

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION

ACTUARIAL VALUATION REPORT
(Based on a June 30, 1985 Census)

 **FILE COPY**

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION

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COMPENSATION & CAPITAL
INCORPORATED

900 NORTH SHORE DRIVE

LAKE BLUFF, ILLINOIS 60044

TELEPHONE 312 234-9050

May 29, 1986

Board of Trustees
Public Employees Retirement Association
of Minnesota
Suite 200 - Skyway Level
514 St. Peter Street
St. Paul, Minnesota 55102

Members of the Board:

In accordance with your request, we have made an actuarial valuation of the Public Employees Retirement Association of the State of Minnesota for the year ended June 30, 1985, in order to determine the adequacy of the contributions being made to that system and to prepare the financial and actuarial reports as required by the laws of the State of Minnesota.

The results of our analysis are set forth in the following report. The basic financial and employee data are those submitted to us by the Association office; the summaries and actuarial figures are those prepared by us from such data.

On the basis of the foregoing, and the assumptions indicated therein, we hereby certify that, to the best of our knowledge and belief, the attached statements are true and correct. A copy of this report will supply the data required by the legislative commission for the year ended June 30, 1985.

Respectfully submitted,

COMPENSATION & CAPITAL INCORPORATED
Davis H. Roenisch

Davis H. Roenisch
Enrolled Actuary No. 174

DHR:nt

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION

SUMMARY OF ACTUARIAL REQUIREMENTS
(July 1, 1985)

	<u>General Fund</u>	<u>Police and Fire Fund</u>
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AMORTIZATION REQUIREMENTS

Present Value of Benefits (For Both Past and Future Service)	\$2,961,210,223	\$ 606,027,434
Obligation for Service Rendered to Date	2,457,725,171	357,741,740
Net Assets	1,842,957,195	338,400,219
Accrued Unfunded Obligation	614,767,976	19,341,521
Funding Ratio	75.0%	94.6%
Amortization Requirement (25 year; mid-year)	30,154,790	948,715
Covered Payroll	1,295,674,181	128,518,325
Amortization Rate Requirement	<u>2.327%</u>	<u>.738%</u>

ENTRY AGE NORMAL RATE REQUIREMENTS

Normal Cost Requirement (mid-year)	\$ 71,990,667	\$ 20,441,451
Covered Payroll	1,295,674,181	128,518,325
Normal Cost Rate Requirement	<u>5.556%</u>	<u>15.905%</u>

ACTUARIAL BALANCE

Normal Cost Rate Requirement	5.556%	15.905%
Amortization Rate Requirement	2.327	.738
Allowance for Expenses	<u>.223</u>	<u>.136</u>
Total Rate Requirement	8.106%	16.779%
Member Contribution Rate	<u>4.447*</u>	<u>8.000</u>
Employer Rate Requirement	3.659%	8.779%
Employer Contribution Rate Set by Law	<u>4.949*</u>	<u>12.000</u>
Excess (Deficit) of Employer Contribution Rate Set by Law and Total Requirement	<u>1.290%</u>	<u>3.221%</u>

* Weighted by Covered Payroll 11.19% Basic and 88.81% Coordinated.

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION

Value of Benefits Earned to June 30, 1985

	<u>General Fund</u>	
	<u>Without Augmentation*</u>	<u>With Augmentation</u>
Benefits Payable to Retired Members and their Beneficiaries	\$ 914,639,750	\$ 914,639,750
Deferred Annuityants	12,991,795	12,991,795
Former Members without Vested Rights	9,363,884	9,363,884
Active Members:		
a. Eligible for Normal Retirement	58,162,279	58,162,279
b. Eligible for Early Retirement	134,838,864	134,838,864
c. Eligible for Deferred Benefits	460,353,449	681,471,470
d. Under 10 years service (Refund of Contributions only)	<u>106,884,362</u>	<u>106,884,362</u>
<u>Total</u>	<u>\$1,697,234,383</u>	<u>\$1,918,352,404</u>

	<u>Police and Fire Fund</u>	
Benefits Payable to Retired Members and their beneficiaries	\$ 89,912,993	\$ 89,912,993
Deferred Annuityants	1,996,760	1,996,760
Former Members without Vested Rights	765,873	765,873
Active Members:		
a. Eligible for Normal Retirement	32,846,898	32,846,898
b. Eligible for Early Retirement	-	-
c. Eligible for Deferred Benefits	124,713,136	168,428,736
d. Under 10 years service (Refund of Contribution only)	<u>22,064,806</u>	<u>22,064,806</u>
<u>Total</u>	<u>\$ 272,300,466</u>	<u>\$ 316,016,066</u>

* Applies only to present active with 10 or more years of service. The value for Deferred Vested Benefits of inactive members includes augmentation to Normal Retirement Date and refund of contributions to inactive members with less than 10 years of service.

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONPublic Employees Retirement FundBalance SheetJune 30, 1985Assets

Cash	\$ (2,477,836)
Accounts Receivable	136,931
Security Sales Receivable	-0-
Due From Other Funds	201,218
Accrued Investment Income	3,485
Investments	
Bonds	-0-
Equity Securities	-0-
Minnesota Outside Managed Pooled Funds	929,405,246
Short-term Cash Equivalents	65,688,246
Equity in Minnesota Post-Retirement Investment Fund	822,476,545
Deferred Yield Adjustment	-0-
Fixed Assets, Net of Accumulated Depreciation	600,273
Other	2,918,971
	<hr/>
Total Assets	<u>\$1,818,953,079</u>

Liabilities and Reserves Required

Liabilities:

Current -

Accounts Payable	\$ 6,611,827
Accrued Compensated Absences	275,141
Payable to Other Funds	41,133
Obligations Under Capital Lease	-0-
Security Purchases Payable	-0-
	<hr/>

\$ 6,928,101

Long-term -

Obligations Under Capital Lease	-0-
	<hr/>

Total Liabilities	<u>\$ 6,928,101</u>
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Fund Balance:

Member Reserves	\$ 391,294,492
Minnesota Post-Retirement Investment Fund Reserve	822,476,545
Benefit Reserves	1,243,954,134
	<hr/>

Total Reserves	\$2,457,725,171
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Unreserved Fund Balance -

Unfunded Actuarial Accrued Liability	<u>(645,700,193)</u>
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Total Fund Balance	<u>\$1,812,024,978</u>
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Total Liabilities and Fund Balance	<u>\$1,818,953,079</u>
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PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONPublic Employees Retirement FundStatement of Revenues, Expenses, and Changes in Fund BalanceFor Fiscal Year Ended June 30, 1985

Operating Revenues:	
Member Contribution	\$ 60,563,580
Employer Contribution	68,375,342
Investment Income	99,325,045
Distributed Income of the Minnesota Post-Retirement Investment Fund	72,719,560
Other	<u>668,430</u>
 Total Operating Revenues	 \$ <u>301,651,957</u>
Operating Expenses:	
Benefits Paid	\$ 90,388,147
Refunds	13,158,370
Administrative Expenses	2,888,196
Investment Management Fees	1,789,157
Other	<u>27,839</u>
 Total Operating Expenses	 \$ <u>108,251,709</u>
Other Changes in Reserves:	
Transfer from State General Fund	\$ <u>1,876,856</u>
 Total Other Changes	 \$ <u>1,876,856</u>
 Net Fund Balance Additions	 \$ 195,277,104
 Recovery of Unrealized Loss on Marketable Equity Securities	 54,179,165
 Fund Balance, July 1, 1984	 <u>1,562,568,709</u>
 Fund Balance, June 30, 1985	 <u>\$1,812,024,978</u>

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONPublic Employees Retirement FundStatement of Changes in Financial PositionFor the Fiscal Year Ended June 30, 1985

Resources Provided by:

From Operations -

Net Operating Income \$ 195,277,104

Item Not Requiring Resources Currently:

Depreciation Expense 173,074

Recovery of Unrealized Loss on

Marketable Equity Securities 54,179,165

From Other -

Proceeds from Disposal of Fixed Assets 53,155

Total Resources Provided

\$ 249,682,498

Resources Used by:

Payments of Obligations Under Capital Lease \$ 1,325

Current Year Acquisition of Equipment 278,549

Net Increase in Working Capital 249,402,624

Total Resources Used

\$ 249,682,498

Elements of Net Increase (Decrease) in Working Capital

	<u>Year Ended June 30</u>		<u>Increase</u>
	<u>1985</u>	<u>1984</u>	<u>(Decrease)</u>
Current Assets:			
Cash	\$ (2,477,836)	\$ 411,281	\$ (2,889,117)
Accounts Receivable	136,931	202,981	(66,050)
Security Sales Receivable	-0-	-0-	-0-
Due from Other Funds	201,218	167,078	34,140
Accrued Investment Income	3,485	3,921	(436)
Investments -			
Bonds	-0-	-0-	-0-
Equity Securities	-0-	-0-	-0-
Minnesota Outside Managed Pooled Funds	929,405,246	910,957,295	18,447,951
Short-term Cash Equivalents	65,688,246	34,621,667	31,066,579
Equity in Minnesota Post-Retirement			
Investment Fund	822,476,545	634,793,435	187,683,110
Deferred Yield Adjustment	-0-	-0-	-0-
Other	2,918,971	27,822	2,891,149
Total Current Assets	\$1,818,352,806	\$1,581,185,480	
Current Liabilities:			
Accounts Payable	\$ 6,611,827	\$ 18,836,660	12,224,833
Accrued Compensated Absences	275,141	300,214	25,073
Payable to Other Funds	41,133	15,632	(25,501)
Obligations Under Capital Leases	-0-	10,893	10,893
Security Purchases Payable	-0-	-0-	-0-
Total Current Liabilities	\$ 6,928,101	\$ 19,163,399	
Working Capital	\$1,811,424,705	\$1,562,022,081	\$ 249,402,624

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION

General Fund

Valuation Assets
(June 30, 1985)

Net Assets at Cost	\$1,812,024,978
1/3 of Unrealized Capital Gains or (Losses)	<u>30,932,217</u>
Valuation Assets	<u>\$1,842,957,195</u>

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONASSET ALLOCATION
(July 1, 1985)

	<u>Basic Fund</u>	<u>Coordinated Fund</u>	<u>General Fund Total</u>
Asset Balance July 1, 1984	\$677,166,187	\$ 885,402,522	\$1,562,568,709
MPRF	533,887,143	100,906,292	634,793,435
General Fund	143,279,044	784,496,230	927,775,274
1. Employer Contributions	16,399,770	51,975,572	68,375,342
2. Employee Contributions	12,691,113	47,872,467	60,563,580
3. Transfer from State General Fund	216,777	1,660,079	1,876,856
4. Benefits Paid			
i. Retirement	(65,907,972)	(13,568,176)	(79,476,148)
ii. Survivors	(7,266,409)	(364,361)	(7,630,770)
iii. Disability	(2,677,361)	(603,868)	(3,281,229)
5. Refunds	(256,588)	(12,901,782)	(13,158,370)
6. Net (Items 1 to 5)	(46,800,670)	74,069,931	27,269,261
7. Income from MPRIF	61,223,916	11,495,644	72,719,560
8. Investment Income	15,062,752	82,473,136	97,535,888
9. Other Income	103,228	565,202	668,430
10. Administrative Expenses	(605,530)	(2,310,505)	(2,916,035)
11. Recovery of Unrealized Loss on Marketable equity Securities	12,774,455	41,404,710	54,179,165
12. Net (Items 7 to 12)	88,558,821	133,628,187	222,187,008
13. Increase for Year (Sum of Items 6 and 13)	41,758,151	207,698,118	249,456,269
14. Asset Balance July 1, 1985	<u>\$718,924,338</u>	<u>\$1,093,100,640</u>	<u>\$1,812,024,978</u>
i. MPRIF	688,539,088	133,937,457	822,476,545
ii. General Fund	30,385,250	959,163,183	989,548,433
15. Valuation Assets	\$719,874,148	\$1,123,083,047	\$1,842,957,195

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONGENERAL FUNDACTUARIAL COST METHOD AND ASSUMPTIONSActuarial Cost Method

- Entry Age Normal.

