



Seasons of Change

The original retirement staff consisted of five employees who maintained all records with posting and bookkeeping machines with all checks written, protected, and signed by hand. In 1962, the Comptroller's office made a data processing change which required the retirement system to keypunch records. At that time, 2,000 to 3,000 retirement checks were printed monthly, and member records were kept in paper files.

Nearly 20 years later, the retrieval of member records was partially automated using a filing machine built by Diebold. This machine resembled a huge jukebox with an automated arm that would retrieve member records. Over a decade passed before member records were converted to digital images in 1993.

MOSERS now employs 70 employees and, using a combination of high-end servers and personal computers, provides all computer support for its retirement, life insurance, and long-term disability programs. Ten million member records are maintained on an imaging system that allows information to be stored and processed more efficiently. Imaged records have greatly improved the quality of and the speed with which we are able to provide service to members and employers. Today, the retirement system issues over 27,000 benefit payments each month, and most are distributed through direct deposit.

Automation of member forms and benefit statements via the Internet has significantly enhanced access, efficiency, and accuracy for employers, employees, and retirees. In addition, members and employers now have access to their personal information through a secure website that allows them to create personalized benefit estimates as well as submit forms electronically any time of the day or night.



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Actuary's Certification Letter

GRS

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October 2, 2007

The Board of Trustees
Missouri State Employees' Retirement System
907 Wildwood Drive
Jefferson City, Missouri 65102

Dear Board Members:

The basic financial objective of the Missouri State Employees' Retirement System (MOSERS) is to establish and receive contributions which:

1. when expressed in terms of percents of active member payroll will remain approximately level from generation to generation of Missouri citizens, and which
2. when combined with present assets and future investment return will be sufficient to meet the present and future financial obligations of MOSERS.

In order to measure progress toward this fundamental objective, MOSERS has annual actuarial valuations performed. The valuations (i) measure present financial position, and (ii) establish contribution rates that provide for the normal cost and level percent of payroll amortization of unfunded actuarial accrued liabilities over a reasonable period. The latest completed actuarial valuations were based upon data and assumptions as of June 30, 2007. These valuations indicate that the contribution rates for the fiscal year ending June 30, 2009, adopted by the board of trustees for the benefits scheduled to be in effect on July 1, 2007, meet the basic financial objective. These contribution rates are 12.53% of payroll for 54,363 General State Employees, and 60.07% of payroll for 400 Judges.

The actuarial valuations are based upon financial and participant data which is prepared by retirement system staff, assumptions regarding future rates of investment return and inflation, and assumptions regarding rates of retirement, turnover, death, and disability among MOSERS' members and their beneficiaries. The data is reviewed by us for internal and year-to-year consistency as well as general reasonableness prior to its use in the actuarial valuations. It is also summarized and tabulated for the purpose of analyzing trends. The demographic assumptions were adopted by the board of trustees in January, 2004 based upon recommendations made in an experience study covering the period from 1999 to 2003. The economic assumptions were adopted by the board of trustees in September, 2001 and reaffirmed in January, 2004. The assumptions and methods used in this valuation, in our opinion, meet the parameters established by Governmental Accounting Standards Board Statement No. 25.

The current benefit structure is outlined in the *Actuarial Section*. Benefit provisions evaluated were unchanged from the previous valuation. We provided the information used in the supporting schedules in the *Actuarial Section* and the *Schedules of Funding Progress* in the *Financial Section*, as well as the employer contribution rates shown in the *Schedule of Employer Contributions* in the *Financial Section*.

Based upon the valuation results, it is our opinion that the Missouri State Employees' Retirement System continues to operate in accordance with actuarial principles of level percent of payroll financing.

Respectfully submitted,

Norman L. Jones, F.S.A.
Senior Consultant & Actuary

Brad Lee Armstrong, A.S.A.
Senior Consultant & Actuary



Summary of Actuarial Assumptions

Economic Assumptions

The investment return rate used in the valuations was 8.5% per year, compounded annually (net after investment expenses). This assumption is used to account for the fact that equal amounts of money payable at different points in time in the future do not have the same value presently.

Pay increase assumptions for individual active members are shown for sample ages on page 105. Part of the assumption for each age is for merit and/or seniority increase, and the other 4% recognizes wage inflation. This assumption is used to project a member's current salary to the salary upon which benefits will be based.

The active member payroll is assumed to increase 4% annually, which is the portion of the individual pay increase assumptions attributable to inflation.

The annual COLA is assumed to be 4% per year on a compounded basis when a minimum COLA of 4% is in effect and 2.8% per year on a compounded basis when no minimum COLA is in effect.

The number of active members in the MSEP is assumed to remain constant although certain new hires on or after July 1, 2002, will participate in the College and University Retirement Plan (CURP). The number of active members in the Judicial Plan is assumed to continue at the present number. Active and retired member data is reported as of May 31, 2007. It is assumed for valuation purposes that there is no turnover among members and no new entrants during the month of June.

Noneconomic Assumptions

The mortality table for post-retirement mortality used in evaluating allowances to be paid was the 1971 Group Annuity Mortality Table projected to the year 2000 with a 1-year age setback for men and a 7-year age setback for women. Related values are shown on page 106. This assumption is used to measure the probabilities of each benefit payment being made after retirement.

The probabilities of age and service retirement are shown on page 106. It was assumed that each member will be granted one-half year of service credit for unused leave upon retirement and military service purchases.

The probabilities of withdrawal from service, death-in-service, and disability are shown for sample ages on page 105. For disability retirement, impaired longevity was recognized by use of special mortality tables.

The entry-age normal actuarial cost method of valuation was used in determining liabilities and normal cost. The normal cost was based on the benefit provisions affecting new employees (MSEP 2000). Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest), which are a level percent of payroll contributions.

Employer contribution dollars were assumed to be paid in equal installments throughout the employer's fiscal year.

Valuation assets recognize assumed investment return fully each year. Differences between actual and assumed investment return are phased in over a closed 5-year period. Valuation assets are not permitted to deviate from the market value by more than 20%.

The data about persons now covered and about present assets was furnished by the system's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.

It is assumed that among active members, 80% are married at retirement, 70% of those dying in active service are married, and men are three years older than their spouses.

The liabilities for active members hired on or after July 1, 2000 (April 26, 2005 for administrative law judges) were based on MSEP 2000 benefits. The liabilities for active members hired before July 1, 2000, for male general employees with an age at hire of 35 years or less, for female general employees, for contract employees, for elected and for General assembly were based on MSEP 2000 benefits. All others were based on MSEP benefits. The BackDROP was only explicitly valued for those assumed to receive MSEP 2000 benefits.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).



Summary of Actuarial Assumptions

*Separations From Active Employment Before Service Retirement
and Individual Pay Increase Assumptions - June 30, 2007*

MSEP

Sample Ages	Years of Service	Percent of Active Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Employee		
		Withdrawal		Death*		Disability		Merit and Seniority**	Base (Economy)	Increase Next Year
		Men	Women	Men	Women	Men	Women			
	0	23.8%	24.7%							
	1	16.5	17.2							
	2	13.4	13.5							
	3	11.9	10.7							
	4	12.0	10.7							
	+5									
20		12.0	11.0	.04%	.03%	.16%	.18%	2.7%	4.0%	6.7%
25		12.0	11.0	.05	.04	.16	.18	2.6	4.0	6.6
30		8.8	9.9	.06	.04	.16	.18	2.2	4.0	6.2
35		6.2	6.8	.08	.06	.21	.19	1.9	4.0	5.9
40		4.6	4.9	.12	.08	.26	.32	1.4	4.0	5.4
45		3.5	4.3	.19	.11	.34	.37	1.2	4.0	5.2
50		2.8	3.6	.35	.17	.49	.57	0.7	4.0	4.7
55		2.4	2.9	.59	.31	1.07	.89	0.7	4.0	4.7
60		2.4	2.9	.90	.54	1.50	1.50	0.0	4.0	4.0
65		2.4	2.9	1.44	.83	1.60	1.70	0.0	4.0	4.0

* 2% of the deaths in active service are assumed to be duty-related.

