State Employees Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 1995

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November 16, 1995

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, 1995.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. 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 on July 8, 1992.

Respectfully submitted,

Thomas K. Custis

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TKC/WVH/bh

State Employees Retirement Fund

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State Employees Retirement Fund

Report Highlights

(dollars in thousands)

	07/01/94 Valuation	07/01/95 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 352 % of Payroll	8.27%	8.27%
2. Required Contributions - Chapter 356 % of Payroll	9.15%	8.05%
3. Sufficiency (Deficiency): (A.1. - A.2.)	-0.88%	0.22%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$3,158,068	$3,462,098
b. Current Benefit Obligations (Table 8)	$3,376,267	$3,339,193
c. Funding Ratio: (a/b)	93.54%	103.68%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$3,158,068	$3,462,098
b. Actuarial Accrued Liability (Table 9)	$3,876,584	$3,795,926
c. Funding Ratio: (a/b)	81.47%	91.21%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$4,604,302	$4,749,183
b. Current and Expected Future Benefit Obligations	$4,872,195	$4,689,789
c. Funding Ratio: (a/b)	94.50%	101.27%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	49,365	49,705
b. Projected Annual Earnings	$1,789,033	$1,611,687
c. Average Annual Earnings (Actual $)	$36,241	$32,425
d. Average Age	42.2	42.7
e. Average Service	10.8	11.1
2. Others		
a. Service Retirements (Table 4)	13,924	14,004
b. Disability Retirements (Table 5)	800	824
c. Survivors (Table 6)	1,207	1,313
d. Deferred Retirements (Table 7)	4,818	5,518
e. Terminated Other Non-vested (Table 7)	4,744	5,242
f. Total	25,493	26,901

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 103.68%. The corresponding ratio for the prior year was 93.54%.

- ° 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 1995 the ratio is 91.21%, which is an increase from the 1994 value of 81.47%.

- ° The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 101.27% verifies that the current statutory contributions are sufficient.

Asset Information (Tables 1 and 2)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only a third of the unrealized gains and losses. This requirement exists because market values (which include all unrealized gain and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F1 to F6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

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 in accordance with Statement No. 5 of the Governmental Accounting Standards Board (GASB). Those requirements are:

- ° 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

The Current Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 uses the terms "Actuarial Present Value of Credited Projected Benefits" and "Pension Benefit Obligation" rather than "Current Benefit Obligation".

The JULY 1, 1995 Pension Benefit Obligation reported in Table 8 is reformatted for GASB reporting purposes in the following table:

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$1,442,864,000
Current Employees	
Accumulated employee contributions including allocated investment income	$718,188,000
Employer-financed vested	1,052,855,000
Employer-financed nonvested	125,286,000
Total Pension Benefit Obligation	$3,339,193,000
Net Assets Available for Benefits at Cost	$3,401,803,000
Total Benefit Obligation less Assets	($62,610,000)
Funded Ratio	101.88%

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 the 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.

Sources 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 expectation. 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 8.27% compared to the Required Contribution Rate of 8.05%. The contribution sufficiency has improved significantly due to a change in the salary data which has been used in this valuation. The magnitude of the gain due to this change is reflected in Table 10, D.5. "Other Items".

Changes in Actuarial Assumptions

There were no changes in actuarial assumptions since the last valuation.

Changes in Plan Provisions

There were no changes in plan provisions since the last valuation which impacted funding costs.

State Employees Retirement Fund

Accounting Balance Sheet

(dollars in thousands)

JULY 1, 1995

	Market Value	Cost Value
A. ASSETS		
1. Cash, Equivalents, Short-term Securities	$38,825	$38,825
2. Investments		
a. Fixed Income	626,861	610,214
b. Equity	1,509,311	1,336,683
c. Real Estate	93,621	102,012
3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)	1,313,386	1,313,386
4. Other	7,300	7,300
B. TOTAL ASSETS	$3,589,304	$3,408,420
C. AMOUNTS CURRENTLY PAYABLE	$6,617	$6,617
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	$546,329	$546,329
2. Employer Reserves	1,718,741	1,537,857
3. MPRIF Reserves	1,313,386	1,313,386
4. Non-MPRIF Reserves	4,231	4,231
5. Total Assets Available for Benefits	$3,582,687	$3,401,803
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	$3,589,304	$3,408,420

F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS

1. Cost Value of Assets Available for Benefits (D5)		$3,401,803
2. Market Value (D5)	$3,582,687	
3. Cost Value (D5)	3,401,803	
4. Market Over Cost: (F2-F3)	$180,884	
5. 1/3 of Market Over Cost: (F4)/3		60,295
6. Actuarial Value of Assets (F1+F5) (Same as "Current Assets")		$3,462,098

State Employees Retirement Fund

Change In Assets Available For Benefits

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

	Market Value	Cost Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	$3,180,071	$3,147,068
B. OPERATING REVENUES		
1. Member Contributions	$61,627	$61,627
2. Employer Contributions	63,161	63,161
3. Investment Income	141,795	141,795
4. MPRIF Income	107,910	107,910
5. Net Realized Gain (Loss)	19,883	19,883
6. Other	900	900
7. Net Change in Unrealized Gain (Loss)	147,881	0
8. Total Revenue	$543,157	$395,276
C. OPERATING EXPENSES		
1. Service Retirements	$126,831	$126,831
2. Disability Benefits	0	0
3. Survivor Benefits	0	0
4. Refunds	6,275	6,275
5. Investment Fees	3,183	3,183
6. Administrative Expenses	1,908	1,908
7. Other	2,344	2,344
8. Total Disbursements	$140,541	$140,541
D. OTHER CHANGES IN RESERVES	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	$3,582,687	$3,401,803

State Employees Retirement Fund

ACTIVE MEMBERS AS OF JUNE 30, 1995

AGE	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
	YEARS OF SERVICE								
<25	896	243	9						1,148
25-29	1,564	1,722	402	14					3,702
30-34	1,196	1,958	2,096	803	78				6,131
35-39	970	1,538	2,605	1,903	1,158	34			8,208
40-44	805	1,467	2,320	1,792	2,058	1,106	35		9,583
45-49	595	1,140	1,779	1,332	1,759	1,477	821	46	8,949
50-54	250	537	1,042	725	952	812	898	393	5,609
55-59	146	308	552	523	658	494	494	580	3,755
60-64	56	202	272	305	357	319	244	259	2,014
65+	40	75	95	121	108	83	42	42	606
ALL	6,518	9,190	11,172	7,518	7,128	4,325	2,534	1,320	49,705

AVERAGE ANNUAL EARNINGS

AGE	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
	YEARS OF SERVICE								
<25	13,743	19,357	17,230						14,959
25-29	19,048	24,048	25,742	24,180					22,120
30-34	21,993	25,749	29,483	28,583	28,494				26,699
35-39	21,453	26,278	31,016	32,035	31,687	31,245			29,330
40-44	21,848	27,315	32,469	33,729	35,339	34,435	33,143		31,869
45-49	25,662	28,228	32,491	32,979	36,898	39,089	37,162	39,210	33,985
50-54	19,638	27,150	31,645	33,198	35,917	39,099	40,551	41,282	34,786
55-59	20,993	27,359	30,090	30,694	34,158	36,408	39,386	42,735	34,317
60-64	16,271	25,027	30,377	32,296	33,672	34,644	37,128	42,238	33,342
65+	12,932	16,426	27,189	32,814	32,370	34,596	34,427	41,680	29,483
ALL	20,171	25,951	31,029	32,265	34,895	37,119	38,692	42,049	30,621

AGE	≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
	PRIOR FISCAL YEAR EARNINGS (IN MILLIONS) BY YEARS OF SERVICE								
ALL	131	238	346	242	248	160	98	55	1,522

State Employees Retirement Fund

SERVICE RETIREMENTS AS OF JUNE 30, 1995

AGE	YEARS RETIRED ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54	2	2						4
55-59	133	355	7					495
60-64	265	1,057	406					1,728
65-69	188	1,497	1,254	170				3,109
70-74	21	347	1,717	1,030	16			3,131
75-79	8	52	264	1,586	524	14		2,448
80-84		1	5	242	1,262	246	11	1,767
85+				4	62	878	378	1,322
ALL	617	3,311	3,653	3,032	1,864	1,138	389	14,004

AVERAGE ANNUAL BENEFIT

AGE	YEARS RETIRED ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54	14,543	9,559						12,051
55-59	5,428	8,994	7,706					8,018
60-64	5,957	9,784	11,140					9,516
65-69	7,098	8,197	9,248	11,026				8,709
70-74	6,226	8,634	7,484	9,155	8,483			8,158
75-79	5,245	9,421	7,177	7,619	8,638	4,810		7,804
80-84		21,370	6,979	7,115	5,918	7,521	3,856	6,304
85+				6,003	5,665	5,804	4,773	5,503
ALL	6,218	8,859	8,473	8,290	6,696	6,163	4,747	7,898

AGE	TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS RETIRED ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL	3,836	29,332	30,951	25,135	12,481	7,013	1,846	110,603

State Employees Retirement Fund

SURVIVORS AS OF JUNE 30, 1995

	YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	19	16	16	3				54
50-54	13	21	9	4				47
55-59	19	42	23	4			1	89
60-64	20	48	45	13			1	127
65-69	15	73	77	45	6	2	2	220
70-74	19	66	56	72	34	7	2	256
75-79	21	76	41	41	39	11	5	234
80-84	7	30	20	14	32	37	9	149
85+	4	15	11		5	45	57	137
ALL	137	387	298	196	116	102	77	1,313

AVERAGE ANNUAL BENEFIT

	YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	3,353	4,404	4,586	2,909				4,005
50-54	6,988	6,544	5,078	5,262				6,277
55-59	4,941	6,474	7,542	4,992			3,900	6,327
60-64	8,451	7,914	6,005	5,872			2,426	7,070
65-69	9,463	7,893	7,269	7,531	6,559	2,510	3,884	7,586
70-74	10,256	7,335	6,515	7,340	7,139	4,522	2,115	7,230
75-79	5,398	6,584	7,770	6,332	7,222	4,773	5,650	6,643
80-84	8,656	5,569	6,604	5,903	6,281	6,597	3,527	6,169
85+	4,119	5,055	6,396		3,223	6,388	4,133	5,123
ALL	6,896	6,882	6,739	6,815	6,731	6,086	4,077	6,601

	TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL	944	2,663	2,008	1,335	780	620	313	8,667

State Employees Retirement Fund

DISABILITY RETIREMENTS AS OF JUNE 30, 1995

	YEARS DISABLED							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	27	58	18	4				107
50-54	16	32	14	5	2			69
55-59	17	52	24	4	2	2		101
60-64	20	55	34	11	6			126
65-69	1	28	51	27	9	4		120
70-74			17	60	50	10	4	141
75-79				13	60	15	3	91
80-84				1	18	27	5	51
85+						8	10	18
ALL	81	225	158	125	147	66	22	824

AVERAGE ANNUAL BENEFIT

	YEARS DISABLED							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	4,015	5,059	3,894	3,759				4,551
50-54	8,594	6,844	6,049	5,961	4,514			6,957
55-59	6,125	6,249	4,426	5,252	3,426	2,773		5,631
60-64	6,129	6,995	6,552	4,273	5,157			6,413
65-69	965	5,803	5,068	6,053	6,718	3,869		5,511
70-74			4,680	5,924	5,549	5,029	5,230	5,558
75-79				4,626	5,759	5,226	3,372	5,431
80-84				3,940	4,985	5,562	4,896	5,261
85+						4,256	3,986	4,106
ALL	5,847	6,154	5,201	5,566	5,578	5,060	4,335	5,613

	TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS DISABLED							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL	473	1,384	821	695	819	333	95	4,625

State Employees Retirement Fund

Reconciliation Of Members

	Actives	Terminated: Deferred Retirement	Terminated: Other Non-Vested
A. ON JUNE 30, 1994	49,365	4,818	4,744
B. ADDITIONS	4,472	1,331	1,722
C. DELETIONS			
1. Service Retirement	(471)	(150)	(7)
2. Disability	(66)	(14)	0
3. Death	(58)	(5)	(3)
4. Terminated - Deferred	(1,072)	0	(18)
5. Terminated - Refund	(1,630)	(130)	(383)
6. Terminated - Other Non-Vested	(1,441)	(3)	0
7. Returned as Active	264	(123)	(141)
8. Transferred to Other Fund	0	0	(670)
D. DATA ADJUSTMENTS	342	(206)	(2)
Vested	38,150		
Non-Vested	11,555		
E. TOTAL ON JUNE 30, 1995	49,705	5,518	5,242

	Recipients: Retirement Annuitants	Recipients: Disabled	Recipients: Survivors
A. ON JUNE 30, 1994	13,924	800	1,207
B. ADDITIONS	682	83	148
C. DELETIONS			
1. Service Retirement	0	0	0
2. Death	(534)	(67)	(36)
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	(68)	8	(6)
E. TOTAL ON JUNE 30, 1995	14,004	824	1,313

State Employees Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

JULY 1, 1995

A. CURRENT ASSETS (TABLE 1, F6)			$3,462,098
B. EXPECTED FUTURE ASSETS			
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			$393,222
2. Present Value of Future Normal Costs			893,863
3. Total Expected Future Assets			$1,287,085
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$4,749,183

D. CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
1. Benefit Recipients			
a. Retirement Annuities		$1,182,482	$1,182,482
b. Disability Benefits		44,693	44,693
c. Surviving Spouse and Child Benefits		90,441	90,441
2. Deferred Retirements with Future Augmentation		122,146	122,146
3. Former Members without Vested Rights		3,102	3,102
4. Active Members			
a. Retirement Annuities	11,089	1,491,510	1,502,599
b. Disability Benefits	63,780	0	63,780
c. Survivor's Benefits	45,362	0	45,362
d. Deferred Retirements	5,055	254,878	259,933
e. Refund Liability Due to Death or Withdrawal	0	24,655	24,655
5. Total Current Benefit Obligations	$125,286	$3,213,907	$3,339,193

