ACTUARIAL VALUATION REPORT as of December 31, 1980

LECISLATIVE THESE THE HERARY STATE OF MINELSOTA

LB 2842.2 .S34a× 1980

Pursuant to Mn Stat 356.215

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COMPENSATION & CAPITAL

49 SHERWOOD TERRACE

LAKE BLUFF, ILLINOIS 60044

TELEPHONE 312 234-9050

April 17, 1980

Board of Trustees St. Paul Teachers' Retirement Fund Association 555 Wabasha Street, Room 303 St. Paul, Minnesota 55102

Gentlemen:

In accordance with your request, we have made an actuarial valuation of the St. Paul Teachers' Retirement Fund Association for the year ended December 31, 1980, 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 herein, we hereby certify that, to the best of our knowledge and belief, the attached statements are true and correct.

Respectfully submitted

Fellow, Society of Actuaries Enrolled Actuary No. 174

DHR:kc

Philadelphia

COMMENTS

This report sets forth the information of the Teachers' Retirement Fund Association of the City of St. Paul, Minnesota required by law for the legislature based on the annual actuarial valuation.

These figures have been prepared in accordance with the requirements of the law under the supervision of an approved actuary. Included in these requirements are the use of the Entry Age Normal Cost Method, anticipated salary increases of 3-1/2% per year, and an assumed interest of 5% per year.

The actuarial valuation measures all aspects of the St. Paul Teachers' Fund in accordance with the plan described in the section of the report titled "Summary of the Plan".

Exhibits 5, 9 and 13 show the present value of benefits for past and future service of active members, and current benefits being received by retirees (and beneficiaries).

Exhibits 6, 10 and 14 also indicate an amount of Unfunded Accumulated Contribution Requirement of \$122,142,267. This amount represents an increase of \$6,177,242. The primary reasons for the increase are estimated in Exhibits 8, 12 and 16.

Exhibits 6, 10 and 14 restate the dollar amount of obligation in Exhibits 5, 9 and 13, respectively, as percentages based on current payroll of active members. The resulting percentage total rate requirement may then be compared with the statutory contribution rate to ascertain the actuarial balance of the Fund.

The state appropriation levy of 11.2915% is well short of the actuarial requirement of 18.5892% (Exhibit 6). This short fall of roughly \$4.2 million in the current year continues to erode the financial strength of the Plan. The Coordinated program also shows a small deficit so that the shift between the Basic and Coordinated systems, as time goes on, will not cure the shortfall. The principal effect of the substitution of the Coordinated for the Basic program will be to highlight the financial strain on the Association to meet the peaking benefit payments over the next two decades and to emphasize the need for more adequate financing.

FINANCIAL EXHIBITS

FINANCIAL BALANCE SHEET (December 31, 1980)

A S S E T S

Cash		\$	7,496.84
Receivables Interest Dividends Employer Contribution Prepaid Principal Stock Sale	\$1,058,218.04 94,108.78 644,152.89 57,822.10 32,850.00	1,	887,151.81
Short-Term Notes, at Discounted Value		17,8	361,248.55
Bonds, at Amortized Cost		43,1	18,230.11
Stocks, at Cost		25,3	327,005.91
Deferred Yield Adjustment Ad	ccount	3,1	17,294.91
Equipment Less Depreciation			6,103.29
Administrative Expenses Paya	able		(7,348.66)
TOTAL ASSETS		<u>\$91,3</u>	317,182.76
Members Accumulated Contribution (without interest)	utions	\$33,6	87,530.84
Administration Expenses 1980	0 - \$190,398.57		

SOURCES AND USES OF FUNDS

SOURCES

Cash Balance January 1, 1980		\$ 8,738.89
Income from Employer Contribution: State of Minnesota-Basic -Coordinated Federal Programs -Basic	\$5,854,894.38 362,076.65 396,248.90	
-Coordinated	49,847.31	6,663,067.24
Income from Members: Payroll Deductions-Basic -Coordinated	\$3,949,429.78 420,570.56	
Prior Service Return of Refunds	29,903.56 16,606.47	4,416,510.37
Income from Investments: Interest Dividends	\$6,300,437.99 1,035,914.20	
Miscellaneous	536.55	7,336,888.74
Investments Sold		241,905,364.76
Total		\$260,330,570.00
USE	S	
Pension Paid: Retirements Survivor Family Disability	\$5,958,797.78 239,173.51 96,896.28 328,935.98	\$ 6,623,803.55
Refunds of Dues		555,534.14
Administrative Expenses: Actuarial, Auditing, Legal Data Processing Delegate Expense Investment Services Office Equipment Office Expense Salaries Taxes, Insurance, Affiliate Dues Accounts Payable - Withheld Taxes	\$ 21,750.00 1,072.50 5,441.00 49,371.06 2,366.90 14,330.93 92,681.59 16,079.25 (6,498.66)	196.594.57
Refund - Dividend Received Not Due		6,875.00
Investments Purchased		252,940,265.91
Cash Balance - December 31, 1980		\$ 7,496.83
TOTAL		\$260,330,570.00

RECONCILIATION OF ASSET BALANCES (December 31, 1980)

Asset Balance - December 31, 1979	\$79,622,860.05
Additions:	
Employer Contributions \$6,687,084.89 Member Contributions 4,416,567.62 Investment Income 7,434,344.17 Net Gain on Sale of Stock 525,582.99	19,063,579.67
Sub-Total	\$98,686,439.72
Deductions:	
Benefit Payments \$6,623,324.25 Refunds 555,534.14 Administrative Expenses 190,398.57	7,369,256.96
Asset Balance, December 31, 1980	\$91,317,182.76

Asset Allocation (December 31, 1980)

		Basic Division		Coordinated Division	<u>Total</u>
Ass	et Balance, 12/31/79	\$78,803,834.39	\$	819,025.66	\$79,622,860.05
1.	Employer Contributions	\$ 6,273,676.11	\$	413,408.78	\$ 6,687,084.89
2.	Employee Contributions	3,994,404.24		422,163.38	4,416,567.62
3.	Benefits Paid	(6,621,929.79)		(1,394.46)	(6,623,324.25)
4.	Refunds	(417,028.75)		(138,505.39)	(555,534.14)
5.	Net (Items 1 to 4)	\$ 3,229,121.81	\$	695,672.31	\$ 3,924,794.12
6.	Investment Income	\$ 7,841,932.88	\$	117,994.28	\$ 7,959,927.16
7.	Administrative Expenses	(161,589.89)		(28,808.68)	(190,398.57)
8.	Net (Items 6 to 7)	\$ 7,680,342.99	\$	89,185.60	\$ 7,769,528.59
9.	Increase for Year	\$10,909,464.80	\$	784,857.91	\$11,694,322.71
Ass	et Balance 12/31/80	\$89,713,299.19	\$]	L,603,883.57	\$91,317,182.76