** Does not apply to members of the General Assembly.

Judicial Plan

Sample Ages	Percent of Active Members Separating Within the Next Year						Pay Increase Assumptions for an Individual Employee		
	Withdrawal		Death		Disability		Merit and Seniority	Base (Economy)	Increase Next Year
	Men	Women	Men	Women	Men	Women			
25	6.2%	4.5%	.05%	.04%	.02%	.02%	1.6%	4.0%	5.6%
30	5.5	3.7	.06	.04	.03	.03	1.2	4.0	5.2
35	3.8	2.6	.08	.06	.03	.07	0.9	4.0	4.9
40	2.7	2.1	.12	.08	.04	.11	0.4	4.0	4.4
45	2.1	1.9	.19	.11	.09	.17	0.3	4.0	4.3
50	2.1	1.7	.35	.17	.12	.35	0.2	4.0	4.2
55	2.1	1.2	.59	.31	.23	.49	0.2	4.0	4.2
60	1.7	0.6	.90	.54	.33	.53	0.0	4.0	4.0
65	1.2	0.4	1.44	.83	.00	.00	0.0	4.0	4.0



Summary of Actuarial Assumptions

Single Life Retirement Values - June 30, 2007

All Plans

Sample Attained Ages	Present Value of \$1/Month the First Year Increasing 4%/2.8% Yearly				Future Life Expectancy (Years)			
	Service		Disability		Service		Disability	
	Men	Women	Men	Women	Men	Women	Men	Women
40	\$203.29	\$213.24	\$135.93	\$157.34	38.46	44.22	19.70	26.02
45	192.77	205.14	126.72	150.77	33.73	39.41	17.50	23.70
50	180.29	195.04	116.43	143.29	29.17	34.67	15.35	21.39
55	165.93	182.93	106.32	135.58	24.82	30.06	13.43	19.18
60	149.43	168.96	97.83	127.14	20.70	25.67	11.87	17.01
65	130.80	152.92	90.83	117.40	16.82	21.50	10.56	14.82
70	111.02	134.67	82.22	105.26	13.32	17.57	9.13	12.50
75	91.88	114.99	70.84	89.45	10.36	13.99	7.49	10.00
80	73.43	95.64	56.19	71.98	7.83	10.91	5.66	7.62
85	57.86	76.96	42.26	56.19	5.89	8.29	4.08	5.66

Summary of Actuarial Assumptions

Percent of Eligible Active Members Retiring Next Year - June 30, 2007

MSEP

Retirement Ages	Year of Eligibility		
	1st Year	2nd Year	3rd Year
48	20.0%	10.0%	8.0%
49	20.0	10.0	8.0
50	20.0	10.0	8.0
51	20.0	10.0	8.0
52	20.0	10.0	8.0
53	20.0	10.0	8.0
54	20.0	10.0	8.0
55	25.0	10.0	12.0
56	20.0	10.0	12.0
57	20.0	10.0	12.0
58	20.0	10.0	12.0
59	20.0	10.0	12.0
60	25.0	10.0	12.0
61	20.0	10.0	12.0
62	30.0	15.0	30.0
63	20.0	12.0	20.0
64	20.0	12.0	20.0
65	30.0	15.0	30.0
66	20.0	12.0	20.0
67	20.0	12.0	20.0
68	20.0	12.0	20.0
69	20.0	12.0	20.0
70	20.0	12.0	20.0
71	20.0	12.0	20.0
72	20.0	12.0	20.0
73	20.0	12.0	20.0
74	20.0	12.0	20.0
75 & over	20.0	12.0	100.0

Judicial Plan

Retirement Ages	Percent Men	Percent Women
55	5.0%	8.0%
56	5.0	8.0
57	5.0	8.0
58	5.0	8.0
59	5.0	8.0
60	15.0	15.0
61	10.0	10.0
62	15.0	15.0
63	10.0	10.0
64	10.0	10.0
65	25.0	40.0
66	20.0	25.0
67	20.0	25.0
68	20.0	25.0
69	30.0	50.0
70	100.0	100.0

Early retirement rates were assumed to be 5.0% from ages 57-61.



Summary of Actuarial Assumptions

Miscellaneous and Technical Assumptions - June 30, 2007

Pay Increase Timing

Middle of fiscal year for MSEP.

Beginning of fiscal year for judges.

Decrement Timing

Decrements of all types are assumed to occur mid-year.

Eligibility Testing

Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Benefit Service

Exact fractional service is used to determine the amount of benefit payable.

Decrement Relativity

Decrement rates are used directly from the experience study, without adjustments for multiple decrement table effects.

Decrement Operation

Disability and mortality decrements do not operate during the first five years of service. Disability and withdrawal do not operate during normal retirement eligibility.

Normal Form of Benefit

The assumed normal form of benefit is the straight life form for the MSEP 2000 with 50% continuing to an eligible surviving spouse for the MSEP. No adjustment has been made for post-retirement option election changes. For judges, the assumed normal form of benefit is the straight-life form with 50% continuing to an eligible surviving spouse.

Other Liability Adjustments

MSEP Benefits for Current Retirees

- Pop-up factor for 50% survivor benefits: 1.005
- Pop-up factor for 75% survivor benefits: 1.0075
- Pop-up factor for 100% survivor benefits: 1.010

MSEP 2000 Benefits for Current Retirees

- Pop-up factor for 100% survivor benefits: 1.005

Pre-Retirement Survivor Benefits for Spouse of Terminated-Vested Member

Age	Factor
<30	1.11
30-39	1.10
40-49	1.08
>50	1.04

There are no other liability adjustments for judges.

Incidence of Contributions

Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

Active and retired member data was reported as of May 31, 2007. It was brought forward to June 30, 2007, by adding one month of service for all active members and the June COLA for certain retired members. It is expected that this procedure resulted in a slight overstatement of total liabilities as of June 30, 2007. Financial information continues to be reported as of June 30. This procedure was instituted to provide sufficient time for the board of trustees to certify the appropriate contribution rate prior to the October 1 statutory deadline.



Summary of Member Data Included in Valuations

Pension Trust Funds - June 30, 2007

Active Members

Valuation Group	Number	Payroll	Group Averages		
			Salary	Age (Yrs)	Service (Yrs)
MSEP					
Regular state employees	50,331	\$1,640,905,677	\$ 32,602	44.6	10.3
Elected officials	6	592,060	98,677	47.4	6.3
Legislative clerks	55	1,666,865	30,307	57.9	18.3
Legislators	198	6,219,774	31,413	49.7	1.6
Uniformed water patrol	92	4,415,599	47,996	39.2	14.0
Conservation department	1,541	62,182,642	40,352	43.9	13.5
School-term salaried employees	2,099	127,066,006	60,536	53.6	17.8
Administrative law judges	41	3,594,707	87,676	52.4	13.3
Total MSEP group	<u>54,363</u>	<u>\$1,846,643,330</u>	33,969	45.0	10.7
Judicial Plan	400	\$ 40,846,581	\$102,116	54.4	11.2

Retired Members

Type of Benefit Payment	Number	Annual Benefits	Group Averages	
			Benefit	Age (Yrs)
MSEP				
Retirement	25,287	\$ 376,052,427	\$ 14,871	69.1
Disability	12	39,588	3,299	57.3
Survivor of active member	1,318	11,016,328	8,358	59.6
Survivor of retired member	2,075	19,329,851	9,316	74.0
Total MSEP group	<u>28,692</u>	<u>\$ 406,438,194</u>	14,166	69.0
Judicial Plan	437	\$ 21,666,281	\$ 49,580	72.8

Others

Group	Terminated Vested	Leave of Absence	Long-Term Disability
MSEP	16,518	277	1,031
Judicial Plan	60	0	0



Active Members by Attained Age and Years of Service

June 30, 2007

MSEP

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
15-19	47							47	\$ 926,565
20-24	1,580	18						1,598	37,261,740
25-29	3,811	811	10					4,632	128,408,471
30-34	2,502	2,177	480	5				5,164	157,926,545
35-39	2,066	2,196	1,769	378	27			6,436	208,102,452
40-44	1,839	1,831	1,456	1,210	592	33		6,961	236,292,484
45-49	1,832	1,899	1,415	1,255	1,230	748	79	8,458	296,581,060
50-54	1,549	1,761	1,382	1,287	1,176	1,023	479	8,657	314,968,885
55-59	1,280	1,497	1,160	1,201	1,010	622	564	7,334	270,871,970
60	210	248	224	193	146	60	76	1,157	42,713,970
61	165	205	192	176	118	73	72	1,001	37,745,041
62	100	161	132	113	86	42	39	673	26,103,554
63	76	126	93	83	65	28	34	505	19,265,394
64	64	99	110	72	52	28	47	472	18,937,010
65	62	95	63	62	31	13	39	365	14,373,272
66	14	53	56	46	17	11	28	225	8,595,405
67	17	41	26	29	14	7	15	149	6,252,303
68	20	24	21	20	9	6	22	122	5,145,162
69	20	16	21	17	6	6	18	104	4,445,001
70 & Over	42	57	61	56	35	15	37	303	11,727,046
Totals	17,296	13,315	8,671	6,203	4,614	2,715	1,549	54,363	\$1,846,643,330