E. EXPECTED FUTURE BENEFIT OBLIGATIONS	$1,350,596
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS	$4,689,789
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)	($122,905)
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)	($59,394)

State Employees Retirement Fund

Determination Of Unfunded Actuarial Accrued Liability (UAAL) And Supplemental Contribution Rate

(dollars in thousands)

JULY 1, 1995

	Actuarial Present Value of Projected Benefits (1)	Actuarial Present Value of Future Normal Costs (2)	Actuarial Accrued Liability (3)=(1)-(2)
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	$2,619,571	$558,653	$2,060,918
b. Disability Benefits	115,412	37,416	77,996
c. Survivor's Benefit	77,094	25,420	51,674
d. Deferred Retirements	392,678	177,014	215,664
e. Refunds Due to Death or Withdrawal	42,169	95,360	(53,191)
f. Total	$3,246,924	$893,863	$2,353,061
2. Deferred Retirements With Future Augmentation	122,146		122,146
3. Former Members Without Vested Rights	3,102		3,102
4. Annuitants in MPRIF	1,313,386		1,313,386
5. Recipients Not in MPRIF	4,231		4,231
6. Total	$4,689,789	$893,863	$3,795,926

B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)	
1. AAL (A6)	$3,795,926
2. Current Assets (Table 1, F6)	3,462,098
3. UAAL (B1-B2)	$333,828
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE	
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2020	$26,749,797
2. Supplemental Contribution Rate (B3/C1)	1.25%

State Employees Retirement Fund

Changes In Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

A. UAAL AT BEGINNING OF YEAR	$718,516
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	$121,687
2. Contribution	(124,789)
3. Interest on A, B1 and B2	60,942
4. Total (B1+B2+B3)	$57,840
C. EXPECTED UAAL AT END OF YEAR (A+B4)	$776,356
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Salary Increases	($65,755)
2. Investment Return	(44,337)
3. MPRIF Mortality	5,414
4. Mortality of Other Benefit Recipients	(197)
5. Other Items	(337,653)
6. Total	($442,528)
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTION (C+D6)	$333,828
F. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	0
G. CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	0
H. UAAL AT END OF YEAR (E+F+G)	$333,828

State Employees Retirement Fund

Determination Of Contribution Sufficiency

(dollars in thousands)

JULY 1, 1995

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 352		
1. Employee Contributions	4.07%	$65,596
2. Employer Contributions	4.20%	67,691
3. Total	8.27%	$133,287
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	4.19%	$67,464
b. Disability benefits	0.27%	4,319
c. Survivors	0.18%	2,917
d. Deferred Retirement Benefits	1.31%	21,073
e. Refunds Due to Death or Withdrawal	0.74%	11,997
f. Total	6.69%	$107,770
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	1.25%	20,146
3. Allowance for Expenses	0.11%	1,773
4. Total	8.05%	$129,689
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	0.22%	$3,598

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 1995 is $1,611,687.

State Employees Retirement Fund

Summary of Actuarial Assumptions and Methods

Interest:	**Pre-Retirement:** 8.5% per annum **Post-Retirement:** 5.0% per annum
Salary Increases:	Reported salary at valuation date increased according to the rate table below to current fiscal year and annually for each future year. Prior fiscal year salary is annualized for new Members.
Mortality:	**Pre-Retirement:** Male - 1983 Group Annuity Mortality Table for males setback four years. Female - 1983 Group Annuity Mortality Table for females set back two years. **Post-Retirement:** Male - 1983 Group Annuity Mortality Table for males. Female - 1983 Group Annuity Mortality Table for females. **Post-Disability:** Male - Combined Annuity Mortality Table Female - Combined Annuity Mortality Table
Retirement Age:	Graded rates beginning at age 58 as shown in rate table. Members who have attained the highest assumed retirement age will retire in one year. In addition, 25% of Members are assumed to retire each year that they are eligible for the Rule of 90.
Separation:	Graded rates based on actual experience developed by the June 30, 1971 experience analysis. Rates are shown in rate table.
Disability:	Rates adopted by MSRS as shown in rate table.
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
Benefit Increases After Retirement:	Payment of earnings on retired reserves in excess of 5% accounted for by 5% post-retirement assumptions.
Special Consideration:	Married Members assumed to elect subsidized joint and survivor form of annuity as follows: **Males -** 25% elect 50% J&S option 45% elect 100% J&S option **Females -** 5% elect 50% J&S option 5% elect 100% J&S option
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method with normal costs expressed as a level percentage of earnings. Under this method, Actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability.
Asset Valuation Method:	Cost Value plus one-third Unrealized Gains or Losses.
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.

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		
Age	Male	Female	Male	Female	Male	Female	Male	Female	Salary Increases
20	3	2	2,400	3,700	0	0	0	0	7.75%
21	3	2	2,250	3,550	0	0	0	0	7.1454
22	4	2	2,080	3,390	0	0	0	0	7.1094
23	4	2	1,920	3,230	0	0	0	0	7.0725
24	4	2	1,760	3,070	0	0	0	0	7.0363
25	4	2	1,600	2,910	0	0	0	0	7
26	4	2	1,470	2,750	0	0	0	0	7
27	4	3	1,340	2,600	0	0	0	0	7
28	4	3	1,230	2,430	0	0	0	0	7
29	5	3	1,130	2,270	0	0	0	0	7
30	5	3	1,040	2,120	2	0	0	0	7
31	5	3	950	1,970	2	0	0	0	7
32	5	3	890	1,820	2	0	0	0	7
33	6	4	830	1,680	2	0	0	0	7
34	6	4	770	1,540	2	0	0	0	7
35	6	4	720	1,410	2	1	0	0	7
36	7	4	680	1,300	2	1	0	0	6.9019
37	7	5	640	1,190	2	1	0	0	6.8074
38	8	5	600	1,090	2	1	0	0	6.7125
39	9	5	560	1,000	2	2	0	0	6.6054
40	9	6	530	920	2	2	0	0	6.5
41	10	6	500	850	2	2	0	0	6.354
42	10	7	480	780	2	4	0	0	6.2087
43	11	7	460	720	3	4	0	0	6.0622
44	12	8	430	680	3	4	0	0	5.9048
45	14	8	410	630	3	5	0	0	5.75
46	15	9	390	590	5	6	0	0	5.6940
47	17	10	370	560	7	7	0	0	5.6375
48	19	11	350	530	9	7	0	0	5.5822
49	22	12	340	500	11	10	0	0	5.5405

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		
Age	Male	Female	Male	Female	Male	Female	Male	Female	Salary Increases
50	25	14	320	470	14	10	0	0	5.5%
51	28	15	300	440	16	12	0	0	5.4384
52	31	16	280	410	20	14	0	0	5.3776
53	35	18	260	390	24	16	0	0	5.3167
54	39	19	240	360	28	20	0	0	5.2826
55	43	21	210	330	34	24	0	0	5.25
56	48	23	170	290	40	30	0	0	5.25
57	52	25	140	230	46	36	0	0	5.25
58	57	28	90	170	56	44	50	50	5.25
59	61	31	40	90	66	52	50	50	5.25
60	66	34	0	0	76	62	150	150	5.25
61	71	38	0	0	90	74	150	150	5.25
62	77	42	0	0	110	88	500	500	5.25
63	84	47	0	0	136	104	350	350	5.25
64	92	52	0	0	174	122	1,100	1,100	5.25
65	101	58	0	0	0	0	10,000	10,000	5.25
66	111	64	0	0	0	0	0	0	5.25
67	124	71	0	0	0	0	0	0	5.25
68	139	78	0	0	0	0	0	0	5.25
69	156	87	0	0	0	0	0	0	5.25
70	176	97	0	0	0	0	0	0	5.25

State Employees Retirement Fund

Summary of Plan Provisions

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:	4.07% of salary unless there is a deficiency. (Amended 1992)
Employer:	4.20% of salary unless there is a deficiency. (Amended 1992)
***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 and three years of Allowable Service. Proportionate Retirement Annuity is available at normal retirement age and one year of Allowable Service.

Amount: 1.5% 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% of average salary for each of the first 10 years of Allowable Service and 1.5% 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

1.5% 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:
1.5% of average salary for each year of Allowable Service assuming augmentation to the age eligible for full Social Security retirement benefit at 3% per year and actuarial reduction for each month the Member is under the Social Security retirement age.

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.

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.

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.

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.

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.

SIGNIFICANT CHANGES

None.

State Employees Retirement Fund

Military Affairs Calculation

Section 352.85 of Chapter 352 of Minnesota Statutes provides 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	3
2.	Projected Annual Earnings	$104,936
3.	Normal Cost	
	a. Dollar Amount	$ 11,614
	b. Percent of Payroll	11.07%

State Employees Retirement Fund

Pilots Calculation

Section 352.86 of chapter 352 of Minnesota Statutes provides 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 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	4
2.	Projected Annual Earnings	$226,753
3.	Normal Cost	
	a. Dollar Amount	$ 23,900
	b. Percent of Payroll	10.54%

State Patrol Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 1995

MILLIMAN & ROBERTSON, INC.

FILE COPY

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November 16, 1995

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, 1995.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. 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 on July 8, 1992.

Respectfully submitted,

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)

	07/01/94 Valuation	07/01/95 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 352B % of Payroll	23.38%	23.80%
2. Required Contributions - Chapter 356 % of Payroll	21.79%	21.34%
3. Sufficiency (Deficiency): (A.1. - A.2.)	1.59%	2.46%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$262,570	$284,918
b. Current Benefit Obligations (Table 8)	$264,307	$271,819
c. Funding Ratio: (a/b)	99.34%	104.82%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$262,570	$284,918
b. Actuarial Accrued Liability (Table 9)	$275,377	$283,078
c. Funding Ratio: (a/b)	95.35%	100.65%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$376,089	$392,684
b. Current and Expected Future Benefit Obligations	$362,973	$371,920
c. Funding Ratio: (a/b)	103.61%	105.58%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	788	803
b. Projected Annual Earnings	$41,462	$39,838
c. Average Annual Earnings (Actual $)	$52,617	$49,611
d. Average Age	41.9	42.3
e. Average Service	14.9	15.1
2. Others		
a. Service Retirements (Table 4)	391	401
b. Disability Retirements (Table 5)	18	18
c. Survivors (Table 6)	120	121
d. Deferred Retirements (Table 7)	21	19
e. Terminated Other Non-vested (Table 7)	3	5
f. Total	553	564

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 104.82%. The corresponding ratio for the prior year was 99.34%.

- 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 1995 the ratio is 100.65%, which is an increase from the 1994 value of 95.35%.

- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 105.58% verifies that the current statutory contributions are sufficient.

Asset Information (Tables 1 and 2)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only a third of the unrealized gains and losses. This requirement exists because market values (which include all unrealized gain and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F1 to F6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

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 in accordance with Statement No. 5 of the Governmental Accounting Standards Board (GASB). Those requirements are:

° 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

The Current Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 uses the terms "Actuarial Present Value of Credited Projected Benefits" and "Pension Benefit Obligation" rather than "Current Benefit Obligation".

The JULY 1, 1995 Pension Benefit Obligation reported in Table 8 is reformatted for GASB reporting purposes in the following table:

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$131,242,000
Current Employees	
Accumulated employee contributions including allocated investment income	$48,901,000
Employer-financed vested	70,459,000
Employer-financed nonvested	21,217,000
Total Pension Benefit Obligation	$271,819,000
Net Assets Available for Benefits at Cost	$280,423,000
Total Benefit Obligation less Assets	($8,604,000)
Funded Ratio	103.17%

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 the corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

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

The payments will increase 6.50% 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.

Sources 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 expectation. 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 23.80% compared to the Required Contribution Rate of 21.34%. The contribution sufficiency has improved significantly due to a change in the salary data which has been used in this valuation. The magnitude of the gain due to this change is reflected in Table 10, D.5. "Other Items".

Changes in Actuarial Assumptions

There were no changes in actuarial assumptions since the last valuation.

Changes in Plan Provisions

Two changes were made, the net result of which was a modest cost increase. These changes are summarized below:

The member contribution rate was increased from 8.50% of salary to 8.92% of salary. Also, the benefit multiplier for retirement and disability benefits was increased from 2.50% to 2.65% of average salary.

