CITY OF MANCHESTER
EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM

ANNUAL ACTUARIAL VALUATION
DECEMBER 31, 2003

GABRIEL, ROEDER, SMITH & COMPANY

CONTENTS

June 1, 2004

Board of Trustees
City of Manchester Employees'
    Contributory Retirement System
Manchester, New Hampshire   03101-1829

Dear Board Members:

The results of the **Annual Actuarial Valuation of the City of Manchester Employees'
Contributory Retirement System (MECRS)** are presented in this report. The purpose
of the valuation was to measure the System's funding progress and to determine the
contribution rate for the fiscal year beginning July 1, 2004.
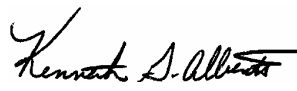
The date of the valuation was December 31, 2003.
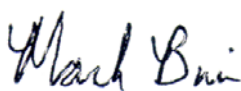
The valuation was based upon information, furnished by the Retirement System,
concerning Retirement System benefits, financial transactions, and individual members,
terminated members, retirees and beneficiaries. Data was checked for year-to-year
consistency but was not otherwise audited.

To the best of our knowledge this report is complete and accurate and was made in
accordance with the standards of practice prescribed by the Actuarial Standards Board.
The actuarial assumptions used for the valuation were carried over from the previous
actuary, and produce results which, in the aggregate, are reasonable.   MECRS has
authorized a comprehensive review of methods and assumptions following the
completion of the December 31, 2003 valuation.

This report was produced under the supervision of a Member of the American Academy
of Actuaries with significant experience in valuing public employee retirement systems.

                                                Respectfully submitted,

         Kenneth G. Alberts   Mark Buis, E.A., M.A.A.A.

KGA/MB/clb/bd

SECTION A

Valuation Results

FUNDING OBJECTIVE

The funding objective of the Retirement System is to establish and receive contributions which, when expressed as percents of active member payroll, will remain approximately level from year to year and will accumulate sufficient assets over each member's working lifetime to finance promised benefits throughout retirement.

CONTRIBUTION RATES

The Retirement System is supported by member contributions, City contributions and investment income from Retirement System assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

- Cover the actuarial present value of benefits allocated to the current year by the actuarial cost method described in Section C (the normal cost); and
- Finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (unfunded actuarial accrued liability).

The computed City contribution rate for the fiscal year beginning July 1, 2004 is 8.76% of covered payroll. The details of this contribution rate are shown on page A-7.

The City contribution rate of 8.76% is sufficient to finance the employer normal cost and to amortize the unfunded actuarial accrued liability (full funding credit) as a level percent-of-payroll over a period of 30 years.

SUMMARY STATEMENT OF SYSTEM RESOURCES AND OBLIGATIONS
DECEMBER 31, 2003

Present Resources and Expected Future Resources

A.	Actuarial value of System assets:	
	1. Net assets from System financial statements	$ 95,632,745
	2. Market Value Adjustment	(335,056)
	3. Valuation assets	95,297,689
B.	Present value of expected future employer contributions:	
	1. For normal costs	26,803,888
	2. For unfunded actuarial accrued liabilities	20,954,959
	3. Totals	47,758,847
C.	Present value of expected future member contributions:	16,005,186
D.	**Total Present and Expected Future Resources**	**$159,061,722**

Actuarial Present Value of Expected Future Benefit Payments

A.	To retirees and beneficiaries:	$ 41,612,921
B.	To vested terminated members:	1,864,330
C.	To present active members:	
	1. Allocated to service rendered prior to valuation date	72,775,397
	2. Allocated to service likely to be rendered after valuation date	42,809,074
	3. Total	115,584,471
D.	**Total Actuarial Present Value of Expected Future Benefit Payments**	**$159,061,722**

Balance Sheet

Reported Assets - Actuarial Value	
Cash & equivalents	$ 1,525,395
Investments	94,582,885
Contributions Receivable	34,763
Property, Plant, Equipment	215,971
Accrued Interest & Dividends	9,928
Receivable for Investments Sold	129,655
Payable for Investments Purchased	(333,230)
Accounts Payable	(117,170)
Pension Benefits Payable	(415,452)
Funding Value Adjustment	(335,056)
Total Valuation Assets	**$95,297,689**

Revenues and Expenditures

	2003
Funding Value - January 1, 2003	$89,755,853
Revenues	
Employees' contributions	1,567,445
Employer contributions	3,333,796
Recognized Investment income	6,929,312
Total	11,830,553
Expenditures	
Benefit payments	4,877,225
Refund of member contributions	255,233
Expenses and fees	1,156,259
Total	6,288,717
Funding Value - December 31, 2003	$95,297,689
Rate of return recognized	6.4%

