State Employees' Retirement Association
of Minnesota

REPORT ON AN ACTUARIAL VALUATION

of the

STATE EMPLOYEES' RETIREMENT SYSTEM

As of December 31, 1958

A. A. Weinberg

Actuary

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RETIREMENT & PENSION PLANS
CERTIFIED PUBLIC ACCOUNTANT

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October 31, 1959

Board of Directors,
State Employees' Retirement
Association of Minnesota
201 State Office Building,
St. Paul, Minnesota.

Dear Sirs:

We are pleased to submit herewith our report on an actuarial survey of the operations of the State Employees' Retirement System as of December 31, 1958.

The results of this valuation disclose an improvement in the financial condition of the system. A decrease has occurred in the unfunded accrued liability equal to 6%. This improvement should continue under the revenue provisions for the system which became operative in the year 1957.

The financial impact of the 1959 amendments have not been evaluated for this report since the amendments became operative after the date of our present valuation. Effect to these changes will be given in the next actuarial survey. It is not anticipated, however, that there will be any substantial changes in the financial condition of the system as a result of these amendments. We have noted with much satisfaction that the 2% rate of contribution for accrued liability purposes has been made permanent. This development should bring about continued progress in the building up of the reserves of the system and the strengthening of its financial condition.

Respectfully submitted,

A. A. Weinberg
Actuary

REPORT ON AN ACTUARIAL VALUATION OF THE STATE EMPLOYEES' RETIREMENT SYSTEM OF MINNESOTA

This report presents the results of an actuarial valuation of the assets of the State Employees' Retirement System of Minnesota as of December 31, 1958.

The benefit and contribution provisions of the plan of operation which formed the basis of this valuation are summarized in the appendix.

The valuation was made according to the 1937 Standard Annuity Mortality Table and 3% interest, rated back 5 years for female lives.

	Membership	
	Male	Female
Active members		
Number of members	15,590	11,479
Proportion of total	57.6%	42.4%
Annual salaries	$58,616,832.00	$29,911,540.00
Average age	42.3	38.6
Average membership service	7.1	4.6

	Membership	
	Male	Female
Inactive members - Terminated service		
Number of members	6,176	2,224
Proportion of total	73.5%	26.5%
Accumulated contributions	$642,198.77	$297,996.73
Average age	35.0	35.6
Average service	1.9	1.2
Inactive members - Service not terminated		
Number of members	153	27
Proportion of total	85.0%	15.0%
Accumulated contributions	$101,640.94	$11,963.01
Average age	35.0	42.3
Average service	1.0	0.9
Pensioners		
Service retirement -		
Number	1,311 ~~1,277~~	645 ~~644~~
Annual payments	$1,555,698.21	$629,377.89
Average age	71.6	70.4
Deferred -		
Number	11	6
Annual payments	$3,456.48	$1,471.44
Average age	56.2	54.5

Pensioners - continued	Membership Male	Membership Female
Disability -		
Number	27	9
Annual payments	$26,620.20	$7,521.84
Average age	62.4	63.7
Reversionary - (annuitants)		
Number	--	13
Annual payments	--	$11,552.40
Average age	--	66.2
Reversionary - (active members)		
Number	--	8
Annual payments	--	$9,134.64
Average age	--	50.6
Optional -		
Number	32	3
Annual payments	$29,846.40	$1,001.28
Average age	68.8	64.7
Survivors - (Adults)		
Number	1	36
Annual payments	$780.00	$31,811.28
Average age	72.0	56.1

Pensioners - continued	Membership	
Survivors - (children)	Male	Female
Number	9	15
Annual payments	$5,820.00	$9,300.00
Average age	15.0	12.8

Legislation

At the 1959 regular session of the Legislature, a number of amendments were made affecting the State Employees' Retirement System which were embodied in four bills. These amendments may briefly be described as follows:

1. Provision was made for a contingent death benefit to be paid upon death of an annuitant under the conditions prescribed in the amendment. This benefit would consist of the excess, if any, of the member's accumulated contributions at date of retirement over the total annuity payments made by the system.

2. Restoration of the provision omitted in 1957, that employees granted a leave of absence for employment by a political subdivision of the State are required to make contributions to the system during such leave. Each political subdivision concerned in such employment must make the employer's contributions for the period thereof.

