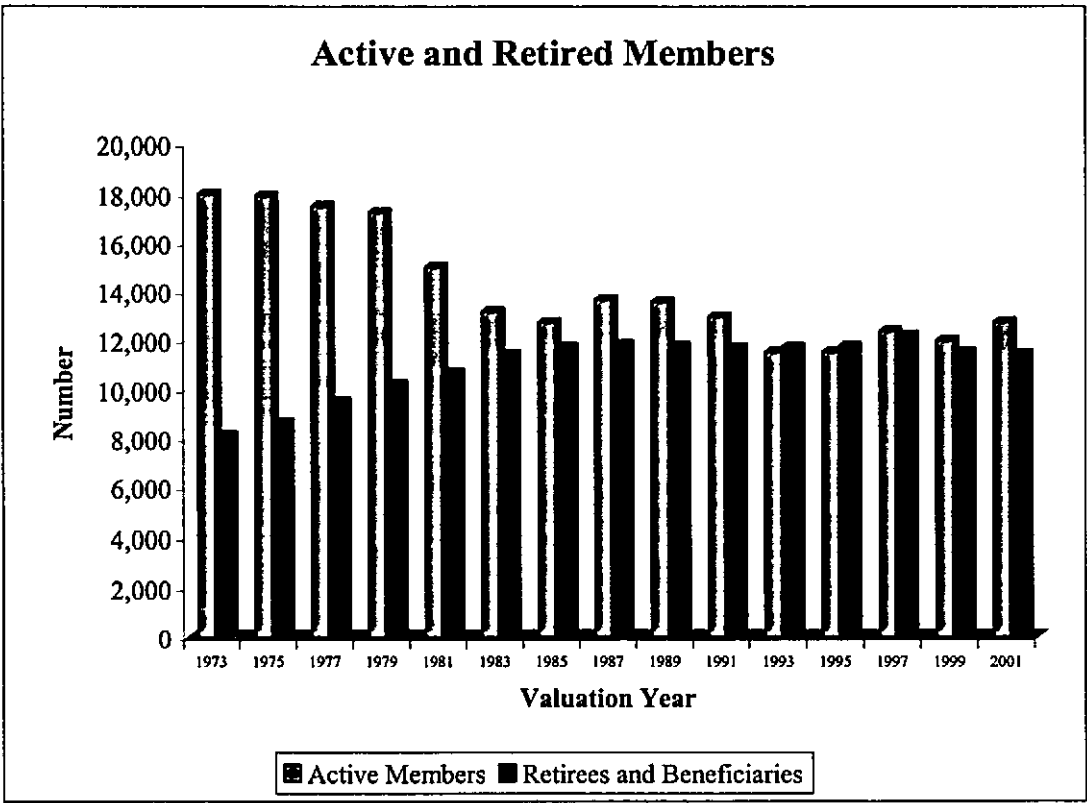
Active Members

June 30	Active Members		Annual Payroll	Group Averages			
	No.	Change		Average Pay		Age Years	Service Years
				\$	Change		
1973	18,004	(7.1)%	\$198,377,179	\$11,019	7.8 %	43.1	14.2
1974	17,930	(0.4)%	213,255,078	11,894	7.9 %	42.6	13.9
1975	17,935	0.0 %	243,372,127	13,570	14.1 %	42.7	13.7
1976	16,102	(10.2)%	247,803,284	15,390	13.4 %	43.2	14.7
1977	17,508	8.7 %	274,950,896	15,704	2.0 %	41.8	13.2
1978	17,475	(0.2)%	297,680,389	17,035	8.5 %	41.3	12.3
1979	17,258	(1.2)%	310,683,375	18,002	5.7 %	41.5	12.3
1980	15,881	(8.0)%	293,624,360	18,489	2.7 %	41.7	12.6
1981	14,993	(5.6)%	301,243,225	20,092	8.7 %	42.0	13.0
1982	13,730	(8.4)%	283,677,869	20,661	2.8 %	42.0	13.1
1983	13,156	(4.2)%	272,369,708	20,703	0.2 %	41.6	12.6
1984	13,172	0.1 %	288,048,279	21,868	5.6 %	41.5	12.0
1985	12,719	(3.4)%	281,378,439	22,123	1.2 %	41.5	11.9
1986	13,423	5.5 %	299,859,070	22,339	1.0 %	41.1	11.3
1987	13,640	1.6 %	321,402,755	23,563	5.5 %	40.9	11.0
1988	13,368	(2.0)%	326,216,082	24,403	3.6 %	41.0	11.1
1989	13,554	1.4 %	331,555,458	24,462	0.2 %	41.1	11.0
1990	13,207	(2.6)%	352,622,639	26,700	9.1 %	41.5	11.4
1991	12,949	(2.0)%	362,532,918	27,997	4.9 %	41.8	11.7
1992	12,137	(6.3)%	344,320,379	28,369	1.3 %	42.2	12.1
1993	11,508	(5.2)%	331,009,921	28,763	1.4 %	43.0	12.9
1994	11,382	(1.1)%	325,427,813	28,591	(0.6)%	43.1	12.8
1995	11,515	1.2 %	327,615,936	28,451	(0.5)%	42.2	12.6
1996	12,086	5.0 %	360,068,578	29,792	4.7 %	42.8	11.9
1997	12,369	2.3 %	382,835,917	30,951	3.9 %	42.8	11.7
1998	12,261	(0.9)%	387,022,423	31,565	2.0 %	43.3	11.8
1999	11,987	(2.2)%	383,449,421	31,989	1.3 %	43.7	12.1
2000	12,147	1.3 %	417,187,666	34,345	7.4 %	43.5	12.0
2001	12,744	4.9 %	439,636,072	34,497	0.4 %	43.3	11.7

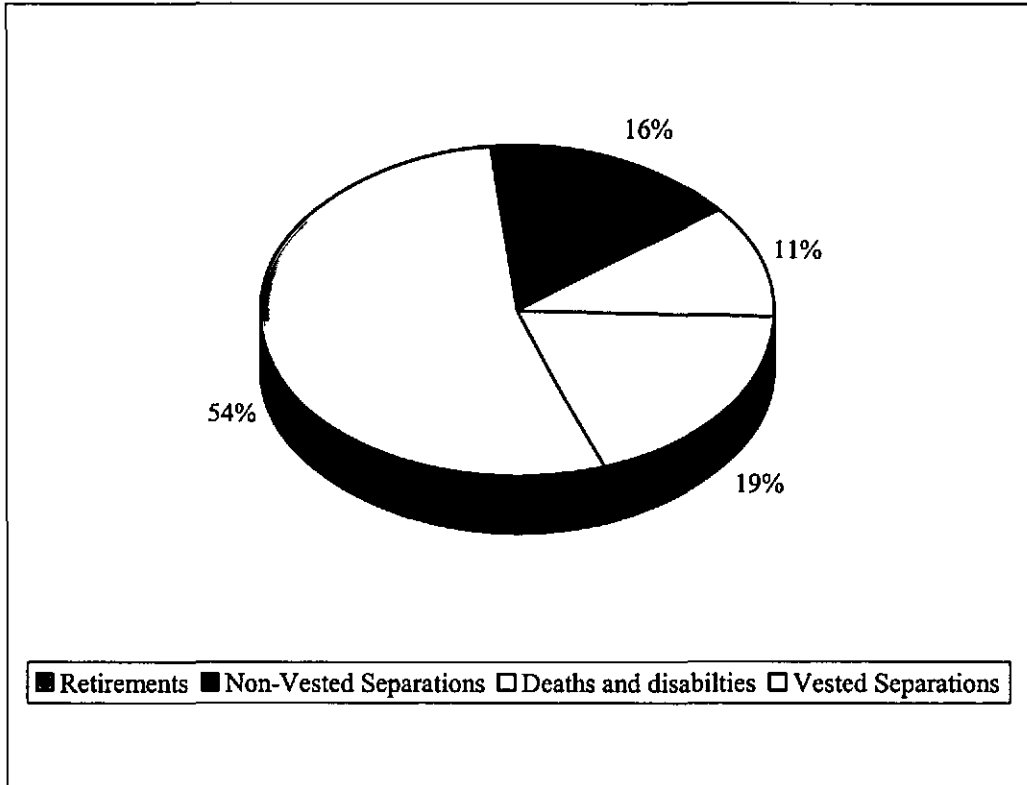
PERSONS IN VALUATIONS - COMPARATIVE STATEMENTS
RETIREMENT SYSTEM TOTALS

Retirees and Beneficiaries

June 30	No.	% of Current Allowances				Annual Allowances		
		Annuities	Initial Pensions	Escalators & Other Increases	Allow.	Total	Average	% of Payroll
1973	8,132	13.1%	72.8%	14.1%	100.0%	\$ 21,950,395	\$ 2,699	11.1%
1974	8,377	12.1%	74.1%	13.8%	100.0%	23,798,971	2,841	11.2%
1975	8,646	11.1%	74.2%	14.7%	100.0%	26,105,277	3,019	10.7%
1976	8,991	9.7%	76.2%	14.1%	100.0%	29,498,975	3,281	11.9%
1977	9,511	8.5%	78.3%	13.2%	100.0%	33,691,814	3,542	12.3%
1978	9,934	7.4%	79.6%	13.0%	100.0%	39,090,328	3,935	13.1%
1979	10,207	6.8%	82.4%	10.8%	100.0%	42,147,291	4,129	13.6%
1980	10,373	6.3%	81.0%	12.7%	100.0%	45,054,237	4,343	15.3%
1981	10,693	5.6%	81.7%	12.7%	100.0%	49,416,852	4,621	16.4%
1982	10,924	4.8%	77.7%	17.5%	100.0%	56,741,667	5,194	20.0%
1983	11,418	4.1%	79.6%	16.3%	100.0%	64,048,464	5,609	23.5%
1984	11,643	3.8%	80.4%	15.8%	100.0%	68,564,556	5,889	23.8%
1985	11,710	3.4%	80.6%	16.0%	100.0%	71,433,168	6,100	25.4%
1986	11,776	3.2%	80.7%	16.1%	100.0%	74,834,820	6,355	25.0%
1987	11,800	2.9%	80.2%	16.9%	100.0%	78,342,384	6,639	24.4%
1988	11,728	3.0%	80.0%	17.0%	100.0%	81,346,500	6,936	24.9%
1989	11,734	3.0%	79.8%	17.2%	100.0%	83,790,744	7,141	25.3%
1990	11,684	2.9%	79.1%	18.0%	100.0%	85,720,620	7,337	24.3%
1991	11,691	2.9%	78.7%	18.4%	100.0%	87,625,800	7,495	24.2%
1992	11,674	2.6%	76.5%	20.9%	100.0%	97,218,012	8,328	28.2%
1993	11,719	2.8%	77.7%	19.5%	100.0%	100,203,596	8,551	30.3%
1994	11,649	2.8%	76.9%	20.3%	100.0%	106,193,220	9,116	32.6%
1995	11,756	2.7%	76.7%	20.6%	100.0%	110,262,876	9,379	33.7%
1996	11,889	2.6%	75.5%	21.9%	100.0%	115,232,400	9,692	32.0%
1997	12,199	2.4%	74.4%	23.2%	100.0%	121,255,488	9,940	31.7%
1998	11,593	2.3%	73.7%	24.0%	100.0%	119,852,820	10,338	31.0%
1999	11,537	2.4%	76.6%	21.0%	100.0%	127,535,748	11,054	33.3%
2000	11,480	2.2%	77.7%	20.1%	100.0%	129,354,696	11,268	31.0%
2001	11,450	2.3%	77.7%	20.0%	100.0%	133,170,804	11,631	30.3%



EXPECTED TERMINATIONS FROM ACTIVE EMPLOYMENT FOR CURRENT ACTIVE MEMBERS



The chart shows the expected future development of the present population in simplified terms. The retirement system presently covers 12,744 active members. Eventually, 2,062 people are expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. 9,323 people are expected to receive monthly retirement benefits either by retiring directly from active service, or by retiring from vested deferred status. 1,359 people are expected to become eligible for death-in-service or disability benefits.

