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**ELECTIVE STATE OFFICERS RETIREMENT FUND**

**ACTUARIAL VALUATION REPORT**

**JULY 1, 1987**

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November 23, 1987

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

**RE: ELECTIVE STATE OFFICERS RETIREMENT FUND**

Commission Members:

We have prepared an actuarial valuation of the Fund as of July 1, 1987 based on membership and financial data supplied by the Fund.

We certify that to the best of our knowledge and belief this actuarial valuation was performed 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 August 26, 1987.

Respectfully submitted,

THE WYATT COMPANY

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ELECTIVE STATE OFFICERS RETIREMENT FUND

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**ELECTIVE STATE OFFICERS RETIREMENT FUND**

**REPORT HIGHLIGHTS  
(DOLLARS IN THOUSANDS)**

	<u>07/01/86</u> <u>VALUATION</u>	<u>07/01/87</u> <u>VALUATION</u>
<b>A. CONTRIBUTIONS (TABLE 11)</b>		
1. Statutory Contributions - Chapter 352C % of Payroll	9.00%	9.00%
2. Required Contributions - Chapter 356 % of Payroll	35.06%	37.93%
3. Sufficiency (Deficiency) (A1-A2)	-26.06%	-28.93%
<b>B. FUNDING RATIOS</b>		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$230	\$246
b. Current Benefit Obligations (Table 8)	\$1,555	\$1,619
c. Funding Ratio (a/b)	14.79%	15.19%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$230	\$246
b. Actuarial Accrued Liability (Table 9)	\$1,706	\$1,800
c. Funding Ratio (a/b)	13.48%	13.67%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$430	\$482
b. Current and Expected Future Benefit Obligations	\$2,054	\$2,210
c. Funding Ratio (a/b)	20.93%	21.81%
<b>C. PLAN PARTICIPANTS</b>		
1. Active Members		
a. Number (Table 3)	6	6
b. Projected Annual Earnings	\$392	\$373
c. Average Annual Earnings (Actual \$)	\$65,373	\$62,219
d. Average Age	47.2	49.1
e. Average Service	6.9	7.2
2. Others		
a. Service Retirements (Table 4)	4	3
b. Disability Retirements (Table 5)	NA	NA
c. Survivors (Table 6)	4	5
d. Deferred Retirements (Table 7)	5	5
e. Terminated Other Non-vested (Table 7)	1	1
f. Total	14	14

## ELECTIVE STATE OFFICERS RETIREMENT FUND

### COMMENTARY

#### Purpose

The purpose of this valuation is to determine the financial status of the Fund. 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 statutory contributions, representing only member contributions, for the Elective State Officers Retirement Fund are 9.00%. The remaining 28.93% needed to reach the required contribution level of 37.93% will be paid by the State as needed in future years according to Chapter 352C of Minnesota Statutes.

The financial status of the Fund can be measured by three different funding ratios. These ratios are lower than the corresponding ratios for funds that include both member contributions and employer contributions in the assets.

- o 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. This ratio is based on Statement No. 5 of the Governmental Accounting Standards Board. This year's ratio is 15.19%. The corresponding ratio for the prior year was 14.79%.
  
- o 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 1987 the ratio is 13.67%, which is an increase from the 1986 value of 13.48%.

- o The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 21.81% verifies that the current statutory contributions by members are going to cover only a portion of the plan benefits. Since the State will make the necessary payments to pay other benefits as they come due, this Funding Ratio may be considered to be 100%.

#### Asset Information

Beginning in 1984, changes in Section 356.215 of Minnesota Statutes require that the asset value used for actuarial purposes reflect a portion of the unrealized gains and losses. Only a portion of these gains and losses are considered because market values are typically volatile and could produce erratic changes in the contribution requirements from year to year.

The calculation of assets for actuarial purposes begins with the reporting of Total Assets by the Fund (Table 1, line B). These Total Assets reduced by any Amounts Currently Payable (line C) produces the Assets Available for Benefits (line D5), which is the starting value for determining the Actuarial Value of Assets.

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

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

The term MPRIF appears on some of the tables with a corresponding value of zero. MPRIF stands for Minnesota Post Retirement Investment Fund, which is used by many of the public funds. For purposes of consistency all of the actuarial reports follow the same format.

