# ACTUARIAL VALUATION REPORT JULY 1, 1985

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ACTUARIES AND CONSULTANTS

EMPLOYEE BENEFITS
COMPENSATION PROGRAMS
EMPLOYEE COMMUNICATIONS
ADMINISTRATIVE SYSTEMS
RISK MANAGEMENT
INTERNATIONAL SERVICES

NORTHWESTERN FINANCIAL CENTER
7900 XERXES AVENUE SOUTH, SUITE 1200
MINNEAPOLIS, MINNESOTA 55431
(612) 835-1500

OFFICES IN PRINCIPAL CITIES
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December 27, 1985

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

#### RE: ELECTIVE STATE OFFICERS RETIREMENT FUND

Gentlemen:

We have prepared an actuarial valuation of the Fund as of July 1, 1985 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 June 11, 1985.

Respectfully submitted,

THE WYATT COMPANY

Allan J. Grosh

Vice President

Robert E. Perkins Consulting Actuary

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<sup>\*</sup> Not included since this is the first valuation of the Fund.

### REPORT HIGHLIGHTS (DOLLARS IN THOUSANDS)

		07/01/85 <u>VALUATION</u>
Α.	CONTRIBUTIONS (TABLE 11)	
	<ol> <li>Statutory Contributions - Chapter 3A % of Payroll</li> </ol>	9.00%
	2. Required Contributions - Chapter 356 % of Payroll	37.42%
	3. Sufficiency (Deficiency) (A1-A2)	-28.42%
В.	FUNDING RATIOS	
	<ol> <li>Accrued Benefit Funding Ratio</li> <li>a. Current Assets (Table 1)</li> <li>b. Current Benefit Obligations (Table 8)</li> <li>c. Funding Ratio (a/b)</li> </ol>	\$197 \$1,595 12.35%
	<ol> <li>Accrued Liability Funding Ratio</li> <li>a. Current Assets (Table 1)</li> <li>b. Actuarial Accrued Liability (Table 9)</li> <li>c. Funding Ratio (a/b)</li> </ol>	\$197 \$1,745 11.29%
	<ol> <li>Projected Benefit Funding Ratio (Table 8)</li> <li>a. Current and Expected Future Assets</li> <li>b. Current and Expected Future Benefit         <ul> <li>Obligations</li> <li>c. Funding Ratio (a/b)</li> </ul> </li> </ol>	\$762 \$2,116 36.01%
С.	PLAN PARTICIPANTS	
	<ol> <li>Active Members (Table 3)         <ul> <li>a. Number</li> <li>b. Projected Annual Earnings</li> <li>c. Average Annual Earnings (Actual \$)</li> <li>d. Average Age</li> <li>e. Average Service</li> </ul> </li> </ol>	6 \$366 \$61,000 46.2 5.9
	<ol> <li>Others         <ul> <li>Service Retirements (Table 4)</li> <li>Disability Retirements (Table 5)</li> <li>Survivors (Table 6)</li> <li>Deferred Retirements (Table 7)</li> <li>Terminated Other Non-vested (Table 7)</li> <li>Total</li> </ul> </li> </ol>	6 NA 3 5 1 15

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# 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 28.42% needed to reach the required contribution level of 37.42% will be paid by the State as needed in future years according to Chapter 3A of Minnesota Statutes.

The financial status of the Fund 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. This ratio is based on recently published Governmental Accounting Standards Board proposals. This year's ratio is 12.35%.
- 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 1985 the ratio is 11.29%.

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The Projected Benefit Funding Ratio is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 36.01% 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 neccessary 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

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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 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 Liability on line G.

The measurement of the Current Benefit Obligation is based on the Proposed

Statement of Governmental Accounting Standards published by the Governmental Accounting Standards Board (GASB) in August 1985. This value is known as the Actuarial Present Value of Credited Projected Benefits.

The first step in the GASB 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 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 are included in Expected

Future Assets on line B2.

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

#### 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 between 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.

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 begin to cover not only the interest but also repay a 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.

