Public Employees Retirement Fund
ACTUARIAL VALUATION REPORT

JULY 1, 2002

MILLIMAN USA

A MILLIMAN GLOBAL FIRM

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November 26, 2002

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, 2002.

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

Thomas K. Custis

Thomas K. Custis, F.S.A., M.A.A.A.
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Public Employees Retirement Fund

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Public Employees Retirement Fund

Report Highlights

(dollars in thousands)

	July 1, 2001 Valuation	July 1, 2002 Valuation
A. CONTRIBUTIONS % OF PAYROLL (Table 11)		
1. Statutory Contributions - Chapter 353 % of Payroll	10.32%	10.66%
2. Required Contributions - Chapter 356 % of Payroll	11.60%	11.23%
3. Sufficiency (Deficiency)	(1.28%)	(0.57%)
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$ 10,527,270	$ 11,017,414
b. Current Benefit Obligations (Table 8)	$ 11,304,993	$ 12,106,527
c. Funding Ratio	93.12%	91.00%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$ 10,527,270	$ 11,017,414
b. Actuarial Accrued Liability (Table 9)	$ 12,105,337	$ 12,958,105
c. Funding Ratio	86.96%	85.02%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$ 15,063,174	$ 15,492,814
b. Current and Expected Future Benefit Obligations	$ 15,815,784	$ 15,951,825
c. Funding Ratio	95.24%	97.12%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	138,759	137,817
b. Projected Annual Earnings	$ 3,835,448	$ 3,967,335
c. Average Annual Earnings (Actual dollars)	$ 27,641	$ 28,787
d. Average Age	44.3	44.9
e. Average Service	9.0	9.4
2. Others		
a. Service Retirements (Table 4)	41,797	43,037
c. Survivors (Table 5)	6,149	6,276
b. Disability Retirements (Table 6)	1,468	1,565
d. Deferred Retirements (Table 7)	25,917	29,353
e. Terminated Other Non-Vested (Table 7)	83,027	87,114
f. Total	158,358	167,345

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 91.00%. The corresponding ratio for the prior year was 93.12%.
- 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 2002 the ratio is 85.02%, which is a decrease from the 2001 value of 86.96%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 97.12% 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 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, 2002, *less*
>
> 80% 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*

60% 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*

40% 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); *less*

10% of the Unrecognized Asset Return at July 1, 1999 (the difference between Market Value of Assets on June 30, 1999 and the Actuarial Value of Assets used 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 two 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:

- <u>For Active Members</u> – 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.
- <u>For Non-Active Members</u> – 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% 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 10.66% compared to the Required Contribution Rate of 11.23%.

Changes in Actuarial Assumptions and Methods

This report reflects the new assumptions which became effective July 1, 2002. These revised assumptions were developed from the recently completed experience study and have been approved by the Commission. Effective with this July 1, 2002 valuation, the following assumptions have been changed:

Assumption	Prior	Revised
Salary increases	Ten year select and ultimate table. During the select period, 0.2% x (10 - T) where T is completed years of service is added to the ultimate rate. Ultimate table ranges from 6.75% at age 20 down to 5.0% at age 70	Ten year select and ultimate table. During the select period, 0.3% x (10 - T) where T is completed years of service is added to the ultimate rate. Ultimate table ranges from 6.4% at age 20 down to 5.00% at age 70
Male Post-Retirement Mortality	1983 GAM (Male)	1983 GAM (Male - 1)
Female Post-Retirement Mortality	1983 GAM (Female - 1)	1983 GAM (Female - 1)
Retirement Age	Graded rates beginning at age 55. A different set of rates applies if the Member is eligible for the Rule of 90.	Graded rates beginning at age 55. A different set of rates applies if the Member is eligible for the Rule of 90.
Separation Decrement	Select and ultimate table.	Select and ultimate table. Rates are generally higher than current rates.
Combined Service Annuity Load Factor	2.5% load on liabilities for active and deferred vested participants.	0.8% load on liabilities for active Members and 60% load on liabilities for former Members.
Form of Annuity Selected - Male	0% elect 25% J&S option 30% elect 50% J&S option 0% elect 75% J&S option 45% elect 100% J&S option	10% elect 25% J&S option 20% elect 50% J&S option 10% elect 75% J&S option 30% elect 100% J&S option
Form of Annuity Selected - Female	0% elect 25% J&S option 15% elect 50% J&S option 0% elect 75% J&S option 15% elect 100% J&S option	5% elect 25% J&S option 5% elect 50% J&S option 5% elect 75% J&S option 15% elect 100% J&S option

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

- The PERA student membership provision is revised to exclude all students who are attending classes on a full-time basis if the student is under age 23.
- PERA's allowable service credit provision is revised to eliminate service credit proration for part-time employment for post December 31, 2001 hirees.
- Kanabec Hospital is added to Chapter 353F subject to local approval and an actuarial gain calculation (Kanabec employees have been included in this valuation pending these actions).

Public Employees Retirement Fund

Statement of Plan Net Assets

(dollars in thousands)

July 1, 2002

	Market Value	Cost Value
A. ASSETS IN TRUST		
1. Cash, Equivalents, Short-Term Securities	$ 52,287	$ 52,287
2. Fixed Income	996,526	1,018,722
3. Equity	2,966,779	3,553,173
4. Real Estate	145,755	134,606
5. Equity in MPRIF	5,867,776	5,867,776
6. Invested Securities Lending Collateral	754,199	754,199
7. Other	13,268	13,268
Subtotal	$ 10,796,590	$ 11,394,031
B. ASSETS RECEIVABLE	16,863	16,863
C. LIABILITIES		
1. Invested Securities Lending Collateral	(754,199)	(754,199)
2. Other	(26,668)	(26,668)
Subtotal	(780,867)	(780,867)
D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
1. MPRIF Reserves	5,867,776	5,867,776
2. Member Reserves	1,572,688	1,572,688
3. Other Non-MPRIF Reserves	2,592,122	3,189,563
4. Total Assets Available for Benefits	$ 10,032,586	$ 10,630,027

E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Market Value of Assets Available for Benefits (D4)		$ 10,032,586
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2002	(746,832)	
b. June 30, 2001	(777,813)	
c. June 30, 2000	86,227	
d. June 30, 1999	448,347	
3. UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) +.1 * 2(d)		(984,828)
4. Actuarial Value of Assets (E1 - E3) (Same as "Current Assets")		$ 11,017,414

Public Employees Retirement Fund

Statement of Change In Plan Net Assets

(dollars in thousands)

Year Ending June 30, 2002

	Non-MPRIF Assets	MPRIF Reserve	Market Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	$ 4,496,046	$ 5,595,214	$ 10,091,260
B. ADDITIONS			
1. Member Contributions	$ 191,422	0	$ 191,422
2. Employer Contributions	206,982	0	206,982
3. Contributions From Other Sources	0	0	0
4. MPRIF Income	0	575,200	575,200
5. Net Investment Income			
a. Interest and Dividends	193,893	0	193,893
b. Net Appreciation/(Depreciation)	(554,403)	0	(554,403)
c. Investment Expenses	(6,099)	0	(6,099)
d. Net Subtotal	(366,609)	0	(366,609)
6. Other	3,721	0	3,721
7. Total Additions	$ 35,516	$ 575,200	$ 610,716
C. OPERATING EXPENSES			
1. Service Retirements	$ 1,630	$ 608,220	$ 609,850
2. Disability Benefits	15,520	0	15,520
3. Survivor Benefits	16,718	0	16,718
4. Refunds	16,267	0	16,267
5. Administrative Expenses	8,680	0	8,680
6. Other	2,355	0	2,355
7. Total Disbursements	$ 61,170	$ 608,220	$ 669,390
D. OTHER CHANGES IN RESERVES			
1. Annuities Awarded	(295,355)	295,355	0
2. Mortality Gain (Loss)	65,340	(65,340)	0
3. Change in MPRIF Assumptions	(75,567)	75,567	0
4. Total Other Changes	(305,582)	305,582	0
E. ASSETS AVAILABLE AT END OF PERIOD	$ 4,164,810	$ 5,867,776	$ 10,032,586
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN			
1. Average Balance			
(a) Non-MPRIF Assets Available at Beginning of Period			4,496,046
(b) Non-MPRIF Assets Available at End of Period*			4,175,037
(c) Average Balance {[F1.a + F1.b - B5.d-B6] / 2}			4,516,986
2. Expected Return: .085 * F1.c			383,944
3. Actual Return			(362,888)
4. Current Year UAR: F.3 - F.2			$ (746,832)

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

Public Employees Retirement Fund

Active Members as of June 30, 2002

Age	Years of Service <1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25	2,687	2,559	35	0	1	0	0	0	5,282
25-29	2,277	5,332	912	17	1	0	0	0	8,539
30-34	1,859	5,601	3,188	701	28	1	0	0	11,378
35-39	2,072	6,195	3,635	2,523	954	29	0	0	15,408
40-44	2,213	7,656	5,296	3,648	2,502	1,421	44	1	22,781
45-49	2,645	6,094	5,492	4,628	3,008	2,671	1,383	36	25,957
50-54	1,112	4,018	3,968	4,439	3,278	2,624	2,220	778	22,437
55-59	649	2,190	2,125	2,673	2,567	2,080	1,584	1,063	14,931
60-64	363	1,167	1,117	1,242	1,196	1,106	835	456	7,482
65+	336	1,103	757	486	358	249	192	141	3,622
ALL	16,213	41,915	26,525	20,357	13,893	10,181	6,258	2,475	137,817