RETIRES AND BENEFICIARIES JUNE 30, 2001
TABULATED BY ATTAINED AGES
RETIREMENT SYSTEM TOTALS

Attained Ages	Age & Service		Disability		Death-in-Service		Totals	
	No.	Monthly Allowances	No.	Monthly Allowances	No.	Monthly Allowances	No.	Monthly Allowances
Under 20*	19	\$ 25,802			5	\$ 1,751	24	\$ 27,553
20-24	1	399					1	399
25-29	1	1,260	1	\$ 502			2	1,762
30-34	5	2,965	4	1,355	1	651	10	4,971
35-39	3	1,222	17	6,038			20	7,260
40-44	6	4,280	91	27,004	4	4,054	101	35,338
45-49	68	81,437	137	43,443	8	7,470	213	132,350
50-54	383	603,937	191	63,662	19	22,311	593	689,910
55-59	651	1,096,595	177	77,135	33	34,891	861	1,208,621
60-64	995	1,408,368	155	155,556	43	40,927	1,193	1,604,851
65-69	1,238	1,318,613	95	65,170	68	61,755	1,401	1,445,538
70-74	1,569	1,600,626	128	79,085	110	78,062	1,807	1,757,773
75-79	1,959	1,844,422	178	115,528	114	80,340	2,251	2,040,290
80-84	1,473	1,204,767	114	69,798	101	56,189	1,688	1,330,754
85-89	805	553,966	49	25,294	61	30,787	915	610,047
90-94	256	140,262	14	6,155	19	8,920	289	155,337
95-99	75	42,089	1	330	5	2,394	81	44,813
Totals	9,507	\$9,931,010	1,352	\$736,055	591	\$430,502	11,450	\$11,097,567

* May include records with defective birthdates.

INACTIVE VESTED MEMBERS JUNE 30, 2001
BY ATTAINED AGES
RETIREMENT SYSTEM TOTALS

Attained Ages	No.	Estimated Annual Pensions
20-24	0	\$ 0
25-29	2	3,744
30-34	20	111,336
35-39	118	688,620
40-44	231	1,774,488
45-49	295	2,321,064
50-54	438	3,373,236
55-59	305	2,058,192
60-64	164	989,148
65-69	41	253,536
70-74	16	62,232
75-79	4	25,980
80-84	1	3,060
Totals	1,635	\$11,664,636

ACTIVE MEMBERS AS OF JUNE 30, 2001
BY ATTAINED AGE AND YEARS OF SERVICE
RETIREMENT SYSTEM TOTALS

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
Under 20	187							187	\$ 3,074,193
20-24	425	10						435	8,856,643
25-29	629	117	3					749	19,538,218
30-34	751	331	149	14				1,245	37,473,469
35-39	674	438	449	182	13			1,756	56,917,065
40-44	594	385	480	459	284	11		2,213	76,327,838
45-49	456	302	363	453	535	233	5	2,347	85,680,037
50-54	285	233	271	298	445	376	116	2,024	78,988,015
55-59	147	125	151	174	259	190	153	1,199	48,818,606
60-64	51	71	58	56	78	50	65	429	17,217,515
65-69	13	22	13	13	17	5	28	111	4,843,220
70-74		8	3	5		3	6	28	1,042,726
75-79	1	1	1	4	2	1	11	21	858,527
Totals	4,215	2,043	1,941	1,658	1,634	869	384	12,744	\$439,636,072

Group Averages:

Age: 43.3 years
Service: 11.7 years
Annual Pay: \$34,497

RETIREES AND BENEFICIARIES JUNE 30, 2001
TABULATED BY YEAR OF RETIREMENT

Year of Retirement	No.	Monthly Allowances	
		Total	Average
1950 & before	11	\$ 4,254	\$387
1951-1955	32	11,888	372
1956-1960	21	7,851	374
1961-1965	104	42,646	410
1966-1970	338	148,501	439
1971-1975	923	515,646	559
1976-1980	1,937	1,393,520	719
1981-1985	2,313	2,187,457	946
1986-1990	1,688	1,655,240	981
1991-1995	2,033	2,319,016	1,141
1996-2000	1,946	2,650,464	1,362
2001	104	161,084	1,549
Totals	11,450	\$11,097,567	\$969

SUMMARY OF BENEFIT PROVISIONS EVALUATED

Age and Service Pension

Eligibility - Any age (minimum age 55 for members hired after 1995) with 30 years of service (25 for EMS members), or age 60 with 10 years of service, or age 65 with 8 years of service.

Annual Amount - Sum of a) a basic pension of \$12 for each of the first 10 years of service, plus b) a pension equal to the first 10 years of service multiplied by 1.6% of AFC, plus 1.8% of AFC for each year of service greater than 10 years up to 20 years, plus 2.0% of AFC for each year of service greater than 20 years up to 25 years, plus 2.2% of AFC for each year of service greater than 25 years.

Type of Average Final Compensation (AFC) - Highest 3 consecutive years out of the last 10. Pension benefits will not be diminished if compensation is reduced because of a fiscal emergency. Effective July 1, 1999, in computing a the AFC, a member shall have the option of adding the value of 25% of unused accrued sick leave to the earnings used in computing the AFC. Longevity is added to AFC in accordance with the following schedule: \$150 after 5 years, \$300 after 10 years, \$450 after 15 years, \$600 after 20 years, and \$750 after 25 years.

Early Retirement

Eligibility - Any age with 25 or more years of service (minimum age 55 for members hired after 1995).

Annual Amount - Same as regular retirement but actuarially reduced.

Deferred Retirement (Vested Benefit)

Eligibility - Hired prior to 7-1-80: Age 40 with 8 years of service. Hired on or after 7-1-80: Any age with 10 years of service.

Benefit Commencement - *Non-Union, SAAA, APTE and lawyers hired prior to June 30, 1986:* Benefit begins at the age the member would have become eligible for regular retirement if service had continued. *Others:* Benefits based on service rendered by June 30, 1986 begin at the age the member would have become eligible for regular retirement. Benefits based on service rendered after July 1, 1986 begin at age 62.

Annual Amount - Same as regular retirement but based on average final compensation and service at the time of termination.

Duty Disability Retirement

Eligibility - Service related disability before age 60. No service requirement.

Annual Amount - An annuity which is the actuarial equivalent of the accumulated contributions at date of disability plus a pension of two-thirds of average final compensation at time of disability. The maximum annual pension is \$9,000. At the earliest of when the member would have accrued 30 years service credit (25 for EMS) or age 60, the annuity is recomputed assuming contributions would have continued at a salary level equal to final compensation. The pension is recomputed with additional service credit granted from the date of disability to age 60 (or 30 years service credit) with no maximum.

SUMMARY OF BENEFIT PROVISIONS EVALUATED (CONTINUED)

Non-Duty Disability Retirement

Eligibility - Disability from any cause before age 60 with 10 or more years of service.

Annual Amount - Computed in the same manner as a regular retirement benefit. Maximum annual pension to age 60 is \$6,000. Benefit is recomputed at age 60 with no maximum.

Duty Death Before Retirement

Eligibility - Death from service related causes. No age or service requirements.

Annual Amount - One-third of final compensation to the surviving spouse for life or until remarriage, plus an equal share of 1/4 of final compensation to each unmarried child under age 18. If there is no eligible spouse, eligible children each receive 1/4 of final compensation; if there are more than 2 such children, each child shares an equal part of 1/2 of final compensation. Maximum total amount for spouse and children is \$9,000 annually. If there is no eligible spouse or children, dependent parents each receive 1/6 of deceased's final compensation, to a total maximum of \$600 annually.

Non-Duty Death Before Retirement

Eligibility - Death in service at any age with 15 years of service; or after age 60 with 10 years of service.

Annual Amount - To Surviving Spouse: Computed as a regular retirement benefit but reduced in accordance with a 100% joint and survivor election for members with 20 or more years of service. For members with 15 years of service but less than 20, benefit is reduced in accordance with a 50% joint and survivor election. To Dependent Children if no Surviving Spouse: \$9,000 payable to age 19 of the youngest child or for life if child is physically or mentally impaired for members with 20 or more years of service (\$6,000 if less than 20 years of service).

Post-Retirement Cost-of-Living Adjustments

Benefit is increased annually by 2.25% of the **original** pension amount at retirement.

