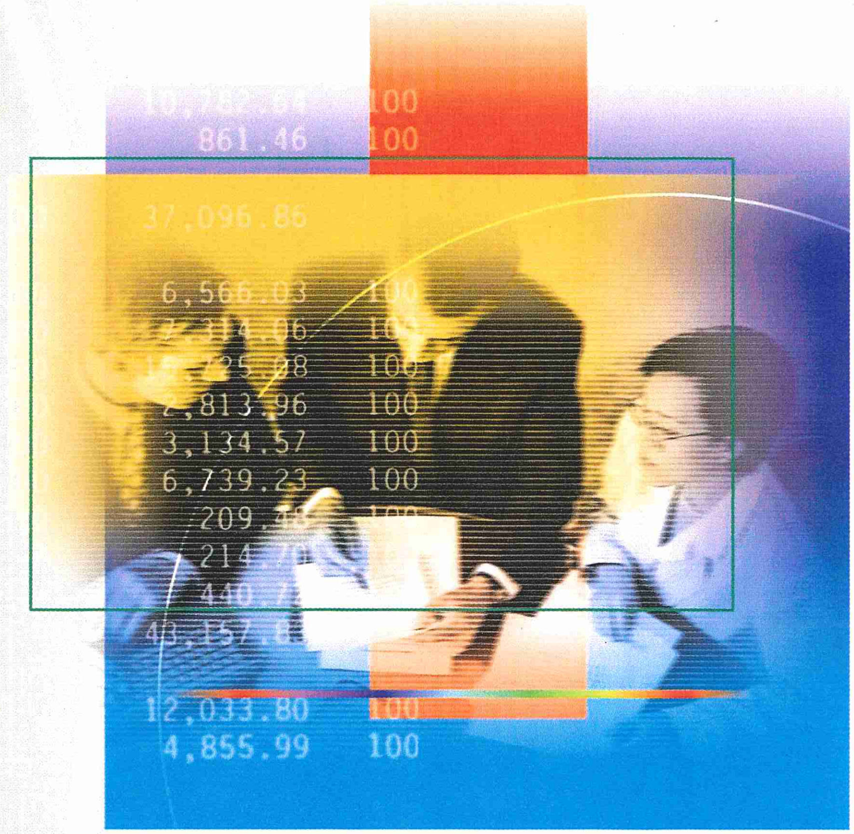
Annual Valuation Report

for

MSRS

Minnesota State Retirement System



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Consultants and Actuaries

July 1, 2002

State Employees Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 2002

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Milliman USA

Consultants and Actuaries

15800 Bluemound Road, Suite 400
Brookfield, WI 53005-6069
Tel +1 262 784.2250
Fax +1 262 784.7287
www.milliman.com

November 21, 2002

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

RE: State 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 Minnesota State Retirement System.

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

State Employees Retirement Fund

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State Employees Retirement Fund

Report Highlights

(dollars in thousands)

	07/01/01 Valuation	07/01/02 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 352 % of Payroll	8.00%	8.00%
2. Required Contributions - Chapter 356 % of Payroll	6.79%	8.34%
3. Sufficiency (Deficiency)	1.21%	(0.34%)
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$ 7,366,673	$ 7,673,028
b. Current Benefit Obligations (Table 8)	$ 6,116,079	$ 6,880,192
c. Funding Ratio	120.45%	111.52%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$ 7,366,673	$ 7,673,028
b. Actuarial Accrued Liability (Table 9)	$ 6,573,193	$ 7,340,397
c. Funding Ratio	112.07%	104.53%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$ 8,615,702	$ 8,802,995
b. Current and Expected Future Benefit Obligations	$ 8,173,098	$ 8,932,715
c. Funding Ratio	105.42%	98.55%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	49,229	49,099
b. Projected Annual Earnings	$ 1,967,814	$ 2,040,390
c. Average Annual Earnings (Projected $)	$ 39,973	$ 41,557
d. Average Age	44.4	44.8
e. Average Service	11.5	11.8
2. Others		
a. Service Retirements (Table 4)	16,766	17,279
c. Survivors (Table 5)	2,085	2,308
b. Disability Retirements (Table 6)	1,127	1,218
d. Deferred Retirements (Table 7)	11,452	11,939
e. Terminated Other Non-Vested (Table 7)	8,111	8,224
f. Total	39,541	40,968

State 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 111.52%. The corresponding ratio for the prior year was 120.45%.
- 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 104.53%, which is a decrease from the 2001 value of 112.07%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 98.55% shows that the current statutory contributions are inadequate.

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:

- 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 deficiency since the Statutory Contribution Rate is 8.00% compared to the Required Contribution Rate of 8.34%.

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 6.75% at age 20 down to 5.25% at age 70
Male Post-Retirement Mortality	1983 GAM (Male - 1)	1983 GAM (Male - 2)
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. Revised rates are higher than prior rates.
Separation Decrement	Select and ultimate rates based on gender.	Select and ultimate rates based on gender rates are generally higher than prior rates.
Disability Decrement	Age-related and gender-related rates.	Age-related and gender-related rates. Revised rates are modestly higher than prior rates.
Form of Annuity Selected - Male	25% elect 50% J&S option 45% elect 100% J&S option	20% elect 50% J&S option 50% elect 100% J&S option
Form of Annuity Selected - Female	10% elect 50% J&S option 10% elect 100% J&S option	10% elect 50% J&S option 15% elect 100% J&S option
Combined Service Annuity Load Factor	1.0% load on liabilities for active and deferred vested participants.	1.2% load on liabilities for active Members and 40% load on liabilities for former Members.

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

Changes in Plan Provisions

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

State 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	$ 36,679	$ 36,679
2. Fixed Income	913,085	933,874
3. Equity	2,717,880	3,245,065
4. Real Estate	133,546	125,152
5. Equity in MPRIF	3,015,552	3,015,552
6. Other	6,199	6,199
Subtotal	$ 6,822,941	$ 7,362,521
B. ASSETS RECEIVABLE	6,584	6,584
C. LIABILITIES	$ (59,583)	$ (59,583)
D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
1. MPRIF Reserves	3,015,552	3,015,552
2. Member Reserves	807,966	807,966
3. Other Non-MPRIF Reserves	2,946,424	3,486,004
4. Total Assets Available for Benefits	$ 6,769,942	$ 7,309,522

E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Market Value of Assets Available for Benefits (D4)		$ 6,769,942
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2002	(685,390)	
b. June 30, 2001	(721,038)	
c. June 30, 2000	87,707	
d. June 30, 1999	427,661	
3. UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) +.1 * 2(d)		(903,086)
4. Actuarial Value of Assets (E1-E3) (Same as "Current Assets")		$ 7,673,028

State 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	$ 4,198,813	$ 2,771,952	$ 6,970,765
B. ADDITIONS			
1. Member Contributions	$ 79,487	0	$ 79,487
2. Employer Contributions	76,614	0	76,614
3. Contributions From Other Sources	0	0	0
4. MPRIF Income	0	285,707	285,707
5. Net Investment Income			
a. Interest and Dividends	(5,456)	0	(5,456)
b. Net Appreciation/(Depreciation)	(326,603)	0	(326,603)
c. Investment Expenses	(5,678)	0	(5,678)
d. Net Subtotal	(337,737)	0	(337,737)
6. Other	6,614	0	6,614
7. Total Additions	$ (175,022)	$ 285,707	$ 110,685
C. OPERATING EXPENSES			
1. Service Retirements	$ 528	$ 296,159	$ 296,687
2. Disability Benefits	0	0	0
3. Survivor Benefits	0	0	0
4. Refunds	8,068	0	8,068
5. Administrative Expenses	3,942	0	3,942
6. Other	2,811	0	2,811
7. Total Disbursements	$ 15,349	$ 296,159	$ 311,508
D. OTHER CHANGES IN RESERVES			
1. Annuities Awarded	(202,676)	202,676	0
2. Mortality Gain (Loss)	(20,843)	20,843	0
3. Change in MPRIF Assumptions	(30,533)	30,533	0
4. Total Other Changes	(254,052)	254,052	0
E. ASSETS AVAILABLE AT END OF PERIOD	$ 3,754,390	$ 3,015,552	$ 6,769,942

F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN	
1. Average Balance	
(a) Non-MPRIF Assets Available at Beginning of Period	4,198,813
(b) Non-MPRIF Assets Available at End of Period*	3,805,766
(c) Average Balance {[F1.a+F21.b-B5.d-B6]/2}	4,167,851
2. Expected Return: .085*F1.c	354,267
3. Actual Return	(331,123)
4. Current Year UAR: F3-F2	$ (685,390)

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

State 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	993	810	4	0	0	0	0	0	1,807
25-29	972	2,212	237	1	0	0	0	0	3,422
30-34	684	2,158	1,029	209	16	0	0	0	4,096
35-39	599	1,832	1,217	1,040	453	39	0	0	5,180
40-44	551	1,879	1,283	1,459	1,319	859	47	0	7,397
45-49	555	1,675	1,180	1,493	1,409	1,550	956	56	8,874
50-54	397	1,346	1,027	1,304	1,177	1,408	1,589	816	9,064
55-59	237	753	568	793	732	829	871	1,166	5,949
60-64	115	295	307	371	355	361	320	487	2,611
65+	84	109	93	117	84	71	64	77	699
ALL	5,187	13,069	6,945	6,787	5,545	5,117	3,847	2,602	49,099

Average Annual Earnings

Age	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	All
	Years of Service								
<25	15,516	24,991	29,973	0	0	0	0	0	19,795
25-29	21,407	29,934	34,170	35,066	0	0	0	0	27,807
30-34	22,278	32,589	37,937	39,858	30,401	0	0	0	32,573
35-39	22,802	34,151	39,610	42,458	41,665	37,523	0	0	36,472
40-44	22,487	35,130	40,350	44,072	45,189	41,422	41,657	0	39,423
45-49	22,263	34,669	41,008	44,647	45,265	45,942	44,499	42,961	41,178
50-54	22,305	35,432	40,739	45,072	45,093	47,585	50,099	48,033	43,693
55-59	21,887	33,675	41,619	44,505	43,972	46,818	51,505	52,838	44,872
60-64	18,438	32,283	40,657	42,139	43,487	43,380	46,714	53,322	42,809
65+	13,210	20,834	32,750	44,976	40,681	40,898	44,442	48,961	35,227
ALL	20,654	32,770	39,831	43,973	44,520	45,462	48,547	51,094	38,894

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	107	428	276	298	246	232	186	132	1,909

TABLE 4

State 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	15	9	0	0	0	0	0	24
55-59	339	623	22	1	0	0	0	985
60-64	451	1,439	668	6	0	0	0	2,564
65-69	217	1,436	1,442	510	1	0	0	3,606
70-74	20	261	1,583	1,194	278	0	0	3,336
75-79	10	55	350	1,462	989	29	0	2,895
80-84	2	14	59	218	1,164	554	6	2,017
85+	0	4	7	13	175	865	788	1,852
ALL	1,054	3,841	4,131	3,404	2,607	1,448	794	17,279

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	12,826	7,838	0	0	0	0	0	10,956
55-59	11,978	12,005	14,153	12,644	0	0	0	12,044
60-64	13,952	14,546	13,208	14,219	0	0	0	14,092
65-69	12,393	13,438	15,007	19,174	13,664	0	0	14,814
70-74	10,372	11,068	14,621	17,823	22,740	0	0	16,140
75-79	9,042	9,964	16,450	14,754	18,897	14,255	0	16,259
80-84	3,411	6,049	13,825	14,775	14,267	17,122	10,278	15,014
85+	0	9,627	16,605	12,980	11,794	13,247	11,366	12,312
ALL	12,846	13,366	14,672	16,486	16,761	14,750	11,358	14,797

	Total Annual Benefit (in thousands) by Years Retired							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	13,539	51,338	60,610	56,118	43,695	21,358	9,018	255,677

State 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	24	53	47	7	2	0	0	133
50-54	25	33	30	2	2	0	1	93
55-59	29	53	44	15	6	1	0	148
60-64	18	73	82	26	6	0	2	207
65-69	18	95	84	46	16	2	0	261
70-74	37	99	106	83	29	11	2	367
75-79	37	110	118	77	48	35	9	434
80-84	24	93	105	72	24	51	18	387
85+	10	37	65	57	7	26	76	278
ALL	222	646	681	385	140	126	108	2,308

Average Annual Benefit

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
	Years Since Death							
<50	7,447	7,553	5,988	9,831	6,642	0	0	7,087
50-54	10,378	9,068	9,673	1,823	5,665	0	892	9,298
55-59	11,483	11,730	11,532	8,649	10,069	6,770	0	11,210
60-64	10,698	12,449	11,767	13,815	13,015	0	13,045	12,220
65-69	9,596	15,296	14,042	13,323	10,311	10,651	0	13,810
70-74	16,108	16,326	15,130	15,341	10,185	10,991	7,166	15,041
75-79	11,891	17,730	16,147	13,461	15,005	14,973	8,121	15,321
80-84	11,561	13,683	14,366	13,913	15,971	12,660	10,039	13,617
85+	13,503	13,439	11,079	10,919	12,311	13,542	10,759	11,621
ALL	11,644	13,962	13,159	13,268	12,951	13,260	10,304	13,115

Total Annual Benefit (in thousands) by Years Since Death

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	2,584	9,019	8,961	5,108	1,813	1,670	1,112	30,269

TABLE 6

State 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	26	72	51	15	1	0	0	165
50-54	42	83	44	13	1	0	0	183
55-59	49	71	45	28	4	3	0	200
60-64	27	90	81	24	7	1	2	232
65-69	1	33	74	41	6	4	1	160
70-74	0	0	24	48	18	7	1	98
75-79	0	0	0	19	23	22	16	80
80-84	0	0	0	0	5	44	13	62
85+	0	0	0	0	0	9	29	38
ALL	145	349	319	188	65	90	62	1,218

Average Annual Benefit

Age	Years Disabled ≤1	1-4	5-9	10-14	15-19	20-24	25+	All
<50	8,909	6,972	8,748	5,438	5,594	0	0	7,678
50-54	9,097	11,565	10,629	11,700	3,447	0	0	10,739
55-59	11,659	10,450	12,650	10,852	8,167	11,100	0	11,262
60-64	11,104	11,777	12,977	11,899	9,889	10,123	7,058	12,026
65-69	1,519	11,244	12,444	13,668	6,751	7,099	4,073	12,042
70-74	0	0	10,312	10,371	10,561	14,409	5,297	10,628
75-79	0	0	0	9,393	9,174	12,996	8,575	10,157
80-84	0	0	0	0	10,290	11,061	7,940	10,344
85+	0	0	0	0	0	6,540	9,704	8,955
ALL	10,251	10,415	11,607	10,956	9,292	11,157	8,796	10,704

Total Annual Benefit (in thousands) by Years Disabled

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	1,486	3,634	3,702	2,059	603	1,004	545	13,037

State Employees Retirement Fund

Reconciliation of Members

	Actives	Terminated: Deferred Retirement	Terminated: Other Non-Vested
A. ON JUNE 30, 2001	49,229	11,452	8,111
B. ADDITIONS	4,642	1,164	1,976
C. DELETIONS			
1. Service Retirement	(733)	(286)	(6)
2. Disability	(104)	(42)	0
3. Death	(88)	(12)	(5)
4. Terminated - Deferred	(1,047)	0	(5)
5. Terminated - Refund	(1,414)	(128)	(430)
6. Terminated - Other Non-Vested	(1,770)	0	0
7. Returned as active	339	(171)	(168)
8. Transferred to Other Fund	(7)	0	(1,202)
D. DATA ADJUSTMENTS	52	(38)	(47)
1. Vested	36,320		
2. Non-Vested	12,779		
E. TOTAL ON JUNE 30, 2002	49,099	11,939	8,224

	Recipients: Retirement Annuitants	Recipients: Disabled	Recipients: Survivors
A. ON JUNE 30, 2001	16,766	1,127	2,085
B. ADDITIONS	1,093	161	250
C. DELETIONS			
1. Service Retirement	1	(1)	0
2. Death	(676)	(132)	(101)
3. Annuity Expired	0	(1)	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	95	64	74
E. TOTAL ON JUNE 30, 2002	17,279	1,218	2,308

State Employees Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

July 1, 2002

		Non-Vested	Vested	Total
A.	CURRENT ASSETS (Table 1, Line E4)			$ 7,673,028
B.	EXPECTED FUTURE ASSETS			
	1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			(462,351)
	2. Present Value of Future Normal Costs			1,592,318
	3. Total Expected Future Assets			$ 1,129,967
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$ 8,802,995
D.	CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
	1. Benefit Recipients			
	a. Retirement Annuities		$ 2,592,304	$ 2,592,304
	b. Disability Benefits		140,318	140,318
	c. Surviving Spouse and Child Benefits		282,946	282,946
	2. Deferred Retirements with Future Augmentation		683,381	683,381
	3. Former Members Without Vested Rights		11,173	11,173
	4. Active Members			
	a. Retirement Annuities	$ 25,489	2,667,514	2,693,003
	b. Disability Benefits	121,262	0	121,262
	c. Surviving Spouse and Child Benefits	67,304	0	67,304
	d. Deferred Retirements	7,567	263,237	270,804
	e. Refund Liability Due to Death or Withdrawal	0	17,697	17,697
	5. Total Current Benefit Obligations	$ 221,622	$ 6,658,570	$ 6,880,192
E.	EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 2,052,523
F.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 8,932,715
G.	CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)			$ (792,836)
H.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)			$ 129,720

State 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	$ 4,410,395	$ 1,089,180	$ 3,321,215
b. Disability Benefits	204,660	78,085	126,575
c. Survivor's Benefits	113,203	41,730	71,473
d. Deferred Retirements	435,617	247,314	188,303
e. Refunds Due to Death or Withdrawal	36,463	136,009	(99,546)
f. Total	$ 5,200,338	$ 1,592,318	$ 3,608,020
2. Deferred Retirements With Future Augmentation	683,381		683,381
3. Former Members Without Vested Rights	11,173		11,173
4. Annuitants in MPRIF	3,015,552		3,015,552
5. Recipients Not in MPRIF	16		16
6. Contingent Liability From Unclassified Plan	22,255		22,255
7. Total	$ 8,932,715	$ 1,592,318	$ 7,340,397
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			$ 7,340,397
2. Current Assets (Table 1, E4)			7,673,028
3. UAAL (B1-B2)			$ (332,631)
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2032			37,897,607
2. Supplemental Contribution Rate (B3/C1)			-0.88%

