

Public Employees Retirement Fund
ACTUARIAL VALUATION REPORT

JULY 1, 2003

 **FILE COPY**



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November 26, 2003

Legislative Commission on
Pensions and Retirement
55 State Office Building
St. Paul, Minnesota 55155

RE: Public Employees Retirement Fund

Commission Members:

Pursuant to the terms of our Actuarial Services Contract, we have performed an actuarial valuation of the Fund as of July 1, 2003.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. Although we have reviewed the data for reasonableness and consistency, we have relied on the basic employee data and asset figures as submitted by the Public Employees Retirement Fund.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with the requirements of Section 356.215, Minnesota Statutes, and the requirements of the Standards for Actuarial Work, adopted by the Commission.

We, Thomas K. Custis and William V. Hogan, are actuaries for Milliman USA. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Milliman USA

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Consulting Actuary

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TKC/WVH/bh

Public Employees Retirement Fund

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Public Employees Retirement Fund
Report Highlights
(dollars in thousands)

	July 1, 2002 Valuation	July 1, 2003 Valuation
A. CONTRIBUTIONS % OF PAYROLL (Table 11)		
1. Statutory Contributions - Chapter 353 % of Payroll	10.66%	10.65%
2. Required Contributions - Chapter 356 % of Payroll	11.23%	11.89%
3. Sufficiency (Deficiency)	(0.57%)	(1.24%)
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$ 11,017,414	\$ 11,195,902
b. Current Benefit Obligations (Table 8)	\$ 12,106,527	\$ 12,878,071
c. Funding Ratio	91.00%	86.94%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$ 11,017,414	\$ 11,195,902
b. Actuarial Accrued Liability (Table 9)	\$ 12,958,105	\$ 13,776,198
c. Funding Ratio	85.02%	81.27%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$ 15,492,814	\$ 15,870,230
b. Current and Expected Future Benefit Obligations	\$ 15,951,825	\$ 16,916,574
c. Funding Ratio	97.12%	93.81%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	137,817	140,066
b. Projected Annual Earnings	\$ 3,967,335	\$ 4,233,217
c. Average Annual Earnings (Actual dollars)	\$ 28,787	\$ 30,223
d. Average Age	44.9	45.2
e. Average Service	9.4	9.6
2. Others		
a. Service Retirements (Table 4)	43,037	44,532
c. Survivors (Table 5)	6,276	6,391
b. Disability Retirements (Table 6)	1,565	1,640
d. Deferred Retirements (Table 7)	29,353	32,128
e. Terminated Other Non-Vested (Table 7)	87,114	94,340
f. Total	167,345	179,031

Public Employees Retirement Fund

Commentary

Purpose

The purpose of this valuation is to determine the financial status of the Plan. In order to achieve this purpose, an actuarial valuation is made at the beginning of each fiscal year as required by Section 356.215 of Minnesota Statutes.

Report Highlights

The financial status of the Plan can be measured by three different funding ratios:

- The Accrued Benefit Funding Ratio is a measure of current funding status and, when viewed over a period of years, presents a view of the funding progress. It is based upon benefits which have been earned by service to the valuation date. This year's ratio is 86.94%. The corresponding ratio for the prior year was 91.00%.
- The Accrued Liability Funding Ratio is also a measure of funding status and funding progress. It is based on the actuarial cost method that has historically been used by the State. For 2003 the ratio is 81.27%, which is a decrease from the 2002 ratio of 85.02%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 93.81% verifies that the current statutory contributions are deficient.

Asset Information (Tables 1 and 2)

Effective with the July 1, 2000 valuation of the fund, Minnesota Statutes require that the asset value used for actuarial purposes spread differences between actual return (measured on a market-value basis) and expected return on non-MPRIF assets over five years, in a manner similar to that already being used within the MPRIIF. The previous method required under Minnesota Statutes recognized one third of the unrealized gains and losses. An Asset Valuation Method requirement exists because market values (which include all unrealized gains and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year. The intent of the change to the current method is to employ a more effective asset smoothing technique which is market-value based and which eliminates artificial bias related to manager style. The effective date of this requirement is July 1, 2000 with full transition to be accomplished as of July 1, 2003.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines E.1 to E.4. Actuarial Value of Assets is determined as:

Market Value of Assets at June 30, 2003, *less*

80% of the current year Unrecognized Asset Return at July 1, 2003 (the difference between actual net return on Market Value of Assets between June 30, 2002 and June 30, 2003 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2002 Actuarial Valuation); *less*

60% of the current year Unrecognized Asset Return at July 1, 2002 (the difference between actual net return on Market Value of Assets between June 30, 2001 and June 30, 2002 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2001 Actuarial Valuation); *less*

40% of the current year Unrecognized Asset Return at July 1, 2001 (the difference between actual net return on Market Value of Assets between June 30, 2000 and June 30, 2001 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2000 Actuarial Valuation); *less*

20% of the current year Unrecognized Asset Return at July 1, 2000 (the difference between actual net return on Market Value of Assets between June 30, 1999 and June 30, 2000 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 1999 Actuarial Valuation).

Since its adoption on July 1, 2000, the Asset Valuation Method has functioned effectively to smooth the significant variability in market value returns. It is prudent to note, however, that the deferral of recognition of the large market losses of the last three fiscal years means there has accumulated a significant negative return amount that will be recognized over the next few years. This means that in order for asset returns on a "Current Assets" basis to be at or near the assumed 8.5%, market value returns will need to be substantially above 8.5%; conversely, if market value returns are at or near the assumed 8.5%, returns measured on a "Current Assets" basis will be substantially lower, resulting in actuarial losses.

The term "Actuarial Value of Assets" is used to indicate that the value was determined for use in this actuarial valuation. Since Minnesota Statutes refer to this value as "Current Assets," the latter phrase will be used in the remainder of this report.

This Plan participates in the Minnesota Post Retirement Investment Fund (i.e., MPRIF). After the MPRIF liability has been calculated for each participating Plan, the State Board of Investments, (i.e., SBI) will determine each Plan's portion of the excess earnings for the January benefit increase as well as the Plan's allocated market share of MPRIF.

Actuarial Balance Sheet (Table 8)

An actuarial balance sheet provides a method for evaluating current and future levels of funding.

The Current Benefit Obligation used to measure current funding levels is calculated as follows:

- For Active Members – Salary and service are projected to retirement to determine benefits for each member and the ratio of credited service to total service establishes the portion of the projected benefit to be used in calculating the current funding level.
- For Non-Active Members – The discounted value of benefits, including augmentation in cases where benefits have not commenced.

GASB Disclosure

Disclosure of the Current Benefit Obligation amounts used to be required by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 has been superseded

by Statement No. 25. Tables 14 and 15 of this report are included to fulfill the requirements of Statement No. 25.

Actuarial Cost Method (Table 9)

The approach used by the State of Minnesota to determine contribution sufficiency is the Entry Age Normal Actuarial Cost Method. The primary characteristic of this method is that it allocates costs as a level percentage of payroll.

A comparison of this actuarial method (Table 9) to the actuarial balance sheet (Table 8) illustrates the two techniques for allocating liabilities of active Members to past and future. As noted in the prior section, the balance sheet allocates benefits and corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

An Unfunded Actuarial Accrued Liability is computed under the Entry Age Normal Actuarial Cost Method by comparing the liabilities allocated to past service (Actuarial Accrued Liability) to the Current Assets. This amount, line B3, is funded over the remaining years to the amortization date by a series of payments that remain a constant percentage of payroll each year.

The payments will increase 6% each year because that is the assumed rate of increase in payroll. Although the payment schedule will be adequate to amortize the existing unfunded, the lower payments in the earlier years will not be sufficient to cover the interest on the unfunded liability. After a few years, the annual payment will cover the interest and also repay a portion of the unfunded.

Source of Actuarial Gains and Losses (Table 10)

The assumptions used in making the calculations using the Entry Age Normal Actuarial Cost Method are based on long-term expectations. Each year the actual experience will deviate from the long-term expectations. For a detailed analysis of the major components, refer to Table 10.

Contribution Sufficiency (Table 11)

This report determines the adequacy of Statutory Contributions by comparing the Statutory Contributions to the Required Contributions.

The Required Contributions, set forth in Chapter 356, consist of:

- Normal costs based on the Entry Age Normal Actuarial Cost Method.
- A Supplemental Contribution for amortizing any Unfunded Actuarial Accrued Liability.
- An Allowance for Expenses.

Table 11 shows the Plan has a contribution deficiency since the Statutory Contribution Rate is 10.65% compared to the Required Contribution Rate of 11.89%.

Changes in Actuarial Assumptions and Methods

All actuarial assumptions are the same as those used in the prior valuation. Table 12 contains a summary of all actuarial assumptions and methods.

Changes in Plan Provisions

All plan provisions are the same as those used in the prior valuation. Table 13 contains a summary of the plan provisions.

TABLE 1

Public Employees Retirement Fund
Statement of Plan Net Assets
(dollars in thousands)

July 1, 2003

	Market Value	Cost Value
A. ASSETS IN TRUST		
1. Cash, Equivalents, Short-Term Securities	\$ 31,164	\$ 31,164
2. Fixed Income	1,004,999	998,489
3. Equity	3,093,937	3,505,647
4. Real Estate	152,779	128,469
5. Equity in MPRIF*	5,994,477	5,994,477
6. Invested Securities Lending Collateral	707,578	707,578
7. Other	12,691	12,691
Subtotal	<u>\$ 10,997,625</u>	<u>\$ 11,378,515</u>
B. ASSETS RECEIVABLE	8,234	8,234
C. LIABILITIES		
1. Invested Securities Lending Collateral	(707,578)	(707,578)
2. Other	(58,252)	(58,252)
Subtotal	<u>(765,830)</u>	<u>(765,830)</u>
D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
1. MPRIF Reserves*	5,994,477	5,994,477
2. Member Reserves	1,734,500	1,734,500
3. Other Non-MPRIF Reserves	2,511,052	2,891,942
4. Total Assets Available for Benefits	<u>\$ 10,240,029</u>	<u>\$ 10,620,919</u>
<hr/>		
E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Market Value of Assets Available for Benefits (D4)		\$ 10,240,029
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2003	(267,368)	
b. June 30, 2002	(746,832)	
c. June 30, 2001	(777,813)	
d. June 30, 2000	<u>86,227</u>	
3. UAR Adjustment: $.80 * 2(a) + .60 * 2(b) + .40 * 2(c) + .20 * 2(d)$		(955,873)
4. Actuarial Value of Assets (E1 - E3)		<u>\$ 11,195,902</u>
(Same as "Current Assets")		

* The number shown is the full MPRIF reserve amount. The actual MPRIF market value of \$4,550,889 is not used for funding purposes because this deficiency is accounted for separately and is expected to be recovered from future excess earnings on MPRI funds.

Public Employees Retirement Fund
Statement of Change In Plan Net Assets
(dollars in thousands)

Year Ending June 30, 2003

	Non-MPRIF Assets	MPRIF Reserve	Market Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$ 4,164,810	\$ 5,867,776	\$ 10,032,586
B. ADDITIONS			
1. Member Contributions	\$ 205,963	0	\$ 205,963
2. Employer Contributions	221,689	0	221,689
3. Contributions From Other Sources	0	0	0
4. MPRIF Income	0	384,293	384,293
5. Net Investment Income			
a. Interest and Dividends	105,084	0	105,084
b. Net Appreciation/(Depreciation)	(15,156)	0	(15,156)
c. Investment Expenses	(5,336)	0	(5,336)
d. Net Subtotal	84,592	0	84,592
6. Other	3,609	0	3,609
7. Total Additions	\$ 515,853	\$ 384,293	\$ 900,146
C. OPERATING EXPENSES			
1. Service Retirements	\$ 714	\$ 632,926	\$ 633,640
2. Disability Benefits	16,381	0	16,381
3. Survivor Benefits	14,438	0	14,438
4. Refunds	18,242	0	18,242
5. Administrative Expenses	8,628	0	8,628
6. Other	1,374	0	1,374
7. Total Disbursements	\$ 59,777	\$ 632,926	\$ 692,703
D. OTHER CHANGES IN RESERVES			
1. Annuities Awarded	(331,167)	331,167	0
2. Mortality Gain (Loss)	(44,167)	44,167	0
3. Change in MPRIF Assumptions	0	0	0
4. Total Other Changes	(375,334)	375,334	0
E. ASSETS AVAILABLE AT END OF PERIOD	\$ 4,245,552	\$ 5,994,477	\$ 10,240,029
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN			
1. Average Balance			
(a) Non-MPRIF Assets Available at Beginning of Period			4,164,810
(b) Non-MPRIF Assets Available at End of Period*			4,289,719
(c) Average Balance {[F1.a + F1.b - B5.d-B6] / 2}			4,183,164
2. Expected Return: .085 * F1.c			355,569
3. Actual Return			88,201
4. Current Year UAR: F.3 - F.2			\$ (267,368)

* Before adjustment for MPRIF mortality gain (loss) and new MPRIF assumptions

Table 3

Public Employees Retirement Fund

Active Members as of June 30, 2003

<u>Age</u>	<u>Years of Service</u>								<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	2,811	2,655	53	0	0	0	0	0	5,519
25-29	2,263	5,480	1,026	14	0	0	0	0	8,783
30-34	1,834	5,381	3,258	667	15	0	0	0	11,155
35-39	1,890	5,937	3,771	2,314	913	14	0	0	14,839
40-44	2,216	7,410	5,328	3,412	2,672	1,211	51	0	22,300
45-49	2,420	6,172	5,722	4,596	3,200	2,454	1,370	53	25,987
50-54	1,126	4,164	4,194	4,425	3,623	2,440	2,387	897	23,256
55-59	679	2,415	2,270	2,735	2,967	2,102	1,719	1,256	16,143
60-64	402	1,326	1,219	1,304	1,416	1,109	839	532	8,147
65+	419	1,176	825	500	404	248	198	167	3,937
ALL	16,060	42,116	27,666	19,967	15,210	9,578	6,564	2,905	140,066

Average Annual Earnings

<u>Age</u>	<u>Years of Service</u>								<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	9,966	17,169	21,427	0	0	0	0	0	13,541
25-29	13,978	24,729	30,413	28,927	0	0	0	0	22,630
30-34	14,644	26,245	33,969	35,690	33,080	0	0	0	27,168
35-39	12,772	22,625	32,511	39,477	38,587	35,733	0	0	27,505
40-44	12,432	20,760	27,764	37,471	42,819	40,673	43,100	0	27,938
45-49	9,897	21,057	25,952	33,090	41,525	45,540	43,778	44,972	29,303
50-54	13,055	22,963	26,092	31,311	37,666	45,031	50,347	47,742	33,008
55-59	13,483	21,374	26,579	31,188	34,616	39,375	47,707	53,458	33,515
60-64	10,159	16,855	23,648	29,333	32,297	34,089	38,004	46,438	28,678
65+	6,935	9,965	15,068	22,451	23,959	27,204	28,958	34,265	16,806
ALL	12,017	21,886	27,942	33,496	37,975	41,627	46,005	49,149	28,398

Prior Fiscal Year Earnings (in Millions) by Years of Service

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>ALL</u>
All	193	922	773	669	578	399	302	143	3,978

Public Employees Retirement Fund

Service Retirements as of June 30, 2003

<u>Age</u>	<u>Years Retired</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	0	3	1	0	0	0	0	4
50-54	23	32	0	0	0	0	0	55
55-59	639	1,593	27	1	0	0	0	2,260
60-64	988	3,537	1,960	9	0	0	0	6,494
65-69	656	4,276	4,064	1,139	8	0	0	10,143
70-74	135	937	4,659	2,818	719	0	0	9,268
75-79	50	268	1,060	3,657	2,491	92	0	7,618
80-84	10	94	225	726	3,012	927	21	5,015
85+	2	10	31	109	630	1,932	961	3,675
ALL	2,503	10,750	12,027	8,459	6,860	2,951	982	44,532

Average Annual Benefit

<u>Age</u>	<u>Years Retired</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	0	14,071	5,609	0	0	0	0	11,955
50-54	8,958	10,091	0	0	0	0	0	9,616
55-59	11,426	9,476	24,923	17,526	0	0	0	10,214
60-64	10,463	9,889	10,777	30,138	0	0	0	10,272
65-69	9,274	8,044	13,058	14,408	32,310	0	0	10,866
70-74	5,540	7,262	11,251	14,425	20,873	0	0	12,476
75-79	3,650	4,401	10,576	11,422	20,018	39,399	0	14,155
80-84	1,479	3,495	7,347	9,635	14,652	19,906	17,157	14,344
85+	2,022	1,998	5,745	6,618	10,513	13,841	14,128	13,024
ALL	9,938	8,666	11,668	12,629	16,893	16,542	14,193	12,212

Total Annual Benefit (In Thousands) by Years RETIRED

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	24,875	93,160	140,331	106,829	115,886	48,815	13,938	543,825

Table 5

Public Employees Retirement Fund

Survivors as of June 30, 2003

<u>Age</u>	<u>Years Since Death</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	24	102	71	25	10	0	0	232
50-54	19	83	36	18	2	5	0	163
55-59	29	119	63	24	11	2	3	251
60-64	54	152	118	78	16	10	6	434
65-69	54	224	177	115	60	22	17	669
70-74	61	256	250	197	112	23	36	935
75-79	71	280	335	248	175	64	76	1,249
80-84	63	243	277	233	162	90	117	1,185
85+	29	176	218	225	200	138	287	1,273
ALL	404	1,635	1,545	1,163	748	354	542	6,391

Average Annual Benefit

<u>Age</u>	<u>Years Since Death</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	6,833	6,070	6,777	10,472	9,034	0	0	6,967
50-54	6,443	9,893	10,545	15,544	20,520	17,189	0	10,613
55-59	8,664	9,752	12,815	16,690	14,288	16,976	14,348	11,369
60-64	9,471	9,785	12,141	14,994	14,807	18,841	16,999	11,815
65-69	12,873	11,365	14,047	12,832	20,209	20,463	13,364	13,591
70-74	16,633	16,650	13,820	12,609	18,945	18,718	11,146	15,155
75-79	16,406	15,624	16,721	15,462	15,951	17,323	10,764	15,767
80-84	17,104	11,510	13,761	12,324	13,592	15,126	9,320	12,836
85+	13,052	12,679	11,379	10,382	10,766	10,982	6,930	10,277
ALL	13,315	12,415	13,550	12,994	14,714	14,617	8,618	12,920