#### Membership Data

Tables 3 through 6 summarize statistical information on members by category. Active members are grouped by age and completed years of service in Table 3. The earnings shown for these members are for the prior fiscal year.

The service retirements in Table 4 include not only those retiring from active status but also members with deferred benefits who have attained retirement age and started receiving benefits. The survivors category (Table 6) includes spouses and children of deceased members.

#### Actuarial Balance Sheet

An actuarial balance sheet is required by Section 356.215, Subdivision 4f of Minnesota Law. This balance sheet (Table 8) establishes a method for evaluating both current and future levels of funding.

Current funding levels are evaluated by comparing Current Assets on line A to

Current Benefit Obligations on line D5. The difference between the obligations and the assets is shown as Current Unfunded Actuarial Liability on line G.

The Current Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of 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 first step in the calculation for active members involves projecting salaries and service to determine future benefits payable under the plan and then discounting those projected benefits to the date of the valuation. The second step is to determine the discounted value of benefits for the non-active members. For those non-active members whose benefits have not commenced, the liability includes augmentation of benefits to date of commencement. The result of the first two steps is shown on line F, Total Current and Expected Future Benefit Obligations.

The third step is to determine the portion that represents Current Benefit Obligations. In the case of active members the Current Benefit Obligation is computed by attributing an equal benefit amount to each year of credited and expected future employee service. For all others, their entire liability is considered a Current Benefit Obligation.

Current and future funding levels are evaluated by comparing Current and Future Expected Assets on line C to Current and Expected Future Benefit Obligations on line F. The difference between the obligations and the assets is shown as the



Current and Future Unfunded Actuarial Liability on line H.

Since line F has already been calculated, the remaining step is to determine the Expected Future Assets. Since the State does not have a set statutory contribution rate, only future member contributions (net of expenses) are included in Expected Future Assets on line B2.

The Current Unfunded Actuarial Liability, line G, is a measurement of the status of the funding to the date of the valuation. The Current and Future Unfunded Actuarial Liability is a measurement of the adequacy of the current statutory contribution level.

**GASB Disclosure**

Table 8 shows that on July 1, 1987, the Pension Benefit Obligation consisted of the following components:

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$ 980,000
Current Employees -	
Accumulated employee contributions including allocated investment income	199,000 *
Employer-financed vested	365,000
Employer-financed nonvested	<u>75,000</u>
Total Pension Benefit Obligation	\$1,619,000

\* Estimated

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### Contribution Sufficiency

The approach used by the State of Minnesota to determine contribution sufficiency is the Entry Age Normal 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) shows similarities and differences. The similarity is that both approaches calculate the value of all future benefits the same way. This can be verified by comparing line F of Table 8 to line A6, column 1, of Table 9. The difference arises from the technique 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.

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An Unfunded Actuarial Accrued Liability is computed under the Entry Age Normal 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, representing a constant percentage of payroll each year.

Under this new approach the payments will increase 6.5% each year since 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

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portion of the unfunded.

**Projected Cash Flow**

Table 12 illustrates the anticipated cash flow over the amortization period. The cash flow begins with the Current Assets. Contributions are then added based on the present statutory rates for employees. As members become eligible for payments, disbursements are made from the Fund.

This projected cash flow assumes that future payrolls increase by 6.5%. For purposes of this table only, new members are assumed to be hired in order to replace those who terminate from the active group. This open group method provides a more realistic picture of future cash flow. The statutory interest rate of 8% is used to project future investment return.

TABLE 1

## ELECTIVE STATE OFFICERS RETIREMENT FUND

ACCOUNTING BALANCE SHEET  
(DOLLARS IN THOUSANDS)

July 1, 1987

	<u>MARKET VALUE</u>	<u>COST VALUE</u>
<b>A. ASSETS</b>		
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	248	248
	-----	-----
<b>B. TOTAL ASSETS</b>	<b>\$248</b>	<b>\$248</b>
	=====	=====
<b>C. AMOUNTS CURRENTLY PAYABLE</b>	<b>\$2</b>	<b>\$2</b>
<b>D. ASSETS AVAILABLE FOR BENEFITS</b>		
1. Member Reserves	\$245	\$245
2. State Reserves	1	1
3. MPRIF Reserves	0	0
4. Non-MPRIF Reserves	0	0
	-----	-----
5. Total Assets Available for Benefits	<b>\$246</b>	<b>\$246</b>
	-----	-----
<b>E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS</b>	<b>\$248</b>	<b>\$248</b>
	=====	=====