DEVELOPMENT OF FUNDING VALUE OF ASSETS

Year Ended December 31:	2002	2003	2004	2005	2006	2007
A. Funding Value Beginning of Year	$94,812,631	$89,755,853				
B. Market Value End of Year	74,796,544	95,632,745				
C. Market Value Beginning of Year	85,818,863	74,796,544				
D. Non-Investment Net Cash Flow	(1,544,827)	(231,217)				
E. Investment Income						
E1. Market Total: B - C - D	(9,477,492)	21,067,418				
E2. Amount for Immediate Recognition (7.5%	7,053,016	6,723,018				
E3. Amount for Phased-In Recognition E1-E2	(16,530,508)	14,344,400				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20 x E3	(3,306,102)	2,868,880				
F2. First Prior Year	(2,399,176)	(1,847,368)	$2,868,880			
F3. Second Prior Year	(800,009)	(2,399,176)	(1,847,368)	$2,868,880		
F4. Third Prior Year	1,227,708	(800,009)	(2,399,176)	(1,847,368)	$2,868,880	
F5. Fourth Prior Year	547,555	1,227,708	(800,009)	(2,399,176)	(1,847,368)	$2,868,880
F6. Total Recognized Investment Gain	(4,730,024)	(949,965)	(2,177,673)	(1,377,664)	1,021,512	2,868,880
G. Preliminary Funding Value End of Year: A + D + E2 + F6	95,590,797	95,297,689				
H. Actuarial Value after application of 20% corridor Limit	89,755,853	95,297,689				
H. Difference between Market & Funding Value	(14,959,309)	335,056	2,512,728	3,890,392	2,868,880	(0)
I. Recognized Rate of Return		6.4 %				
J. Market Rate of Return		28.2 %				
K. Ratio of Funding Value to Market Value	120.0 %	99.6 %				

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 5-year period. During periods when investment performance exceeds the assumed rate, 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 actual and assumed rates of retirement income are exactly equal for 4 consecutive years, the Funding Value will become equal to Market Value.

Present Value of Future Benefits - Retirees		41,612,921
Present Value of Future Benefits - Deferreds		1,864,330
Present Value of Future Benefits - Actives		115,584,471
Total Present Value of Future Benefits	$	159,061,722
Present Value of Future Normal Cost		42,809,074
Actuarial Accrued Liability	$	116,252,648
Actuarial Value of Assets		95,297,689
Unfunded Actuarial Accrued Liability	$	20,954,959
Fuded Ratio		82.0%

DERIVATION OF EXPERIENCE GAIN (LOSS)
YEAR ENDED DECEMBER 31, 2003

Actual experience will never (except by coincidence) match exactly with assumed experience. Gains and losses often 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, along with a year-by-year comparative schedule.

(1)	UAAL* at start of year	$16,364,857
(2)	Total normal cost from last valuation	4,030,620
(3)	Actual contributions (employer & employee)	4,901,241
(4)	Interest accrual: $[(1) + 1/2 ((2) - (3))]$ x .075	1,194,716
(5)	Expected UAAL before changes: $(1) + (2) - (3) + (4)$	16,688,952
(6)	Change from benefit improvements	0
(7)	Change from revised actuarial methods and assumptions	0
(8)	Expected UAAL after changes: $(5) + (6) + (7)$	16,688,952
(9)	Actual UAAL at end of year	20,954,959
(10)	Gain (loss): $(8) - (9)$	(4,266,007)
(11)	Gain (loss) as percent of actuarial accrued liabilities at start of year ($106,120,710)	(4.0)%

* *Unfunded actuarial accrued liabilities.*

Valuation Date December 31	Experience Gain (Loss) As % of Beginning Accrued Liability [#]
1998	Gain
1999	Gain
2000	Gain
2001	Loss
2002	Loss
2003	(4.0)%

[#]*Magnitude of gain or loss to 2002 is not available.*

CITY'S COMPUTED CONTRIBUTIONS FOR THE FISCAL YEAR BEGINNING JULY 1, 2004

	Contributions Expressed As % of Active Member Payroll
Contributions For	
Total Normal Cost	10.10%
Member Contributions (weighted average)	3.75%
Employer Normal Cost	6.35%
Unfunded Actuarial Accrued Liabilities*	2.41%
Employer Pension Total	8.76%
Valuation Payroll	$ 41,998,187
Estimated Contribution Dollars	3,844,598

*   *Unfunded actuarial accrued liabilities were financed as a level percent of payroll over a period of 30 years.*

Note: *If a 4.5% ad-hoc COLA is adopted this year, the employer contribution rate would increase to 8.98% of payroll. For each 1% ad-hoc COLA increase, the UAAL will increase by $401,867 and the employer contribution rate will increase by 0.05% (based on current payroll and a 30-year amortization period). In developing these costs for the ad-hoc COLA increase, it was assumed that the increase would be a one-time permanent increase to all members retired as of 12/31/2003 and the additional liability would be amortized over 30 years. It was also assumed that the increase would be effective on 1/1/2004.*

COMMENT A – The Retirement System is 82.0% funded as of December 31, 2003. The Unfunded Actuarial Accrued Liability of $20,954,959 is amortized over a *30*-year period.

COMMENT B – The valuation uses a smoothed market value, which recognizes gains and losses due to investments over a 5-year period. One-fifth of this year's investment gain (approximately $14.3 million) was recognized in the valuation model this year and one-fifth will be recognized in each of the next 4 years. This smoothing process resulted in a recognized rate of return of 6.4% (compared with an assumed rate of 7.5%) even though the actual rate of return on a market basis was 28.2%. The Funding Value of Assets is now 0.4% less than the Market Value (see Page -4).

COMMENT C – Experience during the year ending December 31, 2003 was less favorable than assumed resulting in an experience loss of $4.3 million. Of this loss, approximately $1 million was due to the loss recognized in the funding value of assets; approximately $1.5 million was due to losses related to pay increases; and approximately $2 million was related to differences between assumed decrement experience and actual decrement experience (incidences of retirement, quits, death and disabilities) as well as differences in actuarial software.

COMMENT D – The actuarial assumptions used in the valuation were the same as those used by the previous actuary. An experience study is scheduled to be performed, subsequent to the December 31, 2003 actuarial valuation. Any recommended changes in methods and assumptions as a result of that study are expected to be reflected in the December 31, 204 actuarial valuation.