ACTUARIAL REQUIREMENTS - 5%

FINANCIAL BALANCE SHEET (December 31, 1980)

Present Value of Benefits Expected to be Paid by Retirement Fund

To Active Teachers for

Retirement	\$195,706,644
Disability	17,629,938
Survivorship	12,478,819
Refund	1,807,654

Total	\$227,623,055

To Teachers and Beneficiaries Now Receiving Benefits for

Retirement	\$ 53,935,642
Disability	2,537,700
Survivorship	3,102,639

Total		Ş	59,5/5,981

Total Value of Benefits	\$291,150,508
Less Value of Expected Future Contributions*	77,691,058
Accumulated Contribution Requirement Assuming Full Funding During Prior Service Period	\$213,459,450
Assets on Hand	91,317,183
Accumulated Contribution Requirement	

\$122,142,267

to be Amortized by 2009

As Determined by the Entry Age Normal Cost Method.

ACTUARIAL REQUIRMENTS (December 31, 1980)

TOTAL REQUIREMENTS

Expected Future Contributions on Behalf of Active Teachers	\$ 77,691,058	
Accumulated Contribution Assuming Full Funding During Prior Service Period	213,459,450	
Total - Value of All Benefits Payable to Present Members	\$291,150,508	
AMORTIZATION RATE REQUIRE	EMENT	
Accumulated Contribution Requirement Assets on Hand	\$213,459,450 91,317,183	
Amount to be Amortized	\$122,142,267	
Contribution Requirement for Amortization Period of 29 Years	\$ 8,066,949	
Current Payroll Amortization Rate Requirement	\$ 58,224,248	13.8550%
LEVEL CONTRIBUTION (ENTRY AGE NORMAL)	RATE REQUIREM	ENT
Expected Future Contributions on Behalf of Active Teachers	\$ 77,691,058	÷
Expected Future Payroll	\$656,674,800	
Total Entry Age Normal Rate Requirement Teacher Contribution Rate* Employer Entry Age Normal Rate Requirement	11.8310% 	4.4072%
ACTUARIAL BALANCE		
Employer Statutory Contribution Rate**		11.2915%
Rate Requirements Amortization Rate Requirement Entry Age Normal Rate Requirement Expenses Rate Requirement	13.8550% 4.4072 0.3270	
Total Rate Requirement		18.5892%
Deficit of Statutory Rate over Rate Requirement	nt	(7.2977%)

^{*} Weighted by Current Payroll 83.54% Basic and 16.46% Coordinated.

^{**} Rate established by Minnesota Statute, 12.63% Basic and 4.5% Coordinated weighted by Current Payroll.

STATEMENT OF REVENUE, EXPENDITURES, CHANGES IN UNFUNDED ACCUMULATED CONTRIBUTION REQUIREMENT (Year Ended December 31, 1980)

Revenue:

Employer Contributions	\$6,687,084.89	
Employee Contributions	4,416,567.62	
Net Investment Income	7,959,927.16	
Total Revenue		\$19,063,579.67
Expenditure:		
Benefits	6,623,324,25	
Refund of Dues	555,534.14	
Administrative Expense	190,398.57	
Total Expenditures		7,369,256.96
Increase in Assets (1980)		\$11,694,322.71
Increase in Accumulated Contrib	oution Requirement	17,871,565.00
Increase (Decrease) in Unfunded Contribution Requirement	d Accumulated	\$ 6,177,242.29

INCREASE (DECREASE) IN UNFUNDED REQUIREMENTS

Unfunded	December	31,	1979	\$1.	15,965,025
Unfunded	December	31,	1980	_12	22,142,267
Increase (Decrease)				\$	6,177,242

ALLOCATION OF INCREASE (DECREASE) IN UNFUNDED REQUIREMENT

Change in Average Earnings	\$ 7,812,460
Principal of Unfunded Anticipated in Total Rate Requirement \$(1,745,439)	
Deficiency in Total Rate Require- ment over Statutory Rate 3,882,026	
Increase Due to Amortization	2,136,587
Investment Income in excess of 5%: Loss (Gain)	(3,339,337)
Experience Variation: Loss (Gain)	 (432,428)
Total Increase (Decrease)	\$ 6,177,242

BASIC DIVISION

FINANCIAL BALANCE SHEET (December 31, 1980)

Present Value of Benefits Expected to be Paid by Retirement Fund

To Active Teachers for

Retirement	\$186,052,896
Disability	16,967,151
Survivorship	12,478,819
Refund	1,324,804

To Vested Teachers 574,225

To Teachers on Leave 2,950,016

To Former Teachers without
Vested Rights 172,620

To Teachers and Beneficiaries Now Receiving Benefits for

Retirement	\$ 53,904,541
Disability	2,537,700
Survivorship	3,102,639

1 7	•	E 0	.544	$\sim \sim \sim$
Total		- ¬u	5/1/1	××n
IULAI				

Total Value of Benefits	\$280,065,411
Less Value of Expected Future Contributions*	69,638,651
Accumulated Contribution Requirement Assuming Full Funding During Prior Service Period	\$210,426,760
Assets on Hand	89,713,299
Accumulated Contribution Requirement to be Amortized by 2009	\$120,713,461

^{*} As Determined by the Entry Age Normal Cost Method.

BASIC DIVISION

ACTUARIAL REQUIRMENTS (December 31, 1980)

TOTAL REQUIREMENTS

Expected Future Contributions on Behalf of Active Teachers	\$ 69,638,651	
Accumulated Contribution Assuming Full Funding During Prior Service Period	210,426,760	
Total - Value of All Benefits Payable to Present Members	\$280,065,411	
AMORTIZATION RATE REQUIREM	MENT	
Accumulated Contribution Requirement Assets on Hand	\$210,426,760 89,713,299	
Amount to be Amortized	\$120,713,461	
Contribution Requirement for Amortization Period of 29 Years	\$ 7,972,583	
Current Payroll Amortization Rate Requirement	\$ 48,638,608	16.3915%
LEVEL CONTRIBUTION (ENTRY AGE NORMAL)	RATE REQUIREME	NT
Expected Future Contributions on Behalf of Active Teachers	\$ 69,638,651	
Expected Future Payroll	\$554,083,400	
Total Entry Age Normal Rate Requirement Teacher Contribution Rate Employer Entry Age Normal Rate Requirement	12.5683% 8.0000	4.5683%
ACTUARIAL BALANCE		
Employer Statutory Contribution Rate*		12.6300%
Rate Requirements Amortization Rate Requirement Entry Age Normal Rate Requirement Expenses Rate Requirement	16.3915% 4.5683 0.3270	
Total Rate Requirement		21.2868%
Deficit of Statutory Rate over Rate Requirement	t	(8.6568%)

COMPENSATION & CAPITAL INCORPORATED

Rate established by Minnesota Statute.