Total Annual Benefit (In Thousands) by Years SINCE DEATH

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	5,379	20,299	20,935	15,112	11,006	5,174	4,671	82,572

Table 6

Public Employees Retirement Fund

Disability Retirements as of June 30, 2003

<u>Age</u>	<u>Years Disabled</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	39	128	74	26	0	0	0	267
50-54	29	163	79	36	7	0	0	314
55-59	47	221	132	34	10	1	0	445
60-64	33	253	200	56	13	4	1	560
65-69	1	29	13	7	1	2	1	54
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	149	794	498	159	31	7	2	1,640

Average Annual Benefit

<u>Age</u>	<u>Years Disabled</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	7,585	5,661	7,028	5,311	0	0	0	6,286
50-54	8,521	8,689	8,541	8,695	3,732	0	0	8,526
55-59	11,886	10,777	11,449	8,624	7,934	10,368	0	10,863
60-64	9,187	9,590	12,472	12,039	12,328	13,532	2,617	10,919
65-69	3,315	9,472	10,165	7,834	12,936	42,726	6,234	10,548
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	9,450	9,097	10,707	9,265	8,989	21,421	4,425	9,678

Total Annual Benefit (In Thousands) by Years DISABLED

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	1,408	7,223	5,332	1,473	279	150	9	15,872

Public Employees Retirement Fund
Reconciliation of Members

	<u>Actives</u>	<u>Terminated</u>	
		<u>Deferred Retirement</u>	<u>Other Non-Vested</u>
A. ON JUNE 30, 2002	137,817	29,353	87,114
B. ADDITIONS	17,779	7,463	16,216
C. DELETIONS			
1. Service Retirement	(2,069)	(613)	(28)
2. Disability	(190)	(47)	(3)
3. Death	(190)	(34)	(40)
4. Terminated - Deferred	(6,983)	0	0
5. Terminated - Refund	(2,896)	(49)	(1,536)
6. Terminated - Other Non-Vested	(14,471)	0	0
7. Returned as active	1,714	(667)	(1,047)
8. Members switched from Active to Terminated status	(955)	409	546
D. DATA ADJUSTMENTS	10,510	(3,687)	(6,882)
1. Vested	99,473		
2. Non-Vested	40,593		
E. TOTAL ON JUNE 30, 2003	140,066	32,128	94,340

	<u>Recipients</u>		
	<u>Retirement Annuitants</u>	<u>Disabled</u>	<u>Survivors</u>
A. ON JUNE 30, 2002	43,037	1,565	6,276
B. ADDITIONS	2,817	256	460
C. DELETIONS			
1. Service Retirement	0	(104)	0
2. Death	(1,316)	(63)	(299)
3. Annuity Expired	0	0	(23)
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	(6)	(14)	(23)
E. TOTAL ON JUNE 30, 2003	44,532	1,640	6,391

Public Employees Retirement Fund
Actuarial Balance Sheet
(dollars in thousands)

July 1, 2003

A. CURRENT ASSETS (Table 1; Line E4)				\$ 11,195,902
B. EXPECTED FUTURE ASSETS				
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)				\$ 1,533,952
2. Present Value of Future Normal Costs				3,140,376
3. Total Expected Future Assets				<u>\$ 4,674,328</u>
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				<u>\$ 15,870,230</u>
D. CURRENT BENEFIT OBLIGATIONS				
	<u>Non-Vested</u>	<u>Vested</u>		<u>Total</u>
1. Benefit Recipients				
a. Retirement Annuities		\$ 5,410,309		\$ 5,410,309
b. Disability Benefits		192,853		192,853
c. Surviving Spouse and Child Benefits		670,995		670,995
2. Deferred Retirements with Future Augmentation		846,867		846,867
3. Former Members Without Vested Rights		47,223		47,223
4. Active Members				
a. Retirement Annuities	\$ 57,471	4,913,832		4,971,303
b. Disability Benefits	189,946	0		189,946
c. Surviving Spouse and Child Benefits	64,487	0		64,487
d. Deferred Retirements	13,965	437,883		451,848
e. Refund Liability Due to Death or Withdrawal	0	32,240		32,240
5. Total Current Benefit Obligations	<u>\$ 325,869</u>	<u>\$ 12,552,202</u>		<u>\$ 12,878,071</u>
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				<u>\$ 4,038,503</u>
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				<u>\$ 16,916,574</u>
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5 - A)				\$ 1,682,169
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F - C)				\$ 1,046,344

Public Employees Retirement Fund
Determination of Unfunded Actuarial Accrued Liability (UAAL) and
Supplemental Contribution Rate

(dollars in thousands)

July 1, 2003

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	\$ 8,478,764	\$ 2,367,147	\$ 6,111,617
b. Disability Benefits	338,694	139,486	199,208
c. Survivor's Benefits	113,295	45,502	67,793
d. Deferred Retirements	754,980	493,591	261,389
e. Refunds Due to Death or Withdrawal	62,594	94,650	(32,056)
f. Total	<u>\$ 9,748,327</u>	<u>\$ 3,140,376</u>	<u>\$ 6,607,951</u>
2. Deferred Retirements With Future Augmentation	846,867		846,867
3. Former Members Without Vested Rights	47,223		47,223
4. Annuitants in MPRIF	5,994,477		5,994,477
5. Recipients Not in MPRIF	<u>279,680</u>		<u>279,680</u>
6. Total	<u><u>\$ 16,916,574</u></u>	<u><u>\$ 3,140,376</u></u>	<u><u>\$ 13,776,198</u></u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			\$ 13,776,198
2. Current Assets (Table 1; Line E4)			<u>11,195,902</u>
3. UAAL (B1 - B2)			<u><u>\$ 2,580,296</u></u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2031			84,283,096
2. Supplemental Contribution Rate (B3/C1)			3.06%

Public Employees Retirement Fund
Changes in Unfunded Actuarial Accrued Liability (UAAL)
(dollars in thousands)

Year Ending June 30, 2003

A. UAAL AT BEGINNING OF YEAR	\$ 1,940,691
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$ 350,424
2. Contributions	(427,652)
3. Interest on A, B1, and B2	<u>161,677</u>
4. Total (B1+B2+B3)	<u>\$ 84,449</u>
C. EXPECTED UAAL AT END OF YEAR (A+B4)	\$ 2,025,140
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Salary Increases	\$ 33,730
2. Investment Return	380,033
3. MPRIF Mortality	44,167
4. Mortality of Other Benefit Recipients	(5,892)
5. Other Items	<u>103,118 ⁽¹⁾</u>
6. Total	<u>\$ 555,156</u>
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	\$ 2,580,296
F. CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY DUE TO CHANGE IN ACTUARIAL METHODS	0
G. CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	0
H. UAAL AT END OF YEAR (E+F+G)	<u><u>\$ 2,580,296</u></u>

⁽¹⁾ Of the \$103 million "other loss" we have been able to identify sources of loss as follows: approximately \$36 million from new entrants and approximately \$52 million from a programming refinement affecting Rule of 90 eligibility.

Public Employees Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 2003

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 353		
1. Employee Contributions	5.11%	\$ 216,169
2. Employer Contributions	5.54%	234,526
3. Total	<u>10.65%</u>	<u>\$ 450,695</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	6.64%	\$ 281,052
b. Disability Benefits	0.37%	15,504
c. Survivors	0.12%	5,152
d. Deferred Retirement Benefits	1.26%	53,440
e. Refunds Due to Death or Withdrawal	<u>0.22%</u>	<u>9,509</u>
f. Total	<u>8.61%</u>	<u>\$ 364,657</u>
2. Supplemental Contribution Amortization by July 1, 2031 of UAAL	3.06%	129,536
3. Allowance for Expenses	<u>0.22%</u>	<u>9,313</u>
4. Total	<u>11.89%</u>	<u>\$ 503,506</u>
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	(1.24%)	(52,811)
Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 4,233,217

Public Employees Retirement Fund

Summary of Actuarial Assumptions and Methods

Interest:	Pre-Retirement: 8.5% per annum Post-Retirement: 8.5% per annum
Benefit Increases After Retirement:	Payment of earnings on retired reserves in excess of 6% accounted for by 6% post-retirement assumptions.
Salary Increases:	Reported salary for prior fiscal year, with new hires annualized, increased to current fiscal year and annually for each future year according to the ultimate rate table below. During a 10-year select period, $0.3\% \times (10 - T)$ where T is completed years of service is added to the ultimate rate.
Mortality:	Pre-Retirement: Male - 1983 Group Annuity Mortality Table for males setback eight years. Female - 1983 Group Annuity Mortality Table for females setback seven years. Post-Retirement: Male - 1983 Group Annuity Mortality Table for males setback one year. Female - 1983 Group Annuity Mortality Table for females setback one year. Post-Disability: Male - 1965 RRB rates through age 54. For ages 55 to 64, graded rates between 1965 RRB rates and the Post-Retirement mortality table. For ages 65 and later, the Post-Retirement mortality table. Female - 1965 RRB rates through age 54. For ages 55 to 64, graded rates between 1965 RRB rates and the Post-Retirement mortality table. For ages 65 and later, the Post-Retirement mortality table.
Retirement Age:	Graded rates beginning at age 55 as shown in rate table. Members who have attained the highest assumed retirement age will retire in one year.

TABLE 12
(Continued)

<i>Separation:</i>	Select and ultimate rates based on recent plan experience. Ultimate rates after the third year are shown in rate table. Select rates are as follows:						
	<table><tr><td><u>First Year</u></td><td><u>Second Year</u></td><td><u>Third Year</u></td></tr><tr><td>0.40</td><td>0.15</td><td>0.10</td></tr></table>	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	0.40	0.15	0.10
<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>					
0.40	0.15	0.10					
<i>Disability:</i>	Rates as shown in rate table.						
<i>Member Status:</i>	Active members who are reported with no salary and no credited service for the prior fiscal year are changed to terminated status as of the prior fiscal year end.						
<i>Allowance for Combined Service Annuity:</i>	Liabilities for active Members are increased by 0.8% and liabilities for former Members are increased by 60% to account for the effect of some participants having eligibility for a Combined Service Annuity.						
<i>Expenses:</i>	Prior year expenses expressed as percentage of prior year payroll.						
<i>Return of Contributions:</i>	All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit.						
<i>Family Composition:</i>	85% of male Members and 65% of female Members are assumed to be married. Female is four years younger than male. Assume Members have no children.						
<i>Social Security:</i>	N/A						
<i>Special Consideration:</i>	Married Members assumed to elect subsidized joint and survivor form of annuity as follows: Males - 10% elect 25% J&S option 20% elect 50% J&S option 10% elect 75% J&S option 30% elect 100% J&S option Females - 5% elect 25% J&S option 5% elect 50% J&S option 5% elect 75% J& S option 15% elect 100% J&S option						

TABLE 12
(Continued)

<i>Actuarial Cost Method:</i>	Entry Age Normal Actuarial Cost Method with normal costs expressed as a level percentage of earnings. Under this method, Actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability.
<i>Asset Valuation Method:</i>	Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during the fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year). Transition rules apply between July 1, 2000 and July 1, 2003, when the method is fully in effect.
<i>Payment on the Unfunded Actuarial Accrued Liability:</i>	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6% per annum. If there is a negative Unfunded Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll.

Public Employees Retirement Fund

Summary of Actuarial Assumptions and Methods

Separation Expressed as Number of Occurrences Per 10,000:

<u>Age</u>	<u>Pre-Retirement Death</u>		<u>Withdrawal</u>		<u>Disability</u>		<u>Retirement</u>		<u>Salary Increases</u>
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Rule of 90 Eligible</u>	<u>Other</u>	
20	3	1	840	840	1	1	0	0	6.40%
21	3	1	810	810	1	1	0	0	6.40
22	3	1	780	780	1	1	0	0	6.40
23	3	1	750	750	1	1	0	0	6.40
24	3	2	720	720	1	1	0	0	6.40
25	3	2	690	690	1	1	0	0	6.40
26	4	2	660	660	1	1	0	0	6.36
27	4	2	630	630	1	1	0	0	6.32
28	4	2	600	600	1	1	0	0	6.28
29	4	2	570	570	1	1	0	0	6.24
30	4	2	540	540	2	2	0	0	6.20
31	4	2	510	510	2	2	0	0	6.16
32	4	3	480	480	3	3	0	0	6.12
33	5	3	450	460	3	3	0	0	6.08
34	5	3	420	440	4	4	0	0	6.04
35	5	3	390	420	5	4	0	0	6.00
36	5	3	360	400	6	4	0	0	5.96
37	6	3	330	380	7	5	0	0	5.92
38	6	4	320	370	7	5	0	0	5.88
39	6	4	310	360	8	5	0	0	5.84
40	7	4	300	350	9	6	0	0	5.80
41	7	4	290	340	10	6	0	0	5.76
42	8	5	280	330	11	6	0	0	5.72
43	9	5	270	320	12	7	0	0	5.68
44	9	5	260	310	13	8	0	0	5.64
45	10	6	250	300	14	9	0	0	5.60
46	10	6	240	290	16	10	0	0	5.56
47	11	7	230	280	17	12	0	0	5.52
48	12	7	220	270	19	13	0	0	5.48
49	14	8	210	260	21	14	0	0	5.44

Public Employees Retirement Fund

Summary of Actuarial Assumptions and Methods

Separation Expressed as Number of Occurrences Per 10,000:

<u>Age</u>	<u>Pre-Retirement Death</u>		<u>Withdrawal</u>		<u>Disability</u>		<u>Retirement</u>		<u>Salary Increases</u>
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Rule of 90 Eligible</u>	<u>Other</u>	
50	15	8	200	250	23	16	0	0	5.40%
51	17	9	190	240	25	18	0	0	5.36
52	19	10	180	230	28	19	0	0	5.32
53	22	11	170	220	35	22	0	0	5.28
54	25	12	160	210	42	24	0	0	5.24
55	28	14	0	0	49	26	4,000	700	5.20
56	31	15	0	0	56	28	4,000	700	5.16
57	35	16	0	0	61	31	4,000	700	5.12
58	39	18	0	0	68	36	4,000	700	5.08
59	43	20	0	0	75	41	4,000	900	5.04
60	48	21	0	0	82	46	4,000	900	5.00
61	52	23	0	0	89	51	4,000	2,000	5.00
62	57	25	0	0	96	58	4,000	2,000	5.00
63	61	28	0	0	103	65	4,000	2,000	5.00
64	66	31	0	0	110	72	4,000	2,000	5.00
65	71	35	0	0	0	0	4,000	4,000	5.00
66	77	38	0	0	0	0	2,500	2,500	5.00
67	84	43	0	0	0	0	2,500	2,500	5.00
68	92	47	0	0	0	0	2,500	2,500	5.00
69	101	52	0	0	0	0	2,500	2,500	5.00
70	111	58	0	0	0	0	2,500	2,500	5.00
71	124	64	0	0	0	0	10,000	10,000	5.00

Public Employees Retirement Fund
Schedule of Funding Progress
(dollars in thousands)

July 1, 2003

Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (B)	Unfunded AAL (UAAL) (B)-(A)	Funded Ratio (A)/(B)	Actual Covered Payroll (Previous FY) (C)	UAAL as % of Covered Payroll ((B)-(A))/(C)
07/01/91	\$ 3,570,304	\$ 4,988,671	\$ 1,418,367	71.57%	\$ 2,124,409	66.77%
07/01/92	3,978,110	5,439,953	1,461,843	73.13%	2,299,532	63.57%
07/01/93	4,374,459	5,784,318	1,409,859	75.63%	2,403,558	58.66%
07/01/94	4,747,128	6,223,622	1,476,494	76.28%	2,557,522	57.73%
07/01/95	5,138,461	6,622,069	1,483,608	77.60%	2,679,069	55.38%
07/01/96	5,786,398	7,270,073	1,483,675	79.59%	2,814,126	52.72%
07/01/97	6,658,410	8,049,666	1,391,256	82.72%	2,979,260	46.70%
07/01/98	7,636,668	8,769,303	1,132,635	87.08%	3,271,737	34.62%
07/01/99	8,489,177	9,443,678	954,501	89.89%	3,302,808	28.90%
07/01/00	9,609,367	11,133,682	1,524,315	86.31%	3,437,954	44.34%
07/01/01	10,527,270	12,105,337	1,578,067	86.96%	3,466,587	45.52%
07/01/02	11,017,414	12,958,105	1,940,691	85.02%	3,809,864	50.94%
07/01/03	11,195,902	13,776,198	2,580,296	81.27%	4,387,649	58.81%

Public Employees Retirement Fund
Schedule of Employer Contributions
(dollars in thousands)

July 1, 2003

Year Ended June 30	Actuarially Required Contribution Rate (A) ⁽¹⁾	Actual Covered Payroll (B)	Actual Member Contributions (C)	Annual Required Contributions [(A)*(B)]-(C)	Actual Employer Contributions ⁽²⁾	Percentage Contributed
1991	10.04%	\$ 2,124,409	\$ 94,413	\$ 118,878	\$ 101,907	85.72%
1992	9.44%	2,299,532	101,655	115,421	109,203	94.61%
1993	9.95%	2,403,558	106,359	132,795	113,183	85.23%
1994	9.58%	2,557,522	112,940	132,071	119,390	90.40%
1995	9.76%	2,679,069	115,986	145,491	123,984	85.22%
1996	9.61%	2,814,126	121,525	148,913	129,738	87.12%
1997	9.75%	2,979,260	128,234	162,244	136,686	84.25%
1998	9.62% ⁽³⁾	3,271,737	140,385	174,356	151,499	86.89%
1999	9.63% ⁽³⁾	3,302,808	158,475	159,585	173,370	108.64%
2000	9.22% ⁽³⁾	3,437,954	171,073	145,906	186,637	127.92%
2001	11.84% ^{(3),(4)}	3,466,587	173,380	237,064	188,208	79.39%
2002	11.85% ⁽³⁾	3,809,864	191,422	260,047	206,982	79.59%
2003	11.52% ^{(3),(5)}	4,387,649	205,963	299,494	221,689	74.02%
2004	12.25% ⁽³⁾					

⁽¹⁾ Actuarially Required Contributions determined for years ended 6/30/95, 6/30/96, and 6/30/97 did not comply with the parameters of GASB Statement No. 25 since a one percent growth in covered population is assumed in the amortization calculation.