State Employees Retirement Fund

Changes in Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

Year Ending June 30, 2002

A. UAAL AT BEGINNING OF YEAR	$	(793,480)
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
1. Normal Cost and Expenses	$	176,338
2. Contributions		(156,101)
3. Interest on A, B1, and B2		(66,586)
4. Total (B1+B2+B3)	$	(46,349)
C. EXPECTED UAAL AT END OF YEAR (A+B4)	$	(839,829)
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
1. Salary Increases	$	(100,655)
2. Investment Return		211,865
3. MPRIF Mortality		20,843
4. Mortality of Other Benefit Recipients		0
5. Other Items		45,958
6. Total	$	178,011
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	$	(661,818)
F. CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY DUE TO CHANGE IN ACTUARIAL METHODS		0
G. CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY DUE TO CHANGE IN ACTUARIAL ASSUMPTIONS		329,187
H. UAAL AT END OF YEAR (E+F+G)	$	(332,631)

State Employees Retirement Fund

Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2002

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 352		
1. Employee Contributions	4.00%	$ 81,616
2. Employer Contributions	4.00%	81,616
3. Total	8.00%	$ 163,232
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	6.29%	$ 128,268
b. Disability Benefits	0.42%	8,592
c. Survivors	0.23%	4,634
d. Deferred Retirement Benefits	1.33%	27,036
e. Refunds Due to Death or Withdrawal	0.75%	15,358
f. Total	9.02%	$ 183,888
2. Supplemental Contribution Amortization by July 1, 2032 of UAAL	-0.88%	(17,955)
3. Allowance for Expenses	0.20%	4,081
4. Total	8.34%	$ 170,014
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	-0.34%	(6,782)

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: $ 2,040,390

State 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 on pages 21 and 22. 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 five years. Female - 1983 Group Annuity Mortality Table for females set back two years. **Post-Retirement**: Male - 1983 Group Annuity Mortality Table for males setback two years. 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
Males	0.45	0.14	0.09
Females	0.48	0.15	0.10

Disability:	Rates as shown in rate table.
Allowance for Combined Service Annuity:	Liabilities for active Members are increased by 1.2% and liabilities for former Members are increased by 40% to account for the effect of some participants having eligibility for a Combined Service Annuity.
Expenses:	Prior year administration expenses expressed as a 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:	N/A
Special Consideration:	Married Members assumed to elect subsidized joint and survivor form of annuity as follows:

Males -	20% elect 50% J&S option 50% elect 100% J&S option
Females -	10% 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 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 5% 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.

State Employees Retirement Fund

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	2	690	855	1	1	0	0	6.75%
21	3	2	670	840	1	1	0	0	6.75
22	3	2	650	825	1	1	0	0	6.75
23	4	2	630	810	1	1	0	0	6.75
24	4	2	610	795	1	1	0	0	6.75
25	4	2	590	780	1	1	0	0	6.75
26	4	2	570	765	1	1	0	0	6.75
27	4	3	550	750	1	1	0	0	6.75
28	4	3	530	735	1	1	0	0	6.75
29	4	3	510	720	1	1	0	0	6.75
30	5	3	490	705	1	1	0	0	6.75
31	5	3	470	690	1	1	0	0	6.75
32	5	3	450	675	1	1	0	0	6.75
33	5	4	430	660	1	1	0	0	6.75
34	6	4	410	645	2	2	0	0	6.75
35	6	4	390	630	3	3	0	0	6.75
36	6	4	370	615	4	4	0	0	6.75
37	7	5	350	600	5	5	0	0	6.75
38	7	5	340	585	6	6	0	0	6.75
39	8	5	330	570	7	7	0	0	6.75
40	9	6	320	555	8	8	0	0	6.75
41	9	6	310	540	9	9	0	0	6.75
42	10	7	300	525	10	10	0	0	6.75
43	10	7	290	510	11	11	0	0	6.65
44	11	8	280	495	12	12	0	0	6.55
45	12	8	270	480	13	13	0	0	6.45
46	14	9	260	465	14	14	0	0	6.35
47	15	10	250	450	15	15	0	0	6.25
48	17	11	240	430	18	18	0	0	6.15
49	19	12	230	410	21	21	0	0	6.05

State Employees Retirement Fund

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	22	14	220	390	24	24	0	0	5.95%
51	25	15	210	370	27	27	0	0	5.85
52	28	16	200	350	30	30	0	0	5.75
53	31	18	190	330	34	32	0	0	5.65
54	35	19	180	310	38	34	0	0	5.55
55	39	21	0	0	42	36	2,500	500	5.45
56	43	23	0	0	46	38	2,500	500	5.35
57	48	25	0	0	50	40	2,500	500	5.25
58	52	28	0	0	55	44	2,500	500	5.25
59	57	31	0	0	60	48	2,500	500	5.25
60	61	34	0	0	65	52	2,500	1,000	5.25
61	66	38	0	0	70	56	2,500	1,000	5.25
62	71	42	0	0	75	60	5,000	2,500	5.25
63	77	47	0	0	80	64	4,000	2,000	5.25
64	84	52	0	0	85	68	4,000	2,000	5.25
65	92	58	0	0	0	0	4,500	4,500	5.25
66	101	64	0	0	0	0	3,000	3,000	5.25
67	111	71	0	0	0	0	3,000	3,000	5.25
68	124	78	0	0	0	0	3,000	3,000	5.25
69	139	87	0	0	0	0	3,000	3,000	5.25
70	156	97	0	0	0	0	3,000	3,000	5.25
71	176	109	0	0	0	0	10,000	10,000	5.25

State 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: State employees, non-academic staff of the University of Minnesota and employees of certain Metro level governmental units, unless excluded by law.

Contributions:

Member: 4.00% of salary.

Employer: 4.00% of salary.

Allowable Service: 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. Excludes lump sum vacation pay at termination.

Salary: Includes wages, allowances and fees. Excludes lump-sum payments at separation, employer contributions to deferred compensation and tax-sheltered annuity plans and benevolent vacation and sick leave donation programs.

Average Salary: Average of the five highest successive years (60 successive months) 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.

First hired after June 30, 1989:
The greater of age 65 or the age eligible for full Social Security retirement benefits (but not higher 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 benefit (but not higher than age 66) at 3% per year and actuarial reduction for each month the Member is under the Social Security retirement age (but not higher 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:

50% or 100% joint and survivor with bounce back feature without additional reduction. 15 year certain and life thereafter.

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 the greater of $25 times each full year of Allowable Service or $400 per full year of service less any Social Security benefits received or annuity from a Minnesota public employee pension plan. 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.

If a Member became disabled prior to July 1, 1997 but was not eligible to commence their benefit before July 1, 1997, 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 revert 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: Same as for retirement.

Retirement After Disability:

Eligibility: Normal retirement age with continued disability.

Amount: Any optional annuity continues. Otherwise, a normal retirement benefit equal to the disability benefit paid before normal retirement age, or an actuarially equivalent optional annuity.

Benefit Increases: Same as for retirement.

DEATH

Surviving Spouse Optional Benefit:

Eligibility: Member or former Member who dies before retirement or disability benefits commence with three years of Allowable Service. If a former Member dies before age 55 and has less than 30 years of Allowable Service, benefits commence when the former Member would have been age 55. If an active Member dies, benefits may commence immediately, regardless of age.

Amount: Surviving spouse receives the 100% joint and survivor benefit the Member could have elected if terminated. If commencement is prior to age 55, the appropriate early retirement formula described above applies except that one-half the monthly reduction factor is used from age 55 to the commencement age and the Rule of 90 does not apply. In lieu of this benefit, the surviving spouse may elect a refund of contributions with interest or an actuarially equivalent term certain annuity.

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

Benefit Increases: Same as for retirement.

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.

Amounts: 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.

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

Refund of Contributions:

Eligibility: Active employee dies and survivor benefits are not payable, or a former employee dies before annuity begins, or a former employee who is not entitled to an annuity dies.

Amount: The Member's contributions with 5% interest if death occurred before May 16, 1989, and 6% interest if death occurred on or after May 16, 1989.

Eligibility: Retired or disabled annuitant who did not select an optional annuity dies, or the remaining recipient of an option dies.

Amount: The excess of the Member's contributions over all benefits paid.

TERMINATION

Refund of Contributions:

Eligibility: Termination of state service.

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

Deferred Benefit:

Eligibility: Three years of Allowable Service.

Amount: Benefit computed under law in effect at termination and increased by the following annual percentage: 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. 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%.

SIGNIFICANT CHANGES

No significant changes in plan provisions were recognized for this valuation.

State 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	$ 2,304,311	$ 2,883,603	$ 579,292	79.91%	$ 1,370,964	42.25%
07/01/92	2,613,472	3,125,299	511,827	83.62%	1,409,108	36.32%
07/01/93	2,905,578	3,563,492	657,914	81.54%	1,482,005	44.39%
07/01/94	3,158,068	3,876,584	718,516	81.47%	1,536,978	46.75%
07/01/95	3,462,098	3,795,926	333,828	91.21%	1,514,177	22.05%
07/01/96	3,975,832	4,087,273	111,441	97.27%	1,560,369	7.14%
07/01/97	4,664,519	4,519,542	(144,977)	103.21%	1,568,747	-9.24%
07/01/98	5,390,526	5,005,165	(385,361)	107.70%	1,557,880	-24.74%
07/01/99	5,968,692	5,464,207	(504,485)	109.23%	1,649,469	-30.58%
07/01/00	6,744,165	6,105,703	(638,462)	110.46%	1,733,054	-36.84%
07/01/01	7,366,673	6,573,193	(793,480)	112.07%	1,834,042	-43.26%
07/01/02	7,673,028	7,340,397	(332,631)	104.53%	1,915,350	-17.37%

State Employees 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
1991	8.17%	$ 1,370,964	$ 56,895	$ 55,113	$ 57,986	105.21%
1992	7.86%	1,409,108	58,478	52,278	59,244	113.33%
1993	8.27%	1,482,005	59,132	63,430	58,982	92.99%
1994	8.93%	1,536,978	62,555	74,697	60,741	81.32%
1995	9.15%	1,514,177	61,627	76,920	63,161	82.11%
1996	8.05%	1,560,369	63,507	62,103	65,557	105.56%
1997	7.21%	1,568,747	63,848	49,259	66,568	135.14%
1998	7.13%	1,557,880	62,901	48,176	62,315	129.35%
1999	6.48%	1,649,469	66,823	40,063	65,979	164.69%
2000	6.12%	1,733,054	70,378	35,685	69,322	194.26%
2001	7.12% [2]	1,834,042	74,364	56,220	73,362	130.49%
2002	6.79%	1,915,350	79,487	50,565	76,614	151.52%
2003	8.34% [3]					

[1] Includes contributions from other sources (if applicable.)

[2] Actuarially Required Contribution Rate prior to change in Actuarial Assumptions and Asset Valuation Method is 5.72%.

[3] Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 7.22%.

State Employees Retirement Fund
Military Affairs Calculation

Section 352.85 of Chapter 352 of Minnesota Statutes provided that certain military affairs personnel may retire, with an unreduced benefit, at age 60. In addition, they may receive disability benefits upon being found disqualified for retention in active military duty. To fund these special benefits, employees and employer contribute an extra 1.6% of payroll.

To recognize the effect of the unreduced early retirement benefit available at age 60, we have assumed that all military affairs personnel will retire at age 60, or if over age 60, one year from the valuation date.

The results of our calculations are as follows:

1. Number of Active Members	4
2. Projected Annual Earnings	127,858
3. Normal Cost	
a. Dollar Amount	15,320
b. Percent of Payroll	11.98%

State Employees Retirement Fund
Pilots Calculation

Section 352.86 of Chapter 352 of Minnesota Statutes provided that certain transportation department pilots may retire, with an unreduced benefit, at age 62. In addition, they may receive disability benefits upon being found disqualified for retention as pilots. To fund these special benefits, employees and employer contribute an extra 1.6% of payroll.

To recognize the effect of the unreduced early retirement benefit available at age 62, we have have assumed that all pilots will retire at age 62, or if over age 62, one year from the valuation date.

The results of our calculations are as follows:

1.	Number of Active Members	5
2.	Projected Annual Earnings	355,759
3.	Normal Cost	
	a. Dollar Amount	45,672
	b. Percent of Payroll	12.84%

State Employees Retirement Fund

Fire Marshals Calculation

Section 352.87 of Chapter 352 of Minnesota Statutes provided that deputy state fire marshals may retire, with an unreduced benefit with respect to service after July 1, 1999, at age 55. Credited service after July 1, 1999 accrues retirement benefits at a rate of 2.0% per year, and disability benefits are based on a minimum of 15 years of service (20 years if duty related.) To fund these special benefits, employees contribute and extra 2.78% of payroll, and employers contribute an extra 4.2% of payroll.

To recognize the effect of the unreduced early retirement benefit available at age 55, we have assumed that all fire marshals will retire in accordance with the retirement assumptions which apply to the Members of the Correctional Employees Retirement Fund.

The results of our calculations are as follows:

1.	Number of Active Members	11
2.	Projected Annual Earnings	590,108
3.	Normal Cost for Post 7/1/99 Benefits	
	a. Dollar Amount	53,523
	b. Percent of Payroll	9.07%

State Employees Retirement Fund
Unclassified Plan Contingent Liability Calculation

Section 352D.02 of Chapter 352D of Minnesota Statutes provides that employees credited with employee shares in the unclassified program may elect to terminate participation in the unclassified plan and be covered by the regular plan prior to termination of covered employment.

To recognize the effect of the option to elect coverage under the regular plan, we have assumed that all eligible Unclassified Plan Members will elect coverage under the regular plan if such election provides the member with a greater economic present value than the accumulated contribution balance under the Unclassified Plan. The liabilities were measured using the actuarial assumptions which are applied to the State Employees Retirement Fund.

The results of our calculations are as follows:

1. Number of Active Members	1,930
2. Account Balances for Active Members	138,420
3. Accrued Liability for Active Members	163,774
4. Number of Inactive Members	1,539
5. Account Balances for Inactive Members	87,253
6. Net Assets held in trust for Unclassified Plan pension benefits	228,772
7. Contingent Liability [(3) + (5) - (6)]	22,255
8. Projected Annual Earnings for Active Members	114,752
9. Normal Cost	
a. Dollar Amount	12,579
b. Percent of Payroll	10.96%

State Patrol Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 2002

MILLIMAN USA

A MILLIMAN GLOBAL FIRM

Milliman USA

Consultants and Actuaries

15800 Bluemound Road, Suite 400
Brookfield, WI 53005-6069
Tel +1 262 784.2250
Fax +1 262 784.7287
www.milliman.com

November 21, 2002

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

RE: State Patrol 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 Minnesota State Retirement System.

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

State Patrol Retirement Fund

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State Patrol Retirement Fund

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(Continued)

State Patrol Retirement Fund

Report Highlights

(dollars in thousands)

	07/01/01 Valuation	07/01/02 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 352B % of Payroll	21.00%	21.00%
2. Required Contributions - Chapter 356 % of Payroll	14.00%	14.34%
3. Sufficiency (Deficiency)	7.00%	6.66%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$ 572,815	$ 591,383
b. Current Benefit Obligations (Table 8)	$ 476,072	$ 496,913
c. Funding Ratio	120.32%	119.01%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$ 572,815	$ 591,383
b. Actuarial Accrued Liability (Table 9)	$ 489,483	$ 510,344
c. Funding Ratio	117.02%	115.88%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$ 678,931	$ 695,967
b. Current and Expected Future Benefit Obligations	$ 611,884	$ 632,328
c. Funding Ratio	110.96%	110.06%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	823	810
b. Projected Annual Earnings	$ 51,574	$ 51,473
c. Average Annual Earnings (Projected $)	$ 62,665	$ 63,547
d. Average Age	40.8	41.0
e. Average Service	12.6	12.6
2. Others		
a. Service Retirements (Table 4)	556	577
c. Survivors (Table 5)	164	156
b. Disability Retirements (Table 6)	25	29
d. Deferred Retirements (Table 7)	25	27
e. Terminated Other Non-Vested (Table 7)	10	11
f. Total	780	800

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 119.01%. The corresponding ratio for the prior year was 120.32%.

- 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 115.88%, which is a decrease from the 2001 value of 117.02%.

- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 110.06% 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.

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 21.00% compared to the Required Contribution Rate of 14.34%.

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.