Actuarial Assumptions

1. a. Retirement
 - Age 64. In addition, 50% utilization of retirement when age plus service totals 90, or age 55 and age plus service totals 85 prior to 1987.
- b. Mortality
 - Unisex Pension 1984 Table, set forward 1 year for males, set back 4 years for females.
- c. Disability
 - Graduated rates.
- d. Separation
 - Graduated rates.
2. Loading for Expense
 - .223%
3. Asset Valuation
 - Cost plus 1/3 unrealized gains or losses.
4. Investment Return
 - 8% compounded annually pre-retirement; 5% compounded annually post-retirement.
5. Earnings Progression
 - 6.5% per year.

A detailed statement of the mortality rates, disability rates, separation rates, and earnings progression is provided in the following Tables 1 through 4.

Public Employees Retirement AssociationGeneral FundMale EmployeesMORTALITY RATES
(Per 1,000 Employees)

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	1.267	45	3.769
21	1.219	46	4.180
22	1.167	47	4.635
23	1.149	48	5.103
24	1.129	49	5.616
25	1.107	50	6.196
26	1.083	51	6.853
27	1.058	52	7.543
28	1.083	53	8.278
29	1.111	54	9.033
30	1.141	55	9.875
31	1.173	56	10.814
32	1.208	57	11.863
33	1.297	58	12.952
34	1.398	59	14.162
35	1.513	60	15.509
36	1.643	61	17.010
37	1.792	62	18.685
38	1.948	63	20.517
39	2.125	64	22.562
40	2.327	65	24.847
41	2.556		
42	2.818		
43	3.095		
44	3.410		

Public Employees Retirement AssociationGeneral FundFemale EmployeesMORTALITY RATES
(Per 1,000 Employees)

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	1.437	45	2.327
21	1.414	46	2.556
22	1.385	47	2.818
23	1.351	48	3.095
24	1.311	49	3.410
25	1.267	50	3.769
26	1.219	51	4.180
27	1.167	52	4.635
28	1.149	53	5.103
29	1.129	54	5.616
30	1.107	55	6.196
31	1.083	56	6.853
32	1.058	57	7.543
33	1.083	58	8.278
34	1.111	59	9.033
35	1.141	60	9.875
36	1.173	61	10.814
37	1.208	62	11.863
38	1.297	63	12.952
39	1.398	64	14.162
40	1.513	65	15.509
41	1.643		
42	1.792		
43	1.948		
44	2.125		

Public Employees Retirement AssociationGeneral FundAll EmployeesDISABILITY RATES
(Per 1,000 Employees)

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	0.90	45	2.15
21	0.92	46	2.32
22	0.94	47	2.51
23	0.96	48	2.74
24	0.98	49	3.01
25	1.00	50	3.30
26	1.02	51	3.63
27	1.04	52	4.03
28	1.06	53	4.52
29	1.08	54	5.11
30	1.10	55	5.80
31	1.12	56	6.60
32	1.14	57	7.60
33	1.16	58	8.80
34	1.18	59	10.20
35	1.20	60	11.80
36	1.23	61	13.60
37	1.27	62	15.70
38	1.33	63	18.10
39	1.41	64	20.80
40	1.50		
41	1.60		
42	1.71		
43	1.84		
44	1.99		

Public Employees Retirement AssociationGeneral FundMale EmployeesSEPARATION RATES
(Per 1,000 Employees)

<u>Age</u>	<u>Separation</u>	<u>Age</u>	<u>Separation</u>
20	275.0	40	81.8
21	263.8	41	76.2
22	250.5	42	71.5
23	239.0	43	67.0
24	226.5	44	62.2
25	216.0	45	58.0
26	204.5	46	53.9
27	192.5	47	49.7
28	182.0	48	45.0
29	171.5	49	42.0
30	161.0	50	38.5
31	152.8	51	34.5
32	143.5	52	31.0
33	133.0	53	27.0
34	124.5	54	23.0
35	117.0	55	19.5
36	109.2	56	15.0
37	101.0	57	10.0
38	94.0	58	5.0
39	88.0		

Public Employees Retirement AssociationGeneral FundFemale EmployeesSEPARATION RATES
(Per 1,000 Employees)

<u>Age</u>	<u>Separation</u>	<u>Age</u>	<u>Separation</u>
20	383.2	40	134.0
21	377.7	41	123.0
22	371.2	42	113.0
23	363.1	43	104.5
24	351.6	44	97.2
25	335.6	45	90.0
26	322.6	46	83.0
27	310.3	47	78.7
28	299.7	48	74.5
29	289.1	49	70.4
30	280.5	50	66.3
31	269.4	51	62.8
32	259.0	52	59.5
33	246.3	53	55.5
34	232.5	54	52.2
35	216.0	55	47.8
36	199.0	56	41.0
37	183.0	57	36.2
38	165.0	58	21.0
39	148.5	59	5.0

Public Employees Retirement AssociationGeneral FundALL EMPLOYEESEARNINGS PROGRESSION

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	0.0588	45	0.2838
21	0.0626	46	0.3022
22	0.0667	47	0.3219
23	0.0710	48	0.3428
24	0.0756	49	0.3651
25	0.0805	50	0.3888
26	0.0858	51	0.4141
27	0.0914	52	0.4410
28	0.0973	53	0.4697
29	0.1036	54	0.5002
30	0.1103	55	0.5327
31	0.1175	56	0.5674
32	0.1252	57	0.6042
33	0.1333	58	0.6435
34	0.1420	59	0.6853
35	0.1512	60	0.7299
36	0.1610	61	0.7773
37	0.1715	62	0.8278
38	0.1826	63	0.8817
39	0.1945	64	0.9390
40	0.2071	65	1.0000
41	0.2206		
42	0.2349		
43	0.2502		
44	0.2665		

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONACTUARIAL BALANCE SHEET
(July 1, 1985)General FundCURRENT AND EXPECTED FUTURE ASSETS

Total Current Assets	\$1,842,957,195
Expected Future Assets	
Present Value of Expected Future Supplemental Contributions	\$347,207,140
Present Value of Future Normal Costs	503,485,052
Total Expected Future Assets	850,692,192
Total Current and Expected Future Assets	2,693,649,387

CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS

Current Benefit Obligations

For Annuitants	
Retirement Annuities	\$ 822,476,545
Disability Annuities	22,650,118
Surviving Spouses' Annuities	68,544,126
Surviving Children's Annuities	968,961
For Former Members without Vested Rights	9,363,884
For Deferred Annuitants'	12,991,795
For Active Employees	
Retirement Benefits	1,346,899,056
Disability Benefits	64,213,799
Refund Liability Due to Death or Withdrawal	41,696,855
Survivors' Benefits	67,920,032
Total Current Benefit Obligations	\$2,457,725,171
Expected Future Benefit Obligations	503,485,052
Total Current and Expected Future Benefit Obligations	\$2,961,210,223
Current Unfunded Liability	\$ 614,767,976
Current and Future Unfunded Liability	\$ 267,560,836

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONACTUARIAL REQUIREMENTS
(July 1, 1985)General FundAMORTIZATION RATE REQUIREMENT

Present Value of Benefits (For Both Past and Future Service)		\$2,961,210,223
Obligation for Service Rendered to Date	\$2,457,725,171	
Net Assets	1,842,957,195	
Accrued Unfunded Obligation	614,767,976	
Funding Ratio		75.0%
Amortization Requirement (24 year; mid-year)	30,154,790	
Covered Payroll	1,295,674,181	
Amortization Rate Requirement		<u>2.327%</u>

ENTRY AGE NORMAL RATE REQUIREMENT

Normal Cost Requirement (mid-year)	\$ 71,990,667	
Covered Payroll	1,295,674,181	
Normal Cost Rate Requirement		<u>5.556%</u>

ACTUARIAL BALANCE

Normal Cost Rate Requirement	5.556%	
Amortization Rate Requirement	2.327	
Allowance for Expenses	<u>.223</u>	
Total Rate Requirement		8.106%
Member Contribution Rate*		<u>4.447</u>
Employer Rate Requirement		3.659%
Employer Contribution Rate Set by Law*		<u>4.949</u>
Excess (Deficit) of Employer Contribution Rate Set by Law and Total Requirement		<u>1.290%</u>

* Weighted by Covered Payroll 11.19% Basic and 88.81% Coordinated.