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### ACCOUNTING BALANCE SHEET (DOLLARS IN THOUSANDS)

July 1, 1985

•	ACCETC	MARKET VALUE	COST VALUE
А.	ASSETS 1. Cash and Cash Equivalents 2. Investments	\$0	\$0
	a. Fixed Income b. Equity	0	0
	c. Real Estate	0	0
	3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)	0	0
	4. Other	201	201
R	TOTAL ASSETS	\$201	\$201
υ.	TOTAL ASSETS	\$201	\$201 ========
С.	AMOUNTS CURRENTLY PAYABLE	\$4	\$4
D.	ASSETS AVAILABLE FOR BENEFITS		
	<ol> <li>Member Reserves</li> <li>State Reserves</li> </ol>	\$197 0	\$197 0
	3. MPRIF Reserves	Ö	0
	4. Non-MPRIF Reserves	0	0
	5. Total Assets Available for Benefits	\$197	\$197
Ε.	TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	\$201	\$201
F.	DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
	<ol> <li>Cost Value of Assets Available for Benefits (D5)</li> </ol>		\$197
	2. Market Value (D5)	\$197	
	3. Cost Value (D5)	197	
	<ul><li>4. Market Over Cost (F2-F3)</li><li>5. 1/3 of Market Over Cost(F4)/3</li></ul>	\$0	0
	<ol> <li>Actuarial Value of Assets (F1+F5) (Same as "Current Assets")</li> </ol>		\$197

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# CHANGES IN ASSETS AVAILABLE FOR BENEFITS (DOLLARS IN THOUSANDS)

#### YEAR ENDING JUNE 30, 1985

	MARKET VALUE	COST VALUE
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$196	\$196
B. OPERATING REVENUES 1. Member Contributions 2. Employer Contributions 3. Investment Income 4. MPRIF Income 5. Net Realized Gain (Loss) 6. Other 7. Net Change in Unrealized Gain (Loss)	\$29 0 0 0 0 95 0	\$29 0 0 0 0 95 0
8. Total Revenue	\$124	\$12 <b>4</b>
C. OPERATING EXPENSES  1. Service Retirements 2. Disability Benefits 3. Survivor Benefits 4. Refunds 5. Expenses 6. Other	\$80 0 22 17 4 0	\$80 0 22 17 4 0
7. Total Disbursements	\$123	\$123
D. OTHER CHANGES IN RESERVES	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	\$197	\$197

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#### ACTIVE MEMBERS AS OF JUNE 30, 1985

	-				OF SERV					
AGE	<u> </u>	1-4	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u> 30+</u>	<u>TOTAL</u>	
<25 25-29									0 0	
30-34 35-39		2							0 2	
40-44 45-49		1		1					1	
50-54 55-59			1	1					1 1	
60-64 65+									0	
TOTAL	0	3	1	2	0	0	0	0	6	
	AVERAGE ANNUAL EARNINGS									
AGE	<u>&lt;1</u>	1-4	5-9	YEARS 10-14	OF SERV:	ICE 20-24	<u>25-29</u>	<u>30+</u>	ALL	
<25							<u> </u>	<u> </u>		
25-29									0	
30-34 35-39		44,383							0 44,383	
40-44 45-49		63,841		45,255					63,841 45,255	
50-54 55-59			49,370	78,964					49,370 78,964	
60-64 65+									0	
ALL	0	50,869	49,370	62,110	0	0	0	0	54,366	
	P	RIOR FIS	CAL YEAR	EARNINGS	(IN THO	OUSANDS)	BY YEARS	OF SERV	ICE	
	<u>≼1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	20-24	<u>25-29</u>	<u>30+</u>	TOTAL	
	0	153	49	124	0	0	0	0	326	

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#### SERVICE RETIREMENTS AS OF JUNE 30, 1985

	YEARS RETIRED							
<u>AGE</u>	<u>≼1</u>	1-4	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	TOTAL
<50 50-54								0
55-59 60-64								0
65-69 70-74			4					0 4
75-79 80-84				1				1 0
85+				1				1
TOTAL	0	0	4	2	0	0	0	6

#### **AVERAGE ANNUAL ANNUITY**

	YEARS RETIRED							
<u>AGE</u>	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	ALL
<50 50-54								0
55-59 60-64								0
65-69 70-74			12,471					0 12,471
75-79 80-84				19,034				19,034 0
85+				14,097				14,097
ALL	0	0	12,471	16,566	0	0	0	13,836