Average Annual Earnings

Age	Years of Service <1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25	10,519	16,696	24,658	0	25,002	0	0	0	13,608
25-29	13,985	23,744	28,129	26,603	29,062	0	0	0	21,616
30-34	14,697	24,639	32,090	34,046	40,417	4,438	0	0	25,719
35-39	13,271	21,488	30,694	37,108	36,426	35,116	0	0	26,063
40-44	12,536	19,527	26,701	35,931	41,011	38,982	38,213	35,098	26,752
45-49	10,719	20,224	24,660	31,496	39,403	42,882	42,304	45,729	27,970
50-54	14,276	21,580	24,635	30,430	36,150	42,585	47,781	47,253	31,577
55-59	12,863	21,002	25,003	29,825	32,269	36,685	44,108	50,699	31,485
60-64	9,877	16,125	22,435	27,817	30,120	32,469	35,735	43,543	27,217
65+	8,020	10,018	14,107	21,336	24,299	24,619	27,805	32,869	16,454
ALL	12,430	20,894	26,536	32,151	36,214	39,391	43,354	47,203	27,050

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

Age	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
All	202	876	704	655	503	401	271	117	3,728

Public Employees Retirement Fund

Service Retirements as of June 30, 2002

	Years Retired							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	2	0	0	0	0	0	2
50-54	17	26	0	0	0	0	0	43
55-59	671	1,622	16	0	0	0	0	2,309
60-64	955	3,772	1,572	8	0	0	0	6,307
65-69	543	4,536	3,661	1,024	9	0	0	9,773
70-74	100	1,086	4,489	2,619	743	0	0	9,037
75-79	40	269	986	3,589	2,404	38	0	7,326
80-84	9	80	213	674	3,088	732	12	4,808
85+	2	10	37	77	635	1,793	878	3,432
ALL	2,337	11,403	10,974	7,991	6,879	2,563	890	43,037

Average Annual Benefit

	Years Retired							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	4,344	0	0	0	0	0	4,344
50-54	8,933	11,263	0	0	0	0	0	10,341
55-59	10,747	9,756	23,954	0	0	0	0	10,142
60-64	9,277	10,149	12,535	23,509	0	0	0	10,629
65-69	8,636	8,487	14,070	14,301	30,924	0	0	11,217
70-74	4,209	7,934	11,703	13,313	25,835	0	0	12,796
75-79	3,071	4,726	11,139	10,677	22,226	21,532	0	14,325
80-84	3,811	3,995	9,066	7,998	15,573	16,832	14,869	14,198
85+	1,765	2,317	5,110	6,519	10,914	14,165	13,146	12,992
ALL	9,197	9,045	12,506	11,752	18,597	15,036	13,169	12,407

	Total Annual Benefit (in Thousands) by Years Retired							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	21,493	103,140	137,241	93,910	127,929	38,537	11,720	533,960

Public Employees Retirement Fund

Survivors as of June 30, 2002

Age	Years Since Death ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	14	66	30	6	0	2	1	119
50-54	21	77	25	4	0	0	0	127
55-59	36	111	44	15	0	1	0	207
60-64	25	137	99	32	9	2	3	307
65-69	51	160	151	97	26	6	5	496
70-74	73	216	214	172	71	21	18	785
75-79	93	294	297	224	153	32	53	1,146
80-84	61	259	284	252	160	72	64	1,152
85+	57	257	384	360	270	215	394	1,937
ALL	431	1,577	1,528	1,162	689	351	538	6,276

Average Annual Benefit

Age	Years Since Death ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	8,155	5,931	5,222	6,534	0	7,063	5,196	6,056
50-54	9,781	9,682	10,251	9,944	0	0	0	9,819
55-59	7,727	8,195	12,107	12,605	0	23,640	0	9,340
60-64	12,283	9,168	10,355	16,854	17,905	21,001	20,899	11,053
65-69	9,865	11,122	12,716	12,507	25,301	21,494	14,170	12,649
70-74	14,244	14,283	14,365	13,801	16,079	20,977	12,825	14,504
75-79	17,047	15,933	16,803	15,634	20,027	20,877	11,690	16,679
80-84	12,150	14,743	15,367	14,097	15,014	18,365	9,369	14,584
85+	10,284	11,729	10,500	9,973	9,490	10,897	6,764	9,702
ALL	12,437	12,482	13,319	12,943	14,499	14,195	7,907	12,693

Total Annual Benefit (in Thousands) by Years Since Death

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	5,360	19,684	20,351	15,040	9,990	4,982	4,254	79,661

Public Employees Retirement Fund

Disability Retirements as of June 30, 2002

Age	Years Disabled ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	29	138	75	23	0	0	0	265
50-54	46	145	68	34	5	0	0	298
55-59	36	243	116	24	5	2	0	426
60-64	52	223	176	47	12	4	1	515
65-69	1	26	19	11	4	0	0	61
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	164	775	454	139	26	6	1	1,565

Average Annual Benefit

Age	Years Disabled ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	5,920	6,654	6,798	5,814	0	0	0	6,542
50-54	10,350	8,277	9,029	8,315	4,021	0	0	8,702
55-59	11,023	11,357	10,073	10,121	8,093	9,269	0	10,862
60-64	10,079	9,546	12,824	11,821	15,015	18,176	6,188	11,116
65-69	4,184	9,232	16,124	12,877	15,188	0	0	12,344
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	9,591	9,350	10,695	9,759	11,596	15,207	6,188	9,860

Total Annual Benefit (in Thousands) by Years Disabled

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	1,573	7,246	4,856	1,357	302	91	6	15,431

Public Employees Retirement Fund
Reconciliation of Members

	Actives	Terminated: Deferred Retirement	Terminated: Other Non-Vested
A. ON JUNE 30, 2001	138,759	25,917	83,027
B. ADDITIONS	17,624	4,838	10,377
C. DELETIONS			
1. Service Retirement	(1,929)	(996)	(9)
2. Disability	(269)	(447)	(2)
3. Death	(175)	(103)	(10)
4. Terminated - Deferred	(4,743)	0	0
5. Terminated - Refund	(2,945)	(41)	(1,592)
6. Terminated - Other Non-Vested	(8,765)	(3)	0
7. Returned as active	0	(524)	(821)
8. Members switched from Active to Terminated status	(2,395)	660	1,735
D. DATA ADJUSTMENTS	2,655	52	(5,591)
1. Vested	96,323		
2. Non-Vested	41,494		
E. TOTAL ON JUNE 30, 2002	137,817	29,353	87,114

	Recipients: Retirement Annuitants	Recipients: Disabled	Recipients: Survivors
A. ON JUNE 30, 2001	41,797	1,468	6,149
B. ADDITIONS	2,673	283	472
C. DELETIONS			
1. Service Retirement	0	(98)	0
2. Death	(1,304)	(57)	(304)
3. Annuity Expired	0	0	(24)
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	(129)	(31)	(17)
E. TOTAL ON JUNE 30, 2002	43,037	1,565	6,276

Public Employees Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

July 1, 2002

A. CURRENT ASSETS (Table 1; Line E4)			$ 11,017,414
B. EXPECTED FUTURE ASSETS			
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			$ 1,481,680
2. Present Value of Future Normal Costs			2,993,720
3. Total Expected Future Assets			$ 4,475,400
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$ 15,492,814
D. CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
1. Benefit Recipients			
a. Retirement Annuities		$ 5,337,259	$ 5,337,259
b. Disability Benefits		186,752	186,752
c. Surviving Spouse and Child Benefits		623,840	623,840
2. Deferred Retirements with Future Augmentation		758,745	758,745
3. Former Members Without Vested Rights		40,281	40,281
4. Active Members			
a. Retirement Annuities	$ 54,049	4,398,332	4,452,381
b. Disability Benefits	180,380	0	180,380
c. Surviving Spouse and Child Benefits	61,509	0	61,509
d. Deferred Retirements	13,759	422,108	435,867
e. Refund Liability Due to Death or Withdrawal	0	29,513	29,513
5. Total Current Benefit Obligations	$ 309,697	$ 11,796,830	$ 12,106,527
E. EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 3,845,298
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 15,951,825
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5 - A)			$ 1,089,113
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F - C)			$ 459,011

Public Employees Retirement Fund

Determination of Unfunded Actuarial Accrued Liability (UAAL) and Supplemental Contribution Rate

(dollars in thousands)

July 1, 2002

	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	$ 7,785,389	$ 2,252,428	$ 5,532,961
b. Disability Benefits	323,409	133,440	189,969
c. Survivor's Benefits	108,605	43,738	64,867
d. Deferred Retirements	729,645	475,803	253,842
e. Refunds Due to Death or Withdrawal	57,900	88,311	(30,411)
f. Total	$ 9,004,948	$ 2,993,720	$ 6,011,228
2. Deferred Retirements With Future Augmentation	758,745		758,745
3. Former Members Without Vested Rights	40,281		40,281
4. Annuitants in MPRIF	5,867,776		5,867,776
5. Recipients Not in MPRIF	280,075		280,075
6. Total	$ 15,951,825	$ 2,993,720	$ 12,958,105
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			$ 12,958,105
2. Current Assets (Table 1; Line E4)			11,017,414
3. UAAL (B1 - B2)			$ 1,940,691
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2031			80,966,108
2. Supplemental Contribution Rate (B3/C1)			2.40%