Comment E – Beginning with the December 31, 2003 valuation the method of amortizing the unfunded actuarial accrued liability (UAAL) was changed from amortizing individual changes in the UAAL over multiple periods to amortizing the entire UAAL over a 30-year period. The amortization method was also changed from a level dollar amortization to a level percent of payroll amortization. These changes were adopted by the Retirement Board pursuant to GRS recommendations.

COMPARATIVE STATEMENT

| Valuation Date December 31 | Active Members | | | | | Retirees & Beneficiaries | | | Annual Contributions as a Percent of Payroll | | |
| | Number | Ratio to Retired | Valuation Payroll | | % Increase | Number | Annual Benefits | | Member | Employer | Total |
			$	Average			$	% of Payroll			
2003	1,316	2.59	$ 41,998,187	$ 31,914	1.0%	509	$ 4,981,710	11.9%	3.75%	8.76%	12.51%

ACTUARIAL ACCRUED LIABILITIES & VALUATION ASSETS
COMPARATIVE STATEMENT

Valuation Date December 31	Actuarial Accrued Liability (AAL)	Valuation Assets	Unfunded Actuarial Accrued Liability (UAAL)	Ratio of Present Assets To AAL	Ratio of UAAL to Valuation Payroll
2003	$ 116,252,648	$ 95,297,689	$ 20,954,959	82.0 %	49.9 %

Active Members & Benefit Recipients

Covered Persons

1400
1200
1000
800
600
400
200
0

2003

Valuation Year

■ Benefit Members □ Active Recipients
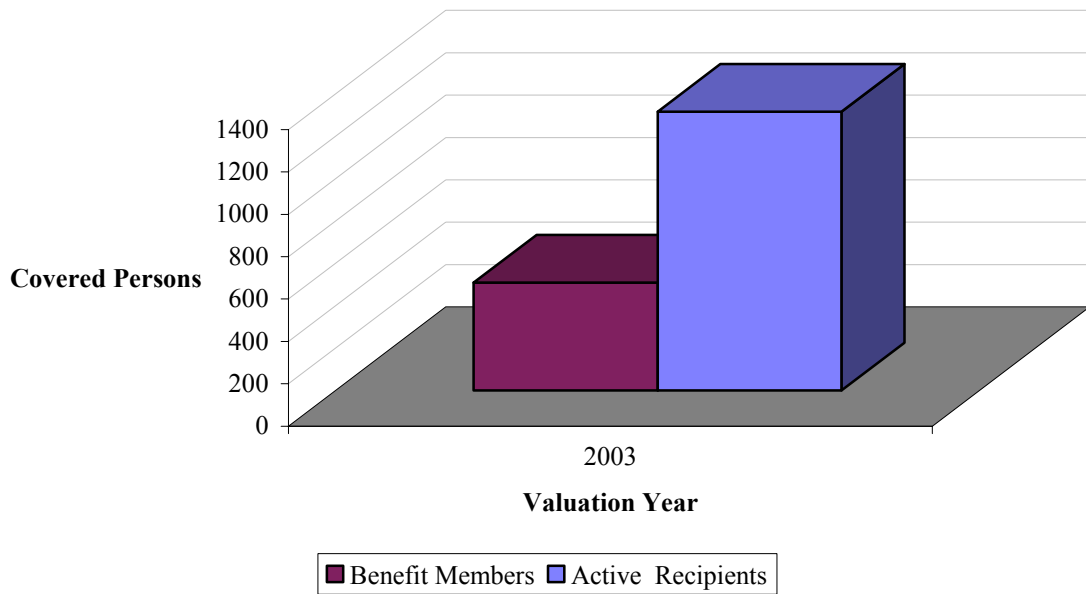
Benefits as a Percent of Payroll