St. Paul Teachers' Retirement Fund Association BASIC DIVISION

STATEMENT OF REVENUE, EXPENDITURES, CHANGES IN UNFUNDED ACCUMULATED CONTRIBUTION REQUIREMENT (Year Ended December 31, 1980)

Revenue:

	Employer Contributions	\$6,273,676.11	
	Employee Contributions	3,994,404.24	
	Net Investment Income	7,841,932.88	
	Total Revenue		\$18,110,013.23
Expen	diture:		
	Benefits	6,621,929.79	
	Refund of Dues	417,028.75	
	Administrative Expense	161,589.89	
	Total Expenditures		7,200,548.43
Incre	ase in Assets (1980)		\$10,909,464.80
Incre	ase in Accumulated Contribut	tion Requirement	17,093,411.00
	ase (Decrease) in Unfunded Atribution Requirement	Accumulated	\$ 6,183,946.20

St. Paul Teachers' Retirement Fund Association BASIC DIVISION

INCREASE (DECREASE) IN UNFUNDED REQUIREMENTS

Unfunded	December	31,	1979	\$1	14,529,515
Unfunded	December	31,	1980	_1	20,713,461
Increase (Decrease)				\$	6,183,946

ALLOCATION OF INCREASE (DECREASE) IN UNFUNDED REQUIREMENT

Change in Average Earnings	\$ 7,747,707
Principal of Unfunded Anticipated in Total Rate Requirement \$(1,723,833)	
Deficiency in Total Rate Requirement over Statutory Rate 3,848,742	
Increase Due to Amortization	2,124,909
Investment Income in excess of 5%: Loss (Gain)	(3,289,876)
Experience Variation: Loss (Gain)	 (398,794)
Total Increase (Decrease)	\$ 6,183,946

COORDINATED DIVISION

FINANCIAL BALANCE SHEET (December 31, 1980)

Present Value of Benefits Expected to be Paid by Retirement Fund

To Active Teachers for

Total

Retirement Disability	\$9,653,748 662,787	
Survivorship Refund	482,850	
Total		\$10,799,385
To Vested Teachers		95,633
To Teachers on Leave		67,035
To Former Teachers without Vested Rights	ıt	91,943
To Teachers and Beneficia Now Receiving Benefits fo		
Retirement Disability Survivorship	\$ 31,101	

Total Value of Benefits \$11,085,097

Less Value of Expected Future Contributions* 8,052,407

Accumulated Contribution Requirement
Assuming Full Funding During
Prior Service Period \$3,032,690

Assets on Hand 1,603,884

\$

31,101

to be Amortized by 2009

As Determined by the Entry Age Normal Cost Method.

Accumulated Contribution Requirement

\$ 1,428,806

COORDINATED DIVISION

ACTUARIAL REQUIRMENTS (December 31, 1980)

TOTAL REQUIREMENTS

Expected Future Contributions on Behalf of Active Teachers	\$	8,052,407	
Accumulated Contribution Assuming Full Funding During Prior Service Period		3,032,690	
Total - Value of All Benefits Payable to Present Members	\$	11,085,097	
AMORTIZATION RATE REQUIR	EME	ENT	
Accumulated Contribution Requirement Assets on Hand	\$	3,032,690 1,603,884	
Amount to be Amortized	\$	1,428,806	
Contribution Requirement for Amortization Period of 29 Years	\$	94,366	
Current Payroll Amortization Rate Requirement	\$	9,585,640	0.9845%
LEVEL CONTRIBUTION (ENTRY AGE NORMAL)	R	ATE REQUIRE	MENT
Expected Future Contributions on Behalf of Active Teachers	\$	8,052,407	
Expected Future Payroll	\$1	.02,591,400	
Total Entry Age Normal Rate Requirement Teacher Contribution Rate Employer Entry Age Normal Rate Requiremen	nt	7.8490% 4.5000	3.3490%
ACTUARIAL BALANCE			
Employer Statutory Contribution Rate*			4.5000%
Rate Requirements Amortization Rate Requirement Entry Age Normal Rate Requirement Expenses Rate Requirement		0.9845% 3.3490 0.3270	
Total Rate Requirement			4.6605%
Deficit of Statutory Rate over Rate Require	eme	nt	(0.1605%)

Rate established by Minnesota Statute.

St. Paul Teachers' Retirement Fund Association COORDINATED DIVISION

STATEMENT OF REVENUE, EXPENDITURES, CHANGES IN UNFUNDED ACCUMULATED CONTRIBUTION REQUIREMENT (Year Ended December 31, 1980)

\$413,408.78

Revenue:

Employer Contributions

Employee Contributions	422,163.38	
Net Investment Income	117,994.28	
Total Revenue		\$953,566.44
•		
Expenditure:		
Benefits	1,394.46	
Refund of Dues	138,505.39	
Administrative Expense	28,808.68	
Total Expenditures		168,708.53
Increase in Assets (1980)		\$784,857.91
Increase in Accumulated Cont	778,154.00	
Increase (Decrease) in Unfun Contribution Requirement	\$ (6,703.91)	

St. Paul Teachers' Retirement Fund Association COORDINATED DIVISION

INCREASE (DECREASE) IN UNFUNDED REQUIREMENTS

Unfunded	December 31, 1979	\$1,435,510
Unfunded	December 31, 1980	1,428,806
Increase (Decrease)		\$ (6,704)

ALLOCATION OF INCREASE (DECREASE) IN UNFUNDED REQUIREMENT

Change in Average Earnings	\$ 64,753
Principal of Unfunded Anticipated in Total Rate Requirement \$(21,606)	
Deficiency in Total Rate Requirement over Statutory Rate 33,284	
Increase Due to Amortization	11,678
Investment Income in excess of 5%: Loss (Gain)	(49,501)
Experience Variation: Loss (Gain)	 (33,634)
Total Increase (Decrease)	\$ (6,704)

EMPLOYEE STATISTICS

RECONCILIATION OF MEMBERS

ACTIVE

Active (Including 179 on Leave) December 31, 1979		2,840
Additions: New Apointments 1980 Reappointments	150 19	169
Total		3,009
Separations: Retirements Deaths Terminations	47 5 <u>115</u>	167
Active (Including 168 On Leave) December 31, 1980		2,842
Substitutes and Part-Time currently work:	ing	510
Inactive Members		45
RETIRED		
Retired Members December 31, 1979		874
Additions During 1980: Retirement Disability	43 4	47
Total		921
Separations - Deaths		41
Retired Members December 31, 1980		880
Beneficiaries: Reversionary Survivor Children	13 46 24	
Total	<u>83</u>	

