

*When is the
MSEP 2000 effective?*

The MSEP 2000 became
effective July 1, 2000.

When





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September 19, 2000

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

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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 current 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, 2000. These valuations indicate that the contribution rates, established by the board of trustees for the benefits scheduled to be in effect on July 1, 2000, meet or exceed the basic financial objective. These contribution rates are 11.59% of payroll for 57,774 general state employees, 22.32% of payroll for 52 administrative law judges, and 55.30% of payroll for 375 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 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 assumptions were adopted by the board of trustees and were based upon actual experience of MOSERS during the years 1995 to 1999. Assets are valued according to a method that fully recognizes expected investment return and averages unanticipated market return over a three-year period. The assumptions and methods utilized 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. The changes made since the previous valuation are highlighted on page 97. 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 in sound condition in accordance with actuarial principles of level percent of payroll financing.

Respectfully submitted,


Alan E. Sonnanstine, A.S.A.
Senior Consultant & Actuary


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

Economic Assumptions

The investment return rate used in the valuations was 8.5 percent 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 74. Part of the assumption for each age is for merit and/or seniority increase, and the other 4.5 percent recognizes wage inflation. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

The active member payroll is assumed to increase 4.5 percent annually, which is the portion of the individual pay increase assumptions attributable to inflation.

Future COLAs are assumed to be 4.25 percent per year on a compounded basis when a minimum COLA of 4 percent is in effect and 3.6 percent per year on a compounded basis when no minimum COLA is in effect.

The number of active members is assumed to continue at the present number. Active and retired member data is reported as of May 31. 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 postretirement 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 75. 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 76. It is assumed that each member will be eligible for one-half year of service credit resulting from unused leave at retirement and service credit purchased.

The probabilities of withdrawal from service, death-in-service, and disability are shown for sample ages on page 74. 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 actuarial 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 fiscal year.

The asset valuation method fully recognizes expected investment return and averages unanticipated market return over a 3-year period.

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 percent are married at retirement, 70 percent of those dying in active service are married, and men are three years older than their spouses.

The liabilities for active members were based on the MSEP benefits, except for general employees with an age at hire of 35 years or less, who were assumed to elect MSEP 2000.

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

**Separations From Active Employment Before Service Retirement
 and Individual Pay Increase Assumptions**

| 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 | 25.2% | 24.7% | | | | | | | |
| | 1 | 17.1 | 17.7 | | | | | | | |
| | 2 | 14.4 | 14.4 | | | | | | | |
| | 3 | 12.8 | 12.8 | | | | | | | |
| | 4 | 12.0 | 12.0 | | | | | | | |
| 20 | +5 | 12.0 | 11.0 | .04% | .03% | .00% | .00% | 2.7% | 4.5% | 7.2% |
| 25 | | 12.0 | 11.0 | .05 | .04 | .05 | .03 | 2.6 | 4.5 | 7.1 |
| 30 | | 8.8 | 8.9 | .06 | .04 | .12 | .04 | 2.2 | 4.5 | 6.7 |
| 35 | | 6.2 | 6.0 | .08 | .06 | .16 | .13 | 1.9 | 4.5 | 6.4 |
| 40 | | 4.6 | 4.9 | .12 | .08 | .21 | .21 | 1.4 | 4.5 | 5.9 |
| 45 | | 3.5 | 4.3 | .19 | .11 | .29 | .25 | 1.2 | 4.5 | 5.7 |
| 50 | | 2.8 | 3.6 | .35 | .17 | .41 | .41 | 0.7 | 4.5 | 5.2 |
| 55 | | 2.4 | 2.9 | .59 | .31 | .77 | .85 | 0.7 | 4.5 | 5.2 |
| 60 | | 2.4 | 2.9 | .90 | .54 | 1.40 | 1.50 | 0.0 | 4.5 | 4.5 |
| 65 | | 2.4 | 2.9 | 1.44 | .83 | 0.00 | 0.00 | 0.0 | 4.5 | 4.5 |

* Two percent of the deaths in active service are assumed to be duty-related.

