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**ACTUARIAL SECTION**

**Actuarial**



**GABRIEL, ROEDER, SMITH & COMPANY**  
CONSULTANTS & ACTUARIES

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October 18, 2002

Board of Trustees  
Public School Retirement System of Missouri  
Non-Teacher School Employee Retirement System of Missouri  
3210 West Truman Boulevard  
Jefferson City, MO 65109

Re: Certification of Actuarial Results

Dear Members of the Board:

At your request, we have performed actuarial valuations of the Public School Retirement System and the Non-Teacher School Employee Retirement System of Missouri as of June 30, 2002. An actuarial valuation of each system is performed annually.

The actuarial valuation is based upon:

- a. *Data relative to the Members of the Systems* – Data for all members of each system was provided by the staff. Such data is tested for reasonableness by the actuary but is used unaudited.
- b. *Assets of the Fund* – The values of the trust fund assets for each system are provided by the staff. A market related value of assets, with gains and losses recognized ratably over five years, is used to develop actuarial results.
- c. *Actuarial Method* – The actuarial method utilized for each system is the Entry Age Normal Cost Method. The objective of this method is to finance the benefits of the systems as a level percentage of pay over the entire career of each member. Any Unfunded Actuarial Accrued Liability (UAAL) under this method is separately financed. All actuarial gains and losses under this method are reflected in the UAAL.
- d. *Actuarial Assumptions* – The actuarial assumptions used in the valuation of each system are summarized in the next few pages. The Board has adopted this set of assumptions effective for the actuarial valuations as of June 30, 2001 and later.

The actuarial assumptions and methods used are in accordance with paragraph 36 of GASB Statement Number 25.

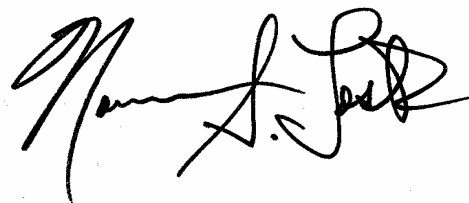
The trend data in the Financial Section and the schedules and other data in this Section are prepared by the staff with our guidance.

The Board's statement of funding policy provides that:

1. The Board of Trustees shall adopt actuarial assumptions, each of which individually represents a reasonable long-term estimate of anticipated experience under the system, derived from experience studies conducted every fifth year.
2. The actuarial funding method used shall be the Entry Age Normal Method with normal costs calculated as a percentage of payroll.
3. It shall be the general objective to maintain an amortization period of 30 years or less in the funding of the Unfunded Actuarial Accrued Liability. Whenever a change is made in a system's benefit and contribution rate structures, the amortization period for the system after this change should not exceed 30 years initially.
4. If an escalation in future payroll is assumed in determining the amortization payments toward the Unfunded Actuarial Accrued Liability, then the annual rate of such escalation shall not exceed the expected rate of expansion in total system payroll based upon the actuarial assumptions.
5. Assets used in the actuarial valuation shall be valued using adjusted market values averaged over a period of five years.
6. Annual actuarial valuations shall be made of the system's assets and liabilities. The contribution rate shall be established based on the results of these valuations.

The results of the valuations are based on the data and actuarial techniques described above and on the provisions of each system at the valuation date. Based on these items, we certify these results to be true and correct.

Sincerely,

A handwritten signature in black ink, appearing to read "Norman S. Losk". The signature is fluid and cursive, with a large initial "N" and "L".

Norman S. Losk, F.S.A.  
Senior Consultant

## PSRS Calculation of Unfunded Actuarial Accrued Liability

As of June 30, 2002

	<b>Amount</b>
(1) Present Value of Future Benefits for:	
Active Members	\$ 18,658,799,822
Service Retirees	10,051,969,685
Disability Retirees	105,164,174
Tax-sheltered Annuitants	1,276,650
Survivors	382,058,037
Death Benefits	49,077,059
Inactive Members	296,388,994
Total	29,544,734,421
 (2) Present Value of Future Normal Costs	 6,210,796,844
(3) Actuarial Accrued Liability ((1)-(2))	23,333,937,577
 (4) Actuarial Value of Assets	 22,236,105,216
(5) Unfunded Actuarial Accrued Liability ((3)-(4))	\$ 1,097,832,361

## PSRS Required Contribution Rate & Amortization of Unfunded Liability

As of June 30, 2002

	<b>Percentage of Payroll</b>
(1) Total Contribution Rate, Member + Employer	21.00%
(2) Normal Cost Rate	20.57%
(3) Approximate Rate Available for Unfunded Actuarial Accrued Liability ((1) - (2))	.43%
(4) Number of Years Required to Amortize Unfunded Actuarial Accrued Liability	30*

\* 30 year amortization assumes an annual required contribution rate of 22.22% for fiscal year 2003. The unfunded liability will never be amortized with a contribution rate of 21%.