State Patrol Retirement Fund

Accounting Balance Sheet

(dollars in thousands)

JULY 1, 1995

	Market Value	Cost Value
A. ASSETS		
1. Cash, Equivalents, Short-term Securities	$952	$952
2. Investments		
a. Fixed Income	47,146	45,897
b. Equity	112,385	99,738
c. Real Estate	7,041	7,451
3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)	128,279	128,279
4. Other	448	448
B. TOTAL ASSETS	$296,251	$282,765
C. AMOUNTS CURRENTLY PAYABLE	$2,342	$2,342
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	$31,160	$31,160
2. Employer Reserves	133,711	120,225
3. MPRIF Reserves	128,279	128,279
4. Non-MPRIF Reserves	759	759
5. Total Assets Available for Benefits	$293,909	$280,423
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	$296,251	$282,765

F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS

1. Cost Value of Assets Available for Benefits (D5)		$280,423
2. Market Value (D5)	$293,909	
3. Cost Value (D5)	280,423	
4. Market Over Cost: (F2-F3)	$13,486	
5. 1/3 of Market Over Cost: (F4)/3		4,495
6. Actuarial Value of Assets (F1+F5) (Same as "Current Assets")		$284,918

State Patrol Retirement Fund

Change In Assets Available For Benefits

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

	Market Value	Cost Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	$264,327	$261,692
B. OPERATING REVENUES		
1. Member Contributions	$3,189	$3,189
2. Employer Contributions	5,583	5,583
3. Investment Income	10,717	10,717
4. MPRIF Income	10,363	10,363
5. Net Realized Gain (Loss)	1,735	1,735
6. Other	0	0
7. Net Change in Unrealized Gain (Loss)	10,851	0
8. Total Revenue	$42,438	$31,587
C. OPERATING EXPENSES		
1. Service Retirements	$12,092	$12,092
2. Disability Benefits	0	0
3. Survivor Benefits	0	0
4. Refunds	99	99
5. Investment Fees	239	239
6. Administrative Expenses	54	54
7. Other	372	372
8. Total Disbursements	$12,856	$12,856
D. OTHER CHANGES IN RESERVES	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	$293,909	$280,423

State Patrol Retirement Fund

ACTIVE MEMBERS AS OF JUNE 30, 1995

AGE	YEARS OF SERVICE <1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25		4							4
25-29	17	22	16						55
30-34	9	28	61	10					108
35-39	7	15	43	63	27				155
40-44	2	6	24	38	62	11			143
45-49		5	6	14	33	67	15		140
50-54		1	3	3	13	35	82	4	141
55-59		1			2	3	35	7	48
60-64						1	1	2	4
65+								5	5
ALL	35	82	153	128	137	117	133	18	803

AVERAGE ANNUAL EARNINGS

AGE	YEARS OF SERVICE <1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25		31,532							31,532
25-29	27,387	35,991	42,644						35,267
30-34	26,912	38,988	45,323	43,752					42,001
35-39	33,667	38,099	45,292	46,847	50,787				45,660
40-44	26,458	47,303	46,984	47,666	47,868	52,188			47,675
45-49		48,488	48,782	45,246	50,700	50,393	49,165		49,682
50-54		47,619	50,933	47,084	50,077	52,244	49,385	46,854	50,058
55-59		45,050			46,821	52,320	51,880	50,010	51,282
60-64						47,194	65,196	50,355	53,275
65+								44,352	44,352
ALL	28,468	39,025	45,540	46,679	49,320	51,138	50,136	47,775	46,583

AGE	PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE <1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
ALL	996	3,200	6,967	5,974	6,756	5,983	6,668	859	37,406

State Patrol Retirement Fund

SERVICE RETIREMENTS AS OF JUNE 30, 1995

AGE	YEARS RETIRED ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54	2	1						3
55-59	14	42	1					57
60-64		15	67					82
65-69		4	27	70				101
70-74		2	4	48	28			82
75-79			1	17	20	10		48
80-84					2	9	6	17
85+							11	11
ALL	16	64	100	135	50	19	17	401

AVERAGE ANNUAL BENEFIT

AGE	YEARS RETIRED ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54	18,017	18,349						18,128
55-59	26,028	26,383	19,475					26,175
60-64		30,034	27,345					27,837
65-69		18,571	29,620	27,033				27,389
70-74		24,595	25,285	29,451	20,957			26,229
75-79			21,501	23,729	23,245	16,735		22,024
80-84					35,507	22,515	17,622	22,317
85+							17,206	17,206
ALL	25,027	26,569	27,740	27,477	22,454	19,473	17,353	25,865

AGE	TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS RETIRED ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL	400	1,700	2,774	3,709	1,122	369	295	10,371

State Patrol Retirement Fund

SURVIVORS AS OF JUNE 30, 1995

	YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50						1		1
50-54	1		1					2
55-59			3					3
60-64		5		3		1	1	10
65-69		5	4	3	4	1	1	18
70-74	1	3	3	3	6	3	3	22
75-79		6	3		2	4	2	17
80-84	1	2	3			4	13	23
85+		2	4			2	17	25
ALL	3	23	21	9	12	16	37	121

AVERAGE ANNUAL BENEFIT

	YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50						4,985		4,985
50-54	3,777		15,571					9,674
55-59			8,490					8,490
60-64		11,370		24,147		5,441	8,930	14,366
65-69		12,704	12,792	24,226	20,020	17,645	9,055	16,341
70-74	10,274	10,821	16,434	21,834	19,409	13,464	10,968	15,786
75-79		10,959	14,710		10,661	13,905	10,264	12,197
80-84	6,728	13,326	13,808			16,617	11,359	12,563
85+		11,160	11,958			10,485	12,371	12,057
ALL	6,926	11,633	13,090	23,402	18,155	13,220	11,605	13,493

	TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL	20	267	274	210	217	211	429	1,632

State Patrol Retirement Fund

DISABILITY RETIREMENTS AS OF JUNE 30, 1995

AGE	YEARS DISABLED <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50		2						2
50-54		3	1	1				5
55-59			2		1			3
60-64				1	1			2
65-69					2	2		4
70-74					1	1		2
75-79								
80-84								
85+								
ALL		5	3	2	5	3		18

AVERAGE ANNUAL BENEFIT

AGE	YEARS DISABLED <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50		17,965						17,965
50-54		24,011	5,761	21,257				19,810
55-59			25,916		17,791			23,208
60-64				29,485	19,583			24,534
65-69					22,660	18,586		20,623
70-74					22,845	10,493		16,669
75-79								
80-84								
85+								
ALL		21,593	19,198	25,371	21,108	15,888		20,528

TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS DISABLED

AGE	<1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL		107,965	57,594	50,742	105,540	47,664		369,504

State Patrol Retirement Fund

Reconciliation Of Members

	Actives	Terminated: Deferred Retirement	Terminated: Other Non-Vested
A. ON JUNE 30, 1994	788	21	3
B. ADDITIONS	34	2	2
C. DELETIONS			
1. Service Retirement	(16)	(3)	0
2. Disability	0	0	0
3. Death	0	0	0
4. Terminated - Deferred	(2)	0	0
5. Terminated - Refund	(2)	0	0
6. Terminated - Other Non-Vested	(3)	0	0
7. Returned as Active	1	(1)	0
8. Transferred to Other Fund	0	0	0
D. DATA ADJUSTMENTS	3	0	0
Vested	739		
Non-Vested	64		
E. TOTAL ON JUNE 30, 1995	803	19	5

	Recipients: Retirement Annuitants	Recipients: Disabled	Recipients: Survivors
A. ON JUNE 30, 1994	391	18	120
B. ADDITIONS	16	0	4
C. DELETIONS			
1. Service Retirement	0	0	0
2. Death	(6)	0	(2)
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	0	0	(1)
E. TOTAL ON JUNE 30, 1995	401	18	121

State Patrol Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

JULY 1, 1995

A.	CURRENT ASSETS (TABLE 1, F6)			$284,918
B.	EXPECTED FUTURE ASSETS			
	1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			$18,924
	2. Present Value of Future Normal Costs			88,842
	3. Total Expected Future Assets			$107,766
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$392,684
D.	CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
	1. Benefit Recipients			
	a. Retirement Annuities		$109,482	$109,482
	b. Disability Benefits		4,458	4,458
	c. Surviving Spouse and Child Benefits		15,098	15,098
	2. Deferred Retirements with Future Augmentation		2,058	2,058
	3. Former Members without Vested Rights		146	146
	4. Active Members			
	a. Retirement Annuities	160	110,409	110,569
	b. Disability Benefits	11,071	0	11,071
	c. Survivor's Benefits	9,960	0	9,960
	d. Deferred Retirements	26	8,686	8,712
	e. Refund Liability Due to Death or Withdrawal	0	265	265
	5. Total Current Benefit Obligations	$21,217	$250,602	$271,819
E.	EXPECTED FUTURE BENEFIT OBLIGATIONS			$100,101
F.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$371,920
G.	CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)			($13,099)
H.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)			($20,764)

State Patrol Retirement Fund

Determination Of Unfunded Actuarial Accrued Liability (UAAL) And Supplemental Contribution Rate

(dollars in thousands)

JULY 1, 1995

	Actuarial Present Value of Projected Benefits (1)	Actuarial Present Value of Future Normal Costs (2)	Actuarial Accrued Liability (3)=(1)-(2)
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	$190,825	$61,295	$129,530
b. Disability Benefits	18,545	9,864	8,681
c. Survivor's Benefit	16,482	9,531	6,951
d. Deferred Retirements	14,395	6,942	7,453
e. Refunds Due to Death or Withdrawal	431	1,210	(779)
f. Total	$240,678	$88,842	$151,836
2. Deferred Retirements With Future Augmentation	2,058		2,058
3. Former Members Without Vested Rights	146		146
4. Annuitants in MPRIF	128,279		128,279
5. Recipients Not in MPRIF	759		759
6. Total	$371,920	$88,842	$283,078

B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)	
1. AAL (A6)	$283,078
2. Current Assets (Table 1, F6)	284,918
3. UAAL (B1-B2)	($1,840)
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE	
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2020	$769,284
2. Supplemental Contribution Rate (B3/C1)	0.00%

State Patrol Retirement Fund

Changes In Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

A.	UAAL AT BEGINNING OF YEAR	$12,807
B.	CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
	1. Normal Cost and Expenses	$8,392
	2. Contribution	(8,771)
	3. Interest on A, B1 and B2	1,072
	4. Total (B1+B2+B3)	$693
C.	EXPECTED UAAL AT END OF YEAR (A+B4)	$13,500
D.	INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
	1. Salary Increases	$934
	2. Investment Return	(3,275)
	3. MPRIF Mortality	2,234
	4. Mortality of Other Benefit Recipients	(3,509)
	5. Other Items	(19,950)
	6. Total	($23,566)
E.	UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTION (C+D6)	($10,066)
F.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	8,226
G.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	0
H.	UAAL AT END OF YEAR (E+F+G)	($1,840)

State Patrol Retirement Fund

Determination Of Contribution Sufficiency

(dollars in thousands)

JULY 1, 1995

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 352B		
1. Employee Contributions	8.92%	$3,554
2. Employer Contributions	14.88%	5,928
3. Total	23.80%	$9,482
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	14.58%	$5,808
b. Disability benefits	2.39%	951
c. Survivors	2.36%	939
d. Deferred Retirement Benefits	1.65%	656
e. Refunds Due to Death or Withdrawal	0.23%	92
f. Total	21.21%	$8,446
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	0.00%	0
3. Allowance for Expenses	0.13%	52
4. Total	21.34%	$8,498
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	2.46%	$984

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 1995 is $39,838.

State Patrol Retirement Fund

Summary of Actuarial Assumptions and Methods

Interest:	**Pre-Retirement:** 8.5% per annum **Post-Retirement:** 5.0% per annum
Salary Increases:	Reported salary at Valuation Date increased 6.5% to current fiscal year and 6.5% annually for each future year.
Mortality:	**Pre-Retirement:** Male - 1971 Group Annuity Mortality Table Female - 1971 Group Annuity Mortality Table male rates set back eight years **Post-Retirement:** Male - Same as above Female - Same as above **Post-Disability:** Male - Same as above Female - Same as above
Retirement Age:	Age 58 for State Troopers and for State Police Officers hired after June 30, 1961 or age 63 for State Police Officers hired before July 1, 1961. If over assumed retirement age, one year from the valuation date.
Separation:	Graded rates starting at .03 at age 20 and decreasing to .005 at age 45-49 and .02 for ages 50-54. Adopted 1984.
Disability:	Rates adopted by MSRS as shown in rate table.
Administrative and Investment 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
***Benefit Increases After Retirement*:**	Payment of earnings on retired reserves in excess of 5% accounted for by 5% post-retirement assumptions.
***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.
***Asset Valuation Method*:**	Cost Value plus one-third Unrealized Gains or Losses.
***Payment on the Unfunded Actuarial Accrued Liability*:**	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.5% per annum.

State Patrol 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	5	4	300	300	4	4	0	0
21	5	4	290	290	4	4	0	0
22	5	4	280	280	5	5	0	0
23	6	4	270	270	5	5	0	0
24	6	4	260	260	6	6	0	0
25	6	5	250	250	6	6	0	0
26	7	5	240	240	6	6	0	0
27	7	5	230	230	7	7	0	0
28	7	5	220	220	7	7	0	0
29	8	5	210	210	8	8	0	0
30	8	5	200	200	8	8	0	0
31	9	6	190	190	9	9	0	0
32	9	6	180	180	9	9	0	0
33	10	6	170	170	10	10	0	0
34	10	7	160	160	10	10	0	0
35	11	7	150	150	11	11	0	0
36	12	7	140	140	12	12	0	0
37	13	8	130	130	13	13	0	0
38	14	8	120	120	15	15	0	0
39	15	9	110	110	16	16	0	0
40	16	9	100	100	18	18	0	0
41	18	10	90	90	20	20	0	0
42	20	10	80	80	22	22	0	0
43	23	11	70	70	24	24	0	0
44	26	12	60	60	26	26	0	0
45	29	13	50	50	29	29	0	0
46	33	14	50	50	32	32	0	0
47	38	15	50	50	36	36	0	0
48	42	16	50	50	41	41	0	0
49	47	18	50	50	46	46	0	0

State Patrol 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	53	20	200	200	50	50	0	0
51	59	23	200	200	57	57	0	0
52	65	26	200	200	64	64	0	0
53	71	29	200	200	72	72	0	0
54	78	33	200	200	80	80	0	0
55	85	38	0	0	88	88	0	0
56	93	42	0	0	98	98	0	0
57	100	47	0	0	108	108	0	0
58	109	53	0	0	118	118	10,000	10,000
59	119	59	0	0	129	129	0	0
60	131	65	0	0	141	141	0	0
61	144	71	0	0	154	154	0	0
62	159	78	0	0	167	167	0	0
63	174	85	0	0	0	0	0	0
64	192	93	0	0	0	0	0	0
65	213	100	0	0	0	0	0	0
66	236	109	0	0	0	0	0	0
67	263	119	0	0	0	0	0	0
68	292	131	0	0	0	0	0	0
69	324	144	0	0	0	0	0	0
70	361	159	0	0	0	0	0	0

State Patrol Retirement Fund

Summary of Plan Provisions

GENERAL

***Eligibility*:**	State trooper, conservation officers and certain crime bureau officers.
***Contributions*:**	
Member:	8.92% of salary. (Amended 1995)
Employer:	14.88% of salary. (Amended 1990)
***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:	2.65% 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 to the actuarial equivalent of the benefit that would be payable if the Member deferred the benefit until age 55.