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Group Averages:

Age	45.0 years
Service	10.7 years
Annual pay	\$33,969



Active Members by Attained Age and Years of Service

June 30, 2007

Judicial Plan

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34	4							4	\$ 384,000
35-39	10	2						12	1,152,000
40-44	18	11	1					30	2,931,000
45-49	16	18	13	3	1			51	5,193,097
50-54	20	20	24	11	7	4		86	8,760,002
55-59	23	30	23	13	12	6	2	109	11,197,992
60	2	7	6	3	1	2	1	22	2,271,000
61	2	6	6	3		2	1	20	2,041,998
62	2	1	2	4	5	2	1	17	1,826,496
63	1	2	3	4	2			12	1,188,000
64		3	1			2		6	612,000
65	1	4	2		2	1		10	1,052,999
66		2	1	2	2			7	750,999
67		1	1	1		1	1	5	535,000
68	1			1	1		1	4	414,999
69				3				3	312,000
70				1			1	2	222,999
Totals	100	107	83	49	33	20	8	400	\$ 40,846,581

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Group Averages:

Age	54.4 years
Service	11.2 years
Annual pay	\$102,116



Schedules of Active Member Valuation Data

Six Years Ended June 30, 2007

MSEP

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
June 30, 2002	58,616	\$1,773,283,484	\$30,253	0.54%
June 30, 2003	57,558	1,739,895,364	30,229	(0.08)
June 30, 2004	55,914	1,737,454,454	31,074	2.80
June 30, 2005	55,944	1,806,600,560	32,293	3.92
June 30, 2006	54,493	1,777,277,138	32,615	1.00
June 30, 2007	54,363	1,846,643,330	33,969	4.15

ALJLAP*

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
June 30, 2002	58	\$4,779,504	\$82,405	0.77%
June 30, 2003	57	4,657,896	81,717	(0.83)
June 30, 2004	57	4,655,340	81,673	(0.05)

* Transferred to the MSEP during the year ended June 30, 2005.

Judicial Plan

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
June 30, 2002	392	\$40,068,744	\$102,216	0.66%
June 30, 2003	392	40,052,952	102,176	(0.04)
June 30, 2004	391	39,878,499	101,991	(0.18)
June 30, 2005	392	40,016,098	102,082	0.09
June 30, 2006	394	40,270,535	102,209	0.12
June 30, 2007	400	40,846,581	102,116	(0.09)



Retirees and Beneficiaries Added and Removed

Six Years Ended June 30, 2007

MSEP

Fiscal Year Ended	Classification	Benefit Type	Added to Rolls	
			Number	Annual Allowances
June 30, 2002	General employees	Retirement	1,840	\$32,360,047
		Survivor of active	84	842,611
		Survivor of retired	209	1,805,486
		Disability	0	3,474
		Occupational disability	0	0
	Lincoln University - vested	Retirement	2	6,061
		Survivor of active	0	0
	Legislators	Retirement	8	238,058
		Survivor of active	1	6,950
		Survivor of retired	4	59,947
	Elected officials	Retirement	0	304
		Survivor of active	0	2,277
		Survivor of retired	0	968
	Administrative law judges and legal advisors	Retirement	1	67,877
		Survivor of active	0	0
Survivor of retired		0	5,582	
June 30, 2003	General employees	Retirement	1,819	33,654,082
		Survivor of active	76	808,507
		Survivor of retired	206	1,944,744
		Disability	0	2,109
		Occupational disability	0	0
	Lincoln University - vested	Retirement	0	0
		Survivor of active	0	0
	Legislators	Retirement	45	880,632
		Survivor of active	1	27,031
		Survivor of retired	4	65,987
	Elected officials	Retirement	0	(13,546)
		Survivor of active	0	2,369
		Survivor of retired	0	1,007
	Administrative law judges and legal advisors	Retirement	3	166,161
		Survivor of active	0	0
Survivor of retired		0	5,601	
June 30, 2004	General employees	Retirement	2,454	42,366,392
		Survivor of active	91	926,617
		Survivor of retired	171	1,965,930
		Disability	1	6,657
		Occupational disability	0	0
	Lincoln University - vested	Retirement	0	0
		Survivor of active	0	0
	Legislators	Retirement	10	182,124
		Survivor of active	1	16,311
		Survivor of retired	3	73,196
	Elected officials	Retirement	0	0
		Survivor of active	0	2,464
		Survivor of retired	0	1,045
	Administrative law judges and legal advisors	Retirement	1	62,331
		Survivor of active	0	0
Survivor of retired		2	58,362	



Source of Data: MOSERS benefit payment database as of June 30, 2007.

Other *Actuarial Section* information reported based on MOSERS valuation data as of May 31, 2007.

Removed From Rolls		Rolls at End of Year		Percentage Increase (Decrease) in Annual Allowances	Average Annual Allowance	Percentage Increase (Decrease) in Average Annual Allowance
Number	Annual Allowances	Number	Annual Allowances			
685	\$6,249,943	18,930	\$236,193,447	12.43%	\$12,477	5.57%
30	137,619	1,094	7,262,392	10.75	6,638	5.28
67	378,545	1,456	10,545,180	15.65	7,243	4.38
7	32,754	31	108,906	(21.19)	3,513	(3.38)
0	0	1	17,448	0.00	17,448	0.00
0	0	10	44,905	15.60	4,491	(7.52)
0	0	1	2,624	0.00	2,624	0.00
4	80,340	175	3,385,372	4.89	19,345	2.49
0	0	9	79,454	9.59	8,828	(2.59)
1	4,195	39	367,509	17.88	9,423	8.81
0	0	9	373,707	0.08	41,523	0.08
0	0	1	59,215	4.00	59,215	4.00
0	0	1	25,167	4.00	25,167	4.00
1	46,580	16	660,874	3.33	41,305	3.33
0	0	0	0	0.00	0	0.00
0	0	8	157,691	3.67	19,711	3.67
734	6,798,563	20,015	263,048,966	11.37	13,143	5.34
28	97,740	1,142	7,973,159	9.79	6,982	5.18
71	368,959	1,591	12,120,965	14.94	7,618	5.18
3	15,849	28	95,166	(12.62)	3,399	(3.25)
0	0	1	17,448	0.00	17,448	0.00
1	1,051	9	43,854	(2.34)	4,873	8.51
0	0	1	2,624	0.00	2,624	0.00
4	71,803	216	4,194,201	23.89	19,418	0.38
0	0	10	106,485	34.02	10,649	20.63
3	20,943	40	412,553	12.26	10,314	9.46
0	0	9	360,161	(3.62)	40,018	(3.62)
0	0	1	61,584	4.00	61,584	4.00
0	0	1	26,174	4.00	26,174	4.00
0	0	19	827,035	25.14	43,528	5.38
0	0	0	0	0.00	0	0.00
0	0	8	163,292	3.55	20,412	3.56
733	7,302,918	21,736	298,112,440	13.33	13,715	4.35
38	197,250	1,195	8,702,526	9.15	7,282	4.30
96	623,128	1,666	13,463,767	11.08	8,081	6.08
5	21,761	24	80,062	(15.87)	3,336	(1.85)
0	0	1	17,448	0.00	17,448	0.00
0	0	9	43,854	0.00	4,873	0.00
0	0	1	2,624	0.00	2,624	0.00
5	116,367	221	4,259,958	1.57	19,276	(0.73)
0	0	11	122,796	15.32	11,163	4.83
1	20,633	42	465,116	12.74	11,074	7.37
0	0	9	360,161	0.00	40,018	0.00
0	0	1	64,048	4.00	64,048	4.00
0	0	1	27,219	3.99	27,219	3.99
3	152,311	17	737,055	(10.88)	43,356	(0.40)
0	0	0	0	0.00	0	0.00
2	48,306	8	173,348	6.16	21,669	6.16