11.9%

%

12%
10%
8%
6%
4%
2%
0%

2003

Valuation Year

Assets & Accrued Liabilities

Valuation Year

2003

$0 $20 $40 $60 $80 $100 $120

$ Millions
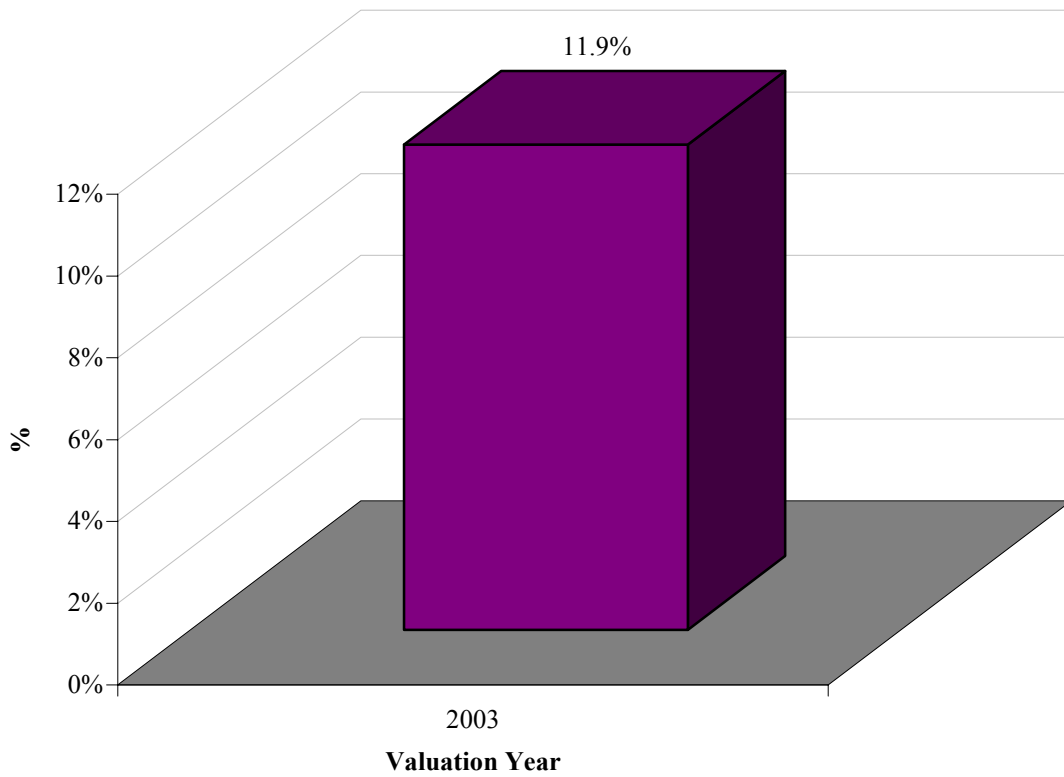
■ Assets ■ Liabilities

SCHEDULE OF CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY
OTHER THAN ANNUAL GAINS/LOSSES

Date Established	Original Amount	Type of Base
01/01/1991	$ 2,656,461	Initial Unfunded
01/01/1997	32,202	Plan Amendment
01/01/1997	588,165	1996 COLA
01/01/1998	602,888	1997 COLA
01/01/1999	4,750,497	Plan Amendment
01/01/1999	62,532	Assumption Change
01/01/1999	866,215	1998 COLA
01/01/2000	847,614	1999 COLA
01/01/2001	958,172	2000 COLA
01/01/2002	1,047,075	2001 COLA
01/01/2003	1,214,958	2002 COLA
01/01/2003	(3,319,777)	Assumption Change
01/01/2003	6,317,683	Plan Amendment

SECTION B

Benefit Provisions and Valuation Data

SUMMARY OF BENEFIT PROVISIONS
AS OF DECEMBER 31, 2003

Eligibility	Amount

NORMAL RETIREMENT

Members are eligible to retire at age 60 with at least 5 years of service.

Straight life pension equals 2.0% of 3-year final average earnings (FAE) times service on and after January 1, 1999 *plus* 1.5% of FAE times service before January 1, 1999.

Members with at least 20 years of service at retirement are eligible for a minimum benefit if employed on or before January 1, 1974.

Minimum benefit for eligible members is 50% of FAE.

EARLY RETIREMENT

Members are eligible to retire early if the sum of age and service is at least 80, or at age 55 with at least 20 years of service.

Computed as a normal retirement pension. If the early retirement occurs prior to the member attaining age 60, the benefit is reduced by 1/6 of 1% for each month that the early retirement precedes age 60.

DEFERRED RETIREMENT

Members are eligible to retire with a deferred benefit after attaining at least 5 years of service, provided they do not take a refund of member contributions.

Pension is computed as a normal retirement pension, based on service and FAE on date of termination. Commencement of benefits begins at age 60.

NON-DUTY DISABILITY

Members are eligible upon attainment of 15 years of service.

Pension is computed as a normal retirement pension based on service and FAE as of date of disability.

DUTY DISABILITY

No age or service requirement.

Pension is computed as a normal retirement pension based on service and FAE as of date of disability. Minimum duty disability benefit is 50% of FAE.

SUMMARY OF BENEFIT PROVISIONS
AS OF DECEMBER 31, 2003

Eligibility	**Amount**

ORDINARY DEATH-IN-SERVICE

(1) Any age with less than 5 years of service.	(1) Beneficiary receives member's contributions and accumulated interest.
(2) Any age with 5 or more years of service.	(2) Beneficiary receives normal or early retirement benefit (depending on eligibility), actuarially reduced as if the member had elected the 100% Joint & Survivor benefit. The combined reduction for the Joint & Survivor reduction and early retirement reduction shall not be more than 50%.

DUTY DEATH-IN-SERVICE

Death as a result of a work-related accident; not caused by willful neglect of the member.	50% of FAE payable to the unmarried surviving spouse, child, or children under age 18, or dependent parent. If none of the above-mentioned potential beneficiaries are alive at the time of the member's death, a lump sum is payable to the member's estate in the amount of 100% of base salary plus the member's accumulated contributions (including interest) plus accrued fringe benefits not paid at the time of death.

MEMBER CONTRIBUTIONS

	3.75% of pay for service on and after January 1, 1999. 2.5% of pay for service prior to January 1, 1999. Contributions are credited with 5.0% interest per annum.

OPTIONAL FORMS OF PAYMENT

In lieu of the straight life benefit, a member may elect an actuarially reduced benefit in one of the following forms:

> 100% Joint & Survivor with pop-up
> 66 2/3 % Joint & Survivor with pop-up
> 50% Joint & Survivor with pop-up
> 10-year Certain & Life Option

The actuarial factors for optional forms of payment are based on the 1983 Group Annuity Mortality Table and 7.5% interest.