State Patrol 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	$ 2,303	$ 2,303
2. Fixed Income	51,611	52,876
3. Equity	152,973	182,889
4. Real Estate	7,549	7,027
5. Equity in MPRIF	324,743	324,743
6. Other	0	0
Subtotal	$ 539,179	$ 569,838
B. ASSETS RECEIVABLE	311	311
C. LIABILITIES	$ (759)	$ (759)
D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
1. MPRIF Reserves	324,743	324,743
2. Member Reserves	38,508	38,508
3. Other Non-MPRIF Reserves	175,480	206,139
4. Total Assets Available for Benefits	$ 538,731	$ 569,390

E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Market Value of Assets Available for Benefits (D4)		$ 538,731
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2002	(39,184)	
b. June 30, 2001	(43,283)	
c. June 30, 2000	5,030	
d. June 30, 1999	26,535	
3. UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) +.1 * 2(d)		(52,652)
4. Actuarial Value of Assets (E1-E3) (Same as "Current Assets")		$ 591,383

State Patrol 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	$ 245,567	$ 303,600	$ 549,167
B. ADDITIONS			
1. Member Contributions	$ 4,215	0	$ 4,215
2. Employer Contributions	6,209	0	6,209
3. Contributions From Other Sources	0	0	0
4. MPRIF Income	0	31,332	31,332
5. Net Investment Income			
a. Interest and Dividends	(938)	0	(938)
b. Net Appreciation/(Depreciation)	(17,570)	0	(17,570)
c. Investment Expenses	(320)	0	(320)
d. Net Subtotal	(18,828)	0	(18,828)
6. Other	0	0	-
7. Total Additions	$ (8,404)	$ 31,332	$ 22,928
C. OPERATING EXPENSES			
1. Service Retirements	$ 208	$ 32,823	$ 33,031
2. Disability Benefits	0	0	0
3. Survivor Benefits	0	0	0
4. Refunds	60	0	60
5. Administrative Expenses	102	0	102
6. Other	171	0	171
7. Total Disbursements	$ 541	$ 32,823	$ 33,364
D. OTHER CHANGES IN RESERVES			
1. Annuities Awarded	(22,053)	22,053	0
2. Mortality Gain (Loss)	(581)	581	0
3. Total Other Changes	(22,634)	22,634	0
E. ASSETS AVAILABLE AT END OF PERIOD	$ 213,988	$ 324,743	$ 538,731

F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN

1. Average Balance	
(a) Non-MPRIF Assets Available at Beginning of Period	245,567
(b) Non-MPRIF Assets Available at End of Period*	214,569
(c) Average Balance {[F1.a+F1.b-B5.d-B6]/2}	239,482
2. Expected Return: .085*F1.c	20,356
3. Actual Return	(18,828)
4. Current Year UAR: F3-F2	$ (39,184)

* Before adjustment for MPRIF mortality gain (loss)

State Patrol 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	4	3	0	0	0	0	0	0	7
25-29	9	63	4	0	0	0	0	0	76
30-34	5	70	36	9	0	0	0	0	120
35-39	4	39	35	52	13	0	0	0	143
40-44	0	26	22	35	67	13	0	0	163
45-49	1	9	7	20	46	64	7	0	154
50-54	0	8	2	14	13	31	41	6	115
55-59	0	3	0	4	3	7	5	8	30
60-64	0	0	0	0	0	0	0	2	2
65+	0	0	0	0	0	0	0	0	0
ALL	23	221	106	134	142	115	53	16	810

Average Annual Earnings

	Years of Service								
Age	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	All
<25	37,375	47,904	0	0	0	0	0	0	41,887
25-29	39,853	49,219	55,666	0	0	0	0	0	48,449
30-34	40,504	50,472	54,655	58,313	0	0	0	0	51,900
35-39	48,147	52,487	56,354	60,608	64,524	0	0	0	57,359
40-44	0	54,746	57,442	60,975	64,798	75,572	0	0	62,240
45-49	36,188	60,071	60,764	63,625	66,043	65,989	68,238	0	65,024
50-54	0	68,795	63,998	64,779	62,784	64,788	71,297	66,252	67,222
55-59	0	62,617	0	66,232	62,261	76,260	66,838	68,047	68,398
60-64	0	0	0	0	0	0	0	65,897	65,897
65+	0	0	0	0	0	0	0	0	0
ALL	40,847	52,157	56,412	61,604	64,938	67,374	70,472	67,105	59,850

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	939	11,526	5,979	8,254	9,221	7,748	3,735	1,073	48,478

State Patrol 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	9	17	0	0	0	0	0	26
55-59	20	102	5	0	0	0	0	127
60-64	2	28	83	2	0	0	0	115
65-69	0	4	13	63	0	0	0	80
70-74	0	1	1	28	50	0	0	80
75-79	0	0	3	4	34	40	1	82
80-84	0	0	0	0	8	21	12	41
85+	0	0	0	0	1	5	20	26
ALL	31	152	105	97	93	66	33	577

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	43,529	41,841	0	0	0	0	0	42,425
55-59	45,198	49,604	34,761	0	0	0	0	48,326
60-64	50,538	46,801	51,573	48,259	0	0	0	50,336
65-69	0	38,535	56,486	54,958	0	0	0	54,385
70-74	0	59,448	47,328	58,543	48,808	0	0	52,330
75-79	0	0	48,428	33,339	54,432	48,586	31,182	50,048
80-84	0	0	0	0	47,619	51,400	35,941	46,138
85+	0	0	0	0	42,048	42,485	36,036	37,507
ALL	45,058	47,993	51,250	54,963	50,689	49,019	35,854	49,458

Total Annual Benefit (in thousands) by Years Retired

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	1,396	7,294	5,381	5,331	4,714	3,235	1,183	28,537

State Patrol 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	3	13	4	0	0	0	0	20
50-54	0	1	2	0	0	0	1	4
55-59	0	4	3	1	0	0	0	8
60-64	1	3	2	2	0	0	0	8
65-69	1	6	3	3	0	1	0	14
70-74	3	7	4	5	1	3	5	28
75-79	0	7	3	2	1	4	4	21
80-84	0	2	5	6	1	4	7	25
85+	0	1	5	6	0	0	16	28
ALL	8	44	31	25	3	12	33	156

Average Annual Benefit

	Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
<50	11,072	10,496	18,467	0	0	0	0	12,177
50-54	0	4,707	40,404	0	0	0	9,950	23,866
55-59	0	46,055	21,706	25,491	0	0	0	34,354
60-64	23,626	22,889	44,321	8,523	0	0	0	24,748
65-69	16,347	41,156	26,977	20,278	0	77,969	0	34,501
70-74	32,380	30,153	40,114	17,410	43,504	40,172	18,394	28,990
75-79	0	25,827	29,173	23,339	45,847	51,141	28,721	32,394
80-84	0	16,585	17,902	23,865	35,526	34,167	24,094	24,269
85+	0	17,694	22,581	25,256	0	0	26,665	25,313
ALL	21,291	24,630	27,089	21,273	41,626	44,976	24,609	26,297

	Total Annual Benefit (in thousands) by Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	170	1,083	839	531	124	539	812	4,102

State Patrol 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	1	3	1	0	0	0	0	5
50-54	1	3	2	1	0	0	0	7
55-59	2	1	2	2	0	0	0	7
60-64	0	0	0	0	1	1	0	2
65-69	0	0	0	2	0	0	0	2
70-74	0	0	0	0	0	1	1	2
75-79	0	0	0	0	0	2	2	4
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	4	7	5	5	1	4	3	29

Average Annual Benefit

Age	Years Disabled ≤1	1-4	5-9	10-14	15-19	20-24	25+	All
<50	32,869	21,096	33,940	0	0	0	0	26,019
50-54	25,294	36,176	43,044	33,621	0	0	0	36,219
55-59	12,959	58,848	49,582	29,276	0	0	0	34,640
60-64	0	0	0	0	35,983	34,353	0	35,168
65-69	0	0	0	49,701	0	0	0	49,701
70-74	0	0	0	0	0	42,485	29,450	35,968
75-79	0	0	0	0	0	42,822	30,558	36,690
80-84	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0
ALL	21,020	32,952	43,838	38,315	35,983	40,621	30,189	34,984

Total Annual Benefit (actual dollars) by Years Disabled

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	84,080	230,664	219,190	191,575	35,983	162,484	90,567	1,014,536

State Patrol Retirement Fund

Reconciliation of Members

	Actives	Terminated: Deferred Retirement	Terminated: Other Non-Vested
A. ON JUNE 30, 2001	823	25	10
B. ADDITIONS	30	3	3
C. DELETIONS			
1. Service Retirement	(30)	(1)	0
2. Disability	(3)	0	0
3. Death	(2)	0	0
4. Terminated - Deferred	(3)	0	0
5. Terminated - Refund	(2)	0	(1)
6. Terminated - Other Non-Vested	(3)	0	0
7. Returned as active	0	0	0
8. Transferred to Other Fund	0	0	(1)
D. DATA ADJUSTMENTS	0	0	0
1. Vested	699		
2. Non-Vested	111		
E. TOTAL ON JUNE 30, 2002	810	27	11

	Recipients: Retirement Annuitants	Recipients: Disabled	Recipients: Survivors
A. ON JUNE 30, 2001	556	25	164
B. ADDITIONS	31	4	8
C. DELETIONS			
1. Service Retirement	0	0	0
2. Death	(15)	0	(16)
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	5	0	0
E. TOTAL ON JUNE 30, 2002	577	29	156

State Patrol Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

July 1, 2002

A. CURRENT ASSETS (Table 1, Line E4)			$ 591,383
B. EXPECTED FUTURE ASSETS			
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			(17,400)
2. Present Value of Future Normal Costs			121,984
3. Total Expected Future Assets			$ 104,584
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$ 695,967
D. CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
1. Benefit Recipients			
a. Retirement Annuities		$ 281,268	$ 281,268
b. Disability Benefits		9,749	9,749
c. Surviving Spouse and Child Benefits		34,739	34,739
2. Deferred Retirements with Future Augmentation		6,048	6,048
3. Former Members Without Vested Rights		19	19
4. Active Members			
a. Retirement Annuities	$ 1,570	143,761	145,331
b. Disability Benefits	12,120	0	12,120
c. Surviving Spouse and Child Benefits	4,928	0	4,928
d. Deferred Retirements	80	2,525	2,605
e. Refund Liability Due to Death or Withdrawal	0	106	106
5. Total Current Benefit Obligations	$ 18,698	$ 478,215	$ 496,913
E. EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 135,415
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 632,328
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)			$ (94,470)
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)			$ (63,639)

State Patrol 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	$ 264,723	$ 100,036	$ 164,687
b. Disability Benefits	22,013	12,835	9,178
c. Survivor's Benefits	8,894	4,877	4,017
d. Deferred Retirements	4,682	3,519	1,163
e. Refunds Due to Death or Withdrawal	193	717	(524)
f. Total	$ 300,505	$ 121,984	$ 178,521
2. Deferred Retirements With Future Augmentation	6,048		6,048
3. Former Members Without Vested Rights	19		19
4. Annuitants in MPRIF	324,743		324,743
5. Recipients Not in MPRIF	1,013		1,013
6. Total	$ 632,328	$ 121,984	$ 510,344
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			$ 510,344
2. Current Assets (Table 1, E4)			591,383
3. UAAL (B1-B2)			$ (81,039)
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2032			956,044
2. Supplemental Contribution Rate (B3/C1)			-8.48%

State Patrol Retirement Fund

Changes in Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

Year Ending June 30, 2002

A. UAAL AT BEGINNING OF YEAR	$	(83,332)
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
1. Normal Cost and Expenses	$	11,708
2. Contributions		(10,424)
3. Interest on A, B1, and B2		(7,029)
4. Total (B1+B2+B3)	$	(5,745)
C. EXPECTED UAAL AT END OF YEAR (A+B4)	$	(89,077)
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
1. Salary Increases	$	(8,953)
2. Investment Return		12,190
3. MPRIF Mortality		581
4. Mortality of Other Benefit Recipients		26
5. Other Items		2,794
6. Total	$	6,638
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	$	(82,439)
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		1,400
H. UAAL AT END OF YEAR (E+F+G)	$	(81,039)

State Patrol Retirement Fund

Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2002

	Percent of Payroll	Dollar Amount	
A. STATUTORY CONTRIBUTIONS - CHAPTER 352B			
1. Employee Contributions	8.40%	$	4,324
2. Employer Contributions	12.60%		6,486
3. Total	21.00%	$	10,810
B. REQUIRED CONTRIBUTIONS - CHAPTER 356			
1. Normal Cost			
a. Retirement Benefits	18.50%	$	9,523
b. Disability Benefits	2.43%		1,252
c. Survivors	0.95%		490
d. Deferred Retirement Benefits	0.62%		320
e. Refunds Due to Death or Withdrawal	0.12%		64
f. Total	22.62%	$	11,649
2. Supplemental Contribution Amortization by July 1, 2032 of UAAL	-8.48%		(4,365)
3. Allowance for Expenses	0.20%		103
4. Total	14.34%	$	7,387
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	6.66%		3,423

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: $ 51,473

State Patrol 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 using a 6% post-retirement assumption.
Salary Increases:	Reported salary at valuation date increased according to the rate table on pages 18 and 19 to current fiscal year and annually for each future year. Prior fiscal year salary is annualized for new Members.
Mortality:	**Pre-Retirement:** Male - 1983 GAM (Males -1) Female - 1983 GAM (Females) **Post-Retirement:** Male - 1983 GAM (Males +2) Female - 1983 GAM (Females +2) **Post-Disability:** Male - Combined Annuity Mortality Female - Combined Annuity Mortality
Retirement Age:	Age-related table as follows:

Ages:	
50-53	2%
54	20
55	60
56-61	20
62-64	50
65+	100

Separation:	Graded rates starting at .022 at age 20 and decreasing to .003 at age 49
Disability:	Rates adopted by MSRS 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 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:	100% of Members are married. Female is three years younger than male. Each Member is assumed to have two children whose ages are dependent upon the Member's age. Assumed first child is born at Member's age 28 and second child is born at Member's age 31.
Social Security:	N/A
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 based on earnings and the date the employee entered the plan is applied to all plan benefits. Under this method, Actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability. The actuarial cost method was changed as of July 1, 1997 to permit negative amortization of supplemental contribution surpluses.
Asset Valuation Method:	Market Value 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 that 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 5.0% 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.

State Patrol 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	220	220	4	4	0	0	7.75%
21	4	2	210	210	4	4	0	0	7.1454
22	4	2	200	200	5	5	0	0	7.1094
23	4	2	190	190	5	5	0	0	7.0725
24	4	2	180	180	6	6	0	0	7.0363
25	4	3	170	170	6	6	0	0	7
26	5	3	160	160	6	6	0	0	7
27	5	3	150	150	7	7	0	0	7
28	5	3	140	140	7	7	0	0	7
29	5	3	130	130	8	8	0	0	7
30	6	3	120	120	8	8	0	0	7
31	6	4	110	110	9	9	0	0	7
32	6	4	100	100	9	9	0	0	7
33	7	4	90	90	10	10	0	0	7
34	7	4	80	80	10	10	0	0	7
35	8	5	70	70	11	11	0	0	7
36	9	5	60	60	12	12	0	0	6.9019
37	9	5	60	60	13	13	0	0	6.8074
38	10	6	60	60	15	15	0	0	6.7125
39	10	6	60	60	16	16	0	0	6.6054
40	11	7	60	60	18	18	0	0	6.5
41	12	7	60	60	20	20	0	0	6.354
42	14	8	60	60	22	22	0	0	6.2087
43	15	8	60	60	24	24	0	0	6.0622
44	17	9	60	60	26	26	0	0	5.9048
45	19	10	60	60	29	29	0	0	5.75
46	22	11	60	60	32	32	0	0	5.6940
47	25	12	60	60	36	36	0	0	5.6375
48	28	14	60	60	41	41	0	0	5.5822
49	31	15	30	30	46	46	0	0	5.5405

State Patrol 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	0	0	50	50	200	200	5.5%
51	39	18	0	0	57	57	200	200	5.4384
52	43	19	0	0	64	64	200	200	5.3776
53	48	21	0	0	72	72	200	200	5.3167
54	52	23	0	0	80	80	2,000	2,000	5.2826
55	57	25	0	0	88	88	6,000	6,000	5.25
56	61	28	0	0	98	98	2,000	2,000	5.25
57	66	31	0	0	108	108	2,000	2,000	5.25
58	71	34	0	0	118	118	2,000	2,000	5.25
59	77	38	0	0	129	129	2,000	2,000	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	5,000	5,000	5.25
63	111	58	0	0	0	0	5,000	5,000	5.25
64	124	64	0	0	0	0	5,000	5,000	5.25
65	129	71	0	0	0	0	10,000	10,000	5.25
66	156	78	0	0	0	0	0	0	5.25
67	176	87	0	0	0	0	0	0	5.25
68	198	97	0	0	0	0	0	0	5.25
69	222	109	0	0	0	0	0	0	5.25
70	248	124	0	0	0	0	0	0	5.25

State Patrol 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:	State trooper, conservation officers and certain crime bureau officers.
Contributions:	
Member:	8.40% of salary.
Employer:	12.60% of salary.
Allowable Service:	Service during which Member contributions were deducted. Includes period receiving temporary Workers' Compensation.
Salary:	Salaries excluding lump-sum payments at separation.
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.
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 reduced by 1/10% for each month that the member is under age 55.

Form of Payment: Life annuity.

Actuarially equivalent options are:

50% 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.

For members retired under laws in effect before June 1, 1973 receive an additional 6% supplement through July 1, 1994. For each of those years, the supplement increases by 6% of the total annuity which includes both MPRIF and supplemental amounts. Thereafter, regular MPRIF increases apply.

Members retired under law in effect before June 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 or $400 per year of service less any Social Security benefits received or annuity from a Minnesota public employee pension plan. 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

Occupational Disability Benefit:

Eligibility: Member who cannot perform his duties because of a disability directly resulting from 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 (pro rata for completed months).

Payments cease 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.

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

Non-Duty Disability Benefit:

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 15 years) and Average Salary at disability without reduction for commencement before age 55.

Payments cease 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.

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

Form of Payment: Same as for retirement.

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

***Retirement After Disability*:**

Eligibility:	Age 65 with continued disability.
Amount:	Optional annuity continues. Otherwise, a normal retirement annuity equal to disability benefit paid, or an actuarially equivalent option.
Form of Payment:	Same as for retirement.
Benefit Increases:	Same as for retirement.

DEATH

***Surviving Spouse Benefit*:**

Eligibility:	Member who is active or receiving a disability benefit.
Amount:	50% of Annual Salary if member was active or occupational disability and either had less than three years of Allowable Service or was under age 55. Payment for life. Surviving spouse receives the 100% joint and survivor benefit commencing on the Member's 55th birthday if Member was active or a disability with three years of Allowable Service. A spouse who had been receiving the 50% benefit shall be entitled to the larger of the two. Payment for life. If a Member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefit before July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.
Benefit Increases:	Adjusted by MSRS to provide same increase as MPRIF.

Surviving Dependent Children's Benefit:

Eligibility:	Member who is active or receiving a disability benefit. Child must be unmarried, under age 18 (or 23 if full-time student) and dependent upon the Member.
Amount:	10% of Average Salary for each child and $20 per month prorated among all dependent children. Benefit must not be less than 50% nor exceed 70% of Average Salary.
	If a Member became deceased prior to July 1, 1997 and the beneficiary was not eligible to commence their survivor benefit before July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

Refund of Contributions:

Eligibility:	Member dies before receiving any retirement benefits and survivor benefits are not payable.
Amount:	Member's contributions with 5% interest if death occurred before May 16, 1989 and 6% interest if death occurred on or after May 16, 1989.