BASIC DIVISION

RETIRED ON SERVICE PENSION

		MALE	F	EMALE
		ANNUAL		ANNUAL
AGE	NUMBER	PENSION	NUMBER	PENSION
11011	HOHDER	12001011	HOLLBER	TENDION
55	1	\$ 9,401	_	_
56	-	, , 40±	1	14,207
57	_	22 672	2	15,241
	4	33,673	2	
58	4	58,733	2	14,962
59	1	13,813	2	15,736
60	12	168,351	4	44,569
61	7	94,168	8	98,909
62	7	112,224	5	68 , 985
63	6	92 , 975	6	53 , 778
64	12	157,239	13	122,171
65	10	125,542	19	138,716
66	7	93,105	19	169,024
67	9	131,738	17	143,944
68	13	154,586	21	141,051
69	8	105,567	15	135,333
70	5	45,417	25	182,984
71		92,053	18	143,894
72	9 3 5 3 5	25,416	21	141,531
73	5	53,153	22	154,365
74	3		31	206,264
74 75	. <u>.</u>	27,384		
		46,687	25	146,328
76	6	51,381	30	176,092
77	1	6,072	36	194,459
78	6	39,603	37	177,282
79	2	12,200	17	80,596
80	3	14,651	25	101,584
81	4	18 , 598	20	83,932
82	2	7,917	24	99,869
83	2	9 , 875	18	72 , 937
84	_	_	20	75 , 929
85	1 5	4,479	18	65,119
86	5	19,771	18	71,796
87	1	4,238	16	62,719
88	1	4,221	17	60,488
89	<u> </u>	<u>-</u>	10	38,886
90	_	<u>-</u> -	7	27,264
91	- ·		9	32,679
92	1	3,362	8	29,910
93	<u> </u>	- ,	4	12,527
94		_	i	3,605
95	_	- .	ī	3,525
96	_	_	ī	3,377
97	_	_	4	11,974
TOTALS	166	\$1,837,593	<u>617</u>	\$3,638,539

RETIRED ON LIMITED PENSION

		MALE	FE	MALE
A C E	MIMDED	ANNUAL	NUMBER	ANNUAL
AGE	NUMBER	PENSION	NUMBER	PENSION
67	2	\$16,253	5	\$33,426
68	. 2	7,122	5	21,219
69	1	3,538	8	22,346
70	1	470	8 3	8,263
71	_	_		16,661
72	-	-	4 1	2,925
74	-	-	3	14,328
75	1	3,132	1	3,912
76	-	<u> </u>	1	2,256
77	1	3,180	1 3 1	11,016
78	-	<u>-</u>	1	2,460
80	_		2	4,476
82	-	-	_	-
83	1	2,312	2 2	5,489
85	-		2	5,056
86	1	2,544	1	2,458
87	-	-	1	2,546
89	-	-	1	2,294
93			1 2	4,110
TOTALS	10	\$38 , 551	46	\$165,241

RETIRED WITH REVERSIONARY PENSIONS

	MA	ALE	${ t FEMALE}$		
AGE	NUMBER	ANNUAL PENSION	NUMBER	ANNUAL PENSION	
81	1	\$ 4,403	1	\$ 3,758	
84	<u>-</u>	_	1	4,129	
89	<u>-</u>		_ _		
TOTAL	1	\$ 4,403	_2	\$ 7,887	

RETIRED ON DISABILITY PENSION

		MALE		FEMALE
AGE	NUMBER	ANNUAL PENSION	NUMBER	ANNUAL PENSION
		•		
39 45 47 48	- - - 1	\$ - - - 15,216	1 1 2	\$ 9,709 9,870 27,710
50	_	_	1	5,375
51 52 53 56 57	1 1 1	13,548 11,268 - 17,030	- 4 -	- 40,502 - -
58 59 60 61 63	2 2 2 1	17,952 20,696 33,000 14,739	1 1 1 2 1	13,809 10,286 14,748 26,056 4,716
64 66 67 68 71	1 1 1	11,232 - 6,228 4,188	1 1 - - 1	11,311 12,951 - 4,400
74 77 79	<u> </u>	- - -	1 1 _1	3,239 3,099 3,482
TOTAL	14	\$165,097	21	\$201,263

SURVIVOR ANNUITIES

C H I L D R E N

Number 24

Annual Pension \$96,453

<u>Age</u>	Reversio Number	nary Survivors Annual Pension	Regular Number	Survivors Annual Pension
52 56 63 64 66 69 72 73 76 80 85	- - - - - - - -	M A L E	1 1 2 1 1 1 1 1	\$ 3,477 3,900 6,431 16,509 6,395 8,641 1,839 7,404 3,407 6,228
Totals		\$ -	11	\$ 64,231
43 44 54 56 57 58 59 61 63 64 65 67 68 69 70 71 73 74 75 76 78 80 81 84 85 86 99	- - - - - - - - - 1 1 - 1 2 5 - 1 1	FEMALE \$ 1,371 - 1,441 - 1,045 4,176 12,298 - 1,814 1,479 1,338	1 1 2 2 1 1 4 2 1 2 2 2 1 2 2 1 1 2 - - - - 1	\$ 6,985 4,291 9,595 10,796 2,520 10,404 2,760 30,415 5,541 10,659 21,306 9,546 10,174 8,203 2,280 11,979 5,069 5,208 3,852 15,280 - 4,734 - 4,428
Total	13	<u>\$24,962</u>	35	\$196,025

CONSIDERED EARNINGS (Year Ended December 31, 1980)

Basic Division - Active Male Employees
(Age and Credited Service as of December 31, 1980)