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONGeneral Fund

STATEMENT OF REVENUE, EXPENDITURES,
CHANGES IN RESERVES AND EXPERIENCE GAIN (LOSS)
 (Year Ending June 30, 1985)

Revenue:

Employer Contributions	\$ 68,375,342	
Member Contributions	60,563,580	
Investment Income	99,325,045	
Minnesota Post-Retirement Investment Fund Income	72,719,560	
Operating Transfers	1,876,856	
Other Income	<u>668,430</u>	
Total Revenue		\$303,528,813

Expenditure:

Benefits	\$(90,388,147)	
Refund of Contributions	(13,158,370)	
Administrative Expense	(2,888,196)	
Investment Management Fees	(1,789,157)	
Other	<u>(27,839)</u>	
Total Expenditures		(108,251,709)
Net Change in Unrealized Capital Gains or Losses		<u>48,006,551</u>

Increase in Valuation Assets (1985) \$243,283,655

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONGeneral FundALLOCATION OF CHANGE IN ACTUARIAL RESERVES

<u>Item</u>	<u>Assets</u>	<u>Reserves</u>	<u>Change in Unfunded Increase (Decrease)</u>
Contribution Income	\$128,938,922	\$122,186,231 ¹	\$ (6,752,691)
Investment Income	172,044,605 ²	146,493,369	(25,551,236)
Other Income	<u>668,430</u>	<u>-</u>	<u>(668,430)</u>
Total Income	301,651,957	28,679,600	(32,972,357)
Benefit Payments and Expenses	(108,251,709)	(108,251,709)	-
Transfer from State General Fund	1,876,856	-	(1,876,856)
Change in Unrealized Gains or Losses	48,006,551	-	(48,006,551)
Increase in Reserves Based on Salary	-	59,769,027	59,769,027
Mortality Loss	-	6,425,748	6,425,748
Amendments	-	-	-
Change in Assumptions and Method	-	-	-
Other Experience Variation	<u>-</u>	<u>2,741,326</u>	<u>2,741,326</u>
Net Change	<u>\$243,283,655</u>	<u>\$229,363,992</u>	<u>\$(13,919,663)</u>

1 Normal Cost Plus Interest on the Unfunded

2 Includes MPRF Income

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONRECONCILIATION OF ACTIVE MEMBERSGeneral Fund

As of July 1, 1984	83,619
New Entrants	10,714
Reinstated	2,963
Reinstated from Errors	<u>23</u>
TOTAL	<u>97,319</u>

Separations:

a. Refund of Contributions	
(i) Death	97
(ii) Withdrawal	5,680
b. With Deferred Annuity	45
c. With Disability Annuity	120
d. With Normal Retirement Annuity	1,558
e. With Survivor Annuity	15
f. With Option Annuity	27
g. Terminated	2,945
h. Terminated to Active	410
i. Died - No Refund or Benefit	29
j. Duplicate Member Number Errors	49
k. Added in Error	<u>-</u>
TOTAL SEPARATIONS	<u>10,975</u>
Current Active Total	<u>86,344</u>

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONRECONCILIATION OF ANNUITANTSGeneral Fund

<u>Annuitants:</u>	<u>Normal</u>	<u>Option</u>	<u>Survivor</u>	<u>Disabled</u>	<u>Children</u>	<u>Total</u>
Balance - July 1, 1984	15,753	629	3,067	671		20,120
Additions for year	2,120	178	93	144		2,535
Deletions for year	-568	-12	-155	-130		-865
Subtotal - July 1, 1985	17,305	795	3,005	685	185	790
Inactives	1	0	17	32		50
Actives	17,304	795	2,988	653	46	21,740
Annual Annuity	80,662,982	2,844,317	7,133,658	3,185,211	231,647	93,826,168

Note - Children are for informational purposes only. They are included as survivors. Active children are active children only.

Deferred Vested Members:

Balance - July 1, 1984	1,945
Additions	169
Deletions	-251
Balance - July 1, 1985	1,863

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION

Public Employees Police & Fire FundBalance SheetJune 30, 1985Assets

Cash	\$ (122,610)
Accounts Receivable	350,017
Security Sales Receivable	-0-
Due From Other Funds	41,133
Accrued Investment Income	1,429
Investments	
Bonds	-0-
Equity Securities	-0-
Minnesota Outside Managed Pooled Funds	240,898,775
Short-term Cash Equivalents	15,305,239
Equity in Minnesota Post-Retirement Investment Fund	74,839,092
Deferred Yield Adjustment	-0-
Fixed Assets, Net of Accumulated Depreciation	-0-
Other	245,981
Total Assets	<u>\$331,559,056</u>

Liabilities and Reserves Required

Liabilities:

Current -

Accounts Payable	\$ 695,550
Accrued Compensated Absences	-0-
Payable to Other Funds	201,218
Obligations Under Capital Lease	-0-
Security Purchases Payable	-0-
	<u>\$ 896,768</u>

Long-term -

Obligations Under Capital Lease	-0-
Total Liabilities	<u>\$ 896,768</u>

Fund Balance:

Member Reserves	\$ 66,628,458
Minnesota Post-Retirement Investment Fund Reserve	74,839,092
Benefit Reserves	216,274,190
Total Reserves	\$357,741,740

Unreserved Fund Balance -

Unfunded Actuarial Accrued Liability	<u>(27,079,452)</u>
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Total Fund Balance	<u>\$330,662,288</u>
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Total Liabilities and Fund Balance	<u>\$331,559,056</u>
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PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONPublic Employees Police & Fire FundStatement of Revenues, Expenses, and Changes in Fund BalanceFor Fiscal Year Ended June 30, 1985

Operating Revenues:	
Member Contribution	\$ 10,529,901
Employer Contribution	15,747,219
Investment Income	22,957,919
Distributed Income of the	
Minnesota Post-Retirement	
Investment Fund	6,987,775
Other	<u>393,930</u>
 Total Operating Revenues	 \$ <u>56,616,744</u>
Operating Expenses:	
Benefits Paid	\$ 7,615,838
Refunds	1,032,043
Administrative Expenses	174,785
Investment Management Fees	438,470
Other	<u>-0-</u>
 Total Operating Expenses	 \$ <u>9,261,136</u>
Other Changes in Reserves:	
Transfer from State General Fund	\$ <u>75,429</u>
 Total Other Changes	 \$ <u>75,429</u>
Net Fund Balance Additions	\$ 47,431,037
Recovery of Unrealized Loss on Marketable	
Equity Securities	11,060,717
 Fund Balance, July 1, 1984	 <u>272,170,534</u>
 Fund Balance, June 30, 1985	 <u>\$ 330,662,288</u>

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONPublic Employees Police & Fire FundStatement of Changes in Financial PositionFor the Fiscal Year Ended June 30, 1985

Resources Provided by:

From Operations -

Net Operating Income	\$ 47,431,037
Item Not Requiring Resources Currently:	
Depreciation Expense	-0-
Recovery of Unrealized Loss on	
Marketable Equity Securities	<u>11,060,717</u>

Total Resources Provided

\$ 58,491,754

Resources Used by:

Payments of Obligations Under Capital Lease	\$ -0-
Current Year Acquisition of Equipment	-0-
Net Increase in Working Capital	<u>58,491,754</u>

Total Resources Used

\$ 58,491,754

Elements of Net Increase (Decrease) in Working Capital

	<u>Year Ended June 30</u>		<u>Increase</u>
	<u>1985</u>	<u>1984</u>	<u>(Decrease)</u>
Current Assets:			
Cash	\$ (122,610)	\$ 138,526	\$ (261,136)
Accounts Receivable	350,017	781,044	(431,027)
Security Sales Receivable	-0-	-0-	-0-
Due from Other Funds	41,133	15,632	25,501
Accrued Investment Income	1,429	2,085	(656)
Investments -			
Bonds	-0-	-0-	-0-
Equity Securities	-0-	-0-	-0-
Minnesota Outside Managed Pooled Funds	240,898,775	190,497,010	50,401,765
Short-term Cash Equivalents	15,305,239	22,243,487	(6,938,248)
Equity in Minnesota Post-Retirement			
Investment Fund	74,839,092	59,663,039	15,176,053
Deferred Yield Adjustment	-0-	-0-	-0-
Other	<u>245,981</u>	<u>-0-</u>	<u>245,981</u>
Total Current Assets	<u>\$ 331,559,056</u>	<u>\$ 273,340,823</u>	
Current Liabilities:			
Accounts Payable	\$ 695,550	\$ 1,003,211	307,661
Accrued Compensated Absences	-0-	-0-	-0-
Payable to Other Funds	201,218	167,078	(34,140)
Obligations Under Capital Leases	-0-	-0-	-0-
Security Purchases Payable	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>
Total Current Liabilities	<u>\$ 896,768</u>	<u>\$ 1,170,289</u>	
Working Capital	<u>\$ 330,662,288</u>	<u>\$ 272,170,534</u>	<u>\$ 58,491,754</u>

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION

Police and Fire Fund

Valuation Assets
(June 30, 1985)

Net Assets at Cost	\$330,662,288
1/3 of Unrealized Capital Gains or (Losses)	<u>7,737,931</u>
Valuation Assets	<u>\$338,400,219</u>

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONPOLICE AND FIRE FUNDACTUARIAL COST METHOD AND ASSUMPTIONSActuarial Cost Method

- Entry Age Normal.

Actuarial Assumptions

1. a. Retirement - Age 60. In addition, 50% utilization of retirement when age 55 and age plus service totals 85 prior to 1987.
- b. Mortality - Unisex Pension 1984 Table, set forward 1 year for males, set back 4 years for females.
- c. Disability - Graduated rates.
- d. Separation - Graduated rates.
2. Loading for Expense - .136%
3. Asset Valuation - Cost plus 1/3 unrealized gains or losses.
4. Investment Return - 8% compounded annually pre-retirement; 5% compounded annually post-retirement.
5. Earnings Progression - 6.5% per year.

A detailed statement of the mortality rates, disability rates, separation rates, and earnings progression is provided in the following Tables 1 through 4.

Public Employees Retirement AssociationPolice and Fire FundMale EmployeesMORTALITY RATES
(Per 1,000 Employees)

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	1.267	45	3.769
21	1.219	46	4.180
22	1.167	47	4.635
23	1.149	48	5.103
24	1.129	49	5.616
25	1.107	50	6.196
26	1.083	51	6.853
27	1.058	52	7.543
28	1.083	53	8.278
29	1.111	54	9.033
30	1.141	55	9.875
31	1.173	56	10.814
32	1.208	57	11.863
33	1.297	58	12.952
34	1.398	59	14.162
35	1.513	60	15.509
36	1.643		
37	1.792		
38	1.948		
39	2.125		
40	2.327		
41	2.556		
42	2.818		
43	3.095		
44	3.410		

Public Employees Retirement AssociationPolice and Fire FundFemale EmployeesMORTALITY RATES
(Per 1,000 Employees)

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	1.437	45	2.327
21	1.414	46	2.556
22	1.385	47	2.818
23	1.351	48	3.095
24	1.311	49	3.410
25	1.267	50	3.769
26	1.219	51	4.180
27	1.167	52	4.635
28	1.149	53	5.103
29	1.129	54	5.616
30	1.107	55	6.196
31	1.083	56	6.853
32	1.058	57	7.543
33	1.083	58	8.278
34	1.111	59	9.033
35	1.141	60	9.875
36	1.173		
37	1.208		
38	1.297		
39	1.398		
40	1.513		
41	1.643		
42	1.792		
43	1.948		
44	2.125		

Public Employees Retirement AssociationPolice and Fire FundAll EmployeesDISABILITY RATES
(Per 1,000 Employees)