## PSRS Analysis of Actuarial Gains and Losses

**As of June 30, 2002**

(Dollar Amounts in Thousands)

(1) Unfunded Actuarial Liability as of July 1, 2001		\$ 399,702
(2) Normal Cost for 2002 Plan Year		613,173
(3) Contribution received during year		(696,685)
(4) Interest to Year End @ 8.00% on (1) (2) & (3)		28,700
(5) Expected Unfunded Actuarial Liability as of June 30, 2002		344,890
(6) Actuarial (Gain)/Loss During the Year		
From Investments	\$ 394,031	
From Actuarial Liabilities	358,911	
Total	752,942	752,942
(7) Actual Unfunded Actuarial Liability as of June 30, 2002		\$ 1,097,832

## NTRS Calculation of Unfunded Actuarial Accrued Liability

As of June 30, 2002

	<b>Amount</b>
(1) Present Value of Future Benefits for:	
Active Members	\$ 1,913,756,462
Service Retirees	615,700,178
Disability Retirees	13,456,992
Survivors	22,137,565
Inactive Members	61,634,019
Total	2,626,685,216
 (2) Present Value of Future Normal Costs	 770,703,191
(3) Actuarial Accrued Liability ((1)-(2))	1,855,982,025
(4) Actuarial Value of Assets	1,810,618,705
(5) Unfunded Actuarial Accrued Liability ((3)-(4))	\$ 45,363,320

## NTRS Required Contribution Rate & Amortization of Unfunded Liability

As of June 30, 2002

	<b>Percentage of Payroll</b>
(1) Total Contribution Rate, Member + Employer	10.00%
(2) Normal Cost Rate	10.55%
(3) Approximate Rate Available for Unfunded Actuarial Accrued Liability ((1) - (2))	-0.55%
(4) Number of Years Required to Amortize Unfunded Actuarial Accrued Liability	30*

*\* 30 year amortization assumes an annual required contribution rate of 10.8% for fiscal year 2003. The unfunded liability will never be amortized with a contribution rate of 10%.*

## NTRS Analysis of Actuarial Gains and Losses

As of June 30, 2002

	<b>Amount</b>
(1) Unfunded Actuarial Liability as of July 1, 2001	\$ (50,166,463)
(2) Normal Cost for 2002 Plan Year	80,398,180
(3) Contribution received during year	(91,990,250)
(4) Interest to Year End @ 8.00% on (1) (2) & (3)	<u>(4,468,080)</u>
(5) Expected Unfunded Actuarial Liability as of June 30, 2002	(66,226,613)
(6) Actuarial (Gain)/Loss During the Year	
From Investments	\$ 33,052,246
From Liabilities	<u>78,537,687</u>
Total	<u>111,589,933</u>
(7) Actual Unfunded Actuarial Liability as of June 30, 2002	<u><u>\$ 45,363,320</u></u>

## PSRS Summary of Actuarial Assumptions and Methods

### Mortality -

Sample rates per 1,000 members by ages: (effective 6/30/02)

Active and Service Retired Members, Beneficiaries and Survivors

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.430	0.280
40	0.891	0.652
60	5.581	3.863
80	45.171	35.362
100	268.815	256.712

### Interest -

8% per annum compound, net of expenses. (1980)

### Termination -

Illustrate per 1,000 members (male and female): (2002)

<u>Age</u>	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	<u>After Three Years</u>
20	140	110	100	35
30	120	100	80	31
40	100	90	60	21
50	90	70	40	8

### Salary Increases -

Sample annual rates varying by service: (effective 6/30/02)

<u>Service</u>	<u>Increase</u>	<u>Service</u>	<u>Increase</u>
20	10.0%	9	6.0%
33	7.5	10 & over	5.0
46	7.0		

### Retirement Rates -

Sample rates per 1000 eligible members: (effective 6/30/02)

<u>(1) Age 60</u>		<u>(2) Below 60 or Meet Rule of 80</u>		<u>(3) Below 60, Less Than 30 Years</u>	
<u>Age</u>	<u>5 Years</u>	<u>Service</u>	<u>With 30 Years</u>	<u>Before (1) or (2), After 55/25</u>	
60	250	30	500	First Year Eligible	400
62	250	31 & over	250	Thereafter	200
65	400				
67	300				
70+	1000				