	(Age and Credited Service as of December 31, 1980)							
				YEARS OF SER	VTCF:			
		Under 1		1		2 to 4		5 to 9
AGE	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	_	\$ -	_	\$ -	_	\$ -	_	\$ -
25 to 29	_	T	_	Υ _	11	147,080	4	74,062
30 to 34		_	1	13,742	18	337,511	65	1,243,032
35 to 39	_		_	15,742	11	236,757	40	890,086
40 to 44	_	_	_	_	4	114,282	21	577 , 928
45 to 49	_	_		_	3	60,962	13	341,937
50 to 54	_	_	_	_	1	21,536	6	158,675
55 to 59	_		_	_		21,550	1	30,820
60 to 64		_	_	_	_	- ·	_	50,020
65 & Up	_	. <u>_</u>		_	_	_	1	23,224
ου α υμ							=	25,224
Total		\$ -	1	\$ 13,742	48	<u>\$ 918,128</u>	151	\$ 3,339,764
			·	YEARS OF SER		20 1 24		05 1 00
		10 to 14	120	15 to 19		20 to 24	170	25 to 29
AGE	NO.	EARNINGS	NO.	EARNINGS	NO.	<u>EARNINGS</u>	NO.	EARNINGS
Under 25	. _ ·	\$ -	_	\$ -	_	\$ -	_	\$ -
25 to 29	· _		_	_	_	_	_	-
30 to 34	40	848,432	_		_	_	_	_
35 to 39	95	2,282,478	25	669,707	_	_	_	-
40 to 44	60	1,560,178	67	1,874,911	13	364,266		. -
45 to 49	39	1,062,731	40	1,127,294	55	1,541,169	18	544,289
50 to 54	19	514,421	18	494,699	44	1,218,875	58	1,666,041
55 to 59	6	183,605	15	413,340	15	408,053	35	952,490
60 to 64	3	79,683	8	219,327	4	111,837	5	160,890
65 & Up		_	_	_	_	_	_	_
Total	<u> 262</u>	\$6,531,528	<u>173</u>	\$4 , 799 , 278	131	\$3,644,200	116	\$ 3,323,710
				YEARS OF SER	VTC'E			
		30 to 34		35 to 39		40 & Up		All
AGE	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	_	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	· –	-	-	-	-	15	221,142
30 to 34	-	-	-	-	-	-	124	2,442,717
35 to 39	-	-	-	-		-	171	4,079,028
40 to 44	-		-	-	_	-	165	4,491,565
45 to 49	-	-	_		_	-	168	4,678,382
50 to 54	19	558 , 699	-	-	_	-	165	4,632,946
55 to 59	39	1,217,613	15	511,346	_	-	126	3,717,267
60 to 64	12	366,874	2	61,631	-	_	34	1,000,242
65 & Up	<u>l</u>	27,463	_1	35,747			3	86,434
Total	71	\$2,170,649	18	\$ 608,724	_	\$ -	971	\$25,349,723

CONSIDERED EARNINGS (Year Ended December 31, 1980)

Basic Division - Active Female Employees
(Age and Credited Service as of December 31, 1980)

		(Age and Cre	dited S	Service as of	Decemb	per 31, 1980)		
				YEARS OF SER				
		Under 1		1		2 to 4	 -	5 to 9
AGE	NO.	EARNINGS	<u>NO.</u>	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	_	\$ -	_	\$ -	2	\$ 25,962	_	\$ -
25 to 29	_	γ –	7	6,600	70	943,668	24	352 , 877
		-	1 1					
30 to 34	_	-		16,843	51	742,368	130	2,148,534
35 to 39	_	-	1	6 , 550	21	351,850	57	1,034,128
40 to 44	_	-	-	-	13	203,203	51	1,050,684
45 to 49	_	_	-	-	14	231,877	28	596,255
50 to 54	_	-	_	-	8	126,370	19	491,249
55 to 59	_	-	-	-	-	-	13	252,866
60 to 64		-		-	1	18,147	2	42,277
65 & Up					1	14,113		
Total	_	\$ -	3	\$ 29,993	181	\$2,657,558	324	\$ 5,968,870
TOCAL		<u> </u>	<u> </u>	¥ 23/333	===	\(\frac{\pi}{2\frac{1}{2}1		+ 3/300/0/0
•				YEARS OF SER	VICE			_
		10 to 14		15 to 19	2	20 to 24		25 to 29
AGE	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	_	\$ -		\$ -	_	\$ -		\$ -
25 to 29		Υ <u> </u>		Υ <u> </u>		ب –		Ψ -
30 to 34	91	1,705,381	_	·	_	_	_	_
35 to 39	87		10	476 EE2	_	_		
40 to 44	50	2,021,475 1,169,550	19 34	476,553 859,642	15	377 , 332		_
	42		22				8	197,127
45 to 49 50 to 54	26	939,821	20	533,068	2 <u>1</u> 17	505,535 460,888	16	397,501
		571,025		484,324		•	12	-
55 to 59	21	494,451	19 13	458,467	17	415,022		318,555
60 to 64	11	256,457		298,716	13	333,519	8 1	207,626
65 & Up		20,450	2	46,827	<u>l</u>	24,700		24,700
Total	329	\$7,178,610	129	\$3,157,597	84	\$2,116,996	45	\$ 1,145,509
•								
	·	20 to 24		YEARS OF SER		40 c IIn		777
ACTE		30 to 34		33 10 39		40 & Up	NTO	All FADNINGS
AGE	<u>NO.</u>	EARNINGS	<u>NO.</u>	EARNINGS	<u>NO.</u>	EARNINGS	NO.	<u>EARNINGS</u>
Under 25	-	\$ -	-	\$ -	_	\$ -	2	\$ 25,962
25 to 29	-	· <u>-</u>			-	-	95	1,303,145
30 to 34	-	-	_	-	-	_	273	4,613,126
35 to 39	-	-	-	· –	-	_	185	3,890,556
40 to 44	-	-	-	-	_	-	163	3,660,411
45 to 49	-	-	-	-	-	-	135	3,003,683
50 to 54	6	146,020	-		-	_	112	2,677,377
55 to 59	12	296,013	4	108,044	-	-	98	2,343,418
60 to 64	6	140,500	10	250,730	1	20,700	65	1,568,672
65 & Up	1	33,742	1	17,400	1	20,603	9	202,535
Total	25	\$ 616,275	<u>15</u>	\$ 376,174	2	\$ 41,303	1,137	\$23,288,885

COORDINATED DIVISION

RETIRED ON SERVICE PENSION

	M	ALE	FEMALE			
AGE	NUMBER	ANNUAL PENSION	NUMBER	ANNUAL PENSION		
65	_	\$ -	1 .	\$ 958		
66		- -	1	1,322		
67	<u>=</u> :		<u>1</u>	2,854		
Total		\$ -	<u>3</u>	\$1,395		

CONSIDERED EARNINGS (Year Ended December 31, 1980)

Coordinated Division - Active Male Employees (Age and Credited Service as of December 31, 1980)