⁽²⁾ Includes contributions from other sources (if applicable.)

⁽³⁾ Actuarially Required Contributions calculated according to parameters of GASB 25 with no assumption for growth of covered population.

⁽⁴⁾ Actuarially Required Contribution Rate prior to change in Actuarial Assumptions and Asset Valuation Method is 11.41%.

⁽⁵⁾ Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 11.86% .

Table 3A
Basic

Public Employees Retirement Fund

Active Members as of June 30, 2003

<u>Age</u>	<u>Years of Service</u>								<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	1	12	13
55-59	0	0	0	0	0	0	0	58	58
60-64	0	0	0	0	0	0	0	43	43
65+	0	0	0	0	0	0	0	31	31
ALL	0	0	0	0	0	0	1	144	145

Average Annual Earnings

<u>Age</u>	<u>Years of Service</u>								<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	19,364	43,961	42,069
55-59	0	0	0	0	0	0	0	47,493	47,493
60-64	0	0	0	0	0	0	0	47,226	47,226
65+	0	0	0	0	0	0	0	38,743	38,743
ALL	0	0	0	0	0	0	19,364	45,235	45,056

Prior Fiscal Year Earnings (in Thousands) by Years of Service

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>ALL</u>
All	0	0	0	0	0	0	19	6,514	6,533

Table 4A
Basic

Public Employees Retirement Fund

Service Retirements as of June 30, 2003

<u>Age</u>	<u>Years Retired</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	0	1	0	0	0	0	0	1
50-54	1	2	0	0	0	0	0	3
55-59	37	166	15	1	0	0	0	219
60-64	9	322	333	7	0	0	0	671
65-69	24	204	735	344	7	0	0	1,314
70-74	4	49	588	760	367	0	0	1,768
75-79	1	10	119	746	1,143	84	0	2,103
80-84	0	2	14	124	1,166	646	19	1,971
85+	0	1	2	9	196	1,083	741	2,032
ALL	76	757	1,806	1,991	2,879	1,813	760	10,082

Average Annual Benefit

<u>Age</u>	<u>Years Retired</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	0	33,462	0	0	0	0	0	33,462
50-54	2,945	20,955	0	0	0	0	0	14,951
55-59	36,833	34,700	33,399	17,526	0	0	0	34,892
60-64	30,766	31,076	36,104	32,807	0	0	0	33,585
65-69	28,441	24,564	36,713	34,505	34,254	0	0	34,084
70-74	23,171	27,169	30,833	31,865	35,340	0	0	32,093
75-79	11,818	25,679	28,655	24,339	33,607	41,325	0	30,299
80-84	0	14,080	26,921	23,967	26,035	24,881	18,361	25,446
85+	0	6,736	21,973	31,086	21,272	19,545	15,973	18,456
ALL	31,970	29,690	34,035	29,001	29,923	22,455	16,032	28,085

Total Annual Benefit (In Thousands) by Years RETIRED

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	2,429	22,475	61,467	57,740	86,148	40,710	12,184	283,152

Table 5A
Basic

Public Employees Retirement Fund

Survivors as of June 30, 2003

<u>Age</u>	<u>Years Since Death</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	1	0	4	4	3	0	0	12
50-54	0	5	4	6	2	3	0	20
55-59	4	9	8	12	4	2	2	41
60-64	8	26	21	35	8	10	6	114
65-69	16	60	50	30	38	22	17	233
70-74	27	104	96	79	58	22	36	422
75-79	28	127	165	127	107	47	75	676
80-84	34	121	133	133	90	73	115	699
85+	13	98	149	168	151	111	275	965
ALL	131	550	630	594	461	290	526	3,182

Average Annual Benefit

<u>Age</u>	<u>Years Since Death</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	11,268	0	7,537	22,445	22,379	0	0	16,527
50-54	0	9,983	22,450	28,735	20,520	17,932	0	20,348
55-59	30,513	23,983	26,309	25,297	23,635	16,976	20,560	24,915
60-64	22,575	21,804	29,574	25,151	22,783	18,841	16,999	23,872
65-69	22,782	25,003	28,034	25,165	27,945	20,463	13,364	24,723
70-74	31,212	28,118	24,232	21,882	30,408	19,370	11,146	24,675
75-79	28,410	24,760	25,722	21,705	21,764	21,667	10,864	22,341
80-84	25,570	17,017	20,489	15,943	19,244	17,204	9,400	16,942
85+	21,241	18,067	13,381	11,766	12,152	12,301	7,043	11,558
ALL	26,428	22,238	21,654	18,153	19,753	16,524	8,753	18,422

Total Annual Benefit (In Thousands) by Years SINCE DEATH

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	3,462	12,230	13,642	10,782	9,106	4,791	4,604	58,618

Public Employees Retirement Fund

Disability Retirements as of June 30, 2003

<u>Age</u>	<u>Years Disabled</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	0	3	7	0	1	1	0	12
60-64	0	2	14	6	3	1	0	26
65-69	0	5	0	0	0	2	0	7
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	0	10	21	6	4	4	0	45

Average Annual Benefit

<u>Age</u>	<u>Years Disabled</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	0	49,522	43,753	0	22,276	10,368	0	40,623
60-64	0	19,944	39,224	36,393	26,498	23,683	0	35,021
65-69	0	17,515	0	0	0	42,726	0	24,718
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	0	27,602	40,733	36,393	25,442	29,875	0	34,912

Total Annual Benefit (In Thousands) by Years DISABLED

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	0	276	855	218	101	119	0	1,571

Public Employees Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 2003

	<u>Percent of Payroll</u>	<u>Dollar Amount</u>
A. STATUTORY CONTRIBUTIONS - CHAPTER 353		
1. Employee Contributions	9.10%	\$ 625
2. Employer Contributions	11.78%	809
3. Total	<u>20.88%</u>	<u>\$ 1,434</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	8.14%	\$ 559
b. Disability Benefits	0.50%	34
c. Survivors	0.31%	21
d. Deferred Retirement Benefits	3.41%	234
e. Refunds Due to Death or Withdrawal	<u>0.23%</u>	<u>16</u>
f. Total	<u>12.59%</u>	<u>\$ 864</u>
Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 6,866

Public Employees Retirement Fund

Summary of Plan Provisions

This summary of provisions reflects the interpretation of applicable Statutes by the Commission Actuary for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

GENERAL

Eligibility:	A public employee who is not covered under the Social Security Act. General exceptions are employees covered by other public funds, certain part-time employees and full-time students under age 23.
Contributions:	
Member:	8.75% of total salary thereafter.
Employer:	11.43% of total salary. Additional 2.68% is repealed at full funding.
Allowable Service:	Service during which Member contributions were deducted. May also include certain leaves of absence and military service. Does not include pro-rated service credit for part-time employment for post 12/31/01 hirees.
Salary:	Includes amounts deducted for deferred compensation or supplemental retirement plans, net income from fees and sick leave payments funded by the employer. Excludes unused annual leave and sick leave payments, severance payments, Workers' Compensation benefits and employer-paid flexible spending accounts, cafeteria plans, healthcare expense accounts, day-care expenses, fringe benefits and the cost of insurance coverage.
Average Salary:	Average of the five highest successive years of salary. Average salary is based on all Allowable Service if less than five years.

RETIREMENT

Normal Retirement Benefit:

Eligibility:	Age 65 and three years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.
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Amount: The greater of:
2.2% of Average Salary for each of the first 10 years of Allowable Service and 2.7% of Average Salary for each subsequent year;
OR
2.7% of Average Salary for each year of Allowable Service.

Early Retirement Benefit:

Eligibility: Age 55 and three years of Allowable Service.
Any age with 30 years of Allowable Service.
Rule of 90: Age plus Allowable Service totals 90.

Amount: The greater of
2.2% of Average Salary for each of the first 10 years of Allowable Service and 2.7% of Average Salary for each subsequent year with reduction of 0.25% for each month the Member is under age 65 at time of retirement or age 62 if 30 years of Allowable Service. No reduction if age plus years of Allowable Service totals 90;
OR
2.7% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3% per year and actuarial reduction for each month the Member is under age 65.

Form of Payment: Life annuity with return on death of any balance of contributions over aggregate monthly payments. Actuarially equivalent options are:

25%, 50%, 75% or 100% joint and survivor with bounce back feature without additional reduction (option canceled if Member is pre-deceased by beneficiary).

Benefit Increases: Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). A benefit recipient who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase. Members receiving benefits for at least one full month but less than 12 full months will receive a partial increase.

Members retired under laws in effect before July 1, 1973 receive an additional lump-sum payment each year. In 1989, this lump-sum payment is the greater of \$25 times each full year of Allowable Service or the difference between \$400 times each full year of Allowable Service and the sum of the benefits paid from any Minnesota public pension plan plus cash payments from the Social Security Administration for the preceding fiscal year July 1, 1988 through June 30, 1989. In each following year, the lump-sum payment will increase by the same percentage increase that is applied to regular annuities paid from MPRIF. Effective January 1, 2002, annual lump sum payment is divided by 12 and paid as a monthly life annuity in the annuity form elected.

DISABILITY

Disability Benefit:

Eligibility:

Total and permanent disability before normal retirement age with three years of Allowable Service.

Amount:

Normal Retirement Benefit based on Allowable Service and average salary at disability without reduction for commencement before normal retirement age. Supplemental benefit of \$25 per month payable to the later of the normal retirement age or the 5-year anniversary at commencement of disability. The disability benefit is reduced to that amount which, when added to Workers' Compensation, does not exceed the salary the disabled Member received as of the date of the disability or the salary currently payable for the same employment position substantially similar to the one the person held as of the date of the disability, whichever is greater.

If a Member became disabled prior to July 1, 1997 but did not commence their benefit before July 1, 1997, the benefit payable is calculated under the laws in effect at the time the Member became disabled, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

Payments stop if disability ceases. If death occurs prior to age 65 or within five years of disability, the surviving spouse can receive a refund or a survivor benefit. Dependent children are entitled to dependent child benefits subject to the 70% family maximum. Payments change to a retirement annuity at normal retirement age. Benefits may be reduced on resumption of partial employment.

Form of Payment: Same as for retirement.

Benefit Increases: Adjusted by PERA to provide same increase as MPRIF.

Retirement After Disability

Eligibility: Normal retirement age.

Amount: Any optional annuity continues. Otherwise, the larger of the disability benefit paid before normal retirement age or the normal retirement benefit available at normal retirement age, or an actuarially equivalent optional annuity.

Benefit Increases: Same as for retirement.

DEATH

Surviving Spouse Benefit

Eligibility: Active Member with 18 months of Allowable Service or Member receiving a disability benefit.

Amount: 50% of salary averaged over last six months. Family benefit is maximum of 70% and minimum of 50% of average salary. Benefit paid until spouse's death but no payments while spouse is remarried prior to July 1, 1991.

If a Member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

Surviving spouse optional annuity may be elected in lieu of this benefit.

Surviving Dependent Child Benefit

Eligibility: Active Member with 18 months of Allowable Service or Member receiving a disability benefit.

Amount: 10% of salary averaged over last six months for each child. Family benefit minimum (including spouse's benefit) of 50% of salary and maximum of 70% of average salary. Benefits paid until child marries, dies, or attains age 18 (age 22 if full-time student.)

If a Member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

Surviving Spouse Optional Annuity

Eligibility: Member or former Member who dies before retirement benefits commence and other survivor annuity is waived by spouse.

Amount: Survivor's payment of the 100% joint and survivor benefit the Member could have elected if terminated or an actuarial equivalent term certain annuity. If commencement is prior to age 65 (age 62 if 30 years of service), the benefit is reduced same as early retirement with half the applicable reduction factor used from age 55 to the actual commencement age. If no surviving spouse, then an actuarial equivalent dependent child benefit is paid to age 20 or for five years if longer.

If a Member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

Benefit Increases: Adjusted by PERA to provide same increase as MPRIIF.

Refund of Contributions

Eligibility: Member dies before receiving any retirement benefits and survivor benefits are not payable.

Amount: The excess of the Member's contributions with 6% interest over any disability or survivor benefits paid.

TERMINATION

Refund of Contributions

<i>Eligibility:</i>	Termination of public service.
<i>Amount:</i>	Member's contributions with 5% interest compounded annually if termination occurred before May 16, 1989 and 6% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund if three or more years of Allowable Service.

Deferred Benefit

<i>Eligibility:</i>	Three years of Allowable Service.
<i>Amount:</i>	<p>Benefit computed under law in effect at termination and increased by the following percentage compounded annually: 0% before 7/1/71; 5% from 7/1/71 to 1/1/81; and 3% thereafter until January 1 of the year following attainment of age 55 and 5% thereafter until the annuity begins. Members active with a public employer the day prior to the privatization of the employer become vested immediately and receive augmentation at the rate of 5.5% compounded annually through the year the member turns age 55 and 7.5% thereafter until the annuity begins. Amount is payable as a normal or early retirement.</p> <p>If a Member terminated employment prior to July 1, 1997 but was not eligible to commence their pension before July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.</p>

SUMMARY OF SIGNIFICANT CHANGES

No changes in plan provisions have been recognized in this valuation that have had a material impact on the valuation results.

Public Employees Retirement Fund
Active Members as of June 30, 2003

<u>Age</u>	<u>Years of Service</u>								<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	2,811	2,655	53	0	0	0	0	0	5,519
25-29	2,263	5,480	1,026	14	0	0	0	0	8,783
30-34	1,834	5,381	3,258	667	15	0	0	0	11,155
35-39	1,890	5,937	3,771	2,314	913	14	0	0	14,839
40-44	2,216	7,410	5,328	3,412	2,672	1,211	51	0	22,300
45-49	2,420	6,172	5,722	4,596	3,200	2,454	1,370	53	25,987
50-54	1,126	4,164	4,194	4,425	3,623	2,440	2,386	885	23,243
55-59	679	2,415	2,270	2,735	2,967	2,102	1,719	1,198	16,085
60-64	402	1,326	1,219	1,304	1,416	1,109	839	489	8,104
65+	419	1,176	825	500	404	248	198	136	3,906
ALL	16,060	42,116	27,666	19,967	15,210	9,578	6,563	2,761	139,921

Average Annual Earnings

<u>Age</u>	<u>Years of Service</u>								<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	9,966	17,169	21,427	0	0	0	0	0	13,541
25-29	13,978	24,729	30,413	28,927	0	0	0	0	22,630
30-34	14,644	26,245	33,969	35,690	33,080	0	0	0	27,168
35-39	12,772	22,625	32,511	39,477	38,587	35,733	0	0	27,505
40-44	12,432	20,760	27,764	37,471	42,819	40,673	43,100	0	27,938
45-49	9,897	21,057	25,952	33,090	41,525	45,540	43,778	44,972	29,303
50-54	13,055	22,963	26,092	31,311	37,666	45,031	50,360	47,793	33,003
55-59	13,483	21,374	26,579	31,188	34,616	39,375	47,707	53,746	33,464
60-64	10,159	16,855	23,648	29,333	32,297	34,089	38,004	46,369	28,579
65+	6,935	9,965	15,068	22,451	23,959	27,204	28,958	33,244	16,631
ALL	12,017	21,886	27,942	33,496	37,975	41,627	46,010	49,353	28,381

Prior Fiscal Year Earnings (in Millions) by Years of Service

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>ALL</u>
All	193	922	773	669	578	399	302	136	3,971

Public Employees Retirement Fund

Service Retirements as of June 30, 2003

Age	Years Retired							All
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	2	1	0	0	0	0	3
50-54	22	30	0	0	0	0	0	52
55-59	602	1,427	12	0	0	0	0	2,041
60-64	979	3,215	1,627	2	0	0	0	5,823
65-69	632	4,072	3,329	795	1	0	0	8,829
70-74	131	888	4,071	2,058	352	0	0	7,500
75-79	49	258	941	2,911	1,348	8	0	5,515
80-84	10	92	211	602	1,846	281	2	3,044
85+	2	9	29	100	434	849	220	1,643
ALL	2,427	9,993	10,221	6,468	3,981	1,138	222	34,450

Average Annual Benefit

Age	Years Retired							All
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50	0	4,376	5,609	0	0	0	0	4,787
50-54	9,232	9,367	0	0	0	0	0	9,309
55-59	9,865	6,542	14,329	0	0	0	0	7,567
60-64	10,277	7,768	5,594	20,800	0	0	0	7,586
65-69	8,547	7,217	7,836	5,712	18,709	0	0	7,411
70-74	5,002	6,164	8,423	7,985	5,790	0	0	7,852
75-79	3,484	3,577	8,290	8,112	8,496	19,179	0	7,999
80-84	1,479	3,265	6,049	6,683	7,463	8,472	5,720	7,156
85+	2,022	1,472	4,626	4,416	5,655	6,565	7,918	6,307
ALL	9,249	7,074	7,716	7,590	7,470	7,124	7,898	7,567

Total Annual Benefit (In Thousands) by Years RETIRED

Age	<1	1-4	5-9	10-14	15-19	20-24	25+	All
All	22,447	70,690	78,865	49,092	29,738	8,107	1,753	260,683