TERMINATION

Refund of Contributions:

Eligibility:	Termination of state 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.

Deferred Benefit:

Eligibility: Three years of Allowable Service.

Amount: Benefit computed under law in effect at termination and increased by the following annual percentage: 0% before 7/1/71; 5% from 7/1/71 to 1/1/81; and 3% 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%.

SIGNIFICANT CHANGES

No significant changes in plan provisions were recognized for this valuation.

State Patrol 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	$ 200,068	$ 224,033	$ 23,965	89.30%	$ 32,365	74.05%
07/01/92	222,314	233,656	11,342	95.15%	32,882	34.49%
07/01/93	244,352	258,202	13,850	94.64%	35,765	38.73%
07/01/94	262,570	275,377	12,807	95.35%	35,341	36.24%
07/01/95	284,918	283,078	(1,840)	100.65%	37,518	-4.90%
07/01/96	323,868	303,941	(19,927)	106.56%	41,476	-48.04%
07/01/97	375,650	332,427	(43,223)	113.00%	41,996	-102.92%
07/01/98	430,011	371,369	(58,642)	115.79%	43,456	-134.95%
07/01/99	472,687	406,215	(66,472)	116.36%	45,333	-146.63%
07/01/00	528,573	458,384	(70,189)	115.31%	48,167	-145.72%
07/01/01	572,815	489,483	(83,332)	117.02%	48,935	-170.29%
07/01/02	591,383	510,344	(81,039)	115.88%	49,278	-164.45%

State Patrol 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
1991	22.15%	$ 32,365	$ 2,751	$ 4,418	$ 4,825	109.21%
1992	22.58%	32,882	2,795	4,630	4,893	105.68%
1993	22.27%	35,765	3,040	4,925	5,288	107.37%
1994	21.94%	35,341	3,004	4,750	5,159	108.61%
1995	21.79%	37,518	3,189	4,986	5,583	111.97%
1996	21.34%	41,476	3,484	5,367	5,742	106.99%
1997	21.33%	41,996	3,746	5,212	6,151	118.02%
1998	15.67%	43,456	3,634	3,176	5,475	172.39%
1999	14.14%	45,333	3,850	2,560	5,712	223.13%
2000	15.17% [2]	48,167	4,044	3,263	6,069	185.99%
2001	15.48% [3]	48,935	4,145	3,430	6,166	179.77%
2002	14.00%	49,278	4,215	2,684	6,209	231.33%
2003	14.34% [4]					

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

(2) Actuarially Required Contribution Rate calculated according to parameters of GASB 25 using a 30-year amortization of the negative unfunded accrued liability.

(3) Actuarially Required Contribution Rate Prior to change in Asset Valuation Method is 15.15%

(4) Actuarially Required Contribution Rate Prior to change in Actuarial Assumptions is 14.20%

Correctional Employees Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 2002

MILLIMAN USA

A MILLIMAN GLOBAL FIRM

Milliman USA

Consultants and Actuaries

15800 Bluemound Road, Suite 400
Brookfield, WI 53005-6069
Tel +1 262 784.2250
Fax +1 262 784.7287
www.milliman.com

November 21, 2002

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

RE: Correctional 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 Minnesota State Retirement System.

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

Correctional Employees Retirement Fund

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Correctional Employees Retirement Fund

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(Continued)

Correctional Employees Retirement Fund

Report Highlights

(dollars in thousands)

	07/01/01 Valuation	07/01/02 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 352 % of Payroll	13.67%	13.67%
2. Required Contributions - Chapter 356 % of Payroll	13.81%	14.73%
3. Sufficiency (Deficiency)	(0.14%)	(1.06%)
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$ 431,134	$ 457,416
b. Current Benefit Obligations (Table 8)	$ 362,903	$ 409,388
c. Funding Ratio	118.80%	111.73%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$ 431,134	$ 457,416
b. Actuarial Accrued Liability (Table 9)	$ 398,633	$ 446,426
c. Funding Ratio	108.15%	102.46%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$ 530,289	$ 558,596
b. Current and Expected Future Benefit Obligations	$ 533,641	$ 584,412
c. Funding Ratio	99.37%	95.58%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	3,182	3,249
b. Projected Annual Earnings	$ 127,835	$ 131,232
c. Average Annual Earnings (Projected $)	$ 40,174	$ 40,392
d. Average Age	40.6	40.7
e. Average Service	8.0	8.0
2. Others		
a. Service Retirements (Table 4)	655	754
c. Survivors (Table 5)	61	69
b. Disability Retirements (Table 6)	92	115
d. Deferred Retirements (Table 7)	483	550
e. Terminated Other Non-Vested (Table 7)	220	268
f. Total	1,511	1,756

Commentary

Purpose

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

Report Highlights

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

- The Accrued Benefit Funding Ratio is a measure of current funding status and, when viewed over a period of years, presents a view of the funding progress. It is based upon benefits which have been earned by service to the valuation date. This year's ratio is 111.73%. The corresponding ratio for the prior year was 118.80%.
- 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 102.46%, which is a decrease from the 2001 value of 108.15%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 95.58% shows that the current statutory contributions are modestly inadequate.

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:

- 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 deficiency since the Statutory Contribution Rate is 13.67% compared to the Required Contribution Rate of 14.73%.

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.

Correctional 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	$ 6,815	$ 6,815
2. Fixed Income	55,190	56,392
3. Equity	163,583	197,390
4. Real Estate	8,072	7,603
5. Equity in MPRIF	172,606	172,606
6. Other	0	0
Subtotal	$ 406,266	$ 440,806
B. ASSETS RECEIVABLE	545	545
C. LIABILITIES	$ (1,421)	$ (1,421)
D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
1. MPRIF Reserves	172,606	172,606
2. Member Reserves	51,324	51,324
3. Other Non-MPRIF Reserves	181,460	216,000
4. Total Assets Available for Benefits	$ 405,390	$ 439,930

E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS

1. Market Value of Assets Available for Benefits (D4)		$ 405,390
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2002	(41,435)	
b. June 30, 2001	(43,375)	
c. June 30, 2000	12,132	
d. June 30, 1999	22,939	
3. UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) +.1 * 2(d)		(52,026)
4. Actuarial Value of Assets (E1-E3)		$ 457,416
(Same as "Current Assets")		

Correctional 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	$ 265,689	$ 144,906	$ 410,595
B. ADDITIONS			
1. Member Contributions	$ 7,207	0	$ 7,207
2. Employer Contributions	9,925	0	9,925
3. Contributions From Other Sources	0	0	0
4. MPRIF Income	0	15,370	15,370
5. Net Investment Income			
a. Interest and Dividends	(792)	0	(792)
b. Net Appreciation/(Depreciation)	(18,974)	0	(18,974)
c. Investment Expenses	(342)	0	(342)
d. Net Subtotal	(20,108)	0	(20,108)
6. Other	727	0	727
7. Total Additions	$ (2,249)	$ 15,370	$ 13,121
C. OPERATING EXPENSES			
1. Service Retirements	0	$ 17,105	$ 17,105
2. Disability Benefits	0	0	0
3. Survivor Benefits	0	0	0
4. Refunds	633	0	633
5. Administrative Expenses	265	0	265
6. Other	323	0	323
7. Total Disbursements	$ 1,221	$ 17,105	$ 18,326
D. OTHER CHANGES IN RESERVES			
1. Annuities Awarded	(28,364)	28,364	0
2. Mortality Gain (Loss)	(1,071)	1,071	0
3. Total Other Changes	(29,435)	29,435	0
E. ASSETS AVAILABLE AT END OF PERIOD	$ 232,784	$ 172,606	$ 405,390

F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN	
1. Average Balance	
(a) Non-MPRIF Assets Available at Beginning of Period	265,689
(b) Non-MPRIF Assets Available at End of Period*	233,855
(c) Average Balance {[F1.a+F21.b-B5.d-B6]/2}	259,463
2. Expected Return: .085*F1.c	22,054
3. Actual Return	(19,381)
4. Current Year UAR: F3-F2	$ (41,435)

* Before adjustment for MPRIF mortality gain (loss)

Correctional 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	55	52	0	0	0	0	0	0	107
25-29	70	215	30	1	0	0	0	0	316
30-34	70	218	191	21	0	0	0	0	500
35-39	61	164	176	105	26	0	0	0	532
40-44	49	140	156	143	93	24	0	0	605
45-49	31	139	118	80	69	83	18	0	538
50-54	28	85	105	64	59	65	67	2	475
55-59	10	38	32	12	14	6	9	3	124
60-64	6	11	16	6	2	1	4	0	46
65+	0	2	2	0	2	0	0	0	6
ALL	380	1,064	826	432	265	179	98	5	3,249

Average Annual Earnings

Age	Years of Service <1	1-4	5-9	10-14	15-19	20-24	25-29	30+	All
<25	19,676	29,117	0	0	0	0	0	0	24,264
25-29	21,999	31,007	36,715	41,757	0	0	0	0	29,588
30-34	23,855	31,329	38,047	44,995	0	0	0	0	33,423
35-39	22,714	32,781	39,922	43,657	47,239	0	0	0	36,842
40-44	23,020	34,173	39,645	44,889	47,418	49,630	0	0	39,863
45-49	22,805	36,317	40,386	45,401	48,711	49,195	54,865	0	41,979
50-54	25,569	38,561	43,364	44,890	49,356	48,004	52,050	62,172	44,345
55-59	28,775	42,006	45,023	45,104	49,127	52,195	50,167	53,663	44,189
60-64	27,448	49,681	46,170	46,531	58,526	45,260	66,602	0	46,909
65+	0	37,543	38,968	0	52,245	0	0	0	42,919
ALL	22,844	33,566	40,140	44,711	48,379	48,899	52,988	57,067	38,140

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	8,680	35,714	33,155	19,315	12,820	8,752	5,192	285	123,916

Correctional 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	0	0	0	0	0	0	0
50-54	22	19	0	0	0	0	0	41
55-59	75	169	3	0	0	0	0	247
60-64	11	37	86	2	0	0	0	136
65-69	3	33	33	58	0	0	0	127
70-74	1	3	9	21	45	0	0	79
75-79	0	0	0	2	19	34	0	55
80-84	0	0	0	0	1	6	30	37
85+	0	0	0	0	0	5	27	32
ALL	112	261	131	83	65	45	57	754

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	13,806	13,240	0	0	0	0	0	13,544
55-59	14,192	16,927	9,499	0	0	0	0	16,006
60-64	11,849	15,573	18,990	12,785	0	0	0	17,392
65-69	17,212	14,584	14,057	23,378	0	0	0	18,525
70-74	6,347	6,756	17,714	16,773	21,774	0	0	19,217
75-79	0	0	0	14,290	20,159	23,555	0	22,045
80-84	0	0	0	0	8,550	14,702	14,242	14,163
85+	0	0	0	0	0	24,805	11,216	13,339
ALL	13,897	16,054	17,442	21,233	21,099	22,514	12,809	17,120

Total Annual Benefit (in thousands) by Years Retired

Age	<1	1-4	5-9	10-14	15-19	20-24	25+	All
All	1,556	4,190	2,284	1,762	1,371	1,013	730	12,908

Correctional 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	5	5	3	0	0	0	0	13
50-54	1	4	3	1	0	0	0	9
55-59	1	4	3	0	2	0	0	10
60-64	0	5	5	1	0	0	0	11
65-69	1	5	3	1	1	1	0	12
70-74	0	3	0	0	1	0	0	4
75-79	0	1	3	1	0	0	0	5
80-84	0	0	1	0	0	0	3	4
85+	0	0	0	1	0	0	0	1
ALL	8	27	21	5	4	1	3	69

Average Annual Benefit

Age	Years Since Death <1	1-4	5-9	10-14	15-19	20-24	25+	All
<50	2,646	9,163	6,955	0	0	0	0	6,147
50-54	1,165	14,663	4,807	7,898	0	0	0	9,126
55-59	12,600	9,612	13,033	0	8,802	0	0	10,775
60-64	0	16,988	10,775	5,207	0	0	0	13,093
65-69	14,759	10,789	8,425	10,465	35,445	13,957	0	12,821
70-74	0	2,977	0	0	5,202	0	0	3,533
75-79	0	12,176	13,084	6,862	0	0	0	11,658
80-84	0	0	12,731	0	0	0	8,609	9,640
85+	0	0	0	672	0	0	0	672
ALL	5,219	11,219	9,787	6,221	14,563	13,957	8,609	9,845

Total Annual Benefit (actual dollars) by Years Since Death

Age	<1	1-4	5-9	10-14	15-19	20-24	25+	All
All	41,752	302,913	205,527	31,105	58,252	13,957	25,827	679,305

Correctional 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	14	24	16	0	0	0	0	54
50-54	4	16	5	3	0	0	0	28
55-59	3	10	5	4	0	0	0	22
60-64	1	2	1	3	0	0	0	7
65-69	0	0	0	0	1	1	0	2
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	1	1
80-84	0	0	0	0	0	1	0	1
85+	0	0	0	0	0	0	0	0
ALL	22	52	27	10	1	2	1	115

Average Annual Benefit

	Years Disabled							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
<50	13,047	16,193	13,325	0	0	0	0	14,528
50-54	16,860	14,822	14,033	13,457	0	0	0	14,826
55-59	15,976	17,122	14,540	11,969	0	0	0	15,442
60-64	11,498	12,570	20,287	14,974	0	0	0	14,550
65-69	0	0	0	0	19,559	16,504	0	18,032
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	7,054	7,054
80-84	0	0	0	0	0	4,861	0	4,861
85+	0	0	0	0	0	0	0	0
ALL	14,069	15,811	13,939	13,317	19,559	10,683	7,054	14,689

	Total Annual Benefit (actual dollars) by Years Disabled							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	309,518	822,172	376,353	133,170	19,559	21,366	7,054	1,689,235

Correctional Employees Retirement Fund

Reconciliation of Members

		Terminated	
	Actives	Deferred Retirement	Other Non-Vested
A. ON JUNE 30, 2001	3,182	483	220
B. ADDITIONS	415	103	87
C. DELETIONS			
1. Service Retirement	(101)	(11)	0
2. Disability	(18)	(3)	(2)
3. Death	(2)	(2)	0
4. Terminated - Deferred	(96)	0	(1)
5. Terminated - Refund	(82)	(12)	(20)
6. Terminated - Other Non-Vested	(69)	0	0
7. Returned as active	15	(9)	(6)
8. Transferred to Fund	0	0	(11)
D. DATA ADJUSTMENTS	5	1	1
1. Vested	2,207		
2. Non-Vested	1,042		
E. TOTAL ON JUNE 30, 2002	3,249	550	268

	Recipients		
	Retirement Annuitants	Disabled	Survivors
A. ON JUNE 30, 2001	655	92	61
B. ADDITIONS	114	24	10
C. DELETIONS			
1. Service Retirement	0	0	0
2. Death	(21)	(3)	(1)
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	6	2	(1)
E. TOTAL ON JUNE 30, 2002	754	115	69

Correctional Employees Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

July 1, 2002

	Non-Vested	Vested	Total
A. CURRENT ASSETS (Table 1, Line E4)			$ 457,416
B. EXPECTED FUTURE ASSETS			
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			(36,806)
2. Present Value of Future Normal Costs			137,986
3. Total Expected Future Assets			$ 101,180
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$ 558,596
D. CURRENT BENEFIT OBLIGATIONS			
1. Benefit Recipients			
a. Retirement Annuities		$ 140,572	$ 140,572
b. Disability Benefits		24,007	24,007
c. Surviving Spouse and Child Benefits		8,027	8,027
2. Deferred Retirements with Future Augmentation		28,089	28,089
3. Former Members Without Vested Rights		532	532
4. Active Members			
a. Retirement Annuities	$ 4,093	168,618	172,711
b. Disability Benefits	12,638	0	12,638
c. Surviving Spouse and Child Benefits	3,798	0	3,798
d. Deferred Retirements	664	14,061	14,725
e. Refund Liability Due to Death or Withdrawal	0	4,289	4,289
5. Total Current Benefit Obligations	$ 21,193	$ 388,195	$ 409,388
E. EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 175,024
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 584,412
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)			$ (48,028)
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)			$ 25,816

Correctional 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	$ 320,074	$ 97,253	$ 222,821
b. Disability Benefits	22,881	11,342	11,539
c. Survivor's Benefits	6,727	2,688	4,039
d. Deferred Retirements	25,620	13,182	12,438
e. Refunds Due to Death or Withdrawal	7,883	13,521	(5,638)
f. Total	$ 383,185	$ 137,986	$ 245,199
2. Deferred Retirements With Future Augmentation	28,089		28,089
3. Former Members Without Vested Rights	532		532
4. Annuitants in MPRIF	172,606		172,606
5. Recipients Not in MPRIF	0		0
7. Total	$ 584,412	$ 137,986	$ 446,426
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			$ 446,426
2. Current Assets (Table 1, E4)			457,416
3. UAAL (B1-B2)			$ (10,990)
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2032			2,437,465
2. Supplemental Contribution Rate (B3/C1)			-0.45%

Correctional Employees Retirement Fund

Changes in Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

Year Ending June 30, 2002

A. UAAL AT BEGINNING OF YEAR	$	(32,501)
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
1. Normal Cost and Expenses	$	19,404
2. Contributions		(17,132)
3. Interest on A, B1, and B2		(2,666)
4. Total (B1+B2+B3)	$	(394)
C. EXPECTED UAAL AT END OF YEAR (A+B4)	$	(32,895)
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
1. Salary Increases	$	(6,690)
2. Investment Return		11,694
3. MPRIF Mortality		1,071
4. Mortality of Other Benefit Recipients		0
5. Other Items		9,225
6. Total	$	15,300
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	$	(17,595)
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		6,605
H. UAAL AT END OF YEAR (E+F+G)	$	(10,990)

Correctional Employees Retirement Fund

Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2002

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 352		
1. Employee Contributions	5.69%	$ 7,467
2. Employer Contributions	7.98%	10,472
3. Total	13.67%	$ 17,939
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	10.84%	$ 14,221
b. Disability Benefits	1.24%	1,632
c. Survivors	0.27%	349
d. Deferred Retirement Benefits	1.31%	1,721
e. Refunds Due to Death or Withdrawal	1.31%	1,723
f. Total	14.97%	$ 19,646
2. Supplemental Contribution Amortization by July 1, 2032 of UAAL	-0.45%	(591)
3. Allowance for Expenses	0.21%	276
4. Total	14.73%	$ 19,331
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	-1.06%	(1,392)

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: $ 131,232

Correctional Employees Retirement Fund

Summary of Actuarial Assumptions and Methods

Interest:	**Pre-Retirement**: 8.5% per annum **Post-Retirement**: 8.5% per annum
Benefit Increases After Retirement:	Payment of earnings on retired reserves in excess of 6% accounted for by using a 6% post-retirement assumption.
Salary Increases:	Reported salary at valuation date increased according to the rate table on pages 18 and 19 to current fiscal year and annually for each future year. Prior fiscal year salary is annualized for new Members.
Mortality:	**Pre-Retirement**: Male - 1983 GAM (Males -1) Female - 1983 GAM (Females) **Post-Retirement**: Male - 1983 GAM (Males +2) Female - 1983 GAM (Females +2) **Post-Disability**: Male - Combined Annuity Mortality Table Female - Combined Annuity Mortality Table
Retirement Age:	Age-related table as follows:

Ages:	50-53	2%
	54	20
	55	60
	56-61	20
	62-64	50
	65+	100

Separation:	Graded rates based on actual experience developed by the June 30, 1997 experience analysis. 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 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. The actuarial cost method was changed as of July 1, 1997 to permit negative amortization of supplemental contribution surpluses.
Asset Valuation Method:	Market Value 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 that 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 5% 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.