MSEP continued on pages 114-115



Retirees and Beneficiaries Added and Removed

Six Years Ended June 30, 2007

MSEP continued from pages 112-113

Fiscal Year Ended	Classification	Benefit Type	Added to Rolls	
			Number	Annual Allowances
June 30, 2005	General employees	Retirement	1,719	\$27,796,807
		Survivor of active	78	891,051
		Survivor of retired	206	2,036,085
	Lincoln University - vested	Disability	0	1,409
		Occupational disability	0	0
		Retirement	1	3,086
	Legislators	Survivor of active	0	0
		Retirement	31	606,743
		Survivor of active	2	15,361
	Elected officials	Survivor of retired	3	47,695
		Retirement	2	92,916
		Survivor of active	0	2,562
	Administrative law judges and legal advisors	Survivor of retired	0	1,089
		Retirement	4	203,829
		Survivor of active	0	0
June 30, 2006	General employees	Survivor of retired	0	4,987
		Retirement	1,853	30,323,860
		Survivor of active	76	997,296
	Lincoln University - vested	Survivor of retired	214	2,460,805
		Disability	0	1,356
		Occupational disability	0	0
	Legislators	Retirement	1	3,535
		Survivor of active	0	0
		Retirement	6	141,548
	Elected officials	Survivor of active	0	4,398
		Survivor of retired	5	53,788
		Retirement	1	24,113
	Administrative law judges and legal advisors	Survivor of active	0	2,664
		Survivor of retired	0	1,132
		Retirement	6	219,793
June 30, 2007	General employees	Survivor of active	0	0
		Survivor of retired	1	30,686
		Retirement	2,211	37,839,159
	Lincoln University - vested	Survivor of active	89	897,874
		Survivor of retired	213	2,630,107
		Disability	0	1,104
	Legislators	Occupational disability	0	0
		Retirement	0	0
		Survivor of active	0	0
	Elected officials	Retirement	19	303,741
		Survivor of active	1	8,157
		Survivor of retired	5	95,976
	Administrative law judges and legal advisors	Retirement	0	0
		Survivor of active	0	2,771
		Survivor of retired	0	1,178
	Retirement	0	35,846	
	Survivor of active	0	0	
	Survivor of retired	0	6,071	



Source of Data: MOSERS benefit payment database as of June 30, 2007.

Other *Actuarial Section* information reported based on MOSERS valuation data as of May 31, 2007.

Removed From Rolls		Rolls at End of Year		Percentage Increase (Decrease) in Annual Allowances	Average Annual Allowance	Percentage Increase (Decrease) in Average Annual Allowance
Number	Annual Allowances	Number	Annual Allowances			
737	\$6,879,542	22,718	\$319,029,705	7.02%	\$14,043	2.39%
47	227,380	1,226	9,366,197	7.63	7,640	4.92
92	632,735	1,780	14,867,117	10.42	8,352	3.35
3	12,123	21	69,348	(13.38)	3,302	(1.02)
1	17,448	0	0	(100.00)	0	(100.00)
0	0	10	46,940	7.04	4,694	(3.67)
0	0	1	2,624	0.00	2,624	0.00
14	274,590	238	4,592,111	7.80	19,295	0.10
0	0	13	138,157	12.51	10,627	(4.80)
1	4,156	44	508,655	9.36	11,560	4.39
0	0	11	453,077	25.80	41,189	2.93
0	0	1	66,610	4.00	66,610	4.00
0	0	1	28,308	4.00	28,308	4.00
0	0	21	940,884	27.65	44,804	3.34
0	0	0	0	0.00	0	0.00
0	0	8	178,335	2.88	22,292	2.88
749	7,656,047	23,822	341,697,518	7.11	14,344	2.14
48	201,958	1,254	10,161,535	8.49	8,103	6.06
80	658,501	1,914	16,669,421	12.12	8,709	4.27
5	13,560	16	57,144	(17.60)	3,572	8.18
0	0	0	0	0.00	0	0.00
0	0	11	50,475	7.53	4,589	(2.24)
0	0	1	2,624	0.00	2,624	0.00
6	124,079	238	4,609,580	0.38	19,368	0.38
0	0	13	142,555	3.18	10,966	3.19
2	39,490	47	522,953	2.81	11,127	(3.75)
0	0	12	477,190	5.32	39,766	(3.45)
0	0	1	69,274	4.00	69,274	4.00
0	0	1	29,440	4.00	29,440	4.00
2	105,777	25	1,054,900	12.12	42,196	(5.82)
0	0	0	0	0.00	0	0.00
0	0	9	209,021	17.21	23,225	4.19
740	8,391,528	25,293	371,145,149	8.62	14,674	2.30
39	281,916	1,304	10,777,493	6.06	8,265	2.00
106	810,074	2,021	18,489,454	10.92	9,149	5.05
4	18,658	12	39,590	(30.72)	3,299	(7.64)
0	0	0	0	0.00	0	0.00
0	0	11	50,475	0.00	4,589	0.00
0	0	1	2,624	0.00	2,624	0.00
7	178,306	250	4,735,015	2.72	18,940	(2.21)
0	0	14	150,712	5.72	10,765	(1.83)
0	0	52	618,929	18.35	11,902	6.97
0	0	12	477,190	0.00	39,766	0.00
0	0	1	72,045	4.00	72,045	4.00
0	0	1	30,618	4.00	30,618	4.00
0	0	25	1,090,746	3.40	43,630	3.40
0	0	0	0	0.00	0	0.00
0	0	9	215,092	2.90	23,899	2.90



Retirees and Beneficiaries Added and Removed

Six Years Ended June 30, 2007

Judicial Plan

Fiscal Year Ended	Benefit Type	Added to Rolls		Removed From Rolls	
		Number	Annual Allowances	Number	Annual Allowances
June 30, 2002	Retirement	11	\$ 984,612	9	\$455,021
	Survivor of active	1	57,051	1	28,541
	Survivor of retired	5	195,971	5	84,932
	Disability	0	0	1	48,000
June 30, 2003	Retirement	23	1,445,716	10	560,588
	Survivor of active	0	34,820	0	0
	Survivor of retired	6	214,029	7	101,944
	Disability	0	0	0	0
June 30, 2004	Retirement	12	1,076,421	11	652,803
	Survivor of active	0	36,471	2	56,802
	Survivor of retired	7	269,344	4	86,633
	Disability	0	0	0	0
June 30, 2005	Retirement	12	1,159,324	8	402,329
	Survivor of active	0	35,224	1	14,247
	Survivor of retired	6	211,269	6	75,799
	Disability	0	0	0	0
June 30, 2006	Retirement	11	952,792	11	583,695
	Survivor of active	2	89,661	2	33,794
	Survivor of retired	6	219,711	4	79,701
	Disability	1	54,000	0	0
June 30, 2007	Retirement	47	2,802,873	15	967,969
	Survivor of active	1	64,452	2	40,742
	Survivor of retired	13	526,008	4	91,948
	Disability	0	0	1	54,000



Rolls at End of Year				
Number	Annual Allowances	Percentage Increase (Decrease) in Annual Allowance	Average Annual Allowance	Percentage Increase (Decrease) in Average Annual Allowance
257	\$13,782,720	4.00%	\$53,629	3.19%
44	903,906	3.26	20,543	3.26
80	1,572,764	7.60	19,660	7.60
0	0	(100.00)	0	(100.00)
270	14,667,848	6.42	54,325	1.30
44	938,726	3.85	21,335	3.86
79	1,684,849	7.13	21,327	8.48
0	0	0.00	0	0.00
271	15,091,466	2.89	55,688	2.51
42	918,395	(2.17)	21,867	2.49
82	1,867,560	10.84	22,775	6.79
0	0	0.00	0	0.00
275	15,848,461	5.02	57,631	3.49
41	939,372	2.28	22,912	4.78
82	2,003,030	7.25	24,427	7.25
0	0	0.00	0	0.00
275	16,217,558	2.33	58,973	2.33
41	995,239	5.95	24,274	5.94
84	2,143,040	6.99	25,512	4.44
1	54,000	0.00	54,000	0.00
307	18,052,462	11.31	58,803	(0.29)
40	1,018,949	2.38	25,474	4.71
93	2,577,100	20.25	27,711	7.94
0	0	(100.00)	0	(100.00)

Source of Data: MOSERS benefit payment database as of June 30, 2007.

Other *Actuarial Section* information reported based on MOSERS valuation data as of May 31, 2007.