101/	<u>AL ANNUAL</u>	ANNUITY	(IN THOU	<u>SANDS) BY</u>	YEARS OF	RETIREMENT	
<u>≤1</u>	<u>1-4</u>	<u>5-9</u>	10-14	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	TOTAL
0	0	50	33	0	0	0	83

	SURVIVORS AS OF JUNE 30, 1985								
	YEARS SINCE DEATH								
<u>AGE</u>	<u>≼1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>	
<50 50-54								0	
55-59 60-64								0	
65-69 70-74								0	
75-79 80-84				1				0 1	
85+					2			2	
TOTAL	0	0	0	1	2	0	0	3	
			AVERA	AGE ANNUAL	BENEFIT				
AGE		1-4	<u>5-9</u>	YEARS SI 10-14	NCE DEATH		25.	ALL	
	<u>≼1</u>	<u>1-4</u>	<u>5-3</u>	10-14	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	ALL	
<50 50-54								0	

	YEARS SINCE DEATH							
AGE	<u>&lt;1</u>	1-4	<u>5-9</u>	10-14	<u>15-19</u>	20-24	<u>25+</u>	ALL
<50 50-54								0
55-59 60-64								0
65-69 70-74								0
75-79 80-84				5,671				0 5,671
85+					8,342			8,342
ALL	0	0	0	5,671	8,342	0	0	7,451

	TOTAL ANNUAL	BENEFIT	(IN Th	HOUSANDS) I	BY YEARS	SINCE DEATH	
<u> </u>	1-4	<u>5-9</u>	10-14	<u> 15-19</u>	<u>20-24</u>	<u>25+</u>	TOTAL
0	0	0	6	16	0	0	22

# RECONCILIATION OF MEMBERS

		TERMINATED			
	ACTIVES	DEFERRED <u>RETIREMENT</u>	OTHER <u>Non-Vested</u>		
A. On June 30, 1984	6	5	NA		
B. Additions	0	0	NA		
<ul> <li>C. Deletions:</li> <li>1. Service Retirement</li> <li>2. Disability</li> <li>3. Death</li> <li>4. Terminated-Deferred</li> <li>5. Terminated-Refund</li> <li>6. Terminated-Other Non-vested</li> </ul>	0 0 0 0 0	0 0 0			
7. Returned as Active	•	0	NA		
D. Data Adjustments	0	0	NA		
Vested Non-Vested	2 4				
E. Total on June 30, 1985	6	5	1		

	<u>RECIPIENTS</u>		
	RETIREMENT <u>Annuitants</u>	DISABLED	<u>SURVIVORS</u>
A. On June 30, 1984	6	0	3
B. Additions	0	0	0
C. Deletions: 1. Service Retirement 2. Death 3. Annuity Expired 4. Returned as Active	0 0 0	0 0 0	0
D. Data Adjustments	0	0	0
E. Total on June 30, 1985	6	0	3

# ACTUARIAL BALANCE SHEET (DOLLARS IN THOUSANDS)

JULY 1, 1985

Α.	CURRENT ASSETS (TABLE 1, F6)			\$197
В.	EXPECTED FUTURE ASSETS 1. Present Value of Expected Future Supplemental Contributions 2. Present Value of Future Normal Co	sts		194 371
	3. Total Expected Future Assets			\$565
С.	TOTAL CURRENT AND EXPECTED FUTURE AS	SETS		\$762
D.	CURRENT BENEFIT OBLIGATIONS	Non-Vested	<u>Vested</u>	<u>Total</u>
	<ol> <li>Benefit Recipients         <ul> <li>a. Retirement Annuities</li> <li>b. Disability Benefits</li> <li>c. Surviving Spouse's Benefits</li> <li>d. Surviving Children's Benefits</li> </ul> </li> </ol>		\$793 0 123 0	\$793 0 123 0
	2. Deferred Retirements		208	208
	3. Former Members without Vested Rig	hts	7	7
	4. Active Members a. Retirement Annuities b. Disability Benefits c. Survivors' Benefits d. Deferred Retirements e. Refund Liability Due to Death or Withdrawal	58 0 6 0	349 0 12 0	407 0 18 0
	5. Total Current Benefit Obligations	\$102	\$1,493	\$1,595
Ε.	EXPECTED FUTURE BENEFIT OBLIGATIONS			\$521
F.	TOTAL CURRENT AND EXPECTED FUTURE BE	NEFIT OBLIGATI	ONS	\$2,116
G.	CURRENT UNFUNDED LIABILITY (D5-A)			\$1,398
н.	CURRENT AND FUTURE UNFUNDED LIABILITY	Y (F-C)		\$1,354