Public Employees Retirement Fund

Survivors as of June 30, 2003

<u>Age</u>	<u>Years Since Death</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	23	102	67	21	7	0	0	220
50-54	19	78	32	12	0	2	0	143
55-59	25	110	55	12	7	0	1	210
60-64	46	126	97	43	8	0	0	320
65-69	38	164	127	85	22	0	0	436
70-74	34	152	154	118	54	1	0	513
75-79	43	153	170	121	68	17	1	573
80-84	29	122	144	100	72	17	2	486
85+	16	78	69	57	49	27	12	308
ALL	273	1,085	915	569	287	64	16	3,209

Average Annual Benefit

<u>Age</u>	<u>Years Since Death</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	6,641	6,070	6,732	8,192	3,316	0	0	6,446
50-54	6,443	9,888	9,057	8,949	0	16,075	0	9,252
55-59	5,169	8,588	10,853	8,084	8,948	0	1,926	8,725
60-64	7,193	7,306	8,367	6,727	6,832	0	0	7,521
65-69	8,701	6,376	8,541	8,480	6,848	0	0	7,643
70-74	5,056	8,805	7,331	6,402	6,633	4,382	0	7,324
75-79	8,591	8,041	7,985	8,911	6,805	5,315	3,305	8,013
80-84	7,179	6,049	7,547	7,511	6,529	6,205	4,755	6,932
85+	6,399	5,911	7,057	6,303	6,497	5,560	4,356	6,267
ALL	7,024	7,436	7,971	7,610	6,622	5,976	4,188	7,466

Total Annual Benefit (In Thousands) by Years SINCE DEATH

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	1,917	8,068	7,293	4,330	1,900	382	67	23,958

Public Employees Retirement Fund

Disability Retirements as of June 30, 2003

Age	Years Disabled							All
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	39	128	74	26	0	0	0	267
50-54	29	163	79	36	7	0	0	314
55-59	47	218	125	34	9	0	0	433
60-64	33	251	186	50	10	3	1	534
65-69	1	24	13	7	1	0	1	47
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	149	784	477	153	27	3	2	1,595

Average Annual Benefit

Age	Years Disabled							All
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	7,585	5,661	7,028	5,311	0	0	0	6,286
50-54	8,521	8,689	8,541	8,695	3,732	0	0	8,526
55-59	11,886	10,244	9,641	8,624	6,341	0	0	10,039
60-64	9,187	9,508	10,459	9,117	8,078	10,149	2,617	9,746
65-69	3,315	7,797	10,165	7,834	12,936	0	6,234	8,438
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	9,450	8,861	9,386	8,202	6,552	10,149	4,425	8,967

Total Annual Benefit (In Thousands) by Years DISABLED

Age	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	1,408	6,947	4,477	1,254	176	30	8	14,302

Public Employees Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 2003

	<u>Percent of Payroll</u>	<u>Dollar Amount</u>
A. STATUTORY CONTRIBUTIONS - CHAPTER 353		
1. Employee Contributions	5.10%	\$ 215,544
2. Employer Contributions	5.53%	233,717
3. Total	<u>10.63%</u>	<u>\$ 449,261</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	6.64%	\$ 280,493
b. Disability Benefits	0.37%	15,470
c. Survivors	0.12%	5,131
d. Deferred Retirement Benefits	1.26%	53,206
e. Refunds Due to Death or Withdrawal	<u>0.22%</u>	<u>9,493</u>
f. Total	<u>8.61%</u>	<u>\$ 363,793</u>

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: \$ 4,226,351

Public Employees Retirement Fund

Summary of Plan Provisions

This summary of provisions reflects the interpretation of applicable Statutes by the Commission Actuary for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

GENERAL

<i>Eligibility</i>	A public employee who is covered under the Social Security Act. General exceptions are employees covered by other public funds, certain part-time employees and full-time students under age 23. City managers and persons holding elective office may choose to become Members.
<i>Contributions</i>	
<i>Member:</i>	4.75% of total salary.
<i>Employer:</i>	5.18% of total salary. Additional 0.43% is repealed at full funding.
<i>Allowable Service:</i>	Service during which Member contributions were deducted. May also include certain leaves of absence and military service. Does not include pro-rated service credit for part-time employment for post 12/31/01 hirees.
<i>Salary:</i>	Includes amounts deducted for deferred compensation or supplemental retirement plans, net income from fees and sick leave payments funded by the employer. Excludes unused annual leave and sick leave payments, severance payments, Workers' Compensation benefits and employer-paid flexible spending accounts, cafeteria plans, healthcare expense accounts, day-care expenses, fringe benefits and the cost of insurance coverage.
<i>Average Salary:</i>	Average of the five highest successive years of salary. Average salary is based on all Allowable Service if less than five years.

RETIREMENT

Normal Retirement Benefit

<i>Eligibility:</i>	First hired before July 1, 1989: Age 65 and three years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.
----------------------------	--

Amount: The greater of:
1.2% of Average Salary for each of the first 10 years of Allowable Service and 1.7% of Average Salary for each subsequent year;
OR
1.7% of Average Salary for each year of Allowable Service.

Eligibility: **First hired after June 30, 1989:**
The greater of age 65 or the age eligible for full Social Security retirement benefits but no later than age 66 and three years of Allowable Service. Proportionate Retirement Annuity is available at normal retirement age and one year of Allowable Service.

Amount: 1.7% of Average Salary for each year of Allowable Service.

Early Retirement Benefit

Eligibility: **First hired before July 1, 1989:**
Age 55 and three years of Allowable Service. Any age with 30 years of Allowable Service. Rule of 90: Age plus Allowable Service totals 90.

First hired after June 30, 1989:
Age 55 with three years of Allowable Service.

Amount: **First hired before July 1, 1989:**
The greater of
1.2% of Average Salary for each of the first 10 years of Allowable Service and 1.7% of Average Salary for each subsequent year with reduction of 0.25% for each month the Member is under age 65 at time of retirement or age 62 if 30 years of Allowable Service. No reduction if age plus years of Allowable Service totals 90;
OR
1.7% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3% per year and actuarial reduction for each month the Member is under age 65.

First hired after June 30, 1989:

1.7% of Average Salary for each year of allowable Service assuming augmentation to the age eligible for full Social Security retirement benefits at 3% per year and actuarial reduction for each month the Member is under the Social Security retirement age, but no later than age 66.

Form of Payment: Life annuity with return on death of any balance of contributions over aggregate monthly payments. Actuarially equivalent options are:

25%, 50%, 75% or 100% joint and survivor with bounce back feature without additional reduction (option canceled if Member is pre-deceased by beneficiary).

Benefit Increases: Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). A benefit recipient who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase. Benefit recipients receiving benefits for at least one full month but less than 12 full months will receive a partial increase.

Members retired under laws in effect before July 1, 1973 receive an additional lump-sum payment each year. In 1989, this lump-sum payment is \$25 times each full year of Allowable Service. In each following year, the lump-sum payment will increase by the same percentage increase that is applied to regular annuities paid from MPRIF.

DISABILITY

Disability Benefit

Eligibility: Total and permanent disability before normal retirement age with three years of Allowable Service.

Amount: Normal Retirement Benefit based on Allowable Service and average salary at disability without reduction for commencement before normal retirement age. The disability benefit is reduced to that amount which, when added to Workers' Compensation, does not exceed the salary the disabled Member received as of the date of the disability or the salary currently payable for the same employment position substantially similar to the one the person held as of the date of the disability, whichever is greater.

If a Member became disabled prior to July 1, 1997 but did not commence their benefit before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

Payments stop if disability ceases or death occurs. Payments change to a retirement annuity at normal retirement age. Benefits may be reduced on resumption of partial employment.

Form of Payment: Same as for retirement.

Benefit Increases: Adjusted by PERA to provide same increase as MPRIF.

Retirement After Disability

Eligibility: Normal retirement age.

Amount: Any optional annuity continues. Otherwise, the larger of the disability benefit paid before normal retirement age or the normal retirement benefit available at normal retirement age, or an actuarially equivalent optional annuity.

Benefit Increases: Same as for retirement.

DEATH

Surviving Spouse Optional Annuity

Eligibility: Member or former Member who dies before retirement or disability benefits commence.

Amount: Survivor's payment of the 100% joint and survivor benefit the Member could have elected if terminated or an actuarial equivalent term certain annuity. If commencement is prior to age 65 (age 62 if 30 years of service), the benefit is reduced same as early retirement with half the applicable reduction factor used from age 55 to the actual commencement age. If no surviving spouse, then an actuarial equivalent dependent child benefit is paid to age 20 or for five years if longer.

If a Member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

Benefit Increases: Adjusted by PERA to provide same increase as MPRIF.

Refund of Contributions

Eligibility: Member dies before receiving any retirement benefits and survivor benefits are not payable.

Amount: The excess of the Member's contributions with 6% interest over any disability or survivor benefits paid.

TERMINATION

Refund of Contributions

Eligibility: Termination of public service.

Amount: Member's contributions with 5% interest compounded annually if termination occurred before May 16, 1989 and 6% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund if three or more years of Allowable Service.

Deferred Benefit

Eligibility: Three years of Allowable Service.

Amount: Benefit computed under law in effect at termination and increased by the following percentage compounded annually: 0% before 7/1/71; 5% from 7/1/71 to 1/1/81; and 3% thereafter until January 1 of the year following attainment of age 55 and 5% thereafter until the annuity begins. Members active with a public employer the day prior to the privatization of the

employer become vested immediately and receive augmentation at the rate of 5.5% compounded annually through the year the member turns age 55 and 7.5% thereafter until the annuity begins. Amount is payable as a normal or early retirement.

If a Member terminated employment prior to July 1, 1997 but was not eligible to commence their pension before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

SUMMARY OF SIGNIFICANT CHANGES

No changes in plan provisions have been recognized in this valuation that have had a material impact on the valuation results.

Public Employees Police and Fire Fund
ACTUARIAL VALUATION REPORT

July 1, 2003

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LCP & R DEC 02 2003



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November 26, 2003

Legislative Commission on
Pensions and Retirement
55 State Office Building
St. Paul, Minnesota 55155

RE: Public Employees Police and Fire Fund

Commission Members:

Pursuant to the terms of our Actuarial Services Contract, we have performed an actuarial valuation of the Fund as of July 1, 2003.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. Although we have reviewed the data for reasonableness and consistency, we have relied on the basic employee data and asset figures as submitted by the Public Employees Retirement Association.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with the requirements of Section 356.215, Minnesota Statutes, and the requirements of the Standards for Actuarial Work, adopted by the Commission.

We, Thomas K. Custis and William V. Hogan, are actuaries for Milliman USA. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Milliman USA

Thomas K. Custis, F.S.A., M.A.A.A.
Consulting Actuary

William V. Hogan, F.S.A., M.A.A.A.
Consulting Actuary

TKC/WVH/bh

Public Employees Police and Fire Fund

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Public Employees Police and Fire Fund

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Public Employees Police and Fire Fund
Report Highlights
(dollars in thousands)

	July 1, 2002 Valuation	July 1, 2003 Valuation
A. CONTRIBUTIONS % OF PAYROLL (Table 11)		
1. Statutory Contributions - Chapter 353	15.50%	15.50%
2. Required Contributions - Chapter 356	13.08%	19.52%
3. Sufficiency (Deficiency)	2.42%	(4.02%)
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$ 4,707,255	\$ 4,713,606
b. Current Benefit Obligations (Table 8)	3,737,701	4,242,759
c. Funding Ratio	125.94%	111.10%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$ 4,707,255	\$ 4,713,606
b. Actuarial Accrued Liability (Table 9)	3,886,311	4,390,953
c. Funding Ratio	121.12%	107.35%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$ 5,452,773	\$ 5,329,085
b. Current and Expected Future Benefit Obligations	5,179,204	5,818,520
c. Funding Ratio	105.28%	91.59%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	9,940	9,948
b. Projected Annual Earnings	\$ 541,250	\$ 582,688
c. Average Annual Earnings (Projected \$)	\$ 54,452	\$ 58,573
d. Average Age	38.6	38.8
e. Average Service	10.9	11.1
2. Others		
a. Service Retirements (Table 4)	4,191	4,381
c. Survivors (Table 5)	1,206	1,213
b. Disability Retirements (Table 6)	574	614
d. Deferred Retirements (Table 7)	637	758
e. Terminated Other Non-Vested (Table 7)	663	740
f. Total	7,271	7,706

Public Employees Police and Fire Fund

Commentary

Purpose

The purpose of this valuation is to determine the financial status of the Plan. In order to achieve this purpose, an actuarial valuation is made at the beginning of each fiscal year as required by Section 356.215 of Minnesota Statutes.

Report Highlights

The financial status of the Plan can be measured by three different funding ratios:

- The Accrued Benefit Funding Ratio is a measure of current funding status and, when viewed over a period of years, presents a view of the funding progress. It is based upon benefits which have been earned by service to the valuation date. This year's ratio is 111.10%. The corresponding ratio for the prior year was 125.94%.
- The Accrued Liability Funding Ratio is also a measure of funding status and funding progress. It is based on the actuarial cost method that has historically been used by the State. For 2003, the ratio is 107.35%, which is a decrease from the 2002 ratio of 121.12%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 91.59% verifies that the current statutory contributions are not sufficient.

Asset Information (Tables 1 and 2)

Effective with the July 1, 2000 valuation of the fund, Minnesota Statutes require that the asset value used for actuarial purposes spread differences between actual return (measured on a market-value basis) and expected return on non-MPRIF assets over five years, in a manner similar to that already being used within the MPRIF. The previous method required under Minnesota Statutes recognized one third of the unrealized gains and losses. An Asset Valuation Method requirement exists because market values (which include all unrealized gains and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year. The intent of the change to the current method is to employ a more effective asset smoothing technique which is market-value based and which eliminates artificial bias related to manager style. The effective date of this requirement is July 1, 2000 with full transition to be accomplished as of July 1, 2003.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines E.1 to E.4. Actuarial Value of Assets is determined as:

Market Value of Assets at June 30, 2003, *less*

80% of the current year Unrecognized Asset Return at July 1, 2003 (the difference between actual net return on Market Value of Assets between June 30, 2002 and June 30, 2003 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2002 Actuarial Valuation); *less*

60% of the current year Unrecognized Asset Return at July 1, 2002 (the difference between actual net return on Market Value of Assets between June 30, 2001 and June 30, 2002 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2001 Actuarial Valuation); *less*

40% of the current year Unrecognized Asset Return at July 1, 2001 (the difference between actual net return on Market Value of Assets between June 30, 2000 and June 30, 2001 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2000 Actuarial Valuation); *less*

20% of the current year Unrecognized Asset Return at July 1, 2000 (the difference between actual net return on Market Value of Assets between June 30, 1999 and June 30, 2000 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 1999 Actuarial Valuation).

Since its adoption on July 1, 2000, the Asset Valuation Method has functioned effectively to smooth the significant variability in market value returns. It is prudent to note, however, that the deferral of recognition of the large market losses of the last three fiscal years means there has accumulated a significant negative return amount that will be recognized over the next few years. This means that in order for asset returns on a "Current Assets" basis to be at or near the assumed 8.5%, market value returns will need to be substantially above 8.5%; conversely, if market value returns are at or near the assumed 8.5%, returns measured on a "Current Assets" basis will be substantially lower, resulting in actuarial losses.

The term "Actuarial Value of Assets" is used to indicate that the value was determined for use in this actuarial valuation. Since Minnesota Statutes refer to this value as "Current Assets," the latter phrase will be used in the remainder of this report.

The Police and Fire Consolidation Fund was merged into the Public Employees Police and Fire Fund effective July 1, 1999. The Local Relief Association accounts that had a "Positive Amortizable Base" on July 1, 1999 were required to make 10 year fixed amortization payments to pay for the unfunded liability that existed on that date. The Market Value of Assets includes the outstanding balance as of the valuation date.

This Plan participates in the Minnesota Post Retirement Investment Fund (i.e., MPRIF). After the MPRIF liability has been calculated for each participating Plan, the State Board of Investments, (i.e., SBI) will determine each Plan's portion of the excess earnings for the January benefit increase as well as the Plan's allocated market share of MPRIF.

Actuarial Balance Sheet (Table 8)

An actuarial balance sheet provides a method for evaluating current and future levels of funding.

The Current Benefit Obligation used to measure current funding levels is calculated as follows:

- For Active Members – Salary and service are projected to retirement to determine benefits for each member and the ratio of credited service to total service establishes the portion of the projected benefit to be used in calculating the current funding level.

- For Non-Active Members – The discounted value of benefits, including augmentation in cases where benefits have not commenced.

GASB Disclosure

Disclosure of the Current Benefit Obligation amounts used to be required by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 has been superseded by Statement No. 25. Tables 14 and 15 of this report are included to fulfill the requirements of Statement No. 25.

Actuarial Cost Method (Table 9)

The approach used by the State of Minnesota to determine contribution sufficiency is the Entry Age Normal Actuarial Cost Method. The primary characteristic of this method is that it allocates costs as a level percentage of payroll.

A comparison of this actuarial method (Table 9) to the actuarial balance sheet (Table 8) illustrates the two techniques for allocating liabilities of active Members to past and future. As noted in the prior section, the balance sheet allocates benefits and corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

An Unfunded Actuarial Accrued Liability is computed under the Entry Age Normal Actuarial Cost Method by comparing the liabilities allocated to past service (Actuarial Accrued Liability) to the Current Assets. This amount, line B3, is funded over the remaining years to the amortization date by a series of payments that remain a constant percentage of payroll each year.

Source of Actuarial Gains and Losses (Table 10)

The assumptions used in making the calculations using the Entry Age Normal Actuarial Cost Method are based on long-term expectations. Each year the actual experience will deviate from the long-term expectations. For a detailed analysis of the major components, refer to Table 10.

Contribution Sufficiency (Table 11)

This report determines the adequacy of Statutory Contributions by comparing the Statutory Contributions to the Required Contributions.

The Required Contributions, set forth in Chapter 356, consist of:

- Normal costs based on the Entry Age Normal Actuarial Cost Method.
- A Supplemental Contribution for amortizing any Unfunded Actuarial Accrued Liability.
- An Allowance for Expenses.

Table 11 shows the Plan has a contribution deficiency since the Statutory Contribution Rate is 15.50% compared to the Required Contribution Rate of 19.52%.