Missouri State Employees' Plan
Summary of Actuarial Assumptions
 June 30, 2000

Single Life Retirement Values

| Sample Attained Ages | Present Value of \$1/Month the First Year Increasing 4.25/3.60* Percent Yearly | | | | Future Life Expectancy (Years) | | | |
|----------------------------|---|-----------|------------|-----------|--------------------------------|-------|------------|-------|
| | Service | | Disability | | Service | | Disability | |
| | Men | Women | Men | Women | Men | Women | Men | Women |
| 40 | \$ 214.64 | \$ 226.72 | \$ 140.38 | \$ 164.15 | 38.46 | 44.22 | 19.70 | 26.02 |
| 45 | 202.28 | 216.86 | 130.41 | 156.72 | 33.73 | 39.41 | 17.50 | 23.70 |
| 50 | 187.99 | 204.92 | 119.42 | 148.39 | 29.17 | 34.67 | 15.35 | 21.39 |
| 55 | 171.91 | 190.99 | 108.73 | 139.83 | 24.82 | 30.06 | 13.43 | 19.18 |
| 60 | 153.85 | 175.27 | 99.75 | 130.57 | 20.70 | 25.67 | 11.87 | 17.01 |
| 65 | 133.91 | 157.64 | 92.34 | 120.03 | 16.82 | 21.50 | 10.56 | 14.82 |
| 70 | 113.09 | 138.02 | 83.34 | 107.15 | 13.32 | 17.57 | 9.13 | 12.50 |
| 75 | 93.21 | 117.24 | 71.60 | 90.70 | 10.36 | 13.99 | 7.49 | 10.00 |
| 80 | 74.25 | 97.10 | 56.64 | 72.75 | 7.83 | 10.91 | 5.66 | 7.62 |
| 85 | 58.38 | 77.87 | 42.52 | 56.64 | 5.89 | 8.29 | 4.08 | 5.66 |

* Increasing 3.6 percent yearly after exceeding 65 percent of the original benefit.

Missouri State Employees' Plan
Summary of Actuarial Assumptions
 June 30, 2000

Percent of Eligible Active Members Retiring Next Year

| Retirement Ages | Percent | |
|--------------------|---------|--------|
| | Men | Women |
| 50 | 25.0% | 20.0% |
| 51 | 25.0 | 19.5 |
| 52 | 21.0 | 18.5 |
| 53 | 17.0 | 16.0 |
| 54 | 12.5 | 12.5 |
| 55 | 6.5 | 6.7 |
| 56 | 6.5 | 6.7 |
| 57 | 6.5 | 6.7 |
| 58 | 6.5 | 6.7 |
| 59 | 6.5 | 8.3 |
| 60 | 9.5 | 12.0 |
| 61 | 13.0 | 16.5 |
| 62 | 29.0 | 28.0 |
| 63 | 24.0 | 18.0 |
| 64 | 30.0 | 33.0 |
| 65 | 40.0 | 50.0 |
| 66 | 32.0 | 27.0 |
| 67 | 26.0 | 27.0 |
| 68 | 23.0 | 27.0 |
| 69 | 23.0 | 27.0 |
| 70 | 23.0 | 27.0 |
| 71 | 23.0 | 27.0 |
| 72 | 23.0 | 27.0 |
| 73 | 23.0 | 27.0 |
| 74 | 23.0 | 27.0 |
| 75 & over | 100.0% | 100.0% |

Pension Trust Funds

Summary of Member Data Included in Valuations

June 30, 2000

Active Members

| Valuation Group | Number | Payroll | Group Averages | | |
|---|--------|------------------|----------------|-------------|-----------------|
| | | | Salary | Age (Years) | Service (Years) |
| Missouri State Employees' Plan | | | | | |
| Regular state employees | 55,933 | \$ 1,619,460,037 | \$ 28,954 | 42.9 | 9.9 |
| Elected officials | 6 | 579,440 | 96,573 | 51.7 | 9.4 |
| Legislative clerks | 122 | 2,762,414 | 22,643 | 49.2 | 12.0 |
| Legislators | 195 | 5,933,982 | 30,431 | 50.6 | 9.4 |
| Uniformed member of the water patrol | 83 | 3,030,232 | 36,509 | 37.7 | 12.0 |
| Conservation department | 1,435 | 51,930,975 | 36,189 | 43.1 | 13.8 |
| Total MSEP group | 57,774 | \$ 1,683,697,080 | \$ 29,143 | 42.9 | 9.9 |
| Administrative Law Judges and Legal Advisors' Plan | | | | | |
| | 52 | \$ 4,072,888 | \$ 78,325 | 46.8 | 8.7 |
| Judicial Plan | | | | | |
| | 375 | \$ 37,107,487 | \$ 98,953 | 52.4 | 11.2 |