Year Ended December 31	Added to Rolls		Removed from Rolls		Rolls End of Year		Average Pension
	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	
2003	36	320,042	26	210,619	509	4,981,710	9,787

RETIREES AND BENEFICIARIES DECEMBER 31, 2003
TABULATED BY TYPE OF PENSIONS BEING PAID

Type of Pensions Being Paid	Number	Annual Pensions
Age and Service Pensions		
Regular Pension - Benefit terminating at death of retiree	270	$ 2,199,726
For life of member, but not less than 10 years	49	439,573
100% Joint & Survivor	71	848,735
66 2/3% Joint & Survivor	21	308,258
50% Joint & Survivor	27	391,264
Survivor Beneficiary	28	240,169
Survivor of 10-year certain	12	100,369
Total age and service pensions	478	4,528,094
Casualty Pensions		
Duty Disability	25	389,005
Non-Duty Disability	6	64,611
Duty Death - Survivor Benefits	0	0
Non-Duty Death - Survivor Benefits	0	0
Total casualty pensions	31	453,616
Total Pensions Being Paid	**509**	**$4,981,710**

RETIREES AND BENEFICIARIES DECEMBER 31, 2003
TABULATED BY ATTAINED AGES

Attained Age	Age and Service		Casualty		Totals	
	Number	Annual Pensions	Number	Annual Pensions	Number	Annual Pensions
25-29	1	$ 18,226			1	$ 18,226
30-34	1	13,131			1	13,131
35-39						
40-44	3	38,314	2	$ 29,176	5	67,490
45-49	2	21,075	9	150,810	11	171,885
50-54	6	121,381	3	49,835	9	171,216
55-59	10	173,041	5	73,985	15	247,026
60-64	58	642,306	6	64,176	64	706,482
65-69	88	1,007,451	3	44,975	91	1,052,427
70-74	91	809,565			91	809,565
75-79	95	837,528	3	40,658	98	878,186
80-84	80	527,070			80	527,070
85-89	35	241,777			35	241,777
90-94	7	56,497			7	56,497
95-100	1	20,734			1	20,734
Totals	**478**	**$ 4,528,094**	**31**	**$ 453,615**	**509**	**$ 4,981,710**

Average Age at Retirement: 62.3 years
Average Age Now: 72.3 years

RETIREES AND BENEFICIARIES DECEMBER 31, 2003
TABULATED BY YEAR OF RETIREMENT

Year of Retirement	Number	Annual Pensions	
		Totals	Average
1974	2	$ 15,758	$ 7,879
1976	2	18,089	9,044
1977	2	16,852	8,426
1978	8	59,502	7,438
1979	5	20,125	4,025
1980	4	27,542	6,885
1981	16	146,549	9,159
1982	11	32,585	2,962
1983	12	95,360	7,947
1984	10	50,760	5,076
1985	10	58,370	5,837
1986	13	79,460	6,112
1987	16	188,148	11,759
1988	16	89,755	5,610
1989	19	186,230	9,802
1990	21	259,746	12,369
1991	24	179,604	7,483
1992	18	229,569	12,754
1993	25	282,056	11,282
1994	42	354,148	8,432
1995	30	275,433	9,181
1996	29	320,660	11,057
1997	21	226,056	10,765
1998	16	155,132	9,696
1999	34	476,636	14,019
2000	29	381,190	13,144
2001	23	257,989	11,217
2002	33	299,192	9,066
2003	18	199,214	11,067
Totals	**509**	**$ 4,981,710**	**$ 9,787**

Average Age at Retirement: 62.3 years
Average Age Now: 72.3 years

INACTIVE VESTED MEMBERS DECEMBER 31, 2003
TABULATED BY ATTAINED AGE

Attained Age	Number	Estimated Annual Pensions
30-34	3	16,815
35-39	5	24,535
40-44	2	9,968
45-49	19	97,812
50-54	16	82,653
55-59	22	99,130
60-64	1	2,092
Totals	**68**	**$333,005**

Average Age at Termination: 47.7 years
Average Age Now: 50.6 years

Valuation Date	Number Added During Year		Terminations During Year									
			Normal Retirement		Disability Retirement		Died-in Service		Withdrawals			
									Vested	Other	Totals	
	A	E	A	E	A	E	A	E	A	A	A	E
2003	166	265	24	N/A	1	N/A	0	N/A	68	172	240	N/A
5-Year Totals*	166	265	24	0.0	1	0.0	0	0.0	68	172	240	0.0

A = Actual
E = Expected
* As of December 31, 2003, only one year of information available.

ACTIVE MEMBERS DECEMBER 31, 2003
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals Number	Totals Valuation Payroll
20-24	45							45	$ 885,150
25-29	75	5						80	1,875,754
30-34	55	20	8					83	2,711,760
35-39	73	34	15	16				138	4,374,982
40-44	101	45	19	38	10	1		214	6,922,579
45-49	89	54	42	29	13	19		246	7,639,814
50-54	60	31	41	39	16	35	8	230	8,371,654
55-59	30	29	14	32	18	16	8	147	5,366,175
60-64	17	11	6	13	15	10	7	79	2,658,657
65-69	8	6	2	9	7	4	1	37	942,903
70-74	3	2	2	1	2	3		13	210,691
75-79	1	1		1		1		4	38,068
Totals	**557**	**238**	**149**	**178**	**81**	**89**	**24**	**1,316**	**$ 41,998,187**

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

Age:	45.9 years
Service:	9.7 years
Annual Pay:	$ 31,914

SECTION C

Valuation Methods and Assumptions

Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using the *individual entry-age actuarial cost method* having the following characteristics:

- the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;

- each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

MECRS currently has a tiered benefit structure with the ultimate tier being more costly than the initial tier. The normal cost is computed based on this tiered structure. As a result, the normal cost rate is expected to increase as the members affected by the initial tier are replaced by new members.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded actuarial accrued liabilities were amortized by level (principal and interest combined) percent of payroll contributions over 30 future years.