Correctional Employees 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

Correctional Employees 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	2,000	2,000	5.2826
55	57	25	140	330	88	88	6,000	6,000	5.25
56	61	28	120	290	98	98	2,000	2,000	5.25
57	66	31	100	230	108	108	2,000	2,000	5.25
58	71	34	70	170	118	118	2,000	2,000	5.25
59	77	38	40	90	129	129	2,000	2,000	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	5,000	5,000	5.25
63	111	58	0	0	0	0	5,000	5,000	5.25
64	124	64	0	0	0	0	5,000	5,000	5.25
65	129	71	0	0	0	0	10,000	10,000	5.25
66	156	78	0	0	0	0	0	0	5.25
67	176	87	0	0	0	0	0	0	5.25
68	198	97	0	0	0	0	0	0	5.25
69	222	109	0	0	0	0	0	0	5.25
70	248	124	0	0	0	0	0	0	5.25

Correctional 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:	State employees in covered correctional service.
Contributions:	
Member:	5.69% of salary.
Employer:	7.98% of salary.
Allowable Service:	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 under the Correctional and General Plans. Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.
Amount:	2.4% 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 by 2/10% per month for each month that the Member is under age 55.
Form of Payment:	Life annuity. Actuarially equivalent options are: 50% or 100% joint and survivor with bounce back feature without additional reduction. 15 year certain and life benefits. Level Social Security option either to age 62 or Social Security Retirement Age.
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:	50% of Average Salary plus 2.4% of Average Salary for each year in excess of 20 years and 10 months of Allowable Service (pro rata for completed months). Maximum of 75% of Average Salary.

Payment begins at disability and stops at age 65 or the five-year anniversary of the effective date of the disability benefit, whichever is later. Payments stop 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 Correctional service and disability not related to covered employment.

Amount: Normal Retirement Benefit based on Allowable Service (minimum of 15 years) and Average Salary at disability.

Payment begins at disability and ends at age 65 or the five-year anniversary of the effective date of the disability benefit, whichever is later. Payments stop 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 MSRS to provide same increase as MPRIF.

***Retirement Benefits*:**

Eligibility: Age 62 with continued disability.

Amount: Benefit computed as a normal retirement benefit under General Plan based on same Allowable Service and without reduction for age.

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 a former Member dies before age 55 and has less than 30 years of Allowable Service, benefits commence when the former Member would have been age 55. 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 55, the appropriate early retirement formula described above applies except that one-half the monthly reduction factor is used from age 55 to the commencement age and the Rule of 90 does not apply. 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 MSRS to provide same income 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 5% interest if death occurred before May 16, 1989 and 6% interest if death occurred on or after May 16, 1989.

TERMINATION

***Refund of Contributions*:**

Eligibility:	Termination of state 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 Correctional and General Service.
Amount:	Benefit computed under law in effect at termination.

SIGNIFICANT CHANGES

No significant changes in plan provisions were recognized for this valuation.

Correctional 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	$ 105,925	$ 112,171	$ 6,246	94.43%	$ 43,429	14.38%
07/01/92	121,051	123,515	2,464	98.01%	47,592	5.18%
07/01/93	135,939	134,280	(1,659)	101.24%	52,122	-3.18%
07/01/94	148,163	152,702	4,539	97.03%	54,673	8.30%
07/01/95	165,427	153,491	(11,936)	107.78%	66,939	-17.83%
07/01/96	193,833	170,959	(22,874)	113.38%	72,959	-31.35%
07/01/97	241,916	212,638	(29,278)	113.77%	112,408	-26.05%
07/01/98	295,291	261,869	(33,422)	112.76%	105,796	-31.59%
07/01/99	335,408	307,408	(28,000)	109.11%	106,131	-26.38%
07/01/00	386,964	359,885	(27,079)	107.52%	112,587	-24.05%
07/01/01	431,134	398,633	(32,501)	108.15%	120,947	-26.87%
07/01/02	457,416	446,426	(10,990)	102.46%	124,373	-8.84%

Correctional Employees Retirement Fund

Schedule of Employer Contributions

(dollars in thousands)

July 1, 2002

Year Ended June 30	Required Contribution Rate (A)	Actual Covered Payroll (B)	Actual Member Contributions (C)	Annual Required Contributions [(A)*(B)]-(C)	Actual Employer Contributions[1]	Percentage Contributed
1991	10.73%	$ 43,429	$ 2,128	$ 2,532	$ 2,731	107.86%
1992	10.82%	47,592	2,332	2,817	2,955	104.90%
1993	11.41%	52,122	2,554	3,393	3,217	94.81%
1994	10.97%	54,673	2,679	3,319	3,355	101.08%
1995	11.30%	66,939	3,280	4,284	4,195	97.92%
1996	11.11%	72,959	3,575	4,531	4,559	100.62%
1997	11.21%	112,408	5,508	7,093	9,129	128.70%
1998	12.49%	105,796	5,954	7,260	8,146	112.20%
1999	12.99%	106,131	6,378	7,408	8,172	110.31%
2000	13.66% [2]	112,587	6,526	8,853	8,984	101.48%
2001	13.72% [3]	120,947	6,996	9,598	9,652	100.56%
2002	13.81%	124,373	7,207	9,969	9,925	99.56%
2003	14.73% [4]					

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

[2] Actuarially Required Contribution Rate calculated according to parameters of GASB 25 using a 30-year amortization of the negative unfunded accrued liability.

[3] Actuarially Required Contribution Rate Prior to change in Asset Valuation Method is 13.34%

[4] Actuarially Required Contribution Rate Prior to change in Actuarial Assumptions is 14.46%

Legislators Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 2002

MILLIMAN USA

A MILLIMAN GLOBAL FIRM

Milliman USA

Consultants and Actuaries

15800 Bluemound Road, Suite 400
Brookfield, WI 53005-6069
Tel +1 262 784.2250
Fax +1 262 784.7287
www.milliman.com

November 21, 2002

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

RE: Legislators 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 Minnesota State Retirement System.

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

Legislators Retirement Fund

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Legislators Retirement Fund

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(Continued)

Legislators Retirement Fund

Report Highlights

(dollars in thousands)

	07/01/01 Valuation	07/01/02 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 3A % of Payroll	9.00%	9.00%
2. Required Contributions - Chapter 356 % of Payroll	60.14%	63.12%
3. Sufficiency (Deficiency)	(51.14%)	(54.12%)
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$ 42,608	$ 45,501
b. Current Benefit Obligations (Table 8)	$ 72,588	$ 76,203
c. Funding Ratio	58.70%	59.71%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$ 42,608	$ 45,501
b. Actuarial Accrued Liability (Table 9)	$ 75,072	$ 78,070
c. Funding Ratio	56.76%	58.28%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$ 48,265	$ 50,398
b. Current and Expected Future Benefit Obligations	$ 80,729	$ 82,967
c. Funding Ratio	59.79%	60.74%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	139	134
b. Projected Annual Earnings	$ 5,646	$ 5,284
c. Average Annual Earnings (Projected $)	$ 40,622	$ 39,433
d. Average Age	54.6	55.5
e. Average Service	13.0	13.3
2. Others		
a. Service Retirements (Table 4)	226	230
c. Survivors (Table 5)	67	67
b. Disability Retirements (Table 6)	0	0
d. Deferred Retirements (Table 7)	102	97
e. Terminated Other Non-Vested (Table 7)	6	5
f. Total	401	399

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 59.71%. The corresponding ratio for the prior year was 58.70%.
- 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 58.28%, which is an increase from the 2001 value of 56.76%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 60.74% shows that the current statutory contributions are inadequate.

Asset Information (Tables 1 and 2)

While Minnesota Statutes have changed the specified method for determination of "Current Assets," the new smoothing methodology is not applicable to this plan.

This plan has only two reported assets – MPRIF reserves and receivable non-segregated member deposits. Each of these assets is valued on an "as reported" basis.

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 5.00% 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 deficiency since the Statutory Contribution Rate is 9.00% compared to the Required Contribution Rate of 63.12%.

Changes in Actuarial Assumptions

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

There were no significant changes in plan provisions since the last valuation.

Legislators 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	$ 0	$ 0
2. Fixed Income	0	0
3. Equity	0	0
4. Real Estate	0	0
5. Equity in MPRIF	37,816	37,816
6. Other	8,376	8,376
Subtotal	$ 46,192	$ 46,192
B. ASSETS RECEIVABLE	-	-
C. LIABILITIES	(691)	(691)
D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
1. MPRIF Reserves	37,816	37,816
2. Member Reserves	7,093	7,093
3. Other Non-MPRIF Reserves	592	592
4. Total Assets Available for Benefits	$ 45,501	$ 45,501

E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Market Value of Assets Available for Benefits (D4)		$ 45,501
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2002	0	
b. June 30, 2001	0	
b. June 30, 2000	0	
c. June 30, 1999	0	
3. UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) +.1 * 2(d)		0
4. Actuarial Value of Assets (E1-E3) (Same as "Current Assets")		$ 45,501

Legislators 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	$ 6,302	$ 36,306	$ 42,608
B.	ADDITIONS			
	1. Member Contributions	$ 458	$0	$ 458
	2. Employer Contributions	4,135	0	4,135
	3. Contributions From Other Sources	0	0	0
	4. MPRIF Income	0	3,640	3,640
	5. Net Investment Income			
	a. Interest and Dividends	0	0	0
	b. Net Appreciation/(Depreciation)	0	0	0
	c. Investment Expenses	0	0	0
	d. Net Subtotal	0	0	-
	6. Other	0	0	0
	7. Total Additions	$ 4,593	$ 3,640	$ 8,233
C.	OPERATING EXPENSES			
	1. Service Retirements	$ 608	$ 4,635	$ 5,243
	2. Disability Benefits	0	0	0
	3. Survivor Benefits	0	0	0
	4. Refunds	39	0	39
	5. Administrative Expenses	29	0	29
	6. Other	29	0	29
	7. Total Disbursements	$ 705	$ 4,635	$ 5,340
D.	OTHER CHANGES IN RESERVES			
	1. Annuities Awarded	(1,843)	1,843	0
	2. Mortality Gain (Loss)	(662)	662	0
	3. Total Other Changes	(2,505)	2,505	0
E.	ASSETS AVAILABLE AT END OF PERIOD	$ 7,685	$ 37,816	$ 45,501
F.	DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN			
	1. Average Balance			
	(a) Non-MPRIF Assets Available at Beginning of Period Less Non-Segregated Member Deposits			0
	(b) Non-MPRIF Assets Available at End of Period* Less Non-Segregated Member Deposits			0
	(c) Average Balance {[F1.a+F21.b-B5.d-B6]/2}			0
	2. Expected Return: .085*F1.c			0
	3. Actual Return			0
	4. Current Year UAR: F3-F2			0

* Before adjustment for MPRIF mortality gain (loss)

Legislators Retirement Plan

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	1	0	0	0	0	0	1
35-39	0	0	5	0	0	0	0	0	5
40-44	0	1	8	4	0	0	0	0	13
45-49	0	0	10	3	1	0	0	0	14
50-54	0	0	14	7	8	2	0	0	31
55-59	0	1	9	4	3	3	4	1	25
60-64	0	0	9	1	6	1	3	1	21
65+	0	0	7	5	3	2	6	1	24
ALL	0	2	63	24	21	8	13	3	134

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	38,797	0	0	0	0	0	38,797
35-39	0	0	38,025	0	0	0	0	0	38,025
40-44	0	36,461	36,760	37,862	0	0	0	0	37,076
45-49	0	0	37,560	37,727	36,046	0	0	0	37,488
50-54	0	0	37,406	36,640	37,375	37,993	0	0	37,263
55-59	0	37,357	37,315	37,898	37,618	38,251	37,945	38,071	37,690
60-64	0	0	36,877	37,357	38,070	38,797	37,781	38,797	37,553
65+	0	0	37,795	37,946	37,837	38,599	37,793	38,797	37,940
ALL	0	36,909	37,374	37,491	37,611	38,342	37,837	38,555	37,554

	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	73	2,354	899	789	306	491	115	5,032

Legislators Retirement Plan

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	4	8	0	0	0	0	0	12
60-64	2	26	1	0	0	0	0	29
65-69	0	17	28	0	0	0	0	45
70-74	2	5	29	24	0	0	0	60
75-79	0	1	12	3	29	0	0	45
80-84	0	0	0	1	5	16	0	22
85+	0	0	0	1	1	4	11	17
ALL	8	57	70	29	35	20	11	230

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	11,673	8,317	0	0	0	0	0	9,436
60-64	14,431	15,102	23,282	0	0	0	0	15,338
65-69	0	20,225	20,620	0	0	0	0	20,471
70-74	18,483	21,771	23,148	19,791	0	0	0	21,535
75-79	0	11,407	21,077	13,504	19,617	0	0	19,416
80-84	0	0	0	34,826	24,179	22,086	0	23,141
85+	0	0	0	11,551	36,377	43,310	16,870	23,926
ALL	14,065	16,198	21,784	19,375	20,748	26,331	16,870	19,830

Total Annual Benefit (in thousands) by Years Retired

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	112	923	1,524	561	726	526	185	4,560

Legislators Retirement Plan

Survivors as of June 30, 2002

	Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
<50	1	2	0	0	0	0	0	3
50-54	0	1	0	0	0	0	0	1
55-59	2	0	0	0	0	0	0	2
60-64	0	2	1	1	1	2	0	7
65-69	0	2	1	1	0	0	0	4
70-74	0	2	5	2	0	0	2	11
75-79	0	0	3	4	0	2	1	10
80-84	0	2	1	3	1	0	2	9
85+	0	2	6	6	0	1	5	20
ALL	3	13	17	17	2	5	10	67

Average Annual Benefit

	Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
<50	2,420	1,369	0	0	0	0	0	1,719
50-54	0	5,476	0	0	0	0	0	5,476
55-59	18,880	0	0	0	0	0	0	18,880
60-64	0	15,001	8,989	7,619	44,917	18,181	0	18,270
65-69	0	31,515	1,808	10,651	0	0	0	18,872
70-74	0	4,033	13,960	10,237	0	0	11,271	10,989
75-79	0	0	23,467	5,168	0	8,205	20,206	12,769
80-84	0	8,739	7,281	10,424	6,646	0	4,408	7,944
85+	0	16,552	11,884	13,474	0	17,307	10,790	12,826
ALL	13,393	12,300	13,505	10,090	25,782	14,016	10,551	12,364

	Total Annual Benefit (actual dollars) by Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	40,179	159,900	229,585	171,530	51,564	70,080	105,510	828,388

Legislators Retirement Plan

Disability Retirements as of June 30, 2002

Age	Years Disabled ≤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	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	0	0	0	0	0	0	0	0

Average Annual Benefit

Age	Years Disabled ≤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	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	0	0	0	0	0	0	0	0

Total Annual Benefit (in thousands) by Years Disabled

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	0	0	0	0	0	0	0	0

Legislators Retirement Fund
Reconciliation of Members

	Actives	Terminated: Deferred Retirement	Terminated: Other Non-Vested
A. ON JUNE 30, 2001	139	102	6
B. ADDITIONS	0	1	0
C. DELETIONS			
1. Service Retirement	(2)	(6)	0
2. Disability	0	0	0
3. Death	(2)	(2)	0
4. Terminated - Deferred	(1)	0	0
5. Terminated - Refund	0	0	0
6. Terminated - Other Non-Vested	0	0	0
7. Returned as active	0	0	0
8. Transferred to Fund	0	0	(1)
D. DATA ADJUSTMENTS	0	2	0
1. Vested	114		
2. Non-Vested	20		
E. TOTAL ON JUNE 30, 2002	134	97	5

	Recipients: Retirement Annuitants	Recipients: Disabled	Recipients: Survivors
A. ON JUNE 30, 2001	226	0	67
B. ADDITIONS	8	0	3
C. DELETIONS			
1. Service Retirement	0	0	0
2. Death	(6)	0	(5)
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	2	0	2
E. TOTAL ON JUNE 30, 2002	230	0	67

Legislators Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

July 1, 2002

A. CURRENT ASSETS (Table 1, Line E4)				$ 45,501
B. EXPECTED FUTURE ASSETS				
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)				0
2. Present Value of Future Normal Costs				4,897
3. Total Expected Future Assets				$ 4,897
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				$ 50,398
D. CURRENT BENEFIT OBLIGATIONS		Non-Vested	Vested	Total
1. Benefit Recipients				
a. Retirement Annuities			$ 42,558	$ 42,558
b. Disability Benefits			0	0
c. Surviving Spouse and Child Benefits			6,933	6,933
2. Deferred Retirements with Future Augmentation			10,704	10,704
3. Former Members Without Vested Rights			75	75
4. Active Members				
a. Retirement Annuities		$ 685	13,708	14,393
b. Disability Benefits		0	0	0
c. Surviving Spouse and Child Benefits		182	0	182
d. Deferred Retirements		127	1,197	1,324
e. Refund Liability Due to Death or Withdrawal		0	34	34
5. Total Current Benefit Obligations		$ 994	$ 75,209	$ 76,203
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				$ 6,764
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				$ 82,967
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)				$ 30,702
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)				$ 32,569

Legislators 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	$ 20,332	$ 3,500	$ 16,832
b. Disability Benefits	0	0	0
c. Survivor's Benefits	266	114	152
d. Deferred Retirements	2,049	899	1,150
e. Refunds Due to Death or Withdrawal	50	384	(334)
f. Total	$ 22,697	$ 4,897	$ 17,800
2. Deferred Retirements With Future Augmentation	10,704		10,704
3. Former Members Without Vested Rights	75		75
4. Annuitants in MPRIF	37,816		37,816
5. Recipients Not in MPRIF	11,675		11,675
7. Total	$ 82,967	$ 4,897	$ 78,070

B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)	
1. AAL (A6)	$ 78,070
2. Current Assets (Table 1, E4)	45,501
3. UAAL (B1-B2)	$ 32,569
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE	
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2021	72,685
2. Supplemental Contribution Rate (B3/C1)	44.81%

Note: If non-segregated member reserves were not counted as assets, the UAAL would be $40,945, resulting in a Supplemental Contribution Rate of 56.33%.