Retired Lives

| Type of Benefit Payment | Number | Annual Benefits | Group Averages | |
|---|--------|-----------------|----------------|-------------|
| | | | Benefit | Age (Years) |
| Missouri State Employees' Plan | | | | |
| Retirement | 15,945 | \$ 162,945,385 | \$ 10,219 | 71.5 |
| Disability | 54 | 211,687 | 3,920 | 58.1 |
| Survivor of active member | 989 | 5,974,870 | 6,041 | 58.6 |
| Survivor of retired member | 1,208 | 7,877,342 | 6,521 | 72.3 |
| Total MSEP group | 18,196 | \$ 177,009,284 | \$ 9,728 | 70.8 |
| Administrative Law Judges and Legal Advisors' Plan | | | | |
| | 23 | \$ 751,338 | \$ 32,667 | 74.0 |
| Judicial Plan | | | | |
| | 363 | \$ 13,624,032 | \$ 37,532 | 75.1 |

Others

| Group | Terminated-Vested | Leave of Absence | Long-Term Disability |
|---|-------------------|------------------|----------------------|
| Missouri State Employees' Plan | 11,774 | 232 | 930 |
| Administrative Law Judges and Legal Advisors' Plan | 20 | 0 | 0 |
| Judicial Plan | 64 | 0 | 0 |

Missouri State Employees' Plan

Active Members by Attained Age and Years of Service

June 30, 2000

| Attained Age | Years of Service to Valuation Date | | | | | | | Totals | |
|---------------|------------------------------------|---------------|--------------|--------------|--------------|--------------|--------------|---------------|-------------------------|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 Plus | Number | Valuation Payroll |
| Under 20 | 76 | | | | | | | 76 | \$ 1,450,703 |
| 20-24 | 2,061 | 23 | | | | | | 2,084 | 42,721,134 |
| 25-29 | 4,841 | 801 | 17 | | | | | 5,659 | 135,712,394 |
| 30-34 | 3,819 | 2,291 | 652 | 36 | | | | 6,798 | 179,324,801 |
| 35-39 | 3,049 | 1,908 | 1,680 | 719 | 64 | | | 7,420 | 208,108,824 |
| 40-44 | 2,895 | 1,698 | 1,720 | 1,222 | 939 | 84 | | 8,558 | 249,674,689 |
| 45-49 | 2,547 | 1,656 | 1,701 | 1,108 | 1,433 | 873 | 64 | 9,382 | 294,608,374 |
| 50-54 | 1,905 | 1,535 | 1,510 | 1,058 | 1,166 | 1,146 | 449 | 8,769 | 279,077,483 |
| 55-59 | 1,102 | 918 | 991 | 690 | 696 | 529 | 549 | 5,475 | 176,833,726 |
| 60 | 143 | 103 | 180 | 101 | 75 | 53 | 90 | 745 | 23,847,377 |
| 61 | 120 | 110 | 118 | 78 | 73 | 66 | 101 | 666 | 22,030,153 |
| 62 | 89 | 111 | 122 | 64 | 66 | 46 | 84 | 582 | 19,213,752 |
| 63 | 70 | 77 | 76 | 53 | 43 | 35 | 47 | 401 | 13,447,051 |
| 64 | 40 | 70 | 74 | 52 | 34 | 15 | 37 | 322 | 10,660,930 |
| 65 | 27 | 52 | 59 | 35 | 20 | 15 | 32 | 240 | 7,812,130 |
| 66 | 21 | 21 | 37 | 20 | 9 | 10 | 14 | 132 | 4,467,322 |
| 67 | 16 | 14 | 19 | 16 | 11 | 11 | 11 | 98 | 3,320,112 |
| 68 | 11 | 19 | 16 | 13 | 11 | 8 | 8 | 86 | 2,525,405 |
| 69 | 9 | 14 | 16 | 7 | 3 | 3 | 7 | 59 | 1,833,818 |
| 70 & over | 37 | 26 | 38 | 35 | 35 | 17 | 34 | 222 | 7,026,902 |
| Totals | 22,878 | 11,447 | 9,026 | 5,307 | 4,678 | 2,911 | 1,527 | 57,774 | \$ 1,683,697,080 |

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

Group Averages:

| | |
|------------|------------|
| Age | 42.9 years |
| Service | 9.9 years |
| Annual pay | \$29,143 |