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	1.10	45	3.64
21	1.14	46	4.05
22	1.18	47	4.55
23	1.22	48	5.15
24	1.26	49	6.00
25	1.30	50	6.90
26	1.35	51	7.97
27	1.40	52	9.10
28	1.45	53	10.40
29	1.50	54	11.90
30	1.55	55	13.50
31	1.61	56	15.20
32	1.67	57	17.10
33	1.73	58	19.20
34	1.80	59	21.55
35	1.90		
36	2.02		
37	2.15		
38	2.29		
39	2.44		
40	2.60		
41	2.76		
42	2.94		
43	3.14		
44	3.36		

Public Employees Retirement AssociationPolice and Fire FundAll EmployeesSEPARATION RATES
(Per 1,000 Employees)

<u>Age</u>	<u>Separation</u>	<u>Age</u>	<u>Separation</u>
20	70.0	40	24.5
21	70.0	41	21.3
22	70.0	42	18.5
23	69.9	43	16.0
24	69.8	44	13.7
25	69.7	45	11.8
26	69.4	46	10.2
27	68.9	47	8.7
28	68.0	48	7.3
29	67.0	49	6.1
30	65.8	50	5.0
31	64.3	51	3.9
32	62.4	52	2.9
33	59.8	53	2.2
34	56.1	54	1.5
35	51.1	55	1.1
36	45.4	56	.7
37	39.5	57	.5
38	33.6	58	.3
39	28.7	59	.1

Public Employees Retirement AssociationPolice and Fire FundAll EmployeesEARNINGS PROGRESSION

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	0.0805	45	0.3888
21	0.0858	46	0.4141
22	0.0914	47	0.4410
23	0.0973	48	0.4697
24	0.1036	49	0.5002
25	0.1103	50	0.5327
26	0.1175	51	0.5674
27	0.1252	52	0.6042
28	0.1333	53	0.6435
29	0.1420	54	0.6853
30	0.1512	55	0.7299
31	0.1610	56	0.7773
32	0.1715	57	0.8278
33	0.1826	58	0.8817
34	0.1945	59	0.9390
35	0.2071	60	1.0000
36	0.2206		
37	0.2349		
38	0.2502		
39	0.2665		
40	0.2838		
41	0.3022		
42	0.3219		
43	0.3428		
44	0.3651		

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONACTUARIAL BALANCE SHEET
(July 1, 1985)Police and Fire FundCURRENT AND EXPECTED FUTURE ASSETS

Total Current Assets	\$ 338,400,219
Expected Future Assets	
Present Value of Expected Future Supplemental Contributions	\$ 81,188,066
Present Value of Future Normal Costs	248,285,694
Total Expected Future Assets	329,473,760
Total Current and Expected Future Assets	667,873,979

CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS

Current Benefit Obligations

For Annuitants	
Retirement Annuities	\$ 74,839,092
Disability Annuities	4,616,380
Surviving Spouses' Annuities	9,789,391
Surviving Children's Annuities	668,130
For Former Members without Vested Rights	765,873
For Deferred Annuitants'	1,996,760
For Active Employees	
Retirement Benefits	205,391,621
Disability Benefits	27,486,029
Refund Liability Due to Death or Withdrawal	1,853,956
Survivors' Benefits	30,334,508
Total Current Benefit Obligations	\$ 357,741,740
Expected Future Benefit Obligations	248,285,694
Total Current and Expected Future Benefit Obligations	\$ 606,027,434
Current Unfunded Liability	\$ 19,341,521
Current and Future Unfunded Liability	\$ (61,846,545)

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONACTUARIAL REQUIREMENTS

(July 1, 1985)

Police and Fire FundAMORTIZATION RATE REQUIREMENT

Present Value of Benefits (For Both Past and Future Service)		\$606,027,434
Obligation for Service Rendered to Date	\$ 357,741,740	
Net Assets	338,400,219	
Accrued Unfunded Obligation	19,341,521	
Funding Ratio		94.6%
Amortization Requirement (24 year; mid-year)	948,715	
Covered Payroll	128,518,325	
Amortization Rate Requirement		.738%

ENTRY AGE NORMAL RATE REQUIREMENT

Normal Cost Requirement (mid-year)	\$ 20,441,451	
Covered Payroll	128,518,325	
Normal Cost Rate Requirement		<u>15.905%</u>

ACTUARIAL BALANCE

Normal Cost Rate Requirement	15.905%	
Amortization Rate Requirement	.738	
Allowance for Expenses	<u>.136</u>	
Total Rate Requirement		16.779%
Member Contribution Rate		<u>8.000</u>
Employer Rate Requirement		8.779%
Employer Contribution Rate Set by Law		<u>12.000</u>
Excess (Deficit) of Employer Contribution Rate Set by Law and Total Requirement		<u>3.221%</u>

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONPolice and Fire Fund

STATEMENT OF REVENUE, EXPENDITURES,
CHANGES IN RESERVES AND EXPERIENCE GAIN (LOSS)
 (Year Ending June 30, 1985)

Revenue:

Employer Contributions	\$15,747,219	
Member Contributions	10,529,901	
Investment Income	22,957,919	
Minnesota Post-Retirement Investment Fund Income	6,987,775	
Operating Transfers	75,429	
Other Income	<u>393,930</u>	
Total Revenue		\$56,692,173

Expenditures:

Benefits	\$(7,615,838)	
Refund of Contributions	(1,032,043)	
Administrative Expense	(174,785)	
Investment Management Fees	<u>(438,470)</u>	
Total Expenditures		(9,261,136)
Net Change in Unrealized Capital Gains or Losses		<u>11,211,872</u>

Increase in Valuation Assets (1985)		<u>\$58,642,909</u>
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PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONPolice and Fire FundALLOCATION OF CHANGE IN ACTUARIAL RESERVES

<u>Item</u>	<u>Assets</u>	<u>Reserves</u>	<u>Change in Unfunded Increase (Decrease)</u>
Contribution Income	\$26,277,120	\$21,344,380 ¹	\$ (4,932,740)
Investment Income	29,945,694 ²	24,555,087	(5,390,607)
Other Income	<u>393,930</u>	<u>-</u>	<u>(393,930)</u>
Total Income	56,616,744	45,899,467	(10,717,277)
Benefit Payments and Expenses	(9,261,136)	(9,261,136)	-
Transfers from State General Fund	75,429	-	(75,429)
Change in Unrealized Gains or Losses	11,211,872	-	(11,211,872)
Increase in Reserves Based on Salary Change		11,464,534	11,464,534
Mortality Loss	-	678,597	678,597
Amendments	-	-	-
Change in Assumptions and Method	-	-	-
Other Experience Variation	<u>-</u>	<u>2,142,013</u>	<u>2,143,013</u>
Net Change	<u>\$58,642,909</u>	<u>\$50,924,475</u>	<u>\$ (7,718,434)</u>

1 Normal Cost Plus Interest on the Unfunded

2 Includes MPRF Income

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONRECONCILIATION OF ACTIVE MEMBERSPolice and Fire Fund

As of July 1, 1985	4,750
New Entrants	354
Reinstated	121
Reinstated from Errors	<u>5</u>
TOTAL	<u>5,230</u>

Separations:

a. Refund of Contributions	
(i) Death	-
(ii) Withdrawal	93
b. With Deferred Annuity	4
c. With Disability Annuity	9
d. With Normal Retirement Annuity	61
e. With Survivor Annuity	6
f. With Option Annuity	-
g. Terminated	58
h. Terminated to Active	54
i. Died - No Refund or Benefit	1
j. Duplicate Member Number Errors	16
k. Added in Error	<u>-</u>
TOTAL SEPARATIONS	<u>302</u>
Current Active Total	<u>4,928</u>

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONRECONCILIATION OF ANNUITANTSPolice & Fire Fund

<u>Annuitants:</u>	<u>Normal</u>	<u>Option</u>	<u>Survivor</u>	<u>Disabled</u>	<u>Children</u>	<u>Total</u>
Balance - July 1, 1984	714	50	196	53		1,013
Additions for year	88	12	11	9		120
Deletions for year	-37	-0	-4	-5		-46
Subtotal - July 1, 1985	765	62	203	57	68	1,087
Inactives	0	0	1	8		9
Actives	765	62	202	49	10	1,078
Annual Annuity	6,402,966	273,330	873,398	455,260	57,750	8,004,954

Note - Children are for informational purposes only. They are included as survivors. Active children are active children only.

Deferred Vested Members:

Balance - July 1, 1984	175
Additions	12
Deletions	-24
Balance - July 1, 1985	163

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION

VALUATION PAYROLL

Police and Fire Fund

Active Male Members

(Age and Credited Service as of July 1, 1985)

YEARS OF SERVICE

AGE	Under 1		1		2 to 4		5 to 9	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	100	\$ 753,016	85	\$ 1,648,087	79	\$ 1,762,548	2	\$ 48,365
25 to 29	92	890,302	109	2,255,307	339	8,327,801	275	7,274,303
30 to 34	47	446,942	61	1,275,611	185	4,830,612	556	15,457,732
35 to 39	23	226,295	32	690,145	112	2,804,177	283	7,813,386
40 to 44	13	52,425	13	205,710	34	643,885	79	2,158,230
45 to 49	6	60,399	4	46,291	17	215,618	49	1,173,958
50 to 54	4	44,624	4	31,327	15	323,949	24	590,854
55 to 59	1	2,181	7	122,214	4	79,266	16	348,435
60 to 64	-	-	-	-	4	110,833	3	70,216
65 & Up	7	15,134	2	44,274	-	-	1	14,084
Total	293	\$ 2,491,318	317	\$ 6,318,966	789	\$ 19,098,689	1,288	\$ 34,949,563

YEARS OF SERVICE

AGE	10 to 14		15 to 19		20 to 24		25 to 29	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	1	28,407	-	-	-	-	-	-
30 to 34	227	6,306,391	3	83,004	-	-	-	-
35 to 39	435	13,043,630	98	3,042,375	-	-	-	-
40 to 44	172	4,982,308	251	7,778,093	20	687,744	-	-
45 to 49	87	2,519,561	158	4,800,414	79	2,578,890	11	347,134
50 to 54	50	1,227,743	88	2,686,245	80	2,586,764	35	1,135,924
55 to 59	22	634,072	35	1,018,989	32	963,891	25	844,160
60 to 64	11	288,125	17	451,731	14	365,077	9	267,364
65 & Up	4	133,951	3	68,993	4	87,627	1	28,052
Total	1,009	\$ 29,164,188	653	\$ 19,929,844	229	\$ 7,269,993	81	\$ 2,622,634