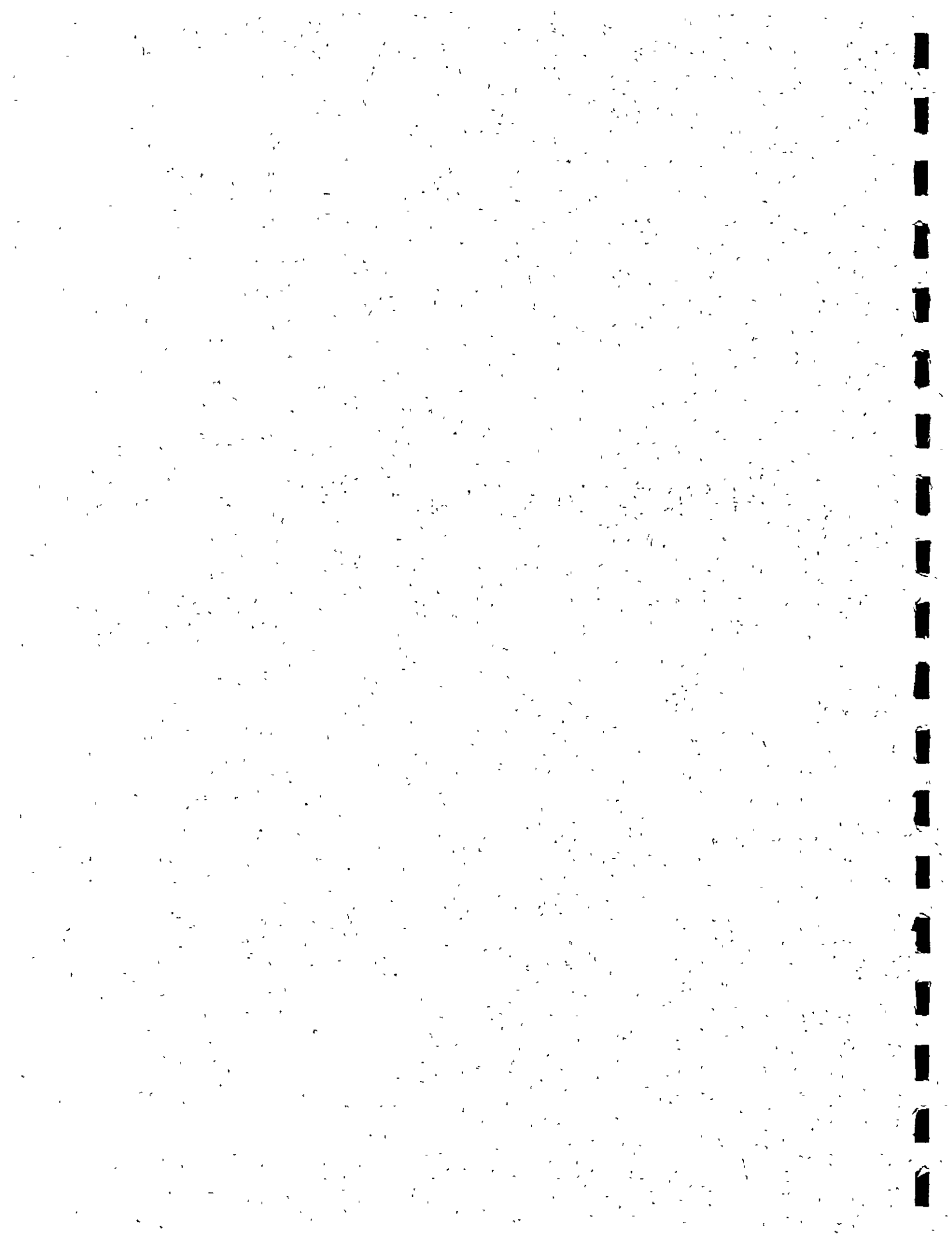
Member Contributions

Members have the option of choosing one of four contribution amounts: (1) 0%; (2) 3.0% of compensation up to the Social Security wage base, plus 5.0% of compensation in excess of the Social Security wage base; (3) 5.0% of total compensation; or (4) 7.0% of total compensation.



SECTION B

Divisions Separately Experience Rated



SUMMARY OF MEMBER DATA
JUNE 30, 2001

Active Members

	General	D.O.T.	Water	Sewage	Housing	Library	Totals
Number	7,325	1,677	1,836	1,094	325	487	12,744
% Change in active members	5.5 %	4.4 %	3.7 %	2.8 %	(2.7)%	12.7 %	4.9 %
Annual payroll (\$ millions)	\$254.3	\$51.4	\$61.6	\$44.3	\$12.9	\$15.1	\$439.6
Average pay	\$34,716	\$30,652	\$33,562	\$40,514	\$39,543	\$31,104	\$34,497
% Change in average pay	0.4 %	(1.9)%	1.4 %	2.4 %	4.4 %	(1.3)%	0.4 %

Retired Members and Survivor Beneficiaries

	General	D.O.T.	Water	Sewage	Housing	Library	Totals
Number	7,483	1,684	1,418	235	327	303	11,450
Annual payroll (\$ millions)	\$87.6	\$18.9	\$18.3	\$2.8	\$4.0	\$4.6	\$136.2
Average benefits	\$11,711	\$11,234	\$12,878	\$12,050	\$12,082	\$15,096	\$11,893
% Change in average pay	3.1 %	2.3 %	4.8 %	0.4 %	1.4 %	7.1 %	3.3 %

**ALLOCATION OF ASSETS USED FOR VALUATION
RESERVE ACCOUNTS**

	June 30, 2001	June 30, 2000
Annuity Savings Fund		
General	\$ 373,487,145	\$ 378,335,918
D.O.T.	105,589,118	102,934,572
Water	149,345,035	153,230,332
Sewage	53,201,196	50,140,545
Housing	17,121,722	16,960,299
Library	22,057,048	24,354,381
Totals	720,801,264	725,956,047
Annuity Reserve Fund		
General	13,234,997	14,101,869
D.O.T.	3,228,334	3,367,978
Water	3,501,010	3,902,127
Sewage	1,542,599	1,508,205
Housing	1,316,157	1,389,063
Library	1,261,999	1,306,779
Totals	24,085,096	25,576,021
Pension Accumulation Fund		
General	472,951,834	446,107,997
D.O.T.	92,874,467	87,078,081
Water	81,089,764	81,864,489
Sewage	221,320,084	221,179,417
Housing	29,375,668	28,102,069
Library	44,955,031	47,725,862
Totals	942,566,848	912,057,915
Pension Reserve Fund		
General	784,503,263	800,577,037
D.O.T.	161,209,825	165,313,810
Water	175,400,075	168,526,243
Sewage	27,537,007	29,291,532
Housing	36,136,389	37,089,540
Library	39,906,622	38,044,918
Totals	1,224,693,181	1,238,843,080
Retirement System Totals	\$2,912,146,389	\$2,902,433,063



ACTUARIAL ACCRUED LIABILITIES AS OF JUNE 30, 2001
BY DIVISION
(\$ IN THOUSANDS)

Present Value, June 30 of	General	D.O.T.	Water	Sewage	Housing	Library	Totals
Accrued Pension Liabilities							
Retirees and beneficiaries	\$810,729	\$167,482	\$180,392	\$27,753	\$36,914	\$41,254	\$1,264,524
Inactive members future deferred pensions	63,665	12,484	16,449	4,605	3,463	2,700	103,366
Active members	596,913	125,474	153,066	126,240	23,805	38,317	1,063,815
Total accrued pension liabilities	1,471,307	305,440	349,907	158,598	64,182	82,271	2,431,705
Pension fund balances	1,257,455	254,084	256,490	248,857	65,512	84,862	2,167,260
Unfunded accrued pension liabilities	213,852	51,356	93,417	(90,259)	(1,330)	(2,591)	264,445
Accrued Annuity Liabilities							
Retirees and beneficiaries	15,771	3,392	4,337	735	986	1,874	27,095
Members annuities & future refunds	373,487	105,589	149,345	53,201	17,122	22,057	720,801
Total accrued annuity liabilities	389,258	108,981	153,682	53,936	18,108	23,931	747,896
Annuity fund balances	386,722	108,817	152,846	54,744	18,438	23,319	744,886
Unfunded accrued annuity liabilities	2,536	164	836	(808)	(330)	612	3,010
Totals							
Actuarial Accrued Liabilities	1,860,565	414,421	503,589	212,534	82,290	106,202	3,179,601
Accrued Assets	1,644,177	362,901	409,336	303,601	83,950	108,181	2,912,146
Unfunded Actuarial Accrued Liabilities	\$216,388	\$51,520	\$94,253	\$(91,067)	\$(1,660)	\$(1,979)	\$267,455

Note: Totals may be off slightly due to rounding.

DERIVATION OF EXPERIENCE GAIN (LOSS)
YEAR ENDED JUNE 30, 2001
(\$ IN MILLIONS)

Actual experience will never (except by coincidence) coincide exactly with assumed experience. Gains and losses may cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below.

	General	D.O.T.	Water	Sewage	Housing	Library	Totals
(1) UAAL* at start of year	\$171.7	\$42.5	\$71.9	\$(100.7)	\$(2.6)	\$(8.4)	\$174.4
(2) Normal cost from last valuation	24.1	4.1	5.7	4.0	1.2	1.5	40.6
(3) Employer contributions	42.4	9.7	12.1	1.4	1.5	1.0	68.1
(4) Interest accrual: $[(1) + 1/2 [(2) - (3)]] \times .079$	12.8	3.1	5.4	(7.9)	(0.2)	(0.6)	12.6
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	166.2	40.0	70.9	(106.0)	(3.1)	(8.5)	159.5
(6) Increase due to active member plan amendments	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(7) Increase due to ad hoc increase for retirees	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(8) Expected UAAL after changes: (5) + (6) + (7)	166.2	40.0	70.9	(106.0)	(3.1)	(8.5)	159.5
(9) Actual UAAL at end of year	216.4	51.5	94.3	(91.1)	(1.7)	(2.0)	267.4
(10) Experience gain (loss): (8) - (9)	\$(50.2)	\$(11.5)	\$(23.4)	\$(14.9)	\$(1.4)	\$(6.5)	\$(107.9)
(11) Gain (loss) as % of beginning of year accrued liability	(3.5)%	(3.8)%	(7.2)%	(9.8)%	(2.2)%	(8.4)%	(4.6)%

* Unfunded actuarial accrued liabilities.

Note: Totals may be off slightly due to rounding.

**ACTIVE AND RETIRED MEMBERS
INCLUDED IN VALUATION
HISTORIC COMPARISONS**

*Active Members
By Valuation Division*

June 30	General	D.O.T.	Water	Sewage	Housing	Library	Totals
1987	7,936	1,994	1,687	1,163	317	543	13,640
1988	7,855	1,928	1,631	1,127	296	531	13,368
1989	7,899	2,022	1,646	1,156	305	526	13,554
1990	7,658	1,974	1,648	1,153	296	478	13,207
1991	7,301	1,935	1,737	1,193	281	502	12,949
1992	6,739	1,736	1,657	1,181	299	525	12,137
1993	6,274	1,694	1,586	1,132	298	524	11,508
1994	6,289	1,596	1,592	1,108	308	489	11,382
1995	6,377	1,585	1,604	1,091	369	489	11,515
1996	6,620	1,724	1,681	1,134	461	466	12,086
1997	6,717	1,845	1,727	1,185	436	459	12,369
1998	6,659	1,764	1,785	1,184	430	439	12,261
1999	6,527	1,669	1,768	1,173	414	436	11,987
2000	6,941	1,606	1,770	1,064	334	432	12,147
2001	7,325	1,677	1,836	1,094	325	487	12,744

*Retired Members & Beneficiaries
By Valuation Division*

June 30	General	D.O.T.	Water	Sewage	Housing	Library	Totals
1987	7,829	2,208	1,063	167	272	261	11,800
1988	7,793	2,123	1,083	176	284	269	11,728
1989	7,820	2,076	1,102	180	292	264	11,734
1990	7,803	2,020	1,114	195	297	255	11,684
1991	7,834	1,960	1,135	210	297	255	11,691
1992	7,842	1,887	1,152	234	299	260	11,674
1993	7,866	1,837	1,189	256	309	262	11,719
1994	7,827	1,789	1,203	268	304	258	11,649
1995	7,883	1,788	1,256	254	310	265	11,756
1996	7,910	1,823	1,312	257	323	264	11,889
1997	8,086	1,858	1,377	254	347	277	12,199
1998	7,665	1,738	1,334	247	337	272	11,593
1999	7,599	1,719	1,360	243	338	278	11,537
2000	7,522	1,706	1,387	242	330	293	11,480
2001	7,483	1,684	1,418	235	327	303	11,450