		(Age and	Credite	ed Service as	s of Dec	ember 31, 19	180)	
	YEARS OF SERVICE							
		Under 1		1	2	2 to 4		5 to 9
AGE	<u>NO.</u>	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	21	\$ 40,230	3	\$ 35,023	1	\$ 11,500	_	\$ -
25 to 29	58	148,219	20	207,912	18	246,158	1	14,781
30 to 34	34	151,734	15	161,332	19	312,909	4	70,830
35 to 39	37	95,635	5	77,714	11	230,436	2	54,930
40 to 44	20	31,162	6	97,613	2	41,202	1	26,043
45 to 49	14	39,419	4	74,088	ī	12,795	1	17,700
50 to 54	14	54,347	_	-	ī	6,390	ī	26,703
55 to 59	6	5 , 796	_	_	ī	18,500	_	-
60 to 64	4	1,204	1	18,673	_		_	· _
65 & Up	6	4,438						
Total	214	\$572,184	<u>54</u>	\$672 , 355	<u>54</u>	\$879 , 890	_10	\$ 210,987
				YEARS OF SEF	RVICE			
	1	.0 to 14		15 to 19		0 to 24		25 to 29
AGE	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -		\$ -	_	\$ -	-	\$ -
25 to 29	<u> </u>		· -	· -	-	-	, -	-
30 to 34	-	_	-	-	_	-	_	-
35 to 39	3	65 , 858	-	-	-	-	_	
40 to 44	-	_	1	21,456	-	-	-	- ,
45 to 49	1	25,800	1	25 , 400	-	_	-	-
50 to 54	-	-	_	_	-	-		-
55 to 59	-	-	1	24,700	-	-		-
60 to 64		-	_	-	-	-	-	
65 & Up					_			
Total	4	\$ 91,658	3	\$ 71 , 556		\$ <u>-</u>		\$ <u>-</u>
				YEARS OF SEE	RVICE			
		0 to 34		5 to 39		QU & 0		All
AGE	<u>NO.</u>	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	<u>NO.</u>	EARNINGS
Under 25	_	\$ -	_	\$ -	_	\$ -	25	\$ 86,753
25 to 29	_	. -	.—	-	-	-	97	617,070
30 to 34	_	-	-	-	-	_	72	696,805
35 to 39	-	_	-	-	-	-	58	524 , 573
40 to 44	-	-	-	-	_	-	30	217,476
45 to 49	· -	-	-	-	-	-	22	195,202
50 to 54		_	-	-	-	-	16	87,440
55 to 59	-	-	-	-	-	-	8	48,996
60 to 64	<u> </u>	-	-	-	-	-	5	19,877
65 & Up			_				6	4,438
Total		\$ -	_	\$ <u>-</u>	_	\$ -	339	\$2,498,630

CONSIDERED EARNINGS (Year Ended December 31, 1980)

Coordinated Division - Active Female Employees (Age and Credited Service as of December 31, 1980)

		·		YEARS OF SER				
		Under l		1		2 to 4		5 to 9
AGE	NO.	FARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	60	\$ 284,482	16	\$ 195,999	12	\$ 141,543	_	\$ -
25 to 29	102	532,425	39	488,583	63	824,175	5	66,947
30 to 34	46	308,120	35	473,414	32	439,975	7	123,440
35 to 39	53	256,317	19	210,626	21	301,066	2	35,900
40 to 44	36	140,528	16	208,595	21	335,521	4	84,606
45 to 49	24	112,095	12	121,309	12	143,577	4	69,935
50 to 54	10	39,371	5	53,781	7	83,692	8	81,649
55 to 59	- 8	16,598	4	44,901	9	82 , 170	1	23,336
60 to 64	4	2,350	2	21,722	2	8,214	2	9,924
65 & Up	2	392	_	ZI, 12Z	_	0,214	_	7,724
03 & 0p					_			
Total	<u>345</u>	\$1,692,678	148	\$1,818,930	<u>179</u>	\$2,359,933	33	\$ 495,737
					VICE			
		10 to 14		15 to 19		20 to 24		25 to 29
AGE	NO.	EARNINGS	<u>NO.</u>	EARNINGS	<u>NO.</u>	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	_	\$ -	_	\$ -	_	\$ -
25 to 29	. -	. <u> </u>	-	-	-	_	_	_
30 to 34	8	135,136	-		_	-	_	-
35 to 39	7	179,419	3	73,151	_	-	-	: <u>-</u>
40 to 44	- 3	64,578	1	24,700	_	-	-	_
45 to 49	1	25,800	1	21,350	1	24 , 700	-	-
50 to 54	3	65,086	_	-	_	-		_
55 to 59	. 1	27 , 340	_	_	1	17 , 750	_	_
60 to 64		-	-	-	1	35 , 830	_	-
65 & Up					_1	24,892		. –
Total		\$ 497,359	5	\$ 119,201	4	\$ 103,172	_	\$ -
				YEARS OF SER				
		30 to 34		35 to 39		40 & Up		All
AGE	<u>NO.</u>	EARNINGS	NO.	EARNINGS	<u>NO.</u>	EARNINGS	<u>NO.</u>	EARNINGS
Under 25	_	\$ -	-	\$ -	· –	\$ -	88	\$ 622,024
25 to 29	_	-	-	_	_	-	209	1,912,130
30 to 34	· -	-	-	-	-	-	128	1,480,085
35 to 39	-	-		-	-	-	105	1,056,479
40 to 44	-	-	_	_	_	.	81	858,528
45 to 49	-	-	-	-	_	-	55	518 , 766
50 to 54	-	-	-	-	-	-	33	323 , 579
55 to 59	_	-	-	-	_	-	24	212,095
60 to 64	_	-	-	-	-	-	11	78 , 040
65 & Up							3	25,284
Total	-	\$ -	_	\$ -		\$ -	<u>737</u>	\$7,087,010

SUMMARY OF PLAN

BASIC DIVISION

SUMMARY OF PLAN

(As Amended Effective July 1, 1978)

1. Name

St. Paul Teachers' Retirement Fund Association.

2. Type of Plan

Self-insured, managed by a Board of Trustees consisting of the Chairman of the Board of Independent School District Number 625 and nine others elected by and from members of the Teachers' Association.

3. Employers Included

Board of Education - City of St. Paul.

4. Employees Included

All employees in the St. Paul Public Schools in a position covered by a certificate issued by the Minnesota State Department of Education and not covered under Section 218 of the Social Security Act.

5. Service Considered for Benefits

All periods of service for which salary deductions were made and service during sabbatical leave. After June 30, 1974, St. Paul service for part-time teachers is granted on a proportional basis of actual duty days to the agreed number of annual duty days. Year of service credited prior to May 31, 1976 shall not be recomputed.

6. Earnings Considered

Annual total salary. Average salary based on the five years during the last 10 years of St. Paul Service which produced the highest average. For any member employed on a part-time basis during any of the 10 years, the average is computed on the basis of the amount earned in the time required to complete one full year of service.

7. Employer Contributions

12.63% of payroll.