Administrative Law Judges and Legal Advisors' Plan
Active Members by Attained Age and Years of Service
 June 30, 2000

| Attained Age | Years of Service to Valuation Date | | | | | | | Totals | |
|--------------|------------------------------------|-----|-------|-------|-------|-------|---------|--------|-------------------|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 Plus | Number | Valuation Payroll |
| 30-34 | 2 | | | | | | | 2 | \$ 148,415 |
| 35-39 | 5 | 5 | 1 | | | | | 11 | 772,264 |
| 40-44 | 3 | 5 | 2 | | | | | 10 | 793,053 |
| 45-49 | 3 | 2 | 5 | 2 | | | | 12 | 975,895 |
| 50-54 | 1 | 3 | 1 | 1 | | | | 6 | 500,654 |
| 55-59 | 2 | 2 | 1 | | 1 | 1 | | 7 | 555,267 |
| 63 | 1 | | | | 1 | | | 2 | 164,838 |
| 65 | | | 1 | | | | | 1 | 88,487 |
| 79 | | | | | | | 1 | 1 | 74,015 |
| Totals | 17 | 17 | 11 | 3 | 2 | 1 | 1 | 52 | \$ 4,072,888 |

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

Group Averages:

| | |
|------------|------------|
| Age | 46.8 years |
| Service | 8.7 years |
| Annual pay | \$78,325 |

Judicial Plan

Active Members by Attained Age and Years of Service

June 30, 2000

| Attained Age | Years of Service to Valuation Date | | | | | | | Totals | |
|--------------|------------------------------------|-----|-------|-------|-------|-------|---------|--------|-------------------|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30 Plus | Number | Valuation Payroll |
| 30-34 | 3 | | | | | | | 3 | \$ 277,557 |
| 35-39 | 5 | 6 | | | | | | 11 | 1,030,647 |
| 40-44 | 24 | 12 | 3 | | | | | 39 | 3,759,633 |
| 45-49 | 21 | 35 | 13 | 8 | 7 | | | 84 | 8,334,336 |
| 50-54 | 20 | 26 | 22 | 9 | 14 | 4 | | 95 | 9,316,455 |
| 55-59 | 11 | 26 | 17 | 12 | 10 | 1 | 2 | 79 | 7,876,579 |
| 60 | 2 | 2 | 3 | 2 | 2 | 3 | | 14 | 1,410,121 |
| 61 | | 2 | 1 | 2 | 2 | | 2 | 9 | 907,174 |
| 62 | | 2 | 3 | | 1 | 1 | | 7 | 714,584 |
| 63 | | | 1 | 1 | | | 1 | 3 | 308,580 |
| 64 | | 2 | 2 | | 1 | 2 | | 7 | 709,679 |
| 65 | | 1 | | | 2 | | | 3 | 320,556 |
| 66 | | 1 | | 1 | 1 | 1 | 1 | 5 | 498,523 |
| 67 | | | | | 3 | 1 | | 4 | 425,051 |
| 68 | | 1 | 2 | | 1 | 2 | | 6 | 603,018 |
| 69 | | | | | | 1 | 1 | 2 | 197,014 |
| 70 | | | 2 | | 2 | | | 4 | 417,980 |
| Totals | 86 | 116 | 69 | 35 | 46 | 16 | 7 | 375 | \$ 37,107,487 |

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

Group Averages:

| | |
|------------|------------|
| Age | 52.4 years |
| Service | 11.2 years |
| Annual pay | \$98,953 |

Missouri State Employees' Retirement System
Schedules of Active Member Valuation Data
 Six Years Ended June 30, 2000

Missouri State Employees' Plan

Schedule of Active Member Valuation Data

| Valuation Date | Number | Annual Payroll | Annual Average Pay | Percentage of Increase in Average Pay |
|----------------|--------|------------------|--------------------|---------------------------------------|
| June 30, 1995 | 50,524 | \$ 1,198,938,042 | \$ 23,730 | 4.29% |
| June 30, 1996 | 51,425 | 1,267,605,000 | 24,650 | 3.88 |
| June 30, 1997 | 52,737 | 1,359,656,666 | 25,782 | 4.59 |
| June 30, 1998 | 54,544 | 1,459,712,203 | 26,762 | 3.80 |
| June 30, 1999 | 56,158 | 1,564,551,532 | 27,860 | 4.10 |
| June 30, 2000 | 57,774 | 1,683,697,080 | 29,143 | 4.61 |

Administrative Law Judges and Legal Advisors' Plan

Schedule of Active Member Valuation Data

| Valuation Date | Number | Annual Payroll | Annual Average Pay | Percentage of Increase in Average Pay |
|----------------|--------|----------------|--------------------|---------------------------------------|
| June 30, 1995 | 37 | \$ 2,166,275 | \$ 58,548 | 0.65% |
| June 30, 1996 | 46 | 2,706,314 | 58,833 | 0.49 |
| June 30, 1997 | 45 | 2,865,733 | 63,683 | 8.24 |
| June 30, 1998 | 42 | 2,806,436 | 66,820 | 4.93 |
| June 30, 1999 | 47 | 3,488,698 | 74,228 | 11.09 |
| June 30, 2000 | 52 | 4,072,888 | 78,325 | 5.52 |