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

#### JULY 1, 1985

Δ.	DETERMINATION OF ACTUARIAL ACC	ACTUARIAL PRESENT VALUE OF PROJECTED BENEFITS (1) RUFD	ACTUARIAL PRESENT VALUE OF FUTURE NORMAL COSTS (2)	ACTUARIAL ACCRUED LIABILITY (3)=(1)-(2)
,,,	LIABILITY (AAL)	NOLD		
	1. Active Members a. Retirement Annuities	\$884	\$282	\$602
	b. Disability Benefits	0	0	0
	<ul><li>c. Survivors Benefits</li><li>d. Deferred Retirements</li></ul>	33 0	21 0	12 0
	e. Refunds Due to Death or Withdrawal	67	68	(1)
	f. Total	\$984	\$371	\$613
	2. Deferred Retirements	\$208		\$208
	3. Former Members Without Vested Rights	7		7
	4. Annuitants in MPRIF	0		0
	5. Recipients Not in MPRIF	917		917
	6. Total AAL	\$2,116	\$371	\$1,745
D	DETERMINATION OF UNFUNDED ACTU	ADIAL ACCOUED L	TARTITTY (11AA1 \	
ь.	1. AAL (A6)	ARIAL ACCRUED L	INDILITY (UNAL)	\$1,745
	2. Current Assets (Table 1,F6)			197
	3. UAAL (B1-B2)			\$1,548 =======
С.	DETERMINATION OF SUPPLEMENTAL  1. Present Value of Future Pay Amortization Date of July 1	rolls to the	TE	\$7,206
	2. Supplemental Contribution R	ate (B3/C1)		21.48%

### DETERMINATION OF CONTRIBUTION SUFFICIENCY (DOLLARS IN THOUSANDS)

**JULY 1, 1985** 

	% OF <u>PAYROLL</u>	\$ <u>AMOUNT</u>
A. STATUTORY CONTRIBUTIONS - CHAPTER 3A		
1. Employee Contributions	9.00%	\$33
2. Employer Contributions	0.00%	0
3. Total	9.00%	\$33 =======
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
<ol> <li>Normal Cost         <ul> <li>a. Retirement Benefits</li> <li>b. Disability Benefits</li> <li>c. Survivors</li> <li>d. Deferred Retirement Benefits</li> <li>e. Refunds Due to Death or                 Withdrawal</li> </ul> </li> </ol>	11.23% 0.00% 0.82% 0.00% 2.73%	\$41 0 3 0 10
f. Total	14.78%	\$54
<ol> <li>Supplemental Contribution         Amortization by July 1, 2009         of UAAL of \$1,548     </li> </ol>	21.48%	\$79
3. Allowance for Expenses	1.16%	\$4
4. Total	37.42%	\$137
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY) (A3-B4)	-28.42%	(\$104)
Note: Projected Annual Payroll for Fiscal on July 1, 1985 is \$366	Year Beginning	

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# PROJECTED CASH FLOW (DOLLARS IN THOUSANDS)

FISCAL YEAR	STATUTORY CONTRIBUTIONS	TRANSFERS TO MPRIF	OTHER <u>DISBURSEMENTS</u>	INVESTMENT RETURN	CURRENT ASSETS YEAR END
1985					\$197
1986 1987 1988 1989 1990	\$33 35 37 40 42	\$0 0 0 0	\$104 140 94 110 86	\$13 \$7 \$1 (\$4) (\$9)	139 41 (15) (89) (142)
1991 1992 1993 1994 1995	45 48 51 54 58	0 0 0 0	164 129 164 129 143	(\$16) (\$25) (\$35) (\$45) (\$55)	(277) (383) (531) (651) (791)
1996 1997 1998 1999 2000	62 66 70 75 80	0 0 0 0	146 164 209 223 194	(\$67) (\$79) (\$95) (\$114) (\$134)	(942) (1,119) (1,353) (1,615) (1,863)
2001 2002 2003 2004 2005	85 90 96 102 109	0 0 0 0	208 203 228 203 243	(\$154) (\$176) (\$200) (\$225) (\$252)	(2,140) (2,429) (2,761) (3,087) (3,473)
2006 2007 2008 2009 2010	116 124 132 140 149	0 0 0 0 0	231 246 252 292 299	(\$282) (\$314) (\$349) (\$388) (\$431)	(3,870) (4,306) (4,775) (5,315) (5,896)

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#### 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 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:

<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. (1.16% 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.