Changes in Actuarial Assumptions and Methods

This report reflects the new assumptions which became effective July 1, 2003. These revised assumptions were developed from the recently completed experience study and have been approved by the Commission. Effective with this July 1, 2003 valuation, the following assumptions have been changed:

Assumption	Prior	Revised
Male Post-Retirement Mortality	1983 GAM (Male)	1983 GAM (Male - 1)
Female Post-Retirement Mortality	1983 GAM (Female)	1983 GAM (Female - 1)
Male Post-Disability Mortality	1965 RRB	1965 RRB rates up to age 40. For ages 41-59, graded rates between 1965 RRB and the Post-Retirement mortality table. For ages 60 and later, the Post-Retirement mortality table.
Female Post-Disability Mortality	1965 RRB	1965 RRB rates up to age 40. For ages 41-59, graded rates between 1965 RRB and the Post-Retirement mortality table. For ages 60 and later, the Post-Retirement mortality table.
Retirement Decrement	Graded rates.	Graded rates. Rates prior to age 60 are higher, while rates after age 60 are generally lower.
Male Pre-Retirement Mortality	1983 GAM (Male - 5)	1983 GAM (Male - 6)
Female Pre-Retirement Mortality	1983 GAM (Female - 5)	1983 GAM (Female - 6)
Separation Decrement	Graded rates.	Select and ultimate table. Ultimate rates unchanged.
Disability Decrement	Graded rates.	Graded rates. Rates for age 40 and above are generally higher.

All other actuarial assumptions are the same as those used in the prior valuation. Table 12 contains a summary of all actuarial assumptions and methods.

Changes in Plan Provisions

No changes in plan provisions have been reflected in this valuation.

TABLE 1

Public Employees Police and Fire Fund
Statement of Plan Net Assets
(dollars in thousands)

July 1, 2003

	Market Value	Cost Value
A. ASSETS IN TRUST		
1. Cash, Equivalents, Short-Term Securities	\$ 4,808	\$ 4,808
2. Fixed Income	494,455	492,177
3. Equity	1,522,013	1,761,167
4. Real Estate	75,398	64,762
5. Equity in MPRIF*	2,108,662	2,108,662
6. Invested Securities Lending Collateral	292,079	292,079
7. Other	0	0
Subtotal	<u>4,497,415</u>	<u>4,723,655</u>
B. ASSETS RECEIVABLE		
1. Amounts receivable from municipalities with positive amortizable bases	\$ 30,491	\$ 30,491
2. Other	\$ 2,775	\$ 2,775
Subtotal	<u>\$ 33,266</u>	<u>\$ 33,266</u>
C. LIABILITIES		
1. Invested Securities Lending Collateral	\$ (292,079)	\$ (292,079)
2. Other	\$ (60,941)	\$ (60,941)
Subtotal	<u>\$ (353,020)</u>	<u>\$ (353,020)</u>
D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
1. MPRIF Reserves*	\$ 2,108,662	\$ 2,108,662
2. Member Reserves	343,817	343,817
3. Other Non-MPRIF Reserves	1,725,182	1,951,422
4. Total Assets Available for Benefits	<u>\$ 4,177,661</u>	<u>\$ 4,403,901</u>
E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Market Value of Assets Available for Benefits (D4)		\$ 4,177,661
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2003	\$ (152,646)	
b. June 30, 2002	(428,953)	
c. June 30, 2001	(412,267)	
d. June 30, 2000	<u>42,251</u>	
3. UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) + .20 * 2(d)		(535,945)
4. Actuarial Value of Assets (E1 - E3)		<u>\$ 4,713,606</u>

* The number shown is the full MPRIF reserve amount. The actual MPRIF market value of \$1,570,318 is not used for funding purposes because this deficiency is accounted for separately and is expected to be recovered from future excess earnings on MPRI funds.

TABLE 2

Public Employees Police and Fire Fund
Statement of Change In Plan Net Assets
(dollars in thousands)

Year Ending June 30, 2003

	Non-MPRIF Assets	MPRIF Reserve	Market Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$ 2,193,365	\$ 1,964,695	\$ 4,158,060
B. ADDITIONS			
1. Member Contributions	\$ 34,751	0	\$ 34,751
2. Employer Contributions	50,917	0	50,917
3. Contributions From Other Sources	0	0	0
4. MPRIF Income	0	131,228	131,228
5. Net Investment Income			
a. Interest and Dividends	52,497	0	52,497
b. Net Appreciation/(Depreciation)	(23,337)	0	(23,337)
c. Investment Expenses	(2,683)	0	(2,683)
d. Net Subtotal	26,477	0	26,477
6. Other	3,281	0	3,281
7. Total Additions	\$ 115,426	\$ 131,228	\$ 246,654
C. OPERATING EXPENSES			
1. Service Retirements	\$ 110	\$ 189,530	\$ 189,640
2. Disability Benefits	24,096	0	24,096
3. Survivor Benefits	11,698	0	11,698
4. Refunds	643	0	643
5. Administrative Expenses	675	0	675
6. Other	301	0	301
7. Total Disbursements	\$ 37,523	\$ 189,530	\$ 227,053
D. OTHER CHANGES IN RESERVES			
1. Annuities Awarded	(143,020)	143,020	0
2. Mortality Gain (Loss)	(14,871)	14,871	0
3. Change in MPRIF Assumptions	(44,378)	44,378	0
4. Total Other Changes	(202,269)	202,269	0
E. ASSETS AVAILABLE AT END OF PERIOD	\$ 2,068,999	\$ 2,108,662	\$ 4,177,661
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN			
1. Average Balance			
(a) Non-MPRIF Assets Available at Beginning of Period			2,193,365
(b) Assets Available at End of Period*			2,128,248
(c) Average Balance {[F1.a + F1.b - B5.d-B6] / 2}			2,145,928
2. Expected Return: .085 * F1.c			182,404
3. Actual Return			29,758
4. Current Year UAR: F.3 - F.2			\$ (152,646)

* Before adjustment for MPRIF mortality gain (loss) and new MPRIF assumptions

TABLE 3

Public Employees Police and Fire Fund

Active Members as of June 30, 2003

Age	Years of Service								All
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25	122	154	0	0	0	0	0	0	276
25-29	151	876	211	0	0	0	0	0	1,238
30-34	78	720	1,056	149	0	0	0	0	2,003
35-39	51	356	654	685	202	0	0	0	1,948
40-44	33	154	323	442	603	185	0	0	1,740
45-49	20	70	126	199	318	533	197	0	1,463
50-54	7	35	64	66	128	255	354	43	952
55-59	2	25	24	18	40	55	75	38	277
60-64	2	9	3	7	7	5	2	5	40
65+	0	2	1	3	2	0	0	3	11
ALL	466	2,401	2,462	1,569	1,300	1,033	628	89	9,948

Average Annual Earnings

Age	Years of Service								All
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25	25,835	39,661	0	0	0	0	0	0	33,550
25-29	30,363	45,486	52,212	0	0	0	0	0	44,788
30-34	29,371	45,844	54,780	57,878	0	0	0	0	50,809
35-39	27,608	45,552	56,851	60,264	61,162	0	0	0	55,668
40-44	30,453	47,064	55,028	59,994	62,806	65,451	0	0	58,922
45-49	29,570	45,411	54,811	57,594	62,359	65,713	66,802	0	61,622
50-54	24,889	43,238	55,624	54,212	61,176	64,546	66,386	68,594	62,569
55-59	40,225	55,366	52,573	46,070	56,441	63,309	66,487	68,985	61,022
60-64	51,709	45,038	38,465	43,024	45,006	31,898	55,846	72,671	46,873
65+	0	62,276	76,999	33,314	38,841	0	0	72,872	54,345
ALL	28,734	45,411	55,134	59,077	61,952	65,086	66,495	69,134	54,939

Prior Fiscal Year Earnings (in Thousands) by Years of Service

Age	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
All	13,390	109,032	135,740	92,692	80,538	67,234	41,759	6,153	546,533

TABLE 4

Public Employees Police and Fire Fund

Service Retirements as of June 30, 2003

<u>Age</u>	<u>Years Retired</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	0	0	0	0	0	0	0	0
50-54	140	276	0	0	3	0	0	419
55-59	89	617	226	13	7	5	0	957
60-64	27	199	506	128	17	6	3	886
65-69	8	54	253	266	69	12	4	666
70-74	1	13	100	158	210	65	11	558
75-79	0	0	11	94	145	159	68	477
80-84	0	0	0	8	64	110	70	252
85+	0	0	0	1	6	41	118	166
ALL	265	1,159	1,096	668	521	398	274	4,381

Average Annual Benefit

<u>Age</u>	<u>Years Retired</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	0	0	0	0	0	0	0	0
50-54	39,039	36,590	0	0	36,278	0	0	37,406
55-59	39,898	41,217	38,444	35,194	36,677	36,401	0	40,299
60-64	32,141	38,805	47,332	38,151	32,278	35,278	38,662	43,227
65-69	25,193	25,285	48,672	40,773	37,821	36,991	35,869	41,927
70-74	17,053	20,831	42,469	42,011	41,261	40,049	35,381	40,913
75-79	0	0	50,367	39,949	39,915	42,105	36,873	40,459
80-84	0	0	0	29,482	40,773	34,926	39,778	37,585
85+	0	0	0	52,309	19,995	35,845	33,660	33,818
ALL	38,123	38,730	45,395	40,220	39,742	38,811	36,176	40,555

Total Annual Benefit (In Thousands) by Years RETIRED

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	10,102	44,888	49,752	26,866	20,705	15,446	9,912	177,671

TABLE 5

Public Employees Police and Fire Fund

Survivors as of June 30, 2003

<u>Age</u>	<u>Years Since Death</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	6	13	20	13	3	2	0	57
50-54	4	8	5	14	8	4	0	43
55-59	2	26	19	12	12	4	5	80
60-64	4	23	19	19	11	11	4	91
65-69	4	22	19	17	20	18	13	113
70-74	5	28	18	26	28	35	35	175
75-79	8	29	22	30	37	36	61	223
80-84	8	19	15	25	27	33	64	191
85+	2	20	18	16	28	29	127	240
ALL	43	188	155	172	174	172	309	1,213

Average Annual Benefit

<u>Age</u>	<u>Years Since Death</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	42,359	28,070	33,355	33,621	28,790	25,307	0	32,635
50-54	24,907	22,652	47,391	31,086	28,726	26,678	0	29,988
55-59	32,854	25,861	33,435	26,176	24,231	29,659	21,118	27,530
60-64	27,954	29,790	26,387	26,234	25,033	26,472	21,862	26,931
65-69	42,690	25,255	31,834	25,099	22,390	22,974	17,973	25,246
70-74	33,525	18,389	25,714	26,205	23,568	20,901	18,937	22,176
75-79	19,762	25,784	22,711	23,282	20,396	22,471	18,259	21,440
80-84	15,496	17,990	16,780	20,079	19,605	19,174	18,512	18,671
85+	15,654	17,892	19,183	18,139	15,018	18,717	18,013	17,815
ALL	27,513	23,518	27,129	24,904	21,232	21,492	18,367	22,390

Total Annual Benefit (In Thousands) by Years SINCE DEATH

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	1,183	4,421	4,204	4,283	3,694	3,696	5,675	27,159

TABLE 6

Public Employees Police and Fire Fund

Disability Retirements as of June 30, 2003

<u>Age</u>	<u>Years Disabled</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	22	101	38	8	6	1	0	176
50-54	15	103	35	11	9	1	0	174
55-59	11	89	69	7	1	0	0	177
60-64	0	17	57	6	0	0	0	80
65-69	0	6	1	0	0	0	0	7
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	48	316	200	32	16	2	0	614

Average Annual Benefit

<u>Age</u>	<u>Years Disabled</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	27,618	30,224	31,715	30,669	24,170	46,349	0	30,125
50-54	47,871	41,164	38,454	35,369	35,325	17,970	0	40,395
55-59	41,127	45,376	48,605	40,176	33,263	0	0	46,096
60-64	0	40,818	52,002	34,862	0	0	0	48,339
65-69	0	27,596	53,313	0	0	0	0	31,269
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	37,042	38,577	44,611	35,150	31,013	32,159	0	40,025

Total Annual Benefit (In Thousands) by Years DISABLED

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	1,778	12,190	8,922	1,124	496	64	0	24,575

TABLE 7

Public Employees Police and Fire Fund
Reconciliation of Members

	<u>Actives</u>	<u>Terminated</u>	
		<u>Deferred Retirement</u>	<u>Other Non-Vested</u>
A. ON JUNE 30, 2002	9,940	637	663
B. ADDITIONS	537	207	109
C. DELETIONS			
1. Service Retirement	(220)	(37)	(3)
2. Disability	(53)	(10)	0
3. Death	(3)	(2)	(1)
4. Terminated - Deferred	(183)	0	0
5. Terminated - Refund	(25)	(2)	(21)
6. Terminated - Other Non-Vested	(85)	0	0
7. Returned as active	38	(26)	(12)
8. Transferred to Other Fund	0	0	0
D. DATA ADJUSTMENTS	2	(9)	5
1. Vested	8,317		
2. Non-Vested	1,631		
E. TOTAL ON JUNE 30, 2003	9,948	758	740

	<u>Recipients</u>		
	<u>Retirement Annuitants</u>	<u>Disabled</u>	<u>Survivors</u>
A. ON JUNE 30, 2002	4,191	574	1,206
B. ADDITIONS	279	64	61
C. DELETIONS			
1. Service Retirement	0	(13)	0
2. Death	(91)	(10)	(54)
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	2	(1)	0
E. TOTAL ON JUNE 30, 2003	4,381	614	1,213

TABLE 8

Public Employees Police and Fire Fund
Actuarial Balance Sheet
(dollars in thousands)

July 1, 2003

A. CURRENT ASSETS (Table 1; Line E4)				\$ 4,713,606
B. EXPECTED FUTURE ASSETS				
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)				\$ (812,088)
2. Present Value of Future Normal Costs				1,427,567
3. Total Expected Future Assets				<u>615,479</u>
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				<u><u>\$ 5,329,085</u></u>
D. CURRENT BENEFIT OBLIGATIONS				
	<u>Non-Vested</u>	<u>Vested</u>		<u>Total</u>
1. Benefit Recipients				
a. Retirement Annuities		\$ 1,977,837		\$ 1,977,837
b. Disability Benefits		295,746		295,746
c. Surviving Spouse and Child Benefits		236,943		236,943
2. Deferred Retirements with Future Augmentation		94,200		94,200
3. Former Members Without Vested Rights		1,120		1,120
4. Active Members				
a. Retirement Annuities	\$ 15,093	1,396,228		1,411,321
b. Disability Benefits	126,277	0		126,277
c. Surviving Spouse and Child Benefits	35,644	0		35,644
d. Deferred Retirements	2,487	60,101		62,588
e. Refund Liability Due to Death or Withdrawal	0	1,083		1,083
5. Total Current Benefit Obligations	<u>\$ 179,501</u>	<u>\$ 4,063,258</u>		<u>\$ 4,242,759</u>
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				<u>\$ 1,575,761</u>
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				<u><u>\$ 5,818,520</u></u>
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5 - A)				\$ (470,847)
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F - C)				\$ 489,435

TABLE 9

Public Employees Police and Fire Fund
Determination of Unfunded Actuarial Accrued Liability (UAAL) and
Supplemental Contribution Rate

(dollars in thousands)

July 1, 2003

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	\$ 2,783,339	\$ 1,140,861	\$ 1,642,478
b. Disability Benefits	241,487	145,230	96,257
c. Survivor's Benefits	67,874	42,553	25,321
d. Deferred Retirements	117,821	95,875	21,946
e. Refunds Due to Death or Withdrawal	2,153	3,048	(895)
f. Total	<u>\$ 3,212,674</u>	<u>\$ 1,427,567</u>	<u>\$ 1,785,107</u>
2. Deferred Retirements With Future Augmentation	\$ 94,200		\$ 94,200
3. Former Members Without Vested Rights	1,120		1,120
4. Annuitants in MPRIF	2,108,662		2,108,662
5. Recipients Not in MPRIF	401,864		401,864
6. Total	<u>\$ 5,818,520</u>	<u>\$ 1,427,567</u>	<u>\$ 4,390,953</u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			\$ 4,390,953
2. Current Assets (Table 1; Line E4)			4,713,606
3. UAAL (B1 - B2)			<u>\$ (322,653)</u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2033			\$ 12,175,237
2. Supplemental Contribution Rate (B3/C1)			-2.65%

Public Employees Police and Fire Fund
Changes in Unfunded Actuarial Accrued Liability (UAAL)
(dollars in thousands)

Year Ending June 30, 2003

A. UAAL AT BEGINNING OF YEAR	\$ (820,944)
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$ 110,124
2. Contributions	(85,668)
3. Interest on A, B1, and B2	<u>(68,741)</u>
4. Total (B1+B2+B3)	<u>\$ (44,285)</u>
C. EXPECTED UAAL AT END OF YEAR (A+B4)	\$ (865,229)
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Salary Increases	\$ (14,079)
2. Investment Return	212,577
3. MPRIF Mortality	14,871
4. Mortality of Other Benefit Recipients	6,649
5. Other Items	<u>69,944</u>
6. Total	<u>\$ 289,962</u>
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	\$ (575,267)
F. CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY DUE TO CHANGE IN ACTUARIAL METHODS	0
G. CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	<u>252,614</u>
H. UAAL AT END OF YEAR (E+F+G)	<u><u>\$ (322,653)</u></u>

Public Employees Police and Fire Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 2003

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 353		
1. Employee Contributions	6.20%	\$ 36,127
2. Employer Contributions	9.30%	54,190
3. Total	<u>15.50%</u>	<u>\$ 90,317</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	17.66%	\$ 102,886
b. Disability Benefits	2.26%	13,155
c. Survivors	0.68%	3,965
d. Deferred Retirement Benefits	1.40%	8,184
e. Refunds Due to Death or Withdrawal	<u>0.05%</u>	<u>279</u>
f. Total	<u>22.05%</u>	<u>\$ 128,469</u>
2. Supplemental Contribution Amortization by July 1, 2033 of UAAL	(2.65%)	(15,441)
3. Allowance for Expenses	0.12%	699
4. Total	<u>19.52%</u>	<u>\$ 113,727</u>
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	(4.02%)	(23,410)