Form of Payment: Life annuity.

Actuarially equivalent options are:

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.

DISABILITY

Occupational Disability Benefit:

Eligibility: Member who cannot perform his duties because of a disability directly resulting from an act of duty.

Amount:	Normal Retirement Benefit based on Allowable Service (minimum of 20 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.

***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.
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.
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.

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.

SIGNIFICANT CHANGES

1. Benefit multiplier was increased from 2.50% to 2.65%.

2. Disability benefits were increased to be consistent with the increase in the benefit multiplier and now continue to age 65.

3. The Member contribution rate has been increased from 8.50% of salary to 8.92% of salary.

Correctional Employees Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 1995

MILLIMAN & ROBERTSON, INC.

FILE COPY

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November 16, 1995

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, 1995.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. 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 on July 8, 1992.

Respectfully submitted,

Thomas K. Custis

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Consulting Actuary

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Consulting Actuary

TKC/WVH/bh

Correctional Employees Retirement Fund

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Correctional Employees Retirement Fund

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Correctional Employees Retirement Fund

Report Highlights

(dollars in thousands)

	07/01/94 Valuation	07/01/95 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 352 % of Payroll	11.17%	11.17%
2. Required Contributions - Chapter 356 % of Payroll	11.30%	11.11%
3. Sufficiency (Deficiency): (A.1. - A.2.)	-0.13%	0.06%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$148,163	$165,427
b. Current Benefit Obligations (Table 8)	$131,466	$133,923
c. Funding Ratio: (a/b)	112.70%	123.52%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$148,163	$165,427
b. Actuarial Accrued Liability (Table 9)	$152,702	$153,491
c. Funding Ratio: (a/b)	97.03%	107.78%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$212,753	$228,847
b. Current and Expected Future Benefit Obligations	$214,622	$216,088
c. Funding Ratio: (a/b)	99.13%	105.90%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	1,761	2,117
b. Projected Annual Earnings	$70,562	$71,022
c. Average Annual Earnings (Actual $)	$40,070	$33,549
d. Average Age	38.5	38.0
e. Average Service	8.1	7.2
2. Others		
a. Service Retirements (Table 4)	393	399
b. Disability Retirements (Table 5)	21	25
c. Survivors (Table 6)	17	25
d. Deferred Retirements (Table 7)	248	296
e. Terminated Other Non-vested (Table 7)	44	74
f. Total	723	819

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 123.52%. The corresponding ratio for the prior year was 112.70%.
- 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 1995 the ratio is 107.78%, which is an increase from the 1994 value of 97.03%.
- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 105.90% verifies that the current statutory contributions are sufficient.

Asset Information (Tables 1 and 2)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only a third of the unrealized gains and losses. This requirement exists because market values (which include all unrealized gain and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F1 to F6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

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 in accordance with Statement No. 5 of the Governmental Accounting Standards Board (GASB). Those requirements are:

- ° 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

The Current Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 uses the terms "Actuarial Present Value of Credited Projected Benefits" and "Pension Benefit Obligation" rather than "Current Benefit Obligation".

The JULY 1, 1995 Pension Benefit Obligation reported in Table 8 is reformatted for GASB reporting purposes in the following table:

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$59,528,000
Current Employees	
Accumulated employee contributions including allocated investment income	$26,971,000
Employer-financed vested	41,283,000
Employer-financed nonvested	6,141,000
Total Pension Benefit Obligation	$133,923,000
Net Assets Available for Benefits at Cost	$162,086,000
Total Benefit Obligation less Assets	($28,163,000)
Funded Ratio	121.03%

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 the corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

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

The payments will increase 6.50% 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.

Sources 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 expectation. 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 11.17% compared to the Required Contribution Rate of 11.11%. The contribution sufficiency has improved due to a change in the salary data which has been used in this valuation. The magnitude of the gain due to this change is reflected in Table 10, D.5. "Other Items".

Changes in Actuarial Assumptions

There were no changes in actuarial assumptions since the last valuation.

Changes in Plan Provisions

There were no changes in plan provisions since the last valuation which impacted funding costs.

Correctional Employees Retirement Fund

Accounting Balance Sheet

(dollars in thousands)

JULY 1, 1995

	Market Value	Cost Value
A. ASSETS		
1. Cash, Equivalents, Short-term Securities	$4,187	$4,187
2. Investments		
a. Fixed Income	33,676	32,726
b. Equity	81,079	71,813
c. Real Estate	5,029	5,223
3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)	48,776	48,776
4. Other	407	407
B. TOTAL ASSETS	$173,154	$163,132
C. AMOUNTS CURRENTLY PAYABLE	$1,046	$1,046
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	$22,825	$22,825
2. Employer Reserves	100,507	90,485
3. MPRIF Reserves	48,776	48,776
4. Non-MPRIF Reserves	0	0
5. Total Assets Available for Benefits	$172,108	$162,086
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	$173,154	$163,132

F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS

1. Cost Value of Assets Available for Benefits (D5)		$162,086
2. Market Value (D5)	$172,108	
3. Cost Value (D5)	162,086	
4. Market Over Cost: (F2-F3)	$10,022	
5. 1/3 of Market Over Cost: (F4)/3		3,341
6. Actuarial Value of Assets (F1+F5) (Same as "Current Assets")		$165,427

Correctional Employees Retirement Fund

Change In Assets Available For Benefits

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

	Market Value	Cost Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	$149,545	$147,472
B. OPERATING REVENUES		
1. Member Contributions	$3,280	$3,280
2. Employer Contributions	4,195	4,195
3. Investment Income	7,741	7,741
4. MPRIF Income	3,870	3,870
5. Net Realized Gain (Loss)	1,119	1,119
6. Other	31	31
7. Net Change in Unrealized Gain (Loss)	7,949	0
8. Total Revenue	$28,185	$20,236
C. OPERATING EXPENSES		
1. Service Retirements	$4,971	$4,971
2. Disability Benefits	0	0
3. Survivor Benefits	0	0
4. Refunds	224	224
5. Investment Fees	172	172
6. Administrative Expenses	105	105
7. Other	150	150
8. Total Disbursements	$5,622	$5,622
D. OTHER CHANGES IN RESERVES	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	$172,108	$162,086

Correctional Employees Retirement Fund

ACTIVE MEMBERS AS OF JUNE 30, 1995

AGE	YEARS OF SERVICE ≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25	73	21							94
25-29	146	155	26						327
30-34	87	145	135	25					392
35-39	71	116	90	108	26				411
40-44	48	80	58	71	78	19			354
45-49	26	56	54	58	70	43	6		313
50-54	15	18	23	22	37	23	18	4	160
55-59	2	7	6	6	12	5	5	2	45
60-64	2	5	4	3	3	3	1		21
65+									
ALL	470	603	396	293	226	93	30	6	2,117

AVERAGE ANNUAL EARNINGS

AGE	YEARS OF SERVICE ≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25	22,432	27,934							23,661
25-29	22,680	28,638	31,756						26,226
30-34	23,579	30,023	32,605	34,839					29,789
35-39	25,368	30,157	33,232	36,396	37,262				32,092
40-44	24,734	30,823	33,761	35,898	38,220	39,893			33,613
45-49	24,251	31,254	33,959	35,139	35,979	42,249	40,240		34,598
50-54	23,928	30,261	34,535	36,388	39,910	39,512	41,886	35,542	36,125
55-59	20,039	32,787	44,499	34,884	42,377	43,264	41,041	31,657	38,650
60-64	26,696	34,267	35,863	42,587	39,181	41,662	34,761		36,821
65+									
ALL	23,556	29,915	33,371	35,926	37,926	41,126	41,179	34,247	31,501

AGE	PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE ≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
ALL	11,071	18,038	13,214	10,526	8,571	3,824	1,235	205	66,687

Correctional Employees Retirement Fund

SERVICE RETIREMENTS AS OF JUNE 30, 1995

AGE	YEARS RETIRED <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54	1							1
55-59	16	43	4					63
60-64	3	8	63					74
65-69	1	15	18	46				80
70-74			5	20	48			73
75-79				6	32	23		61
80-84					6	37		43
85+						4		4
ALL	21	66	90	72	86	64		399

AVERAGE ANNUAL BENEFIT

AGE	YEARS RETIRED <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54	10,716							10,716
55-59	16,584	17,257	13,423					16,843
60-64	10,731	11,598	14,979					14,441
65-69	11,796	11,404	10,850	12,602				11,973
70-74			9,854	11,220	10,225			10,472
75-79				6,084	7,890	8,161		7,815
80-84					4,635	5,972		5,785
85+						9,209		9,209
ALL	15,240	15,241	13,799	11,675	8,966	6,961		11,592

AGE	TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS RETIRED <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL	320	1,005	1,241	840	771	445		4,625

Correctional Employees Retirement Fund

SURVIVORS AS OF JUNE 30, 1995

	YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	1	1	1					3
50-54	1	1	1	1				4
55-59	3	1		1				5
60-64			2	1				3
65-69				1				1
70-74	2		1		1			4
75-79		1				2	1	4
80-84			1					1
85+								
ALL	7	4	6	4	1	2	1	25

AVERAGE ANNUAL BENEFIT

	YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	2,348	6,812	6,578					5,246
50-54	8,819	5,492	7,290	6,334				6,984
55-59	8,160	4,866		18,325				9,534
60-64			5,433	7,258				6,041
65-69				2,725				2,725
70-74	6,211		3,639		5,455			5,379
75-79		1,582				5,676	1,688	3,656
80-84			366					366
85+								
ALL	6,867	4,688	4,790	8,661	5,455	5,676	1,688	5,948

	TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL	48,069	18,752	28,740	34,644	5,455	11,352	1,688	148,700

Correctional Employees Retirement Fund

DISABILITY RETIREMENTS AS OF JUNE 30, 1995

AGE	YEARS DISABLED <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	5	8	3					16
50-54			1					1
55-59		2						2
60-64			1	2				3
65-69				1				1
70-74					1	1		2
75-79								
80-84								
85+								
ALL	5	10	5	3	1	1		25

AVERAGE ANNUAL BENEFIT

AGE	YEARS DISABLED <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50	14,977	11,575	10,591					12,454
50-54			14,043					14,043
55-59		13,810						13,810
60-64			9,298	12,665				11,543
65-69				16,734				16,734
70-74					2,598	3,756		3,177
75-79								
80-84								
85+								
ALL	14,977	12,022	11,023	14,021	2,598	3,756		11,946

AGE	TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS DISABLED <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL	74,885	120,220	55,115	42,063	2,598	3,756		298,650

Correctional Employees Retirement Fund

Reconciliation Of Members

		Terminated	
	Actives	Deferred Retirement	Other Non-Vested
A. ON JUNE 30, 1994	1,761	248	44
B. ADDITIONS	502	60	34
C. DELETIONS			
1. Service Retirement	(18)	(2)	0
2. Disability	(5)	0	0
3. Death	(2)	(4)	0
4. Terminated - Deferred	(56)	0	0
5. Terminated - Refund	(47)	(4)	(1)
6. Terminated - Other Non-Vested	(24)	0	0
7. Returned as Active	7	(6)	(1)
8. Transferred to Other Fund	0	0	(2)
D. DATA ADJUSTMENTS	(1)	4	0
Vested	1,331		
Non-Vested	786		
E. TOTAL ON JUNE 30, 1995	2,117	296	74

	Recipients		
	Retirement Annuitants	Disabled	Survivors
A. ON JUNE 30, 1994	393	21	17
B. ADDITIONS	21	5	8
C. DELETIONS			
1. Service Retirement	0	0	0
2. Death	(15)	(1)	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, 1995	399	25	25

Correctional Employees Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

JULY 1, 1995

A.	CURRENT ASSETS (TABLE 1, F6)			$165,427
B.	EXPECTED FUTURE ASSETS			
	1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			$823
	2. Present Value of Future Normal Costs			62,597
	3. Total Expected Future Assets			$63,420
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$228,847
D.	CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
	1. Benefit Recipients			
	a. Retirement Annuities		$43,217	$43,217
	b. Disability Benefits		3,618	3,618
	c. Surviving Spouse and Child Benefits		1,941	1,941
	2. Deferred Retirements with Future Augmentation		10,617	10,617
	3. Former Members without Vested Rights		135	135
	4. Active Members			
	a. Retirement Annuities	1,050	51,282	52,332
	b. Disability Benefits	1,504	0	1,504
	c. Survivor's Benefits	3,076	0	3,076
	d. Deferred Retirements	511	14,980	15,491
	e. Refund Liability Due to Death or Withdrawal	0	1,992	1,992
	5. Total Current Benefit Obligations	$6,141	$127,782	$133,923
E.	EXPECTED FUTURE BENEFIT OBLIGATIONS			$82,165
F.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$216,088
G.	CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)			($31,504)
H.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)			($12,759)

Correctional Employees Retirement Fund

Determination Of Unfunded Actuarial Accrued Liability (UAAL) And Supplemental Contribution Rate

(dollars in thousands)

JULY 1, 1995

	Actuarial Present Value of Projected Benefits (1)	Actuarial Present Value of Future Normal Costs (2)	Actuarial Accrued Liability (3)=(1)-(2)
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	$113,898	$39,413	$74,485
b. Disability Benefits	3,014	1,320	1,694
c. Survivor's Benefit	5,867	2,465	3,402
d. Deferred Retirements	29,932	13,384	16,548
e. Refunds Due to Death or Withdrawal	3,849	6,015	(2,166)
f. Total	$156,560	$62,597	$93,963
2. Deferred Retirements With Future Augmentation	10,617		10,617
3. Former Members Without Vested Rights	135		135
4. Annuitants in MPRIF	48,776		48,776
5. Recipients Not in MPRIF	0		0
6. Total	$216,088	$62,597	$153,491

B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)	
1. AAL (A6)	$153,491
2. Current Assets (Table 1, F6)	165,427
3. UAAL (B1-B2)	($11,936)
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE	
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2020	$1,371,472
2. Supplemental Contribution Rate (B3/C1)	0.00%

Correctional Employees Retirement Fund

Changes In Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

A.	UAAL AT BEGINNING OF YEAR	$4,539
B.	CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
	1. Normal Cost and Expenses	$7,752
	2. Contribution	(7,475)
	3. Interest on A, B1 and B2	398
	4. Total (B1+B2+B3)	$675
C.	EXPECTED UAAL AT END OF YEAR (A+B4)	$5,214
D.	INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
	1. Salary Increases	($2,426)
	2. Investment Return	(2,318)
	3. MPRIF Mortality	907
	4. Mortality of Other Benefit Recipients	0
	5. Other Items	(13,313)
	6. Total	($17,150)
E.	UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTION (C+D6)	($11,936)
F.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	0
G.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	0
H.	UAAL AT END OF YEAR (E+F+G)	($11,936)

Correctional Employees Retirement Fund

Determination Of Contribution Sufficiency

(dollars in thousands)

JULY 1, 1995

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 352		
1. Employee Contributions	4.90%	$3,480
2. Employer Contributions	6.27%	4,453
3. Total	11.17%	$7,933
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	6.98%	$4,955
b. Disability benefits	0.24%	171
c. Survivors	0.41%	292
d. Deferred Retirement Benefits	2.28%	1,617
e. Refunds Due to Death or Withdrawal	1.05%	747
f. Total	10.96%	$7,782
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	0.00%	0
3. Allowance for Expenses	0.15%	107
4. Total	11.11%	$7,889
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	0.06%	$44

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 1995 is $71,022.