3. Restoration of the provision deleted in 1957, that

former members who retired on annuity prior to July 1, 1949 are to receive a service allowance equal to $5.00 per year for each full year of allowable service.

4. A number of administrative and clarifying changes have been made affecting membership provisions, annuity computations, applications for service retirement and disability retirement, refundment provisions and certain service credits.

5. The employer's contribution for the amortization of the accrued liability for previous service was fixed at 2% of salaries limited to salaries of $4,800 per year.

6. The provisions governing disability benefits were revised to provide $50.00 per month until a member becomes eligible for the social security primary insurance benefit or disability insurance benefit. A limitation of 50% of salary on the total disability benefit is provided.

Effect to these amendments will be given in our valuation of the system for the year 1959.

Purpose of valuation

An annual actuarial valuation is undertaken for the purpose of establishing the true liabilities of a retirement system under the applicable benefit provisions. It is also intended to determine whether or not the financial provisions are adequate to meet the accruing benefit obligations.

Such a valuation also serves as a means of detecting any unfavorable trends or developments in the operation of the system of a substantial nature that may require correction.

Results of valuation

The valuation as of December 31, 1958 discloses that the system is operating satisfactorily and in accord with assumed standards. No substantive changes in financial provisions are required.

A decrease has occurred in the unfunded accrued liability amounting to $1,599,375.51, which is equal to 6% of the total of such liability. Under the revenue provisions in effect, this trend should continue. It might conceivably become accelerated if no major changes occur in the benefit schedule and if the basic assumptions made a year ago in an evaluation of the system's operating experience are confirmed by future operations.

Valuation balance sheet

The accompanying Valuation Balance Sheet reflects the actuary's appraisal of the financial condition of the system. It sets forth all accrued and prospective liabilities under the existing plan of operation, and all present and prospective assets.

Actuarial liabilities are fixed liabilities and are not contingent or speculative. They constitute actual obligations actuarially computed. The application of actuarial science in the computation of these obligations reflects the accrual principle which governs standard accounting procedures. An actuarial liability is in essence an accrued liability involving interest, mortality and other operating factors.

A retirement system is considered to be actuarially sound when its assets on hand are equal to the difference between (1) the total of all accrued and prospective liabilities, and (2) the present value of contributions to be made to the system subsequent to the date of valuation.

The current valuation discloses that the system still has an unfunded liability of $25,127,799.00. This actuarial reserve deficiency or actuarial deficit as it is commonly referred to came about principally as the result of inadequate financing in prior years. This situation has now been corrected and a gradual amortization of this deficit should occur under the more realistic financial policy now in effect.

VALUATION BALANCE SHEET - DECEMBER 31, 1958

A S S E T S

PRESENT ASSETS

Net present assets	$44,250,440.00	
Less, releases of member contributions on account of separation prior to retirement	11,139,177.00	$33,111,263.00

DEFERRED ASSETS

Obligation of members and the State of Minnesota for retirement and disability annuities covering service of the members for the remainder of their working lifetime after December 31, 1958		
Members -		
Male	$ 6,447,355.00	
Female	3,655,371.00	
State of Minnesota	13,383,846.00	23,486,572.00

UNFUNDED ACCRUED LIABILITY

Deferred obligation of the State of Minnesota for unfunded accrued liabilities on account of retirement and disability annuities covering service prior to January 1, 1959		25,127,799.00
TOTAL		$81,725,634.00

VALUATION BALANCE SHEET - DECEMBER 31, 1958

L I A B I L I T I E S

ACCRUED LIABILITIES

Present value of annuities entered upon and in force -		
Retirement annuities	$ 2,852,750.00	
Superannuation	906,601.00	
Proportional	614,269.00	
Partial	89,908.00	
Full Retirement Allowance	17,201,342.00	
Revised Retirement Allowance	474,497.00	
Disability	443,270.00	
Reversionary	283,092.00	
Optional Annuities	403,483.00	
Widows' & Children's Benefits	587,649.00	$23,856,861.00
Deferred Annuities		41,528.00
Present value of prospective reversionary annuities		104,513.00
Present value of retirement and disability annuities on active members covering service prior to July 1, 1929		
Male	$ 1,690,973.00	
Female	475,683.00	2,166,656.00
Present value of retirement and disability annuities on active members covering service July 1, 1929 to December 31, 1958		
Male	$21,273,450.00	
Female	10,796,054.00	32,069,504.00