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: \$ 582,688

Public Employees Police and Fire Fund

Summary of Actuarial Assumptions and Methods*(Please note that these are new assumptions effective July 1, 2003.)*

Interest:	Pre-Retirement: 8.5% per annum Post-Retirement: 8.5% per annum
Benefit Increases After Retirement:	Payment of earnings on retired reserves in excess of 6% accounted for by 6% post-retirement assumption.
Salary Increases:	Reported salary for prior fiscal year, with new hires annualized, increased to current fiscal year and annually for each future year according to the rate table below.
Mortality:	Pre-Retirement: Male - 1983 Group Annuity Mortality Table for males setback six years. Female - 1983 Group Annuity Mortality Table for females setback six years. Post-Retirement: Male - 1983 Group Annuity Mortality Table for males setback one year. Female - 1983 Group Annuity Mortality Table for females setback one year. Post-Disability: Male - 1965 RRB rates up to age 40. For ages 41 to 59, graded rates between 1965 RRB and the Post-Retirement Mortality Table. For ages 60 and later, the Post-retirement Mortality Table. Female - 1965 RRB rates up to age 40. For ages 41 to 59, graded rates between 1965 RRB and the Post-Retirement Mortality Table. For ages 60 and later, the Post-retirement Mortality Table.
Retirement Age:	Rates as shown in table.
Separation:	Select and ultimate rates based on plan experience through June 30, 2002. Ultimate rates after the third year are shown in rate table. Select rates are as follows:

First Year	Second Year	Third Year
3.5%	3.5%	3.5%

TABLE 12*(Continued)*

<i>Disability:</i>	Rates as shown in rate table.								
<i>Allowance for Combined Service Annuity:</i>	Liabilities for active Members are increased by 0% and liabilities for former Members are increased by 30% to account for the effect of some participants having eligibility for a Combined Service Annuity.								
<i>Expenses:</i>	Prior year expenses expressed as percentage of prior year payroll.								
<i>Return of Contributions:</i>	All employees withdrawing after becoming eligible for a deferred benefit were assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.								
<i>Family Composition:</i>	85% of male Members and 65% of female Members are assumed to be married. Female is four years younger than male. Assume Members have no children.								
<i>Social Security:</i>	N/A								
<i>Special Consideration:</i>	<p>Married Members assumed to elect subsidized joint and survivor form of annuity as follows:</p> <table> <tr> <td>Males -</td><td>40% elect 50% J&S option</td></tr> <tr> <td></td><td>45% elect 100% J&S option</td></tr> <tr> <td>Females -</td><td>15% elect 50% J&S option</td></tr> <tr> <td></td><td>15% elect 100% J&S option</td></tr> </table>	Males -	40% elect 50% J&S option		45% elect 100% J&S option	Females -	15% elect 50% J&S option		15% elect 100% J&S option
Males -	40% elect 50% J&S option								
	45% elect 100% J&S option								
Females -	15% elect 50% J&S option								
	15% elect 100% J&S option								
<i>Actuarial Cost Method:</i>	Entry Age Normal Actuarial Cost Method with normal costs expressed as a level percentage of earnings. Under this method, Actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability.								
<i>Asset Valuation Method:</i>	<p>Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during the fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year). Transition rules apply between July 1, 2000 and July 1, 2003, when the method is fully in effect.</p>								
<i>Payment on the Unfunded Actuarial Accrued Liability:</i>	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.0% per annum. If there is a negative Unfunded Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll.								

TABLE 12
(Continued)

Public Employees Police and Fire Fund

Summary of Actuarial Assumptions and Methods

Separations Expressed as the Number of Occurrences per 10,000:

<u>Age</u>	<u>Pre-Retirement Death</u>		<u>Withdrawal</u>		<u>Disability</u>		<u>Retirement</u>		<u>Salary Increases</u>
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	
20	3	1	601	601	11	11	0	0	11.50%
21	3	1	525	525	11	11	0	0	11.50
22	3	1	462	462	12	12	0	0	11.00
23	3	2	408	408	12	12	0	0	10.50
24	4	2	363	363	13	13	0	0	10.00
25	4	2	324	324	13	13	0	0	9.50
26	4	2	291	291	14	14	0	0	9.20
27	4	2	262	262	14	14	0	0	8.90
28	4	2	237	237	14	14	0	0	8.60
29	4	2	215	215	15	15	0	0	8.30
30	4	2	190	190	16	16	0	0	8.00
31	5	3	180	180	16	16	0	0	7.80
32	5	3	170	170	17	17	0	0	7.60
33	5	3	160	160	17	17	0	0	7.40
34	5	3	150	150	18	18	0	0	7.20
35	6	3	146	146	19	19	0	0	7.00
36	6	3	142	142	20	20	0	0	6.80
37	6	4	138	138	22	22	0	0	6.60
38	7	4	134	134	23	23	0	0	6.40
39	7	4	130	130	24	24	0	0	6.20
40	8	4	126	126	29	29	0	0	6.00
41	9	5	118	118	34	34	0	0	5.90
42	9	5	110	110	39	39	0	0	5.80
43	10	5	103	103	44	44	0	0	5.70
44	10	6	97	97	49	49	0	0	5.60
45	11	6	91	91	54	54	0	0	5.50
46	12	7	86	86	64	64	0	0	5.45
47	14	7	81	81	74	74	0	0	5.40
48	15	8	69	69	84	84	0	0	5.35
49	17	8	59	59	94	94	0	0	5.30

TABLE 12
(Continued)

Public Employees Police and Fire Fund

Summary of Actuarial Assumptions and Methods

Separations Expressed as the Number of Occurrences per 10,000:

<u>Age</u>	<u>Pre-Retirement Death</u>		<u>Withdrawal</u>		<u>Disability</u>		<u>Retirement</u>		<u>Salary Increases</u>
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	
50	19	9	50	50	104	104	1,000	1,000	5.25%
51	22	10	39	39	123	123	1,000	1,000	5.25
52	25	11	29	29	143	143	1,000	1,000	5.25
53	28	12	22	22	163	163	1,000	1,000	5.25
54	31	14	15	15	183	183	1,000	1,000	5.25
55	35	15	11	11	203	203	3,000	3,000	5.25
56	39	16	7	7	206	206	2,000	2,000	5.25
57	43	18	5	5	209	209	2,000	2,000	5.25
58	48	19	3	3	212	212	2,000	2,000	5.25
59	52	21	1	1	215	215	2,000	2,000	5.25
60	57	23	0	0	0	0	2,500	2,500	5.25
61	61	25	0	0	0	0	2,500	2,500	5.25
62	66	28	0	0	0	0	3,500	3,500	5.25
63	71	31	0	0	0	0	3,500	3,500	5.25
64	77	34	0	0	0	0	3,500	3,500	5.25
65	84	38	0	0	0	0	5,000	5,000	5.25
66	92	42	0	0	0	0	5,000	5,000	5.25
67	101	47	0	0	0	0	5,000	5,000	5.25
68	111	52	0	0	0	0	5,000	5,000	5.25
69	124	58	0	0	0	0	5,000	5,000	5.25
70	139	64	0	0	0	0	10,000	10,000	5.25

Public Employees Police and Fire Fund

Summary of Plan Provisions

This summary of provisions reflects the interpretation of applicable Statutes by the Commission Actuary for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

GENERAL

Eligibility:	All full-time and certain part-time, police officers and fire fighters, who are not contributing to any other local retirement fund.
Contributions:	
Member:	6.2% of salary effective July 1, 1999.
Employer:	9.3% of salary effective July 1, 1999.
Allowable Service:	Police and fire service during which Member contributions were deducted. May also include certain leaves of absence and military service.
Salary:	Includes amounts deducted for deferred compensation or supplemental retirement plans, net income from fees and sick leave payments funded by the employer. Excludes lump-sum annual leave and sick leave payments and Workers' Compensation benefits.
Average Salary:	Average of the five highest successive years of salary. Average salary is based on all Allowable Service if less than five years.

RETIREMENT**Normal Retirement Benefit:**

Eligibility:	Age 55 and three years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.
Amount:	3.0% of Average Salary for each year of Allowable Service.

Early Retirement Benefit:

<i>Eligibility:</i>	Age 50 and three years of Allowable Service.
<i>Amount:</i>	Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date and a 0.1%* reduction for each month the Member is under age 55.
<i>Form of Payment:</i>	Life annuity with return on death of any balance of contributions over aggregate monthly payments. Actuarially equivalent options are: 25%, 50%, 75% or 100% joint and survivor with bounce back feature without additional reduction.
<i>Benefit Increases:</i>	Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). A benefit recipient who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase. Benefit recipients receiving benefits for at least one full month but less than 12 full months will receive a partial increase. Members retired under law in effect before July 1, 1973 receive an additional lump-sum payment each year. In 1989, this lump-sum payment is the greater of \$25 times each full year of Allowable Service or the difference between \$400 times each full year of Allowable Service and the sum of the benefits paid from any Minnesota public pension plan plus cash payments from the Social Security Administration for the preceding fiscal year July 1, 1988 through June 30, 1989. In each following year, the lump-sum payment will increase by the same percentage increase that is applied to regular annuities paid from MPRIF. Effective January 1, 2002, annual lump sum payment is divided by 12 and paid as a monthly life annuity in the annuity form elected.

**Effective July 1, 1999. From July 1, 1996 through June 30, 1999, the reduction is 0.2% for each month the Member is under age 55. Prior to July 1, 1996, an actuarial reduction is used assuming augmentation of the normal benefit to age 55 at 3% per year.*

DISABILITY

Duty Disability Benefit:

Eligibility: Physically or mentally unable to perform duties as a police officer or fire fighter as a direct result of an act of duty.

Amount: 60% of Average Salary plus 3.0% of Average Salary for each year in excess of 20 years of Allowable Service. The disability benefit is reduced to that amount which when added to Workers' Compensation and actual earnings, does not exceed salary or 125% of pay for an employee at same position. Payments change to retirement annuity at age 65.

If a Member became disabled prior to July 1, 1997 but did not commence their benefit before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in post-retirement interest rates from 5% to 6%.

Non-Duty Disability Benefits:

Eligibility: Physically or mentally unable to perform duties as a police officer or fire fighter with one year of Allowable Service.

Amount: Normal Retirement benefit based on Allowable Service (minimum of 15 years) and average salary at disability without reduction for commencement before age 55. Payments change to retirement annuity at age 65.

If a Member became disabled prior to July 1, 1997 but did not commence their benefit before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in post-retirement interest rates from 5% to 6%.

Form of Payment: Same as for retirement.

Benefit Increases: Adjusted by PERA to provide same increase as MPRIF.

TABLE 13
(Continued)

Retirement Benefits:

<i>Eligibility:</i>	Age 55
<i>Amount:</i>	Any optional annuity continues. Otherwise, the larger of the disability benefit paid before age 55 or the normal retirement benefit available at age 55, or an actuarially equivalent optional annuity.
<i>Benefit Increases:</i>	Same as for retirement.

DEATH

Surviving Spouse Benefit:

<i>Eligibility:</i>	Active or Disabled Member with surviving spouse, married for at least one year unless death in the line of duty.
<i>Amount:</i>	<p>50% of salary averaged over last six months. Benefit paid until spouse's death but no payments while spouse is remarried prior to July 1, 1991.</p> <p>If a Member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.</p>

Surviving Dependent Child Benefit:

<i>Eligibility:</i>	Active or Disabled Member with dependent child.
<i>Amount:</i>	<p>10% of salary averaged over last six months for each child. Family benefit minimum (including spouse's benefit) of 50% of salary and maximum of 70% of salary. Benefits paid until child marries, dies, or attains age 18 (age 23 if full-time student.)</p>

If a Member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

Surviving Spouse Optional Annuity:

Eligibility: Active or Disabled Member dies before age 55, benefits commence when Member would have been age 55 or as early as age 50 if qualified for early retirement except that benefits commence immediately if Member had 30 years of service.

Amount: Survivor's payment of the 100% joint and survivor benefit the Member could have elected if terminated.
Alternatively, spouse may elect refund of deceased's contributions with interest if there are no dependent children.

If a Member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefits before July 1, 1997, the benefit payable is calculated under the laws in effect before July 1, 1997, and an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

Benefit Increases: Adjusted by PERA to provide same increase as MPRIF.

TERMINATION

Refund of Contributions:

Eligibility: Termination of public service.

Amount: Member's contributions with 5% interest compounded annually if termination occurred before May 16, 1989 and 6% interest if termination occurred on or after May 16, 1989. A deferred annuity may be elected in lieu of a refund if three or more years of Allowable Service.

TABLE 13
(Continued)

Deferred Annuity:

Eligibility: Three years of Allowable Service.

Amount: Benefit computed under law in effect at termination and increased by the following percentage compounded annually: 0% before 7/1/71; 5% from 7/1/71 to 1/1/81; and 3% thereafter until January of the year following attainment of age 55 and 5% thereafter until the annuity begins. Amount is payable as a normal or early retirement.

If a Member terminated employment prior to July 1, 1997 but was not eligible to commence their pension before July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

SUMMARY OF SIGNIFICANT CHANGES

No significant changes were recognized for this valuation.

Public Employees Police and Fire Fund
Schedule of Funding Progress
(dollars in thousands)

July 1, 2003

Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (B)	Unfunded AAL (UAAL) (B)-(A)	Funded Ratio (A)/(B)	Actual Covered Payroll (Previous FY) (C)	UAAL as % of Covered Payroll ((B)-(A))/(C)
07/01/91	\$ 839,560	\$ 794,295	\$ (45,265)	105.70%	\$ 238,230	-19.00%
07/01/92	979,981	888,826	(91,155)	110.26%	239,158	-38.11%
07/01/93	1,118,342	1,009,226	(109,116)	110.81%	253,666	-43.02%
07/01/94	1,234,961	1,099,221	(135,740)	112.35%	277,566	-48.90%
07/01/95	1,385,901	1,196,795	(189,106)	115.80%	293,919	-64.34%
07/01/96	1,633,010	1,334,202	(298,808)	122.40%	316,189	-94.50%
07/01/97	1,974,635	1,556,483	(418,152)	126.87%	346,319	-120.74%
07/01/98	2,337,313	1,741,344	(595,969)	134.22%	375,131	-158.87%
07/01/99	3,679,551	3,004,637	(674,914)	122.46%	352,066	-191.70%
07/01/00	4,145,351 ⁽¹⁾	3,383,187	(762,164)	122.53%	392,796	-194.04%
07/01/01	4,472,041 ⁽¹⁾	3,712,360	(759,681)	120.46%	500,839	-151.68%
07/01/02	4,672,679 ⁽¹⁾	3,886,311	(786,368)	120.23%	522,153	-150.60%
07/01/03	4,683,115 ⁽¹⁾	4,390,953	(292,162)	106.65%	560,503	-52.12%

⁽¹⁾ Excludes amounts receivable from municipalities with positive amortizable bases.

Public Employees Police and Fire Fund
Schedule of Employer Contributions
(dollars in thousands)

July 1, 2003

Year Ended June 30	Actuarially Required Contribution Rate (A) ⁽¹⁾	Actual Covered Payroll (B)	Actual Member Contributions (C)	Annual Required Contributions [(A)*(B)]-(C)	Actual Employer Contributions ⁽²⁾	Percentage Contributed
1991	17.56%	\$ 238,230	\$ 17,636	\$ 24,197	\$ 26,440	109.27%
1992	17.54%	239,158	19,217	22,731	28,766	126.55%
1993	18.60%	253,666	20,406	26,776	30,434	113.66%
1994	17.45%	277,566	21,806	26,629	32,536	122.18%
1995	17.28%	293,919	22,356	28,433	33,548	117.99%
1996	16.49%	316,189	24,065	28,075	36,066	128.46%
1997	15.11%	346,319	26,354	25,975	39,508	152.10%
1998	15.69% ⁽³⁾	375,131	28,552	30,306	42,786	141.18%
1999	12.32% ⁽³⁾	352,066	30,897	12,478	46,280	370.89%
2000	12.87% ⁽³⁾	392,796	31,214	19,339	53,178	274.98%
2001	12.21% ^{(3),(4),(5)}	500,839	31,341	29,811	52,960	177.65%
2002	12.61%	522,153	33,801	32,042	90,664	282.95%
2003	12.52% ^{(3),(5),(6)}	560,503	34,751	35,424	50,917	143.74%
2004	19.47% ^{(3),(5),(7)}					

⁽¹⁾ Actuarially Required Contributions determined for years ended 6/30/95, 6/30/96, and 6/30/97 did not comply with the parameters of GASB Statement No. 25 since a one percent growth in covered population is assumed in the amortization calculation.

⁽²⁾ Includes contributions from other sources (if applicable.)

⁽³⁾ Actuarially Required Contributions calculated according to parameters of GASB 25 with no assumption for growth of covered population.

⁽⁴⁾ Actuarially Required Contribution Rate prior to change in Asset Valuation Method is 11.41%.

⁽⁵⁾ Excludes amounts receivable from municipalities with positive amortizable bases.

⁽⁶⁾ Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 12.33%.

⁽⁷⁾ Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 15.36%.

**LOCAL GOVERNMENT CORRECTIONAL
SERVICE RETIREMENT FUND
*ACTUARIAL VALUATION REPORT***

July 1, 2003

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LCP & R DEC 02 2003



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November 26, 2003

Legislative Commission on
Pensions and Retirement
55 State Office Building
St. Paul, Minnesota 55155

RE: Local Government Correctional Service Retirement Fund

Commission Members:

Pursuant to the terms of our Actuarial Services Contract, we have performed an actuarial valuation of the Fund as of July 1, 2003.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. Although we have reviewed the data for reasonableness and consistency, we have relied on the basic employee data and asset figures as submitted by the Public Employees Retirement Association.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with the requirements of Section 356.215, Minnesota Statutes, and the requirements of the Standards for Actuarial Work, adopted by the Commission.