Public Employees Retirement Fund

Changes in Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

Year Ending June 30, 2002

A. UAAL AT BEGINNING OF YEAR	$	1,578,067
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
1. Normal Cost and Expenses	$	369,672
2. Contributions		(398,404)
3. Interest on A, B1, and B2		132,915
4. Total (B1+B2+B3)	$	104,183
C. EXPECTED UAAL AT END OF YEAR (A+B4)	$	1,682,250
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
1. Salary Increases	$	(221,668)
2. Investment Return		235,075
3. MPRIF Mortality		(65,340)
4. Mortality of Other Benefit Recipients		(57,647)
5. Other Items		48,659
6. Total	$	(60,921)
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	$	1,621,329
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		319,362
H. UAAL AT END OF YEAR (E+F+G)	$	1,940,691

Public Employees Retirement Fund

Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2002

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 353		
1. Employee Contributions	5.11%	$ 202,715
2. Employer Contributions	5.55%	219,990
3. Total	10.66%	$ 422,705
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	6.62%	$ 262,489
b. Disability Benefits	0.37%	14,637
c. Survivors	0.12%	4,882
d. Deferred Retirement Benefits	1.27%	50,463
e. Refunds Due to Death or Withdrawal	0.22%	8,828
f. Total	8.60%	$ 341,299
2. Supplemental Contribution Amortization by July 1, 2031 of UAAL	2.40%	95,216
3. Allowance for Expenses	0.23%	9,125
4. Total	11.23%	$ 445,640
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	(0.57%)	(22,935)

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: $ 3,967,335

Public Employees Retirement Fund

Summary of Actuarial Assumptions and Methods

(Please note that these are new assumptions effective July 1, 2002.)

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% x (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.

Separation:	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:

First Year	Second Year	Third Year
0.40	0.15	0.10

Disability:	Rates as shown in rate table.
Member Status:	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.
Allowance for Combined Service Annuity:	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.
Expenses:	Prior year expenses expressed as percentage of prior year payroll.
Return of Contributions:	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.
Family Composition:	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.
Social Security:	N/A
Special Consideration:	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

Actuarial Cost Method:	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.
Asset Valuation Method:	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.
Payment on the Unfunded Actuarial Accrued Liability:	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.

Summary of Actuarial Assumptions and Methods

Separation Expressed as Number of Occurrences Per 10,000:

	Pre-Retirement Death		Withdrawal		Disability		Retirement		Salary Increases
Age	Male	Female	Male	Female	Male	Female	Rule of 90 Eligible	Other	
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

Summary of Actuarial Assumptions and Methods

Separation Expressed as Number of Occurrences Per 10,000:

	Pre-Retirement Death		Withdrawal		Disability		Retirement		Salary Increases
Age	Male	Female	Male	Female	Male	Female	Rule of 90 Eligible	Other	
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, 2002

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%

Public Employees Retirement Fund

Schedule of Employer Contributions

(dollars in thousands)

July 1, 2002

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],[4]	3,809,864	191,422	260,047	206,982	79.59%
2003	11.52% [3],[5]					

(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% .

Public Employees Retirement Fund

Active Members as of June 30, 2002

	Years of Service								
Age	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<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	0	33	33
55-59	0	0	0	0	0	0	0	77	77
60-64	0	0	0	0	0	0	0	55	55
65+	0	0	0	0	0	0	0	38	38
ALL	0	0	0	0	0	0	0	203	203

Average Annual Earnings

	Years of Service								
Age	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<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	0	46,148	46,148
55-59	0	0	0	0	0	0	0	49,263	49,263
60-64	0	0	0	0	0	0	0	44,104	44,104
65+	0	0	0	0	0	0	0	34,836	34,836
ALL	0	0	0	0	0	0	0	44,658	44,658

	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	0	0	0	0	0	0	0	9,066	9,066

Public Employees Retirement Fund

Service Retirements as of June 30, 2002

	Years Retired							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	0	0	0	0	0	0	0
50-54	0	3	0	0	0	0	0	3
55-59	59	221	12	0	0	0	0	292
60-64	22	418	339	6	0	0	0	785
65-69	28	271	772	312	9	0	0	1,392
70-74	6	63	664	681	442	0	0	1,856
75-79	0	13	146	734	1,296	35	0	2,224
80-84	1	3	21	111	1,350	499	10	1,995
85+	0	0	3	13	215	1,075	692	1,998
ALL	116	992	1,957	1,857	3,312	1,609	702	10,545

Average Annual Benefit

	Years Retired							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	0	0	0	0	0	0	0
50-54	0	21,515	0	0	0	0	0	21,515
55-59	31,153	33,127	28,233	0	0	0	0	32,527
60-64	20,306	32,296	37,515	24,463	0	0	0	34,154
65-69	20,124	26,678	36,725	34,032	30,924	0	0	33,794
70-74	18,686	26,674	29,440	29,137	38,273	0	0	31,304
75-79	0	23,984	30,362	23,265	33,288	22,389	0	29,562
80-84	10,696	18,800	35,960	19,752	25,617	21,094	15,185	24,198
85+	0	0	19,633	21,745	22,412	19,224	14,599	17,982
ALL	25,612	30,407	33,829	27,011	30,114	19,873	14,607	27,640

Total Annual Benefit (in Thousands) by Years Retired

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	2,970	30,163	66,203	50,159	99,737	31,975	10,254	291,463

Public Employees Retirement Fund

Survivors as of June 30, 2002

	Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	0	0	0	0	2	1	3
50-54	0	1	0	0	0	0	0	1
55-59	0	3	3	5	0	1	0	12
60-64	4	18	8	14	6	2	3	55
65-69	8	34	36	29	22	6	5	140
70-74	23	77	76	68	33	21	18	316
75-79	35	137	130	103	94	30	53	582
80-84	30	118	147	139	98	63	64	659
85+	35	169	243	274	192	175	380	1,468
ALL	135	557	643	632	445	300	524	3,236

Average Annual Benefit

	Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	0	0	0	0	7,063	5,196	6,441
50-54	0	30,392	0	0	0	0	0	30,392
55-59	0	21,122	24,556	19,923	0	23,640	0	21,691
60-64	34,954	18,021	30,394	30,922	24,806	21,001	20,899	25,342
65-69	30,692	25,451	30,440	24,351	28,280	21,494	14,170	26,678
70-74	28,636	26,142	27,842	23,309	27,544	20,977	12,825	25,167
75-79	27,574	26,033	27,317	23,759	28,235	21,206	11,690	24,811
80-84	16,825	22,711	22,387	20,000	19,799	19,792	9,369	19,791
85+	14,466	14,676	13,285	11,357	11,155	12,260	6,853	11,048
ALL	22,371	21,585	21,149	17,663	18,913	15,593	8,002	17,643

	Total Annual Benefit (in Thousands) by Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	3,020	12,022	13,598	11,163	8,416	4,677	4,193	57,092

TABLE 6A
BASIC

Public Employees Retirement Fund

Disability Retirements as of June 30, 2002

	Years Disabled							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	0	7	4	3	0	1	0	15
60-64	0	7	13	5	4	1	0	30
65-69	0	4	2	2	0	0	0	8
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	18	19	10	4	2	0	53

Average Annual Benefit

	Years Disabled							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	0	43,713	36,525	26,541	0	10,291	0	36,134
60-64	0	32,086	35,504	41,709	29,129	48,133	0	35,312
65-69	0	17,676	40,514	36,799	0	0	0	28,166
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	33,405	36,246	36,177	29,129	29,212	0	34,466

Total Annual Benefit (in Thousands) by Years Disabled

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	0	601	688	361	116	58	0	1,826

Public Employees Retirement Fund

Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2002

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 353		
1. Employee Contributions	9.10%	$ 867
2. Employer Contributions	11.78%	1,123
3. Total	20.88%	$ 1,990
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	8.02%	$ 764
b. Disability Benefits	0.49%	47
c. Survivors	0.31%	30
d. Deferred Retirement Benefits	3.42%	326
e. Refunds Due to Death or Withdrawal	0.23%	22
f. Total	12.47%	$ 1,189

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: $ 9,530

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.

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 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, 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.