**F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS**

1. Cost Value of Assets Available for Benefits (D5)		\$246
2. Market Value (D5)	\$246	
3. Cost Value (D5)	246	
	-----	
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")		<b>\$246</b>
		=====

TABLE 2

**ELECTIVE STATE OFFICERS RETIREMENT FUND**  
**CHANGES IN ASSETS AVAILABLE FOR BENEFITS**  
**(DOLLARS IN THOUSANDS)**

YEAR ENDING JUNE 30, 1987

	<u>MARKET VALUE</u>	<u>COST VALUE</u>
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$230	\$230
 B. OPERATING REVENUES		
1. Member Contributions	\$32	\$32
2. Employer Contributions	132	132
3. Investment Income	0	0
4. MPRIF Income	0	0
5. Net Realized Gain (Loss)	0	0
6. Other	0	0
7. Net Change in Unrealized Gain (Loss)	0	0
	-----	-----
8. Total Revenue	\$164	\$164
	-----	-----
 C. OPERATING EXPENSES		
1. Service Retirements	\$66	\$66
2. Disability Benefits	0	0
3. Survivor Benefits	31	31
4. Refunds	17	17
5. Expenses	2	2
6. Other	0	0
	-----	-----
7. Total Disbursements	\$116	\$116
	-----	-----
D. OTHER CHANGES IN RESERVES	(32)	(32)
 E. ASSETS AVAILABLE AT END OF PERIOD	\$246	\$246
	=====	=====

TABLE 3

## ELECTIVE STATE OFFICERS RETIREMENT FUND

## ACTIVE MEMBERS AS OF JUNE 30, 1987

AGE	YEARS OF SERVICE								TOTAL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25									0
25-29									0
30-34									0
35-39									0
40-44	1	1							2
45-49		1							1
50-54			1	1					2
55-59				1					1
60-64									0
65+									0
TOTAL	1	2	1	2	0	0	0	0	6

## AVERAGE ANNUAL EARNINGS

AGE	YEARS OF SERVICE								ALL
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	
<25									0
25-29									0
30-34									0
35-39									0
40-44	40,840	49,018							44,929
45-49		69,615							69,615
50-54			52,439	48,068					50,254
55-59				89,115					89,115
60-64									0
65+									0
ALL	40,840	59,317	52,439	68,592	0	0	0	0	58,183

## PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE

<1	1-4	5-9	10-14	15-19	20-24	25-29	30+	TOTAL
41	119	52	137	0	0	0	0	349

TABLE 4

## ELECTIVE STATE OFFICERS RETIREMENT FUND

## SERVICE RETIREMENTS AS OF JUNE 30, 1987

AGE	YEARS RETIRED							TOTAL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50								0
50-54								0
55-59								0
60-64								0
65-69								0
70-74			2	1				3
75-79								0
80-84								0
85+								0
TOTAL	0	0	2	1	0	0	0	3

## AVERAGE ANNUAL ANNUITY

AGE	YEARS RETIRED							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50								0
50-54								0
55-59								0
60-64								0
65-69								0
70-74			20,328	11,782				17,479
75-79								0
80-84								0
85+								0
ALL	0	0	20,328	11,782	0	0	0	17,479

## TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS OF RETIREMENT

<1	1-4	5-9	10-14	15-19	20-24	25+	TOTAL
0	0	40	12	0	0	0	52

TABLE 6

## ELECTIVE STATE OFFICERS RETIREMENT FUND

SURVIVORS AS OF JUNE 30, 1987

AGE	YEARS SINCE DEATH							TOTAL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50								0
50-54								0
55-59								0
60-64								0
65-69								0
70-74	1	1						2
75-79								0
80-84								0
85+					3			3
TOTAL	1	1	0	0	3	0	0	5