Judicial Plan

Schedule of Active Member Valuation Data

| Valuation Date | Number | Annual Payroll | Annual Average Pay | Percentage of Increase in Average Pay |
|----------------|--------|----------------|--------------------|---------------------------------------|
| June 30, 1995 | 357 | \$ 27,984,008 | \$ 78,387 | 2.75% |
| June 30, 1996 | 366 | 29,908,056 | 81,716 | 4.25 |
| June 30, 1997 | 365 | 31,663,101 | 86,748 | 6.16 |
| June 30, 1998 | 365 | 32,446,141 | 88,894 | 2.47 |
| June 30, 1999 | 366 | 34,162,013 | 93,339 | 5.00 |
| June 30, 2000 | 375 | 37,107,487 | 98,953 | 6.01 |

Missouri State Employees' Retirement Plan
Retirees and Beneficiaries Added and Removed
 Ten Years Ended June 30, 2000

| | Beginning Balance | Additions | Deletions | Ending Balance |
|--------------------|----------------------|-----------|-----------|-------------------|
| <i>FY91</i> | | | | |
| Retirees | 10,700 | 898 | 467 | 11,131 |
| Beneficiaries | 795 | 91 | 22 | 864 |
| <i>FY92</i> | | | | |
| Retirees | 11,131 | 936 | 460 | 11,607 |
| Beneficiaries | 864 | 117 | 36 | 945 |
| <i>FY93</i> | | | | |
| Retirees | 11,607 | 996 | 502 | 12,101 |
| Beneficiaries | 945 | 107 | 38 | 1,014 |
| <i>FY94</i> | | | | |
| Retirees | 12,101 | 957 | 542 | 12,516 |
| Beneficiaries | 1,014 | 168 | 47 | 1,135 |
| <i>FY95</i> | | | | |
| Retirees | 12,516 | 1,186 | 561 | 13,141 |
| Beneficiaries | 1,135 | 154 | 46 | 1,243 |
| <i>FY96</i> | | | | |
| Retirees | 13,141 | 1,108 | 600 | 13,649 |
| Beneficiaries | 1,243 | 154 | 42 | 1,355 |
| <i>FY97</i> | | | | |
| Retirees | 13,649 | 1,107 | 612 | 14,144 |
| Beneficiaries | 1,355 | 153 | 43 | 1,465 |
| <i>FY98</i> | | | | |
| Retirees | 14,144 | 1,153 | 627 | 14,670 |
| Beneficiaries | 1,465 | 183 | 67 | 1,581 |
| <i>FY99</i> | | | | |
| Retirees | 14,670 | 1,294 | 614 | 15,350 |
| Beneficiaries | 1,581 | 250 | 64 | 1,767 |
| <i>FY00</i> | | | | |
| Retirees | 15,350 | 1,676 | 1,027 | 15,999 |
| Beneficiaries | 1,767 | 514 | 84 | 2,197 |

Administrative Law Judges and Legal Advisors' Plan
Retirees and Beneficiaries Added and Removed
 Ten Years Ended June 30, 2000

| | Beginning Balance | Additions | Deletions | Ending Balance |
|--------------------|----------------------|-----------|-----------|-------------------|
| <i>FY91</i> | | | | |
| Retirees | 9 | 3 | 1 | 11 |
| Beneficiaries | 0 | 2 | 0 | 2 |
| <i>FY92</i> | | | | |
| Retirees | 11 | 4 | 1 | 14 |
| Beneficiaries | 2 | 1 | 0 | 3 |
| <i>FY93</i> | | | | |
| Retirees | 14 | 2 | 0 | 16 |
| Beneficiaries | 3 | 0 | 0 | 3 |
| <i>FY94</i> | | | | |
| Retirees | 16 | 1 | 0 | 17 |
| Beneficiaries | 3 | 0 | 0 | 3 |
| <i>FY95</i> | | | | |
| Retirees | 17 | 1 | 1 | 17 |
| Beneficiaries | 3 | 1 | 0 | 4 |
| <i>FY96</i> | | | | |
| Retirees | 17 | 0 | 0 | 17 |
| Beneficiaries | 4 | 0 | 0 | 4 |
| <i>FY97</i> | | | | |
| Retirees | 17 | 1 | 4 | 14 |
| Beneficiaries | 4 | 3 | 0 | 7 |
| <i>FY98</i> | | | | |
| Retirees | 14 | 2 | 0 | 16 |
| Beneficiaries | 7 | 0 | 0 | 7 |
| <i>FY99</i> | | | | |
| Retirees | 16 | 1 | 0 | 17 |
| Beneficiaries | 7 | 0 | 0 | 7 |
| <i>FY00</i> | | | | |
| Retirees | 17 | 0 | 1 | 16 |
| Beneficiaries | 7 | 1 | 1 | 7 |