TABLE 3B
COORDINATED

Public Employees Retirement Fund

Active Members as of June 30, 2002

Age	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
	Years of Service								
<25	2,687	2,559	35	0	1	0	0	0	5,282
25-29	2,277	5,332	912	17	1	0	0	0	8,539
30-34	1,859	5,601	3,188	701	28	1	0	0	11,378
35-39	2,072	6,195	3,635	2,523	954	29	0	0	15,408
40-44	2,213	7,656	5,296	3,648	2,502	1,421	44	1	22,781
45-49	2,645	6,094	5,492	4,628	3,008	2,671	1,383	36	25,957
50-54	1,112	4,018	3,968	4,439	3,278	2,624	2,220	745	22,404
55-59	649	2,190	2,125	2,673	2,567	2,080	1,584	986	14,854
60-64	363	1,167	1,117	1,242	1,196	1,106	835	401	7,427
65+	336	1,103	757	486	358	249	192	103	3,584
ALL	16,213	41,915	26,525	20,357	13,893	10,181	6,258	2,272	137,614

Average Annual Earnings

Age	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
	Years of Service								
<25	10,519	16,696	24,658	0	25,002	0	0	0	13,608
25-29	13,985	23,744	28,129	26,603	29,062	0	0	0	21,616
30-34	14,697	24,639	32,090	34,046	40,417	4,438	0	0	25,719
35-39	13,271	21,488	30,694	37,108	36,426	35,116	0	0	26,063
40-44	12,536	19,527	26,701	35,931	41,011	38,982	38,213	35,098	26,752
45-49	10,719	20,224	24,660	31,496	39,403	42,882	42,304	45,729	27,970
50-54	14,276	21,580	24,635	30,430	36,150	42,585	47,781	47,302	31,556
55-59	12,863	21,002	25,003	29,825	32,269	36,685	44,108	50,811	31,392
60-64	9,877	16,125	22,435	27,817	30,120	32,469	35,735	43,466	27,092
65+	8,020	10,018	14,107	21,336	24,299	24,619	27,805	32,143	16,259
ALL	12,430	20,894	26,536	32,151	36,214	39,391	43,354	47,430	27,024

Age	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
	Prior Fiscal Year Earnings (in Millions) by Years of Service								
All	202	876	704	655	503	401	271	108	3,719

Public Employees Retirement Fund

Service Retirements as of June 30, 2002

Age	Years Retired <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	2	0	0	0	0	0	2
50-54	17	23	0	0	0	0	0	40
55-59	612	1,401	4	0	0	0	0	2,017
60-64	933	3,354	1,233	2	0	0	0	5,522
65-69	515	4,265	2,889	712	0	0	0	8,381
70-74	94	1,023	3,825	1,938	301	0	0	7,181
75-79	40	256	840	2,855	1,108	3	0	5,102
80-84	8	77	192	563	1,738	233	2	2,813
85+	2	10	34	64	420	718	186	1,434
ALL	2,221	10,411	9,017	6,134	3,567	954	188	32,492

Average Annual Benefit

Age	Years Retired <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	4,344	0	0	0	0	0	4,344
50-54	8,933	9,926	0	0	0	0	0	9,504
55-59	8,780	6,070	11,119	0	0	0	0	6,902
60-64	9,017	7,389	5,668	20,647	0	0	0	7,285
65-69	8,012	7,332	8,017	5,656	0	0	0	7,468
70-74	3,285	6,780	8,625	7,753	7,572	0	0	8,013
75-79	3,071	3,749	7,798	7,441	9,289	11,543	0	7,684
80-84	2,951	3,419	6,125	5,681	7,773	7,707	13,292	7,107
85+	1,765	2,317	3,829	3,427	5,029	6,591	7,743	6,040
ALL	8,340	7,010	7,879	7,133	7,904	6,879	7,802	7,464

Total Annual Benefit (in Thousands) by Years Retired

Age	<1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	18,523	72,981	71,044	43,753	28,193	6,562	1,466	242,520

Public Employees Retirement Fund

Survivors as of June 30, 2002

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
	Years Since Death							
<50	14	66	30	6	0	0	0	116
50-54	21	76	25	4	0	0	0	126
55-59	36	108	41	10	0	0	0	195
60-64	21	119	91	18	3	0	0	252
65-69	43	126	115	68	4	0	0	356
70-74	50	139	138	104	38	0	0	469
75-79	58	157	167	121	59	2	0	564
80-84	31	141	137	113	62	9	0	493
85+	22	88	141	86	78	40	14	469
ALL	296	1,020	885	530	244	51	14	3,040

Average Annual Benefit

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
	Years Since Death							
<50	8,155	5,931	5,222	6,534	0	0	0	6,047
50-54	9,781	9,410	10,251	9,944	0	0	0	9,656
55-59	7,727	7,836	11,197	8,946	0	0	0	8,580
60-64	7,965	7,829	8,594	5,913	4,105	0	0	7,935
65-69	5,991	7,256	7,168	7,456	8,919	0	0	7,132
70-74	7,625	7,715	6,944	7,585	6,124	0	0	7,321
75-79	10,695	7,121	8,619	8,718	6,952	15,955	0	8,288
80-84	7,627	8,076	7,836	6,838	7,451	8,380	0	7,624
85+	3,633	6,071	5,702	5,565	5,393	4,935	4,373	5,493
ALL	7,907	7,512	7,631	7,315	6,449	5,975	4,373	7,425

Total Annual Benefit (in Thousands) by Years Since Death

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	2,340	7,662	6,753	3,876	1,573	304	61	22,572

Public Employees Retirement Fund

Disability Retirements as of June 30, 2002

Age	Years Disabled <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	29	138	75	23	0	0	0	265
50-54	46	145	68	34	5	0	0	298
55-59	36	236	112	21	5	1	0	411
60-64	52	216	163	42	8	3	1	485
65-69	1	22	17	9	4	0	0	53
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	164	757	435	129	22	4	1	1,512

Average Annual Benefit

Age	Years Disabled <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	5,920	6,654	6,798	5,814	0	0	0	6,542
50-54	10,350	8,277	9,029	8,315	4,021	0	0	8,702
55-59	11,023	10,398	9,129	7,776	8,093	8,248	0	9,940
60-64	10,079	8,816	11,016	8,263	7,959	8,191	6,188	9,620
65-69	4,184	7,697	13,255	7,562	15,188	0	0	9,956
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	9,591	8,779	9,580	7,712	8,409	8,205	6,188	8,998

Total Annual Benefit (in Thousands) by Years Disabled

Age	<1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	1,572	6,645	4,167	994	184	32	6	13,604

Public Employees Retirement Fund

Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2002

	Percent of Payroll		Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 353			
1. Employee Contributions	5.10%	$	201,848
2. Employer Contributions	5.53%		218,867
3. Total	10.63%	$	420,715
B. REQUIRED CONTRIBUTIONS - CHAPTER 356			
1. Normal Cost			
a. Retirement Benefits	6.61%	$	261,725
b. Disability Benefits	0.37%		14,590
c. Survivors	0.12%		4,852
d. Deferred Retirement Benefits	1.27%		50,137
e. Refunds Due to Death or Withdrawal	0.22%		8,806
f. Total	8.59%	$	340,110

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: $ 3,957,805

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 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.

Contributions

Member: 4.75% of total salary.

Employer: 5.18% of total salary. Additional 0.43% 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: **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, 2002

MILLIMAN USA

A MILLIMAN GLOBAL FIRM

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November 26, 2002

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, 2002.

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

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

William V. Hogan

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

Report Highlights

(dollars in thousands)

	July 1, 2001 Valuation	July 1, 2002 Valuation
A. CONTRIBUTIONS % OF PAYROLL (Table 11)		
1. Statutory Contributions - Chapter 353	15.50%	15.50%
2. Required Contributions - Chapter 356	13.12%	13.08%
3. Sufficiency (Deficiency)	2.38%	2.42%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$ 4,510,134	$ 4,707,255
b. Current Benefit Obligations (Table 8)	3,567,264	3,737,701
c. Funding Ratio	126.43%	125.94%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$ 4,510,134	$ 4,707,255
b. Actuarial Accrued Liability (Table 9)	3,712,360	3,886,311
c. Funding Ratio	121.49%	121.12%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$ 5,242,810	$ 5,452,773
b. Current and Expected Future Benefit Obligations	4,979,963	5,179,204
c. Funding Ratio	105.28%	105.28%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	9,858	9,940
b. Projected Annual Earnings	$ 528,942	$ 541,250
c. Average Annual Earnings (Projected $)	$ 53,656	$ 54,452
d. Average Age	38.5	38.6
e. Average Service	10.9	10.9
2. Others		
a. Service Retirements (Table 4)	4,188	4,191
c. Survivors (Table 5)	1,267	1,206
b. Disability Retirements (Table 6)	543	574
d. Deferred Retirements (Table 7)	554	637
e. Terminated Other Non-Vested (Table 7)	610	663
f. Total	7,162	7,271

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 125.94%. The corresponding ratio for the prior year was 126.43%.
- 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 2002, the ratio is 121.12%, which is a decrease from the 2001 value of 121.49%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 105.28% 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 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, 2002, *less*
>
> 80% 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*
>
> 60% 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*
>
> 40% 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); *less*
>
> 10% of the Unrecognized Asset Return at July 1, 1999 (the difference between Market Value of Assets on June 30, 1999 and the Actuarial Value of Assets used 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 two 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 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.

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 15.50% compared to the Required Contribution Rate of 13.08%.

Changes in Actuarial Assumptions and Methods

This report reflects the new assumptions which became effective July 1, 2002. These revised assumptions were developed from the recently completed experience study and have been approved by the Commission. Effective with this July 1, 2002 valuation, the following assumptions have been changed:

Assumption	Prior	Revised
Combined Service Annuity Load Factor	None.	0% load on liabilities for active Members and 30% load on liabilities for former Members.