Correctional Employees Retirement Fund

Summary of Actuarial Assumptions and Methods

Interest:	**Pre-Retirement**: 8.5% per annum **Post-Retirement**: 5.0% per annum
Salary Increases:	Reported salary at valuation date increased 6.5% to current fiscal year and 6.5% annually for each future year. Prior fiscal year salary is annualized for new Members.
Mortality:	**Pre-Retirement**: Male - 1971 Group Annuity Mortality Table Female - 1971 Group Annuity Mortality Table male rates set back 8 years **Post-Retirement**: Male - Same as above Female - Same as above **Post-Disability**: Male - Combined Annuity Mortality Table Female - Combined Annuity Mortality Table
Retirement Age:	Age 58 or if over age 58, one year from valuation date.
Separation:	Graded rates based on actual experience developed by the June 30, 1971 experience analysis. Rates are shown in rate table.
Disability:	Rates adopted by MSRS as shown in rate table.
Administrative and Investment Expenses:	Prior year administration expenses expressed as percentage of prior year payroll.
Return of Contributions:	All employees withdrawing after becoming eligible for a deferred benefit take the larger of their contributions accumulated with interest or the value of their deferred benefit.

Family Composition:	85% of Members are assumed to be married. Female is three years younger than male.
Social Security:	Based on the present law and 6.5% salary scale. Only earnings history while in state service is used. Future Social Security benefits replace the same proportion of salary as at present.
Benefit Increases After Retirement:	Payment of earnings on retired reserves in excess of 5% accounted for by 5% post-retirement assumptions.
Special Consideration:	Married Members assumed to elect subsidized joint and survivor form of annuity as follows: **Males -** 25% elect 50% J&S option 25% elect 100% J&S option **Females -** 5% elect 50% J&S option 5% elect 100% J&S option
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method with normal costs expressed as a level percentage of earnings. Under this method, Actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability.
Asset Valuation Method:	Cost Value plus one-third Unrealized Gains or Losses.
Payment on the Unfunded Actuarial Accrued Liability:	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.5% per annum.

Correctional Employees 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	5	4	2,400	3,700	0	0	0	0
21	5	4	2,250	3,550	0	0	0	0
22	5	4	2,080	3,390	0	0	0	0
23	6	4	1,920	3,230	0	0	0	0
24	6	4	1,760	3,070	0	0	0	0
25	6	5	1,600	2,910	0	0	0	0
26	7	5	1,470	2,750	0	0	0	0
27	7	5	1,340	2,600	0	0	0	0
28	7	5	1,230	2,430	0	0	0	0
29	8	5	1,130	2,270	0	0	0	0
30	8	5	1,040	2,120	2	0	0	0
31	9	6	950	1,970	2	0	0	0
32	9	6	890	1,820	2	0	0	0
33	10	6	830	1,680	2	0	0	0
34	10	7	770	1,540	2	0	0	0
35	11	7	720	1,410	2	1	0	0
36	12	7	680	1,300	2	1	0	0
37	13	8	640	1,190	2	1	0	0
38	14	8	600	1,090	2	1	0	0
39	15	9	560	1,000	2	2	0	0
40	16	9	530	920	2	2	0	0
41	18	10	500	850	2	2	0	0
42	20	10	480	780	2	4	0	0
43	23	11	460	720	3	4	0	0
44	26	12	430	680	3	4	0	0
45	29	13	410	630	3	5	0	0
46	33	14	390	590	5	6	0	0
47	38	15	370	560	7	7	0	0
48	42	16	350	530	9	7	0	0
49	47	18	340	500	11	10	0	0

Correctional Employees 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	53	20	320	470	14	10	0	0
51	59	23	300	440	16	12	0	0
52	65	26	280	410	20	14	0	0
53	71	29	260	390	24	16	0	0
54	78	33	240	360	28	20	0	0
55	85	38	210	330	34	24	0	0
56	93	42	170	290	40	30	0	0
57	100	47	140	230	46	36	0	0
58	109	53	90	170	56	44	10,000	10,000
59	119	59	40	90	66	52	0	0
60	131	65	0	0	76	62	0	0
61	144	71	0	0	90	74	0	0
62	159	78	0	0	110	88	0	0
63	174	85	0	0	136	104	0	0
64	192	93	0	0	174	122	0	0
65	213	100	0	0	0	0	0	0
66	236	109	0	0	0	0	0	0
67	263	119	0	0	0	0	0	0
68	292	131	0	0	0	0	0	0
69	324	144	0	0	0	0	0	0
70	361	159	0	0	0	0	0	0

Correctional Employees Retirement Fund

Summary of Plan Provisions

GENERAL

Eligibility:	State employees in covered correctional service.
Contributions:	
Member:	4.90% of salary.
Employer:	6.27% of salary. (Amended 1990)
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:	2.5% of average salary for each year of Allowable Service, pro rata for completed months. Maximum of 75% of Average Salary.

After 84 months or normal retirement age if earlier, benefit changes to unreduced General Plan benefit. For Members hired prior to July 1, 1989, normal retirement age is 65; for Members hired after June 30, 1989, normal retirement age is the age first eligible for nonreduced Social Security benefits. If combined General Plan benefit and Social security (based on State service) are less than the Correctional benefit, an additional benefit will be paid to prevent a decrease.

***Early Retirement Benefit*:**

Eligibility: Age 50 and three years of Allowable Service.

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

Form of Payment: Life annuity 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 benefits.

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 2.5% of Average Salary for each year in excess of 20 years of Allowable Service pro rata for completed months. Maximum of 75% of Average Salary.

Payment begins at disability and stops at age 62 or earlier if disability ceases or death occurs. Benefits may be paid upon re-employment but salary plus benefit cannot exceed current salary of position held at time of disability.

Non-Occupational Disability:

Eligibility: At least one year of 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 62 or earlier if disability ceases or death occurs. Benefits may be paid upon re-employment but salary plus benefit cannot exceed current salary of position held at time of disability.

Form of Payment: Same as for retirement.

Benefit Increases: Adjusted by 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 general state employees formula. 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.
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.
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

None.

Legislators Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 1995

FILE COPY

MILLIMAN & ROBERTSON, INC.

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Actuaries & Consultants

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November 16, 1995

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, 1995.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. 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 on July 8, 1992.

Respectfully submitted,

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

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

TKC/WVH/bh

Legislators Retirement Fund

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(Continued)

Report Highlights

(dollars in thousands)

	07/01/94 Valuation	07/01/95 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 3A % of Payroll	9.00%	9.00%
2. Required Contributions - Chapter 356 % of Payroll	38.34%	41.54%
3. Sufficiency (Deficiency): (A.1. - A.2.)	-29.34%	-32.54%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$18,738	$21,213
b. Current Benefit Obligations (Table 8)	$43,356	$48,114
c. Funding Ratio: (a/b)	43.22%	44.09%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$18,738	$21,213
b. Actuarial Accrued Liability (Table 9)	$45,448	$50,255
c. Funding Ratio: (a/b)	41.23%	42.21%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$28,044	$31,697
b. Current and Expected Future Benefit Obligations	$54,754	$60,739
c. Funding Ratio: (a/b)	51.22%	52.19%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	201	198
b. Projected Annual Earnings	$6,926	$7,193
c. Average Annual Earnings (Actual $)	$34,458	$36,326
d. Average Age	49.4	49.3
e. Average Service	8.7	8.0
2. Others		
a. Service Retirements (Table 4)	149	155
b. Disability Retirements (Table 5)	0	0
c. Survivors (Table 6)	56	61
d. Deferred Retirements (Table 7)	133	141
e. Terminated Other Non-vested (Table 7)	6	9
f. Total	344	366

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 44.09%. The corresponding ratio for the prior year was 43.22%.

- ° 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 1995 the ratio is 42.21%, which is an increase from the 1994 value of 41.23%.

- ° The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 52.19% shows that the current statutory contributions are inadequate.

Asset Information (Tables 1 and 2)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only a third of the unrealized gains and losses. This requirement exists because market values (which include all unrealized gain and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F1 to F6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

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 in accordance with Statement No. 5 of the Governmental Accounting Standards Board (GASB). Those requirements are:

- ° 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

The Current Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 uses the terms "Actuarial Present Value of Credited Projected Benefits" and "Pension Benefit Obligation" rather than "Current Benefit Obligation".

The JULY 1, 1995 Pension Benefit Obligation reported in Table 8 is reformatted for GASB reporting purposes in the following table:

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$34,748,000
Current Employees	
Accumulated employee contributions including allocated investment income	$5,110,000
Employer-financed vested	6,438,000
Employer-financed nonvested	1,818,000
Total Pension Benefit Obligation	$48,114,000
Net Assets Available for Benefits at Cost	$21,213,000
Total Benefit Obligation less Assets	$26,901,000
Funded Ratio	44.09%

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 the corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

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

The payments will increase 6.50% 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.

Sources 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 expectation. 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 41.54%.

Changes in Actuarial Assumptions

There were no changes in actuarial assumptions since the last valuation.

Changes in Plan Provisions

There were no changes in plan provisions since the last valuation which impacted funding costs.

Legislators Retirement Fund

Accounting Balance Sheet
(dollars in thousands)

JULY 1, 1995

	Market Value	Cost Value
A. ASSETS		
1. Cash, Equivalents, Short-term Securities	$0	$0
2. Investments		
a. Fixed Income	0	0
b. Equity	0	0
c. Real Estate	0	0
3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)	14,862	14,862
4. Other *	5,872	5,872
B. TOTAL ASSETS	$20,734	$20,734
C. AMOUNTS CURRENTLY PAYABLE	($479)	($479)
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	$5,833	$5,833
2. Employer Reserves	(6,159)	(6,159)
3. MPRIF Reserves	14,862	14,862
4. Non-MPRIF Reserves	6,677	6,677
5. Total Assets Available for Benefits	$21,213	$21,213
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	$20,734	$20,734

F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Cost Value of Assets Available for Benefits (D5)		$21,213
2. Market Value (D5)	$21,213	
3. Cost Value (D5)	21,213	
4. Market Over Cost: (F2-F3)	$0	
5. 1/3 of Market Over Cost: (F4)/3		0
6. Actuarial Value of Assets (F1+F5) (Same as "Current Assets")		$21,213

* Includes $5,833 of Member Reserves not segregated from general funds.

Legislators Retirement Fund

Change In Assets Available For Benefits

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

	Market Value	Cost Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	$18,738	$18,739
B. OPERATING REVENUES		
1. Member Contributions	$635	$635
2. Employer Contributions	0	0
3. Investment Income	0	0
4. MPRIF Income	1,163	1,163
5. Net Realized Gain (Loss)	0	0
6. Other	2,938	2,938
7. Net Change in Unrealized Gain (Loss)	1	0
8. Total Revenue	$4,737	$4,736
C. OPERATING EXPENSES		
1. Service Retirements	$2,052	$2,052
2. Disability Benefits	0	0
3. Survivor Benefits	0	0
4. Refunds	111	111
5. Investment Fees	0	0
6. Administrative Expenses	26	26
7. Other	73	73
8. Total Disbursements	$2,262	$2,262
D. OTHER CHANGES IN RESERVES	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	$21,213	$21,213

Legislators Retirement Fund

ACTIVE MEMBERS AS OF JUNE 30, 1995

AGE	YEARS OF SERVICE <1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25									
25-29		1							1
30-34	5	5							10
35-39	5	11	6						22
40-44	6	10	8	5	1				30
45-49	7	16	8	3	2	4			40
50-54	4	8	12	7	3	5			39
55-59	2	7	2	3	4	5			23
60-64	1	5	3	4	2	3			18
65+	1	4	1	3	2	4			15
ALL	31	67	40	25	14	21			198

AVERAGE ANNUAL EARNINGS

AGE	YEARS OF SERVICE <1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25									
25-29		32,011							32,011
30-34	29,657	35,512							32,585
35-39	29,657	35,784	36,005						34,452
40-44	29,657	35,387	35,440	37,539	32,353				34,513
45-49	29,657	35,805	35,180	36,273	37,163	38,026			34,929
50-54	29,657	36,187	36,201	36,629	35,474	38,643			35,861
55-59	29,657	37,388	37,088	37,689	36,316	36,636			36,379
60-64	29,657	32,277	37,243	36,327	37,213	38,011			35,363
65+	29,657	36,375	35,587	36,671	38,840	36,962			36,419
ALL	29,657	35,642	35,922	36,852	36,462	37,637			35,184