Asset Valuation Method. Last year's valuation assets are increased by contributions and reduced by refunds, benefit payments and expenses. An amount equal to the assumed investment return for the year is then added. Differences between actual return on a market value basis and an assumed return are phased in over a five-year period.

The contribution requirements and benefit values of the System are calculated by applying actuarial assumptions to the benefit provisions and member information furnished, using the actuarial cost method described on the previous page.

The principal areas of financial risk which require assumptions about future experience are:

- long-term rates of investment return to be generated by the assets of the System,

- patterns of pay increases to members,

- rates of mortality among members, retirees and beneficiaries,

- rates of withdrawal of active members,

- rates of disability among members,

- the age patterns of actual retirement.

In a valuation, the monetary effect of each assumption is calculated for as long as a present covered person survives - - - a period of time which can be as long as a century.

Actual experience of the System will not coincide exactly with assumed experience, regardless of the accuracy of the assumptions, or the skill of the actuary and the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations). Actuarial methods and assumptions were set by the prior actuary and are believed to be reasonable, in the aggregate. MECRS will be undergoing an experience study to review methods and assumptions subsequent to the 12/31/2003 valutation.

VALUATION ASSUMPTIONS

The rate of investment return was 7.5 percent per year, compounded annually (net of administrative and investment expenses). This assumption is used to make money payable at one point in time equal in value to a different amount of money payable at another point in time. The assumed real rate of return (the net return in excess of the wage inflation rate) is 3.0%. Experience over the last 5 years has been as follows:

| | Year Ended December 31 | | | | | 5-Year* |
	2003	2002	2001	2000	1999	Average
1) Nominal rate of return#	6.4 %	N/A	N/A	N/A	N/A	N/A
2) Increase in CPI	1.9 %	2.4 %	1.6 %	3.4 %	2.7 %	2.4 %
3) Average salary increase (ASI)	1.0 %	N/A	N/A	N/A	N/A	N/A
4) Real Return						
- Total: CPI (1) - (2)						N/A
- Total: ASI (1) - (3)						N/A
- Assumption						3.0 %

\# *The nominal rate of return was computed using the approximate formula: i = I divided by 1/2 (A+B-I), where I is realized investment income net after expenses, A is the beginning of year asset value and B is the end of year asset value.*

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefit amounts will be based.

| | Salary Increase Assumptions For an Individual Member | | |
Sample Ages	Merit & Seniority	Base (Economic)	Increase Next Year
20	1.00%	4.50%	5.50%
25	1.00%	4.50%	5.50%
30	1.00%	4.50%	5.50%
35	0.50%	4.50%	5.00%
40	0.50%	4.50%	5.00%
45	0.50%	4.50%	5.00%
50	0.00%	4.50%	4.50%
55	0.00%	4.50%	4.50%
60	0.00%	4.50%	4.50%
Ref:	152		

If the number of active members remains constant, then the total active member payroll will increase 4.5% annually, the base portion of the individual salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

VALUATION ASSUMPTIONS

The mortality table was the 1983 Group Annuity Mortality Table, set back 0 years for men and 0 years for women.

Sample Attained Ages	Single Life Retirement Values			
	Present Value of $1 Monthly for Life		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	$138.13	$147.41	29.18	34.92
55	129.80	141.00	24.82	30.24
60	119.40	132.67	20.64	25.67
65	106.72	122.14	16.69	21.29
70	92.80	109.11	13.18	17.13
75	78.28	94.25	10.15	13.37
80	63.93	79.05	7.64	10.20
Ref:	30 x 1.00	31 x 1.00		

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement.

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

Active Members Retiring Next Year	
Ages	% Retiring
50	5%
51	5%
52	5%
53	5%
54	10%
55	10%
56	10%
57	10%
58	10%
59	10%
60	10%
61	10%
62	50%
63	15%
64	15%
65	100%
Ref.	459

A member was assumed to be eligible for normal retirement after attaining age 60 with 5 or more years of service. A member was assumed to be eligible for early retirement after attaining age 55 with at least 20 years of service or if the sum of age and service is at least 80.

Rates of separation from active membership are shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample	% of Active Members Separating Within Next Year	
Ages	Men	Women
20	10.00%	12.50%
25	8.80%	11.30%
30	6.60%	9.40%
35	4.60%	6.90%
40	3.60%	5.50%
45	2.40%	3.40%
50	0.00%	0.00%
Ref.	592	593

Rates of disability were divided equally between duty and non-duty disability, and are as follows:

Sample Ages	% of Active Members Becoming Disabled Within Next Year	
	Male	Female
20	0.015%	0.020%
25	0.015%	0.025%
30	0.020%	0.030%
35	0.025%	0.040%
40	0.035%	0.050%
45	0.050%	0.075%
50	0.090%	0.130%
55	0.180%	0.245%
60	0.450%	0.605%
Ref.	237 x 0.50	238 x 0.50

Expense Load. None.

Marriage Assumption:	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
Pay Increase Timing:	Beginning of the year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and exact fractional service on the date the decrement is assumed to occur.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and withdrawal decrements do not operate after member reaches retirement eligibility.
Miscellaneous Loading Factors:	None.
Benefit Service:	Exact fractional service as of the valuation date is used to determine the amount of benefit payable.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the actual payroll payable at the time contributions are made.