PROSPECTIVE LIABILITIES

Present value of retirement and disabiliy annuities on active members covering service after December 31, 1958		
Male	$13,134,411.00	
Female	10,352,161.00	23,486,572.00
TOTAL		$81,725,634.00

Concluding comment

Because of its technical character, it is suggested that the Valuation Balance Sheet should not be reproduced as a part of the annual statement to the members. Instead, we have prepared a statement for publication purposes which sets forth similar information to that embodied in this report but in a narrative and more simple form.

During recent years, the Board of Trustees and the administrator of the system have had to cope with a great many problems, both organic and functional. Numerous decisions were required of a broad policy character. The several major problems affecting the retirement plan have been satisfactorily resolved and a schedule of benefits, coordinated with social security, has been established which compares favorably with that in effect for other State government employees, with one important exception. This exception relates to the continued maintenance of an arbitrary salary ceiling which is discriminatory and inequitable and should be eliminated.

The administration of the system has attained a high state of efficiency. The standards in effect are in accord with established concepts governing effective administration of a retirement system for public employees.

Respectfully submitted,

A. A. Weinberg
Actuary

A P P E N D I X

Summary of Benefit and Contribution Provisions

Statistical Tables

SUMMARY OF BENEFIT AND CONTRIBUTION PROVISIONS

(In force December 31, 1958)

SERVICE RETIREMENT

Conditions for retirement

Retirement is optional with a member beginning upon attainment of age 58, with at least 20 years of credited service, of which at least 10 years were as a member of the Association.

Retirement is optional with a member beginning upon attainment of age 65, with at least 10 years of credited service as a member of the Association.

Retirement is compulsory upon attainment of age 70.

Amount of service retirement annuity

The amount of retirement annuity is equal to the following percentage rates for the respective periods of allowable service, based upon "average salary" as defined below:

(a) 1st 10 years - 5/8 of 1% per year of such service
(b) 2nd 10 years - 7/8 of 1% per year of such service
(c) 3rd 10 years - 1-2/3 of 1% per year of such service
(d) Over 30 years- 1-3/4 of 1% per year of such service

Average salary defined

Average salary for service prior to July 1, 1957 is the average of the highest salary upon which salary deductions were based for any 5 consecutive years prior to such date.

Average salary for service after June 30, 1957 is the average salary for such entire period of service on which salary deductions were based not exceeding in any one year $4,800.00.

Retirement before age 65

Upon retirement prior to age 65, the retirement annuity is to be the actuarial equivalent, at the age of retirement, of the value of the annuity at age 65.

Any member who retires before he becomes entitled to old age and survivors primary insurance benefit payments may elect to receive from the system a retirement benefit greater than his normal retirement annuity, from the date of retirement to the date when he becomes entitled to social security benefits, and a smaller amount thereafter. This annuity shall be actuarially equated and the calculation thereof shall take into account the anticipated social security primary insurance benefit.

Options

Any member may elect to receive the full service retirement annuity, or in lieu thereof, any of the following optional forms of annuity, on an actuarial equivalent basis:

Option 1 - 5 years certain and life

Option 2 - 10 years certain and life

Option 3 - 15 years certain and life

Option 4 - 20 years certain and life

Option 5 - Joint and last survivor annuity (same amount for member and beneficiary)

Option 6 - Joint and last survivor annuity (1/2 of the member's reduced annuity to beneficiary)

Vesting

Any member having at least 10 years of service, who withdraws from service prior to age 65, may elect to receive a refund of his accumulated salary deductions, or a deferred retirement annuity payable beginning at age 65.

DISABILITY RETIREMENT

Conditions for retirement

Upon total and permanent disability after at least 10 years of credited service if under age 50, or at age 50 or over regardless of length of service.

If service of the member had terminated at any time at least 5 of the required 10 years of allowable credited service must have been rendered since the member's latest reentry into State service.

Waiting period

Payments begin to accrue after 90 days from date of disability unless the member is receiving salary for sick leave or other cause for more than 90 days, in which event benefit payments accrue from the date salary has ceased.