Short-Term Solvency Test

Pension Trust Funds - Ten Years Ended June 30, 2007

MSEP

Fiscal Year	Actuarial Accrued Liabilities for				Percentage of Actuarial Liabilities Coverage by Assets Available for		
	Member Contributions (1)	Retirees and Beneficiaries (2)	Members, Employer Financed Portion (3)	Actuarial Value of Assets Available for Benefits	(1)	(2)	(3)
1998	\$447,716	\$1,688,502,950	\$3,229,936,517	\$4,210,635,094	100.0%	100.0%	78.1%
1999	0	1,970,504,367	3,535,464,262	4,908,820,033	100.0	100.0	83.1
2000	0	2,142,487,495	3,778,196,697	5,511,714,616	100.0	100.0	89.2
2001	0	2,496,277,500	3,568,889,216	5,881,232,850	100.0	100.0	94.8
2002	0	2,716,457,033	3,577,815,242	6,033,133,598	100.0	100.0	92.7
2003	0	3,016,029,050	3,646,262,356	6,057,329,072	100.0	100.0	83.4
2004	0	3,405,053,804	3,824,957,124	6,118,214,495	100.0	100.0	70.9
2005	0	3,629,506,014	3,948,522,003	6,435,344,102	100.0	100.0	71.1
2006	0	3,876,349,145	4,136,856,269	6,836,567,188	100.0	100.0	71.6
2007	0	4,208,621,537	4,291,807,104	7,377,289,283	100.0	100.0	73.8

ALJLAP*

Fiscal Year	Actuarial Accrued Liabilities for				Percentage of Actuarial Liabilities Coverage by Assets Available for		
	Member Contributions (1)	Retirees and Beneficiaries (2)	Members, Employer Financed Portion (3)	Actuarial Value of Assets Available for Benefits	(1)	(2)	(3)
1997	\$0	\$6,569,957	\$ 4,857,224	\$ 8,864,395	100.0%	100.0%	47.2%
1998	0	7,415,852	5,471,056	10,285,233	100.0	100.0	52.4
1999	0	7,883,988	6,890,537	11,763,737	100.0	100.0	56.3
2000	0	7,526,118	8,995,625	13,191,825	100.0	100.0	63.0
2001	0	7,534,368	9,275,594	14,410,199	100.0	100.0	74.1
2002	0	8,268,650	9,906,692	15,172,619	100.0	100.0	69.7
2003	0	9,709,096	10,237,391	15,626,461	100.0	100.0	57.8
2004	0	9,188,086	11,196,127	16,238,804	100.0	100.0	63.0

*Assets and liabilities transferred to the MSEP during FY05.

Judicial Plan

Fiscal Year	Actuarial Accrued Liabilities for				Percentage of Actuarial Liabilities Coverage by Assets Available for		
	Member Contributions (1)	Retirees and Beneficiaries (2)	Members, Employer Financed Portion (3)	Actuarial Value of Assets Available for Benefits	(1)	(2)	(3)
1998	\$0	\$108,392,273	\$ 99,187,524	\$ 0	100.0%	0.0%	0.0%
1999	0	120,543,611	107,258,730	6,067,305	100.0	5.0	0.0
2000	0	131,199,867	110,597,474	13,861,769	100.0	10.6	0.0
2001	0	143,163,718	104,815,186	22,613,050	100.0	15.8	0.0
2002	0	149,135,989	106,979,463	29,651,113	100.0	19.9	0.0
2003	0	157,923,805	109,126,052	34,566,516	100.0	21.9	0.0
2004	0	162,539,486	117,857,978	39,120,142	100.0	24.1	0.0
2005	0	168,703,822	123,600,064	44,223,509	100.0	26.2	0.0
2006	0	171,677,032	137,325,720	51,652,867	100.0	30.1	0.0
2007	0	199,489,503	127,176,870	61,903,516	100.0	31.0	0.0



Derivation of Experience Gain (Loss)

MSEP

Actual experience will never coincide exactly with assumed experience (except by coincidence). Gains and losses may offset each other over a period of years but sizeable year-to-year variations from assumed experience are common. Detail on the derivation of the experience gain (loss) is shown below.

	<u>\$ Millions</u>	<u>Actuarial Gain (Loss) as a % of Beginning Accrued Liabilities (Valuation Date as of June 30)</u>	
		1998	5.5%
(1) Unfunded actuarial accrued liability (UAAL) at beginning of year	1,176.6	1999	4.7
(2) Normal cost from last valuation	157.6	2000	2.7
(3) Actual employer contributions	243.1	2001	(4.4)
(4) Interest accrual: (1) x .085 + [(2) - (3)] x (.085 ÷ 2)	96.4	2002	(3.8)
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	1,187.5	2003	(6.4)
(6) Change from any changes in benefits, assumptions, or methods	12.8	2004	(6.0)
(7) Expected UAAL after changes: (5) + (6)	1,200.3	2005	(3.4)
(8) Actual UAAL at end of year	1,123.1	2006	(0.1)
(9) Gain (loss) (7) - (8)	77.2	2007	1.0
(10) Gain (loss) as a percent of actuarial accrued liabilities at start of year	1.0%		

Judicial Plan

The actuarial gains or losses realized in the operation of the retirement system provide an experience test. Gains and losses are expected to cancel each other over a period of years but sizable year-to-year fluctuations are common. Detail on the derivation of the actuarial gain (loss) is shown below, along with a year-by-year comparative schedule.

	<u>\$ Millions</u>	<u>Actuarial Gain (Loss) as a % of Beginning Accrued Liabilities (Valuation Date as of June 30)</u>	
		2000	(1.7)%
(1) Unfunded actuarial accrued liability (UAAL) at beginning of year	257.3	2001	(3.2)
(2) Employer normal cost middle of year	8.2	2002	(0.2)
(3) Employer contributions	23.7	2003	(1.6)
(4) Interest		2004	(1.0)
a. on (1)	21.9	2005	(0.1)
b. on (2)	0.3	2006	(1.1)
c. on (3)	1.0	2007	(0.6)
d. total [a + b - c]	21.2		
(5) Expected UAAL end of year before changes	263.0		
(6) Change in UAAL end of year			
a. amendments	0.0		
b. assumptions	0.0		
c. methods	0.0		
d. total	0.0		
(7) Expected UAAL after changes: (5) + (6d.)	263.0		
(8) Actual UAAL at end of year	264.8		
(9) Gain (loss) (7) - (8)	(1.8)		
(10) Gain (loss) as a percent of actuarial accrued liabilities at start of year	(0.6)%		

Summary of Plan Provisions*

MSEP and MSEP 2000 - Comparison of Plans for General State Employees - June 30, 2007

Plan Provision	MSEP	MSEP 2000
Membership eligibility	Members who work in a position normally requiring at least 1,000 hours of work a year.	Members hired for the first time on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year. Members who left state employment prior to becoming vested and return to work on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.
Normal retirement eligibility	Age 65 and active with 4 years of service, Age 65 with 5 years of service, Age 60 with 15 years of service, or "Rule of 80" - minimum age 48.	Age 62 with 5 years of service or "Rule of 80" - minimum age 48.
Early retirement eligibility	Age 55 with 10 years of service.	Age 57 with 5 years of service.
Benefit Life benefit Temporary benefit	1.6% x final average pay (FAP) x service. Not available.	1.7% x FAP x service. 0.8% x FAP x service (until age 62 - only if retiring under "Rule of 80").
Vesting	5 years of service.	5 years of service.
In-service cost-of-living adjustment (COLA)	COLA given for service beyond age 65. COLA provisions are determined by employment date.	Not available.
COLA	If hired before August 28, 1997, annual COLA is equal to 80% of the change in the consumer price index (CPI) with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%. If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.	Annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.
Survivor benefit (Death before retirement) Non duty-related death Duty-related death	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children. Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the members' Life Income Annuity paid to eligible children. Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).
Optional forms of payment (Death after retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: <ul style="list-style-type: none"> Life Income Annuity Unreduced Joint & 50% Survivor Joint & 100% Survivor 60 or 120 Guaranteed Payments BackDROP 	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: <ul style="list-style-type: none"> Life Income Annuity Joint & 50% Survivor Joint & 100% Survivor 120 or 180 Guaranteed Payments BackDROP

* This summary describes the plan provisions of the RSMo, as amended, that governed the programs, which MOSERS administered during the period covered by this report. It does not overrule any applicable statute or administrative rule and, in the event of a conflict, the applicable statute or rule would apply. The MSEP 2000 became effective July 1, 2000.