Legislators Retirement Fund

Changes in Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

Year Ending June 30, 2002

A. UAAL AT BEGINNING OF YEAR	$	32,464
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
1. Normal Cost and Expenses	$	1,035
2. Contributions		(4,593)
3. Interest on A, B1, and B2		2,608
4. Total (B1+B2+B3)	$	(950)
C. EXPECTED UAAL AT END OF YEAR (A+B4)	$	31,514
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
1. Salary Increases	$	(1,595)
2. Investment Return		623
3. MPRIF Mortality		662
4. Mortality of Other Benefit Recipients		(667)
5. Other Items		(455)
6. Total	$	(1,432)
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	$	30,082
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		2,487
H. UAAL AT END OF YEAR (E+F+G)	$	32,569

Legislators Retirement Fund

Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2002

	Percent of Payroll	Dollar Amount	
A. STATUTORY CONTRIBUTIONS - CHAPTER 3A			
1. Employee Contributions	9.00%	$	476
2. Employer Contributions *	0.00%		0
3. Total	9.00%	$	476

* Employer contributions are required to cover the portion of the benefit liabilities which are not funded by the member's accumulated contribution at the time of the benefit commencement.

	Percent of Payroll	Dollar Amount	
B. REQUIRED CONTRIBUTIONS - CHAPTER 356			
1. Normal Cost			
a. Retirement Benefits	13.47%	$	712
b. Disability Benefits	0.00%		0
c. Survivors	0.49%		26
d. Deferred Retirement Benefits	2.55%		135
e. Refunds Due to Death or Withdrawal	1.29%		68
f. Total	17.80%	$	941
2. Supplemental Contribution Amortization by July 1, 2031 of UAAL	44.81%		2,368
3. Allowance for Expenses	0.51%		27
4. Total	63.12%	$	3,336
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	-54.12%		(2,860)

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: $ 5,284

The deficiency amount shown above is calculated based on reported assets which include a receivable of $8,376 for member contributions that are held in the State's general fund. If this amount was not considered as an asset of the fund in these calculations, the deficiency would be 65.64%.

Legislators Retirement Fund

Summary of Actuarial Assumptions and Methods

GENERAL

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 using a 6% post-retirement assumption. For those not yet in pay status, a 5% post-retirement interest rate is used to account for the one-time adjustment applicable at retirement.

Salary Increases: 5.0% annually

Mortality: **Pre-Retirement**:
Male - 1983 GAM (Males -4)
Female - 1983 GAM (Females -2)

Post-Retirement:
Male - 1983 GAM (Males)
Female - 1983 GAM (Females)

Post-Disability:
Male - N/A
Female - N/A

Retirement Age: Age 62 or if over age 62, one year from valuation date.

Separation: Rates based on years of service.

Year	House	Senate
1	0%	0%
2	30	0
3	0	0
4	20	25
5	0	0
6	10	0
7	0	0
8	5	10

Disability:	None
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 administration 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 Members are assumed to be married. Female is three years younger than male. Each Member may have up to two dependent children depending on Member's age. Assumed first child born at Member's age 28 and second child born at member's age 31.
Social Security:	N/A
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method based on earnings and the date the employee entered the plan is applied to all plan benefits. Under this method, actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability.
Asset Valuation Method:	Since the only assets of this plan are MPRIF assets plus non-segregated member deposits identified as receivables of the plan, all assets are valued on an "as reported" basis.
Payment on the Unfunded Actuarial Accrued Liability:	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 5.0% 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.

Legislators 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: Members of the State Legislature elected to office before July 1, 1997 and who elect to retain coverage under this plan (i.e., do not elect Social Security coverage.) A Member of PERA who is elected to the Legislature may elect to remain a Member of PERA and receive credit under PERA for service as a legislator.

Contributions:

Member: 9% of salary.

Employer: No specified statutory contribution rate. State must contribute an amount equal to the full annuity value at benefit commencement less accumulated member contributions.

Service: Granted for the full term unless termination occurs before the end of the term. Service during all or part of four regular legislative sessions is deemed to be eight years of service.

Salary: Compensation received for service as a Member of the legislature. Salary includes the monthly compensation paid to a legislator and the per diem payments paid during a regular or special session. Salary does not include additional compensation attributable to a leadership position.

Average Salary: Average of the five highest successive years of salary.

RETIREMENT

Normal Retirement Benefit:

Eligibility: Age 62 and either six full years of service or service during all or part of four regular legislative sessions. For eligibility purposes, service does not include credit for time not served when a Member does not serve a full term of office.

Amount: A percentage of Average Salary for each year of service as follows:

Prior to 1/1/79	- 5% for the first eight years - 2.5% for subsequent years
After 12/31/78 and Before 7/1/97	- 2.5%
After 6/30/97	- 2.5% actuarially increased for 6.0% post-retirement factor

***Early Retirement Benefit*:**

Eligibility: Age 60 and either six full years of Service or Service during all or part of four regular legislative sessions.

Amount: Normal Retirement Benefit based on service and Average Salary at retirement date assuming augmentation to age 62 at 3% per year and actuarial reduction for each month the Member is under age 62.

Form of Payment: Paid as a joint and survivor annuity to Member, spouse and dependent children. Combined service annuitants with less than six years of Legislator service may elect 100% joint and survivor bounceback annuity or a term certain and life annuity on an actuarially equivalent basis.

Benefit Increases: Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF).

DISABILITY

None

DEATH BENEFITS

***Surviving Spouse Benefit*:**

Eligibility: Death while active, or after termination if service requirements for a Normal Retirement Benefit are met but payments have not begun.

Amount: Survivor's payments of 50% of the retirement benefit of the Member assuming the Member had attained normal retirement age and had a minimum of eight years of service. Benefit is paid for life. A former Member's benefit is augmented as a Deferred Annuity to date of death before determining the portion payable to the spouse. If the legislator was at least age 60 at death, the surviving spouse may elect an optional joint and survivor annuity. If a deferred benefit was not eligible to be in pay status before July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

Surviving Dependent Children's Benefit:

Eligibility: Same as spouse's benefit.

Amount: Benefit for first child is 25% of the retirement benefit (computed as for surviving spouse) with 12.5% for each additional child. Maximum payable (including spouse) is 100% of the retirement benefit. Benefits cease when a child marries or attains age 18 (22 if a full-time student).

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

Refund of Contributions:

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

Amount: Member's contributions without interest.

TERMINATION

Refund of Contributions:

Eligibility: Termination of 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.

***Deferred Benefit*:**

Eligibility:	Same service requirement as for Normal Retirement.
Amount:	Benefit computed under law in effect at termination and increased by the following annual percentage: 0% before 7/1/73; 5% from 7/1/73 to 1/1/81; and 5% thereafter until the annuity begins. For Members who terminated prior to July 1, 1997 but were not eligible to commence their pensions before July 1, 1997, the benefit shall be increased to reflect the actuarial equivalent change in post-retirement interest rate from 5% to 6%. Amount is payable as a normal or early retirement.

SIGNIFICANT CHANGES

No significant changes in plan provisions were recognized for this valuation.

Legislators 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	$ 14,694	$ 30,403	$ 15,709	48.33%	$ 7,078	221.94%
07/01/92	15,160	33,224	18,064	45.63%	6,556	275.53%
07/01/93	17,169	36,801	19,632	46.65%	7,322	268.12%
07/01/94	18,738	45,448	26,710	41.23%	6,589	405.37%
07/01/95	21,213	50,255	29,042	42.21%	7,056	411.59%
07/01/96	22,532	54,225	31,693	41.55%	6,267	505.71%
07/01/97	25,678	60,055	34,377	42.76%	7,767	442.60%
07/01/98	31,212	62,928	31,716	49.60%	6,802	466.27%
07/01/99	33,474	66,418	32,944	50.40%	7,490	439.84%
07/01/00	37,265	69,364	32,099	53.72%	5,808	552.67%
07/01/01	42,608	75,072	32,464	56.76%	5,858	554.18%
07/01/02	45,501	78,070	32,569	58.28%	5,089	639.99%

Legislators 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
1991	32.62%	$ 7,078	$ 637	$ 1,672	$ 1,889	112.98%
1992	27.67%	6,556	590	1,224	601	49.10%
1993	30.49%	7,322	659	1,573	2,284	145.20%
1994	31.12%	6,589	593	1,457	1,618	111.05%
1995	38.34%	7,056	635	2,070	2,938	141.93%
1996	41.54%	6,267	564	2,039	1,511	74.10%
1997	43.96%	7,767	699	2,715	3,176	116.98%
1998	48.03%	6,802	612	2,655	5,199	195.82%
1999	47.19%	7,490	674	2,861	2,091	73.09%
2000	52.72%	5,808	523	2,539	3,192	125.72%
2001	47.26%	5,858	527	2,241	5,039	224.85%
2002	60.14%	5,089	458	2,603	4,135	158.86%
2003	63.12% (2)					

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

(2) Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 61.36%.

Elective State Officers Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 2002

MILLIMAN USA

A MILLIMAN GLOBAL FIRM

Milliman USA

Consultants and Actuaries

15800 Bluemound Road, Suite 400
Brookfield, WI 53005-6069
Tel +1 262 784.2250
Fax +1 262 784.7287
www.milliman.com

November 21, 2002

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

RE: Elective State Officers 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 Minnesota State Retirement System.

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

Elective State Officers Retirement Fund

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Elective State Officers Retirement Fund

Report Highlights

(dollars in thousands)

	07/01/01 Valuation	07/01/02 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 352C	0	0 [1]
% of Payroll		
2. Required Contributions - Chapter 356	371	412 [1]
% of Payroll		
3. Sufficiency (Deficiency)	(371)	(412) [1]
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$ 201	$ 201
b. Current Benefit Obligations (Table 8)	$ 3,775	$ 4,075
c. Funding Ratio	5.32%	4.93%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$ 201	$ 201
b. Actuarial Accrued Liability (Table 9)	$ 3,775	$ 4,075
c. Funding Ratio	5.32%	4.93%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$ 201	$ 201
b. Current and Expected Future Benefit Obligations	$ 3,775	$ 4,075
c. Funding Ratio	5.32%	4.93%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	0	0
b. Projected Annual Earnings	$ 0	$ 0
c. Average Annual Earnings (Projected $)	$ 0	$ 0
d. Average Age	0.0	0.0
e. Average Service	0.0	0.0
2. Others		
a. Service Retirements (Table 4)	8	8
c. Survivors (Table 5)	5	5
b. Disability Retirements (Table 6)	0	0
d. Deferred Retirements (Table 7)	4	4
e. Terminated Other Non-Vested (Table 7)	0	0
f. Total	17	17

[1] These amounts are in thousands of dollars.

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 4.93%. The corresponding ratio for the prior year was 5.32%.
- 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 4.93%, which is a decrease from the 2001 value of 5.32%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 4.93% shows that the current statutory contributions are inadequate.

Asset Information (Tables 1 and 2)

The only assets of this plan are non-segregated member contributions. These assets are shown on an "as reported" basis. No asset smoothing methodology would be appropriate.

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. Since this plan has no active members, the costs are shown as level dollar amounts.

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 each year.

Source of Actuarial Gains and Losses (Table 10)

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

Contribution Sufficiency (Table 11)

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

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

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

Table 11 shows the Plan has a contribution deficiency since the Statutory Contribution Amount is $0 compared to the Required Contribution Amount of $412,000.

Changes in Actuarial Assumptions

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

There were no significant changes in plan provisions since the last valuation.

Elective State Officers 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	$ 0	$ 0
2. Fixed Income	0	0
3. Equity	0	0
4. Real Estate	0	0
5. Equity in MPRIF	0	0
6. Other	202	202
Subtotal	$ 202	$ 202
B. ASSETS RECEIVABLE	0	0
C. LIABILITIES	(1)	(1)
D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
1. MPRIF Reserves	0	0
2. Member Reserves	194	194
3. Other Non-MPRIF Reserves	7	7
4. Total Assets Available for Benefits	$ 201	$ 201

E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS

1. Market Value of Assets Available for Benefits (D4)		$ 201
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2002	0	
b. June 30, 2001	0	
b. June 30, 2000	0	
c. June 30, 1999	0	
3. UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) +.1 * 2(d)		0
4. Actuarial Value of Assets (E1-E3)		$ 201
(Same as "Current Assets")		

Elective State Officers 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	$ 201	0	$ 201
B. ADDITIONS			
1. Member Contributions	0	0	0
2. Employer Contributions	354	0	354
3. Contributions From Other Sources	0	0	0
4. MPRIF Income	0	0	0
5. Net Investment Income			
a. Interest and Dividends	0	0	0
b. Net Appreciation/(Depreciation)	0	0	0
c. Investment Expenses	0	0	0
d. Net Subtotal	0	0	0
6. Other	0	0	0
7. Total Additions	$ 354	0	$ 354
C. OPERATING EXPENSES			
1. Service Retirements	$ 353	0	$ 353
2. Disability Benefits	0	0	0
3. Survivor Benefits	0	0	0
4. Refunds	0	0	0
5. Administrative Expenses	1	0	1
6. Other	0	0	0
7. Total Disbursements	$ 354	0	$ 354
D. OTHER CHANGES IN RESERVES			
1. Annuities Awarded	0	0	0
2. Total Other Changes	0	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	$ 201	0	$ 201

F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN	
1. Average Balance	
(a) Non-MPRIF Assets Available at Beginning of Period Less Non-Segregated Member Deposits	0
(b) Non-MPRIF Assets Available at End of Period* Less Non-Segregated Member Deposits	0
(c) Average Balance {[F1.a+F21.b-B5.d-B6]/2}	0
2. Expected Return: .085*F1.c	0
3. Actual Return	0
4. Current Year UAR: F3-F2	0

Elective State Officers Retirement Plan

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	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	0	0
55-59	0	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0
ALL	0	0	0	0	0	0	0	0	0

Average Annual Earnings

Age	Years of Service ≤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	0	0
55-59	0	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0
ALL	0	0	0	0	0	0	0	0	0

Prior Fiscal Year Earnings (in ACTUAL DOLLARS) 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	0	0

Elective State Officers Retirement Plan

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	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0
65-69	0	2	1	0	0	0	0	3
70-74	0	2	1	2	0	0	0	5
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	4	2	2	0	0	0	8

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	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0
65-69	0	62,021	7,452	0	0	0	0	43,831
70-74	0	21,687	3,361	32,719	0	0	0	22,435
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	41,854	5,407	32,719	0	0	0	30,459

Total Annual Benefit (actual dollars) by Years Retired

Age	<1	1-4	5-9	10-14	15-19	20-24	25+	All
All	0	167,416	10,814	65,438	0	0	0	243,672

Elective State Officers Retirement Plan

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	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0
60-64	0	0	1	0	0	0	0	1
65-69	0	0	0	0	0	0	0	0
70-74	0	0	1	0	0	0	0	1
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	1	1	0	0	1	3
ALL	0	0	3	1	0	0	1	5

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	0	0	0
50-54	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0
60-64	0	0	7,452	0	0	0	0	7,452
65-69	0	0	0	0	0	0	0	0
70-74	0	0	42,947	0	0	0	0	42,947
75-79	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0
85+	0	0	20,118	37,148	0	0	9,340	22,202
ALL	0	0	23,506	37,148	0	0	9,340	23,401

	Total Annual Benefit (actual dollars) by Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	0	0	70,518	37,148	0	0	9,340	117,005

Elective State Officers Retirement Plan

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	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	0	0	0	0	0	0	0	0

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	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	0	0	0	0	0	0	0	0

Total Annual Benefit (in thousands) by Years Disabled

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	0	0	0	0	0	0	0	0

Elective State Officers Retirement Fund
Reconciliation of Members

	Actives	Terminated: Deferred Retirement	Terminated: Other Non-Vested
A. ON JUNE 30, 2001	0	4	0
B. ADDITIONS	0	0	0
C. DELETIONS			
1. Service Retirement	0	0	0
2. Disability	0	0	0
3. Death	0	0	0
4. Terminated - Deferred	0	0	0
5. Terminated - Refund	0	0	0
6. Terminated - Other Non-Vested	0	0	0
7. Returned as active	0	0	0
8. Transferred to Fund	0	0	0
D. DATA ADJUSTMENTS	0	0	0
1. Vested	0		
2. Non-Vested	0		
E. TOTAL ON JUNE 30, 2002	0	4	0

	Recipients: Retirement Annuitants	Recipients: Disabled	Recipients: Survivors
A. ON JUNE 30, 2001	8	0	5
B. ADDITIONS	0	0	0
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	0	0
E. TOTAL ON JUNE 30, 2002	8	0	5

Elective State Officers Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

July 1, 2002

	Non-Vested	Vested	Total
A. CURRENT ASSETS (Table 1, Line E4)			$ 201
B. EXPECTED FUTURE ASSETS			
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			0
2. Present Value of Future Normal Costs			0
3. Total Expected Future Assets			0
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$ 201
D. CURRENT BENEFIT OBLIGATIONS			
1. Benefit Recipients			
a. Retirement Annuities		$ 2,339	$ 2,339
b. Disability Benefits		0	0
c. Surviving Spouse and Child Benefits		857	857
2. Deferred Retirements with Future Augmentation		879	879
3. Former Members Without Vested Rights		0	0
4. Active Members			
a. Retirement Annuities	0	0	0
b. Disability Benefits	0	0	0
c. Surviving Spouse and Child Benefits	0	0	0
d. Deferred Retirements	0	0	0
e. Refund Liability Due to Death or Withdrawal	0	0	0
5. Total Current Benefit Obligations	0	$ 4,075	$ 4,075
E. EXPECTED FUTURE BENEFIT OBLIGATIONS			0
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 4,075
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)			$ 3,874
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)			$ 3,874

Elective State Officers 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	$ 0	$ 0	$ 0
b. Disability Benefits	0	0	0
c. Survivor's Benefits	0	0	0
d. Deferred Retirements	0	0	0
e. Refunds Due to Death or Withdrawal	0	0	0
f. Total	$ 0	$ 0	$ 0
2. Deferred Retirements With Future Augmentation	879		879
3. Former Members Without Vested Rights	0		0
4. Annuitants in MPRIF	0		0
5. Recipients Not in MPRIF	3,196		3,196
7. Total	$ 4,075	$ 0	$ 4,075
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			$ 4,075
2. Current Assets (Table 1, E4)			201
3. UAAL (B1-B2)			$ 3,874
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Current UAAL to be Amortized by July 1, 2020			3,874
2. Supplemental Contribution Amount			411

Note: If non-segregated member reserves were not counted as assets, the UAAL would be $4,076, resulting in a Supplemental Contribution Amount of $432.