YEARS OF SERVICE

AGE	30 to 34		35 to 39		40 & Up		All	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	266	\$ 4,212,016
25 to 29	-	-	-	-	-	-	816	18,776,120
30 to 34	-	-	-	-	-	-	1,079	28,400,292
35 to 39	-	-	-	-	-	-	983	27,620,008
40 to 44	-	-	-	-	-	-	582	16,508,395
45 to 49	-	-	-	-	-	-	411	11,742,265
50 to 54	6	196,175	-	-	-	-	306	8,823,605
55 to 59	20	683,478	1	27,502	-	-	163	4,724,188
60 to 64	5	138,807	2	63,903	-	-	65	1,756,056
65 & Up	-	-	1	45,738	-	-	23	437,853
Total	31	\$ 1,018,460	4	\$ 137,143	-	\$ -	4,694	\$123,000,798

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONVALUATION PAYROLLPolice and Fire FundActive Female Members(Age and Credited Service as of July 1, 1985)

AGE	YEARS OF SERVICE							
	Under 1		1		2 to 4		5 to 9	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	11	\$ 90,749	13	\$ 248,722	10	\$ 220,922	-	\$ -
25 to 29	3	28,482	11	248,754	30	715,355	23	590,986
30 to 34	2	19,257	4	83,394	18	465,403	23	669,696
35 to 39	1	1,259	3	47,354	3	92,221	10	299,824
40 to 44	-	-	2	33,345	1	26,547	4	86,219
45 to 49	-	-	-	-	3	42,692	3	87,519
50 to 54	-	-	-	-	-	-	1	15,352
55 to 59	-	-	-	-	-	-	2	36,772
60 to 64	-	-	-	-	-	-	-	-
65 & Up	-	-	1	23,994	-	-	-	-
Total	17	\$ 139,747	34	\$ 685,563	65	\$1,563,140	66	\$1,786,368

AGE	YEARS OF SERVICE							
	10 to 14		15 to 19		20 to 24		25 to 29	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	1	28,527	-	-	-	-	-	-
30 to 34	7	215,500	-	-	-	-	-	-
35 to 39	9	224,978	3	82,591	-	-	-	-
40 to 44	3	72,622	2	62,784	-	-	-	-
45 to 49	5	104,071	-	-	-	-	-	-
50 to 54	4	97,607	5	145,272	1	26,038	1	25,927
55 to 59	4	92,434	2	63,224	-	-	-	-
60 to 64	-	-	4	85,168	1	15,966	-	-
65 & Up	-	-	-	-	-	-	-	-
Total	33	\$ 835,739	16	\$ 439,039	2	\$ 42,004	1	\$ 25,927

AGE	YEARS OF SERVICE							
	30 to 34		35 to 39		40 & Up		All	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	34	\$ 560,393
25 to 29	-	-	-	-	-	-	68	1,612,104
30 to 34	-	-	-	-	-	-	54	1,453,250
35 to 39	-	-	-	-	-	-	29	748,227
40 to 44	-	-	-	-	-	-	12	281,517
45 to 49	-	-	-	-	-	-	11	234,282
50 to 54	-	-	-	-	-	-	12	310,196
55 to 59	-	-	-	-	-	-	8	192,430
60 to 64	-	-	-	-	-	-	5	101,134
65 & Up	-	-	-	-	-	-	1	23,994
Total	-	\$ -	-	\$ -	-	\$ -	234	\$5,517,527

PUBLIC EMPLOYEES POLICE AND FIRE FUNDSUMMARY OF PLAN1. Name

Public Employees Police and Fire Fund.

2. Type of Plan

Self-insured, managed by a 15-member Board of Trustees.

3. Employer Included

Any county, city, borough, town within the state.

4. Employees Included

All full time, and certain part time, police officers and fire fighters, who are not contributing to any other local retirement plan.

5. Allowable Service

All periods of public service during which salary deductions were made or for which payments in lieu of salary deductions were deposited, including authorized leaves of absence, sick leaves, military leaves and layoffs.

6. Considered Salary

Salary means the periodical total compensation of any public employee before deductions for deferred compensation or supplemental retirement plans, and also means wages and includes net income from fees.

7. Employee Contributions

After July 1, 1973, 8% of considered salary.

8. Employer Contributions

An amount equal to 12% of considered salary.

9. Normal Retirement Annuity

After attainment of age 55 and completion of at least 10 years of allowable service.

"Average salary" means an amount equivalent to the highest salary upon which contributions were paid for any five successive years of allowable service.

Annuity equal to:

- (a) 2 1/2% of "Average Salary" for each of the first 25 years of allowable service, plus
- (b) 2% of "Average Salary" for each year of service over 25 years.

10. Late Retirement Annuity

Annual Annuity determined as for Normal Retirement, considering allowable service and salary to actual retirement.

11. Proportionate Annuity

At age 65 or earlier under a mandatory retirement statute or uniformly applied compulsory retirement policy and completion of at least three years but less than 10 years of allowable service.

Annual Annuity determined as for Normal Retirement, considering allowable service and salary to actual retirement.

12. Disability Benefit

In event of disability, which renders member unable to perform the duties of a police officer or fire fighter, after not less than five years of allowable service.

Annual Benefit payable to age 55 determined as for Normal Retirement, considering allowable service and salary to date of disablement, except if service is under 10 years, the benefit shall be the same as though the member had 10 years of service.

In the event of disability incurred in line of duty regardless of years of allowable service, the benefit shall be equal to 50% of "Average Salary" plus 2-1/2% of such salary for each year of allowable service in excess of 20 years but less than 25 years, plus 2% for each year in excess of 25 years.

If disability continues to age 55, the disability benefit shall terminate and the person shall be deemed to be on retirement status with an annuity in the same amount that he was previously receiving, or he may select an optional annuity.

13. Survivor or Death Benefit

In event of death of an active member, or in event of death of a disabilitant prior to age 55.

Annual Survivor Benefit to dependent spouse, of 50% of average salary during the last six months of allowable service, plus for each dependent child, 10% of such average salary.

Upon the death of an active member after age 55 and completion of 10 or more years of allowable service or if the member has made application for an annuity or disability benefit and dies prior to commencement of his benefit, the surviving spouse (in lieu of any other survivor benefit) may elect to receive an annuity equal to the 100% joint and survivor annuity the member could have qualified for on the date of his death.

Upon the death of an annuitant who retired under the "savings clause" the surviving spouse, if otherwise eligible, is entitled to a monthly survivor benefit for life or until remarriage, equal to one-half of the original annuity paid plus 25%, maximum \$125 monthly.

In the event of death of a retired annuitant and no survivor benefits are payable, the excess (if any) of his accumulated contributions not paid out in the way of annuities shall be paid to his designated beneficiary, without interest.

In case of death of a member who has no eligible surviving dependents, his accumulated contributions shall be paid to his designated beneficiary with interest thereon at 5% per annum compounded annually.

14. Separation Benefit

In event of termination after 10 years of allowable service, a deferred vested annuity payable at age 55, provided former member does not withdraw his contributions. (Said 10 years of allowable service need not represent PERA coverage only but may be in conjunction with service covered by other Minnesota funds such as those for state employees and teachers and others which has this same provision; deferred annuity is paid by each fund according to the number of years of allowable service in each fund).

Annual Annuity determined as for Normal Retirement under the provisions of the Plan at date of termination considering allowable service and salary to date of such termination, augmented by interest compounded annually from first of the month following separation from service or from July 1, 1971, whichever is later, to the date annuity begins to accrue, at the rate of 5% until January 1, 1981, and thereafter at the rate of 3%.

All former members shall be eligible to receive a refund of their accumulated contributions without interest for the first three years of membership and thereafter with interest at 5% compounded annually. (Such election is in lieu of any other benefits under the Plan.)

15. Lump Sum Payments for Retired Annuitants, Disabilitants
and Surviving Spouse Receiving Payments on November 30, 1977

Any of the above whose annuity or benefit was computed under laws in effect prior to July 1, 1973, shall receive an additional lump sum payment of \$250 payable December 1, 1977.

Persons receiving benefits from the Minnesota Adjustable Fixed Benefit Fund or the Retirement Fund shall receive the lump sum payment from the same fund.

16. Optional Benefits

A participant may elect to receive an equivalent actuarially reduced annuity in the form of either a 50% or 100% joint and survivor annuity, or joint and survivor with option cancelled if member is pre-deceased by beneficiary.

17. Maximum Annuity

Effective March 23, 1982 the normal monthly retirement annuity or disability benefit may not exceed 100% of final monthly salary.

18. Expenses

Paid by Association from retirement fund.

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONACTUARIAL BALANCE SHEET
(July 1, 1985)Basic MembersCURRENT AND EXPECTED FUTURE ASSETS

Total Current Assets	\$ 719,874,148
Expected Future Assets	
Present Value of Expected Future	
Supplemental Contributions	\$110,443,685
Present Value of Future	
Normal Costs	51,084,625
Total Expected Future Assets	161,528,310
Total Current and Expected Future Assets	881,402,458

CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS

Current Benefit Obligations

For Annuitants	
Retirement Annuities	\$ 688,539,088
Disability Annuities	18,279,341
Surviving Spouses' Annuities	68,544,126
Surviving Children's Annuities	968,961
For Former Members without	
Vested Rights	3,198,448
For Deferred Annuitants'	10,533,910
For Active Employees	
Retirement Benefits	617,400,173
Disability Benefits	26,410,361
Refund Liability Due	
to Death or Withdrawal	1,074,582
Survivors' Benefits	27,919,806
Total Current Benefit Obligations	\$1,462,868,796
Expected Future Benefit Obligations	51,084,625
Total Current and Expected Future	
Benefit Obligations	\$1,513,953,421
Current Unfunded Liability	\$ 742,994,648
Current and Future Unfunded Liability	\$ 632,550,963

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONACTUARIAL REQUIREMENTS

(July 1, 1985)

Basic MembersAMORTIZATION RATE REQUIREMENT

Present Value of Benefits (For Both Past and Future Service)		\$1,513,953,421
Obligation for Service Rendered to Date	\$1,462,868,796	
Net Assets	719,874,148	
Accrued Unfunded Obligation	742,994,648	
Funding Ratio		49.2%
Amortization Requirement (24 year; mid-year)	36,444,396	
Covered Payroll	144,922,339	
Amortization Rate Requirement		<u>25.148%</u>

ENTRY AGE NORMAL RATE REQUIREMENT

Normal Cost Requirement (mid-year)	\$ 9,488,702	
Covered Payroll	144,922,339	
Normal Cost Rate Requirement		<u>6.547%</u>

ACTUARIAL BALANCE

Normal Cost Rate Requirement	6.547%	
Amortization Rate Requirement	25.148	
Allowance for Expenses	<u>.223</u>	
Total Rate Requirement		31.918%
Member Contribution Rate		<u>8.000</u>
Employer Rate Requirement		23.918%
Employer Contribution Rate Set by Law		<u>10.500</u>
Excess (Deficit) of Employer Contribution Rate Set by Law and Total Requirement		(<u>13.418%</u>)