Judicial Plan

Retirees and Beneficiaries Added and Removed

Ten Years Ended June 30, 2000

| | Beginning Balance | Additions | Deletions | Ending Balance |
|--------------------|----------------------|-----------|-----------|-------------------|
| <i>FY91</i> | | | | |
| Retirees | 164 | 23 | 10 | 177 |
| Beneficiaries | 111 | 15 | 4 | 122 |
| <i>FY92</i> | | | | |
| Retirees | 177 | 19 | 14 | 182 |
| Beneficiaries | 122 | 8 | 5 | 125 |
| <i>FY93</i> | | | | |
| Retirees | 182 | 11 | 10 | 183 |
| Beneficiaries | 125 | 5 | 6 | 124 |
| <i>FY94</i> | | | | |
| Retirees | 183 | 15 | 12 | 186 |
| Beneficiaries | 124 | 11 | 4 | 131 |
| <i>FY95</i> | | | | |
| Retirees | 186 | 27 | 7 | 206 |
| Beneficiaries | 131 | 8 | 3 | 136 |
| <i>FY96</i> | | | | |
| Retirees | 206 | 11 | 10 | 207 |
| Beneficiaries | 136 | 6 | 12 | 130 |
| <i>FY97</i> | | | | |
| Retirees | 207 | 6 | 7 | 206 |
| Beneficiaries | 130 | 6 | 9 | 127 |
| <i>FY98</i> | | | | |
| Retirees | 206 | 22 | 9 | 219 |
| Beneficiaries | 127 | 31 | 35 | 123 |
| <i>FY99</i> | | | | |
| Retirees | 219 | 27 | 14 | 232 |
| Beneficiaries | 123 | 8 | 9 | 122 |
| <i>FY00</i> | | | | |
| Retirees | 232 | 19 | 15 | 236 |
| Beneficiaries | 122 | 13 | 8 | 127 |

Pension Trust Funds

Short-Term Solvency Test

Ten Years Ended June 30, 2000

Missouri State Employees' Plan

Actuarial Accrued Liabilities for

| Fiscal Year | Member Contributions (1) | Current Retirees and Beneficiaries (2) | Active and Inactive Members, Employer Financed Portion (3) | Net Assets Available for Benefits | Percentage of Actuarial Liabilities Covered by Net Assets Available for | | |
|-------------|-----------------------------|---|---|-----------------------------------|---|--------|-------|
| | | | | | (1) | (2) | (3) |
| 1991 | \$ 465,307 | \$ 587,489,069 | \$ 1,464,646,384 | \$ 1,793,370,043 | 100.0% | 100.0% | 82.3% |
| 1992 | 455,328 | 662,010,170 | 1,629,118,392 | 1,991,215,165 | 100.0 | 100.0 | 81.6 |
| 1993 | 448,909 | 743,697,883 | 1,703,075,268 | 2,236,558,739 | 100.0 | 100.0 | 87.6 |
| 1994 | 448,559 | 909,819,763 | 2,009,188,103 | 2,425,134,504 | 100.0 | 100.0 | 75.4 |
| 1995 | 448,559 | 1,010,431,608 | 2,139,916,413 | 2,649,077,134 | 100.0 | 100.0 | 76.6 |
| 1996 | 448,559 | 1,156,347,608 | 2,283,330,316 | 2,927,896,643 | 100.0 | 100.0 | 77.6 |
| 1997 | 448,501 | 1,552,966,747 | 2,930,632,553 | 3,580,974,502 | 100.0 | 100.0 | 69.2 |
| 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 |