<b>Asset Valuation -</b>	Based on five year average of adjusted market value returns. (1994)
<b>Payroll Increase -</b>	Total covered payroll is assumed to increase 5.0% per year. (effective 6/30/97) Membership is not assumed to increase.
<b>Inflation -</b>	3.5% per annum compound. (effective 6/30/97)
<b>Actuarial Method -</b>	Entry Age Normal Funding Method is used. Gains and losses are reflected immediately in the unfunded actuarial accrued liability of the System, and amortized in the future as a level percentage of payroll. (1947)
<b>Other -</b>	In addition to the above, other assumptions are made with respect to the incidence of disability, the rates of retirement under a special temporary program, mortality of disabled lives, the probability that a member has a spouse, minor children and the ages of the children. (effective 6/30/97)
<b>COLA -</b>	3.5% per year. (effective 6/30/97)

*Note: Dates reflect the effective date as adopted by the Board of Trustees.*

## NTRS Summary of Actuarial Assumptions and Methods

### Mortality -

Sample rates per 1,000 members by age: (effective 6/30/02)

Active and Service Retired Members, Beneficiaries, and Survivors

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	0.530	0.284
40	1.156	0.709
60	8.986	4.439
80	68.615	39.396
100	333.461	276.427

### Interest -

8% per annum compound, net of expenses. (1980)

### Termination -

Illustrate per 1000 members (male and female): (1994)

<u>Age</u>	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	<u>After Three Years</u>	
				<u>Males</u>	<u>Females</u>
20	350	170	100	66	50
30	225	170	100	66	50
40	130	125	90	61	45
50	90	85	55	39	29

### Salary Increases -

Sample annual rates varying by years of service: (effective 6/30/02)

<u>Service</u>	<u>Increase</u>	<u>Service</u>	<u>Increase</u>
0	10.0%	3	6.0 %
1	7.5	4	5.75
2	6.75	5 & over	5.0

### Retirement Rates - Sample rates per 1000 members: (effective 6/30/02)

<u>(1) Age 60</u>		<u>(2) Below 60</u>		<u>(3) Below 60, Less Than 30 Years</u>	
<u>Age</u>	<u>5 Years</u>	<u>Service</u>	<u>With 30 Years</u>	<u>Before (1) or (2), After 55/25</u>	
60	100	30 & over	100	All Years Eligible	135
62	300				
65	350				
66-74	250				
75+	1000				

<b>Asset Valuation -</b>	Based on five year average of adjusted market values. (1994)
<b>Payroll Increase -</b>	Total covered payroll is assumed to increase 5.0% per year. (effective 6/30/97)
<b>Inflation -</b>	3.5% per annum compound. (effective 6/30/97)
<b>Actuarial Method -</b>	Entry Age Normal Funding Method is used. Gains and losses are reflected immediately in the unfunded actuarial accrued liability of the System, and amortized in the future as a level percentage of payroll. (1966)
<b>Other -</b>	In addition to the above, other assumptions are made with respect to the incidence of disability, the rates of retirement under a special temporary program, mortality of disabled lives, the probability that a member has a spouse and average work year. (effective 6/30/97)

*Note: Dates reflect the effective date as adopted by the Board of Trustees.*

## PSRS Schedule of Active Member Valuation Data

Actuarial Valuation Date	Number of Members	Covered Annual Payroll (000)	Average Annual Salary	% Increase in Average Salary	Average Attained Age	Average Years of Service
6/30/1993	58,493	\$ 1,867,948	\$ 31,935	1.9%	42.3	12.3
6/30/1994	60,595	\$ 1,996,908	\$ 32,955	3.2%	42.5	12.3
6/30/1995	62,854	\$ 2,137,134	\$ 34,002	3.2%	42.5	12.3
6/30/1996	64,624	\$ 2,283,994	\$ 35,343	3.9%	42.6	12.3
6/30/1997	66,456	\$ 2,427,429	\$ 36,527	3.3%	42.5	12.1
6/30/1998	68,709	\$ 2,577,594	\$ 37,514	2.7%	42.5	11.9
6/30/1999	70,092	\$ 2,690,353	\$ 38,383	2.3%	42.5	11.7
6/30/2000	71,706	\$ 2,836,062	\$ 39,581	3.1%	42.5	11.6
6/30/2001	72,688	\$ 2,982,051	\$ 41,025	3.7%	42.4	11.3
<b>6/30/2002</b>	<b>73,673</b>	<b>\$ 3,213,461</b>	<b>\$ 43,618</b>	<b>6.3%</b>	<b>42.4</b>	<b>11.2</b>