Summary of Plan Provisions

MSEP and MSEP 2000 - Comparison of Plans for Uniformed Member of the Water Patrol - June 30, 2007

Plan Provision	MSEP	MSEP 2000
Membership eligibility	Members who work in a position normally requiring at least 1,000 hours of work a year.	Members hired for the first time on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year. Members who left state employment prior to becoming vested and return to work on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.
Normal retirement eligibility	Age 55 and active with 4 years of service, Age 55 with 5 years of service, or "Rule of 80" - minimum age 48.	Age 62 with 5 years of service or "Rule of 80" - minimum age 48.
Early retirement eligibility	Not available.	Age 57 with 5 years of service.
Benefit Life benefit Temporary benefit	1.6% x FAP x service increased by 33.3%. Not available.	1.7% x FAP x service. 0.8% x FAP x service (until age 62 - only if retiring under "Rule of 80").
Vesting	5 years of service.	5 years of service.
In-service COLA	COLA given for service beyond age 65. COLA provisions are determined by employment date.	Not available.
COLA	If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%. If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.	Annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.
Survivor benefit (Death before retirement) Non duty-related death Duty-related death	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children. Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children. Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).
Optional forms of payment (Death after retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: <ul style="list-style-type: none"> • Life Income Annuity • Unreduced Joint & 50% Survivor • Joint & 100% Survivor • 60 or 120 Guaranteed Payments • BackDROP 	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: <ul style="list-style-type: none"> • Life Income Annuity • Joint & 50% Survivor • Joint & 100% Survivor • 120 or 180 Guaranteed Payments • BackDROP



Summary of Plan Provisions

MSEP and MSEP 2000 - Comparison of Plans for Legislators - June 30, 2007

Plan Provision	MSEP	MSEP 2000
Membership eligibility	Elected to the General Assembly.	Elected to the General Assembly on or after July 1, 2000.
Normal retirement eligibility	Age 55 with 3 full-biennial assemblies.	Age 55 with 3 full-biennial assemblies or "Rule of 80" - minimum age 50.
Early retirement eligibility	Not available.	Not available.
Benefit		
Life benefit	\$150 per month per biennial assembly.	(Monthly base pay ÷ 24) x service capped at 100% of pay.
Temporary benefit	Not available.	Not available.
Vesting	3 full-biennial assemblies.	3 full-biennial assemblies.
In-service COLA	COLA given for service beyond age 65. COLA provisions are determined by employment date.	Not available.
COLA	<p>If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.</p> <p>If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.</p>	Benefit adjusted each year based on the percentage increase in the current pay for an active member of the General Assembly.
Survivor benefit (Death before retirement)	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.
Non duty-related death		
Duty-related death	Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).	Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).
Optional forms of payment (Death after retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: <ul style="list-style-type: none"> Life Income Annuity Unreduced Joint & 50% Survivor Joint & 100% Survivor 60 or 120 Guaranteed Payments 	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: <ul style="list-style-type: none"> Life Income Annuity Joint & 50% Survivor Joint & 100% Survivor 120 or 180 Guaranteed Payments



Summary of Plan Provisions

MSEP and MSEP 2000 - Comparison of Plans for Elected Officials - June 30, 2007

Plan Provision	MSEP	MSEP 2000
Membership eligibility	Elected to state office.	Elected to state office on or after July 1, 2000.
Normal retirement eligibility	Age 65 with 4 years of service, Age 60 with 15 years of service, or "Rule of 80" - minimum age 48.	Age 55 with 4 years of service or "Rule of 80" - minimum age 50.
Early retirement eligibility	Age 55 with 10 years of service.	Not available.
Benefit Life benefit	<u>12 or more years of service</u> 50% or current pay for highest position held. <u>Less than 12 years of service</u> 1.6% x FAP x service.	(Monthly base pay ÷ 24) x service capped at 12 years or 50% of pay.
Temporary benefit	Not available.	Not available.
Vesting	4 years of service.	4 years of service.
In-service COLA	COLA provisions determined by amount of service relative to 12 years and date of employment.	Not available.
COLA	<u>12 or more years of service</u> COLA is equal to the percentage increase in the current pay of an active elected state official in the highest position held. <u>Less than 12 years of service</u> If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%. If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.	Benefit adjusted each year based on the percentage increase in the current pay for an active elected state official in the highest position held.
Survivor benefit (Death before retirement) Non duty-related death	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.	Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children.
Duty-related death	Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).	Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement).
Optional forms of payment (Death after retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: <ul style="list-style-type: none"> • Life Income Annuity • Unreduced Joint & 50% Survivor • Joint & 100% Survivor • 60 or 120 Guaranteed Payments 	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: <ul style="list-style-type: none"> • Life Income Annuity • Joint & 50% Survivor • Joint & 100% Survivor • 120 or 180 Guaranteed Payments



Summary of Plan Provisions*

MSEP and MSEP 2000 - Administrative Law Judges and Legal Advisors - June 30, 2007

Plan Provision	Requirement
Membership eligibility	Administrative law judge or legal advisor in the Division of Workers' Compensation, a member or legal counsel of the Labor and Industrial Relations Commission, chairperson of the State Board of Mediation, or an administrative hearing commissioner hired prior to April 26, 2005.
Normal retirement eligibility	Age 62 with 12 years of service, Age 60 with 15 year of service, or Age 55 with 20 years of service.
Reduced retirement eligibility	Age 65 with less than 12 years of service with reduced benefit, based upon years of service relative to 12 years.
Benefit formula	12 or more years of service 50% of the average highest 12 consecutive months of salary.
Vesting	Immediate.
In-service COLA	Not available.
COLA	If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%. If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.
Survivor benefit (Death before retirement)	Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service at age 70.
Survivor benefit (Death after retirement)	Survivor benefit to eligible spouse equal to 50% of the member's annuity at the time of death.

* All new administrative law judges and legal advisors hired on or after April 26, 2005, who had not been previously covered by a retirement system under Chapter 287, RSMo, participate in the MSEP, which is covered under Chapter 104, RSMo.



Summary of Plan Provisions

Judicial Plan - June 30, 2007

Plan Provision	Requirement
Membership eligibility	Must be a judge or commissioner of the supreme court or the court of appeals, a judge of the circuit court, probate court, magistrate court, court of common pleas, court of criminal corrections, a justice of the peace, or a commissioner or deputy commissioner of the circuit court appointed after February 29, 1972, a commissioner of the juvenile division of the circuit court appointed pursuant to Section 211.023, RSMo, a commissioner of the drug court pursuant to Section 478.466, RSMo, or a commissioner of the family court.
Normal retirement eligibility	Age 62 with 12 years of service, Age 60 with 15 year of service, or Age 55 with 20 years of service.
Reduced retirement eligibility	Age 62 with less than 12 years of service or age 60 with less than 15 years of service with a reduced benefit based on years of service relative to 12 or 15 years.
Benefit formula	<u>12 or 15 more years of service</u> 50% of the FAP. <u>Less than 12 or 15 years of service</u> <i>If between age 60 and 62</i> (years of service ÷ 15) x 50% of compensation on the highest court served. <i>If age 62</i> (years of service ÷ 12) x 50% of compensation on the highest court served.
Vesting	Immediate.
In-service COLA	Judges who are at least age 60 and work beyond the date first eligible for unreduced benefits will receive COLAs for each year worked beyond normal retirement eligibility. COLA provisions are determined by date of employment.
COLA	If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%. If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%.
Survivor benefit (Death before retirement)	Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service at age 70.
Survivor benefit (Death after retirement)	Survivor benefit to eligible spouse equal to 50% of the member's annuity at the time of death.



Summary of Plan Provisions

Life Insurance Plans - June 30, 2007

MOSERS administers basic and optional term life insurance plans for eligible state employees and retirees.

Active Members*	Requirement
<p>Basic life insurance An amount equal to one times annual salary (with a minimum of \$15,000) while actively employed.</p>	Actively employed in an eligible state position resulting in membership in MOSERS.
<p>Duty-related death benefit Duty-related death benefit equivalent to two times the annual salary the member was earning at the time of death in addition to the basic life insurance amount of one times annual salary.</p>	Actively employed in an eligible state position resulting in membership in MOSERS.
<p>Optional life insurance Additional life insurance may be purchased in a flat amount in multiples of \$10,000 not to exceed the maximum (lesser of six times annual salary or \$800,000). Spouse coverage may be purchased in multiples of \$10,000 up to a maximum of \$100,000; however, the amount of spouse coverage cannot exceed the amount of optional life insurance coverage the member has purchased. Coverage for children is available in a flat amount of \$10,000 per child.</p>	Actively employed in an eligible state position resulting in membership in MOSERS.
<p>* Terminating employees may convert coverage up to the amount they had as an active employee at individual rates.</p>	
Retired Members	Requirement
<p>Basic life insurance at retirement \$5,000 basic life insurance during retirement.</p>	Must retire directly from active employment.
<p>Optional life insurance at retirement (MSEP) An employee may retain up to the lesser of \$60,000 or the amount of optional life insurance coverage held at the time of retirement at the group rate and may convert any remaining basic and optional life insurance at individual rates.</p>	Must retire directly from active employment.
<p>Optional life insurance at retirement (MSEP 2000) Under "Rule of 80" an employee may retain the current amount of coverage prior to retirement until age 62 at which time coverage is reduced to \$60,000, and may convert any remaining basic and optional life insurance at individual rates. Coverage for spouse and/or children ends at member's retirement and may be converted at individual rates.</p>	Must retire directly from active employment.