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONBasic Members

STATEMENT OF REVENUE, EXPENDITURES,
CHANGES IN RESERVES AND EXPERIENCE GAIN (LOSS)
 (Year Ending June 30, 1985)

Revenue:

Employer Contribution	\$ 16,399,770	
Member Contributions	12,691,113	
Investment Income	15,339,057	
Minnesota Post-Retirement Investment Fund Income	61,223,916	
Operating Transfers	216,777	
Other Income	<u>103,228</u>	
Total Revenue		\$105,973,861

Expenditure:

Benefits	\$(75,851,742)	
Refund of Contributions	(256,588)	
Administrative Expenses	(599,749)	
Investment Management Fees	(276,305)	
Other Expenses	<u>(5,781)</u>	
Total Expenditures		(76,990,165)
Net Change in Unrealized Capital Gains or Losses		<u>7,994,058</u>

Increase in Valuation Assets (1984) \$ 36,977,754

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONBasic MembersALLOCATION OF CHANGE IN ACTUARIAL RESERVES

<u>Item</u>	<u>Assets</u>	<u>Reserves</u>	<u>Change in Unfunded Increase (Decrease)</u>
Contribution Income	\$29,090,883	\$ 65,777,914 ¹	\$ 36,687,031
Investment Income	76,562,973 ²	70,348,288	(6,214,685)
Other Income	<u>103,228</u>	<u>-</u>	<u>(103,228)</u>
Total Income	105,757,084	136,126,202	30,369,118
Benefit Payments and Expenses	(76,990,165)	(76,990,165)	-
Transfers from State General Fund	216,777	-	(216,777)
Change in Unreduced Gains or Losses	7,994,058	-	(7,994,058)
Increase in Reserves Based on Salary Change	-	36,782,218	36,782,218
Mortality Loss	-	5,390,218	5,390,218
Amendments	-	-	-
Change in Assumptions and Method	-	-	-
Other Experience Variation	<u>-</u>	<u>1,691,153</u>	<u>1,691,153</u>
Net Change	<u>\$36,977,754</u>	<u>\$102,999,626</u>	<u>\$ 66,021,872</u>

1 Normal Cost Plus Interest on Unfunded

2 Includes MPRF Income

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONRECONCILIATION OF ACTIVE MEMBERSBasic Members

As of July 1, 1985	7,789
New Entrants	1
Reinstated	18
Reinstated from Errors	<u>6</u>
TOTAL	<u>7,814</u>

Separations:

a. Refund of Contributions	
(i) Death	5
(ii) Withdrawal	28
b. With Deferred Annuity	9
c. With Disability Annuity	45
d. With Normal Retirement Annuity	829
e. With Survivor Annuity	15
f. With Option Annuity	6
g. Terminated	210
h. Terminated to Active	5
i. Died - No Refund or Benefit	4
j. Duplicate Member Number Errors	4
k. Added in Error	<u>-</u>
TOTAL SEPARATIONS	<u>1,160</u>
Current Active Total	<u>6,654</u>

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONRECONCILIATION OF ANNUITANTSBasic Members

<u>Annuitants:</u>	<u>Normal</u>	<u>Option</u>	<u>Survivor</u>	<u>Disabled</u>	<u>Children</u>	<u>Total</u>
Balance - July 1, 1984	10,547	398	3,067	367		14,379
Additions for year	1,170	118	93	54		1,435
Deletions for year	-436	-9	-155	-67		-667
Subtotal - July 1, 1985	11,281	507	3,005	354	185	15,147
Inactives	0	0	17	19		36
Actives	11,281	507	2,988	335	46	15,111
Annual Annuity	66,672,859	2,329,317	7,133,658	2,569,864	231,647	78,705,698

Note - Children are for informational purposes only. They are included as survivors. Active children are active children only.

Deferred Vested Members:

Balance - July 1, 1984	792
Additions	66
Deletions	-130
Balance - July 1, 1985	728

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION

VALUATION PAYROLL

Basic Members

Active Male Members

(Age and Credited Service as of July 1, 1985)

YEARS OF SERVICE

AGE	Under 1		1		2 to 4		5 to 9	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-
40 to 44	-	-	-	-	-	-	-	-
45 to 49	-	-	-	-	-	-	1	23,783
50 to 54	-	-	-	-	1	26,917	1	453
55 to 59	-	-	-	-	2	15,252	-	-
60 to 64	-	-	-	-	1	-	1	18,436
65 & Up	-	-	-	-	1	21,395	-	-
Total	-	\$ -	-	\$ -	5	\$ 63,564	3	\$ 42,672

YEARS OF SERVICE

AGE	10 to 14		15 to 19		20 to 24		25 to 29	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-
35 to 39	1	9,186	69	1,832,111	8	193,519	-	-
40 to 44	2	43,783	216	5,826,988	165	4,445,162	8	218,434
45 to 49	3	134,913	261	6,469,568	330	8,838,906	175	4,550,289
50 to 54	1	30,621	227	5,267,166	343	8,895,390	295	8,280,264
55 to 59	4	67,922	194	4,116,540	343	8,289,074	282	7,342,230
60 to 64	1	18,567	151	3,012,393	237	5,440,640	145	3,629,750
65 & Up	2	24,139	40	769,653	34	623,957	28	432,028
Total	14	\$ 329,131	1,158	\$ 27,294,419	1,460	\$ 36,726,648	933	\$ 24,452,995

YEARS OF SERVICE

AGE	30 to 34		35 to 39		40 & Up		All	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	78	2,034,816
40 to 44	-	-	-	-	-	-	391	10,534,367
45 to 49	11	339,874	-	-	-	-	781	20,357,333
50 to 54	129	3,632,018	4	112,085	-	-	1,001	26,244,914
55 to 59	165	4,760,690	30	932,763	-	-	1,020	25,524,471
60 to 64	77	2,177,369	35	1,037,909	2	45,950	650	15,381,014
65 & Up	19	384,749	5	143,623	-	-	129	2,399,544
Total	401	\$ 11,294,700	74	\$ 2,226,380	2	\$ 45,950	4,050	\$102,476,459

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONVALUATION PAYROLLBasic MembersActive Female Members

(Age and Credited Service as of July 1, 1985)

YEARS OF SERVICE

AGE	Under 1		1		2 to 4		5 to 9	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-
40 to 44	-	-	-	-	-	-	-	-
45 to 49	-	-	-	-	1	1,242	-	-
50 to 54	-	-	-	-	2	16,005	-	-
55 to 59	-	-	-	-	-	-	-	-
60 to 64	-	-	-	-	-	-	-	-
65 & Up	-	-	-	-	1	5,880	-	-
Total	-	\$ -	-	\$ -	4	\$ 23,127	-	\$ -

YEARS OF SERVICE

AGE	10 to 14		15 to 19		20 to 24		25 to 29	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	-	-	-	-
30 to 34	1	8,071	2	48,339	-	-	-	-
35 to 39	3	57,903	70	1,358,030	15	278,923	-	-
40 to 44	3	37,036	106	2,466,462	70	1,430,249	9	226,928
45 to 49	4	41,605	141	2,310,771	80	1,740,732	49	1,069,928
50 to 54	4	75,509	263	3,618,102	147	2,586,146	47	1,073,500
55 to 59	2	19,018	389	5,150,729	272	3,969,577	87	1,712,980
60 to 64	1	1,923	265	3,230,488	219	3,497,370	62	1,157,120
65 & Up	-	-	54	475,061	51	725,036	20	314,041
Total	18	\$ 241,065	1,290	\$18,657,982	854	\$14,228,033	274	\$ 5,554,497

YEARS OF SERVICE

AGE	30 to 34		35 to 39		40 & Up		All	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	3	56,410
35 to 39	-	-	-	-	-	-	88	1,694,856
40 to 44	-	-	-	-	-	-	188	4,160,675
45 to 49	10	215,333	-	-	-	-	285	5,379,611
50 to 54	26	558,976	3	51,807	-	-	492	7,980,045
55 to 59	46	1,057,329	22	552,106	3	54,637	821	12,516,376
60 to 64	22	496,026	7	168,322	5	120,185	581	8,671,434
65 & Up	12	260,857	3	75,842	5	129,756	146	1,986,473
Total	116	\$ 2,588,521	35	\$ 848,077	13	\$ 304,578	2,604	\$42,445,880

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONBASIC MEMBERSSUMMARY OF PLAN1. Name

Public Employees Retirement Association.

2. Type of Plan

Self-insured, managed by a 15-member Board of Trustees.

3. Employer Included

Any county, city, borough, town, school district within the state, or a department or unit of the state or any other public body employing any person who is a public employee as defined by law.

4. Employees Included

All full time and certain part time employees who did not elect coverage under Section 218(d) of the Social Security Act and who are not contributing to any other local retirement plan.

5. Allowable Service

All periods of public service during which salary deductions were made or for which payments in lieu of salary deductions were deposited, including authorized leaves of absence, sick leaves, military leaves and layoffs.

6. Considered Salary

Salary means the periodical total compensation of any public employee before deductions for deferred compensation or supplemental retirement plans, and also means wages and includes net income from fees.

7. Employee Contributions

After July 1, 1973, 8% of considered salary.

8. Employer Contributions

An amount equal to the Employee Contributions plus 2-1/2% of considered salary.

9. Normal Retirement Annuity

After attainment of age 65 and completion of at least 10 years of allowable service.

"Average salary" means an amount equivalent to the highest salary upon which contributions were paid for any five successive years of allowable service.

Annuity equal to:

- (a) 2% of "Average Salary" for each of the first 10 years of allowable service plus
- (b) 2-1/2% of "Average Salary" for each year of service over 10 years.

10. Late Retirement Annuity

Annual Annuity determined as for Normal Retirement, considering allowable service and salary to actual retirement.

11. Early Retirement Annuity

After attainment of age 55 and completion of 10 years of allowable service, or after completion of 30 year of allowable service.

Annual Annuity determined as for Normal Retirement considering allowable service and salary to actual retirement and reduced by 1/4% for each month that the member is under age 65 at the time of retirement if service is less than 30 years, or under age 62 if service is 30 or more years.

12. Special Early Retirement Annuity

After attained age plus allowable service totals 90 years.
After attainment of age 55 and attained age plus allowable service totals 85 years, upon application prior to December 31, 1986.

Annual Annuity determined as for Normal Retirement considering allowable service and salary to actual retirement without reduction for such early retirement.

13. Proportionate Annuity

At age 65 or earlier under a mandatory retirement statute or uniformly applied compulsory retirement policy and completion of at least one year but less than 10 years of allowable service.

Annual Annuity determined as for Normal Retirement, considering allowable service and salary to actual retirement.

14. Disability Benefit

In the event of total and permanent disability, after completion of 10 years of allowable service or attainment of age 50 and completion of five years of allowable service.