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

Changes in Plan Provisions

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

Public Employees Police and Fire Fund

Statement of Plan Net Assets

(dollars in thousands)

July 1, 2002

	Market Value	Cost Value
A. ASSETS IN TRUST		
1. Cash, Equivalents, Short-Term Securities	$ 4,485	$ 4,485
2. Fixed Income	511,901	523,612
3. Equity	1,523,991	1,869,870
4. Real Estate	75,462	71,466
5. Equity in MPRIF	1,964,695	1,964,695
6. Invested Securities Lending Collateral	310,341	310,341
7. Other	0	0
Subtotal	4,390,875	4,744,469
B. ASSETS RECEIVABLE		
1. Amounts receivable from municipalities with positive amortizable bases	$ 34,576	$ 34,576
2. Other	$ 45,155	$ 45,155
Subtotal	$ 79,731	$ 79,731
C. LIABILITIES		
1. Invested Securities Lending Collateral	$ (310,341)	$ (310,341)
2. Other	$ (2,205)	$ (2,205)
Subtotal	$ (312,546)	$ (312,546)
D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
1. MPRIF Reserves	$ 1,964,695	$ 1,964,695
2. Member Reserves	328,530	328,530
3. Other Non-MPRIF Reserves	1,864,835	2,218,429
4. Total Assets Available for Benefits	$ 4,158,060	$ 4,511,654
E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Market Value of Assets Available for Benefits (D4)		$ 4,158,060
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2002	$ (428,953)	
b. June 30, 2001	(412,267)	
c. June 30, 2000	42,251	
d. June 30, 1999	244,273	
3. UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) +.1 * 2(d)		(549,195)
4. Actuarial Value of Assets (E1 - E3)		$ 4,707,255

Public Employees Police and Fire Fund

Statement of Change In Plan Net Assets

(dollars in thousands)

Year Ending June 30, 2002

	Non-MPRIF Assets	MPRIF Reserve	Market Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	$ 2,404,726	$ 1,874,227	$ 4,278,953
B. ADDITIONS			
1. Member Contributions	$ 33,801	0	$ 33,801
2. Employer Contributions	90,664	0	90,664
3. Contributions From Other Sources	0	0	0
4. MPRIF Income	0	194,273	194,273
5. Net Investment Income			
a. Interest and Dividends	99,254	0	99,254
b. Net Appreciation/(Depreciation)	(323,654)	0	(323,654)
c. Investment Expenses	(3,148)	0	(3,148)
d. Net Subtotal	(227,548)	0	(227,548)
6. Other	1,937	0	1,937
7. Total Additions	$ (101,146)	$ 194,273	$ 93,127
C. OPERATING EXPENSES			
1. Service Retirements	$ 292	$ 178,673	$ 178,965
2. Disability Benefits	21,749	0	21,749
3. Survivor Benefits	11,691	0	11,691
4. Refunds	712	0	712
5. Administrative Expenses	647	0	647
6. Other	256	0	256
7. Total Disbursements	$ 35,347	$ 178,673	$ 214,020
D. OTHER CHANGES IN RESERVES			
1. Annuities Awarded	(114,050)	114,050	0
2. Mortality Gain (Loss)	39,182	(39,182)	0
3. Change in MPRIF Assumptions	0	0	0
4. Total Other Changes	(74,868)	74,868	0
E. ASSETS AVAILABLE AT END OF PERIOD	$ 2,193,365	$ 1,964,695	$ 4,158,060
F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN			
1. Average Balance			
(a) Non-MPRIF Assets Available at Beginning of Period			2,404,726
(b) Assets Available at End of Period*			2,154,183
(c) Average Balance {[F1.a + F1.b - B5.d-B6] / 2}			2,392,260
2. Expected Return: .085 * F1.c			203,342
3. Actual Return			(225,611)
4. Current Year UAR: F.3 - F.2			$ (428,953)

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

Public Employees Police and Fire Fund

Active Members as of June 30, 2002

Years of Service

Age	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25	134	154	0	0	0	0	0	0	288
25-29	179	924	193	1	0	0	0	0	1,297
30-34	101	812	983	172	0	0	0	0	2,068
35-39	62	367	607	679	204	0	0	0	1,919
40-44	23	151	286	445	519	206	1	0	1,631
45-49	18	93	89	191	326	560	204	0	1,481
50-54	11	47	45	67	124	269	324	56	943
55-59	9	20	15	18	44	53	57	41	257
60-64	2	5	5	8	4	7	4	11	46
65+	0	2	1	4	0	1	0	2	10
ALL	539	2,575	2,224	1,585	1,221	1,096	590	110	9,940

Average Annual Earnings

Years of Service

Age	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25	25,080	38,034	0	0	0	0	0	0	32,007
25-29	26,661	42,556	48,438	49,513	0	0	0	0	41,243
30-34	25,605	43,409	51,626	53,707	0	0	0	0	47,302
35-39	25,815	43,111	52,606	56,877	56,846	0	0	0	51,887
40-44	37,451	44,907	52,039	56,520	59,035	60,188	54,371	0	55,653
45-49	19,056	41,717	51,148	54,111	59,253	61,904	60,592	0	57,700
50-54	31,953	43,939	50,188	52,063	54,765	60,750	62,757	69,090	58,853
55-59	38,744	47,954	43,099	40,206	51,674	58,037	60,902	61,050	54,483
60-64	4,158	60,181	46,996	52,391	23,540	37,343	56,880	63,735	48,859
65+	0	52,671	77,840	24,135	0	56,105	0	70,609	47,705
ALL	26,406	42,851	51,566	55,597	57,912	60,949	61,775	65,585	51,162

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	14,233	110,341	114,683	88,121	70,711	66,800	36,447	7,214	508,550

Public Employees Police and Fire Fund

Service Retirements as of June 30, 2002

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
	Years Retired							
<50	0	0	0	0	0	0	0	0
50-54	131	293	2	2	3	1	0	432
55-59	69	638	149	13	10	4	0	883
60-64	16	245	430	122	14	8	3	838
65-69	3	88	223	246	64	10	5	639
70-74	2	10	97	133	220	70	7	539
75-79	0	0	14	89	149	155	60	467
80-84	0	0	0	11	67	96	61	235
85+	0	0	0	0	7	47	104	158
ALL	221	1,274	915	616	534	391	240	4,191

Average Annual Benefit

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
	Years Retired							
<50	0	0	0	0	0	0	0	0
50-54	38,409	36,372	31,997	34,214	36,009	38,503	0	36,962
55-59	38,359	42,434	36,188	38,069	31,006	34,294	0	40,831
60-64	23,672	42,123	47,380	38,325	36,397	37,072	36,763	43,752
65-69	18,503	33,953	47,553	40,075	38,761	38,724	35,282	41,550
70-74	15,434	25,829	39,273	41,178	41,928	39,749	34,560	40,490
75-79	0	0	56,050	37,597	39,656	39,940	36,178	39,403
80-84	0	0	0	34,399	33,025	38,575	37,348	36,479
85+	0	0	0	0	29,637	35,361	32,050	32,928
ALL	36,848	40,264	44,839	39,446	39,254	38,869	34,628	40,381

Total Annual Benefit (in Thousands) by Years Retired

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	8,143	51,296	41,027	24,298	20,961	15,197	8,310	169,236

Public Employees Police and Fire Fund

Survivors as of June 30, 2002

	Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	13	11	5	1	1	3	34
50-54	0	10	9	11	8	1	0	39
55-59	4	9	15	10	1	3	3	45
60-64	8	22	13	13	11	2	2	71
65-69	6	24	19	38	42	27	53	209
70-74	8	27	23	19	28	32	14	151
75-79	4	28	24	41	32	42	44	215
80-84	4	18	25	23	26	32	50	178
85+	6	29	20	21	33	31	124	264
ALL	40	180	159	181	182	171	293	1,206

Average Annual Benefit

	Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	29,997	35,794	41,480	27,469	21,848	16,324	32,041
50-54	0	32,952	43,405	27,941	28,447	19,093	0	32,671
55-59	28,744	26,873	31,087	31,103	21,903	22,172	22,988	28,701
60-64	26,624	25,783	35,129	23,982	24,029	25,377	21,590	26,858
65-69	33,071	27,783	28,478	25,197	21,503	22,468	21,789	24,059
70-74	29,477	19,924	26,826	29,254	23,799	22,827	20,189	24,014
75-79	14,157	23,751	22,193	22,671	19,802	21,495	17,469	20,879
80-84	25,243	20,871	24,706	19,651	20,421	19,754	16,115	19,748
85+	14,285	15,061	17,626	15,343	13,661	16,631	16,639	16,011
ALL	25,138	23,393	27,473	24,058	20,474	20,736	17,871	21,930

Total Annual Benefit (in Thousands) by Years Since Death

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	1,005	4,210	4,368	4,354	3,726	3,545	5,236	26,447

Public Employees Police and Fire Fund

Disability Retirements as of June 30, 2002

	Years Disabled							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	27	95	31	14	6	1	0	174
50-54	21	105	34	11	5	0	0	176
55-59	12	86	51	0	1	0	1	151
60-64	0	19	47	0	0	0	0	66
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	60	311	164	25	12	1	1	574

Average Annual Benefit

	Years Disabled							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	33,862	30,653	32,883	32,002	31,584	46,006	0	31,777
50-54	46,291	41,268	37,451	36,230	31,650	0	0	40,542
55-59	38,308	46,956	49,254	0	39,358	0	13,305	46,772
60-64	0	40,879	48,509	0	0	0	0	46,313
65-69	0	37,368	29,089	0	0	0	0	36,185
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	39,101	39,499	43,376	33,862	32,259	46,006	13,305	40,134

Total Annual Benefit (in Thousands) by Years Disabled

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	2,346	12,284	7,113	846	387	46	13	23,036