## NTRS Schedule of Active Member Valuation Data

Actuarial Valuation Date	Number of Members	Covered Annual Payroll (000)	Average Annual Salary	% Increase in Average Salary	Average Attained Age	Average Years of Service
6/30/1993	29,055	\$ 415,672	\$ 14,306	2.1%	45.7	7.7
6/30/1994	30,662	\$ 452,339	\$ 14,752	3.1%	45.5	7.6
6/30/1995	32,598	\$ 495,449	\$ 15,199	3.0%	45.3	7.3
6/30/1996	34,153	\$ 538,022	\$ 15,753	3.6%	45.2	7.2
6/30/1997	35,982	\$ 556,534	\$ 15,467	(1.8)%	45.1	7.1
6/30/1998	38,672	\$ 616,303	\$ 15,937	3.0%	44.8	6.7
6/30/1999	41,599	\$ 685,272	\$ 16,473	3.4%	44.6	6.5
6/30/2000	43,533	\$ 735,400	\$ 16,893	2.5%	44.5	6.4
6/30/2001	45,517	\$ 814,158	\$ 17,887	5.9%	44.6	6.3
<b>6/30/2002</b>	<b>46,728</b>	<b>\$ 895,420</b>	<b>\$ 19,162</b>	<b>7.1%</b>	<b>44.8</b>	<b>6.4</b>

## PSRS Solvency Test

(Dollar amounts in thousands)

Actuarial Accrued Liability for:

Actuarial Valuation Date	Member Contributions	Current Retirees & Beneficiaries	Active & Inactive Members, Employer Financed Portion	Net Assets Available for Benefits	Percentage of Actuarial Liabilities Covered by Net Assets for:		
					(1)	(2)	(3)
6/30/1993	\$ 2,384,406	\$ 2,980,210	\$ 3,591,872	\$ 7,787,379	100.00%	100.00%	67.5%
6/30/1994	2,616,067	3,206,061	4,147,631	9,177,070	100.00%	100.00%	80.9%
6/30/1995	2,856,389	3,705,807	4,419,626	10,193,084	100.00%	100.00%	82.2%
6/30/1996	3,098,448	4,265,851	4,867,447	11,510,625	100.00%	100.00%	85.2%
6/30/1997	3,312,090	4,553,628	4,583,460	13,099,219	100.00%	100.00%	100.0%
6/30/1998	3,541,459	5,523,768	5,405,822	14,979,358	100.00%	100.00%	109.4%
6/30/1999	3,765,854	6,602,915	6,004,376	17,209,870	100.00%	100.00%	113.9%
6/30/2000	3,976,059	7,801,845	6,501,209	19,437,223	100.00%	100.00%	117.8%
6/30/2001	4,129,191	9,504,921	7,648,091	21,146,294	100.00%	100.00%	98.3%
<b>6/30/2002</b>	<b>\$ 4,354,507</b>	<b>\$10,589,546</b>	<b>\$ 8,389,885</b>	<b>\$ 22,236,105</b>	<b>100.00%</b>	<b>100.00%</b>	<b>86.9%</b>

## NTRS Solvency Test

(Dollar amounts in thousands)

Actuarial Accrued Liability for:

Actuarial Valuation Date	Member Contributions	Current Retirees & Beneficiaries	Active & Inactive Members, Employer Financed Portion	Net Assets Available for Benefits	Percentage of Actuarial Liabilities Covered by Net Assets for:		
					(1)	(2)	(3)
6/30/1993	\$ 140,790	\$ 196,936	\$ 277,693	\$ 583,058	100.00%	100.00%	88.3%
6/30/1994	155,238	224,650	306,192	698,988	100.00%	100.00%	104.2%
6/30/1995	169,846	252,034	364,519	778,325	100.00%	100.00%	97.8%
6/30/1996	185,763	293,937	399,861	876,886	100.00%	100.00%	99.3%
6/30/1997	204,757	312,390	447,065	1,001,035	100.00%	100.00%	100.0%
6/30/1998	225,454	350,860	460,033	1,150,311	100.00%	100.00%	125.8%
6/30/1999	231,252	396,846	540,413	1,335,308	100.00%	100.00%	130.9%
6/30/2000	274,167	467,653	653,480	1,522,660	100.00%	100.00%	119.5%
6/30/2001	301,936	565,126	769,014	1,686,242	100.00%	100.00%	106.5%
<b>6/30/2002</b>	<b>\$ 354,296</b>	<b>\$ 651,295</b>	<b>\$ 850,391</b>	<b>\$ 1,810,619</b>	<b>100.00%</b>	<b>100.00%</b>	<b>94.7%</b>