AGE	PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE <1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
ALL	919	2,388	1,436	921	510	790			6,966

Legislators Retirement Fund

SERVICE RETIREMENTS AS OF JUNE 30, 1995

AGE	YEARS RETIRED <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59								
60-64	10	16						26
65-69	4	20	19					43
70-74		4	8	30				42
75-79		2	1	4	16			23
80-84					3	7		10
85+					1	7	3	11
ALL	14	42	28	34	20	14	3	155

AVERAGE ANNUAL BENEFIT

AGE	YEARS RETIRED <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59								
60-64	13,381	11,165						12,017
65-69	19,417	13,319	7,071					11,126
70-74		9,043	7,308	11,089				10,174
75-79		12,380	19,477	14,036	17,387			16,460
80-84					15,804	7,629		10,082
85+					9,258	11,860	10,517	11,257
ALL	15,106	12,047	7,582	11,436	16,743	9,745	10,517	11,751

AGE	TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS RETIRED <1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL	211	505	212	388	334	136	31	1,821

Legislators Retirement Fund

SURVIVORS AS OF JUNE 30, 1995

AGE	YEARS SINCE DEATH ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54			1	1	2			4
55-59		3	1					4
60-64		2					1	3
65-69	2	5	1	1		1		10
70-74	1	2	2		1	1		7
75-79	2	2	5		1	3		13
80-84		3	4		4	2		13
85+	1	1	1			1	3	7
ALL	6	18	15	2	8	8	4	61

AVERAGE ANNUAL BENEFIT

AGE	YEARS SINCE DEATH ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54			22,839	11,445	3,637			10,390
55-59		9,291	5,467					8,335
60-64		3,764					2,934	3,487
65-69	4,457	4,693	1,695	3,084		5,884		4,304
70-74	7,280	2,329	4,009		1,796	7,972		4,246
75-79	8,702	2,481	6,663		2,916	4,009		5,433
80-84		6,900	5,151		7,158	5,344		6,202
85+	3,990	4,318	6,702			3,541	3,267	4,050
ALL	6,265	5,195	6,576	7,265	5,077	5,014	3,184	5,537

AGE	TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL	37,590	93,510	98,640	14,530	40,616	40,112	12,736	337,757

Legislators Retirement Fund

DISABILITY RETIREMENTS AS OF JUNE 30, 1995

	YEARS DISABLED							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59								
60-64								
65-69								
70-74								
75-79								
80-84								
85+								
ALL								

AVERAGE ANNUAL BENEFIT

	YEARS DISABLED							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59								
60-64								
65-69								
70-74								
75-79								
80-84								
85+								
ALL								

	TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS DISABLED							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL								

Legislators Retirement Fund

Reconciliation Of Members

	Actives	Terminated Deferred Retirement	Terminated Other Non-Vested
A. ON JUNE 30, 1994	201	133	6
B. ADDITIONS	31	19	4
C. DELETIONS			
1. Service Retirement	(7)	(8)	0
2. Disability	0	0	0
3. Death	(1)	(1)	0
4. Terminated - Deferred	(19)	0	0
5. Terminated - Refund	0	(2)	0
6. Terminated - Other Non-Vested	(4)	0	0
7. Returned as Active	1	(1)	0
8. Transferred to Other Fund	0	0	0
D. DATA ADJUSTMENTS	(4)	1	(1)
Vested	98		
Non-Vested	100		
E. TOTAL ON JUNE 30, 1995	198	141	9

	Recipients Retirement Annuitants	Recipients Disabled	Recipients Survivors
A. ON JUNE 30, 1994	149	0	56
B. ADDITIONS	14	0	6
C. DELETIONS			
1. Service Retirement	0	0	0
2. Death	(7)	0	(1)
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	(1)	0	0
E. TOTAL ON JUNE 30, 1995	155	0	61

Legislators Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

JULY 1, 1995

		Non-Vested	Vested	Total
A.	CURRENT ASSETS (TABLE 1, F6)			$21,213
B.	EXPECTED FUTURE ASSETS			
	1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			$0
	2. Present Value of Future Normal Costs			10,484
	3. Total Expected Future Assets			$10,484
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$31,697
D.	CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
	1. Benefit Recipients			
	a. Retirement Annuities		$18,130	$18,130
	b. Disability Benefits		0	0
	c. Surviving Spouse and Child Benefits		3,409	3,409
	2. Deferred Retirements with Future Augmentation		13,147	13,147
	3. Former Members without Vested Rights		62	62
	4. Active Members			
	a. Retirement Annuities	1,194	9,939	11,133
	b. Disability Benefits	0	0	0
	c. Survivor's Benefits	371	0	371
	d. Deferred Retirements	253	1,447	1,700
	e. Refund Liability Due to Death or Withdrawal	0	162	162
	5. Total Current Benefit Obligations	$1,818	$46,296	$48,114
E.	EXPECTED FUTURE BENEFIT OBLIGATIONS			$12,625
F.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$60,739
G.	CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)			$26,901
H.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)			$29,042

Legislators Retirement Fund

Determination Of Unfunded Actuarial Accrued Liability (UAAL) And Supplemental Contribution Rate

(dollars in thousands)

JULY 1, 1995

	Actuarial Present Value of Projected Benefits (1)	Actuarial Present Value of Future Normal Costs (2)	Actuarial Accrued Liability (3)=(1)-(2)
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	$21,560	$7,626	$13,934
b. Disability Benefits	0	0	0
c. Survivor's Benefit	718	410	308
d. Deferred Retirements	3,391	1,898	1,493
e. Refunds Due to Death or Withdrawal	322	550	(228)
f. Total	$25,991	$10,484	$15,507
2. Deferred Retirements With Future Augmentation	13,147		13,147
3. Former Members Without Vested Rights	62		62
4. Annuitants in MPRIF	14,862		14,862
5. Recipients Not in MPRIF	6,677		6,677
6. Total	$60,739	$10,484	$50,255

B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)	
1. AAL (A6)	$50,255
2. Current Assets (Table 1, F6)	21,213
3. UAAL (B1-B2)	$29,042
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE	
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2020	$138,893
2. Supplemental Contribution Rate (B3/C1)	20.91%

Note: If non-segregated member reserves were not counted as assets, the UAAL would be $34,875, resulting in a Supplemental Contribution Rate of 25.11%.

Legislators Retirement Fund

Changes In Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

A.	UAAL AT BEGINNING OF YEAR	$26,710
B.	CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
	1. Normal Cost and Expenses	$1,353
	2. Contribution	(635)
	3. Interest on A, B1 and B2	2,301
	4. Total (B1+B2+B3)	$3,019
C.	EXPECTED UAAL AT END OF YEAR (A+B4)	$29,729
D.	INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
	1. Salary Increases	($1,086)
	2. Investment Return	512
	3. MPRIF Mortality	(518)
	4. Mortality of Other Benefit Recipients	3,052
	5. Other Items	(2,647)
	6. Total	($687)
E.	UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTION (C+D6)	$29,042
F.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	0
G.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	0
H.	UAAL AT END OF YEAR (E+F+G)	$29,042

Legislators Retirement Fund

Determination Of Contribution Sufficiency

(dollars in thousands)

JULY 1, 1995

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 3A		
1. Employee Contributions	9.00%	$647
2. Employer Contributions	0.00%	0 *
3. Total	9.00%	$647

* 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 benefit commencement.

	Percent of Payroll	Dollar Amount
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	15.52%	$1,116
b. Disability benefits	0.00%	0
c. Survivors	0.78%	56
d. Deferred Retirement Benefits	2.99%	215
e. Refunds Due to Death or Withdrawal	0.96%	69
f. Total	20.25%	$1,456
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	20.91%	1,504
3. Allowance for Expenses	0.38%	27
4. Total	41.54%	$2,987
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	-32.54%	($2,340)

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 1995 is $7,193.

The deficiency amount shown above is calculated based on reported assets which include a receivable of$5,833 for member contribution 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 36.74%.

Legislators Retirement Fund

Summary of Actuarial Assumptions and Methods

GENERAL

Interest:

Pre-Retirement: 8.5% per annum
Post-Retirement: 5.0% per annum

Salary Increases:

The statutory salary rate as prescribed in Chapter 345, Article I, Sec. 28, through January 1, 1996 and 6.5% per year thereafter. Per diem payments were assumed to remain constant each year in the future.

Mortality:

Pre-Retirement:
Male - 1971 Group Annuity Mortality Table
Female - 1971 Group Annuity Mortality Table male rates set back eight years

Post-Retirement:
Male - Same as above
Female - Same as above

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
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
Benefit Increases After Retirement:	Payment of earnings on retired reserves in excess of 5% accounted for by 5% post-retirement assumptions.
Special Consideration:	Per diem payments for regular and special sessions were included in salary. The annual amount of per diem that is recognized in this valuation is $4,800 per Member. This is based on $48 per day times an average session of 100 days.
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:	Cost Value plus one-third Unrealized Gains or losses.
Payment on the Unfunded Actuarial Accrued Liability:	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.5% per annum.

Legislators Retirement Fund

Summary of Plan Provisions

GENERAL

Eligibility:	Members of the State Legislature. 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 - 2.5%

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.

***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. Amount is payable as a normal or early retirement.

SIGNIFICANT CHANGES

None.

Elective State Officers Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 1995

MILLIMAN & ROBERTSON, INC.

MILLIMAN & ROBERTSON, INC.
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November 16, 1995

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, 1995.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. 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 on July 8, 1992.

Respectfully submitted,

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)

	07/01/94 Valuation	07/01/95 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 352C % of Payroll	9.00%	9.00%
2. Required Contributions - Chapter 356 % of Payroll	42.00%	43.58%
3. Sufficiency (Deficiency): (A.1. - A.2.)	-33.00%	-34.58%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$361	$378
b. Current Benefit Obligations (Table 8)	$2,718	$2,800
c. Funding Ratio: (a/b)	13.28%	13.50%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$361	$378
b. Actuarial Accrued Liability (Table 9)	$2,848	$2,948
c. Funding Ratio: (a/b)	12.68%	12.82%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$571	$627
b. Current and Expected Future Benefit Obligations	$3,058	$3,197
c. Funding Ratio: (a/b)	18.67%	19.61%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	6	6
b. Projected Annual Earnings	$462	$452
c. Average Annual Earnings (Actual $)	$77,000	$75,374
d. Average Age	53.7	52.0
e. Average Service	10.5	10.3
2. Others		
a. Service Retirements (Table 4)	5	5
b. Disability Retirements (Table 5)	0	0
c. Survivors (Table 6)	6	6
d. Deferred Retirements (Table 7)	4	5
e. Terminated Other Non-vested (Table 7)	0	0
f. Total	15	16

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 13.50%. The corresponding ratio for the prior year was 13.28%.

- ° 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 1995 the ratio is 12.82%, which is an increase from the 1994 value of 12.68%.

- ° The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 19.61% shows that the current statutory contributions are inadequate.

Asset Information (Tables 1 and 2)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only a third of the unrealized gains and losses. This requirement exists because market values (which include all unrealized gain and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F1 to F6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

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 in accordance with Statement No. 5 of the Governmental Accounting Standards Board (GASB). Those requirements are:

- ° 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

The Current Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 uses the terms "Actuarial Present Value of Credited Projected Benefits" and "Pension Benefit Obligation" rather than "Current Benefit Obligation".

The JULY 1, 1995 Pension Benefit Obligation reported in Table 8 is reformatted for GASB reporting purposes in the following table:

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$1,642,000
Current Employees	
Accumulated employee contributions including allocated investment income	$414,000
Employer-financed vested	724,000
Employer-financed nonvested	20,000
Total Pension Benefit Obligation	$2,800,000
Net Assets Available for Benefits at Cost	$378,000
Total Benefit Obligation less Assets	$2,422,000
Funded Ratio	13.50%

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 the corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

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

The payments will increase 6.50% 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.

Sources 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 expectation. 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 43.58%.

Changes in Actuarial Assumptions

There were no changes in actuarial assumptions since the last valuation.

Changes in Plan Provisions

There were no changes in plan provisions since the last valuation which impacted funding costs.

TABLE 1

Elective State Officers Retirement Fund

Accounting Balance Sheet

(dollars in thousands)

JULY 1, 1995

	Market Value	Cost Value
A. ASSETS		
1. Cash, Equivalents, Short-term Securities	$0	$0
2. Investments		
a. Fixed Income	0	0
b. Equity	0	0
c. Real Estate	0	0
3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)	0	0
4. Other *	379	379
B. TOTAL ASSETS	$379	$379
C. AMOUNTS CURRENTLY PAYABLE	$1	$1
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	$379	$379
2. Employer Reserves	(1,385)	(1,385)
3. MPRIF Reserves	0	0
4. Non-MPRIF Reserves	1,384	1,384
5. Total Assets Available for Benefits	$378	$378
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	$379	$379

F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Cost Value of Assets Available for Benefits (D5)		$378
2. Market Value (D5)	$378	
3. Cost Value (D5)	378	
4. Market Over Cost: (F2-F3)	$0	
5. 1/3 of Market Over Cost: (F4)/3		0
6. Actuarial Value of Assets (F1+F5) (Same as "Current Assets")		$378

* Includes $379 of Member Reserves not segregated from general funds.