EMPLOYER COMPUTED CONTRIBUTIONS - HISTORIC COMPARISON

City of Detroit General Retirement System

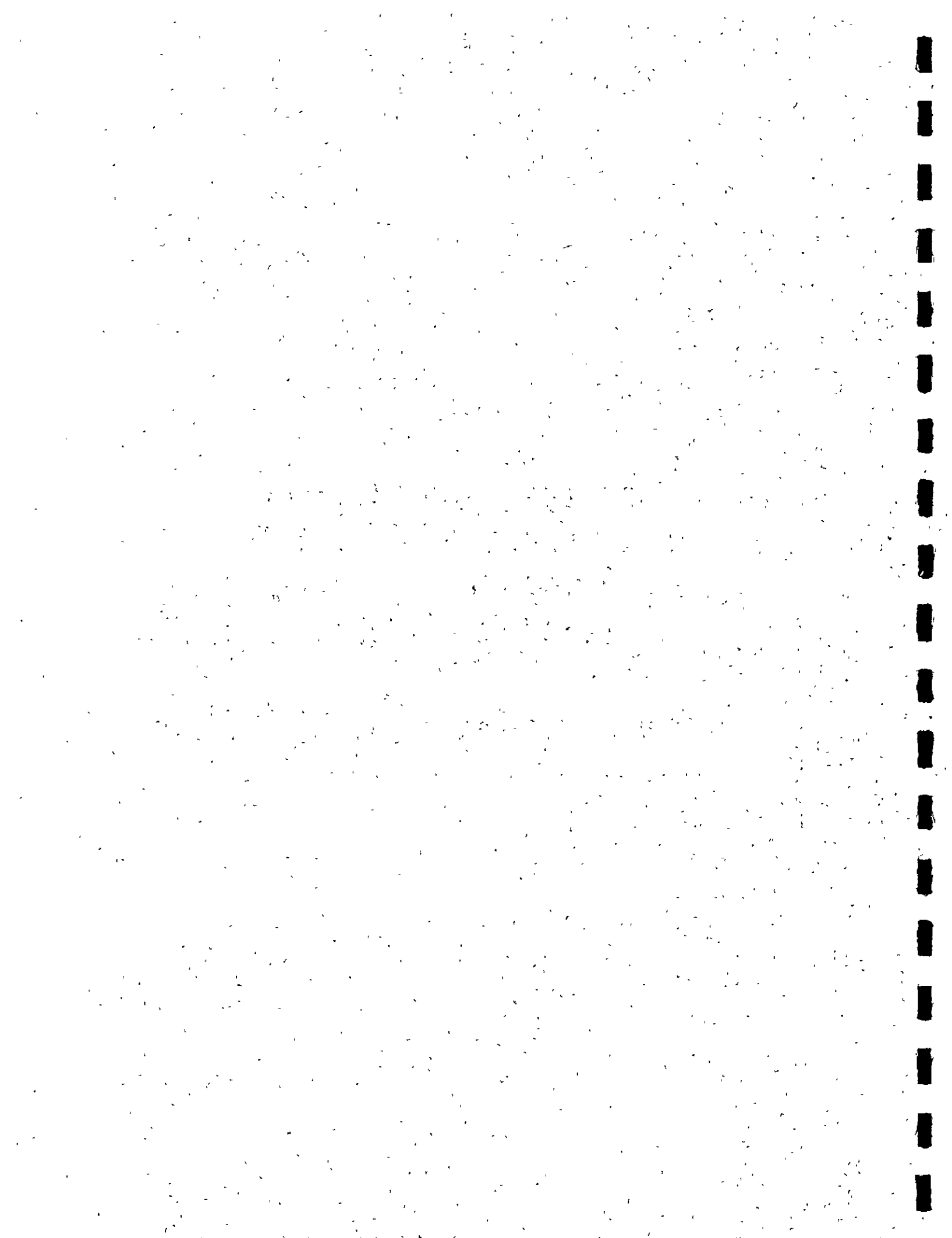
Valuation Date June 30	As Percents of Valuation Payroll						
	General	D.O.T.	Water	Sewage	Housing	Library	Totals
1973	23.52%	50.41%	23.25%	14.88%	20.77%	22.88%	26.30%
1974(a)	17.46%	33.07%	17.13%	14.19%	16.87%	16.79%	19.37%
1975*	18.43%	35.34%	18.41%	14.33%	17.76%	18.59%	20.29%
1976	19.09%	34.77%	18.36%	13.80%	17.84%	19.03%	20.77%
1977	18.77%	33.88%	18.26%	12.99%	17.97%	19.04%	20.29%
1978	18.85%	31.62%	18.23%	12.18%	17.57%	19.26%	19.99%
1979	18.81%	30.35%	18.27%	11.44%	17.09%	19.19%	19.71%
1980	18.58%	25.56%	18.02%	10.85%	16.81%	18.24%	18.92%
1981*	20.67%	30.27%	19.41%	12.52%	17.81%	20.24%	20.89%
1982(a)	19.39%	27.36%	18.12%	10.97%	16.94%	19.07%	19.08%
1983	19.19%	28.30%	17.57%	9.86%	16.10%	17.33%	19.01%
1984(a)	20.27%	27.45%	18.36%	9.48%	17.22%	18.15%	19.78%
1985	17.81%	24.64%	16.35%	6.52%	14.45%	13.75%	17.22%
1986*	16.39%	23.17%	15.28%	5.04%	12.29%	11.46%	15.82%
1987	15.62%	21.67%	14.74%	3.26%	11.24%	10.10%	14.87%
1988(a)*	15.96%	19.82%	15.03%	2.98%	11.54%	10.47%	14.90%
1989	15.18%	18.54%	14.49%	1.58%	11.33%	8.80%	14.02%
1990	15.72%	18.62%	15.10%	2.02%	11.08%	9.04%	14.46%
1991	15.31%	17.73%	14.45%	1.80%	10.51%	8.42%	13.89%
1992(a)*	11.21%	10.08%	10.49%	0.76%	6.94%	6.15%	9.61%
1993(a)	11.57%	10.80%	12.31%	0.59%	8.14%	5.51%	10.10%
1994	12.31%	11.35%	13.42%	0.25%	8.55%	7.65%	10.79%
1995	14.71%	12.65%	15.68%	0.98%	10.74%	10.28%	12.91%
1996	13.23%	12.52%	15.83%	0.00%	9.74%	7.64%	11.58%
1997(a)	13.47%	12.94%	15.32%	0.00%	9.34%	7.09%	11.84%
1998(a)*	15.80%	14.23%	17.16%	0.00%	11.38%	9.73%	13.75%
1999*	15.31%	13.70%	16.95%	0.00%	10.48%	8.04%	13.26%
2000	15.19%	14.37%	17.12%	0.00%	9.01%	6.97%	13.37%
2001	15.92%	15.36%	19.12%	0.00%	9.25%	9.20%	14.27%

(a) After changes in actuarial assumptions.

* After plan amendments.

SECTION C

**Actuarial Disclosures Required
by Statement No. 25 of the
Governmental Accounting
Standards Board**



GASB STATEMENT NO. 25 REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Funding Progress

Actuarial Valuation Date June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) -- Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b - a) / c)
1992*#	\$1,930,339,963	\$1,998,966,965	\$ 68,527,002	96.6%	\$344,320,379	19.9%
1993#	1,983,829,832	2,114,227,938	130,398,106	93.8%	331,009,921	39.4%
1994	2,041,914,572	2,192,846,039	150,931,467	93.1%	325,427,813	46.4%
1995	2,043,397,183	2,275,210,040	231,812,857	89.8%	327,615,936	70.8%
1996	2,193,234,516	2,382,866,954	189,632,438	92.0%	360,068,578	52.7%
1997#	2,333,412,893	2,528,504,057	195,091,164	92.3%	382,835,917	51.0%
1998#*	2,582,099,884	2,814,878,226	232,778,342	91.7%	387,022,423	60.1%
1999*	2,756,614,458	2,900,404,223	143,789,765	95.0%	383,449,421	37.5%
2000	2,902,433,063	3,077,001,129	174,568,066	94.3%	417,187,666	41.8%
2001	2,912,146,389	3,179,601,214	267,454,825	91.6%	439,636,072	60.8%

* After all plan amendments.

After changes in actuarial assumptions.

Schedule of Employer Contributions

Valuation Year Ended June 30	Contribution Rates as Percents of Valuation Payroll	Annual Required Contribution Based on Actual Payroll	Percentage Contributed
1992	9.74%	\$35,760,351	100%
1993	10.10%	36,553,164	100%
1994	10.79%	42,473,029	100%
1995	12.91%	54,655,929	100%
1996	11.58%	52,707,172	100%
1997	12.30%	55,683,125	100%
1998	13.75%	66,681,049	100%
1999	13.26%	68,139,535	100%
2000	13.37%	-	-
2001	14.27%	-	-

GASB STATEMENT NO. 25 REQUIRED 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:

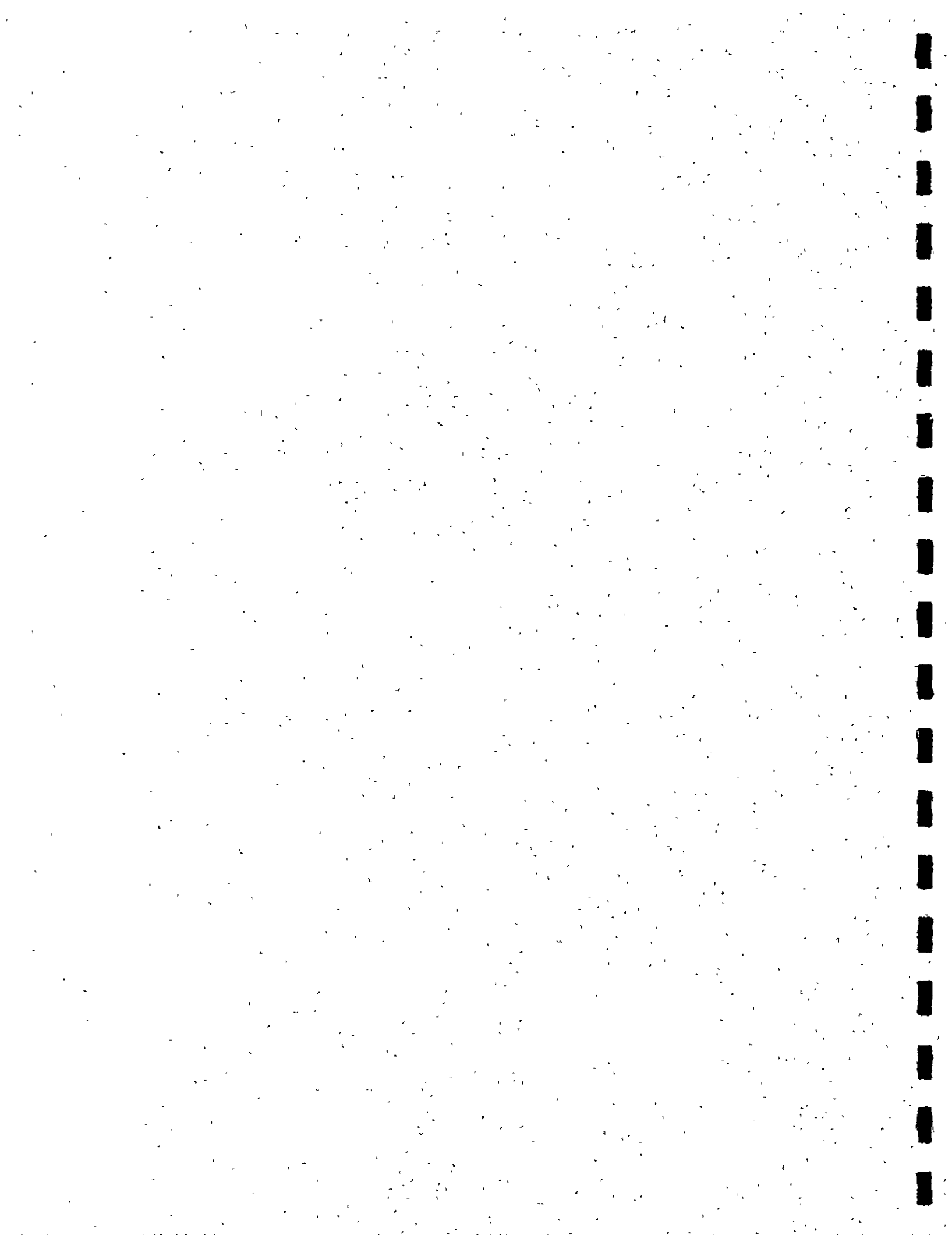
Valuation date:	June 30, 2001
Actuarial cost method	Entry Age
Amortization method	Level percent
Remaining amortization period for unfunded accrued liabilities	20 years (see page A-5)
Perpetual amortization period for gain/loss	15 years
Asset valuation method	3 year smoothed market
Actuarial assumptions:	
Investment rate of return	7.9%
Projected salary increases*	4.0% - 10.0%
*Includes inflation at	4.0%
Cost-of-living adjustments	2.25% of original pension amount at retirement.