Public Employees Police and Fire Fund

Reconciliation of Members

		Actives	Terminated Deferred Retirement	Terminated Other Non-Vested
A.	ON JUNE 30, 2001	9,858	554	610
B.	ADDITIONS	599	132	128
C.	DELETIONS			
	1. Service Retirement	(193)	(52)	0
	2. Disability	(71)	(173)	(2)
	3. Death	(1)	(6)	(1)
	4. Terminated - Deferred	(122)	0	0
	5. Terminated - Refund	(28)	(1)	(20)
	6. Terminated - Other Non-Vested	(94)	(1)	0
	7. Returned as active	0	(18)	(16)
	8. Transferred to Other Fund	0	0	0
D.	DATA ADJUSTMENTS	(8)	202	(36)
	1. Vested	8,108		
	2. Non-Vested	1,832		
E.	TOTAL ON JUNE 30, 2002	9,940	637	663

		Recipients: Retirement Annuitants	Recipients: Disabled	Recipients: Survivors
A.	ON JUNE 30, 2001	4,188	543	1,267
B.	ADDITIONS	225	80	63
C.	DELETIONS			
	1. Service Retirement	0	(12)	0
	2. Death	(105)	(5)	(65)
	3. Annuity Expired	0	0	0
	4. Returned as Active	0	0	0
D.	DATA ADJUSTMENTS	(117)	(32)	(59)
E.	TOTAL ON JUNE 30, 2002	4,191	574	1,206

Public Employees Police and Fire Fund

Actuarial Balance Sheet

(dollars in thousands)

July 1, 2002

	Non-Vested	Vested	Total
A. CURRENT ASSETS (Table 1; Line E4)			$ 4,707,255
B. EXPECTED FUTURE ASSETS			
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			$ (547,375)
2. Present Value of Future Normal Costs			1,292,893
3. Total Expected Future Assets			745,518
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$ 5,452,773
D. CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
1. Benefit Recipients			
a. Retirement Annuities		$ 1,846,528	$ 1,846,528
b. Disability Benefits		208,195	208,195
c. Surviving Spouse and Child Benefits		222,910	222,910
2. Deferred Retirements with Future Augmentation		79,061	79,061
3. Former Members Without Vested Rights		884	884
4. Active Members			
a. Retirement Annuities	$ 13,082	1,155,451	1,168,533
b. Disability Benefits	108,698	0	108,698
c. Surviving Spouse and Child Benefits	42,528	0	42,528
d. Deferred Retirements	2,849	56,163	59,012
e. Refund Liability Due to Death or Withdrawal	0	1,352	1,352
5. Total Current Benefit Obligations	$ 167,157	$ 3,570,544	$ 3,737,701
E. EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 1,441,503
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 5,179,204
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5 - A)			$ (969,554)
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F - C)			$ (273,569)

Public Employees Police and Fire Fund

Determination of Unfunded Actuarial Accrued Liability (UAAL) and Supplemental Contribution Rate

(dollars in thousands)

July 1, 2002

	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	$ 2,412,879	$ 1,011,618	$ 1,401,261
b. Disability Benefits	211,937	130,002	81,935
c. Survivor's Benefits	82,759	49,988	32,771
d. Deferred Retirements	111,303	97,974	13,329
e. Refunds Due to Death or Withdrawal	2,748	3,311	(563)
f. Total	$ 2,821,626	$ 1,292,893	$ 1,528,733
2. Deferred Retirements With Future Augmentation	$ 79,061		$ 79,061
3. Former Members Without Vested Rights	884		884
4. Annuitants in MPRIF	1,964,695		1,964,695
5. Recipients Not in MPRIF	312,938		312,938
6. Total	$ 5,179,204	$ 1,292,893	$ 3,886,311
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			$ 3,886,311
2. Current Assets (Table 1; Line E4)			4,707,255
3. UAAL (B1 - B2)			$ (820,944)
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2032			$ 11,309,392
2. Supplemental Contribution Rate (B3/C1)			-7.26%

Public Employees Police and Fire Fund

Changes in Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

Year Ending June 30, 2002

A. UAAL AT BEGINNING OF YEAR	$	(797,774)
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
1. Normal Cost and Expenses	$	107,593
2. Contributions		(124,465)
3. Interest on A, B1, and B2		(68,528)
4. Total (B1+B2+B3)	$	(85,400)
C. EXPECTED UAAL AT END OF YEAR (A+B4)	$	(883,174)
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
1. Salary Increases	$	(64,490)
2. Investment Return		130,589
3. MPRIF Mortality		(39,182)
4. Mortality of Other Benefit Recipients		(3,234)
5. Other Items		20,098
6. Total	$	43,781
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	$	(839,393)
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		18,449
H. UAAL AT END OF YEAR (E+F+G)	$	(820,944)

Public Employees Police and Fire Fund

Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2002

	Percent of Payroll		Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 353			
1. Employee Contributions	6.20%	$	33,558
2. Employer Contributions	9.30%		50,336
3. Total	15.50%	$	83,894
B. REQUIRED CONTRIBUTIONS - CHAPTER 356			
1. Normal Cost			
a. Retirement Benefits	15.87%	$	85,911
b. Disability Benefits	2.03%		11,001
c. Survivors	0.80%		4,356
d. Deferred Retirement Benefits	1.47%		7,933
e. Refunds Due to Death or Withdrawal	0.05%		273
f. Total	20.22%	$	109,474
2. Supplemental Contribution Amortization by July 1, 2032 of UAAL	(7.26%)		(39,295)
3. Allowance for Expenses	0.12%		650
4. Total	13.08%	$	70,829
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	2.42%		13,065

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: $ 541,250

Public Employees Police and Fire 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 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 five years. Female - 1983 Group Annuity Mortality Table for females setback five years. **Post-Retirement**: Male - 1983 Group Annuity Mortality Table for males Female - 1983 Group Annuity Mortality Table for females **Post-Disability**: Male - 1965 RRB rates Female - 1965 RRB rates
Retirement Age:	Rates as shown in table.
Separation:	Graded rates based on plan experience through June 30, 1992. Rates are shown in rate table.
Disability:	Rates as shown in rate table.
Allowance for Combined Service Annuity:	Last year no assumption was made. For the current year, 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.
Expenses:	Prior year expenses expressed as percentage of prior year payroll.
Return of Contributions:	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.

Family Composition:	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.
Social Security:	N/A
Special Consideration:	Married Members assumed to elect subsidized joint and survivor form of annuity as follows: 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
Actuarial Cost Method:	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.
Asset Valuation Method:	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.
Payment on the Unfunded Actuarial Accrued Liability:	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.

Public Employees Police and Fire Fund

Summary of Actuarial Assumptions and Methods

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

	Pre-Retirement Death		Withdrawal		Disability		Retirement		Salary Increases
Age	Male	Female	Male	Female	Male	Female	Male	Female	
20	3	1	859	859	11	11	0	0	11.50%
21	3	1	750	750	11	11	0	0	11.50
22	3	2	660	660	12	12	0	0	11.00
23	4	2	583	583	12	12	0	0	10.50
24	4	2	519	519	13	13	0	0	10.00
25	4	2	463	463	13	13	0	0	9.50
26	4	2	416	416	14	14	0	0	9.20
27	4	2	374	374	14	14	0	0	8.90
28	4	2	339	339	14	14	0	0	8.60
29	4	2	307	307	15	15	0	0	8.30
30	5	3	280	280	16	16	0	0	8.00
31	5	3	256	256	16	16	0	0	7.80
32	5	3	234	234	17	17	0	0	7.60
33	5	3	215	215	17	17	0	0	7.40
34	6	3	198	198	18	18	0	0	7.20
35	6	3	183	183	19	19	0	0	7.00
36	6	4	169	169	20	20	0	0	6.80
37	7	4	157	157	22	22	0	0	6.60
38	7	4	146	146	23	23	0	0	6.40
39	8	4	135	135	24	24	0	0	6.20
40	9	5	126	126	26	26	0	0	6.00
41	9	5	118	118	28	28	0	0	5.90
42	10	5	110	110	29	29	0	0	5.80
43	10	6	103	103	31	31	0	0	5.70
44	11	6	97	97	34	34	0	0	5.60
45	12	7	91	91	36	36	0	0	5.50
46	14	7	86	86	41	41	0	0	5.45
47	15	8	81	81	46	46	0	0	5.40
48	17	8	69	69	52	52	0	0	5.35
49	19	9	59	59	60	60	0	0	5.30

Public Employees Police and Fire Fund

Summary of Actuarial Assumptions and Methods

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

	Pre-Retirement Death		Withdrawal		Disability		Retirement		Salary Increases
Age	Male	Female	Male	Female	Male	Female	Male	Female	
50	22	10	50	50	69	69	500	500	5.25%
51	25	11	39	39	80	80	500	500	5.25
52	28	12	29	29	91	91	500	500	5.25
53	31	14	22	22	104	104	500	500	5.25
54	35	15	15	15	119	119	500	500	5.25
55	39	16	11	11	135	135	3,000	3,000	5.25
56	43	18	7	7	152	152	1,000	1,000	5.25
57	48	19	5	5	171	171	1,000	1,000	5.25
58	52	21	3	3	192	192	1,000	1,000	5.25
59	57	23	1	1	215	215	1,000	1,000	5.25
60	61	25	0	0	0	0	2,000	2,000	5.25
61	66	28	0	0	0	0	2,000	2,000	5.25
62	71	31	0	0	0	0	5,000	5,000	5.25
63	77	34	0	0	0	0	5,000	5,000	5.25
64	84	38	0	0	0	0	5,000	5,000	5.25
65	92	42	0	0	0	0	5,000	5,000	5.25
66	101	47	0	0	0	0	5,000	5,000	5.25
67	111	52	0	0	0	0	5,000	5,000	5.25
68	124	58	0	0	0	0	5,000	5,000	5.25
69	134	64	0	0	0	0	5,000	5,000	5.25
70	156	71	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:

Eligibility:	Age 50 and three years of Allowable Service.
Amount:	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.
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.
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 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.