Administrative Law Judges and Legal Advisors' Plan

Actuarial Accrued Liabilities for

| Fiscal Year | Member Contributions (1) | Current Retirees and Beneficiaries (2) | Active and Inactive Members, Employer Financed Portion (3) | Net Assets Available for Benefits | Percentage of Actuarial Liabilities Covered by Net Assets Available for | | |
|-------------|-----------------------------|---|---|-----------------------------------|---|--------|-------|
| | | | | | (1) | (2) | (3) |
| 1991 | \$ 0 | \$ 3,587,023 | \$ 3,615,836 | \$ 4,707,938 | 100.0% | 100.0% | 31.0% |
| 1992 | 0 | 4,910,423 | 2,572,992 | 5,247,546 | 100.0 | 100.0 | 13.1 |
| 1993 | 0 | 5,615,161 | 2,549,307 | 5,864,317 | 100.0 | 100.0 | 9.8 |
| 1994 | 0 | 5,973,718 | 2,793,014 | 6,229,224 | 100.0 | 100.0 | 9.1 |
| 1995 | 0 | 6,088,732 | 3,641,223 | 6,655,207 | 100.0 | 100.0 | 15.6 |
| 1996 | 0 | 6,196,526 | 4,079,837 | 7,258,814 | 100.0 | 100.0 | 26.0 |
| 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 |

Judicial Plan

Actuarial Accrued Liabilities for

| Fiscal Year | Member Contributions (1) | Current Retirees and Beneficiaries (2) | Active and Inactive Members, Employer Financed Portion (3) | Net Assets Available for Benefits | Percentage of Actuarial Liabilities Covered by Net Assets Available for | | |
|-------------|-----------------------------|---|---|-----------------------------------|---|------|------|
| | | | | | (1) | (2) | (3) |
| 1991 | \$ 0 | \$ 57,923,939 | \$ 61,128,646 | \$ 0 | 100.0% | 0.0% | 0.0% |
| 1992 | 0 | 64,240,019 | 62,900,515 | 0 | 100.0 | 0.0 | 0.0 |
| 1993 | 0 | 65,843,955 | 66,598,009 | 0 | 100.0 | 0.0 | 0.0 |
| 1994 | 0 | 70,477,754 | 71,117,871 | 0 | 100.0 | 0.0 | 0.0 |
| 1995 | 0 | 81,586,593 | 72,060,389 | 0 | 100.0 | 0.0 | 0.0 |
| 1996 | 0 | 86,145,180 | 75,588,930 | 0 | 100.0 | 0.0 | 0.0 |
| 1997 | 0 | 99,662,179 | 97,810,394 | 0 | 100.0 | 0.0 | 0.0 |
| 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 |

Missouri State Employees' Plan
Derivation of Experience Gain (Loss)
 Year Ended June 30, 2000

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2000, is shown below.

| | Funded Benefits \$ Millions |
|---|--|
| (1) UAAL* at start of year | 597.1 |
| (2) Normal cost from last valuation | 150.4 |
| (3) Actual employer contributions | 202.3 |
| (4) Interest accrual: $(1) \times .085 + [(2)-(3)] \times (.085/2)$ | 48.5 |
| (5) Expected UAAL before changes: $(1) + (2) - (3) + (4)$ | 593.7 |
| (6) Change from any changes in benefits, assumptions, or methods | (35.9) |
| (7) Expected UAAL after changes: $(5) + (6)$ | 557.8 |
| (8) Actual UAAL at end of year | 409.0 |
| (9) Gain (loss) $(7) - (8)$ | 148.8 |
| (10) Gain (loss) as a percent of actuarial accrued liabilities at start of year (\$5,506) | 2.7% |

* Unfunded actuarial accrued liability.

| Valuation Date June 30 | Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities |
|------------------------------|---|
| 1994 | 2.9% |
| 1995 | 0.6 |
| 1996 | 0.4 |
| 1997 | 5.5 |
| 1998 | 5.5 |
| 1999 | 4.7 |
| 2000 | 2.7 |

Administrative Law Judges and Legal Advisors' Plan

Derivation of Experience Gain (Loss)

Year Ended June 30, 2000

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 (in the absence of double-digit inflation), and 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.

| | Funded Benefits |
|--|------------------------|
| (1) UAAL* at start of year | \$3,010,788 |
| (2) Employer normal cost middle of year | 727,011 |
| (3) Employer contributions | 807,022 |
| (4) Interest | |
| a. on (1) | 255,917 |
| b. on (2) | 30,898 |
| c. on (3) | 34,298 |
| d. total [a + b - c] | 252,517 |
| (5) Expected UAAL end of the year before changes | 3,183,294 |
| (6) Change in UAAL end of year | |
| a. amendments | |
| b. assumptions | 192,300 |
| c. methods | |
| d. total | 192,300 |
| (7) Expected UAAL after changes: (5) + (6d) | 3,375,594 |
| (8) Actual UAAL at end of year | 3,329,918 |
| (9) Gain (loss) (7) - (8) | 45,676 |
| (10) Gain (loss) as a percent of actuarial accrued liabilities at start of year (\$14,774,525) | 0.3% |

* Unfunded actuarial accrued liability.