8. Employee Contributions

8% of annual total salary including salary otherwise payable to a member on sabbatical leave.

If an employee elects to purchase eligible outside service, he may do so pursuant to Article IV, Section 2, Paragragh 2(d) of the Articles of Incorporation and By-Laws as amended effective June 1, 1978.

9. Normal Retirement Benefit

On or after attainment of age 60 and completion of 25 years of service.

Pension equal to 2% of average salary multiplied by the number of years of accredited service; such accredited service limited to a maximum of 40 years.

10. Limited Service Benefit

Employees compelled to retire upon attainment of a specified age after completion of 10 years of service but less than 25 years of service. Annuity determined as for Normal Retirement considering service and earnings to actual retirement.

11. Early Retirement Benefit

After attainment of age 55 and completion of 25 years of service. Annuity determined as for Normal Retirement considering service and earnings to actual retirement and reduced by 1/2 of 1% for each month or major fraction thereof between actual retirement and attainment of age 60.

12. Disability Benefit

In the event of total and permanent disability after completion of five years of accredited St. Paul service.

Until age 65 the pension is equal to 75% of annual total salary for last full year of service minus any Social Security and/or Workmen's Compensation benefits being received.

At age 65 the benefit is recomputed as for Normal Retirement considering average salary and accredited service the disabled member would have had if he had continued to teach in his latest position during his period of disability.

13. <u>Deferred Vested Benefit</u>

In the event of termination after completion of ten years of service. Annuity determined as for Normal Retirement payable at age 65, augmented by interest compounded annually at the rate of 5% until January 1, 1981 and thereafter at the rate of 3%.

14. Death Benefit

Active

- (a) In the event of death prior to retirement and after completion of three years of service, a benefit is payable:
 - (i) For each dependent child, subject to a maximum of two at one time, equal to 25% of the maximum salary payable to a teacher holding a B.A. degree for the year in which the member died, and
 - (ii) To the surviving spouse, maintaining a home and having legal custody of the dependent child or children equal to 15% of the maximum salary in (i) above.

If the surviving spouse is also eligible for the benefits in (b) next following, such spouse may elect either benefits under (b) or the 15% benefit in (ii) above. All benefits attributable to one deceased member are limited to 90% of such member's final pay.

(b) In the event of death after completion of 10 years of accredited service, the survivor, as defined in the plan, becomes entitled to a benefit based on the annuity earned to the date of the member's death and payable for life, equal to a joint-and-last survivorship annuity under which 100% of the reduced benefit is payable to the survivor.

Retired

In the event of death after retirement, the survivor receives a life annuity equal to the amount earned by the member to the date of his retirement after reduction to a 100% joint-and-last survivorship form of annuity.

15. Cash Refund of Dues

(a) Upon termination or death of an active member prior to eligibility for any other pension, the full amount of his dues, without interest, paid since January 1, 1940, will be returned to him or to his beneficiary.

- (b) Upon the death of an active member eligible for a dependent children's benefit, but no other benefit under the Plan, the amount of the dues paid since January 1, 1940 which is in excess of the amount payable to the dependent children, without interest, shall be returned to his beneficiary.
- (c) Upon the death of a retired member, who was not survived by a survivor entitled to any other pension under the Plan, the amount of dues paid since January 1, 1940, without interest, in excess of that amount already paid in pension, will be returned to his beneficiary.

In (a) above, if the member terminates and has completed the probationary employment period under the applicable teacher tenure law, all amounts payable after the probationary period are credited with interest in a manner to be determined by the Board of Trustees.

16. Savings Provision

Any member who retires after December 31, 1954 on a Normal Limited, Early, or Disability Pension, shall receive a pension not less than the maximum amount payable to any member who retired before January 1, 1955 for an equal period of service, including all increases of the pension of such previously retired member becoming effective after December 31, 1954.

17. Proportionate Annuity

At age 65 or under a mandatory retirement statute. Annuity determined as for Normal Retirement based on service prior to termination.

18. Combined Service

Service totaling 10 or more years in any Minnesota funds with the same provision shall be entitled to an annuity from each fund based on their respective service in each fund.

19. State Funded Retiree Increases

Minnesota Statutes Law 1976, Chapter 326 provided increases to certain retirees based on service at retirement and years of retirement. The cost of these increases was provided by an appropriation from the general fund in the State Treasury.

20. Bonus Payment

For each year during which investment income of the fund exceeds 5 1/2% of the asset value at the end of the year, a lump sum payment to each retired member and survivor who has received an annuity for at least three years. Amount determined by prorating 1/2% of the asset value by total years of service of eligible annuitants.

COORDINATED DIVISION

SUMMARY OF PLAN (As Amended Effective July 1, 1978)

1. Name

St. Paul Teachers' Retirement Fund Association.

2. Type of Plan

Self-insured, managed by a Board of Trustees consisting of the Chairman of the Board of Independent School District Number 625 and nine others elected by and from members of the Teachers' Association.

3. <u>Employers Included</u>

Board of Education - City of St. Paul.

4. Employees Included

All employees in the St. Paul Public Schools in a position covered by a certificate issued by the Minnesota State Department of Education who either elected coverage under Section 218 of the Social Security Act, or were automatically so covered.

5. Service Considered for Benefits

All periods of service for which salary deductions were made and service during sabbatical leave. After June 30, 1974, St. Paul Service for part-time teachers is granted on a proportional basis of actual duty days to the agreed number of annual duty days. Years of service credited prior to May 31, 1976, shall not be recomputed.

6. Earnings Considered

Annual total salary. Average salary based on the five successive years of St. Paul Service which produces the highest average. For any member employed on a part-time basis during any of the five years, the average is computed on the basis of the amount earned in the time required to complete one full year of service.

7. Employer Contributions

4-1/2% of pay excluding Social Security taxes.

8. Employee Contributions

Four and one half percent of annual total salary including salary otherwise payable to a member on sabbatical leave.

9. Normal Retirement Benefit

Age 65 and completion of 10 years of service or after attainment of age 62 and completion of 30 years of service.

Pension equal to 1% of average salary for each of the first 10 years of accredited service, plus 1 1/2% of average salary for each year of accredited service in excess of 10 years; such accredited service limited to a maximum of 40 years.

10. Early Retirement Benefit

After completion of 30 years of service or attainment of age 55 and completion of 10 years of service. Annuity determined as for Normal Retirement considering service and earnings to actual retirement. For member with less than 30 years of service, annuities are reduced by 1/2% per month for each month under age 65 and by 1/4% per month for each month under age 60. For member with 30 years of service, annuities are reduced by 1/2% per month for each month under age 62 and by 1/4% per month for each month under age 60.