Elective State Officers Retirement Fund

Change In Assets Available For Benefits

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

	Market Value	Cost Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	$361	$361
B. OPERATING REVENUES		
1. Member Contributions	$38	$38
2. Employer Contributions	0	0
3. Investment Income	(1)	(1)
4. MPRIF Income	0	0
5. Net Realized Gain (Loss)	0	0
6. Other	165	165
7. Net Change in Unrealized Gain (Loss)	0	0
8. Total Revenue	$202	$202
C. OPERATING EXPENSES		
1. Service Retirements	$164	$164
2. Disability Benefits	0	0
3. Survivor Benefits	0	0
4. Refunds	18	18
5. Investment Fees	0	0
6. Administrative Expenses	1	1
7. Other	2	2
8. Total Disbursements	$185	$185
D. OTHER CHANGES IN RESERVES	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	$378	$378

Elective State Officers Retirement Fund

ACTIVE MEMBERS AS OF JUNE 30, 1995

AGE	YEARS OF SERVICE ≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25									
25-29									
30-34	1								1
35-39									
40-44									
45-49									
50-54	1		1	1					3
55-59									
60-64					1	1			2
65+									
ALL	2		1	1	1	1			6

AVERAGE ANNUAL EARNINGS

AGE	YEARS OF SERVICE ≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25									
25-29									
30-34	61,607								61,607
35-39									
40-44									
45-49									
50-54	56,219		61,132	86,774					68,042
55-59									
60-64					111,145	61,132			86,139
65+									
ALL	58,913		61,132	86,774	111,145	61,132			73,001

AGE	PRIOR FISCAL YEAR EARNINGS (ACTUAL DOLLARS) BY YEARS OF SERVICE ≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
ALL	117,826		61,132	86,774	111,145	61,132			438,006

Elective State Officers Retirement Fund

SERVICE RETIREMENTS AS OF JUNE 30, 1995

AGE	YEARS RETIRED ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59								
60-64		1						1
65-69		3						3
70-74								
75-79								
80-84					1			1
85+								
ALL		4			1			5

AVERAGE ANNUAL BENEFIT

AGE	YEARS RETIRED ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59								
60-64		3,843						3,843
65-69		26,206						26,206
70-74								
75-79								
80-84					17,891			17,891
85+								
ALL		20,615			17,891			20,070

TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS RETIRED

AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL		82,460			17,891			100,350

Elective State Officers Retirement Fund

SURVIVORS AS OF JUNE 30, 1995

	YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59		1						1
60-64								
65-69								
70-74								
75-79		1						1
80-84		1			1	1		3
85+							1	1
ALL		3			1	1	1	6

AVERAGE ANNUAL BENEFIT

	YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59		3,843						3,843
60-64								
65-69								
70-74								
75-79		10,805						10,805
80-84		20,065			5,048	17,118		14,077
85+							9,763	9,763
ALL		11,571			5,048	17,118	9,763	11,107

	TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS SINCE DEATH							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL		34,713			5,048	17,118	9,763	66,642

TABLE 6

Elective State Officers Retirement Fund

DISABILITY RETIREMENTS AS OF JUNE 30, 1995

	YEARS DISABLED							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59								
60-64								
65-69								
70-74								
75-79								
80-84								
85+								
ALL								

AVERAGE ANNUAL BENEFIT

	YEARS DISABLED							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59								
60-64								
65-69								
70-74								
75-79								
80-84								
85+								
ALL								

	TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS DISABLED							
AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL								

Elective State Officers Retirement Fund

Reconciliation Of Members

	Actives	Terminated: Deferred Retirement	Terminated: Other Non-Vested
A. ON JUNE 30, 1994	6	4	0
B. ADDITIONS	2	1	0
C. DELETIONS			
1. Service Retirement	0	0	0
2. Disability	0	0	0
3. Death	0	0	0
4. Terminated - Deferred	(1)	0	0
5. Terminated - Refund	(1)	0	0
6. Terminated - Other Non-Vested	0	0	0
7. Returned as Active	0	0	0
8. Transferred to Other Fund	0	0	0
D. DATA ADJUSTMENTS	0	0	0
Vested	4		
Non-Vested	2		
E. TOTAL ON JUNE 30, 1995	6	5	0

	Recipients: Retirement Annuitants	Recipients: Disabled	Recipients: Survivors
A. ON JUNE 30, 1994	5	0	6
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, 1995	5	0	6

Elective State Officers Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

JULY 1, 1995

A. CURRENT ASSETS (TABLE 1, F6)			$378
B. EXPECTED FUTURE ASSETS			
1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			$0
2. Present Value of Future Normal Costs			249
3. Total Expected Future Assets			$249
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$627

D. CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
1. Benefit Recipients			
a. Retirement Annuities		$882	$882
b. Disability Benefits		0	0
c. Surviving Spouse and Child Benefits		502	502
2. Deferred Retirements with Future Augmentation		258	258
3. Former Members without Vested Rights		0	0
4. Active Members			
a. Retirement Annuities	2	996	998
b. Disability Benefits	0	0	0
c. Survivor's Benefits	15	0	15
d. Deferred Retirements	3	138	141
e. Refund Liability Due to Death or Withdrawal	0	4	4
5. Total Current Benefit Obligations	$20	$2,780	$2,800

E. EXPECTED FUTURE BENEFIT OBLIGATIONS	$397
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS	$3,197
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)	$2,422
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)	$2,570

Elective State Officers Retirement Fund

Determination Of Unfunded Actuarial Accrued Liability (UAAL) And Supplemental Contribution Rate

(dollars in thousands)

JULY 1, 1995

	Actuarial Present Value of Projected Benefits (1)	Actuarial Present Value of Future Normal Costs (2)	Actuarial Accrued Liability (3)=(1)-(2)
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	$1,266	$74	$1,192
b. Disability Benefits	0	0	0
c. Survivor's Benefit	21	8	13
d. Deferred Retirements	247	128	119
e. Refunds Due to Death or Withdrawal	21	39	(18)
f. Total	$1,555	$249	$1,306
2. Deferred Retirements With Future Augmentation	258		258
3. Former Members Without Vested Rights	0		0
4. Annuitants in MPRIF	0		0
5. Recipients Not in MPRIF	1,384		1,384
6. Total	$3,197	$249	$2,948

B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)	
1. AAL (A6)	$2,948
2. Current Assets (Table 1, F6)	378
3. UAAL (B1-B2)	$2,570
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE	
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2020	$8,733
2. Supplemental Contribution Rate (B3/C1)	29.43%

Note: If non-segregated member reserves were not counted as assets, the UAAL would be $2,949, resulting in a Supplemental Contribution Rate of 33.77%.

Elective State Officers Retirement Fund

Changes In Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

A.	UAAL AT BEGINNING OF YEAR	$2,487
B.	CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
	1. Normal Cost and Expenses	$72
	2. Contribution	(38)
	3. Interest on A, B1 and B2	213
	4. Total (B1+B2+B3)	$247
C.	EXPECTED UAAL AT END OF YEAR (A+B4)	$2,734
D.	INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
	1. Salary Increases	($98)
	2. Investment Return	32
	3. MPRIF Mortality	0
	4. Mortality of Other Benefit Recipients	19
	5. Other Items	(117)
	6. Total	($164)
E.	UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTION (C+D6)	$2,570
F.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	0
G.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	0
H.	UAAL AT END OF YEAR (E+F+G)	$2,570

Elective State Officers Retirement Fund

Determination Of Contribution Sufficiency

(dollars in thousands)

JULY 1, 1995

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 352C		
1. Employee Contributions	9.00%	$41
2. Employer Contributions	0.00%	0 *
3. Total	9.00%	$41

* 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 benefit commencement.

	Percent of Payroll	Dollar Amount
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	4.20%	$19
b. Disability benefits	0.00%	0
c. Survivors	0.44%	2
d. Deferred Retirement Benefits	7.30%	33
e. Refunds Due to Death or Withdrawal	1.99%	9
f. Total	13.93%	$63
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	29.43%	133
3. Allowance for Expenses	0.22%	1
4. Total	43.58%	$197
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	-34.58%	($156)

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 1995 is $452.

The deficiency amount shown above is calculated based on reported assets which include a receivable of$379 for member contribution 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 38.92%.

Elective State Officers Retirement Fund

Summary of Actuarial Assumptions and Methods

***Interest*:**	**Pre-Retirement:**	8.5% per annum
	Post-Retirement:	5.0% per annum
***Salary Increases*:**	The statutory salary rate as prescribed in Chapter 345, Article I, Sec. 28, through January 1, 1996 and 6.5% per year thereafter.	
***Mortality*:**	**Pre-Retirement:**	
	Male -	1971 Group Annuity Mortality Table
	Female -	1971 Group Annuity Mortality Table male rates set back 8 years
	Post-Retirement:	
	Male -	Same as above
	Female -	Same as above
	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

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
Benefit Increases After Retirement:	Payment of earnings on retired reserves in excess of 5% accounted for by 5% post-retirement assumptions.
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:	Cost Value plus one-third Unrealized Gains or Losses.
Payment on the Unfunded Actuarial Accrued Liability:	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.5% per annum.

Elective State Officers Retirement Fund

Summary of Plan Provisions

GENERAL

***Eligibility*:**	Employment as a "Constitutional Officer".
***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.
***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.

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).

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.

SIGNIFICANT CHANGES

None.

Judges Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 1995

MILLIMAN & ROBERTSON, INC.

MILLIMAN & ROBERTSON, INC.
Actuaries & Consultants

Internationally WOODROW MILLIMAN

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November 16, 1995

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, 1995.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. 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 on July 8, 1992.

Respectfully submitted,

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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Report Highlights

(dollars in thousands)

	07/01/94 Valuation	07/01/95 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 490 % of Payroll	28.36%	28.36%
2. Required Contributions - Chapter 356 % of Payroll	28.27%	27.32%
3. Sufficiency (Deficiency): (A.1. - A.2.)	0.09%	1.04%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	$50,428	$56,813
b. Current Benefit Obligations (Table 8)	$94,884	$98,797
c. Funding Ratio: (a/b)	53.15%	57.50%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	$50,428	$56,813
b. Actuarial Accrued Liability (Table 9)	$98,313	$102,238
c. Funding Ratio: (a/b)	51.29%	55.57%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	$141,481	$150,654
b. Current and Expected Future Benefit Obligations	$141,066	$145,951
c. Funding Ratio: (a/b)	100.29%	103.22%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	265	271
b. Projected Annual Earnings	$22,302	$23,429
c. Average Annual Earnings (Actual $)	$84,158	$86,453
d. Average Age	53.0	53.0
e. Average Service	10.7	10.6
2. Others		
a. Service Retirements (Table 4)	127	131
b. Disability Retirements (Table 5)	8	7
c. Survivors (Table 6)	72	77
d. Deferred Retirements (Table 7)	6	7
e. Terminated Other Non-vested (Table 7)	0	1
f. Total	213	223

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 57.50%. The corresponding ratio for the prior year was 53.15%.

- 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 1995 the ratio is 55.57%, which is an increase from the 1994 value of 51.29%.

- The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 103.22% verifies that the current statutory contributions are sufficient.

Asset Information (Tables 1 and 2)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only a third of the unrealized gains and losses. This requirement exists because market values (which include all unrealized gain and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F1 to F6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

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 in accordance with Statement No. 5 of the Governmental Accounting Standards Board (GASB). Those requirements are:

- ° 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

The Current Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 uses the terms "Actuarial Present Value of Credited Projected Benefits" and "Pension Benefit Obligation" rather than "Current Benefit Obligation".

The JULY 1, 1995 Pension Benefit Obligation reported in Table 8 is reformatted for GASB reporting purposes in the following table:

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$58,147,000
Current Employees	
Accumulated employee contributions including allocated investment income	$14,946,000
Employer-financed vested	16,679,000
Employer-financed nonvested	9,025,000
Total Pension Benefit Obligation	$98,797,000
Net Assets Available for Benefits at Cost	$56,635,000
Total Benefit Obligation less Assets	$42,162,000
Funded Ratio	57.32%

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 the corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

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

The payments will increase 6.50% 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.

Sources 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 expectation. 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 28.36% compared to the Required Contribution Rate of 27.32%.

Changes in Actuarial Assumptions

There were no changes in actuarial assumptions since the last valuation.

Changes in Plan Provisions

There were no changes in plan provisions since the last valuation which impacted funding costs.

Judges Retirement Fund

Accounting Balance Sheet

(dollars in thousands)

JULY 1, 1995

	Market Value	Cost Value
A. ASSETS		
1. Cash, Equivalents, Short-term Securities	$980	$980
2. Investments		
a. Fixed Income	3,327	3,315
b. Equity	8,010	7,447
c. Real Estate	497	538
3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)	45,207	45,207
4. Other	245	245
B. TOTAL ASSETS	$58,266	$57,732
C. AMOUNTS CURRENTLY PAYABLE	$1,097	$1,097
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	$8,369	$8,369
2. Employer Reserves	(8,445)	(8,979)
3. MPRIF Reserves	45,207	45,207
4. Non-MPRIF Reserves	12,038	12,038
5. Total Assets Available for Benefits	$57,169	$56,635
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	$58,266	$57,732

F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS

1. Cost Value of Assets Available for Benefits (D5)		$56,635
2. Market Value (D5)	$57,169	
3. Cost Value (D5)	56,635	
4. Market Over Cost: (F2-F3)	$534	
5. 1/3 of Market Over Cost: (F4)/3		178
6. Actuarial Value of Assets (F1+F5) (Same as "Current Assets")		$56,813

Judges Retirement Fund

Change In Assets Available For Benefits

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

	Market Value	Cost Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	$50,176	$50,555
B. OPERATING REVENUES		
1. Member Contributions	$1,455	$1,455
2. Employer Contributions	5,162	5,162
3. Investment Income	823	823
4. MPRIF Income	3,538	3,538
5. Net Realized Gain (Loss)	(57)	(57)
6. Other	1,469	1,469
7. Net Change in Unrealized Gain (Loss)	913	0
8. Total Revenue	$13,303	$12,390
C. OPERATING EXPENSES		
1. Service Retirements	$6,233	$6,233
2. Disability Benefits	0	0
3. Survivor Benefits	0	0
4. Refunds	0	0
5. Investment Fees	17	17
6. Administrative Expenses	28	28
7. Other	32	32
8. Total Disbursements	$6,310	$6,310
D. OTHER CHANGES IN RESERVES	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	$57,169	$56,635