SECTION D

GASB STATEMENT NO. 25

GASB STATEMENT NO. 25
REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets $Millions	Actuarial Accrued Liability (AAL) Entry Age $Millions	Unfunded AAL (UAAL) $Millions	Funded Ratio (a)/(b)	Covered Payroll ($ millions) (c)	UAAL as a Percent of Covered Payroll [(b) - (a)] / (c)
12/31/2003	$95.3	$116.3	$21.0	81.9 %	$42.0	50.0 %

Schedule of Employer Contributions

Valuation Year Ended December 31	Fiscal Year Ended June 30	Contribution Rate as a Percent of Valuation Payroll	Annual Recommended Contribution	Actual Contributions	Percent Contributed
2001	2003	N/A	N/A	N/A	N/A
2002	2004	N/A	N/A	N/A	N/A
2003	2005	8.76%	$ 3,844,598	N/A	N/A

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	December 31, 2003
Actuarial cost method	Entry Age Normal
Amortization method	Level percent of payroll
Remaining amortization period	30 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment net rate of return*	7.5%
Projected salary increases*	4.5%-5.5%
Cost-of-living adjustments	N.A.
*Includes inflation at	4.5%

Membership of the plan consisted of the following at December 31, 2003, the date of the latest actuarial valuation:

Retirees and Beneficiaries receiving benefit	509
Terminated plan members entitled to but not yet receiving benefits	68
Active plan members	1,316
Total	1,893

SECTION E

OPERATION OF THE RETIREMENT SYSTEM

BASIC FINANCIAL OBJECTIVE AND OPERATION
OF THE RETIREMENT SYSTEM

Benefit Promises Made Which Must Be Paid For. A retirement system 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 system acquires a unit of service credit they are, in effect, handed an "IOU" which reads: "The Employees 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?

This Retirement System meets the requirement of funding future benefits during the year 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 current value of benefits likely to be paid on account of members' 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 System 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 systems 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 on behalf of the group
>>
>> ... plus ...
>>
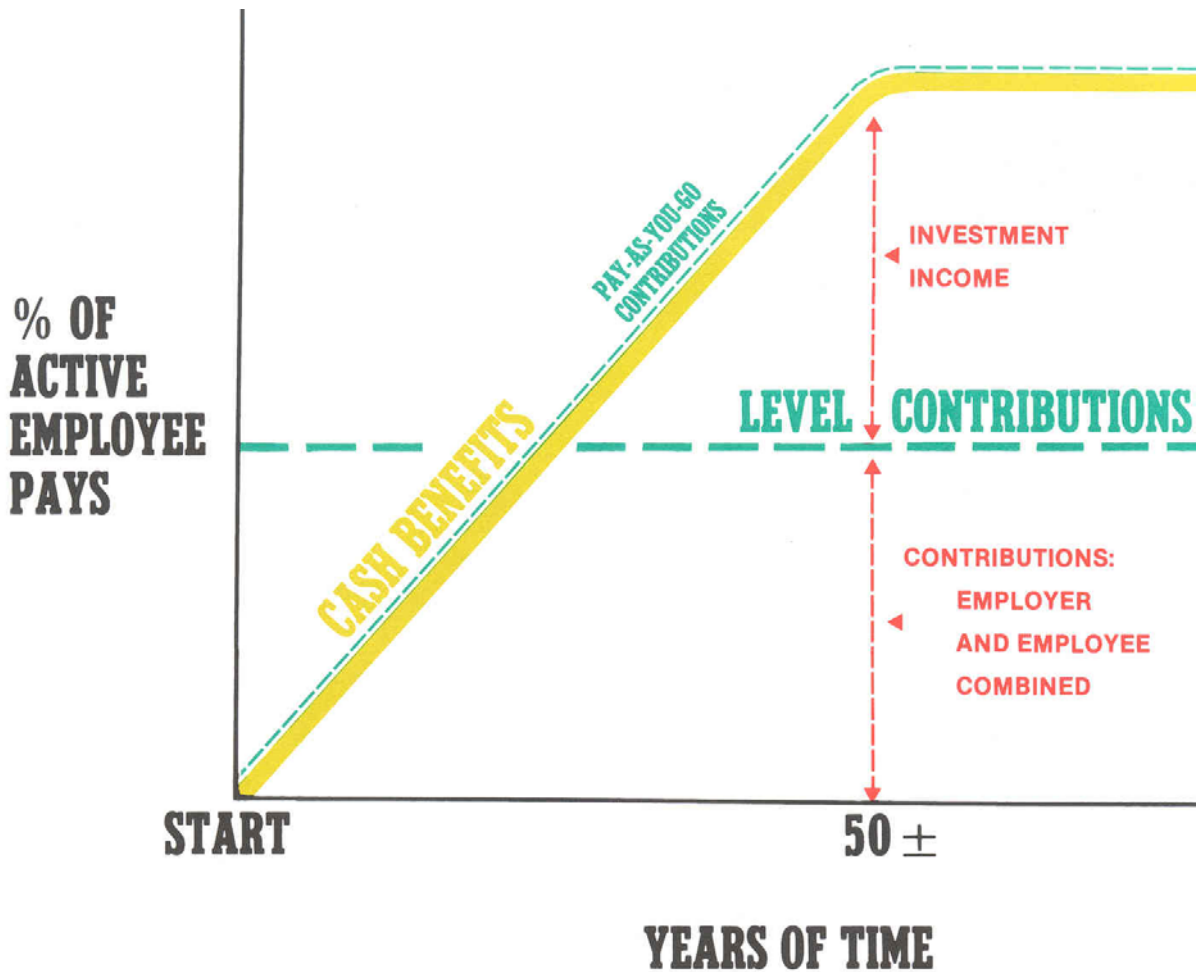>> ___Investment___ earnings on contributions received
>>
>> ... minus ...
>>
>> ___Expenses___ incurred in the operation of the system.