Membership of the plan consisted of the following at June 30, 2001, the date of the latest actuarial valuation:

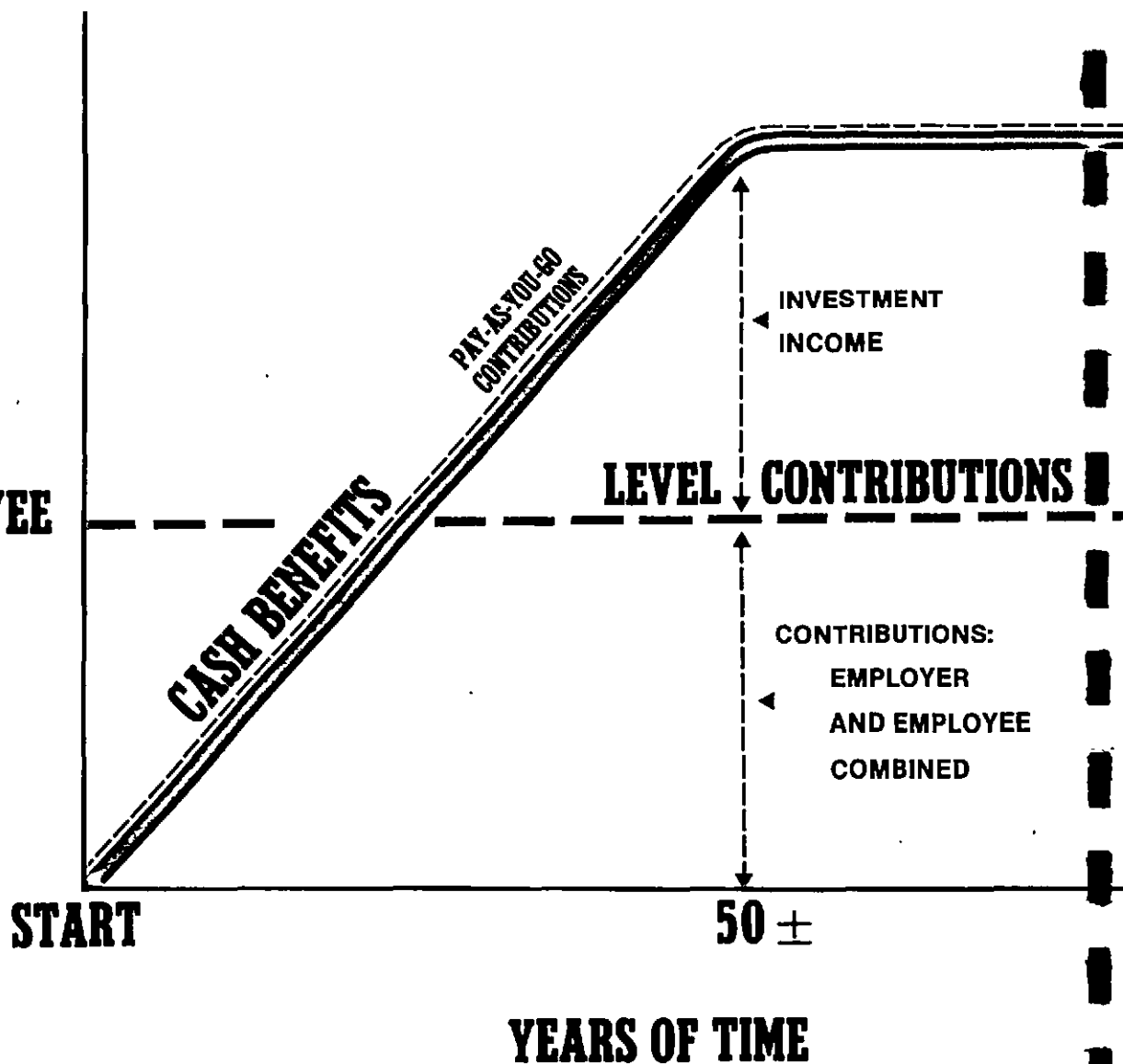
Retirees and beneficiaries receiving benefits	11,450
Terminated plan members entitled to but not yet receiving benefits	1,635
Active plan members	12,744
Total	25,829

SECTION D

Financial Principles



**% OF
ACTIVE
EMPLOYEE
PAYS**



CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

Economic Risk Areas

- Rates of investment return**
- Rates of pay increase**
- Changes in active member group size**

Non-Economic Risk Areas

- Ages at actual retirement**
- Rates of mortality**
- Rates of withdrawal of active members (turnover)**
- Rates of disability**

THE ACTUARIAL VALUATION PROCESS

The financing diagram on the opposite page shows the relationship between two different philosophies of paying for retirement benefits: the method where contributions match cash benefit payments (as in the Federal Social Security program) and is an *increasing contribution method*; and the *level contribution method* which seeks to balance contribution rates between generations.

The actuarial valuation is the mathematical process in which the level contribution rate is determined. The flow of activity constituting the valuation may be summarized as follows:

A. *Member Census Data:*

Retired lives now receiving benefits

Former employees with vested benefits not yet payable

Active employees

B. *Benefit provisions* governing future payments from the plan

C. *Asset data* (cash & investments)

D. *Assumptions concerning future experience in various risk areas*, which are established by the Board of Trustees and the City Council after consulting with the actuary

E. *The funding method* for employer contributions (the long-term, planned pattern for employer contributions)

F. *Mathematically combining the assumptions, the funding method, and the data*

G. *Determination of:*

Plan financial position, and

New Employer Contribution Rate

BASIC FINANCIAL OBJECTIVE AND OPERATION OF THE RETIREMENT SYSTEM

Benefit Promises Made Which Must Be Paid For. A retirement program is an orderly means of handing out, keeping track of, and financing contingent pension promises to a group of employees. As each member of the retirement program acquires a unit of service credit they are, in effect, handed an "IOU" which reads: "The Retirement System promises to pay you one unit of retirement benefits, payments in cash commencing when you retire."

The principal related financial question is: When shall the money required to cover the "IOU" be contributed? This year, when the benefit of the member's service is received? Or, some future year when the "IOU" becomes a cash demand?

The Constitution of the State of Michigan is directed to the question:

"Financial benefits arising on account of service rendered in each fiscal year shall be funded during that year and such funding shall not be used for financing unfunded accrued liabilities."

This retirement system meets this constitutional requirement by having the following *Financial Objective: To establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level* from year to year and will not have to be increased for future generations of taxpayers.

Translated into actuarial terminology, a level percent-of-payroll contribution objective means that the contribution rate must be at least:

Normal Cost (the value of benefits likely to be paid which is assigned to service being rendered in the current year)

. . . plus . . .

Interest on the Unfunded Actuarial Accrued Liability (the difference between the actuarial accrued liability and current system assets).

If contributions to the retirement program are less than the preceding amount, the difference, plus investment earnings not realized thereon, will have to be contributed at some later time, or, benefits will have to be reduced, to satisfy the fundamental fiscal equation under which all retirement programs must operate; that is:

$$B = C + I - E$$

Benefit payments to any group of members and their beneficiaries cannot exceed the sum of:

Contributions received over time on behalf of the group

... plus ...

Investment earnings on contributions received and not required for immediate payment of benefits

... minus ...

Expenses incurred in operating the program.

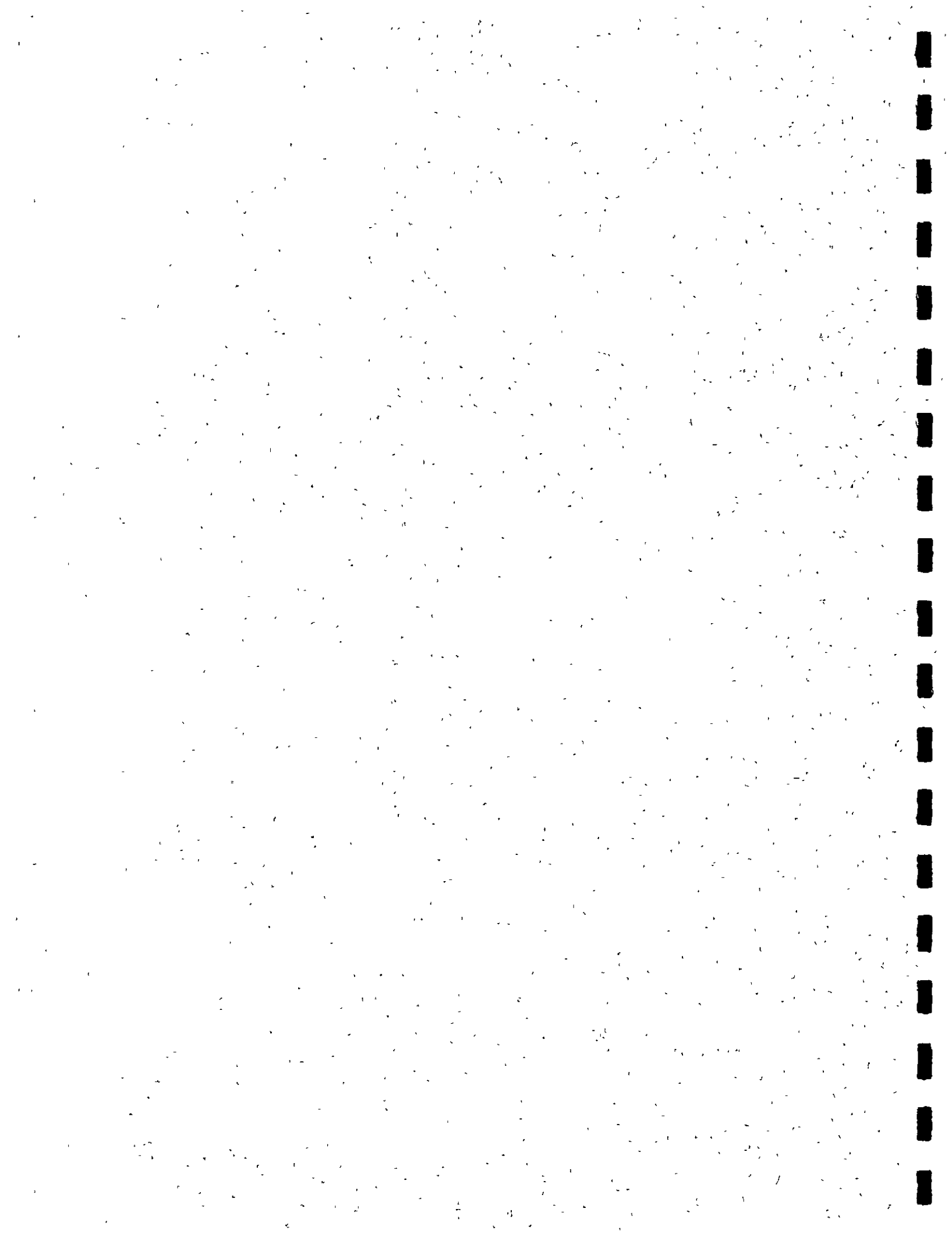
There are retirement programs designed to defer the bulk of contributions far into the future. Contributions in early years are low, but the inevitable consequence is a relentlessly increasing contribution rate – to a level greatly in excess of the level percent of payroll rate. *This method of financing is prohibited in Michigan by the state constitution.*

A by-product of the level percent-of-payroll contribution objective is the accumulation of invested assets for varying periods of time. Investment income becomes the major contributor to the retirement program, and the amount is directly related to the amount of past contributions and investment performance.