## PSRS Schedule of Retirees and Beneficiaries Added to and Removed from Retirement Rolls

	Added to Rolls		Removed from Rolls		Rolls End of Year			% Increase	
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances	Average Annual Allowances	in Annual Allowance	in Average Annual Allowance
<b>2001-2002</b>									
Service Retirees	2,252	76,277,040	763	16,160,604	28,128	814,713,192	28,964	14.53%	8.47%
Disability Retirees	41	890,640	40	688,908	597	11,589,792	19,413	7.27%	7.09%
Beneficiaries	246	4,309,632	105	1,452,696	2,140	39,500,232	18,458	15.70%	8.08%
<b>2000-2001</b>									
Service Retirees	2,629	84,732,912	749	14,326,116	26,639	711,328,968	26,703	18.15%	9.81%
Disability Retirees	44	896,940	28	432,888	596	10,803,876	18,127	11.23%	8.24%
Beneficiaries	184	3,478,620	84	978,240	1,999	34,139,676	17,078	19.26%	13.29%
<b>1999-2000</b>									
Service Retirees	2,152		779		24,759	602,073,480	24,317	19.56%	12.93%
Disability Retirees	45		34		580	9,712,992	16,747	11.18%	9.07%
Beneficiaries	196		90		1,899	28,625,688	15,074	26.30%	19.25%
<b>1998-1999</b>									
Service Retirees	1,947		730		23,386	503,554,404	21,532	20.43%	14.16%
Disability Retirees	41		33		569	8,736,408	15,354	13.75%	12.15%
Beneficiaries	176		74		1,793	22,665,480	12,641	21.66%	14.74%
<b>1997-1998</b>									
Service Retirees	1,757		728		22,169	418,135,200	18,861	10.86%	5.71%
Disability Retirees	27		32		561	7,680,348	13,690	2.14%	3.05%
Beneficiaries	187		82		1,691	18,630,408	11,017	13.17%	6.14%
<b>1996-1997</b>									
Service Retirees	1,797		732		21,140	377,172,204	17,842	13.48%	7.76%
Disability Retirees	30		31		566	7,519,512	13,285	3.43%	3.61%
Beneficiaries	170		74		1,586	16,462,368	10,380	14.99%	8.03%

Note: Detailed data on retirees added to and removed from the rolls is not available for years prior to 2001.

## NTRS Schedule of Retirees and Beneficiaries Added to and Removed from Retirement Rolls

	Added to Rolls		Removed from Rolls		Rolls End of Year			% Increase	
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances	Average Annual Allowances	in Annual Allowance	in Average Annual Allowance
<b>2001-2002</b>									
Service Retirees	970	7,570,872	461	1,280,604	13,141	57,743,412	4,394	22.43%	17.68%
Disability Retirees	30	146,556	21	58,956	387	1,346,280	3,479	17.02%	14.29%
Beneficiaries	97	352,764	18	33,996	742	2,412,648	3,252	26.76%	13.27%
<b>2000-2001</b>									
Service Retirees	978	6,089,376	459	1,165,548	12,632	47,164,044	3,734	18.68%	13.81%
Disability Retirees	53	200,208	22	75,372	378	1,150,476	3,044	18.75%	9.03%
Beneficiaries	76	201,732	14	19,536	663	1,903,260	2,871	19.02%	7.89%
<b>1999-2000</b>									
Service Retirees	960		447		12,113	39,740,484	3,281	20.58%	15.49%
Disability Retirees	45		14		347	968,844	2,792	26.00%	14.76%
Beneficiaries	77		21		601	1,599,060	2,661	24.11%	12.56%
<b>1998-1999</b>									
Service Retirees	796		414		11,600	32,956,644	2,841	9.17%	5.57%
Disability Retirees	35		7		316	768,900	2,433	14.42%	4.29%
Beneficiaries	67		19		545	1,288,428	2,364	14.42%	4.32%
<b>1997-1998</b>									
Service Retirees	841		434		11,218	30,189,600	2,691	10.79%	6.74%
Disability Retirees	29		17		288	672,024	2,333	9.04%	4.48%
Beneficiaries	59		22		497	1,126,008	2,266	11.89%	3.56%
<b>1996-1997</b>									
Service Retirees	823		388		10,811	27,249,996	2,521	12.37%	7.87%
Disability Retirees	22		13		276	616,320	2,233	8.01%	4.49%
Beneficiaries	63		18		460	1,006,320	2,188	17.83%	6.32%

Note: Detailed data on retirees added to and removed from the rolls is not available for years prior to 2001.

## PSRS Summary Plan Description

The Public School Retirement System of Missouri (PSRS) became operative July 1, 1946. It was established by an Act of the Missouri Legislature and is governed by Chapter 169 of the *Revised Statutes of Missouri*. Its purpose is to provide benefits to members and their dependents at retirement or in the event of death or disability prior to retirement.

PSRS is a defined benefit plan funded on an actuarial reserve basis, which guarantees availability of funds to pay benefits as prescribed by law. The system is established as an independent trust fund and is not subject to direction by any state agency. Administrative expenses are paid entirely out of investment earnings.