Elective State Officers Retirement Fund

Changes in Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

Year Ending June 30, 2002

A. UAAL AT BEGINNING OF YEAR	$	3,574
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
1. Normal Cost and Expenses	$	1
2. Contributions		(354)
3. Interest on A, B1, and B2		289
4. Total (B1+B2+B3)	$	(64)
C. EXPECTED UAAL AT END OF YEAR (A+B4)	$	3,510
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
1. Salary Increases		0
2. Investment Return		17
3. MPRIF Mortality		0
4. Mortality of Other Benefit Recipients		73
5. Other Items		71
6. Total	$	161
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	$	3,671
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		203
H. UAAL AT END OF YEAR (E+F+G)	$	3,874

Elective State Officers Retirement Fund

Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2002

		Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 352C		
1. Employee Contributions	$	0
2. Employer Contributions (1)		0
3. Total	$	0

(1) Employer contributions are required to cover the portion of the benefit liabilities which are not funded by the member's accumulated contribution at the time of the benefit commencement.

B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	$	0
b. Disability Benefits		0
c. Survivors		0
d. Deferred Retirement Benefits		0
e. Refunds Due to Death or Withdrawal		0
f. Total	$	0
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL		411
3. Allowance for Expenses		1
4. Total	$	412
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4] (2)		(412)

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: 0

(2) The deficiency amount shown above is calculated based on reported assets which include a receivable of $202 for member contributions that are held in the State's general fund. If this amount was not considered as an asset of the fund in these calculations, the deficiency would be $433.

Elective State Officers 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 using a 6% post-retirement assumption. For those not yet in pay status, a 5% post-retirement discount rate is used to account for the one-time adjustment applicable at retirement.

Salary Increases: 5.0% annually

Mortality:

Pre-Retirement:
Male - 1983 GAM (Males -4)
Female - 1983 GAM (Females -2)

Post-Retirement:
Male - 1983 GAM (Males)
Female - 1983 GAM (Females)

Post-Disability:
Male - N/A
Female - N/A

Retirement Age: Age 62 or if over age 62, one year from valuation date.

Separation: Rates based on years of service:

Year	Rate
1	0%
2	0
3	0
4	50
5	0
6	0
7	0
8	50

Disability: None

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 administration expenses expressed as percentage of prior year payroll.
Return of Contributions:	All employees withdrawing after eight years of service were assumed to leave their contributions on deposit and receive a deferred annuitant benefit.
Family Composition:	85% of Members are assumed to be married. Female is three years younger than male. Each Member may have up to two dependent children depending on the Member's age. Assume first child born at Member's age 28 and second child born at Member's age 31.
Social Security:	N/A
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method based on earnings and the date the employee entered the plan is applied to all plan benefits. Under this method, Actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability.
Asset Valuation Method:	Only plan assets are non-segregated member contributions which theoretically serve to offset state costs. No market smoothing is applicable.
Payment on the Unfunded Actuarial Accrued Liability:	A level dollar amount each year to the statutory amortization date.

Elective State Officers 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*:** Employment as a "Constitutional Officer" as elected prior to July 1, 1997 and who elect to retain coverage under this plan (i.e., do not elect Social Security coverage).

***Contributions*:**

Member: 9% of salary.

Employer: No specified statutory contribution rate. State must contribute an amount equal to the full annuity value at benefit commencement less accumulated member contributions.

***Allowable Service*:** Service while in an eligible position.

***Salary*:** Salary upon which Elective State Officers Retirement Plan contributions have been made.

***Average Salary*:** Average of the five highest successive years of salary.

RETIREMENT

***Normal Retirement Benefit*:**

Eligibility: Age 62 and eight years of Allowable Service.

Amount: 2.5% of Average Salary for each year of Allowable Service. For Members who were employed as of June 30, 1997 and are still employed on July 1, 1997, an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.

Early Retirement Benefit:

Eligibility: Age 60 and eight years of Allowable Service.

Amount: Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date with reduction of 0.5% for each month the Member is under age 62 at time of retirement.

Form of Payment: Life annuity

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

DISABILITY

None

DEATH

Surviving Spouse Benefit:

Eligibility: Death while active or after retirement or with at least eight years of Allowable Service.

Amount: Survivor's payment of 50% of the retirement benefit of the Member assuming the Member had attained age 62 and had a minimum of eight years of Allowable Service. Benefit is paid for life. A former Member's benefit is augmented the same as a Deferred Annuity to date of death before determining the portion payable to the spouse.

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

Surviving Dependent Child Benefit:

Eligibility: Same as spouse's benefit.

Amount: Benefit for first child is 25% of the retirement benefit (computed as for surviving spouse) with 12.5% for each additional child. Maximum payable (including spouse) is 100% of the retirement benefit. Benefits cease when a child marries or attains age 18 (22 if a full-time student).

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

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

TERMINATION

Refund of Contributions:

Eligibility: Termination of service.

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

Deferred Benefit:

Eligibility: Eight years of Allowable Service.

Amount: Benefit computed under law in effect at termination and increased by the following annual percentage: 0% before 7/1/79; 5% from 7/1/79 to 1/1/81; and 3% until 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%.

SIGNIFICANT CHANGES

No significant changes in plan provisions were recognized for this valuation.

Elective State Officers 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	$ 308	$ 2,249	$ 1,941	13.69%	$ 422	459.95%
07/01/92	334	2,380	2,046	14.03%	378	541.27%
07/01/93	322	2,689	2,367	11.97%	500	473.40%
07/01/94	361	2,848	2,487	12.68%	411	605.11%
07/01/95	378	2,948	2,570	12.82%	422	609.00%
07/01/96	412	2,983	2,571	13.81%	456	563.82%
07/01/97	456	3,214	2,758	14.19%	467	590.58%
07/01/98	500	3,369	2,869	14.84%	461	622.34%
07/01/99	198	3,373	3,175	5.87%	291	1091.07%
07/01/00	199	3,535	3,336	5.63%	0	N/A
07/01/01	201	3,775	3,574	5.32%	0	N/A
07/01/02	201	4,075	3,874	4.93%	0	N/A

Elective State Officers 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
1991	34.84%	$ 422	$ 38	$ 109	$ 40	36.70%
1992	33.28%	378	34	92	111	120.65%
1993	36.23%	500	45	136	88	64.71%
1994	38.64%	411	37	122	164	134.43%
1995	42.00%	422	38	139	165	118.71%
1996	43.58%	456	41	158	151	95.57%
1997	43.49%	467	42	161	167	103.73%
1998	51.07%	461	42	193	175	90.67%
1999	51.66%	291	26	124	40	32.26%
2000	321 [(2)]	0	0	0	306	N/A
2001	340	0	0	0	330	N/A
2002	371	0	0	0	354	N/A
2003	412 [(3)]					

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

[(2)] Shown in thousands of dollars for years after 1999.

[(3)] Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 389.

Judges Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 2002

MILLIMAN USA

A MILLIMAN GLOBAL FIRM

Milliman USA
Consultants and Actuaries

15800 Bluemound Road, Suite 400
Brookfield, WI 53005-6069
Tel +1 262 784.2250
Fax +1 262 784.7287
www.milliman.com

November 21, 2002

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

RE: Judges 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 Minnesota State Retirement System.

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

Judges Retirement Fund

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Judges Retirement Fund

Report Highlights

(dollars in thousands)

	07/01/01 Valuation		07/01/02 Valuation	
A. CONTRIBUTIONS (Table 11)				
1. Statutory Contributions - Chapter 490 % of Payroll		28.50%		28.50%
2. Required Contributions - Chapter 356 % of Payroll		26.72%		26.82%
3. Sufficiency (Deficiency)		1.78%		1.68%
B. FUNDING RATIOS				
1. Accrued Benefit Funding Ratio				
a. Current Assets (Table 1)	$	123,589	$	131,379
b. Current Benefit Obligations (Table 8)	$	158,297	$	164,539
c. Funding Ratio		78.07%		79.85%
2. Accrued Liability Funding Ratio				
a. Current Assets (Table 1)	$	123,589	$	131,379
b. Actuarial Accrued Liability (Table 9)	$	165,244	$	171,921
c. Funding Ratio		74.79%		76.42%
3. Projected Benefit Funding Ratio (Table 8)				
a. Current and Expected Future Assets	$	216,016	$	225,879
b. Current and Expected Future Benefit Obligations	$	208,685	$	218,981
c. Funding Ratio		103.51%		103.15%
C. PLAN PARTICIPANTS				
1. Active Members				
a. Number (Table 3)		292		283
b. Projected Annual Earnings	$	29,874	$	31,057
c. Average Annual Earnings (Projected $)	$	102,309	$	109,742
d. Average Age		54.5		54.1
e. Average Service		10.7		9.9
2. Others				
a. Service Retirements (Table 4)		155		164
c. Survivors (Table 5)		88		87
b. Disability Retirements (Table 6)		4		5
d. Deferred Retirements (Table 7)		14		24
e. Terminated Other Non-Vested (Table 7)		1		1
f. Total		262		281

Judges 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 79.85%. The corresponding ratio for the prior year was 78.07%
- 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 76.42%, which is a decrease from the 2001 value of 74.79%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 103.15% 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.

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 5.00% 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 28.50% compared to the Required Contribution Rate of 26.82%.

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.

Judges 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	$ 3,196	$ 3,196
2. Fixed Income	6,256	6,404
3. Equity	18,542	22,227
4. Real Estate	915	886
5. Equity in MPRIF	98,109	98,109
6. Other	0	0
Subtotal	$ 127,018	$ 130,822
B. ASSETS RECEIVABLE	0	0
C. LIABILITIES	$ (1,586)	$ (1,586)
D. NET ASSETS HELD IN TRUST FOR PENSION BENEFITS		
1. MPRIF Reserves	98,109	98,109
2. Member Reserves	16,243	16,243
3. Other Non-MPRIF Reserves	11,080	14,884
4. Total Assets Available for Benefits	$ 125,432	$ 129,236

E. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Market Value of Assets Available for Benefits (D4)		$ 125,432
2. Unrecognized Asset Returns (UAR)		
a. June 30, 2002	(4,777)	
b. June 30, 2001	(4,168)	
b. June 30, 2000	426	
c. June 30, 1999	2,053	
3. UAR Adjustment: .80 * 2(a) + .60 * 2(b) + .40 * 2(c) +.1 * 2(d)		(5,947)
4. Actuarial Value of Assets (E1-E3)		$ 131,379
(Same as "Current Assets")		

Judges 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	$ 31,558	$ 89,568	$ 121,126
B. ADDITIONS			
1. Member Contributions	$ 2,345	0	$ 2,345
2. Employer Contributions	6,371	0	6,371
3. Contributions From Other Sources	1,998	0	1,998
4. MPRIF Income	0	9,059	9,059
5. Net Investment Income			
a. Interest and Dividends	180	0	180
b. Net Appreciation/(Depreciation)	(2,271)	0	(2,271)
c. Investment Expenses	(39)	0	(39)
d. Net Subtotal	(2,130)	0	(2,130)
6. Other	10	0	10
7. Total Additions	$ 8,594	$ 9,059	$ 17,653
C. OPERATING EXPENSES			
1. Service Retirements	$ 1,998	$ 11,204	$ 13,202
2. Disability Benefits	0	0	0
3. Survivor Benefits	0	0	0
4. Refunds	0	0	0
5. Administrative Expenses	57	0	57
6. Other	88	0	88
7. Total Disbursements	$ 2,143	$ 11,204	$ 13,347
D. OTHER CHANGES IN RESERVES			
1. Annuities Awarded	(9,165)	9,165	0
2. Mortality Gain (Loss)	(1,521)	1,521	0
3. Total Other Changes	(10,686)	10,686	0
E. ASSETS AVAILABLE AT END OF PERIOD	$ 27,323	$ 98,109	$ 125,432

F. DETERMINATION OF CURRENT YEAR UNRECOGNIZED ASSET RETURN	
1. Average Balance	
(a) Non-MPRIF Assets Available at Beginning of Period	31,558
(b) Non-MPRIF Assets Available at End of Period*	28,844
(c) Average Balance {[F1.a+F21.b-B5.d-B6]/2}	31,261
2. Expected Return: .085*F1.c	2,657
3. Actual Return	(2,120)
4. Current Year UAR: F3-F2	$ (4,777)

* Before adjustment for MPRIF mortality gain (loss)

Judges 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	1	2	0	0	0	0	0	0	3
40-44	6	10	7	0	0	0	0	0	23
45-49	3	18	13	5	0	0	0	0	39
50-54	4	15	24	19	9	1	0	0	72
55-59	3	13	15	23	27	6	0	0	87
60-64	1	4	13	11	13	7	0	0	49
65+	0	0	3	2	3	2	0	0	10
ALL	18	62	75	60	52	16	0	0	283

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	113,160	106,275	0	0	0	0	0	0	108,570
40-44	93,627	106,275	106,275	0	0	0	0	0	102,976
45-49	48,601	106,660	109,404	108,724	0	0	0	0	103,373
50-54	64,424	106,737	102,878	107,141	106,865	106,275	0	0	103,216
55-59	93,446	107,342	108,148	107,038	106,269	107,431	0	0	106,595
60-64	60,693	108,009	106,808	108,386	107,883	107,265	0	0	106,670
65+	0	0	110,899	108,931	106,275	106,275	0	0	108,193
ALL	78,858	106,834	106,382	107,521	106,776	107,142	0	0	105,087

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	1,419	6,623	7,978	6,451	5,552	1,714	0	0	29,739

Judges 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	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0
60-64	6	5	0	0	0	0	0	11
65-69	4	13	4	0	0	0	0	21
70-74	6	12	25	2	0	0	0	45
75-79	0	2	19	19	2	0	0	42
80-84	0	0	1	12	8	1	0	22
85+	0	0	0	0	11	9	3	23
ALL	16	32	49	33	21	10	3	164

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	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0
60-64	39,176	41,913	0	0	0	0	0	40,420
65-69	56,131	54,187	70,537	0	0	0	0	57,672
70-74	46,678	37,951	65,581	70,720	0	0	0	55,921
75-79	0	67,537	64,678	64,088	60,646	0	0	64,355
80-84	0	0	120,289	61,410	63,926	52,356	0	64,590
85+	0	0	0	0	75,054	83,363	59,589	76,288
ALL	46,228	47,015	66,752	63,516	69,443	80,262	59,589	61,285

Total Annual Benefit (in thousands) by Years Retired

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	739	1,504	3,270	2,096	1,458	802	178	10,050

Judges 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	1	0	0	0	0	0	1
50-54	0	0	2	0	2	0	0	4
55-59	0	2	0	1	1	0	0	4
60-64	0	0	2	1	0	0	0	3
65-69	0	2	1	0	1	0	0	4
70-74	1	0	7	2	0	0	0	10
75-79	2	4	6	3	3	1	5	24
80-84	0	3	2	2	1	0	2	10
85+	0	6	4	3	0	3	11	27
ALL	3	18	24	12	8	4	18	87

Average Annual Benefit

	Years Since Death							
Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
<50	0	23,199	0	0	0	0	0	23,199
50-54	0	0	38,030	0	45,897	0	0	41,964
55-59	0	36,465	0	39,544	68,242	0	0	45,179
60-64	0	0	40,898	39,224	0	0	0	40,340
65-69	0	18,313	62,283	0	37,061	0	0	33,993
70-74	20,085	0	36,312	28,654	0	0	0	33,158
75-79	32,060	28,408	43,531	49,653	44,860	43,111	25,361	37,183
80-84	0	45,071	53,842	33,377	57,052	0	43,985	45,467
85+	0	52,435	36,569	37,690	0	36,461	27,676	36,584
ALL	28,068	38,678	41,228	38,738	48,591	38,124	28,845	37,876

Total Annual Benefit (actual dollars) by Years Since Death

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	84	696	989	464	388	152	519	3,295