We, Thomas K. Custis and William V. Hogan, are actuaries for Milliman USA. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

Milliman USA

Thomas K. Custis, F.S.A., M.A.A.A.
Consulting Actuary

William V. Hogan, F.S.A., M.A.A.A.
Consulting Actuary

TKC/WVH/bh

LCP & R DEC 02 2003

Local Government Correctional Service Retirement Fund

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Local Government Correctional Service Retirement Fund

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Local Government Correctional Service Retirement Fund
Report Highlights
(dollars in thousands)

	July 1, 2002 Valuation	July 1, 2003 Valuation
A. CONTRIBUTIONS % OF PAYROLL (Table 11)		
1. Statutory Contributions - Chapter 353 E % of Payroll	14.58%	14.58%
2. Required Contributions - Chapter 356 % of Payroll	14.09%	14.13%
3. Sufficiency (Deficiency)	0.49%	0.45%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$ 40,105	\$ 56,487
b. Current Benefit Obligations (Table 8)	39,690	58,260
c. Funding Ratio	101.05%	96.96%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$ 40,105	\$ 56,487
b. Actuarial Accrued Liability (Table 9)	42,144	62,542
c. Funding Ratio	95.16%	90.32%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$ 169,606	\$ 198,196
b. Current and Expected Future Benefit Obligations	161,210	190,034
c. Funding Ratio	105.21%	104.30%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	3,270	3,155
b. Projected Annual Earnings	\$ 106,400	\$ 116,276
c. Average Annual Earnings (Projected \$)	\$ 32,538	\$ 36,855
d. Average Age	37.9	38.4
e. Average Service	2.2	2.9
2. Others		
a. Service Retirements (Table 4)	35	57
c. Survivors (Table 5)	2	6
b. Disability Retirements (Table 6)	26	37
d. Deferred Retirements (Table 7)	282	590
e. Terminated Other Non-Vested (Table 7)	488	702
f. Total	833	1,392

Local Government Correctional Service Retirement Fund

Commentary

Purpose

The purpose of this valuation is to determine the financial status of the Plan. In order to achieve this purpose, an actuarial valuation is made at the beginning of each fiscal year as required by Section 356.215 of Minnesota Statutes.

Report Highlights

The financial status of the Plan can be measured by three different funding ratios:

- The Accrued Benefit Funding Ratio is a measure of current funding status and, when viewed over a period of years, presents a view of the funding progress. It is based upon benefits which have been earned by service to the valuation date. This year's ratio is 96.96%. The corresponding ratio for the prior year was 101.05%.
- The Accrued Liability Funding Ratio is also a measure of funding status and funding progress. It is based on the actuarial cost method that has historically been used by the State. For 2003 the ratio is 90.32%, which is a decrease from the 2002 ratio of 95.16%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 104.30% verifies that the current statutory contributions are sufficient.

Asset Information (Tables 1 and 2)

Effective with the July 1, 2000 valuation of the fund, Minnesota Statutes require that the asset value used for actuarial purposes spread differences between actual return (measured on a market-value basis) and expected return on non-MPRIF assets over five years, in a manner similar to that already being used within the MPRIIF. The previous method required under Minnesota Statutes recognized one third of the unrealized gains and losses. An Asset Valuation Method requirement exists because market values (which include all unrealized gains and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year. The intent of the change to the current method is to employ a more effective asset smoothing technique which is market-value based and which eliminates artificial bias related to manager style. The effective date of this requirement is July 1, 2000 with full transition to be accomplished as of July 1, 2003.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines G.1 to G.4. Actuarial Value of Assets is determined as:

Market Value of Assets at June 30, 2003, *less*

80% of the current year Unrecognized Asset Return at July 1, 2003 (the difference between actual net return on Market Value of Assets between June 30, 2002 and June 30, 2003 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2002 Actuarial Valuation); *less*

60% of the current year Unrecognized Asset Return at July 1, 2002 (the difference between actual net return on Market Value of Assets between June 30, 2001 and June 30, 2002 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2001 Actuarial Valuation); *less*

40% of the current year Unrecognized Asset Return at July 1, 2001 (the difference between actual net return on Market Value of Assets between June 30, 2000 and June 30, 2001 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 2000 Actuarial Valuation); *less*

20% of the current year Unrecognized Asset Return at July 1, 2000 (the difference between actual net return on Market Value of Assets between June 30, 1999 and June 30, 2000 and the asset return expected during that period based on the assumed interest rate employed in the July 1, 1999 Actuarial Valuation).

Since its adoption on July 1, 2000, the Asset Valuation Method has functioned effectively to smooth the significant variability in market value returns. It is prudent to note, however, that the deferral of recognition of the large market losses of the last three fiscal years means there has accumulated a significant negative return amount that will be recognized over the next few years. This means that in order for asset returns on a "Current Assets" basis to be at or near the assumed 8.5%, market value returns will need to be substantially above 8.5%; conversely, if market value returns are at or near the assumed 8.5%, returns measured on a "Current Assets" basis will be substantially lower, resulting in actuarial losses.

The term "Actuarial Value of Assets" is used to indicate that the value was determined for use in this actuarial valuation. Since Minnesota Statutes refer to this value "Current Assets," the latter phrase will be used in the remainder of this report.

This Plan participates in the Minnesota Post Retirement Investment Fund (i.e., MPRIF). After the MPRIF liability has been calculated for each participating plan, the State Board of Investments, (i.e., SBI), will determine each plan's portion of the excess earnings for the January benefit increase as well as the plan's allocated market share of MPRIF.

Actuarial Balance Sheet (Table 8)

An actuarial balance sheet provides a method for evaluating current and future levels of funding.

The Current Benefit Obligation used to measure current funding levels is calculated as follows:

- For Active Members – Salary and service are projected to retirement to determine benefits for each member and the ratio of credited service to total service establishes the portion of the projected benefit to be used in calculating the current funding level.
- For Non-Active Members – The discounted value of benefits, including augmentation in cases where benefits have not commenced.

GASB Disclosure

Disclosure of the Current Benefit Obligation amounts used to be required by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 has been superceded by Statement No. 25. Tables 14 and 15 of this report are included to fulfill the requirements of Statement No. 25.

Actuarial Cost Method (Table 9)

The approach used by the State of Minnesota to determine contribution sufficiency is the Entry Age Normal Actuarial Cost Method. The primary characteristic of this method is that it allocates costs as a level percentage of payroll.

A comparison of this actuarial method (Table 9) to the actuarial balance sheet (Table 8) illustrates the two techniques for allocating liabilities of active Members to past and future. As noted in the prior section, the balance sheet allocates benefits and corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

An Unfunded Actuarial Accrued Liability is computed under the Entry Age Normal Actuarial Cost Method by comparing the liabilities allocated to past service (Actuarial Accrued Liability) to the Current Assets. This amount, line B3, is funded over the remaining years to the amortization date by a series of payments that remain a constant percentage of payroll each year.

The payments will increase 6.00% each year because that is the assumed rate of increase in payroll. Although the payment schedule will be adequate to amortize the existing unfunded, the lower payments in the earlier years will not be sufficient to cover the interest on the unfunded liability. After a few years, the annual payment will cover the interest and also repay a portion of the unfunded.

Source of Actuarial Gains and Losses (Table 10)

The assumptions used in making the calculations using the Entry Age Normal Actuarial Cost Method are based on long-term expectations. Each year the actual experience will deviate from the long-term expectations. For a detailed analysis of the major components, refer to Table 10.

Contribution Sufficiency (Table 11)

This report determines the adequacy of Statutory Contributions by comparing the Statutory Contributions to the Required Contributions.

The Required Contributions, set forth in Chapter 356, consist of:

- Normal costs based on the Entry Age Normal Actuarial Cost Method.
- A Supplemental Contribution for amortizing any Unfunded Actuarial Accrued Liability.
- An Allowance for Expenses.

Table 11 shows the Plan has a contribution sufficiency since the Statutory Contribution Rate is 14.58% compared to the Required Contribution Rate of 14.13%.

Changes in Actuarial Assumptions and Methods

All actuarial assumptions and methods listed in Table 12 are the same as those used in the prior valuation.

Changes in Plan Provisions

All plan provisions are the same as those used in the prior actuarial valuation of the Fund.

Local Government Correctional Service Retirement Fund
Statement of Plan Net Assets
(dollars in thousands)

July 1, 2003

	Market Value	Cost Value
A. ASSETS IN TRUST		
1. Cash, Equivalents, Short-Term Securities	\$ 383	\$ 383
2. Fixed Income	11,407	11,394
3. Equity	35,116	34,576
4. Real Estate	1,732	1,593
5. Equity in MPRIF*	1,212	1,212
6. Invested Securities Lending Collateral	3,004	3,004
7. Other	0	0
Subtotal	<u>52,854</u>	<u>52,162</u>
 B. ASSETS RECEIVABLE	 \$ 151	 \$ 151
 C. LIABILITIES		
1. Invested Securities Lending Collateral	\$ (3,004)	\$ (3,004)
2. Other	\$ (167)	\$ (167)
Subtotal	<u>\$ (3,171)</u>	<u>\$ (3,171)</u>
 D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
1. MPRIF Reserves*	\$ 1,212	\$ 1,212
2. Member Reserves	20,661	20,661
3. Other Non-MPRIF Reserves	27,961	27,269
4. Total Assets Available for Benefits	<u>\$ 49,834</u>	<u>\$ 49,142</u>
<hr/>		
E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Market Value of Assets Available for Benefits (D4)		\$ 49,834
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2003	(3,608)	
b. June 30, 2002	(4,776)	
c. June 30, 2001	(2,139)	
d. June 30, 2000	(225)	
3. UAR Adjustment: $.80 * 2(a) + .60 * 2(b) + .40 * 2(c) + .20 * 2(d)$		(6,653)
4. Actuarial Value of Assets (E1 - E3)		<u>\$ 56,487</u>

* The number shown is the full MPRIF reserve amount. The actual MPRIF market value of \$1,027 is not used for funding purposes because this deficiency is accounted for separately and is expected to be recovered from future excess earnings on MPRI funds.

Local Government Correctional Service Retirement Fund
Statement of Change In Plan Net Assets
(dollars in thousands)

Year Ending June 30, 2003

	Non-MPRIF Assets	MPRIF Reserve	Market Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$ 34,436	\$ 475	\$ 34,911
B. ADDITIONS			
1. Member Contributions	\$ 6,430	0	\$ 6,430
2. Employer Contributions	9,645	0	9,645
3. Contributions From Other Sources	0	0	0
4. MPRIF Income	0	42	42
5. Net Investment Income			
a. Interest and Dividends	1,006	0	1,006
b. Net Appreciation/(Depreciation)	(1,037)	0	(1,037)
c. Investment Expenses	(55)	0	(55)
d. Net Subtotal	(86)	0	(86)
6. Other	11	0	11
7. Total Additions	\$ 16,000	\$ 42	\$ 16,042
C. OPERATING EXPENSES			
1. Service Retirements	\$ 0	\$ 74	\$ 74
2. Disability Benefits	484	0	484
3. Survivor Benefits	1	0	1
4. Refunds	409	0	409
5. Administrative Expenses	149	0	149
6. Other	2	0	2
7. Total Disbursements	\$ 1,045	\$ 74	\$ 1,119
D. OTHER CHANGES IN RESERVES			
1. Annuities Awarded	(767)	767	0
2. Mortality Gain (Loss)	(2)	2	0
3. Total Other Changes	(769)	769	0
E. ASSETS AVAILABLE AT END OF PERIOD	\$ 48,622	\$ 1,212	\$ 49,834
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN			
1. Average Balance			
(a) Non-MPRIF Assets Available at Beginning of Period			34,436
(b) Assets Available at End of Period*			48,624
(c) Average Balance {[F1.a + F1.b - B5.d - B6] / 2}			41,568
2. Expected Return: .085 * F1.c			3,533
3. Actual Return			(75)
4. Current Year UAR: F.3 - F.2			\$ (3,608)

* Before adjustment for MPRIF mortality gain (loss)

TABLE 3

Local Government Correctional Service Retirement Fund

Active Members as of June 30, 2003

<u>Age</u>	<u>Years of Service</u>								<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	94	112	0	0	0	0	0	0	206
25-29	111	443	0	0	0	0	0	0	554
30-34	62	490	0	0	0	0	0	0	552
35-39	49	447	0	0	0	0	0	0	496
40-44	36	383	0	0	0	0	0	0	419
45-49	19	373	0	0	0	0	0	0	392
50-54	18	295	0	0	0	0	0	0	313
55-59	7	152	0	0	0	0	0	0	159
60-64	3	49	0	0	0	0	0	0	52
65+	0	12	0	0	0	0	0	0	12
ALL	399	2,756	0	0	0	0	0	0	3,155

Average Annual Earnings

<u>Age</u>	<u>Years of Service</u>								<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	17,500	24,185	0	0	0	0	0	0	21,135
25-29	17,261	31,321	0	0	0	0	0	0	28,504
30-34	18,761	35,225	0	0	0	0	0	0	33,376
35-39	21,561	37,921	0	0	0	0	0	0	36,305
40-44	18,802	39,347	0	0	0	0	0	0	37,582
45-49	17,886	40,396	0	0	0	0	0	0	39,305
50-54	22,960	40,998	0	0	0	0	0	0	39,961
55-59	29,383	42,967	0	0	0	0	0	0	42,369
60-64	38,147	41,127	0	0	0	0	0	0	40,955
65+	0	29,560	0	0	0	0	0	0	29,560
ALL	18,874	36,984	0	0	0	0	0	0	34,693

Prior Fiscal Year Earnings (in Thousands) by Years of Service

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>ALL</u>
All	7,531	101,928	0	0	0	0	0	0	109,456

Local Government Correctional Service Retirement Fund

Service Retirements as of June 30, 2003

<u>Age</u>	<u>Years Retired</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	8	5	0	0	0	0	0	13
60-64	9	16	0	0	0	0	0	25
65-69	3	13	0	0	0	0	0	16
70-74	0	3	0	0	0	0	0	3
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	20	37	0	0	0	0	0	57

Average Annual Benefit

<u>Age</u>	<u>Years Retired</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	2,651	2,178	0	0	0	0	0	2,469
60-64	2,119	1,224	0	0	0	0	0	1,546
65-69	1,080	707	0	0	0	0	0	776
70-74	0	985	0	0	0	0	0	985
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	2,175	1,151	0	0	0	0	0	1,510

Total Annual Benefit (In Dollars) by Years RETIRED

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	43,500	42,587	0	0	0	0	0	86,070

TABLE 5

Local Government Correctional Service Retirement Fund

Survivors as of June 30, 2003

<u>Age</u>	<u>Years Since Death</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	2	1	0	0	0	0	0	3
50-54	0	1	0	0	0	0	0	1
55-59	1	0	0	0	0	0	0	1
60-64	1	0	0	0	0	0	0	1
65-69	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	4	2	0	0	0	0	0	6

Average Annual Benefit

<u>Age</u>	<u>Years Since Death</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	573	811	0	0	0	0	0	652
50-54	0	2,812	0	0	0	0	0	2,812
55-59	16,273	0	0	0	0	0	0	16,273
60-64	1,002	0	0	0	0	0	0	1,002
65-69	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	4,605	1,811	0	0	0	0	0	3,673

Total Annual Benefit (In Dollars) by Years SINCE DEATH

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	18,420	3,622	0	0	0	0	0	22,038

Local Government Correctional Service Retirement Fund

Disability Retirements as of June 30, 2003

<u>Age</u>	<u>Years Disabled</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	4	7	0	0	0	0	0	11
50-54	4	3	0	0	0	0	0	7
55-59	1	8	0	0	0	0	0	9
60-64	2	7	0	0	0	0	0	9
65-69	0	1	0	0	0	0	0	1
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	11	26	0	0	0	0	0	37

Average Annual Benefit

<u>Age</u>	<u>Years Disabled</u>							<u>All</u>
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	12,170	18,533	0	0	0	0	0	16,219
50-54	13,038	13,146	0	0	0	0	0	13,084
55-59	8,774	16,089	0	0	0	0	0	15,276
60-64	13,288	9,831	0	0	0	0	0	10,599
65-69	0	10,505	0	0	0	0	0	10,505
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	12,380	14,507	0	0	0	0	0	13,875

Total Annual Benefit (In Dollars) by Years DISABLED

<u>Age</u>	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>All</u>
All	136,180	377,182	0	0	0	0	0	513,375

Local Government Correctional Service Retirement Fund
Reconciliation of Members

	<u>Actives</u>	<u>Terminated</u>	
		<u>Deferred Retirement</u>	<u>Other Non-Vested</u>
A. ON JUNE 30, 2002	3,270	282	488
B. ADDITIONS	497	277	296
C. DELETIONS			
1. Service Retirement	(20)	0	0
2. Disability	(14)	0	0
3. Death	(8)	0	(2)
4. Terminated - Deferred	(270)	0	0
5. Terminated - Refund	(70)	(4)	(39)
6. Terminated - Other Non-Vested	(234)	0	0
7. Returned as active	9	(6)	(3)
8. Transferred to Other Fund	0	0	0
D. DATA ADJUSTMENTS	(5)	41	(38)
1. Vested	2,075		
2. Non-Vested	1,080		
E. TOTAL ON JUNE 30, 2003	3,155	590	702

	<u>Recipients</u>		
	<u>Retirement Annuitants</u>	<u>Disabled</u>	<u>Survivors</u>
A. ON JUNE 30, 2002	35	26	2
B. ADDITIONS	22	17	4
C. DELETIONS			
1. Service Retirement	0	(1)	0
2. Death	0	(5)	0
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	0	0	0
E. TOTAL ON JUNE 30, 2003	57	37	6

Local Government Correctional Service Retirement Fund
Actuarial Balance Sheet
(dollars in thousands)