If written application has not been filed within 90 days from date of disability, payments begin as of the date 30 days prior to the date of application, provided that if the member received salary during said 30-day period, payments accrue from the date of cessation of salary.

Amount of benefit

The disability benefit is equal to $90.00 per month until the member attains age 50. Thereafter, he shall receive the amount prescribed for service retirement without actuarial discount, plus social security.

Offset

The benefit is likewise subject to reduction by any amounts received or receivable by the member from the State under applicable workmen's compensation laws.

DEATH BENEFITS

Death before retirement

Upon death before retirement, the designated beneficiaries of the member or his legal representative, as the case may be, is entitled to a refund of his accumulated contributions, plus interest credits.

Except as to an option selected by a member as herein provided, no survivors benefits are payable to a surviving spouse or dependent children. These are provided by federal social security.

Death after retirement

Upon death after retirement, the death benefit consists of such amount as is payable under the optional form of annuity selected by the member at the time of or prior to retirement.

REFUNDMENTS

Conditions for payment

Termination of service as an employee from all positions in the State service.

Amount of payment

The refundment is equal to the amount of the accumulated deductions, without interest.

Repayment of refundments

Upon re-entry into service, and the completion of 5 years of credited service, a member may repay all refundments plus interest at 4% per annum compounded annually.

FINANCING

Members' deposits

Members contribute by way of salary deductions, 3% of salary not exceeding salary of $4,800.00 per year.

Employer's contributions

The employer is required to contribute an amount equal to the total deductions from the members' salaries, plus an additional amount on salaries not to exceed a salary of $4,800.00 in any calendar year, equal to the following percentages for the years specified:

Years 1957 to 1959	inclusive	- 2%
" 1960 to 1964	"	- 1-1/2%
" 1965 to 1969	"	- 1%
" 1970 to 1974	"	- 1/2 of 1%
" 1975 & over		- None

Savings provision

Any person who on July 1, 1957 had 10 or more years of allowable service as a member, and who at the date of retirement does not qualify for old age and survivors primary insurance benefits, shall have the option of receiving the annuity as described herein or the annuity provided under the superseded law, namely, Section 352.11 of the Minnesota Statutes of 1953, as amended by Chapter 239, laws of 1955.

Any person who on July 1, 1957 had 10 or more years of allowable service as a member shall receive at retirement, in addition to the annuity herein described, an amount which when added to his old age and survivors insurance primary benefit is equal to the annuity he would have received under the statutes referred to in the preceding paragraph.

Upon death of an annuitant who retired prior to July 1, 1957, the beneficiary or estate of the annuitant shall be entitled to the benefit payable under the law in force at the date of the annuitant's retirement, under the conditions therein prescribed.

Any person whose services terminated prior to July 1, 1957, having a contribution credit in the system, shall be entitled to the rights and benefits prescribed by the law in effect at the date of termination of service as a State employee.

TABLE 1

Number of Active Members Classified by Age at December 31, 1958 and Annual Salaries

MALE

Age	Number	Annual Salaries	Membership Service Credit	Age	Number	Annual Salaries	Membership Service Credit
15	2	$ 1,123	1	50	325	$ 1,462,321	3,357
16	8	3,435	4	51	307	1,284,736	3,060
17	40	22,412	32	52	373	1,606,945	4,117
18	136	111,161	131	53	321	1,324,660	3,224
19	248	375,566	258	54	332	1,381,349	3,713
20	319	578,353	481	55	316	1,320,390	3,693
21	342	691,583	554	56	319	1,300,006	3,797
22	347	714,798	564	57	310	1,321,705	3,544
23	359	858,549	636	58	331	1,394,309	4,233
24	349	946,254	717	59	291	1,292,306	4,042
25	322	916,775	694	60	282	1,199,534	3,529
26	364	1,074,011	729	61	296	1,302,420	3,975
27	371	1,186,690	844	62	273	1,210,613	3,932
28	357	1,203,066	1,001	63	288	1,139,449	3,660
29	346	1,291,612	1,134	64	276	1,115,944	3,575
30	318	1,213,685	1,102	65	220	956,464	3,099
31	288	1,119,648	1,167	66	172	696,319	2,311
32	319	1,342,858	1,306	67	126	500,530	1,740
33	330	1,348,364	1,255	68	109	431,500	410
34	335	1,437,906	1,674	69	82	337,800	1,169
35	298	1,289,399	1,555	70	67	218,073	635
36	300	1,253,142	1,376	71	41	163,112	596
37	302	1,243,094	1,543	72	28	107,754	370
38	322	1,390,532	1,955	73	14	43,200	137
39	290	1,269,270	1,792	74	14	55,598	121
40	318	1,310,617	1,981	75	7	30,339	69
41	313	1,311,302	1,961	76	7	32,694	59
42	291	1,197,760	1,591	77	4	16,552	30
43	273	1,094,184	1,673	78	9	35,426	54
44	280	1,169,101	1,936	79	3	20,593	72
45	278	1,102,059	1,894	80	1	1,430	1
46	303	1,265,816	2,272	82	2	3,088	2
47	296	1,241,266	2,424	85	1	139	9
48	313	1,346,488	2,739	No age	47	27,652	32
49	319	1,360,003	3,195				
				TOTALS	15,590	$57,616,832	110,538