Computed Contribution Rate Needed To Finance Benefits. From a given schedule of benefits and from the data furnished, the contribution rate is calculated *by means of an actuarial valuation* - the technique of assigning monetary values to the risks assumed in operating a retirement program.

SECTION E

Appendix



SUMMARY OF ASSUMPTIONS USED FOR DGRS ACTUARIAL VALUATIONS
ASSUMPTIONS ADOPTED BY BOARD OF TRUSTEES
AFTER CONSULTING WITH ACTUARY

Economic Assumptions

The investment return rate used in making the valuation was 7.9% per year, compounded annually (net after administrative expenses). The real rate of return is the portion of total investment return which is more than the inflation rate. Considering other economic assumptions, the 7.9% total investment return rate translates to an assumed real rate of return of 3.9%.

Pay increase assumptions for individual active members are shown on page E-3. Part of the assumption for each age is for a merit and/or seniority increase, and the other 4.0% recognizes inflation.

Total active member payroll is assumed to increase 4.0% annually, which is the portion of the individual pay increase assumptions attributable to inflation.

Non-Economic Assumptions

The number of active members is assumed to continue at the present number.

The mortality table used to measure retired life mortality was 80% the 1983 Group Annuity Mortality Table. Related values are shown on page E-3. This table was first used for the June 30, 1998 valuation.

The probabilities of retirement for members eligible to retire are shown on page E-4. These probabilities were revised for the June 30, 1998 valuation.

The probabilities of separation from service (including *death-in-service* and *disability*) are shown for sample ages on page E-5. These probabilities were revised for the June 30, 1998 valuation.

Funding Methods

The entry age actuarial cost method was used in determining age & service pension liabilities and normal cost, vesting liabilities and normal cost, and casualty pension liabilities and normal cost.

Differences between assumed experience and actual experience ("actuarial gains and losses") become part of actuarial accrued liabilities and are amortized over a 15 year period.

Unfunded actuarial accrued liabilities (net of actuarial gains and losses after 6/30/92 and 6/30/98) are amortized over a 20 year period (see page A-5), to produce contribution amounts (principal & interest) which are level percent of payroll contributions.

Employer contribution dollars were assumed to be paid in equal monthly installments throughout the employer fiscal year.

Present assets were reported to be valued using a three year smoothing of the difference between expected and actual investment income.

The data about persons now covered and about present assets were furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (M.A.A.A.).

SAMPLE SALARY ADJUSTMENT RATES

Sample Ages	Salary Increase Assumptions For an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
20	6.0%	4.0%	10.0%
25	5.0%	4.0%	9.0%
30	2.4%	4.0%	6.4%
35	1.3%	4.0%	5.3%
40	0.8%	4.0%	4.8%
45	0.7%	4.0%	4.7%
50	0.4%	4.0%	4.4%
55	0.2%	4.0%	4.2%
60	0.0%	4.0%	4.0%
Ref	128		

SINGLE LIFE RETIREMENT VALUES

Sample Attained Ages	Present Value of \$1 Monthly for Life Increasing 2.25% Annually		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	\$165.06	\$176.50	31.33	36.92
55	154.62	168.18	26.89	32.19
60	141.89	157.66	22.60	27.57
65	126.80	144.71	18.52	23.10
70	110.42	129.13	14.85	18.83
75	93.49	111.69	11.64	14.94
80	76.91	93.92	8.93	11.57
Ref:	30 x 0.80	31 x 0.80		

**PROBABILITIES OF AGE/SERVICE RETIREMENT
FOR MEMBERS ELIGIBLE TO RETIRE**

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year	
	General	D.O.T.
50-54	25%	50%
55	25%	50%
56	25%	50%
57	25%	50%
58	25%	50%
59	25%	50%
60	25%	50%
61	25%	50%
62	25%	50%
63	25%	40%
64	25%	40%
65	40%	30%
66	35%	30%
67	25%	30%
68	25%	30%
69	25%	30%
70	25%	100%
71	25%	100%
72	25%	100%
73	25%	100%
74	25%	100%
75	25%	100%
76	25%	100%
77	25%	100%
78	25%	100%
79	25%	100%
80	100%	100%
Ref	536	535

**SAMPLE RATES OF SEPARATION FROM ACTIVE
EMPLOYMENT BEFORE RETIREMENT**

Sample Ages	Years of Service	% of Active Members Separating Within Next Year				
		Withdrawal			Death	
		Men	Women	D.O.T	Men	Women
ALL	0	15.00%	20.00%	19.00%		
	1	11.00%	14.00%	13.00%		
	2	9.00%	12.00%	10.00%		
	3	8.00%	9.50%	9.00%		
	4	7.00%	9.00%	8.50%		
25	5 & Over	7.00%	9.00%	8.00%	0.03%	0.02%
30		7.00%	7.50%	8.00%	0.05%	0.03%
35		6.10%	6.20%	6.30%	0.06%	0.04%
40		4.30%	4.30%	4.60%	0.09%	0.05%
45		2.90%	2.90%	3.60%	0.16%	0.08%
50		2.50%	2.50%	2.80%	0.29%	0.12%
55		2.50%	2.50%	2.50%	0.46%	0.19%
60		2.50%	2.50%	2.50%	0.69%	0.32%
Ref		205	206	204	30 x .75	31 x .75
		360	361	359		

Sample Ages	% of Active Members Becoming Disabled Within Next Year			
	General		D.O.T.	
	Ordinary	Duty	Ordinary	Duty
25	0.01%	0.50%	0.02%	0.02%
30	0.04%	0.50%	0.05%	0.07%
35	0.11%	0.50%	0.12%	0.18%
40	0.21%	0.50%	0.24%	0.36%
45	0.40%	0.50%	0.45%	0.68%
50	0.51%	0.50%	0.59%	0.88%
55	0.59%	0.50%	0.68%	1.01%
60	0.67%	0.00%	0.77%	1.15%
Ref	23 x 0.35	218 x 1.00	23 x 0.40	23 x 0.60

MEANING OF "UNFUNDED ACTUARIAL ACCRUED LIABILITIES"

Actuarial accrued liabilities are the portion of the present value of plan promises to pay benefits in the future not covered by future normal cost contributions.

--- a liability has been established ("accrued") because the service has been rendered, but the resulting monthly cash benefit may not be payable until years in the future.

If actuarial accrued liabilities at any time exceed the plan's accrued assets (cash & investments), the difference is *unfunded actuarial accrued liabilities*. If the plan's assets equal the plan's actuarial accrued liabilities, the plan would be termed "fully funded".

Each time a plan adds a new benefit which applies to service already rendered, an actuarial accrued liability is created. If assets are insufficient to cover the value of the new benefit promises, an additional unfunded actuarial accrued liability is also created. Payment for such unfunded accrued liabilities is generally spread over a period of years, commonly in the 15-40 year range.

Unfunded actuarial accrued liabilities can occur in another way: if actual financial experience is less favorable than assumed financial experience, the difference is added to unfunded actuarial accrued liabilities. For example, during periods of high inflation, unfunded actuarial accrued liabilities generally increase because unexpected rates of pay increase will create additional liabilities which may not be matched by investment performance. Inflation is a very destructive force on financial stability.

The existence of unfunded actuarial accrued liabilities is not bad, but the changes from year to year in the amount of unfunded actuarial accrued liabilities are important -- "bad" or "good" or somewhere in between.

Unfunded actuarial accrued liabilities do not represent a bill payable immediately, but it is important that policy-makers prevent the amount from becoming unreasonably high and *it is vital that there is a sound method for making payments toward them*, so that they are controlled.

GLOSSARY

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as “accrued liability” or “past service liability.”

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future plan benefits” between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost.” Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability.”

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.