### Administration

The administration of PSRS is vested in a seven-member Board of Trustees, composed of three elected PSRS members, one elected Non-Teacher School Employee Retirement System (NTRS) member, and three appointed trustees. The four elected trustees are selected by vote of the members and retirees of both systems. Two are elected each even-numbered calendar year to serve four-year terms. The three appointed trustees, one of whom must be a PSRS or an NTRS retiree, are named by the governor to serve four-year terms. The appointed trustees must be residents of school districts included in the retirement system but not employees of such districts nor state employees nor a state elected official. The Board appoints an Executive Director who is responsible for employment of the retirement office staff, routine operation of the system, and advisement of the Board on all matters pertaining to the system.

### Member Participation

PSRS membership is automatic, regardless of position, for certificated, full-time employees of public school districts in Missouri (except the St. Louis and the Kansas City school districts), public junior college districts in Missouri, and of PSRS. Certificated, part-time employees whose services would qualify them for membership in the Non-Teacher School Employee Retirement System are contributing members of PSRS unless NTRS membership is elected.

Members working in covered employment are considered *active* members. Such members contribute 10.5% of total compensation to PSRS. The contributions are deducted and remitted by the employer and are credited by PSRS to individual member accounts. Since July 1, 1989, member contributions have been tax-deferred for federal and state income tax purposes under IRS 414(h)(2). Contributions are not considered income for such purposes until they are paid as a lump sum refund or monthly benefits.

Members not working in covered employment are considered *inactive* members.

Interest at a rate set each year by the Board of Trustees is credited to individual member accounts each June 30 on the previous June 30 balance. The rate credited on June 30, 2002 was 6%. Since PSRS is a defined benefit plan, benefits are based upon the member's final average salary and years of creditable service. The amount of interest credited to a member's account has no bearing on the monthly benefit amount payable at retirement.

In addition to credit earned for covered service, members may purchase credit in various categories including several types of leave, out-of-state school service, other public and private employment, active U.S. military duty, and service under the federal Uniformed Services Employment and Re-employment Rights Act of 1994 (USERRA).

### Employer Participation

The employers served by PSRS withhold members' contributions from salary payments and match those contributions at a current rate of 10.5% of payroll. Employer contributions and investment earnings on those funds are placed by PSRS in a general reserve account to pay monthly benefits to retirees and to beneficiaries of deceased members. Employers are responsible for remitting contributions promptly and for furnishing contribution information and new membership records to PSRS. Employers also provide record data when members apply for benefits or for refunds upon termination of employment.

### Survivor Benefits

The designated beneficiary of a member who dies before retirement is eligible for a lump sum refund of the member's contributions and interest. If the beneficiary is an eligible dependent and the member dies while in covered employment with at least two years of credit for such service, or while eligible for disability retirement benefits, monthly survivor benefits based on a percentage of the member's salary for the last full year of covered service can be elected instead of the contribution refund.

In lieu of a lump sum refund or monthly survivor benefits, survivors with an insurable interest and beneficiaries of disability retirees may elect to receive monthly benefits under the Option 2 retirement plan. Such benefits are payable when the member would have been eligible for early or normal retirement.

### Refund of Contributions

*Member contributions and interest are fully refundable upon termination of service or death. All credit and benefit rights are forfeited upon voluntary withdrawal or automatic termination of membership.*

A member may, upon returning to covered employment, reinstate the credit forfeited through termination of a previous membership by repaying the money refunded plus interest.

### Membership Termination

Membership is terminated by death, retirement, withdrawal of contributions, or absence from covered employment by a non-vested member for five consecutive school years.

### Disability Retirement Benefits

Disability retirement benefits are payable to eligible members who, because of permanent disability, are unable to earn a livelihood in any occupation. In most instances, the disability retirement benefit is calculated at 50% of the member's salary for the last full year of creditable service.

### Service Retirement Benefits

Service retirement benefits are payable to members who have terminated covered employment and have met certain eligibility requirements.

**Benefit Formula**—All service retirement benefits are based on a formula which multiplies final average salary by the applicable formula factor, by the years of credit and, in the case of early retirement, by an age reduction factor. Final average salary is obtained by dividing the total salaries for the 3 highest consecutive years of service by 36; the applicable factor is determined by the type of retirement eligibility; total credit is the amount accumulated at retirement for covered service and purchased credit; and the age factor, where applicable, is determined by the age at retirement.