Summary of Plan Provisions

Long-Term Disability (LTD) Plans - June 30, 2007

MOSERS administers the LTD Plan for eligible state employees who become disabled during active employment.

Active Members	Requirement
<p>General State Employees, Legislators, and Elected State Officials Members of MOSERS in a position normally requiring 1,000 hours of work a year are covered under the LTD plan, unless they work for a state agency, which has its own LTD plan.</p>	<p>Long-term disability - Eligible participants receive 60% of their compensation minus primary social security, workers' compensation, and employer provided income. Benefits commence after 90 days of disability or after sick leave expires, whichever occurs last. LTD benefits cease upon the earliest of (i) when disability ends, (ii) when the member is first eligible for normal retirement benefits or is receiving early retirement benefits, (iii) when the member returns to work, or (iv) upon a member's death.</p>
<p>Water Patrol</p>	<p>Uniformed members who are eligible for statutory occupational disability receive benefits equal to 50% of compensation with no offset for social security at the time of disability. For nonoccupational disabilities, eligible participants receive the same benefit as general employees.</p>
<p>Judges</p>	<p>In addition to the disability benefits provided to general employees, judges also receive benefits under the state constitution. Participants receive 50% of salary until the current term expires.</p>



Changes in Plan Provisions

Senate Bill 406

This year, the Governor signed an omnibus retirement bill that affects the retirement plans administered by MOSERS. The bill contains general, long-awaited “cleanup” provisions and several substantive changes involving the oversight of the state’s Deferred Compensation Program and the establishment of a medical benefit trust fund.

This legislation transferred responsibility for the administration of the Missouri State Employees’ Deferred Compensation Program from the Missouri State Public Employees’ Deferred Compensation Commission to the MOSERS Board of Trustees effective September 1. In order to assist in the transition, two deferred compensation commissioners (the chair of the commission and the House Speaker’s designee) will serve as ex-officio members on the MOSERS board for issues related to the deferred compensation program. The commission chair will serve through December 2008; the House member will serve through December 2009. This change was initiated by a legislative member of the Deferred Compensation Commission based on the belief that plan participants would benefit from MOSERS’ investment and administrative expertise in monitoring the program. We anticipate this change will be transparent to plan participants. The third party administration of individual accounts and the investment products available will continue to be handled by outside service providers paid from charges to the participants as is the current practice.

The legislation also allows the MOSERS Board of Trustees to provide investment services in connection with medical benefit funds established for state employees, retirees, and their dependents who participate in a state medical plan administered by the Missouri Consolidated Health Care Plan (MCHCP) or other medical benefit plans established or maintained by the state. The MCHCP and the Commissioner of Administration asked the MOSERS board to assume this responsibility to take advantage of the investment expertise already in place at MOSERS. From MOSERS’ perspective, investment of any assets will be contingent upon the receipt of a private letter ruling from the IRS stating that health care funds can be commingled with retirement funds for purposes of investing. An application for such ruling was filed several months ago and we anticipate receiving a response from the IRS in the near future. Subject to a favorable ruling, MOSERS will be able to invest funds that will be set aside to begin pre-funding a portion of the retiree health care expenses.

As it affects public employee retirement plans in general, the legislation also includes pension reform measures that will require all public employee pension plans in the state to adhere to certain standards in the areas of funding, payment of contributions, ethics, and trustee education. As it relates to funding, specific provisions will prohibit a retirement plan from providing benefit enhancements if the funded ratio of the plan falls below 80%. These provisions will (1) allow a plan with a funding ratio greater than 80% to adopt or implement a benefit increase or enhancement provided the funded ratio does not fall below 75% after implementation; (2) provide that increases in the unfunded actuarial accrued liability be amortized over a period not to exceed 30 years for purposes of calculating the contributions necessary to fund the benefit; and (3) require a plan with a funded ratio below 60% to have an actuary prepare an accelerated contribution schedule. These provisions exclude the Judicial Plan administered by MOSERS.

All provisions of the bill that affect MOSERS plans, including the general cleanup, are described in the following section-by-section analysis:

Chapter 104, RSMo – Legislative Changes Affecting MOSERS

- **Section 104.010(7)** – Adds language that would allow the board to promulgate rules necessary to accommodate any change in the state payroll system as it relates to how final average compensation is calculated for purposes of determining a retirement benefit. (The state presently is using a bi-monthly pay system and there have been discussion about moving to two-week pay periods in the future.)
- **Section 104.010.1(20)(a)** – Changes the required hours for benefit eligibility under the definition of employee from 1000 hours to 1040 hours to be consistent with the personnel advisory board rules and removes existing language that is no longer necessary.



- **Section 104.010.1(20)(b)** – Clarifies that a retiree is not an employee. Also changes the required hours for benefit eligibility from 1000 hours to 1040 hours to be consistent with the personnel advisory board rules and further, requires that part-time legislative employees, employed on or after August 28, 2007, be treated like all other state employees with regard to retirement eligibility (on a prospective basis only).
- **Section 104.010.1(20)(d)** – Removes reference to required hours for benefit eligibility since it is not accurate nor necessary (the requirement has been in effect since 1984 rather than 1988 as presently stated in this provision).
- **Section 104.010(27)** – Changes the highways and transportation and highway patrol employees' retirement system to the Missouri department of transportation and highway patrol employees' retirement system (MPERS) to reflect the most recent name change and clarifies the definition of a member for both plans (MPERS and MOSERS).
- **Section 104.010(36)** – Changes the highways and transportation and highway patrol employees' retirement system to the Missouri department of transportation and highway patrol employees' retirement system to reflect the most recent name change.
- **Section 104.010.2** – Adds language to allow MOSERS to pay benefits under a benefit plan in excess of the limitations established by Section 415 of the Internal Revenue Code.
- **Section 104.312.1(3)** – Clarifies the reduction for a spousal benefit is to be equally distributed between the member and the ex-spouse under a division of benefits order whenever the ex-spouse is also the beneficiary of a joint and survivor option.
- **Section 104.312.4** – Clarifies that division of benefits orders will be applied to the plan the member is participating in on the date of dissolution.
- **Section 104.320.2** – Allows the MOSERS Board of Trustees to provide investment services in connection with medical benefit funds established for state employees, retirees, and their dependents who participate in a state medical plan administered by the Missouri Consolidated Health Care Plan or other medical benefit plans established or maintained by the state. Also allows the board to assist with procedures relating to state payroll, or any other state employee benefits, as requested by the office of administration or other state agency. Adds language that allows MOSERS board to contract with third party administrators for investing monies for the medical trust fund. Also adds language that allows the MOSERS board to borrow money and issue negotiable notes, bonds, or other instruments associated with the medical trust.
- **Section 104.344** – Removes language that allows members to purchase contract service. Presently, most persons who had contract service have already made application for the service credit. The remaining applicants are often ineligible for credit due to a lack of appropriate documentation necessary to certify service. Also changes the service purchase provisions to be consistent with the practice in place for purchase of military service (clarifies that the salary and contribution rates are determined when a member is initially covered by MPERS or MOSERS). Adds language to prohibit receiving duplicate credit for purchased service in more than one retirement system for the same period of service.
- **Section 104.352.1** – Eliminates prior service credit for part-time legislative service that does not qualify for retirement eligibility (on a prospective basis only).
- **Section 104.352.2 and .3** – Corrects the numerical statutory reference throughout this section.
- **Section 104.354** – Corrects the numerical statutory reference (consistent with change cited above).
- **Section 104.380** – Changes the required hours for benefit eligibility under the definition of employee from 1000 hours to 1040 hours to be consistent with the personnel advisory board rules and requires a reemployed retiree to work continuously for at least one year in order to receive an additional annuity.