There are retirement systems designed to defer the bulk of contributions far into the future. They are lured by artificially low present contributions, but the inevitable consequence is a relentlessly increasing contribution rate to a level greatly in excess of the level percent-of-payroll rate.

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 a major contributor to the Retirement System, and the amount is directly related to the amount of 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 system.

% OF ACTIVE EMPLOYEE PAYS — **YEARS OF TIME**

Chart labels: PAY-AS-YOU-GO CONTRIBUTIONS, CASH BENEFITS, LEVEL CONTRIBUTIONS, INVESTMENT INCOME, CONTRIBUTIONS: EMPLOYER AND EMPLOYEE COMBINED, START, 50±

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:
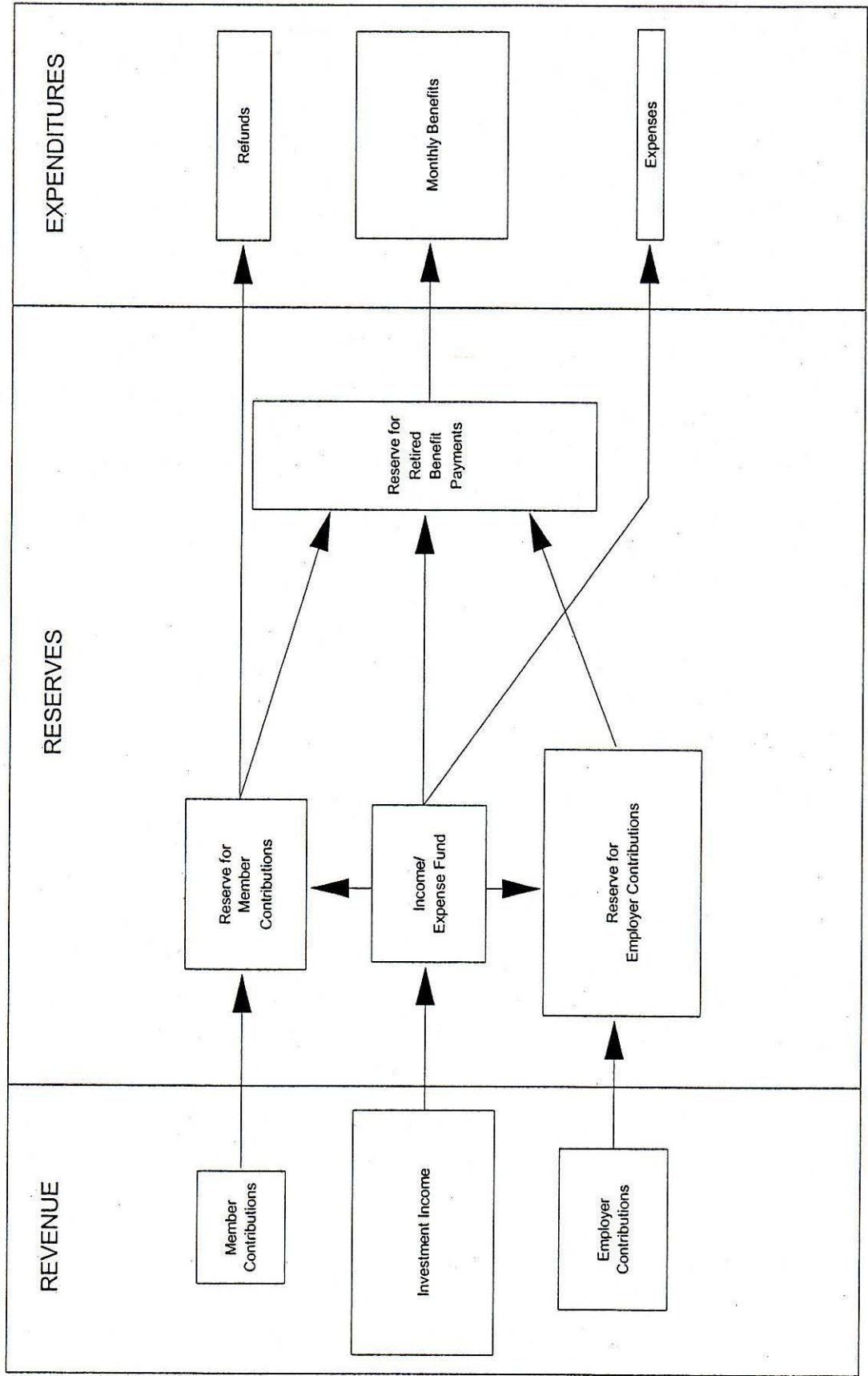
    Economic Risk Areas

        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

Flow of Money Through the Retirement System

REVENUE

- Member Contributions
- Investment Income
- Employer Contributions

RESERVES

- Reserve for Member Contributions
- Income/Expense Fund
- Reserve for Employer Contributions
- Reserve for Retired Benefit Payments

EXPENDITURES

- Refunds
- Monthly Benefits
- Expenses

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 Liabilities. 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.

June 1, 2004

Mr. Gerald Fleury, Executive Director
City of Manchester Employees'
    Contributory Retirement System
1045 Elm Street, Suite 403
Manchester, New Hampshire   03101-1829

Dear Mr. Fleury:

Please find enclosed 15 copies of the report of the Actuarial Valuation of the City of Manchester Employees' Contributory Retirement System.

Sincerely,

Kenneth G. Alberts

KGA/bd
Enclosures

cc: Mark Buis