July 1, 2003

A. CURRENT ASSETS (Table 1; Line E4)				\$	56,487
B. EXPECTED FUTURE ASSETS					
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)				\$	14,217
2. Present Value of Future Normal Costs					127,492
3. Total Expected Future Assets					<u>141,709</u>
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				\$	<u>198,196</u>
D. CURRENT BENEFIT OBLIGATIONS					
		<u>Non-Vested</u>	<u>Vested</u>		<u>Total</u>
1. Benefit Recipients					
a. Retirement Annuities			\$ 896	\$	896
b. Disability Benefits			6,240		6,240
c. Surviving Spouse and Child Benefits			317		317
2. Deferred Retirements with Future Augmentation			4,184		4,184
3. Former Members Without Vested Rights			684		684
4. Active Members					
a. Retirement Annuities	\$	2,730	24,441		27,171
b. Disability Benefits		7,116	0		7,116
c. Surviving Spouse and Child Benefits		1,244	0		1,244
d. Deferred Retirements		1,405	6,824		8,229
e. Refund Liability Due to Death or Withdrawal		0	2,179		2,179
5. Total Current Benefit Obligations	\$	<u>12,495</u>	<u>45,765</u>	\$	<u>58,260</u>
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				\$	<u>131,774</u>
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				\$	<u>190,034</u>
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)				\$	1,773
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)				\$	(8,162)

Local Government Correctional Service Retirement Fund
Determination of Unfunded Actuarial Accrued Liability (UAAL) and
Supplemental Contribution Rate
(dollars in thousands)

July 1, 2003

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	\$ 122,826	\$ 83,462	\$ 39,364
b. Disability Benefits	20,557	16,475	4,082
c. Survivor's Benefits	5,043	3,648	1,395
d. Deferred Retirements	24,736	18,601	6,135
e. Refunds Due to Death or Withdrawal	4,551	5,306	(755)
f. Total	<u>\$ 177,713</u>	<u>\$ 127,492</u>	<u>\$ 50,221</u>
2. Deferred Retirements With Future Augmentation	\$ 4,184		\$ 4,184
3. Former Members Without Vested Rights	684		684
4. Annuitants in MPRIF	1,212		1,212
5. Recipients Not in MPRIF	6,241		6,241
6. Total	<u><u>\$ 190,034</u></u>	<u><u>\$ 127,492</u></u>	<u><u>\$ 62,542</u></u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			\$ 62,542
2. Current Assets (Table 1; Line E4)			56,487
3. UAAL (B1 - B2)			<u><u>\$ 6,055</u></u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2023			\$ 1,799,582
2. Supplemental Contribution Rate (B3/C1)			0.34%

Local Government Correctional Service Retirement Fund
Changes in Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

Year Ending June 30, 2003

A. UAAL AT BEGINNING OF YEAR	\$ 2,039
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$ 14,866
2. Contributions	(16,075)
3. Interest on A, B1, and B2	122
	<hr/>
4. Total (B1+B2+B3)	\$ (1,087)
C. EXPECTED UAAL AT END OF YEAR (A+B4)	\$ 952
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Salary Increases	\$ 468
2. Investment Return	2,591
3. MPRIF Mortality	2
4. Mortality of Other Benefit Recipients	(14)
5. Other Items	2,056 ⁽¹⁾
	<hr/>
6. Total	\$ 5,103
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	\$ 6,055
F. CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY DUE TO CHANGE IN ACTUARIAL METHODS	0
G. CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	0
	<hr/>
H. UAAL AT END OF YEAR (E+F+G)	<u>\$ 6,055</u>

(1) We estimate that approximately 57% of this loss is due to a large group of new Members who have, on average, approximately 0.7 years of credited service as of July 1, 2003

Local Government Correctional Service Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 2003

	<u>Percent of Payroll</u>	<u>Dollar Amount</u>
A. STATUTORY CONTRIBUTIONS - CHAPTER 353 E		
1. Employee Contributions	5.83%	\$ 6,779
2. Employer Contributions	8.75%	10,174
3. Total	<u>14.58%</u>	<u>\$ 16,953</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	9.05%	\$ 10,521
b. Disability Benefits	1.86%	2,164
c. Survivors	0.36%	414
d. Deferred Retirement Benefits	1.82%	2,119
e. Refunds Due to Death or Withdrawal	<u>0.56%</u>	<u>648</u>
f. Total	<u>13.65%</u>	<u>\$ 15,866</u>
2. Supplemental Contribution Amortization by July 1, 2023 of UAAL	0.34%	395
3. Allowance for Expenses	0.14%	163
4. Total	14.13%	\$ 16,424
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	0.45%	529
Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 116,276

TABLE 12

Local Government Correctional Service Retirement Fund

Summary of Actuarial Assumptions and Methods

Interest:	Pre-Retirement: 8.5% per annum Post-Retirement: 8.5% per annum	
Benefit Increases After Retirement:	Payment of earnings on retired reserves in excess of 6% accounted for by 6% post-retirement assumptions.	
Salary Increases:	Reported salary at valuation date increased according to the rate table below to current fiscal year and annually for each future year. Prior fiscal year salary is annualized for new Members.	
Mortality:	Pre-Retirement: Male - 1983 Group Annuity Mortality Table for males setback one year. Female - 1983 Group Annuity Mortality Table for females. Post-Retirement: Male - 1983 Group Annuity Mortality Table for males set forward two years. Female - 1983 Group Annuity Mortality Table for females set forward two years. Post-Disability: Male - Combined Annuity Mortality Table Female - Combined Annuity Mortality Table	
Retirement Age:	Age-related table as follows:	
	Ages:	
	50-53	2%
	54	5
	55	25
	56-59	10
	60-61	20
	62-64	40
	65-69	50
	70+	100

TABLE 12
(Continued)

<i>Separation:</i>	Graded rates based on actual experience developed by the June 30, 1997 experience analysis for the Correctional Employees Retirement Fund. Rates are shown in rate table.								
<i>Disability:</i>	Rates as shown in rate table.								
<i>Allowance for Combined Service Annuity:</i>	Liabilities for active Members are increased by 0% and liabilities for former Members are increased by 30% to account for the effect of some participants having eligibility for a Combined Service Annuity.								
<i>Administrative and Investment Expenses:</i>	Prior year administration expenses expressed as percentage of prior year payroll.								
<i>Return of Contributions:</i>	All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit.								
<i>Family Composition:</i>	85% of Members are assumed to be married. Female is three years younger than male.								
<i>Special Consideration:</i>	<p>Married Members assumed to elect subsidized joint and survivor form of annuity as follows:</p> <table> <tr> <td>Males -</td><td>25% elect 50% J&S option</td></tr> <tr> <td></td><td>25% elect 100% J&S option</td></tr> <tr> <td>Females -</td><td>5% elect 50% J&S option</td></tr> <tr> <td></td><td>5% elect 100% J&S option</td></tr> </table>	Males -	25% elect 50% J&S option		25% elect 100% J&S option	Females -	5% elect 50% J&S option		5% elect 100% J&S option
Males -	25% elect 50% J&S option								
	25% elect 100% J&S option								
Females -	5% elect 50% J&S option								
	5% elect 100% J&S option								
<i>Actuarial Cost Method:</i>	Entry Age Normal Actuarial Cost Method with normal costs expressed as a level percentage of earnings. Under this method, Actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability.								
<i>Asset Valuation Method:</i>	Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during the fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year). Transition rules apply between July 1, 2001 and July 1, 2003, when the method is fully in effect.								

TABLE 12
(Continued)

***Payment on the
Unfunded Actuarial***

A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6% per annum.

Accrued Liability:

If there is a negative Unfunded Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percentage of payroll.

TABLE 12
(Continued)

Local Government Correctional Service Retirement Fund
Summary of Actuarial Assumptions and Methods

Separation Expressed as Number of Occurrences Per 10,000:

<u>Age</u>	<u>Death</u>		<u>Withdrawal</u>		<u>Disability</u>		<u>Retirement</u>		<u>Salary Increases</u>
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	
20	4	2	2,400	1,600	4	4	0	0	7.75%
21	4	2	2,200	1,560	4	4	0	0	7.1454
22	4	2	2,000	1,520	5	5	0	0	7.1094
23	4	2	1,810	1,480	5	5	0	0	7.0725
24	4	2	1,630	1,450	6	6	0	0	7.0363
25	4	3	1,470	1,420	6	6	0	0	7
26	5	3	1,330	1,400	6	6	0	0	7
27	5	3	1,210	1,380	7	7	0	0	7
28	5	3	1,100	1,370	7	7	0	0	7
29	5	3	1,000	1,360	8	8	0	0	7
30	6	3	910	1,350	8	8	0	0	7
31	6	4	830	1,340	9	9	0	0	7
32	6	4	760	1,330	9	9	0	0	7
33	7	4	700	1,320	10	10	0	0	7
34	7	4	650	1,310	10	10	0	0	7
35	8	5	600	1,290	11	11	0	0	7
36	9	5	560	1,260	12	12	0	0	6.9019
37	9	5	520	1,220	13	13	0	0	6.8074
38	10	6	490	1,170	15	15	0	0	6.7125
39	10	6	460	1,110	16	16	0	0	6.6054
40	11	7	440	1,040	18	18	0	0	6.5
41	12	7	420	960	20	20	0	0	6.354
42	14	8	400	870	22	22	0	0	6.2087
43	15	8	380	780	24	24	0	0	6.0622
44	17	9	360	700	26	26	0	0	5.9048
45	19	10	340	640	29	29	0	0	5.75
46	22	11	320	590	32	32	0	0	5.6940
47	25	12	300	560	36	36	0	0	5.6375
48	28	14	280	530	41	41	0	0	5.5822
49	31	15	260	500	46	46	0	0	5.5405

TABLE 12
(Continued)

Local Government Correctional Service Retirement Fund

Summary of Actuarial Assumptions and Methods

Separation Expressed as Number of Occurrences Per 10,000:

<u>Age</u>	<u>Death</u>		<u>Withdrawal</u>		<u>Disability</u>		<u>Retirement</u>		<u>Salary Increases</u>
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	
50	35	16	240	470	50	50	200	200	5.5%
51	39	18	220	440	57	57	200	200	5.4384
52	43	19	200	410	64	64	200	200	5.3776
53	48	21	180	390	72	72	200	200	5.3167
54	52	23	160	360	80	80	500	500	5.2826
55	57	25	140	330	88	88	2,500	2,500	5.25
56	61	28	120	290	98	98	1,000	1,000	5.25
57	66	31	100	230	108	108	1,000	1,000	5.25
58	71	34	70	170	118	118	1,000	1,000	5.25
59	77	38	40	90	129	129	1,000	1,000	5.25
60	84	42	0	0	141	141	2,000	2,000	5.25
61	92	47	0	0	154	154	2,000	2,000	5.25
62	101	52	0	0	167	167	4,000	4,000	5.25
63	111	58	0	0	0	0	4,000	4,000	5.25
64	124	64	0	0	0	0	4,000	4,000	5.25
65	129	71	0	0	0	0	5,000	5,000	5.25
66	156	78	0	0	0	0	5,000	5,000	5.25
67	176	87	0	0	0	0	5,000	5,000	5.25
68	198	97	0	0	0	0	5,000	5,000	5.25
69	222	109	0	0	0	0	5,000	5,000	5.25
70	248	124	0	0	0	0	10,000	10,000	5.25

Local Government Correctional Service Retirement Fund

Summary of Plan Provisions

This summary of provisions reflects the interpretation of applicable Statutes by the Commission Actuary for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

GENERAL

<i>Effective Date:</i>	July 1, 1999
<i>Eligibility:</i>	Local government employees in covered correctional service for a county-administered jail or correctional facility or in a regional correctional facility administered by multiple counties, spends at least 95% of working time in direct contact with persons confined in the jail or facility, and is not a member of the Public Employees Police and Fire Fund.
<i>Contributions:</i>	
<i>Member:</i>	5.83% of salary.
<i>Employer:</i>	8.75% of salary.
<i>Allowable Service:</i>	Local Government Correctional Service during which Member contributions were made. May also include certain leaves of absence, military service and periods while temporary Worker's Compensation is paid.
<i>Salary:</i>	Includes wages, allowances and fees. Excludes lump-sum payments at separation and reduced salary while receiving Worker's Compensation benefits.
<i>Average Salary:</i>	Average of the five highest successive years of salary. Average Salary is based on all Allowable Service if less than five years.

RETIREMENT

Normal Retirement Benefit:

Eligibility: Age 55 and three years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.

Amount: 1.9% of Average Salary for each year of Allowable Service, pro rata for completed months.

Early Retirement Benefit:

Eligibility: Age 50 and three years of Allowable Service.

Amount: Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date reduced to the actuarial equivalent of the benefit that would be payable if the Member deferred the benefit until age 55.

Form of Payment: Life annuity. Actuarially equivalent options are:

- 25%, 50%, 75% or 100% joint and survivor with bounce back feature without additional reduction.

Benefit Increases: Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF). A benefit recipient who has been receiving a benefit for at least 12 full months as of June 30 will receive a full increase. Members receiving benefits for at least one full month but less than 12 full months will receive a partial increase.

DISABILITY

Occupational Disability:

Eligibility: Member who cannot perform his duties as a direct result of a disability related to an act of duty.

TABLE 13
(Continued)

Amount: 47.5% of Average Salary plus 1.9% of Average Salary for each year in excess of 25 years of Allowable Service (pro rata for completed months).

Payment begins at disability and stops at age 65 or earlier if disability ceases or death occurs. Benefits may be paid upon re-employment but salary plus benefit cannot exceed current salary of position held at time of disability.

Non-Occupational Disability:

Eligibility: At least one year of Allowable Service and disability not related to covered employment.

Amount: Normal Retirement Benefit based on Allowable Service (minimum of 10 years) and Average Salary at disability.

Payment begins at disability and ends at age 65 or earlier if disability ceases or death occurs. Benefits may be paid upon re-employment but salary plus benefit cannot exceed current salary of position held at time of disability.

Form of Payment: Same as for retirement.

Benefit Increases: Adjusted by PERA to provide same increase as MPRIF.

Retirement Benefits:

Eligibility: Age 65 with continued disability.

Amount: Any optional annuity continues. Otherwise, the larger of the disability benefit paid before age 65 or the normal retirement benefit available at age 65, or an actuarially equivalent optional annuity.

Form of Payment: Same as for retirement.

Benefit Increases: Same as for retirement.

TABLE 13
(Continued)

DEATH

Surviving Spouse Benefit:

Eligibility: Member at any age or former Member age 50 or older who dies before retirement or disability benefits commence with three years of Allowable Service. If an active member dies, benefits may commence immediately, regardless of age.

Amount: Surviving spouse receives the 100% joint and survivor benefit using the Normal Retirement formula above. If commencement is prior to age 50, the appropriate early retirement formula described above applies except that one-half the monthly reduction factor is used from age 50 to the commencement age. In lieu of this benefit, the surviving spouse may elect a refund of contributions with interest or an actuarially equivalent term certain annuity (lump sum payable to estate at death).

Benefit Increases: Adjusted by PERA to provide same increase as MPRIF.

Surviving Dependent Children's Benefit:

Eligibility: If no surviving spouse, all dependent children (biological or adopted) below age 20 who are dependent for more than half of their support on deceased Member.

Amount: Actuarially equivalent to surviving spouse 100% joint and survivor annuity payable to the later of age 20 or five years. The amount is to be proportionally divided among surviving children.

Refund of Contributions With Interest:

Eligibility: Active employee dies and survivor benefits are not payable or a former employee dies before annuity begins. If accumulated contributions with interest exceed total payments to the surviving spouse and children, then the remainder is paid out.

Amount: The Member's contributions with 6% interest.

TERMINATION

Refund of Contributions:

<i>Eligibility:</i>	Termination of local government service.
<i>Amount:</i>	Member's contributions with 6% interest compounded annually. A deferred annuity may be elected in lieu of a refund if three or more years of Allowable Service.

Deferred Annuity:

<i>Eligibility:</i>	Three years of Allowable Service.
<i>Amount:</i>	Benefit computed under law in effect at termination and increased by 3% compounded annually until January 1 of the year following attainment of age 55 and 5% thereafter until the annuity begins.

SIGNIFICANT CHANGES

No significant changes were recognized for this valuation.

Local Government Correctional Service Retirement Fund
Schedule of Funding Progress
(dollars in thousands)

July 1, 2003

Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (B)	Unfunded AAL (UAAL) (B)-(A)	Funded Ratio (A)/(B)	Actual Covered Payroll (Previous FY) (C)	UAAL as % of Covered Payroll ((B)-(A))/(C)
07/01/99	0	0	0	N/A	0	N/A
07/01/00	11,116	10,195	(921)	109.03%	70,690	-1.30%
07/01/01	25,014	25,453	439	98.28%	91,025	0.48%
07/01/02	40,105	42,144	2,039	95.16%	101,309	2.01%
07/01/03	56,487	62,542	6,055	90.32%	110,296	5.49%

Local Government Correctional Service Retirement Fund
Schedule of Employer Contributions
(dollars in thousands)

July 1, 2003

Year Ended June 30	Actuarially Required Contribution Rate (A)	Actual Covered Payroll (B)	Actual Member Contributions (C)	Annual Required Contributions [(A)*(B)]-(C)	Actual Employer Contributions ⁽¹⁾	Percentage Contributed
1999	0.00%	0	0	0	0	N/A
2000	15.03%	70,690	4,382	6,243	6,487	103.91%
2001	14.36% ^{(2),(3)}	91,025	5,308	7,763	8,054	103.75%
2002	14.21% ⁽²⁾	101,309	5,882	8,514	8,830	103.71%
2003	14.10% ^{(2),(4)}	110,296	6,430	9,122	9,645	105.74%
2004	14.15% ⁽²⁾					

⁽¹⁾ Includes contributions from other sources (if applicable)

⁽²⁾ Actuarially Required Contribution Rate calculated according to parameters of GASB 25 with no assumption for growth of covered population.

⁽³⁾ Actuarially Required Contribution Rate prior to change in Asset Valuation Method is 14.38%.

⁽⁴⁾ Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 14.08%.