TABLE 2

Number of Active Members Classified by Age
at December 31, 1958 and Annual Salaries

F E M A L E

Age	Number	Annual Salaries	Membership Service Credit
16	3	$ 834	2
17	38	22,594	22
18	392	360,607	239
19	548	1,034,331	614
20	496	952,521	693
21	441	829,434	649
22	493	1,016,296	755
23	420	938,054	604
24	336	822,142	572
25	292	686,221	472
26	223	533,668	512
27	219	557,266	388
28	183	466,623	401
29	173	426,131	410
30	173	423,385	397
31	153	407,757	431
32	153	428,155	429
33	133	386,718	404
34	158	438,248	423
35	124	302,328	351
36	146	396,424	515
37	188	534,070	673
38	196	533,047	885
39	165	438,817	617
40	192	523,262	645
41	204	556,045	817
42	175	487,064	806
43	196	582,341	980
44	228	623,951	1,096
45	215	664,236	1,346
46	249	758,928	1,410
47	223	642,461	1,115
48	252	744,093	1,519
49	251	735,009	1,535

Age	Number	Annual Salaries	Membership Service Credit
50	249	$ 748,882	1,710
51	251	799,408	1,951
52	287	862,114	1,895
53	223	672,982	1,708
54	236	725,780	1,694
55	239	736,540	1,763
56	231	677,178	1,786
57	218	688,037	1,873
58	196	620,509	1,706
59	185	607,776	1,740
60	176	539,659	1,664
61	138	469,318	1,426
62	142	446,261	1,294
63	155	505,993	1,626
64	106	330,831	1,256
65	85	273,103	1,089
66	105	327,802	1,246
67	68	212,444	674
68	46	141,766	473
69	31	110,417	452
70	22	69,244	235
71	13	36,671	138
72	10	26,484	141
73	4	9,957	39
74	1	1,540	1
75	2	1,538	10
77	2	5,061	25
No age	27	11,184	16
TOTALS	11,479	$29,911,540	52,558

TABLE 3

Deduced Salary Scale Based Upon Average Annual Salaries

MALE

Age	Average Annual Salary	Effective Annual Salary	Age	Average Annual Salary	Effective Annual Salary
15	$ 562	$4,650	45	$3,964	$4,549
16	429	3,550	46	4,178	4,362
17	560	4,650	47	4,193	4,367
18	817	4,650	48	4,302	4,469
19	1,514	4,650	49	4,263	4,418
20	1,813	4,650	50	4,499	4,650
21	2,022	4,650	51	4,185	4,510
22	2,060	4,254	52	4,308	4,432
23	2,392	4,481	53	4,127	4,236
24	2,711	4,650	54	4,161	4,262
25	2,847	4,876	55	4,178	4,270
26	2,719	5,047	56	4,075	4,155
27	3,199	5,463	57	4,264	4,339
28	3,370	5,744	58	4,212	4,276
29	3,733	4,650	59	4,441	4,499
30	3,817	4,560	60	4,239	4,285
31	3,888	4,463	61	4,400	4,438
32	4,210	4,650	62	4,434	4,463
33	4,086	4,470	63	3,956	3,973
34	4,292	4,650	64	4,043	4,052
35	4,327	4,650	65	4,348	4,348
36	4,177	4,475			
37	4,116	4,397			
38	4,318	4,600			
39	4,377	4,650			
40	4,121	4,367			
41	4,189	4,428			
42	4,116	4,340			
43	4,421	4,538			
44	4,175	4,432			