## AVERAGE ANNUAL BENEFIT

AGE	YEARS SINCE DEATH							ALL
	<1	1-4	5-9	10-14	15-19	20-24	25+	
<50								0
50-54								0
55-59								0
60-64								0
65-69								0
70-74	11,273	3,324						7,299
75-79								0
80-84								0
85+					8,826			8,826
ALL	11,273	3,324	0	0	8,826	0	0	8,215

## TOTAL ANNUAL BENEFIT (IN THOUSANDS) BY YEARS SINCE DEATH

	<1	1-4	5-9	10-14	15-19	20-24	25+	TOTAL
	11	3	0	0	27	0	0	41



TABLE 7

**ELECTIVE STATE OFFICERS RETIREMENT FUND**  
**RECONCILIATION OF MEMBERS**

	<u>ACTIVES</u>	<u>TERMINATED</u>	
		<u>DEFERRED RETIREMENT</u>	<u>OTHER NON-VESTED</u>
A. On June 30, 1986	6	5	1
B. Additions	1	0	0
C. Deletions:			
1. Service Retirement	0	0	
2. Disability	0		
3. Death	0	0	0
4. Terminated-Deferred	0		
5. Terminated-Refund	(1)	0	0
6. Terminated-Other Non-vested	0		
7. Returned as Active		0	0
D. Data Adjustments	0	0	0
	Vested 3		
	Non-Vested 3		
E. Total on June 30, 1987	6	5	1

	<u>RECIPIENTS</u>		
	<u>RETIREMENT ANNUITANTS</u>	<u>DISABLED</u>	<u>SURVIVORS</u>
A. On June 30, 1986	4	NA	4
B. Additions	0		1
C. Deletions:			
1. Service Retirement			
2. Death	(1)		0
3. Annuity Expired	0		0
4. Returned as Active	0		
D. Data Adjustments	0		0
E. Total on June 30, 1987	3	NA	5

TABLE 8

## ELECTIVE STATE OFFICERS RETIREMENT FUND

ACTUARIAL BALANCE SHEET  
(DOLLARS IN THOUSANDS)

JULY 1, 1987

A. CURRENT ASSETS (TABLE 1, F6)				\$246
B. EXPECTED FUTURE ASSETS				
1. Present Value of Expected Future Statutory Supplemental Contributions				0
2. Present Value of Future Normal Costs				236
3. Total Expected Future Assets				----- \$236 -----
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS				=====
D. CURRENT BENEFIT OBLIGATIONS				
		<u>Non-Vested</u>	<u>Vested</u>	<u>Total</u>
1. Benefit Recipients				
a. Retirement Annuities			\$436	\$436
b. Disability Benefits			0	0
c. Surviving Spouse and Child Benefits			282	282
2. Deferred Retirements with Future Augmentation			247	247
3. Former Members without Vested Rights			15	15
4. Active Members				
a. Retirement Annuities	53		537	590
b. Disability Benefits	0		0	0
c. Survivors' Benefits	22		0	22
d. Deferred Retirements	0		0	0
e. Refund Liability Due to Death or Withdrawal	0		27	27
5. Total Current Benefit Obligations		----- \$75 -----	----- \$1,544 -----	----- \$1,619 -----
E. EXPECTED FUTURE BENEFIT OBLIGATIONS				----- \$591 -----
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS				=====
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D5-A)				\$1,373
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F-C)				\$1,728

TABLE 9

## ELECTIVE STATE OFFICERS RETIREMENT FUND

DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)  
AND SUPPLEMENTAL CONTRIBUTION RATE  
(DOLLARS IN THOUSANDS)