11-7-d



CITY OF DETROIT
GENERAL RETIREMENT SYSTEM
63RD ANNUAL ACTUARIAL VALUATION
June 30, 2001

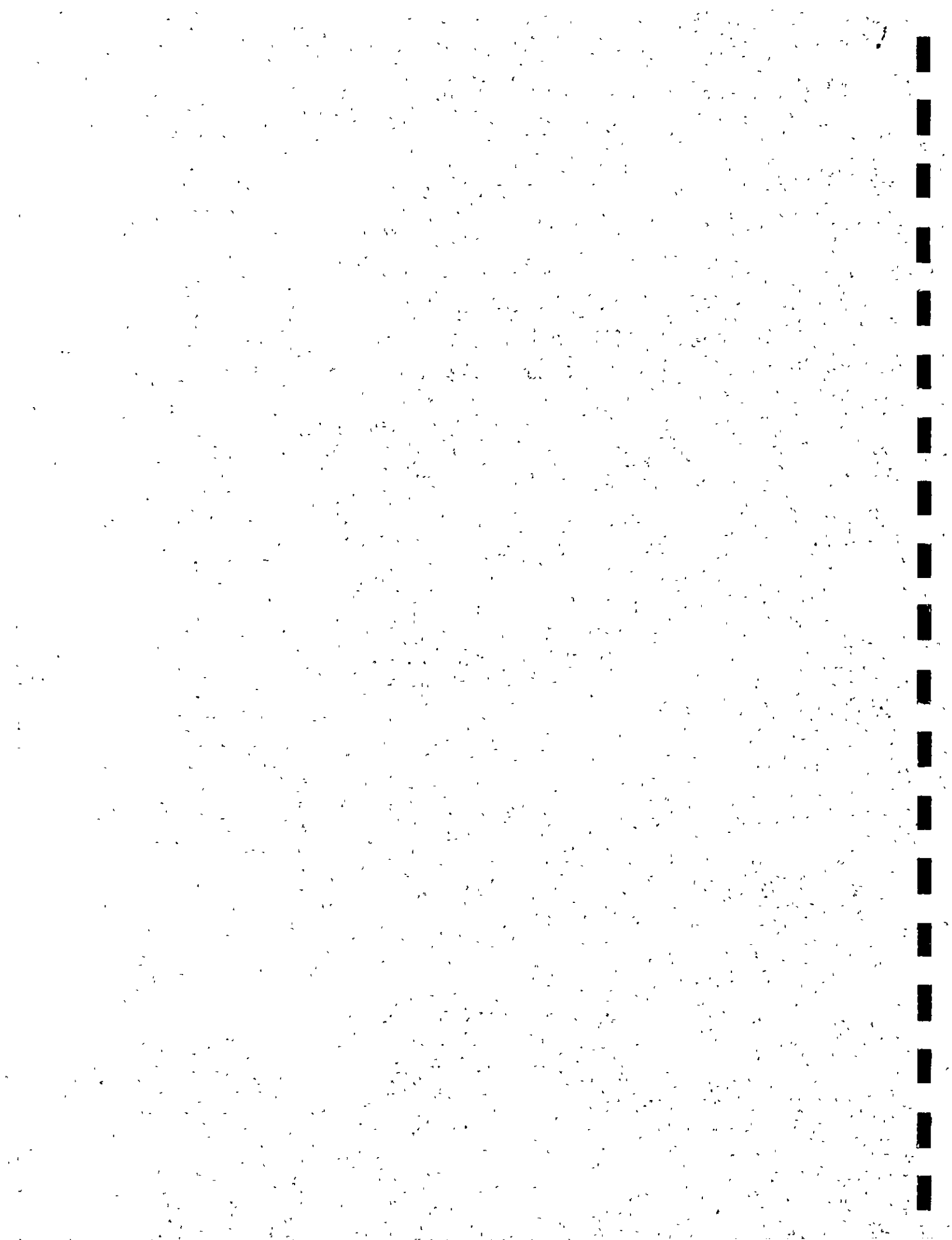
PRELIMINARY REPORT
NOVEMBER 5, 2001

GABRIEL, ROEDER, SMITH & COMPANY



ACTUARIES AND CONSULTANTS





**SUMMARY OF COMPUTED EMPLOYER CONTRIBUTION RATES
2002-2003 FISCAL YEAR**

Contributions for	Contributions Expressed as a Percent of Payroll					
	General City	D.O.T.	Water	Sewage	Housing	Library
Normal Cost:						
Age & Service Pensions	7.33 %	6.67 %	6.98 %	6.90 %	7.58 %	7.47 %
Disability Pensions	1.79 %	1.04 %	1.85 %	1.77 %	1.51 %	1.83 %
Death-in-Service Pensions	0.33 %	0.32 %	0.38 %	0.40 %	0.35 %	0.26 %
Employer Normal Cost	9.45 %	8.03 %	9.21 %	9.07 %	9.44 %	9.56 %
Unfunded Actuarial Accrued Liabilities#	6.47 %	7.33 %	9.91 %	(9.07)%	(0.19)%	(0.36)%
Computed Employer Contribution Rates	15.92 %	15.36 %	19.12 %	0.00 %	9.25 %	9.20 %
(Change from last yr.)	0.73 %	0.99 %	2.00 %	0.00 %	0.24 %	2.23 %

Unfunded actuarial accrued liabilities (UAAL) were amortized over various periods of future years as described on page A4.

ACTUARIAL ACCRUED LIABILITIES AS OF JUNE 30, 2001
RETIREMENT SYSTEM TOTALS

Present Value, June 30	
Accrued Pension Liabilities	
Retirees and beneficiaries	
Future pensions	\$1,264,523,435
Mortality reserve	0
Total	1,264,523,435
Inactive members future deferred pensions	103,365,878
Active members	1,063,815,597
Total accrued pensions	2,431,704,910
Pension fund balances	2,167,260,029
Unfunded accrued pension liabilities	\$ 264,444,881
Accrued Annuity Liabilities	
Retirees and beneficiaries	
Future annuities	\$ 27,095,040
Mortality reserve	0
Total	27,095,040
Members annuities & future refunds	720,801,264
Total accrued annuity liabilities	747,896,304
Annuity fund balances	744,886,360
Unfunded accrued annuity liabilities	\$ 3,009,944
Totals	
Actuarial Accrued Liabilities	\$3,179,601,214
Accrued Assets	2,912,146,389
Unfunded Actuarial Accrued Liabilities	\$ 267,454,825

VALUATION RESULTS - COMPARATIVE STATEMENT

----- \$ IN MILLIONS -----

RETIREMENT SYSTEM TOTALS

June 30	Active Payroll		% of Payroll Contributions For			Actuarial Accrued Liabilities			Unfunded/ Active Pay
			Normal Cost	UAAL	Total	Computed Total	Accrued Assets	Unfunded	
	Total	Average							
1985	\$281.4	\$22,123	8.85%	8.37%	17.22%	\$1,545.3	\$1,227.9	\$317.4	1.13
1986	299.9	22,339	8.61%	7.21%	15.82%	1,625.9	1,342.4	283.5	0.95
1987	321.4	23,563	9.05%	5.82%	14.87%	1,718.1	1,471.7	246.4	0.77
1988(a)	326.2	24,403	9.33%	5.57%	14.90%	1,816.9	1,585.9	231.0	0.71
1989	331.6	24,462	9.26%	4.76%	14.02%	1,869.8	1,678.3	191.5	0.58
1990	352.6	26,700	9.22%	5.24%	14.46%	1,983.0	1,768.9	214.1	0.61
1991	362.5	27,997	8.80%	5.09%	13.89%	2,034.7	1,832.4	202.3	0.56
1992(a)#	344.3	28,369	8.48%	1.13%	9.61%	1,998.8	1,930.3	68.5	0.20
1993(a)	331.0	28,763	8.02%	2.08%	10.10%	2,114.2	1,983.8	130.4	0.39
1994	325.4	28,591	8.06%	2.73%	10.79%	2,192.8	2,041.9	150.9	0.46
1995	327.6	28,451	8.11%	4.80%	12.91%	2,275.2	2,043.4	231.8	0.71
1996	360.1	29,729	8.14%	3.44%	11.58%	2,382.8	2,193.2	189.6	0.53
1997(a)	382.8	30,951	7.91%	3.93%	11.84%	2,528.5	2,333.4	195.1	0.51
1998(a)#	387.0	31,565	9.30%	4.45%	13.75%	2,814.9	2,582.1	232.8	0.60
1999#	383.4	31,989	9.29%	3.97%	13.26%	2,900.4	2,756.6	143.8	0.38
2000	417.2	34,345	9.22%	4.15%	13.37%	3,077.0	2,902.4	174.6	0.42
2001	439.6	34,497	9.22%	5.05%	14.27%	3,179.6	2,912.1	267.5	0.61

After plan amendments.

(a) After changes in actuarial assumptions.

COMMENTS

Experience During the Past Year

During the year ended June 30, 2001, overall Retirement System experience was less favorable than assumed. The recognized rate of investment return was substantially less than assumed, even with the recognition of gains phased-in from prior years (see page A-7). This year's market value loss of \$352 million will be phased in over a 3 year period.

Pension Funding Policy

The Board policy for financing unfunded actuarial accrued liabilities (UAAL) is as follows:

1. The remaining portion of June 30, 1992 and June 30, 1998 unfunded actuarial accrued liabilities are financed over a closed amortization period with 20 years remaining as of June 30, 2001.
2. Actuarial experience gains and losses incurred after June 30, 1992 are over a 15 year open (perpetual) amortization period.
3. Changes in unfunded actuarial accrued liabilities due to increased benefits to present retired lives are amortized over a 15 year closed amortization period beginning with the effective date of the increase.
4. Changes in unfunded actuarial accrued liabilities due to increased benefits for active members are financed over a 25 year closed amortization period beginning with the effective date of the increase.

Overall Financial Condition

The Retirement System is in good actuarial condition in accordance with the principles of level percent-of-payroll financing.

SOLVENCY TESTS

The DGRS funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will pay all promised benefits when due -- the ultimate test of financial soundness. Testing for level contribution rates is *the long-term solvency test*.

A *short-term solvency test* is one means of checking a system's progress under its funding program. In a short-term solvency test, the plan's present assets (cash and investments) are compared with:

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

In a system that has been following the discipline of level percent-of-payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the System.

SHORT-TERM SOLVENCY TEST 5 YEAR COMPARATIVE STATEMENT

June 30	Actuarial Accrued Liabilities			Valuation Assets	Portion of Accrued Liabilities Covered by Assets			
	(1) Active Member Contr.	(2) Retirees and Benef.	(3) Present Members (Employer-Financed Portion)		(1)	(2)	(3)	Total
	1997(a)	\$ 524	\$ 1,187		\$ 817	\$ 2,333	100%	100%
1998(a)#	626	1,211	978	2,582	100%	100%	76%	92%
1999#	706	1,214	981	2,757	100%	100%	85%	95%
2000	726	1,265	1,086	2,902	100%	100%	84%	94%
2001	721	1,292	1,167	2,912	100%	100%	77%	92%

(a) After changes in actuarial assumptions.

After plan amendments.

**ASSET INFORMATION
FURNISHED FOR VALUATION
RETIREMENT SYSTEM TOTALS**

Reserve Accounts

Funds	Fund Balances	
	June 30, 2001	June 30, 2000
Annuity Savings	\$ 720,801,264	\$ 725,956,047
Annuity Reserve	24,085,096	25,576,021
Pension Accumulation	942,566,848	912,057,915
Pension Reserve	1,224,693,181	1,238,843,080
Total Fund Balances	\$2,912,146,389	\$2,902,433,063