***Retirement Benefits*:**

Eligibility:	Age 55
Amount:	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.
Benefit Increases:	Same as for retirement.

DEATH

***Surviving Spouse Benefit*:**

Eligibility:	Active or Disabled Member with surviving spouse, married for at least one year unless death in the line of duty.
Amount:	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. 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 Dependent Child Benefit*:**

Eligibility:	Active or Disabled Member with dependent child.
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 salary. Benefits paid until child marries, dies, or attains age 18 (age 23 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: 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.

***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, 2002

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%

[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, 2002

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% (3),(5)	522,153	33,801	32,042	90,664	282.95%
2003	12.52% (3),(5),(6)					

(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%.

LOCAL GOVERNMENT CORRECTIONAL SERVICE RETIREMENT FUND

ACTUARIAL VALUATION REPORT

July 1, 2002

MILLIMAN USA

A MILLIMAN GLOBAL FIRM

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November 26, 2002

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, 2002.

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

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

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Local Government Correctional Service Retirement Fund

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Local Government Correctional Service Retirement Fund

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(Continued)

Local Government Correctional Service Retirement Fund

Report Highlights

(dollars in thousands)

	July 1, 2001 Valuation		July 1, 2002 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		14.21%		14.09%
3. Sufficiency (Deficiency)		0.37%		0.49%
B. FUNDING RATIOS				
1. Accrued Benefit Funding Ratio				
a. Current Assets (Table 1)	$	25,014	$	40,105
b. Current Benefit Obligations (Table 8)		24,496		39,690
c. Funding Ratio		102.11%		101.05%
2. Accrued Liability Funding Ratio				
a. Current Assets (Table 1)	$	25,014	$	40,105
b. Actuarial Accrued Liability (Table 9)		25,453		42,144
c. Funding Ratio		98.28%		95.16%
3. Projected Benefit Funding Ratio (Table 8)				
a. Current and Expected Future Assets	$	147,071	$	169,606
b. Current and Expected Future Benefit Obligations		141,538		161,210
c. Funding Ratio		103.91%		105.21%
C. PLAN PARTICIPANTS				
1. Active Members				
a. Number (Table 3)		3,238		3,270
b. Projected Annual Earnings	$	100,460	$	106,400
c. Average Annual Earnings (Projected $)	$	31,025	$	32,538
d. Average Age		37.7		37.9
e. Average Service		1.6		2.2
2. Others				
a. Service Retirements (Table 4)		20		35
c. Survivors (Table 5)		0		2
b. Disability Retirements (Table 6)		17		26
d. Deferred Retirements (Table 7)		97		282
e. Terminated Other Non-Vested (Table 7)		267		488
f. Total		401		833

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 101.05%. The corresponding ratio for the prior year was 102.11%.
- 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 2002 the ratio is 95.16%, which is a decrease from the 2001 value of 98.28%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 105.21% 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 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 G.1 to G.4. Actuarial Value of Assets is determined as:

Market Value of Assets at June 30, 2002, *less*

80% 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*

60% 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*

40% 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); *less*

10% of the Unrecognized Asset Return at July 1, 1999 (the difference between Market Value of Assets on June 30, 1999 and the Actuarial Value of Assets used 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 two 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 14.09%.

Changes in Actuarial Assumptions and Methods

This report reflects the new assumptions which became effective July 1, 2002. These revised assumptions were developed from the recently completed experience study and have been approved by the Commission. Effective with this July 1, 2002 valuation, the following assumptions have been changed:

Assumption	Prior	Revised
Combined Service Annuity Load Factor	None.	0% load on liabilities for active Members and 30% load on liabilities for former Members.

All other 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.

It should be noted that a scheduled increase in the contribution rates for Members and the Employer was repealed this year.

Local Government Correctional Service Retirement Fund

Statement of Plan Net Assets

(dollars in thousands)

July 1, 2002

	Market Value		Cost Value	
A. ASSETS IN TRUST				
1. Cash, Equivalents, Short-Term Securities	$	5,441	$	5,441
2. Fixed Income		7,021		7,119
3. Equity		20,810		24,368
4. Real Estate		1,027		1,105
5. Equity in MPRIF		475		475
6. Invested Securities Lending Collateral		1,649		1,649
7. Other		0		0
Subtotal		36,423		40,157
B. ASSETS RECEIVABLE	$	422	$	422
C. LIABILITIES				
1. Invested Securities Lending Collateral	$	(1,649)	$	(1,649)
2. Other	$	(285)	$	(285)
Subtotal	$	(1,934)	$	(1,934)
D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS				
1. MPRIF Reserves	$	475	$	475
2. Member Reserves		14,733		14,733
3. Other Non-MPRIF Reserves		19,703		23,437
4. Total Assets Available for Benefits	$	34,911	$	38,645

E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS

1. Market Value of Assets Available for Benefits (D4)		$	34,911
2. Unrecognized Asset Returns (UAR)			
a. June 30, 2002	(4,776)		
b. June 30, 2001	(2,139)		
c. June 30, 2000	(225)		
d. June 30, 1999	0		
3. UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) +.1 * 2(d)			(5,194)
4. Actuarial Value of Assets (E1 - E3)		$	40,105

Local Government Correctional Service Retirement Fund

Statement of Change In Plan Net Assets

(dollars in thousands)

Year Ending June 30, 2002

	Non-MPRIF Assets		MPRIF Reserve		Market Value	
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	$	23,041	$	127	$	23,168
B. ADDITIONS						
1. Member Contributions	$	5,882		0	$	5,882
2. Employer Contributions		8,830		0		8,830
3. Contributions From Other Sources		0		0		0
4. MPRIF Income		0		15		15
5. Net Investment Income						
a. Interest and Dividends		1,174		0		1,174
b. Net Appreciation/(Depreciation)		(3,384)		0		(3,384)
c. Investment Expenses		(38)		0		(38)
d. Net Subtotal		(2,248)		0		(2,248)
6. Other		12		0		12
7. Total Additions	$	12,476	$	15	$	12,491
C. OPERATING EXPENSES						
1. Service Retirements	$	0	$	32	$	32
2. Disability Benefits		306		0		306
3. Survivor Benefits		0		0		0
4. Refunds		272		0		272
5. Administrative Expenses		137		0		137
6. Other		1		0		1
7. Total Disbursements	$	716	$	32	$	748
D. OTHER CHANGES IN RESERVES						
1. Annuities Awarded		(310)		310		0
2. Mortality Gain (Loss)		(55)		55		0
3. Total Other Changes		(365)		365		0
E. ASSETS AVAILABLE AT END OF PERIOD	$	34,436	$	475	$	34,911

F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN

1. Average Balance		
(a) Non-MPRIF Assets Available at Beginning of Period		23,041
(b) Assets Available at End of Period*		34,491
(c) Average Balance {[F1.a + F1.b - B5.d - B6] / 2}		29,884
2. Expected Return: .085 * F1.c		2,540
3. Actual Return		(2,236)
4. Current Year UAR: F.3 - F.2	$	(4,776)

* Before adjustment for MPRIF mortality gain (loss)

Local Government Correctional Service Retirement Fund

Active Members as of June 30, 2002

	Years of Service								
Age	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25	128	105	0	0	0	0	0	0	233
25-29	181	427	0	0	0	0	0	0	608
30-34	121	466	0	0	0	0	0	0	587
35-39	71	418	0	0	0	0	0	0	489
40-44	48	380	0	0	0	0	0	0	428
45-49	50	371	0	0	0	0	0	0	421
50-54	20	268	0	0	0	0	0	0	288
55-59	12	137	0	0	0	0	0	0	149
60-64	2	53	0	0	0	0	0	0	55
65+	2	10	0	0	0	0	0	0	12
ALL	635	2,635	0	0	0	0	0	0	3,270

Average Annual Earnings

	Years of Service								
Age	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25	13,898	24,292	0	0	0	0	0	0	18,582
25-29	13,969	29,049	0	0	0	0	0	0	24,560
30-34	14,299	32,622	0	0	0	0	0	0	28,845
35-39	16,412	35,880	0	0	0	0	0	0	33,053
40-44	17,015	36,760	0	0	0	0	0	0	34,546
45-49	15,222	37,130	0	0	0	0	0	0	34,528
50-54	14,296	41,237	0	0	0	0	0	0	39,366
55-59	7,861	38,970	0	0	0	0	0	0	36,465
60-64	13,335	38,906	0	0	0	0	0	0	37,976
65+	5,480	25,175	0	0	0	0	0	0	21,893
ALL	14,486	34,764	0	0	0	0	0	0	30,826