JULY 1, 1987

	ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS <u>(1)</u>	ACTUARIAL PRESENT VALUE OF FUTURE NORMAL COSTS <u>(2)</u>	ACTUARIAL ACCRUED LIABILITY <u>(3)=(1)-(2)</u>
<b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>			
1. Active Members			
a. Retirement Annuities	\$1,134	\$300	\$834
b. Disability Benefits	0	0	0
c. Survivors Benefits	39	21	18
d. Deferred Retirements	0	0	0
e. Refunds Due to Death or Withdrawal	57	89	(32)
	-----	-----	-----
f. Total	\$1,230	\$410	\$820
	-----	-----	-----
2. Deferred Retirements with Future Augmentation	\$247		\$247
3. Former Members Without Vested Rights	15		15
4. Annuitants in MPRIF	0		0
5. Recipients Not in MPRIF	718		718
	-----	-----	-----
6. Total AAL	\$2,210	\$410	\$1,800
	=====	=====	=====
<b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b>			
1. AAL (A6)			\$1,800
2. Current Assets (Table 1,F6)			246
			-----
3. UAAL (B1-B2)			\$1,554
			=====
<b>C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE</b>			
1. Present Value of Future Payrolls through the Amortization Date of July 1, 2009			\$6,830
2. Supplemental Contribution Rate (B3/C1)			22.75%

TABLE 10

**ELECTIVE STATE OFFICERS RETIREMENT FUND**  
**CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)**  
**(DOLLARS IN THOUSANDS)**

YEAR ENDING JUNE 30, 1987

A. UAAL AT BEGINNING OF YEAR	\$1,476
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$54
2. Contribution	(164)
3. Interest on A, B1, and B2	114
4. Total (B1+B2+B3)	----- \$4 -----
C. EXPECTED UAAL AT END OF YEAR (A+B4)	\$1,480
D. INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Salary Increases	(\$114)
2. Investment Return	19
3. MPRIF Mortality	0
4. Mortality of Other Benefit Recipients	(31)
5. Other Items	200
6. Total	----- \$74 -----
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C+D7)	\$1,554
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)	----- \$1,554 =====

TABLE 11

**ELECTIVE STATE OFFICERS RETIREMENT FUND**  
**DETERMINATION OF CONTRIBUTION SUFFICIENCY**  
**(DOLLARS IN THOUSANDS)**

JULY 1, 1987

	<u>% OF PAYROLL</u>	<u>\$ AMOUNT</u>
<b>A. STATUTORY CONTRIBUTIONS - CHAPTER 352C</b>		
1. Employee Contributions	9.00%	\$34
2. Employer Contributions	0.00%	0
	-----	-----
3. Total	9.00%	\$34
	=====	=====
<b>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</b>		
1. Normal Cost		
a. Retirement Benefits	10.73%	\$40
b. Disability Benefits	0.00%	0
c. Survivors	0.80%	3
d. Deferred Retirement Benefits	0.00%	0
e. Refunds Due to Death or Withdrawal	3.22%	12
	-----	-----
f. Total	14.75%	\$55
	-----	-----
2. Supplemental Contribution Amortization by July 1, 2009 of UAAL of \$1,554	22.75%	\$85
3. Allowance for Expenses	0.43%	\$2
	-----	-----
4. Total	37.93%	\$142
<b>C. CONTRIBUTION SUFFICIENCY (DEFICIENCY)</b>		
(A3-B4)	-28.93%	(\$108)

Note: Projected Annual Payroll for Fiscal Year Beginning on July 1, 1987 is \$373

TABLE 12

## ELECTIVE STATE OFFICERS RETIREMENT FUND

PROJECTED CASH FLOW  
(DOLLARS IN THOUSANDS)

<u>FISCAL YEAR</u>	<u>STATUTORY CONTRIBUTIONS</u>	<u>TRANSFERS TO MPRIF</u>	<u>OTHER DISBURSEMENTS</u>	<u>INVESTMENT RETURN</u>	<u>CURRENT ASSETS YEAR END</u>
1987					\$246
1988	\$34	\$0	\$93	\$17	204
1989	36	0	88	14	166
1990	38	0	84	11	131
1991	41	0	170	5	7
1992	43	0	111	(2)	(63)
1993	46	0	122	(8)	(147)
1994	49	0	136	(15)	(249)
1995	52	0	143	(24)	(364)
1996	56	0	117	(32)	(457)
1997	59	0	147	(40)	(585)
1998	63	0	218	(53)	(793)
1999	67	0	217	(69)	(1,012)
2000	72	0	188	(86)	(1,214)
2001	76	0	184	(101)	(1,423)
2002	81	0	192	(118)	(1,652)
2003	86	0	194	(136)	(1,896)
2004	92	0	186	(155)	(2,145)
2005	98	0	234	(177)	(2,458)
2006	104	0	240	(202)	(2,796)
2007	111	0	251	(229)	(3,165)
2008	118	0	254	(259)	(3,560)
2009	126	0	282	(291)	(4,007)
2010	134	0	290	(327)	(4,490)
2011	143	0	302	(366)	(5,015)
2012	152	0	359	(409)	(5,631)