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 Consideration:

Current IRC Section 415 benefit limits are applied by assuming indexing of maximum benefit at 6.5% annually beginning in 1988.

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.

at Valuation Mathad.

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.

#### **SUMMARY OF PLAN PROVISIONS**

Eligibility

Employment as a "Constitutional Officer" or

"Commissioner".

Contributions

Member

9% of Salary.

Employer

No statutory contributions.

Allowable Service

Service while in an elgibile 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.

RETIREMENT

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.

DISABILITY

None.

**DEATH** 

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.

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.

**TERMINATION** 

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.

# MEMBERSHIP CHANGES (DOLLARS IN THOUSANDS)

#### JUNE 30, 1985

Α.	ACTIVE MEMBERS 1. As of the Last Valuation Date 2. New Entrants 3. Total	NUMBER 6 0 6	PAYROLL \$337 NA NA
	<ol> <li>Separations from Active Service         <ul> <li>Refund of Contributions</li> <li>Separation with Deferred Annuity</li> <li>Separation with neither Refund</li> </ul> </li> </ol>	0	0
1	nor Deferred Annuity d. Disability	0 0	0
	e. Death	. 0	0
	f. Retirement with Service Annuity	0	0
	<ul><li>5. Total Separations</li><li>6. Data Adjustments</li></ul>	0 0	O NA
	o. Data Adjustillettis	U	IVA
	7. As of Current Valuation Date	6	\$359
В.	SERVICE RETIREMENT ANNUITANTS  1. As of the Last Valuation Date  2. New Entrants  3. Total	<u>NUMBER</u> 6 0 6	ANNUAL ANNUITY \$78 0 78
	<ul> <li>4. Terminations</li> <li>a. Deaths</li> <li>b. Others</li> <li>5. Total Terminations</li> <li>6. Data Adjustments</li> </ul>	0 0 0 0	0 0 0 5
	7. As of Current Valuation Date	6	\$83
C.	DISABLED ANNUITANTS  1. As of the Last Valuation Date  2. New Entrants  3. Total	NUMBER 0 0 0	ANNUAL ANNUITY \$0 0
	<ul><li>4. Terminations</li><li>a. Deaths</li><li>b. Others</li><li>5. Total Terminations</li><li>6. Data Adjustments</li></ul>	0 0 0 0	0 0 0 0
	7. As of Current Valuation Date	0	\$0

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D.	SURVIVING SPOUSE ANNUITANTS  1. As of the Last Valuation Date  2. New Entrants  3. Total	NUMBER 3 0 3	ANNUAL ANNUITY \$21 0 21
	<ul><li>4. Terminations</li><li>a. Deaths</li><li>b. Others</li><li>5. Total Terminations</li><li>6. Data Adjustments</li></ul>	0 0 0 0	0 0 0 1
	7. As of Current Valuation Date	3	\$22
Ε.	SURVIVING CHILDREN ANNUITANTS  1. As of the Last Valuation Date  2. New Entrants  3. Total	NUMBER 0 0 0	ANNUAL ANNUITY \$0 0 0
	<ul><li>4. Terminations</li><li>a. Deaths</li><li>b. Others</li><li>5. Total Terminations</li><li>6. Data Adjustments</li></ul>	0 0 0 0	0 0 0 0
	7. As of Current Valuation Date	0	\$0
F.	DEFERRED ANNUITANTS  1. As of the Last Valuation Date  2. New Entrants  3. Total	NUMBER 5 0 5	ANNUAL ANNUITY \$40 0 40
	<ul><li>4. Terminations</li><li>a. Deaths</li><li>b. Others</li><li>5. Total Terminations</li><li>6. Data Adjustments</li></ul>	0 0 0 0	0 0 0 0
	7. As of Current Valuation Date	5	\$40

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