Revenues and Expenditures

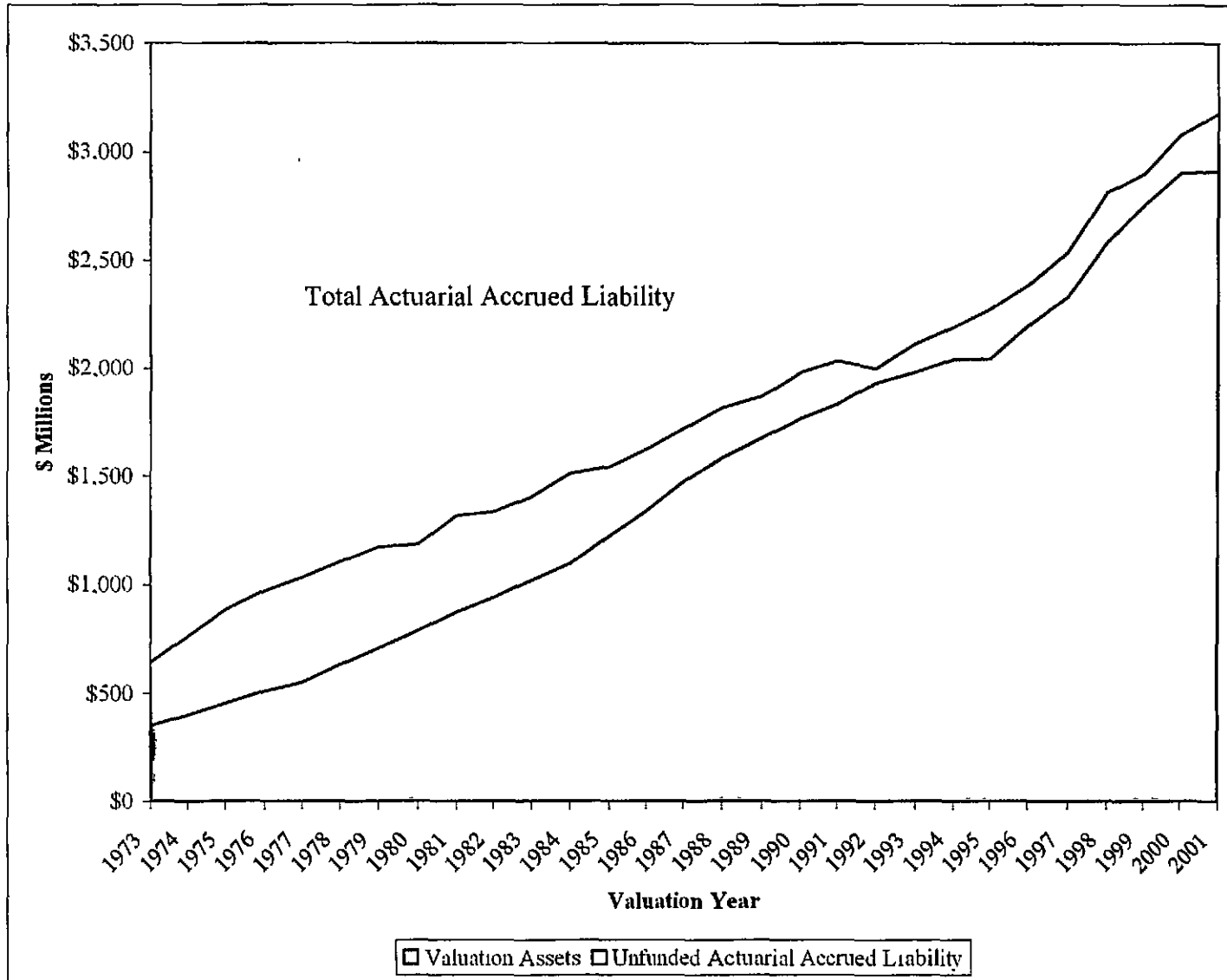
	Pension Funds	Annuity Funds	Total Funds
Balance, July 1, 2000	\$2,150,900,995	\$751,532,068	\$2,902,433,063
Revenues			
Member contributions	46,618	25,432,043	25,478,661
Employer contributions	68,139,535	0	68,139,535
Recognized investment income	84,049,805	54,369,984	138,419,789
Transfers	1,098,266	(1,098,266)	0
Total	\$ 153,334,224	\$ 78,703,761	\$ 232,037,985
Expenditures			
Benefit payments	132,808,650	3,195,254	136,003,904
Refund of member contributions	1,016,843	82,154,215	83,171,058
Administrative expenses	3,149,697	0	3,149,697
Total	\$ 136,975,190	\$ 85,349,469	\$ 222,324,659
Balance, June 30, 2001	\$2,167,260,029	\$744,886,360	\$2,912,146,389
Funding Value Rate of Return	3.8%	7.5%	4.8%

FUNDING VALUE OF ASSETS

Year Ended June 30:	1999	2000	2001	2002	2003
A. Funding Value Beginning of Year	\$2,582,099,884	\$2,756,614,458	\$2,902,433,063		
B. Market Value End of Year	2,845,862,826	2,947,791,076	2,691,006,082		
C. Market Value Beginning of Year	2,729,527,412	2,845,862,826	2,947,791,076		
D. Non-Investment Net Cash Flow(Contribution-Benefits)	(127,925,812)	(153,124,675)	(125,556,767)		
E. Investment Income					
E1. Market Total: B - C - D	244,261,226	255,052,925	(131,228,227)		
E2. Amount for Immediate Recogn: (A+D/2) x .079	190,184,262	214,054,389	220,981,501		
E3. Amount for Phased-In Recognition: E1-E2	54,076,964	40,998,536	(352,209,728)		
F. Phased-In Recognition of Investment Income					
F1. Current Year: E3/3	18,025,655	13,666,179	(117,403,243)		
F2. First Prior Year	53,197,057	18,025,655	13,666,179	\$(117,403,243)	
F3. Second Prior Year	41,033,413	53,197,057	18,025,656	13,666,178	\$(117,403,242)
F4. Total Recognized Investment Gain	112,256,125	84,888,891	(85,711,408)	(103,737,064)	(117,403,242)
G. Total Recognized Investment Income: (E2+F4)	302,440,387	298,943,280	135,270,093		
H. Funding Value End of Year: A + D + G	2,756,614,458	2,902,433,063	2,912,146,389		
I. Difference between Market & Funding Value: B - H	89,248,367	45,358,013	(221,140,307)	(117,403,242)	(0)
J. Recognized Rate of Return: G / [1/2(A+H-G)]	12.0%	11.2%	4.8%		
K. Market Value Rate of Return (net)	9.2%	9.2%	(4.5%)		

The Funding Value of Assets recognizes assumed investment income (line E2) fully each year. Differences between actual and assumed investment income (line E3) are phased in over a closed 3 year period. During periods when investment performance exceeds the assumed rate, the Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than market value. The Funding Value of Assets is unbiased with respect to Market Value. At any time it may be either greater or less than Market Value. If assumed rates are exactly realized for 2 consecutive years, it will become equal to Market Value.

ASSETS AND ACCRUED LIABILITIES



PERSONS IN VALUATIONS - COMPARATIVE STATEMENTS
RETIREMENT SYSTEM TOTALS

Active Members

June 30	Active Members		Annual Payroll	Group Averages			
	No.	Change		Average Pay		Age Years	Service Years
				\$	Change		
1973	18,004	(7.1)%	\$198,377,179	\$11,019	7.8 %	43.1	14.2
1974	17,930	(0.4)%	213,255,078	11,894	7.9 %	42.6	13.9
1975	17,935	0.0 %	243,372,127	13,570	14.1 %	42.7	13.7
1976	16,102	(10.2)%	247,803,284	15,390	13.4 %	43.2	14.7
1977	17,508	8.7 %	274,950,896	15,704	2.0 %	41.8	13.2
1978	17,475	(0.2)%	297,680,389	17,035	8.5 %	41.3	12.3
1979	17,258	(1.2)%	310,683,375	18,002	5.7 %	41.5	12.3
1980	15,881	(8.0)%	293,624,360	18,489	2.7 %	41.7	12.6
1981	14,993	(5.6)%	301,243,225	20,092	8.7 %	42.0	13.0
1982	13,730	(8.4)%	283,677,869	20,661	2.8 %	42.0	13.1
1983	13,156	(4.2)%	272,369,708	20,703	0.2 %	41.6	12.6
1984	13,172	0.1 %	288,048,279	21,868	5.6 %	41.5	12.0
1985	12,719	(3.4)%	281,378,439	22,123	1.2 %	41.5	11.9
1986	13,423	5.5 %	299,859,070	22,339	1.0 %	41.1	11.3
1987	13,640	1.6 %	321,402,755	23,563	5.5 %	40.9	11.0
1988	13,368	(2.0)%	326,216,082	24,403	3.6 %	41.0	11.1
1989	13,554	1.4 %	331,555,458	24,462	0.2 %	41.1	11.0
1990	13,207	(2.6)%	352,622,639	26,700	9.1 %	41.5	11.4
1991	12,949	(2.0)%	362,532,918	27,997	4.9 %	41.8	11.7
1992	12,137	(6.3)%	344,320,379	28,369	1.3 %	42.2	12.1
1993	11,508	(5.2)%	331,009,921	28,763	1.4 %	43.0	12.9
1994	11,382	(1.1)%	325,427,813	28,591	(0.6)%	43.1	12.8
1995	11,515	1.2 %	327,615,936	28,451	(0.5)%	42.2	12.6
1996	12,086	5.0 %	360,068,578	29,792	4.7 %	42.8	11.9
1997	12,369	2.3 %	382,835,917	30,951	3.9 %	42.8	11.7
1998	12,261	(0.9)%	387,022,423	31,565	2.0 %	43.3	11.8
1999	11,987	(2.2)%	383,449,421	31,989	1.3 %	43.7	12.1
2000	12,147	1.3 %	417,187,666	34,345	7.4 %	43.5	12.0
2001	12,744	4.9 %	439,636,072	34,497	0.4 %	43.3	11.7

PERSONS IN VALUATIONS - COMPARATIVE STATEMENTS
RETIREMENT SYSTEM TOTALS

Retirees and Beneficiaries

June 30	No.	% of Current Allowances				Annual Allowances		
		Annuities	Initial Pensions	Escalators & Other Increases	Allow.	Total	Average	% of Payroll
1973	8,132	13.1%	72.8%	14.1%	100.0%	\$ 21,950,395	\$ 2,699	11.1%
1974	8,377	12.1%	74.1%	13.8%	100.0%	23,798,971	2,841	11.2%
1975	8,646	11.1%	74.2%	14.7%	100.0%	26,105,277	3,019	10.7%
1976	8,991	9.7%	76.2%	14.1%	100.0%	29,498,975	3,281	11.9%
1977	9,511	8.5%	78.3%	13.2%	100.0%	33,691,814	3,542	12.3%
1978	9,934	7.4%	79.6%	13.0%	100.0%	39,090,328	3,935	13.1%
1979	10,207	6.8%	82.4%	10.8%	100.0%	42,147,291	4,129	13.6%
1980	10,373	6.3%	81.0%	12.7%	100.0%	45,054,237	4,343	15.3%
1981	10,693	5.6%	81.7%	12.7%	100.0%	49,416,852	4,621	16.4%
1982	10,924	4.8%	77.7%	17.5%	100.0%	56,741,667	5,194	20.0%
1983	11,418	4.1%	79.6%	16.3%	100.0%	64,048,464	5,609	23.5%
1984	11,643	3.8%	80.4%	15.8%	100.0%	68,564,556	5,889	23.8%
1985	11,710	3.4%	80.6%	16.0%	100.0%	71,433,168	6,100	25.4%
1986	11,776	3.2%	80.7%	16.1%	100.0%	74,834,820	6,355	25.0%
1987	11,800	2.9%	80.2%	16.9%	100.0%	78,342,384	6,639	24.4%
1988	11,728	3.0%	80.0%	17.0%	100.0%	81,346,500	6,936	24.9%
1989	11,734	3.0%	79.8%	17.2%	100.0%	83,790,744	7,141	25.3%
1990	11,684	2.9%	79.1%	18.0%	100.0%	85,720,620	7,337	24.3%
1991	11,691	2.9%	78.7%	18.4%	100.0%	87,625,800	7,495	24.2%
1992	11,674	2.6%	76.5%	20.9%	100.0%	97,218,012	8,328	28.2%
1993	11,719	2.8%	77.7%	19.5%	100.0%	100,203,596	8,551	30.3%
1994	11,649	2.8%	76.9%	20.3%	100.0%	106,193,220	9,116	32.6%
1995	11,756	2.7%	76.7%	20.6%	100.0%	110,262,876	9,379	33.7%
1996	11,889	2.6%	75.5%	21.9%	100.0%	115,232,400	9,692	32.0%
1997	12,199	2.4%	74.4%	23.2%	100.0%	121,255,488	9,940	31.7%
1998	11,593	2.3%	73.7%	24.0%	100.0%	119,852,820	10,338	31.0%
1999	11,537	2.4%	76.6%	21.0%	100.0%	127,535,748	11,054	33.3%
2000	11,480	2.2%	77.7%	20.1%	100.0%	129,354,696	11,268	31.0%
2001	11,450	2.3%	77.7%	20.0%	100.0%	133,170,804	11,631	30.3%