TABLE 4

Deduced Salary Scale Based Upon Average Annual Salaries

F E M A L E

Age	Average Annual Salary	Effective Annual Salary	Age	Average Annual Salary	Effective Annual Salary
16	$ 278	$3,485	45	$3,089	$3,485
17	595	3,485	46	3,048	3,421
18	920	3,485	47	2,881	3,217
19	1,887	3,485	48	2,953	3,281
			49	2,928	3,236
20	1,920	3,347			
21	1,881	3,105	50	3,008	3,308
22	2,061	3,231	51	3,185	3,485
23	2,233	3,333	52	3,004	3,264
24	2,447	3,485	53	3,018	3,257
			54	3,075	3,296
25	2,350	3,277			
26	2,393	3,269	55	3,082	3,282
27	2,544	3,407	56	2,932	3,101
28	2,550	3,350	57	3,156	3,316
29	2,463	3,174	58	3,166	3,305
			59	3,285	3,408
30	2,447	3,095			
31	2,665	3,310	60	3,066	3,161
32	2,798	3,413	61	3,401	3,485
33	2,908	3,485	62	3,143	3,201
34	2,774	3,307	63	3,264	3,304
			64	3,121	3,140
35	2,438	2,892			
36	2,715	3,204	65	3,213	3,213
37	2,841	3,336			
38	2,720	3,178			
39	2,660	3,092			
40	2,725	3,152			
41	2,726	3,137			
42	2,783	3,187			
43	2,971	3,386			
44	2,737	3,104			

TABLE 5

Superannuation Retirements Classified by Age

	MALE		FEMALE	
Age	Number	Annual Payments	Number	Annual Payments
66	1	$ 1,200.00	--	$ --
70	1	1,200.00	--	--
71	1	1,200.00	--	--
72	2	2,346.72	--	--
73	3	3,199.92	--	--
74	3	2,690.64	2	1,847.28
75	3	2,347.80	4	3,444.84
76	7	6,030.96	--	--
77	4	3,786.96	4	2,777.28
78	7	6,109.08	6	4,101.96
79	13	10,672.68	2	2,167.68
80	10	9,675.60	5	4,191.60
81	12	9,652.92	7	4,667.28
82	11	10,072.80	5	2,030.88
83	5	4,718.40	5	4,281.36
84	6	4,540.20	4	1,630.80
85	5	3,770.40	1	600.00
86	3	3,352.44	1	1,200.00
87	7	5,365.56	1	717.84
88	--	--	3	2,045.64
89	2	1,830.00	--	--
90	5	4,011.00	--	--
91	3	2,869.92	--	--
92	1	879.84	1	329.04
94	2	857.40	--	--
96	1	881.52	--	--
99	--	--	1	837.00
TOTALS	118	$103,262.76	52	$36,870.48

TABLE 6

Proportional Annuity Retirements
Classified by Age

	MALE		FEMALE	
Age	Number	Annual Payments	Number	Annual Payments
55	--	$ --	1	$ 342.24
56	1	969.96	--	--
57	1	635.64	1	664.44
59	3	2,278.92	--	--
60	1	542.28	--	--
61	-	--	1	425.88
62	1	397.44	--	--
64	1	913.68	--	--
65	5	2,660.40	--	--
66	6	3,437.76	1	250.32
67	7	4,482.84	2	673.68
68	5	3,069.96	3	2,029.56
69	3	1,695.72	2	1,166.64
70	1	713.40	1	816.84
71	2	2,195.88	3	2,652.12
72	3	2,477.76	1	914.64
73	1	970.68	4	2,259.48
74	2	2,048.16	--	--
75	1	872.40	3	1,067.88
76	1	632.76	1	383.04
77	2	1,119.72	1	358.20
78	5	3,024.96	2	1,688.04
79	2	936.96	--	--
80	1	807.84	3	1,806.48
81	2	1,700.64	2	1,118.52
82	3	1,729.44	2	1,234.80
83	4	2,545.68	--	--
86	1	452.40	--	--
87	1	598.44	--	--
88	--	--	2	744.72
92	--	--	1	612.48
TOTALS	66	$43,911.72	37	$21,210.00