- **Section 104.395.1, 3, 4, and 8** – Clarifies that a member must request a pop-up in the event of a spouse's death, states when such an election can occur, and references Section 104.620, which contains the provisions for resolving final payments. This language is consistent with the language in the new plan that governs this provision, and also affirms the present practice regarding changing member elections.
- **Section 104.606** – New language clarifies that members must apply and complete service credit purchases under Chapters 104 and 105 prior to applying for retirement.
- **Section 104.805** – Allows Department of Revenue employees previously transferred to MoDOT to elect MPERS participation within a sixty-day window.
- **Section 104.1003(9)** – Clarifies that a member may receive only one day of credited service for any one calendar day of service.
- **Section 104.1003(13)** – Changes the required hours for benefit eligibility from 1000 hours to 1040 hours to be consistent with the personnel advisory board rules.
- **Section 104.1003(13)(e)** – Corrects an oversight made when the MSEP 2000 became law by amending the definition of employee in the new plan to include part-time legislative employees employed on or after July 1, 2000, but prior to August 28, 2007.
- **Section 104.1003(16)** – Adds language that would allow the board to promulgate rules necessary to accommodate any change in the state payroll system as it relates to how final average compensation is calculated for purposes of determining a retirement benefit. (The state presently is using a bi-monthly pay system and there have been discussions about moving to two-week pay periods in the future.)
- **Section 104.1003(21)(e)** – Adds language clarifying that pay does not include any amounts for which contributions have not been made.
- **Section 104.1003(24)** – Changes the highways and transportation and highway patrol employees' retirement system to the Missouri department of transportation and highway patrol employees' retirement system to reflect the most recent name change.
- **Section 104.1003.2** – Adds language to allow MOSERS to pay benefits under a benefit plan in excess of the limitations established by Section 415 of the Internal Revenue Code.
- **Section 104.1012.3** – Adds safe harbor provisions for the board related to education and advice given to members for retirement planning.
- **Section 104.1015(9)** – Adds language that requires any change in plan election to be completed prior to mailing or electronically transferring the first annuity payment to retiring members.
- **Section 104.1021.11** – Corrects the numerical statutory reference (consistent with changes cited previously) and changes the legislative service requirement for purchasing service from two to three biennial assemblies to be consistent with the legislative vesting requirement.
- **Section 104.1024.1** – Adds clarifying language stating that annuity payments will be issued by the last day of each month provided all documentation required for the calculation and payment of benefits has been received.
- **Section 104.1024.4** – Clarifies that the temporary benefit ceases at age 62, which is currently the earliest eligibility age for social security.
- **Section 104.1027.1, 3, and 7** – Inserts references to Section 104.1054, which contain the provisions for resolving final payments and clarifies the latest time when a member can change a benefit election. Also removes an inaccurate formula for calculating an option which should have been removed when the minimum eligibility age for Rule of 80 was changed from 50 to 48.



- **Section 104.1039** – Requires a reemployed retiree to work continuously for at least one year in order to receive an additional annuity.
- **Section 104.1051.1(3)** – Clarifies the reduction for a spousal benefit to be equally distributed between the member and the ex-spouse under a division of benefits order whenever the ex-spouse is also the beneficiary of a joint and survivor option.
- **Section 104.1051.4** – Clarifies that a division of benefits order will be applied to the year 2000 plan if a closed plan member elects coverage under the year 2000 plan prior to the date of dissolution.
- **Section 104.1072.4** – Clarifies that optional life insurance in excess of \$60,000 ceases at age 62 for retirees who retired under Rule of 80.
- **Section 104.1087.1** – Corrects the numerical statutory reference (consistent with changes cited previously).
- **Section 104.1090.1(5)** – Adds language to require agreements between retirement plans for transfer of service credit.

Chapter 105, RSMo – Pension Reform Provisions Affecting All Public Employee Retirement Plans

- **Section 105.660, 105.666, 105.667, and 105.684** – As it relates to MOSERS, the legislation will require unfunded accrued liabilities to be amortized over a period not to exceed 30 years (which is consistent with current policy). These provisions also require each plan, in conjunction with staff and advisors, to establish a board member education program beginning on January 1, 2008. The curriculum must include, at a minimum, education in the areas of duties and responsibilities of board members as trustees, ethics, governance process and procedure, pension plan design and administration of benefits, investments including but not limited to fiduciary duties, legal liability and risks associated with plan administration, sunshine law requirements under Chapter 610, actuarial principles, and the role of staff and consultants in plan administration. The legislation requires new board members appointed or elected to a board after January 1, 2008, to complete such education within 90 days of becoming a new board member. Board members who have served one or more years are required to attend at least two continuing education programs each year.

The plan is also required, upon the request of any individual participant, to provide an annual pension benefit statement that is written in a manner that can be understood by the average plan participant. The statement is required to include total benefits accrued, date first eligible for a normal retirement benefit, and projected benefit at normal retirement. Any plan failing to do so shall submit in writing to the Joint Committee on Public Employee Retirement why such information cannot be provided as requested.

The legislation also contains provisions that prohibit board members from receiving any gain or profit from any funds or transaction of the plan, except benefits from interest in investments common to all members of the plan, if entitled. Additional provisions exist that prohibit a board member or employee from accepting any political contribution, gratuity, or compensation for the purpose of influencing action with respect to the investment of the funds of the system, and describe the penalties for such action to include forfeiture of office in addition to being subject to any penalties described for bribery. Any trustee or employee that is convicted of a felony in conjunction with their duties would not be eligible to receive any retirement benefits from the retirement plan.

Provisions also exist that would prohibit a retirement plan from providing benefit enhancements if the funded ratio for the plan falls below 80%. Specifically, these provisions:

- Allow a plan with a funding ratio greater than 80% to implement a benefit increase or enhancement provided the funded ratio does not fall below 75% after implementation.
- Provide that increases in the unfunded actuarial accrued liability (UAAL) in connection with benefit increases be amortized over a period not to exceed 30 years for purposes of calculating the contributions necessary to fund the benefit.



- Require a plan with a funded ratio below 60% to have an actuary prepare an accelerated contribution schedule.
- Exclude the Judicial Plan administered under Chapter 476, RSMo.
- **Section 105.910** – Contains provisions that will transfer the administration of the Missouri State Employees' Deferred Compensation Program from the Missouri State Public Employees' Deferred Compensation Commission to the MOSERS Board of Trustees.
- **Section 211.393** – Treats juvenile court grant service as follows:
 - All prior and future grant service will be allowable for service credit under the definition of juvenile court employee.
 - Juvenile officers covered by MOSERS in single county circuits will receive prior service credit for all multi-county circuit grant service after July 1999.
 - Juvenile court employees covered by MOSERS in multi-county circuits will receive prior service credit for all multi-county circuit grant service after July 1999.
 - Any MOSERS member who has multi-county circuit grant service as a juvenile court employee after July 1999 will receive prior service credit.
- Single county juvenile court circuit service will be treated as follows:
 - Juvenile officers covered by MOSERS in single county circuits will receive prior service credit for single county service prior to July 1999.
 - Juvenile court employees covered by MOSERS in multi-county circuits will receive prior service credit for single county service prior to July 1999.
 - Any MOSERS member who has single county circuit service as a juvenile court employee will receive prior service credit for single county service prior to July 1999.

All of the juvenile court provisions mentioned previously will apply retroactively to terminated-vested members and retirees and allow for refunds if such service was purchased in MOSERS.



Actuarial Present Values

As of June 30, 2007

MSEP

Actuarial Present Value as of June 30, 2007	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued liabilities
Active members			
Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$4,247,177,841	\$ 828,007,948	\$3,419,169,893
Disability benefits likely to be paid to present active members who become totally and permanently disabled	124,921,972	55,045,315	69,876,657
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	158,026,870	43,530,628	114,496,242
Separation benefits likely to be paid to present active members	<u>416,674,319</u>	<u>206,573,593</u>	<u>210,100,726</u>
Active member totals	<u>\$4,946,801,002</u>	<u>\$1,133,157,484</u>	3,813,643,518
Members on leave of absence & LTD			
Service retirement benefits based on service rendered before the valuation date			89,677,437
Terminated-vested members			
Service retirement benefits based on service rendered before the valuation date			388,486,149
Retired lives			
BackDROP installment payments incurred, but not yet paid			4,208,258,030
Total actuarial accrued liability			<u>363,507</u>
Actuarial value of assets			<u>8,500,428,641</u>
Unfunded actuarial accrued liability			<u>7,377,289,283</u>
			<u>\$1,123,139,358</u>



Actuarial Present Values

As of June 30, 2007

Judicial Plan

Actuarial Present Value as of June 30, 2007	Actuarial Present Value	Portion Covered by Future Normal Cost Contributions	Actuarial Accrued liabilities
Active members			
Service retirement benefits based on services rendered before and likely to be rendered after valuation date	\$162,474,512	\$52,083,988	\$110,390,524
Disability benefits likely to be paid to present active members who become totally and permanently disabled	1,665,431	1,406,051	259,380
Survivor benefits likely to be paid to widows and children of present active members who die before retiring	5,637,401	3,264,874	2,372,527
Active member totals	\$169,777,344	\$56,754,913	113,022,431
Terminated-vested members			
Service retirement benefits based on service rendered before the valuation date			14,154,439
Retired lives			
Total actuarial accrued liability			199,489,503
Actuarial value of assets			326,666,373
Unfunded actuarial accrued liability			61,903,516
			\$264,762,857