11. Disability Benefit

In the event of total and permanent disability after completion of 10 years of service or attainment of age 50 and completion of five years of service, with average salary of at least \$75 per month.

The benefit is computed as for Normal Retirement considering average salary and accredited service at time of disability. Disability recipients automatically assume retirement status to age 65 with the right to choose a life annuity equal to their disability benefit or to choose an optional annuity plan with provisions for payment to beneficiaries.

12. Deferred Vested Benefit

In the event of termination after completion of 10 years of service. Annuity determined as for Normal Retirement payable at minimum retirement age, augmented by interest compounded annually at the rate of 5% until January 1, 1981 and thereafter at the rate of 3%.

13. Death Benefit

Active

After completion of 30 years of service or attainment of age 55 and completion of 20 years of service a member may elect a joint and survivor annuity payable to the beneficiary in the event of death prior to retirement.

Retired

Upon retirement a member may elect an optional annuity to provide a reduced pension payable for life and survivor benefit to a contingent annuitant.

14. Cash Refund of Dues

Upon termination or death of an active member prior to eligibility for any other pension, the full amount of his dues will be returned to him or to his beneficiary.

15. Proportionate Annuity

At age 65 or under a mandatory retirement statute. Annuity determined as for Normal Retirement based on service prior to termination.

16. Combined Service

Service totaling 10 or more years in any Minnesota funds with the same provision shall be entitled to an annuity from each fund based on their respective service in each fund.

17. Optional Annuity Plans

In lieu of lifetime monthly annuity, a member may elect to convert his pension into an actuarially equivalent optional pension in the form of a 100% joint and survivor benefit, 50% joint and survivor benefit, 15 years' certain and life benefit or a guaranteed refund benefit.

18. Bonus Payment

For each year during which investment income of the fund exceeds 5 1/2% of the asset value at the end of the year, a lump sum payment to each retired member and survivor who has received an annuity for at least three years. Amount determined by prorating 1/2% of the asset value by total years of service of eligible annuitants.

ACTUARIAL ASSUMPTIONS

STATEMENT OF ACTUARIAL ASSUMPTIONS

Based on the experience analysis through December 31, 1975, the following assumptions have been used in determining the actuarial liabilities of the Fund:

Interest:

5% per annum, compounded annually.

Mortality:

Group Annuity Table for 1951 projected through 1965. See

following tables.

Retirement Age:

Age 65.

Disability:

See following tables.

Separation:

See following tables.

Salary Scale:

3-1/2% per annum, compounded annually. See following tables.

A detailed statement of the mortality rates, disability rates, turnover rates and salary progression is set forth on the following pages.

MORTALITY RATES

(Per 1,000 Employees)

Male Employees

<u>Age</u>	_Rate_	Age	Rate
20	.517	45	3.002
21	.537	46	3.409
22	.558	47	3.856
23	.581	48	4.344
24	.607	49	4.869
25 26 27 28 29	.636 .667 .703 .742	50 51 52 53 54	5.429 6.027 6.656 7.321 8.019
30	.831	55	8.751
31	.884	56	9.514
32	.941	57	10.312
33	1.005	58	11.154
34	1.074	59	12.057
35	1.152	60	13.043
36	1.237	61	14.143
37	1.331	62	15.390
38	1.435	63	16.828
39	1.550	64	18.504
40 41 42 43 44	1.677 1.838 2.054 2.322 2.639	65	20.475

MORTALITY RATES

(Per 1,000 Employees)

Female Employees

Age	Rate	Age	Rate
20	.311	45	1.672
21	.330	46	1.819
22	.349	47	1.980
23	.369	48	2.158
24	.392	49	2.355
25	.415	50	2.574
26	.439	51	2.783
27	.466	52	3.016
28	.496	53	3.277
29	.527	54	3.570
30	.561	55	3.898
31	.597	56	4.278
32	.637	57	4.727
33	.681	58	5.253
34	.728	59	5.867
35	.780	60	6.572
36	.836	61	7.369
37	.898	62	8.258
38	.966	63	9.232
39	1.040	64	10.284
40 41 42 43	1.122 1.213 1.311 1.420 1.540	65	11.402

DISABILITY RATES

(Per 1,000 Employees)

All Employees

<u>Age</u>	Rate	Age	Rate
20 21 22 23 24	.70 .71 .72 .73	45 46 47 48 49	1.62 1.76 1.91 2.07 2.23
25 26 27 28 29	.75 .76 .78 .80 .82	50 51 52 53 54	2.40 2.60 2.86 3.18 3.56
30 31 32 33 34	.84 .86 .88 .90	55 56 57 58 59	4.00 4.59 5.34 6.10 7.20
35 36 37 38 39	.96 .99 1.03 1.07 1.11	60 61 62 63 64	8.43 9.75 11.30 13.05 14.90
40 41 42 43 44	1.15 1.20 1.27 1.36 1.48		

SEPARATION RATES

(Per 1,000 Employees)

Male Employees

Age	Rate	<u>Age</u>	Rate
20	191	40	25
21	177	41	23
22	163	42	21
23	149	43	19
24	135	44	17
25	122	45	16
26	112	46	16
27	102	47	15
28	92	48	14
29	83	49	13
30	74	50	12
31	67	51	12
32	61	52	11
33	55	53	11
34	49	54	10
35	43	55	9
36	39	56	7
37	. 35	57	7 5 3 1
38	31	58	3
39	28	59	1

SEPARATION RATES

(Per 1,000 Employees)

Female Employees

Age	Rate	Age	Rate
20 21 22 23 24	275 271 267 263 259	40 41 42 43	80 72 64 56 49
25	255	45	42
26	247	46	37
27	239	47	32
28	231	48	27
29	222	49	23
30	213	50	19
31	199	51	16
32	185	52	14
33	171	53	12
34	157	54	10
35	142	55	8
36	129	56	6
37	116	57	4
38	104	58	2
39	92	59	1

EARNINGS PROGRESSION

(Per 1,000 Employees)

All Employees

Age	Rate	Age	_Rate_
20 21 22 23 24	.2127 .2201 .2278 .2358 .2440	45 46 47 48 49	.5026 .5202 .5384 .5572
25	.2526	50	.5969
26	.2614	51	.6178
27	.2706	52	.6394
28	.2800	53	.6618
29	.2898	54	.6849
30	.3000	55	.7089
31	.3105	56	.7337
32	.3213	57	.7594
33	.3326	58	.7860
34	.3442	59	.8135
35	.3563	60	.8420
36	.3687	61	.8714
37	.3817	62	.9019
38	.3950	63	.9335
39	.4088	64	.9662
40 41 42 43 44	.4231 .4380 .4533 .4692 .4856	65	1.000