**Normal Retirement**—A member may retire with benefits calculated under the standard (2.5%) formula factor at age 60 with 5 years of credit, at any age with 30 years of credit, or when a combination of age and service credit equals 80. Between 7/1/2001-6/30/2008, a member may retire with a 2.55%

formula factor with 31 or more years of service. A special provision in effect until July 1, 2003 allows members under age 55 with 25.0 – 29.9 years of credit to retire with benefits calculated under a modified formula factor ranging from 2.2% to 2.4% but with no age reduction factor applied.

**Early Retirement**—A member may retire with benefits calculated under the standard (2.5%) formula with an age reduction factor applied, at age 55 with 5 years of credit or at any age with 25 years of credit, as long as they do not qualify for Rule of 80 (after 7/1/2003).

**Payment Options**—A retiring member may elect to receive the maximum benefits payable under the Single Life option, or may elect to receive a reduced benefit under one of three Joint-and-Survivor options or under one of two Term-Certain options, to provide survivor benefit coverage in varying degrees after the retiree's death.

Certain benefit minimums apply to normal or early retirement with 15 or more years of credit. The minimums for 15 but fewer than 25 years of credit are reduced if a Joint-and-Survivor or a Term-Certain option is elected and/or if an age factor is applicable because of early retirement. The minimums for 25 or more years of credit are reduced only if a Joint-and-Survivor or a Term-Certain option is elected.

### Post-Retirement Increases

Cost-of-living adjustments (COLAs) are provided beginning the second January after retirement (7/1/01) to service and disability retirees, and to Joint-and-Survivor beneficiaries of deceased retirees. The annual COLA, not to exceed 5%, is based on the increase in the cost of living as measured by the Department of Labor Consumer Price Index for the previous fiscal year and is applied to the current benefit of each eligible recipient. Lifetime COLAs are limited to 80% of the original retirement benefit. The 80% lifetime COLA limit became effective July 1, 2000.

### Benefits Guide

A benefits guide containing detailed information concerning the retirement program can be obtained from the retirement office upon request.

## NTRS Summary Plan Description

### NTRS Summary Plan Description

The Non-Teacher School Employee Retirement System of Missouri (NTRS) was established by an Act of the Missouri Legislature effective November 1, 1965, and is governed by Chapter 169 of the Revised Statutes of Missouri. Its purpose is to provide benefits to members and their dependents at retirement or in the event of death or disability prior to retirement.

NTRS is a defined benefit plan funded on an actuarial reserve basis, which guarantees availability of funds to pay benefits as prescribed by law. The system is established as an independent trust fund and is not subject to direction by any state agency. Administrative expenses are paid entirely out of investment earnings.

### Administration

The statutes provide that the responsibility for the operation and administration of the retirement system is vested in The Public School Retirement System (PSRS) Board of Trustees sitting as the Board of Trustees for NTRS. The Board is comprised of three elected PSRS members, one elected Non-Teacher School Employee Retirement System (NTRS) member and three appointed trustees. The four elected trustees are selected by vote of the members and retirees of both systems. Two are elected each even-numbered calendar year to serve four-year terms. The three appointed trustees, one of whom must be a PSRS or an NTRS retiree, are named by the governor to serve four-year terms. The appointed trustees must be residents of school districts included in the retirement system but not employees of such districts nor state employees nor a state elected official.

The Board appoints an Executive Director who is responsible for employment of the retirement office staff and routine operation of the system, and who acts as advisor to the Board on all matters pertaining to the system.

### Member Participation

**Active Members**—are currently working in covered employment. Employees contribute 5.0% of their total compensation to NTRS. These amounts are deducted by the employing district and then forwarded to NTRS by the payroll officer and applied to the member's account in the NTRS. NTRS membership is automatic, regardless of position, for all persons not covered by The Public School Retirement System who are regularly employed for 20 or more hours a week by the public school districts in Missouri (except the St. Louis and the Kansas City school districts), public junior college districts in Missouri, and by the retirement system.

NTRS membership can be elected by employees with Missouri teaching certificates who work *in any position* for 20 or more hours weekly but less than full time; however, PSRS

membership is automatic if an NTRS election is not made. The election to join NTRS must be filed with the Board of Trustees within 90 days after entering first time, part-time employment.

Since July 1, 1989, member contributions have been tax-deferred for federal and state income tax purposes under IRC 414(h)(2). Contributions are not considered as income for federal or state income tax purposes until they are paid in a lump-sum refund or in monthly benefits.

Individual accounts are maintained for all NTRS members. Interest is credited each June 30 on the previous June 30 balance. The interest rate set annually by the Board of Trustees was 6% on June 30, 2002. Since NTRS is a defined benefit plan, benefits are based upon the member's final average salary and years of creditable service. The amount of interest credited to a member's account has no bearing on the monthly benefit amount payable at retirement.