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	9,199	91,603	0	0	0	0	0	0	100,801

Local Government Correctional Service Retirement Fund

Service Retirements as of June 30, 2002

Age	Years Retired ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	6	1	0	0	0	0	0	7
60-64	6	12	0	0	0	0	0	18
65-69	2	6	0	0	0	0	0	8
70-74	0	2	0	0	0	0	0	2
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	14	21	0	0	0	0	0	35

Average Annual Benefit

Age	Years Retired ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	2,114	303	0	0	0	0	0	1,855
60-64	1,758	853	0	0	0	0	0	1,155
65-69	1,918	437	0	0	0	0	0	807
70-74	0	905	0	0	0	0	0	905
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	1,933	713	0	0	0	0	0	1,201

Total Annual Benefit (in Dollars) by Years Retired

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	27,062	14,973	0	0	0	0	0	42,035

Local Government Correctional Service Retirement Fund

Survivors as of June 30, 2002

Age	Years Since Death <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	1	0	0	0	0	0	0	1
50-54	1	0	0	0	0	0	0	1
55-59	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0
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	2	0	0	0	0	0	0	2

Average Annual Benefit

Age	Years Since Death <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	805	0	0	0	0	0	0	805
50-54	2,795	0	0	0	0	0	0	2,795
55-59	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0
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	1,800	0	0	0	0	0	0	1,800

Total Annual Benefit (in Dollars) by Years Since Death

Age	<1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	3,600	0	0	0	0	0	0	3,600

Local Government Correctional Service Retirement Fund

Disability Retirements as of June 30, 2002

Age	Years Disabled ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	2	5	0	0	0	0	0	7
50-54	0	4	0	0	0	0	0	4
55-59	3	5	0	0	0	0	0	8
60-64	1	4	0	0	0	0	0	5
65-69	0	2	0	0	0	0	0	2
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	6	20	0	0	0	0	0	26

Average Annual Benefit

Age	Years Disabled ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	20,496	14,106	0	0	0	0	0	15,932
50-54	0	17,634	0	0	0	0	0	17,634
55-59	15,211	9,180	0	0	0	0	0	11,442
60-64	15,511	7,911	0	0	0	0	0	9,431
65-69	0	5,401	0	0	0	0	0	5,401
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	17,023	11,471	0	0	0	0	0	12,752

Total Annual Benefit (in Dollars) by Years Disabled

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
All	102,138	229,420	0	0	0	0	0	331,552

Local Government Correctional Service Retirement Fund
Reconciliation of Members

	Actives	Terminated: Deferred Retirement	Terminated: Other Non-Vested
A. ON JUNE 30, 2001	3,238	97	267
B. ADDITIONS	573	178	305
C. DELETIONS			
1. Service Retirement	(12)	(2)	0
2. Disability	(13)	(12)	(1)
3. Death	(6)	0	0
4. Terminated - Deferred	(174)	0	0
5. Terminated - Refund	(87)	(1)	(31)
6. Terminated - Other Non-Vested	(252)	0	0
7. Returned as active	0	(4)	(3)
8. Transferred to Other Fund	0	0	0
D. DATA ADJUSTMENTS	3	26	(49)
1. Vested	1,827		
2. Non-Vested	1,443		
E. TOTAL ON JUNE 30, 2002	3,270	282	488

	Recipients: Retirement Annuitants	Recipients: Disabled	Recipients: Survivors
A. ON JUNE 30, 2001	20	17	0
B. ADDITIONS	15	10	2
C. DELETIONS			
1. Service Retirement	0	0	0
2. Death	0	0	0
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	0	(1)	0
E. TOTAL ON JUNE 30, 2002	35	26	2

Local Government Correctional Service Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

July 1, 2002

		Non-Vested	Vested	Total
A.	CURRENT ASSETS (Table 1; Line E4)			$ 40,105
B.	EXPECTED FUTURE ASSETS			
	1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			$ 10,435
	2. Present Value of Future Normal Costs			119,066
	3. Total Expected Future Assets			129,501
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$ 169,606
D.	CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
	1. Benefit Recipients			
	a. Retirement Annuities		$ 441	$ 441
	b. Disability Benefits		4,131	4,131
	c. Surviving Spouse and Child Benefits		33	33
	2. Deferred Retirements with Future Augmentation		1,617	1,617
	3. Former Members Without Vested Rights		512	512
	4. Active Members			
	a. Retirement Annuities	$ 3,884	14,974	18,858
	b. Disability Benefits	5,617	0	5,617
	c. Surviving Spouse and Child Benefits	877	0	877
	d. Deferred Retirements	1,761	4,066	5,827
	e. Refund Liability Due to Death or Withdrawal	0	1,777	1,777
	5. Total Current Benefit Obligations	$ 12,139	$ 27,551	$ 39,690
E.	EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 121,520
F.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 161,210
G.	CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)			$ (415)
H.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)			$ (8,396)

Local Government Correctional Service Retirement Fund

Determination of Unfunded Actuarial Accrued Liability (UAAL) and Supplemental Contribution Rate

(dollars in thousands)

July 1, 2002

	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	$ 106,329	$ 78,746	$ 27,583
b. Disability Benefits	18,692	15,803	2,889
c. Survivor's Benefits	4,362	3,384	978
d. Deferred Retirements	21,010	16,664	4,346
e. Refunds Due to Death or Withdrawal	4,083	4,469	(386)
f. Total	$ 154,476	$ 119,066	$ 35,410
2. Deferred Retirements With Future Augmentation	$ 1,617		$ 1,617
3. Former Members Without Vested Rights	512		512
4. Annuitants in MPRIF	475		475
5. Recipients Not in MPRIF	4,130		4,130
6. Total	$ 161,210	$ 119,066	$ 42,144
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			$ 42,144
2. Current Assets (Table 1; Line E4)			40,105
3. UAAL (B1 - B2)			$ 2,039
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2023			$ 1,710,614
2. Supplemental Contribution Rate (B3/C1)			0.12%

Local Government Correctional Service Retirement Fund

Changes in Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

Year Ending June 30, 2002

A. UAAL AT BEGINNING OF YEAR	$	439
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
1. Normal Cost and Expenses	$	14,254
2. Contributions		(14,712)
3. Interest on A, B1, and B2		18
4. Total (B1+B2+B3)	$	(440)
C. EXPECTED UAAL AT END OF YEAR (A+B4)	$	(1)
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
1. Salary Increases	$	376
2. Investment Return		1,585
3. MPRIF Mortality		55
4. Mortality of Other Benefit Recipients		87
5. Other Items		(554)
6. Total	$	1,549
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	$	1,548
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		491
H. UAAL AT END OF YEAR (E+F+G)	$	2,039

Local Government Correctional Service Retirement Fund

Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2002

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 353 E		
1. Employee Contributions	5.83%	$ 6,203
2. Employer Contributions	8.75%	9,310
3. Total	14.58%	$ 15,513
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	9.23%	$ 9,821
b. Disability Benefits	1.93%	2,055
c. Survivors	0.36%	382
d. Deferred Retirement Benefits	1.79%	1,908
e. Refunds Due to Death or Withdrawal	0.52%	551
f. Total	13.83%	$ 14,717
2. Supplemental Contribution Amortization by July 1, 2023 of UAAL	0.12%	128
3. Allowance for Expenses	0.14%	149
4. Total	14.09%	$ 14,994
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	0.49%	519

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: $ 106,400

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

Separation:	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.
Disability:	Rates as shown in rate table.
Allowance for Combined Service Annuity:	Last year no assumption was made. For the current year, 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:
Administrative and Investment Expenses:	Prior year administration expenses expressed as percentage of prior year payroll.
Return of Contributions:	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.
Family Composition:	85% of Members are assumed to be married. Female is three years younger than male.
Social Security:	Based on the present law and 6.0% retroactive salary scale. Only earnings history while in state service is used. Future Social Security benefits replace the same proportion of salary as at present.
Special Consideration:	Married Members assumed to elect subsidized joint and survivor form of annuity as follows: 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
Actuarial Cost Method:	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.

Asset Valuation Method:	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.
Payment on the Unfunded Actuarial Accrued Liability:	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.

Local Government Correctional Service Retirement Fund

Summary of Actuarial Assumptions and Methods

Separation Expressed as Number of Occurrences Per 10,000:

	Death		Withdrawal		Disability		Retirement		Salary
Age	Male	Female	Male	Female	Male	Female	Male	Female	Increases
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

Local Government Correctional Service Retirement Fund

Summary of Actuarial Assumptions and Methods

Separation Expressed as Number of Occurrences Per 10,000:

	Death		Withdrawal		Disability		Retirement		Salary
Age	Male	Female	Male	Female	Male	Female	Male	Female	Increases
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

Effective Date:	July 1, 1999
Eligibility:	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.
Contributions:	
Member:	5.83% of salary.
Employer:	8.75% of salary.
Allowable Service:	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.
Salary:	Includes wages, allowances and fees. Excludes lump-sum payments at separation and reduced salary while receiving Worker's 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: 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.
- Level Social Security option to age 62.

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.

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.

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:

Eligibility:	Termination of local government service.
Amount:	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:

Eligibility:	Three years of Allowable Service.
Amount:	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, 2002

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%

Local Government Correctional Service Retirement Fund

Schedule of Employer Contributions

(dollars in thousands)

July 1, 2002

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]					

[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%.