TABLE 7

Partial Annuity Retirements
Classified by Age

	MALE		FEMALE	
Age	Number	Annual Payments	Number	Annual Payments
68	1	$ 461.40	1	$ 347.28
69	1	200.28	--	--
71	--	--	1	319.08
73	2	627.72	--	--
74	2	332.16	2	436.56
75	1	462.96	--	--
76	1	186.12	1	78.48
77	5	1,502.88	--	--
78	--	--	2	372.84
79	2	562.08	4	863.88
80	2	492.36	3	794.52
81	1	261.72	1	97.56
82	2	798.72	1	295.32
83	5	1,240.92	--	--
84	4	978.84	--	--
85	1	351.72	--	--
86	1	103.20	--	--
88	1	196.68	--	--
TOTALS	32	$8,579.76	16	$3,605.52

TABLE 8

Retirement Allowances Classified by Age

	MALE		FEMALE	
Age	Number	Annual Payments	Number	Annual Payments
59	13	$ 21,786.84	6	$ 8,364.96
60	14	27,249.60	6	7,397.16
61	16	28,791.84	4	7,608.00
62	25	43,682.64	10	17,177.16
63	17	24,548.88	15	21,774.24
64	17	29,397.00	10	14,842.68
65	34	57,591.36	19	26,410.08
66	41	56,283.12	26	35,453.52
67	57	91,426.20	28	25,878.84
68	54	76,947.60	25	29,206.56
69	57	83,122.56	31	33,453.09
70	66	85,995.93	31	34,578.12
71	82	108,576.72	40	39,234.12
72	78	101,645.64	49	45,532.08
73	83	94,471.44	41	41,269.44
74	57	61,938.60	33	34,956.72
75	65	73,158.96	19	19,166.76
76	47	55,345.44	16	13,069.68
77	26	24,302.04	18	12,432.96
78	35	35,328.96	13	6,938.88
79	17	16,706.52	3	2,393.40
80	9	9,679.68	3	2,284.20
81	4	4,129.44	2	3,251.52
82	3	2,675.40	3	3,524.88
83	2	1,656.60	--	---
84	1	1,556.76	--	---
85	1	689.40	--	---
86	1	1,069.32	--	---
91	1	551.28	1	812.88
TOTALS	923	$1,220,305.77	452	$487,011.93

TABLE 9

Disability Annuities Classified by Age

Age	MALE Number	MALE Annual Payments	FEMALE Number	FEMALE Annual Payments
47	--	$	1	$ 996.00
53	1	1,500.00	--	---
54	--	---	1	914.88
55	2	2,270.52	1	1,150.92
57	1	1,280.04	--	---
59	3	2,297.76	--	---
60	1	826.92	1	1,362.36
61	2	1,955.16	1	1,009.68
62	4	4,865.04	--	---
63	4	3,960.12	--	---
64	3	2,650.32	1	848.88
66	2	2,125.56	1	553.08
67	--	---	1	513.60
68	2	1,560.24	--	---
70	1	802.44	--	---
76	1	526.08	--	---
99	--	---	1	172.44
TOTALS	27	$26,620.20	9	$7,521.84

TABLE 10

Reversionary Annuities in Force
Classified by Age

Retired Members

FEMALE

Age	Number	Annual Payments
54	1	$ 1,144.20
57	1	1,162.44
59	1	824.28
62	2	1,007.40
64	1	1,018.32
67	3	2,382.24
74	1	913.80
75	2	2,527.08
77	1	572.64
TOTALS	13	$11,552.40

Active Members

FEMALE

Age	Number	Annual Payments
59	1	$ 814.92
60	1	1,243.68
61	1	1,021.20
63	3	4,334.28
66	1	926.04
70	1	794.52
TOTALS	8	$9,134.64