**ELECTIVE STATE OFFICERS RETIREMENT FUND**  
**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

Interest:	Pre-Retirement: 8% per annum Post-Retirement: 5% per annum																		
Salary Increases:	Reported salary at valuation date increased 2% to current fiscal year, 5% annually for the next two years 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 8 years  Post-Retirement: Male - Same as above Female - Same as above  Post-Disability: Male - NA Female - NA																		
Retirement Age:	Age 62, or if over age 62, one year from the valuation date.																		
Separation:	Rates based on years of service:																		
	<table border="0"> <thead> <tr> <th style="text-align: center;"><u>Year</u></th> <th style="text-align: center;"><u>Rate</u></th> </tr> </thead> <tbody> <tr><td style="text-align: center;">1</td><td style="text-align: center;">0%</td></tr> <tr><td style="text-align: center;">2</td><td style="text-align: center;">0</td></tr> <tr><td style="text-align: center;">3</td><td style="text-align: center;">0</td></tr> <tr><td style="text-align: center;">4</td><td style="text-align: center;">50</td></tr> <tr><td style="text-align: center;">5</td><td style="text-align: center;">0</td></tr> <tr><td style="text-align: center;">6</td><td style="text-align: center;">0</td></tr> <tr><td style="text-align: center;">7</td><td style="text-align: center;">0</td></tr> <tr><td style="text-align: center;">8</td><td style="text-align: center;">50</td></tr> </tbody> </table>	<u>Year</u>	<u>Rate</u>	1	0%	2	0	3	0	4	50	5	0	6	0	7	0	8	50
<u>Year</u>	<u>Rate</u>																		
1	0%																		
2	0																		
3	0																		
4	50																		
5	0																		
6	0																		
7	0																		
8	50																		
Disability:	None																		
Expenses:	Prior year expenses expressed as percentage of prior year payroll. (0.43% of payroll)																		
Return of Contributions:	All employees withdrawing after 8 years of service were assumed to leave their contributions on deposit and receive a deferred annuitant benefit.																		

TABLE 13  
(cont)

Family Composition:	85% of Members are married. Female is three years younger than male. Each Member may have up to two dependent children depending on the Member's age.
Social Security:	NA
Benefit Increases After Retirement:	Payment of earnings on retired reserves in excess of 5% accounted for by 5% post-retirement assumptions.
Special Considerations:	NA
Actuarial Cost Method:	Entry Age 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 6.5% per annum.
Projected Cash Flow Method:	Cash flows for the Fund were projected based on the current plan benefits, participant data, and actuarial assumptions. In addition new entrants were assumed so that the total payroll would increase by 6.5% per annum.



## ELECTIVE STATE OFFICERS RETIREMENT FUND

## SUMMARY OF PLAN PROVISIONS

Eligibility	Employment as a "Constitutional Officer".
Contributions	
Member	9% of Salary.
Employer	No statutory 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 5 highest successive years of Salary.
<b>RETIREMENT</b>	
Normal Retirement Benefit	
Eligibility	Age 62 and 8 years of Allowable Service.
Amount	2.5% of Average Salary per year of Allowable Service.
Early Retirement Benefit	
Eligibility	Age 60 and 8 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.
<b>DISABILITY</b>	None.
<b>DEATH</b>	
Surviving Spouse Benefit	
Eligibility	Death while active or after retirement or with at least 8 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 8 years of Allowable Service. Benefit is paid for life or until remarriage. 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.

TABLE 14  
(cont)

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.
<b>TERMINATION</b>	
Refund of Contributions Eligibility	Termination of Service.
Amount	Member's contributions with 5% interest. A deferred annuity may be elected in lieu of a refund.
Deferred Benefit Eligibility	8 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% thereafter until the annuity begins. Amount is payable as a normal or early retirement.