Judges Retirement Fund

ACTIVE MEMBERS AS OF JUNE 30, 1995

AGE	YEARS OF SERVICE ≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25									
25-29									
30-34	2								2
35-39	3	4							7
40-44	4	13	4	2					23
45-49	3	19	34	15					71
50-54	3	13	13	23	9				61
55-59	1	1	14	5	13	10	2	1	47
60-64	1	1	6	5	5	8	5		31
65+		3	7	4	2	8	3	2	29
ALL	17	54	78	54	29	26	10	3	271

AVERAGE ANNUAL EARNINGS

AGE	YEARS OF SERVICE ≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
<25									
25-29									
30-34	68,636								68,636
35-39	75,353	82,999							79,722
40-44	86,806	83,914	84,857	85,582					84,726
45-49	75,603	83,478	83,959	84,074					83,502
50-54	77,423	85,377	83,495	83,948	84,706				83,947
55-59	88,311	83,495	82,579	84,585	83,495	84,585	83,495	83,495	83,673
60-64	85,634	83,495	84,403	83,611	86,765	84,016	80,604		83,954
65+		83,495	87,222	86,220	86,220	83,380	83,495	83,495	84,927
ALL	79,034	84,006	84,007	84,240	84,623	84,039	82,050	83,495	83,732

AGE	PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE ≤1	1-4	5-9	10-14	15-19	20-24	25-29	30+	ALL
ALL	1,343	4,536	6,552	4,548	2,454	2,185	820	250	22,691

TABLE 4

Judges Retirement Fund

SERVICE RETIREMENTS AS OF JUNE 30, 1995

AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
	YEARS RETIRED							
<50								
50-54								
55-59		1						1
60-64		1						1
65-69	7	13	6					26
70-74	3	26	19	2				50
75-79		1	14	4				19
80-84				15	6			21
85+				1	8	3	1	13
ALL	10	42	39	22	14	3	1	131

AVERAGE ANNUAL BENEFIT

AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
	YEARS RETIRED							
<50								
50-54								
55-59		29,889						29,889
60-64		23,133						23,133
65-69	40,825	34,989	29,807					35,364
70-74	38,116	37,378	30,873	27,665				34,562
75-79		6,993	33,056	49,934				35,238
80-84				41,778	40,178			41,321
85+				9,030	38,905	32,725	40,754	35,323
ALL	40,012	35,398	31,493	40,489	39,451	32,725	40,754	35,855

AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
	TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS RETIRED							
ALL	400	1,486	1,228	890	552	98	40	4,697

Judges Retirement Fund

SURVIVORS AS OF JUNE 30, 1995

AGE	YEARS SINCE DEATH ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50			2					2
50-54			2					2
55-59			2					2
60-64	1	1						2
65-69	2	3	3	2	2	1		13
70-74	1	3	1	2		1	1	9
75-79	2	1	2	3		2	1	11
80-84		3	2	1	2	2	3	13
85+		2	2		4	7	8	23
ALL	6	13	16	8	8	13	13	77

AVERAGE ANNUAL BENEFIT

AGE	YEARS SINCE DEATH ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50			22,994					22,994
50-54			27,238					27,238
55-59			19,557					19,557
60-64	16,532	27,225						21,879
65-69	20,806	21,999	21,102	18,306	10,721	13,006		18,614
70-74	21,956	26,300	35,208	25,138		11,966	20,377	24,298
75-79	22,695	20,370	17,834	31,982		10,521	40,382	23,527
80-84		18,045	14,295	28,184	14,005	19,228	13,747	16,817
85+		19,651	20,377		18,555	21,402	15,731	18,693
ALL	20,915	21,995	21,444	26,377	15,459	18,022	17,527	20,148

AGE	TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL	125	285	343	211	123	234	227	1,551

Judges Retirement Fund

DISABILITY RETIREMENTS AS OF JUNE 30, 1995

AGE	YEARS DISABLED ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59								
60-64			1					1
65-69					1			1
70-74			2					2
75-79				3				3
80-84								
85+								
ALL			3	3	1			7

AVERAGE ANNUAL BENEFIT

AGE	YEARS DISABLED ≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
<50								
50-54								
55-59								
60-64			22,594					22,594
65-69					29,886			29,886
70-74			38,349					38,349
75-79				38,975				38,975
80-84								
85+								
ALL			33,097	38,975	29,886			35,158

TOTAL ANNUAL BENEFIT (ACTUAL DOLLARS) BY YEARS DISABLED

AGE	≤1	1-4	5-9	10-14	15-19	20-24	25+	ALL
ALL			99,291	116,925	29,886			246,106

Judges Retirement Fund

Reconciliation Of Members

	Actives	Terminated Deferred Retirement	Terminated Other Non-Vested
A. ON JUNE 30, 1994	265	6	0
B. ADDITIONS	19	2	0
C. DELETIONS			
1. Service Retirement	(9)	(1)	0
2. Disability	0	0	0
3. Death	(1)	0	0
4. Terminated - Deferred	(2)	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 Other Fund	0	0	0
D. DATA ADJUSTMENTS	(1)	0	1
Vested	200		
Non-Vested	71		
E. TOTAL ON JUNE 30, 1995	271	7	1

	Recipients Retirement Annuitants	Recipients Disabled	Recipients Survivors
A. ON JUNE 30, 1994	127	8	72
B. ADDITIONS	10	0	6
C. DELETIONS			
1. Service Retirement	0	0	0
2. Death	(7)	(1)	(2)
3. Annuity Expired	0	0	0
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	1	0	1
E. TOTAL ON JUNE 30, 1995	131	7	77

Judges Retirement Fund

Actuarial Balance Sheet

(dollars in thousands)

JULY 1, 1995

		Non-Vested	Vested	Total
A.	CURRENT ASSETS (TABLE 1, F6)			$56,813
B.	EXPECTED FUTURE ASSETS			
	1. Present Value of Expected Future Statutory Supplemental Contributions (See Table 11)			$50,128
	2. Present Value of Future Normal Costs			43,713
	3. Total Expected Future Assets			$93,841
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS			$150,654
D.	CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested	Total
	1. Benefit Recipients			
	a. Retirement Annuities		$40,790	$40,790
	b. Disability Benefits		2,671	2,671
	c. Surviving Spouse and Child Benefits		13,784	13,784
	2. Deferred Retirements with Future Augmentation		902	902
	3. Former Members without Vested Rights		0	0
	4. Active Members			
	a. Retirement Annuities	1,939	31,269	33,208
	b. Disability Benefits	2,452	0	2,452
	c. Survivor's Benefits	4,634	0	4,634
	d. Deferred Retirements	0	0	0
	e. Refund Liability Due to Death or Withdrawal	0	356	356
	5. Total Current Benefit Obligations	$9,025	$89,772	$98,797
E.	EXPECTED FUTURE BENEFIT OBLIGATIONS			$47,154
F.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			$145,951
G.	CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)			$41,984
H.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)			($4,703)

Judges Retirement Fund

Determination Of Unfunded Actuarial Accrued Liability (UAAL) And Supplemental Contribution Rate

(dollars in thousands)

JULY 1, 1995

	Actuarial Present Value of Projected Benefits (1)	Actuarial Present Value of Future Normal Costs (2)	Actuarial Accrued Liability (3)=(1)-(2)
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities	$72,964	$34,727	$38,237
b. Disability Benefits	4,918	2,945	1,973
c. Survivor's Benefit	9,283	5,685	3,598
d. Deferred Retirements	0	0	0
e. Refunds Due to Death or Withdrawal	639	356	283
f. Total	$87,804	$43,713	$44,091
2. Deferred Retirements With Future Augmentation	902		902
3. Former Members Without Vested Rights	0		0
4. Annuitants in MPRIF	45,207		45,207
5. Recipients Not in MPRIF	12,038		12,038
6. Total	$145,951	$43,713	$102,238

B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)	
1. AAL (A6)	$102,238
2. Current Assets (Table 1, F6)	56,813
3. UAAL (B1-B2)	$45,425
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE	
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2020	$452,421
2. Supplemental Contribution Rate (B3/C1)	10.04%

Judges Retirement Fund

Changes In Unfunded Actuarial Accrued Liability (UAAL)

(dollars in thousands)

YEAR ENDING JUNE 30, 1995

A.	UAAL AT BEGINNING OF YEAR	$47,885
B.	CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
	1. Normal Cost and Expenses	$3,970
	2. Contribution	(6,617)
	3. Interest on A, B1 and B2	3,958
	4. Total (B1+B2+B3)	$1,311
C.	EXPECTED UAAL AT END OF YEAR (A+B4)	$49,196
D.	INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
	1. Salary Increases	($3,103)
	2. Investment Return	(121)
	3. MPRIF Mortality	1,057
	4. Mortality of Other Benefit Recipients	(141)
	5. Other Items	(1,463)
	6. Total	($3,771)
E.	UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTION (C+D6)	$45,425
F.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	0
G.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	0
H.	UAAL AT END OF YEAR (E+F+G)	$45,425

Judges Retirement Fund

Determination Of Contribution Sufficiency

(dollars in thousands)

JULY 1, 1995

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 490		
1. Employee Contributions	6.36%	$1,490
2. Employer Contributions	22.00%	5,154
3. Total	28.36%	$6,644
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	13.70%	$3,210
b. Disability benefits	1.08%	252
c. Survivors	2.19%	514
d. Deferred Retirement Benefits	0.00%	0
e. Refunds Due to Death or Withdrawal	0.18%	42
f. Total	17.15%	$4,018
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	10.04%	2,352
3. Allowance for Expenses	0.13%	30
4. Total	27.32%	$6,400
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) [A3-B4]	1.04%	$244

Note: Projected Annual Payroll for Fiscal Year Beginning on JULY 1, 1995 is $23,429.

Judges Retirement Fund

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

***Interest*:**	**Pre-Retirement:** 8.5% per annum **Post-Retirement:** 5.0% per annum
***Salary Increases*:**	Statutory salary rate as prescribed in Chapter 345, Article I, Sec. 28, through January 1, 1996 and 6.5% per year thereafter.
***Mortality*:**	**Pre-Retirement:** Male - 1971 Group Annuity Mortality Table Female - 1971 Group Annuity Mortality Table male rates set back eight years **Post-Retirement:** Male - Same as above Female - Same as above **Post-Disability:** Male - Same as above Female - Same as above
***Retirement Age*:**	*Judges*: Age 68 or, if over age 68, one year from the valuation date. *Supreme Court Justices in Pre-1974 Plan*: Latest of age 70, 12 years of service, or one year from valuation date.
***Separation*:**	None
***Disability*:**	Rates adopted by MSRS based on actual experience, most recently adjusted in 1979, as shown in rate table.
***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
***Benefit Increases After Retirement*:**	Payment of earnings on retired reserves in excess of 5% accounted for by 5% post-retirement assumptions.
***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*:**	Cost Value plus one-third Unrealized Gains or Losses.
***Payment on the Unfunded Actuarial Accrued Liability*:**	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.5% per annum.

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	5	4	0	0	0	0	0	0
21	5	4	0	0	0	0	0	0
22	5	4	0	0	0	0	0	0
23	6	4	0	0	0	0	0	0
24	6	4	0	0	0	0	0	0
25	6	5	0	0	0	0	0	0
26	7	5	0	0	0	0	0	0
27	7	5	0	0	0	0	0	0
28	7	5	0	0	0	0	0	0
29	8	5	0	0	0	0	0	0
30	8	5	0	0	2	0	0	0
31	9	6	0	0	2	0	0	0
32	9	6	0	0	2	0	0	0
33	10	6	0	0	2	0	0	0
34	10	7	0	0	2	0	0	0
35	11	7	0	0	2	1	0	0
36	12	7	0	0	2	1	0	0
37	13	8	0	0	2	1	0	0
38	14	8	0	0	2	1	0	0
39	15	9	0	0	2	2	0	0
40	16	9	0	0	2	2	0	0
41	18	10	0	0	2	2	0	0
42	20	10	0	0	2	4	0	0
43	23	11	0	0	3	4	0	0
44	26	12	0	0	3	4	0	0
45	29	13	0	0	3	5	0	0
46	33	14	0	0	5	6	0	0
47	38	15	0	0	7	7	0	0
48	42	16	0	0	9	7	0	0
49	47	18	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	53	20	0	0	14	10	0	0
51	59	23	0	0	16	12	0	0
52	65	26	0	0	20	14	0	0
53	71	29	0	0	24	16	0	0
54	78	33	0	0	28	20	0	0
55	85	38	0	0	34	24	0	0
56	93	42	0	0	40	30	0	0
57	100	47	0	0	46	36	0	0
58	109	53	0	0	56	44	0	0
59	119	59	0	0	66	52	0	0
60	131	65	0	0	76	62	0	0
61	144	71	0	0	90	74	0	0
62	159	78	0	0	110	88	0	0
63	174	85	0	0	136	104	0	0
64	192	93	0	0	174	122	0	0
65	213	100	0	0	0	0	0	0
66	236	109	0	0	0	0	0	0
67	263	119	0	0	0	0	0	0
68	292	131	0	0	0	0	10,000	10,000
69	324	144	0	0	0	0	0	0
70	361	159	0	0	0	0	0	0

Judges Retirement Fund

Summary of Plan Provisions

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.
Employer:	22% 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:	2.5% of average salary for each year of Allowable Service prior to 7/1/80 and 3% of Average Salary for each year of Allowable Service after 6/30/80. Maximum benefit of 65% of salary for the 12 months 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. 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.
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.

SIGNIFICANT CHANGES:

None.

Judges Retirement Fund

Summary of Plan Provisions

GENERAL

Eligibility:	A judge or justice of any court who is covered under the Social Security Act.
Contributions:	
Member:	6.27% of salary. (Amended 1992)
Employer:	22% 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:	2.5% of average salary for each year of Allowable Service prior to 7/1/80 and 3% of Average Salary for each year of Allowable Service after 6/30/80. Maximum benefit of 65% of salary for the 12 months preceding retirement. (Amended 1992)

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. 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.

SIGNIFICANT CHANGES:

None.