Annual Benefit payable to age 65 determined as for Normal Retirement, considering allowable service and salary to date of disablement, plus a supplement equal to \$5 for each year that age at disablement is less than 65, maximum supplement \$50. Total Benefit is limited to 100% of "Average Salary."

If disability continues to age 65, the disability benefit shall terminate and the person shall be deemed to be on retirement status and may elect to receive the greater of an annuity determined as for Normal Retirement or the disability benefit he was receiving prior to age 65, or he may select an optional annuity.

Any disabilitant attaining age 65 after July 1, 1973 shall have his annuity computed in accordance with the Normal Retirement Annuity formula above.

15. Survivor or Death Benefit

In event of death of an active member after 18 months of allowable service, or in the event of death of a disabilitant prior to age 65.

Annual Survivor Benefit to dependent spouse, of 50% of average salary during the last six months of allowable service, plus for each dependent child, 10% of such average salary. Maximum family benefit equal to \$1,000 per month. Minimum family benefit equal to 50% of such average salary subject to the maximum limitation.

In the event of death of a retired annuitant and no survivor benefits are payable, the excess (if any) of his accumulated contributions not paid out in the way of annuities shall be paid to his designated beneficiary, without interest.

Upon the death of an active member after age 55 and completion of 10 or more years of allowable service or if the member has made application for an annuity or disability benefit and dies prior to commencement of his benefit, the surviving spouse (in lieu of any other survivor benefit) may elect to receive an annuity equal to the 100% joint and survivor annuity the member could have qualified for on the date of his death.

In case of death of a member who has no eligible surviving dependents, his accumulated contributions shall be paid to his designated beneficiary with interest thereon at 5% per annum compounded annually.

16. Separation Benefit

In event of termination after 10 years of allowable service, a deferred vested annuity payable at age 65, or earlier if otherwise eligible, provided former member does not withdraw his contributions. (Said 10 years of allowable service need not represent PERA coverage only but may be in conjunction with service covered by other Minnesota funds such as those for state employees and teachers and others which has this same provision;

deferred annuity is paid by each fund according to the number of years of allowable service in each fund).

Annual Annuity determined as for Normal Retirement under the provisions of the Plan at date of termination considering allowable service and salary to date of such termination, augmented by interest compounded annually from first of the month following separation from service or from July 1, 1971, whichever is later, to the date annuity begins to accrue, at the rate of 5% until January 1, 1981, and thereafter at the rate of 3%.

All former members shall be eligible to receive a refund of their accumulated contributions without interest for the first three years of membership and thereafter with interest at 5% compounded annually. (Such election is in lieu of any other benefits under the Plan.)

17. Lump Sum Payments for Retired Annuitants, Disabilitants and Surviving Spouse Receiving Payments on November 30, 1977

Any of the above whose annuity or benefit was computed under laws in effect prior to July 1, 1973, shall receive an additional lump sum payment of \$250 payable December 1, 1977.

Persons receiving benefits from the Minnesota Adjustable Fixed Benefit Fund or the Retirement Fund shall receive the lump sum payment from the same fund.

18. Optional Benefits

A participant may elect to receive an equivalent actuarially reduced annuity in the form of either a 50% or 100% joint and survivor annuity, or joint and survivor with option cancelled if member is pre-deceased by beneficiary.

19. Maximum Annuity

Effective March 23, 1982 the normal monthly retirement annuity or disability benefit may not exceed 100% of final monthly salary.

20. Expenses

Paid by Association from retirement fund.

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONACTUARIAL BALANCE SHEET
(July 1, 1985)Coordinated MembersCURRENT AND EXPECTED FUTURE ASSETS

Total Current Assets	\$1,123,083,047
Expected Future Assets	
Present Value of Expected Future Supplemental Contributions	\$236,763,455
Present Value of Future Normal Costs	452,400,427
Total Expected Future Assets	689,163,882
Total Current and Expected Future Assets	1,812,246,929

CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS

Current Benefit Obligations

For Annuitants

Retirement Annuities	\$ 133,937,457
Disability Annuities	4,370,777
Surviving Spouses' Annuities	-
Surviving Children's Annuities	-

For Former Members without Vested Rights

6,165,436

For Deferred Annuitants'

2,457,885

For Active Employees

Retirement Benefits	729,498,883
Disability Benefits	37,803,438
Refund Liability Due to Death or Withdrawal	40,622,273
Survivors' Benefits	40,000,226

Total Current Benefit Obligations	\$ 994,856,375
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Expected Future Benefit Obligations	452,400,427
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Total Current and Expected Future Benefit Obligations	\$1,447,256,802
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Current Unfunded Liability	\$ (128,226,672)
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Current and Future Unfunded Liability	\$ (364,990,127)
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PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONACTUARIAL REQUIREMENTS

(July 1, 1985)

Coordinated MembersAMORTIZATION RATE REQUIREMENT

Present Value of Benefits (For Both Past and Future Service)		\$1,447,256,802
Obligation for Service Rendered to Date	\$ 994,856,375	
Net Assets	1,123,083,047	
Accrued Unfunded Obligation	(128,226,672)	
Funding Ratio		112.9%
Amortization Requirement (24 year; mid-year)	(6,289,606)	
Covered Payroll	1,150,751,842	
Amortization Rate Requirement		<u>(.547%)</u>

ENTRY AGE NORMAL RATE REQUIREMENT

Normal Cost Requirement (mid-year)	\$ 62,501,965	
Covered Payroll	1,150,751,842	
Normal Cost Rate Requirement		<u>5.431%</u>

ACTUARIAL BALANCE

Normal Cost Rate Requirement	5.431%	
Amortization Rate Requirement	(.547)	
Allowance for Expenses	<u>.223</u>	
Total Rate Requirement		5.107%
Member Contribution Rate		<u>4.000</u>
Employer Rate Requirement		1.107%
Employer Contribution Rate Set by Law		<u>4.250</u>
Excess (Deficit) of Employer Contribution Rate Set by Law and Total Requirement		<u>3.143%</u>

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONCoordinated Members

STATEMENT OF REVENUE, EXPENDITURES,
CHANGES IN RESERVES AND EXPERIENCE GAIN (LOSS)
 (Year Ending June 30, 1985)

Revenue:

Employer Contributions	\$ 51,975,572	
Member Contributions	47,872,467	
Investment Income	83,985,988	
Minnesota Post-Retirement Investment Fund Income	11,495,644	
Operating Transfers	1,660,079	
Other Income	<u>565,202</u>	
Total Revenue		\$197,554,952

Expenditure:

Benefits	\$(14,536,405)	
Refund of Contributions	(12,901,782)	
Administrative Expense	(2,288,447)	
Investment Management Fees	(1,512,852)	
Other Expenses	<u>(22,058)</u>	
Total Expenditures		(31,261,544)

Net Change in Unrealized Capital Gains or Losses	<u>40,012,493</u>
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Increase in Valuation Assets (1985)	<u>\$206,305,901</u>
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PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONCoordinated MembersALLOCATION OF CHANGE IN ACTUARIAL RESERVES

<u>Item</u>	<u>Assets</u>	<u>Reserves</u>	<u>Change in Unfunded Increase (Decrease)</u>
Contribution Income	\$ 99,848,039	\$ 56,408,317 ¹	\$ (43,439,722)
Investment Income	95,481,632 ²	76,145,081	(19,336,551)
Other Income	<u>565,202</u>	<u>-</u>	<u>(565,202)</u>
Total Income	195,894,873	132,553,398	(63,341,475)
Benefit Payments and Expenses	(31,261,544)	(31,261,544)	-
Transfers from State General Fund	1,660,079	-	(1,660,079)
Change in Unrealized Gains or Losses	40,012,493	-	(40,012,493)
Increase in Reserves Based on Salary	-	22,986,809	22,986,809
Mortality Loss	-	1,035,530	1,035,530
Amendments	-	-	-
Change in Assumptions and Method	-	-	-
Other Experience Variation	<u>-</u>	<u>1,050,173</u>	<u>1,050,173</u>
Net Change	<u>\$206,305,901</u>	<u>\$126,364,366</u>	<u>\$ (79,941,535)</u>

1 Normal Cost Plus Interest on the Unfunded

2 Includes MPRF Income

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONRECONCILIATION OF ACTIVE MEMBERSCoordinated Members

As of July 1, 1985	75,830
New Entrants	10,713
Reinstated	2,945
Reinstated from Error	<u>17</u>
TOTAL	<u>89,505</u>

Separations:

a. Refund of Contributions	
(i) Death	92
(ii) Withdrawal	5,652
b. With Deferred Annuity	36
c. With Disability Annuity	75
d. With Normal Retirement Annuity	729
e. With Survivor Annuity	-
f. With Option Annuity	21
g. Terminated	2,735
h. Terminated to Active	405
i. Died - No Refund or Benefit	25
j. Duplicate Member Number Errors	45
k. Added in Error	<u>-</u>
TOTAL SEPARATIONS	<u>9,815</u>
Current Active Total	<u>79,690</u>

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONRECONCILIATION OF ANNUITANTSCoordinated Members

<u>Annuitants:</u>	<u>Normal</u>	<u>Option</u>	<u>Disabled</u>	<u>Total</u>
Balance - July 1, 1984	5,206	231	304	5,741
Additions for year	950	60	90	1,100
Deletions for year	-132	-3	-63	-198
Subtotal - July 1, 1985	6,024	288	331	6,643
Inactives	0	0	13	14
Actives	6,023	288	318	6,629
Annual Annuity	13,990,123	515,000	615,347	15,120,470

Deferred Vested Members:

Balance - July 1, 1984	1,153
Additions	103
Deletions	-121
Balance - July 1, 1985	1,135

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION

VALUATION PAYROLL

Coordinated Members

Active Male Members

(Age and Credited Service as of July 1, 1985)

YEARS OF SERVICE

AGE	Under 1		1		2 to 4		5 to 9	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	583	\$ 2,922,134	367	\$ 4,386,278	359	\$ 5,268,725	71	\$ 1,292,435
25 to 29	662	4,293,240	606	9,177,618	1,043	18,252,025	1,120	23,035,294
30 to 34	561	3,884,996	511	8,227,395	1,091	21,317,921	2,110	47,843,123
35 to 39	398	2,780,046	415	7,400,631	819	16,180,062	1,687	41,006,187
40 to 44	253	1,872,288	237	4,156,685	510	9,765,702	850	20,385,082
45 to 49	180	1,172,690	162	2,716,261	341	6,186,467	645	13,810,061
50 to 54	148	995,497	119	1,779,098	318	5,395,019	598	12,133,191
55 to 59	119	726,996	101	1,337,211	268	4,159,710	556	10,784,391
60 to 64	59	265,129	51	544,494	184	2,388,072	415	7,215,545
65 & Up	139	420,232	54	452,950	121	1,162,199	190	2,000,663
Total	3,102	\$ 19,333,248	2,623	\$ 40,178,621	5,054	\$ 90,075,902	8,242	\$179,505,972