In addition to credit earned for covered service, members may purchase credit in various categories including several types of leave, out-of-state school service, other public and private employment, active U.S. military duty, and service under the federal Uniformed Services Employment and Re-employment Rights Act of 1994 (USERRA).

**Inactive Members**—have contributions on deposit with NTRS but are not currently working in covered employment.

**Member's Survivors**—When a member dies before retirement, the designated beneficiary becomes eligible for a lump sum refund of the employee's contributions and interest. In lieu of the lump sum refund, beneficiaries with an insurable interest and beneficiaries of disability retirees may elect to receive monthly benefits under the Option 2 retirement plan. Benefits are payable to the beneficiary under the Option 2 plan when the member would have been eligible for early or normal retirement.

### Membership Termination

Membership in the System is terminated by death, retirement, withdrawal of contributions, or absence from covered employment by a non-vested member for five consecutive school years.

### Employer Participation

The employers served by NTRS withhold members' contributions from salary payments and match employee contributions at a current rate of 5% of payroll. Employer contributions and investment earnings on those funds are placed in a general reserve account to pay monthly benefits to retirees and to beneficiaries of deceased members. It is the responsibility of the employers to remit contributions to the retirement system promptly and to supply NTRS with new

membership records and members' contribution information. Employers also provide needed data when members apply for benefits or refund of contributions upon termination of employment.

### Employer Participation

Member contributions plus interest are fully refundable upon termination of service or death. All credit and benefit rights are forfeited upon voluntary withdrawal or automatic membership termination. Voluntary withdrawal is available to members who cease covered employment. Automatic termination occurs when a non-vested member is absent from covered employment for five consecutive years. Only the money the member has contributed and accrued interest are refundable.

A member may, upon returning to covered employment, reinstate the credit forfeited through termination of a previous membership by repaying the money withdrawn plus interest.

Service retirement benefits are payable to persons who have terminated employment and who have met age and service requirements.

**Benefit Formula**—All service retirement benefits are based on a formula which multiplies final average salary by the applicable formula factor, by the years of credit and, in the case of early retirement, by an age reduction factor. Final average salary is obtained by dividing the total salaries for the three highest consecutive years of service by 36; the applicable factor is determined by the type of retirement eligibility; total credit is the amount accumulated at retirement for covered service and purchased credit; and the age factor, where applicable, is determined by the age at retirement.

Because of the conversion of the system from a formula integrated with Social Security to the present basis, a special "frozen benefit" is in effect for certain members for service prior to July 1, 1973.

**Normal Retirement**—A member may retire with benefits calculated under the standard (1.61%) formula at age 60 with 5 years of credit, at any age with at least 30 years of service, and at the point where the member's age plus creditable service equals or exceeds 80 (Rule of 80). A member may retire under the standard (1.61%) formula when the member qualifies for

Rule of 80 or 30 and out and will receive an additional .8% multiplier until he/she reaches minimum eligibility age for Social Security benefits (currently age 62). A special provision in effect until July 1, 2003 allows members under age 55 with 25.0-29.9 years of credit to retire with benefits calculated under a modified formula factor ranging from 1.51% to 1.59% but with no age reduction factor applied.

**Early Retirement**—A member may retire with benefits calculated under the standard (1.61%) formula with an age reduction factor applied, at age 55 with 5 but fewer than 25 years of credit.

**Options**—A retiring member may elect to receive the maximum benefits payable under the Single Life option, or may elect to receive a reduced benefit under one of three Joint-and-Survivor options or under one of two Term-Certain options, to provide survivor benefit coverage in varying degrees after the retiree's death. Another option, the Accelerated Payment Plan (APP), allows members to receive a higher NTRS benefit prior to minimum Social Security eligibility age (currently age 62). When the minimum Social Security eligibility age is attained, the member's NTRS benefit is reduced and remains at a reduced level for the remainder of their retirement.

### Disability Retirement Benefits

Disability retirement benefits are payable to persons who have met service and eligibility requirements and who, because of permanent disability, are unable to earn a livelihood in any occupation. The disability retirement benefit is calculated at 90% of the normal service retirement.

### Cost-of-Living Adjustments

Cost-of-living adjustments (COLAs) are provided starting the fourth January after retirement to service and disability retirees, and to Joint-and-Survivor beneficiaries of deceased retirees. The annual COLA, not to exceed 5%, is based on the increase in the cost of living as measured by the Department of Labor Consumer Price Index for the previous fiscal year and is applied to the current benefit of each eligible recipient. Lifetime COLAs are limited to 80% of the original retirement benefit.

### Handbook

A handbook which furnishes more complete information concerning provisions of the NTRS law and regulations can be obtained from the retirement office.