Judges 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	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0
65-69	1	0	0	0	0	0	0	1
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	1	1	0	1	3
80-84	0	0	0	0	1	0	0	1
85+	0	0	0	0	0	0	0	0
ALL	1	0	0	1	2	0	1	5

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	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0
65-69	70,713	0	0	0	0	0	0	70,713
70-74	0	0	0	0	0	0	0	0
75-79	0	0	0	65,953	80,735	0	56,280	67,656
80-84	0	0	0	0	109,400	0	0	109,400
85+	0	0	0	0	0	0	0	0
ALL	70,713	0	0	65,953	95,068	0	56,280	76,616

Total Annual Benefit (actual dollars) by Years Disabled

Age	≤1	1-4	5-9	10-14	15-19	20-24	25+	All
All	70,713	0	0	65,953	190,136	0	56,280	383,080

Judges Retirement Fund

Reconciliation of Members

	Actives	Terminated: Deferred Retirement	Terminated: Other Non-Vested
A. ON JUNE 30, 2001	292	14	1
B. ADDITIONS	18	14	0
C. DELETIONS			
1. Service Retirement	(14)	(2)	0
2. Disability	0	(1)	0
3. Death	0	0	0
4. Terminated - Deferred	(14)	0	0
5. Terminated - Refund	0	0	0
6. Terminated - Other Non-Vested	0	0	0
7. Returned as active	1	(1)	0
8. Transferred to Fund	0	0	(1)
D. DATA ADJUSTMENTS	0	0	1
1. Vested	152		
2. Non-Vested	131		
E. TOTAL ON JUNE 30, 2002	283	24	1

	Recipients: Retirement Annuitants	Recipients: Disabled	Recipients: Survivors
A. ON JUNE 30, 2001	155	4	88
B. ADDITIONS	16	1	3
C. DELETIONS			
1. Service Retirement	0	0	0
2. Death	(9)	0	(4)
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	2	0	0
E. TOTAL ON JUNE 30, 2002	164	5	87

Judges Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

July 1, 2002

	Non-Vested	Vested	Total
A. CURRENT ASSETS (Table 1, Line E4)			$ 131,379
B. EXPECTED FUTURE ASSETS			
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			47,440
2. Present Value of Future Normal Costs			47,060
3. Total Expected Future Assets			$ 94,500
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$ 225,879
D. CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
1. Benefit Recipients			
a. Retirement Annuities		$ 82,296	$ 82,296
b. Disability Benefits		2,708	2,708
c. Surviving Spouse and Child Benefits		25,686	25,686
2. Deferred Retirements with Future Augmentation		1,172	1,172
3. Former Members Without Vested Rights		2	2
4. Active Members			
a. Retirement Annuities	$ 2,667	44,025	46,692
b. Disability Benefits	3,123	0	3,123
c. Surviving Spouse and Child Benefits	2,651	0	2,651
d. Deferred Retirements	0	0	0
e. Refund Liability Due to Death or Withdrawal	0	209	209
5. Total Current Benefit Obligations	$ 8,441	$ 156,098	$ 164,539
E. EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 54,442
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$ 218,981
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)			$ 33,160
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)			$ (6,898)

Judges 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	$ 96,498	$ 41,448	$ 55,050
b. Disability Benefits	5,481	2,835	2,646
c. Survivor's Benefits	4,755	2,549	2,206
d. Deferred Retirements	0	0	0
e. Refunds Due to Death or Withdrawal	383	228	155
f. Total	$ 107,117	$ 47,060	$ 60,057
2. Deferred Retirements With Future Augmentation	1,172		1,172
3. Former Members Without Vested Rights	2		2
4. Annuitants in MPRIF	98,109		98,109
5. Recipients Not in MPRIF	12,581		12,581
6. Total	$ 218,981	$ 47,060	$ 171,921
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL (A6)			$ 171,921
2. Current Assets (Table 1, E4)			131,379
3. UAAL (B1-B2)			$ 40,542
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2020			410,739
2. Supplemental Contribution Rate (B3/C1)			9.87%

Judges Retirement Fund

Changes in Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

Year Ending June 30, 2002

A. UAAL AT BEGINNING OF YEAR	$	41,655
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING		
1. Normal Cost and Expenses	$	4,955
2. Contributions		(10,714)
3. Interest on A, B1, and B2		3,296
4. Total (B1+B2+B3)	$	(2,463)
C. EXPECTED UAAL AT END OF YEAR (A+B4)	$	39,192
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED		
1. Salary Increases	$	1,965
2. Investment Return		1,503
3. MPRIF Mortality		1,521
4. Mortality of Other Benefit Recipients		(62)
5. Other Items		(3,848)
6. Total	$	1,079
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D6)	$	40,271
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		271
H. UAAL AT END OF YEAR (E+F+G)	$	40,542

Judges Retirement Fund

Determination of Contribution Sufficiency

(dollars in thousands)

July 1, 2002

	Percent of Payroll		Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 490			
1. Employee Contributions	8.00%	$	2,485
2. Employer Contributions	20.50%		6,367
3. Total	28.50%	$	8,852
B. REQUIRED CONTRIBUTIONS - CHAPTER 356			
1. Normal Cost			
a. Retirement Benefits	14.78%	$	4,589
b. Disability Benefits	0.97%		300
c. Survivors	0.93%		289
d. Deferred Retirement Benefits	0.00%		0
e. Refunds Due to Death or Withdrawal	0.08%		26
f. Total	16.76%	$	5,204
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	9.87%		3,065
3. Allowance for Expenses	0.19%		59
4. Total	26.82%	$	8,328
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	1.68%		524

Note: Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date: $ 31,057

Judges 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 using a 6% post-retirement assumption.
Salary Increases:	5% annually
Mortality:	**Pre-Retirement**: Male - 1983 GAM (Males -4) Female - 1983 GAM (Females -2) **Post-Retirement**: Male - 1983 GAM (Males) Female - 1983 GAM (Females) **Post-Disability**: Male - Combined Annuity Mortality Female - Combined Annuity Mortality
Retirement Age:	Age-related table as follows: Ages: 62-64 10% 65-67 20 68-70 30 71+ 100
Separation:	None
Disability:	Rates adopted by MSRS based on actual experience, most recently adjusted in 1979, 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 administration expenses expressed as percentage of prior year payroll.

***Return of Contributions*:**	N/A
***Family Composition*:**	Marital status as indicated by data. Female is three years younger than male.
***Social Security*:**	N/A
***Actuarial Cost Method*:**	Entry Age Normal Actuarial Cost Method based on earnings and the date the employee entered the plan is applied to all plan benefits. Under this method, Actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability.
Asset Valuation Method:	Market Value less of 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 that 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 5.0% per annum. If there is a negative Unfunded Actuarial Accrued Liability, the surplus amount shall be amortized over 30 years as a level percent of payroll.

Judges Retirement Fund

Summary of Actuarial Assumptions and Methods

Separation Expressed as Number of Occurrences Per 10,000:

	Death		Withdrawal		Disability		Retirement	
Age	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
20	3	2	0	0	0	0	0	0
21	3	2	0	0	0	0	0	0
22	4	2	0	0	0	0	0	0
23	4	2	0	0	0	0	0	0
24	4	2	0	0	0	0	0	0
25	4	2	0	0	0	0	0	0
26	4	2	0	0	0	0	0	0
27	4	3	0	0	0	0	0	0
28	4	3	0	0	0	0	0	0
29	5	3	0	0	0	0	0	0
30	5	3	0	0	2	0	0	0
31	5	3	0	0	2	0	0	0
32	5	3	0	0	2	0	0	0
33	6	4	0	0	2	0	0	0
34	6	4	0	0	2	0	0	0
35	6	4	0	0	2	1	0	0
36	7	4	0	0	2	1	0	0
37	7	5	0	0	2	1	0	0
38	8	5	0	0	2	1	0	0
39	9	5	0	0	2	2	0	0
40	9	6	0	0	2	2	0	0
41	10	6	0	0	2	2	0	0
42	10	7	0	0	2	4	0	0
43	11	7	0	0	3	4	0	0
44	12	8	0	0	3	4	0	0
45	14	8	0	0	3	5	0	0
46	15	9	0	0	5	6	0	0
47	17	10	0	0	7	7	0	0
48	19	11	0	0	9	7	0	0
49	22	12	0	0	11	10	0	0

Judges Retirement Fund

Summary of Actuarial Assumptions and Methods

Separation Expressed as Number of Occurrences Per 10,000:

	Death		Withdrawal		Disability		Retirement	
Age	Male	Female	Male	Female	Male	Female	Male	Female
50	25	14	0	0	14	10	0	0
51	28	15	0	0	16	12	0	0
52	31	16	0	0	20	14	0	0
53	35	18	0	0	24	16	0	0
54	39	19	0	0	28	20	0	0
55	43	21	0	0	34	24	0	0
56	48	23	0	0	40	30	0	0
57	52	25	0	0	46	36	0	0
58	57	28	0	0	56	44	0	0
59	61	31	0	0	66	52	0	0
60	66	34	0	0	76	62	0	0
61	71	38	0	0	90	74	0	0
62	77	42	0	0	110	88	1,000	1,000
63	84	47	0	0	136	104	1,000	1,000
64	92	52	0	0	174	122	1,000	1,000
65	101	58	0	0	0	0	2,000	2,000
66	111	64	0	0	0	0	2,000	2,000
67	124	71	0	0	0	0	2,000	2,000
68	139	78	0	0	0	0	3,000	3,000
69	156	87	0	0	0	0	3,000	3,000
70	176	97	0	0	0	0	3,000	3,000

Judges 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 judge or justice of any court who is not covered under the Social Security Act. If the Member was active prior to 1/1/74, benefits may be computed according to provisions of the prior plan.

Contributions:

Member: 8.15% of salary. Members who were active prior to 1/1/74 may contribute 4% to a special survivor retirement account. Contributions after maximum benefit is reached are redirected to the Unclassified Plan.

Employer: 20.5% of salary.

Allowable Service: Service as a judge. Half credit is received for service not compensated at an annual salary or for service while entitled to practice law. Credit may also be earned for uncredited judicial service if the appropriate employee contributions, with interest, are made.

Salary: Salary set by law.

Average Salary: Average of the five highest years of salary of the last 10 years prior to retirement.

RETIREMENT

Normal Retirement Benefit:

Eligibility: Age 65 and five years of Allowable Service. Age 70.

Amount: 2.7% of Average Salary for each year of Allowable Service prior to 7/1/80 and 3.2% of Average Salary for each year of Allowable Service after 6/30/80. Maximum benefit of 76.8% of average salary for the high five years preceding retirement.

***Early Retirement Benefit*:**

Eligibility:	Age 62 and five years of Allowable Service.
Amount:	Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date with reduction of 0.5% for each month the Member is under age 65 at time of retirement.
Form of Payment:	Life annuity. Actuarial equivalent options are: - 50% or 100% joint and survivor - 50% or 100% bounce back joint and survivor - 10 or 15 year certain and life
Benefit Increases:	Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF).

DISABILITY

***Disability Benefit*:**

Eligibility:	Permanent inability to perform the functions of judge.
Amount:	No benefit is paid by the Fund. Instead salary is continued for one year but not beyond age 70. Employee contributions continue and Allowable Service is earned.

***Retirement After Disability*:**

Eligibility:	Member is still disabled after salary payments cease after one year or at age 70, if earlier.
Amount:	Larger of 25% of Average Salary or the Normal Retirement Benefit, without reduction.
Benefit Increases:	Same as for retirement.

DEATH

***Survivor's Benefit*:**

Eligibility:	Active or disabled Member dies before retirement or a former Member eligible for a deferred annuity dies.
Amount:	Larger of 25% of Average Salary or 60% of Normal Retirement Benefit had the Member retired at date of death. 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, an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%. Benefit paid to spouse for life. If no spouse, benefit is paid to surviving dependent children until child marries, dies, or attains age 18 (age 22 if full-time student).
Benefit Increases:	Same as for retirement.

***Prior Survivors' Benefit*:**

Eligibility:	Retired Member dies who did not elect an optional annuity and such Member retired prior to 1/1/74 or was in office prior to 1/1/74 and continued contributing 4% of pay to provide this post-retirement death benefit.
Amount:	50% of the retired Member's benefit continues to the surviving spouse if married three years. Benefit begins immediately unless spouse is not yet age 40 and continues to death. 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, an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.
Benefit Increases:	Adjusted by MSRS to provide same increase as MPRIF.

***Refund of Contributions*:**

Eligibility: Member dies prior to retirement or former Member eligible for a deferred annuity dies and survivors' benefits are not payable.

Amount: Member's contributions with 5% interest.

TERMINATION

***Refund of Contributions*:**

Eligibility: Termination of service as a judge.

Amount: Member's contributions with 5% interest. A deferred annuity may be elected in lieu of a refund.

***Deferred Benefit*:**

Eligibility: Five years of Allowable Service.

Amount: Benefit computed under law in effect at termination. Amount is payable as a normal or early retirement annuity.

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%.

SIGNIFICANT CHANGES:

No significant changes in plan provisions were recognized for this valuation.

Judges 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 judge or justice of any court who is covered under the Social Security Act.

Contributions:

Member: 8.00% of salary. (Amended 1998) Contributions after maximum benefit is reached are redirected to the Unclassified Plan.

Employer: 20.5% of salary.

Allowable Service: Service as a judge. Half credit is received for service not compensated at an annual salary or for service while entitled to practice law. Credit may also be earned for uncredited judicial service if the appropriate employee contributions, with interest, are made.

Salary: Salary set by law.

Average Salary: Average of the five highest years of salary of the last 10 years prior to retirement.

RETIREMENT

Normal Retirement Benefit:

Eligibility: Age 65 and five years of Allowable Service. Age 70.

Amount: 2.7% of Average Salary for each year of Allowable Service prior to 7/1/80 and 3.2% of Average Salary for each year of Allowable Service after 6/30/80. Maximum benefit of 76.8% of average salary for the high five years preceding retirement.

Early Retirement Benefit:

Eligibility: Age 62 and five years of Allowable Service.

Amount: Normal Retirement Benefit based on Allowable Service and Average Salary at retirement date with reduction of 0.5% for each month the Member is under age 65 at time of retirement.

Form of Payment: Life annuity:

- 50% or 100% joint and survivor
- 50% or 100% bounce back joint and survivor
- 10 or 15 year certain and life

Benefit Increases: Benefits may be increased each January 1 depending on the investment performance of the Minnesota Post Retirement Investment Fund (MPRIF).

DISABILITY

Disability Benefit:

Eligibility: Permanent inability to perform the functions of judge.

Amount: No benefit is paid by the Fund. Instead salary is continued for one year but not beyond age 70. Employee contributions continue and Allowable Service is earned.

Retirement After Disability:

Eligibility: Member is still disabled after salary payments cease after one year or at age 70, if earlier.

Amount: Larger of 25% of Average Salary or the Normal Retirement Benefit, without reduction.

Benefit Increases: Same as for retirement.

DEATH

***Survivor's Benefit*:**

Eligibility:	Active or disabled Member dies before retirement or a former Member eligible for a deferred annuity dies.
Amount:	Larger of 25% of Average Salary or 60% of Normal Retirement Benefit had the Member retired at date of death.
	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, an actuarial increase shall be made for the change in the post-retirement interest rates from 5% to 6%.
	Benefit paid to spouse for life. If no spouse, benefit is paid to surviving dependent children until child marries, dies, or attains age 18 (age 22 if full-time student).
Benefit Increases:	Same as for retirement.

***Refund of Contributions*:**

Eligibility:	Member dies prior to retirement or former Member eligible for a deferred annuity dies and survivors' benefits are not payable.
Amount:	Member's contributions with 5% interest.

TERMINATION

***Refund of Contributions*:**

Eligibility:	Termination of service as a judge.
Amount:	Member's contributions with 5% interest. A deferred annuity may be elected in lieu of a refund.

***Deferred Benefit*:**

Eligibility: Five years of Allowable Service.

Amount: Benefit computed under law in effect at termination. Amount is payable as a normal or early retirement annuity.

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%.

SIGNIFICANT CHANGES:

No significant changes in plan provisions were recognized for this valuation.

Judges 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	$ 33,559	$ 78,429	$ 44,870	42.79%	$ 18,410	243.73%
07/01/92	37,768	83,969	46,201	44.98%	22,765	202.95%
07/01/93	44,156	90,509	46,353	48.79%	22,084	209.89%
07/01/94	50,428	98,313	47,885	51.29%	22,264	215.08%
07/01/95	56,813	102,238	45,425	55.57%	22,877	198.56%
07/01/96	64,851	108,150	43,299	59.96%	22,421	193.12%
07/01/97	74,681	117,714	43,033	63.44%	22,909	187.84%
07/01/98	86,578	130,727	44,149	66.23%	24,965	176.84%
07/01/99	97,692	139,649	41,957	69.96%	32,940	127.37%
07/01/00	111,113	153,660	42,547	72.31%	26,315	161.68%
07/01/01	123,589	165,244	41,655	74.79%	28,246	147.47%
07/01/02	131,379	171,921	40,542	76.42%	31,078	130.45%

Judges 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
1991	23.59%	18,410	799	3,544	0	0.00%
1992	25.10%	22,765	988	4,726	4,722	99.92%
1993	26.59%	22,084	1,409	4,463	4,845	108.56%
1994	26.29%	22,264	1,416	4,437	4,912	110.71%
1995	28.27%	22,877	1,455	5,012	5,162	102.99%
1996	27.32%	22,421	1,426	4,699	4,972	105.81%
1997	27.01%	22,909	1,457	4,731	6,632	140.18%
1998	27.60%	24,965	1,570	5,320	7,129	134.00%
1999	27.32%	32,940	2,069	6,930	7,051	101.75%
2000	26.75%	26,315	2,107	4,932	7,298	147.97%
2001	24.58% [2]	28,246	2,162	4,781	7,793	163.00%
2002	26.72%	31,078	2,345	5,959	8,369	140.44%
2003	26.82% [3]					

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

(2) Actuarially Required Contribution Rate prior to change in plan provisions and Asset Valuation Method is 26.81%.

(3) Actuarially Required Contribution Rate prior to change in Actuarial Assumptions is 26.75%.