YEARS OF SERVICE

AGE	10 to 14		15 to 19		20 to 24		25 to 29	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	53	1,067,131	-	-	-	-	-	-
30 to 34	789	18,449,746	28	635,026	-	-	-	-
35 to 39	1,411	37,370,170	338	9,364,519	3	50,431	-	-
40 to 44	831	21,907,553	486	13,342,164	38	1,146,290	1	25,748
45 to 49	582	13,977,330	419	11,324,624	89	2,775,550	28	916,327
50 to 54	557	12,611,908	408	10,066,461	113	3,801,642	71	2,400,997
55 to 59	640	13,538,371	439	10,202,117	109	3,182,278	83	2,568,324
60 to 64	477	9,567,599	326	7,196,198	89	2,177,857	45	1,248,642
65 & Up	106	1,469,502	53	972,447	10	196,415	5	127,280
Total	5,446	\$129,959,310	2,497	\$ 63,103,556	451	\$ 13,330,463	233	\$ 7,287,318

YEARS OF SERVICE

AGE	30 to 34		35 to 39		40 & Up		All	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	1,380	\$ 13,869,572
25 to 29	-	-	-	-	-	-	3,484	55,825,308
30 to 34	-	-	-	-	-	-	5,090	100,358,207
35 to 39	-	-	-	-	-	-	5,071	114,152,046
40 to 44	-	-	-	-	-	-	3,206	72,601,512
45 to 49	2	47,341	-	-	-	-	2,448	52,926,651
50 to 54	10	312,426	-	-	-	-	2,342	49,496,239
55 to 59	53	1,960,011	8	295,228	-	-	2,376	48,754,637
60 to 64	28	806,574	18	614,938	-	-	1,692	32,025,048
65 & Up	2	57,425	-	-	2	19,327	682	6,878,440
Total	95	\$ 3,183,777	26	\$ 910,166	2	\$ 19,327	27,771	\$546,887,660

PUBLIC EMPLOYEES RETIREMENT ASSOCIATION

VALUATION PAYROLL

Coordinated Members

Active Female Members

(Age and Credited Service as of July 1, 1985)

YEARS OF SERVICE

AGE	Under 1		1		2 to 4		5 to 9	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	1,395	\$ 5,984,296	884	\$ 8,850,729	1,164	\$ 12,933,400	227	\$ 2,969,931
25 to 29	1,241	6,686,886	976	11,410,059	2,053	27,778,464	2,218	32,261,374
30 to 34	1,192	5,864,129	871	10,018,200	1,883	25,279,548	2,632	43,158,547
35 to 39	1,276	5,620,691	920	8,917,269	1,820	21,065,731	2,409	35,343,079
40 to 44	875	3,791,505	673	6,200,806	1,549	16,019,249	2,503	32,150,270
45 to 49	533	2,151,254	400	3,553,065	1,106	11,142,336	2,195	26,137,633
50 to 54	281	1,118,975	260	2,081,250	786	7,470,067	1,616	18,433,258
55 to 59	184	638,410	159	1,079,061	556	4,960,399	1,224	13,390,424
60 to 64	68	208,055	71	419,951	267	2,018,950	717	7,201,492
65 & Up	208	335,501	46	395,554	118	734,641	253	1,917,796
Total	7,253	\$ 32,399,702	5,260	\$ 52,925,944	11,302	\$129,402,785	15,994	\$212,963,804

YEARS OF SERVICE

AGE	10 to 14		15 to 19		20 to 24		25 to 29	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	137	2,167,267	-	-	-	-	-	-
30 to 34	983	16,618,146	49	943,551	-	-	-	-
35 to 39	1,019	19,742,742	270	5,719,440	3	46,357	-	-
40 to 44	1,108	17,099,274	361	7,685,011	20	520,767	-	-
45 to 49	1,527	19,622,471	478	7,426,437	22	479,024	9	200,985
50 to 54	1,483	18,039,004	681	9,874,182	30	630,250	14	338,789
55 to 59	1,299	15,808,255	736	10,231,181	55	906,895	15	307,981
60 to 64	807	9,127,230	498	6,855,105	41	902,057	17	352,822
65 & Up	268	2,159,777	124	1,241,907	9	101,105	6	87,185
Total	8,631	\$120,384,166	3,197	\$ 49,976,814	180	\$ 3,586,455	61	\$ 1,287,762

YEARS OF SERVICE

AGE	30 to 34		35 to 39		40 & Up		All	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	3,670	\$ 30,738,356
25 to 29	-	-	-	-	-	-	6,625	80,304,050
30 to 34	-	-	-	-	-	-	7,610	101,882,121
35 to 39	-	-	-	-	-	-	7,717	96,455,309
40 to 44	-	-	-	-	-	-	7,089	83,466,882
45 to 49	-	-	-	-	-	-	6,270	70,713,205
50 to 54	4	67,167	4	95,812	-	-	5,159	58,148,754
55 to 59	8	209,503	1	22,668	2	24,497	4,239	47,579,274
60 to 64	6	122,017	4	135,556	2	31,991	2,498	27,375,226
65 & Up	6	95,118	-	-	4	132,421	1,042	7,201,005
Total	24	\$ 493,805	9	\$ 254,036	8	\$ 188,909	51,919	\$603,864,182

PUBLIC EMPLOYEES RETIREMENT ASSOCIATIONCOORDINATED MEMBERSSUMMARY OF PLAN1. Name

Public Employees Retirement Association.

2. Type of Plan

Self-insured, managed by a 15-member Board of Trustees.

3. Employer Included

Any county, city, borough, town, school district within the state, or a department or unit of the state or any other public body employing any person who is a public employee as defined by law.

4. Employees Included

All full time and certain part time employees who either elected coverage under Section 218(d) of the Social Security Act, or were automatically so covered by reason of being new employees, and who are not contributing to any other local retirement plan.

5. Allowable Service

All periods of public service during which salary deductions were made or for which payments in lieu of salary deductions were deposited, including authorized leaves of absence, sick leaves, military leaves and layoffs.

6. Considered Salary

Salary means the periodical total compensation of any public employee before deductions for deferred compensation or supplemental retirement plans, and also means wages and includes net income from fees.

7. Employee Contributions

After July 1, 1973, 4% of considered salary.

8. Employer Contributions

An amount equal to the Employee Contributions plus 1/4 of 1% of considered salary.

9. Normal Retirement Annuity

After attainment of age 65 and completion of at least 10 years of allowable service.

"Average salary" means an amount equivalent to the highest salary upon which contributions were paid for any five successive years of allowable service.

Annuity equal to:

- (a) 1% of "Average Salary" for each of the first 10 years of allowable service plus
- (b) 1-1/2% of "Average Salary" for each year of service over 10 years.

10. Late Retirement Annuity

Annual Annuity determined as for Normal Retirement, considering allowable service and salary to actual retirement.

11. Early Retirement Annuity

After attainment of age 55 and completion of 10 years of allowable service, or after completion of 30 years of allowable service.

Annual Annuity determined as for Normal Retirement considering allowable service and salary to actual retirement and reduced by 1/4% for each month that the member is under age 65 at the time of retirement if service is less than 30 years, or under age 62 if service is 30 or more years.

12. Special Early Retirement Benefit

After attained age plus allowable service totals 90 years.
After attainment of age 55 and attained age plus allowable service totals 85 years, upon application prior to December 31, 1986.

Annual annuity determined as for Normal Retirement considering allowable service and salary to actual retirement without reduction for such early retirement.

13. Proportionate Annuity

At age 65 or earlier under a mandatory retirement statute or uniformly applied compulsory retirement policy and completion of at least one year but less than 10 years of allowable service.

Annual Annuity determined as for Normal Retirement, considering allowable service and salary to actual retirement.

14. Disability Benefit

In the event of total and permanent disability, after completion of 10 years of allowable service or attainment of age 50 and completion of five years of allowable service.

Annual Benefit payable to age 65 determined as for Normal Retirement, considering allowable service and salary to date of disablement. Total Benefit is limited to 100% of "Average Salary."

If disability continues to age 65, the disability benefit shall terminate and the person shall be deemed to be on retirement status and may elect to receive the greater of an annuity determined as for Normal Retirement or the disability benefit he was receiving prior to age 65, or he may select an optional annuity.

15. Death Benefit

In event of death of an active member, his accumulated contributions shall be paid to his designated beneficiary with interest thereon at 5% per annum compounded annually.

In the event of death of a retired annuitant, the excess (if any) of his accumulated contributions not paid out in the way of annuities shall be paid to his designated beneficiary, without interest.

Upon the death of an active member after age 55 and completion of 10 or more years of allowable service or if the member has made application for an annuity or disability benefit and dies prior to commencement of his benefit, the surviving spouse (in lieu of any other survivor benefit) may elect to receive an annuity equal to the 100% joint and survivor annuity the member could have qualified for on the date of his death.

16. Separation Benefit

In event of termination after 10 years of allowable service, a deferred vested annuity payable at age 65, or earlier if otherwise eligible, provided former member does not withdraw his contributions. (Said 10 years of allowable service need not represent PERA coverage only but may be in conjunction with service covered by other Minnesota funds such as those for state employees and teachers and others which have this same provision; deferred annuity is paid by each fund according to the number of years of allowable service in each fund).

Annual Annuity determined as for Normal Retirement under the provisions of the Plan at date of termination considering allowable service and salary to date of such termination, augmented by interest compounded annually from first of the month following separation from service or from July 1, 1971, whichever is later, to the date annuity begins to accrue, at the rate of 5% until January 1, 1981, and thereafter at the rate of 3%.

All former members shall be eligible to receive a refund of their accumulated contributions without interest for the first three years of membership and thereafter with interest at 5% compounded annually. (Such election is in lieu of any other benefits under the Plan.)

17. Lump Sum Payments for Retired Annuitants, Disabilitants and Surviving Spouse Receiving Payments on November 30, 1977

Any of the above whose annuity or benefit was computed under laws in effect prior to July 1, 1973, shall receive an additional lump sum payment of \$250 payable December 1, 1977.

Persons receiving benefits from the Minnesota Adjustable Fixed Benefit Fund or the Retirement Fund shall receive the lump sum payment from the same fund.

18. Optional Benefits

A participant may elect to receive an equivalent actuarially reduced annuity in the form of either a 50% or 100% joint and survivor annuity, or joint and survivor with option cancelled if member is pre-deceased by beneficiary.

19. Maximum Annuity

Effective March 23, 1982 the normal monthly retirement annuity or disability benefit may not exceed 100% of final monthly salary.

20. Expenses

Paid by Association from retirement fund.