TABLE 11

Retirement Annuities in Force

	MALE		FEMALE	
Age	Number	Annual Payments	Number	Annual Payments
58	4	$ 8,397.84	--	$ ---
60	3	6,546.84	1	2,400.00
61	3	3,772.68	5	7,762.20
62	--	---	1	325.68
63	4	7,261.68	1	491.40
64	3	8,012.16	3	5,112.60
65	19	18,184.92	6	5,481.48
66	16	18,843.36	13	14,080.68
67	13	13,975.56	7	9,749.16
68	11	12,012.12	11	7,594.44
69	14	20,192.28	17	10,556.64
70	16	16,358.16	10	7,674.12
71	18	29,821.92	7	5,547.60
72	3	1,319.40	1	277.44
73	3	1,772.40	1	2,709.60
74	2	3,458.16	1	244.20
75	1	841.44	1	181.80
76	1	713.40	--	---
78	--	---	1	490.92
80	1	1,770.00	--	---
81	2	5,310.48	--	---
82	1	1,073.40	--	---
TOTALS	138	$179,638.20	87	$80,679.96

TABLE 12

Survivor Benefits in Force

	MALE			FEMALE	
Age	Number	Annual Payment	Age	Number	Annual Payments
72	1	$780.00	32	1	$ 780.00
			41	1	780.00
			42	1	780.00
			43	1	780.00
			44	1	780.00
			46	1	780.00
			48	3	2,340.00
			49	2	1,560.00
			51	1	780.00
			52	1	780.00
			53	1	780.00
			54	2	1,560.00
			55	1	780.00
			56	2	1,560.00
			57	3	2,340.00
			62	1	780.00
			63	2	2,580.00
			64	2	1,560.00
			65	2	2,580.00
			66	2	1,560.00
			67	1	780.00
			69	2	1,853.76
			71	1	1,667.64
			73	1	1,289.88
			TOTALS	36	$31,811.28

TABLE 12 - continued

Survivor Benefits in Force

MALE CHILDREN

Age	Number	Annual Payments
13	1	$ 540.00
14	2	1,560.00
15	3	2,100.00
16	1	540.00
17	2	1,080.00
TOTALS	9	$ 5,820.00

FEMALE CHILDREN

Age	Number	Annual Payments
6	1	$ 780.00
8	1	540.00
9	1	780.00
10	1	780.00
12	1	540.00
13	1	780.00
14	5	2,940.00
15	1	540.00
16	2	1,080.00
17	1	540.00
TOTALS	15	$9,300.00

TABLE 13

Deferred Annuities

MALE			FEMALE		
Age	Number	Annual Payments	Age	Number	Annual Payments
47	1	$ 348.12	48	2	$ 374.16
50	2	526.80	54	1	342.36
52	1	337.68	56	1	283.56
54	1	221.88	57	1	303.72
56	1	189.60	64	1	167.64
57	1	209.88	TOTALS	6	$1,471.44
60	1	266.04			
61	1	385.32			
64	1	331.92			
67	1	639.24			
TOTALS	11	$3,456.48			

TABLE 14

Optional Annuities in Force

Option 1

	MALE			FEMALE	
Age	Number	Annual Payments	Age	Number	Annual Payments
67	1	$1,173.48	65	1	$ 459.96
70	1	566.88	69	1	233.40
81	1	643.56	TOTALS	2	$ 693.36
TOTALS	3	$2,383.92			

Option 2

	MALE	
Age	Number	Annual Payments
62	1	$2,030.04
65	3	2,048.52
68	2	548.88
70	2	786.00
71	1	927.12
72	1	693.96
TOTALS	10	$7,034.52

Option 3 - MALE

69	1	$2,312.40

Option 5 - FEMALE

60	1	$ 307.92

TABLE 15

Joint and Last Survivor Annuities

MALE

Option 5

Ages Member	Ages Benef.	Reduced Retirement Annuity	Reversionary Annuity
64	64	$ 828.36	$ 828.36
65	59	2,015.16	2,015.16
67	56	326.52	326.52
68	62	372.48	372.48
69	63	532.80	532.80
70	76	340.44	340.44
71	66	190.68	190.68
		$4,606.44	$4,606.44

OPtion 6

Ages Member	Ages Benef.	Reduced Retirement Annuity	Reversionary Annuity
65	64	$ 1,359.24	$ 679.68
66	66	4,085.40	2,042.76
67	63	751.92	375.96
67	65	616.32	308.16
68	63	818.76	409.44
68	73	883.32	441.72
69	61	354.48	177.24
70	66	2,139.12	1,069.56
70	69	568.08	284.04
71	64	1,510.20	755.16
74	72	422.28	211.20
		$13,509.12	$6,754.92