| Valuation Date June 30 | Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities |
|---------------------------------------|---|
| 2000 | 0.3% |

Derivation of Experience Gain (Loss)

Year Ended June 30, 2000

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 (in the absence of double-digit inflation), and 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.

| | Funded Benefits |
|---|------------------------|
| (1) UAAL* at start of year | \$221,735,036 |
| (2) Employer normal cost middle of year | 8,048,614 |
| (3) Employer contributions | 19,988,676 |
| (4) Interest | |
| a. on (1) | 18,847,478 |
| b. on (2) | 342,066 |
| c. on (3) | 849,519 |
| d. total [a + b - c] | 18,340,025 |
| (5) Expected UAAL end of the year before changes | 228,134,999 |
| (6) Change in UAAL end of year | |
| a. amendments | |
| b. assumptions | (4,135,761) |
| c. methods | |
| d. total | (4,135,761) |
| (7) Expected UAAL after changes: (5) + (6d) | 223,999,238 |
| (8) Actual UAAL at end of year | 227,935,572 |
| (9) Gain (loss) (7) - (8) | (3,936,334) |
| (10) Gain (loss) as a percent of actuarial accrued liabilities at start of year (\$227,802,341) | (1.7%) |

* Unfunded actuarial accrued liability.

| Valuation Date June 30 | Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities |
|---------------------------------------|---|
| 2000 | (1.7%) |

Comparison of the MSEP and the MSEP 2000 for General State Employees

| 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 50. | Age 62 with 5 years of service or "Rule of 80" - minimum age 50. |
| 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 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 CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the CPI with maximum rate of 5%. If hired on or after August 28, 1997, annual COLA is equal to 80% of the CPI with a maximum rate of 5%. | Annual COLA is equal to 80% of the CPI with a maximum rate of 5%. |
| Survivor Benefit (Death Before Retirement) Nonduty-Related Death Duty-Related Death | Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 50% of the member's life income annuity paid to eligible children. Survivor benefit to eligible spouse or children equal to 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 equal to 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: - 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: - Life Income Annuity - Joint & 50% Survivor - Joint & 100% Survivor - 120 or 180 Guaranteed Payments |

* This summary describes the plan provisions of the Revised Statutes of Missouri (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 is effective July 1, 2000.

Missouri State Employees' Plan
Uniformed Members of the Water Patrol

As of June 30, 2000

Comparison of the MSEP and the MSEP 2000 for Uniformed Members of the Water Patrol

| Plan Provision | MSEP | MSEP 2000 |
|--|--|---|
| Membership Eligibility | Members who works 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 returned 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 50. | Age 62 with 5 years of service or "Rule of 80" - minimum age 50. |
| Early Retirement Eligibility | Not available. | Age 57 with 5 years of service. |
| Benefit Formula 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 | Completion of 5 years of service. | Completion of 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 CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the CPI with maximum rate of 5%. If hired on or after August 28, 1997, annual COLA is equal to 80% of the CPI with a maximum rate of 5%. | Annual COLA is equal to 80% of the CPI with a maximum rate of 5%. |
| Survivor Benefit (Death Before Retirement) Nonduty-Related Death Duty-Related Death | Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 50% of the member's life income annuity paid to eligible children. Survivor benefit to eligible spouse or children equal to 50% of current pay (no service requirement). | Survivor benefit to eligible spouse calculated using the Joint and 100% survivor option or 80% of the member's life income annuity paid to eligible children. Survivor benefit to eligible spouse or children equal to 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: - 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: - Life Income Annuity - Joint & 50% Survivor - Joint & 100% Survivor - 120 or 180 Guaranteed Payments |

Missouri State Employees' Plan

Legislators

As of June 30, 2000

Comparison of the MSEP and the MSEP 2000 for Legislators

| 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 2 full assemblies or "Rule of 80" - minimum age 50. |
| Early Retirement Eligibility | Not available. | Not available. |
| Benefit Formula 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. | 2 full biennial assemblies . |
| 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, COLA is equal to 80% of 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 CPI with maximum rate of 5%. If hired on or after August 28, 1997, COLA is equal to 80% of the CPI with maximum rate of 5%. | Benefit adjusted each year based on the increase in the current pay for an active member of the general assembly. |
| Survivor Benefit (Death Before Retirement) Nonduty-Related Death | Survivor benefit to eligible spouse calculated using the Unreduced Joint & 50% survivor option or 50% of the member's life income annuity paid to eligible children. | Survivor benefit to eligible spouse calculated using the Joint and 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 equal to 50% of current pay (no service requirement). | Survivor benefit to eligible spouse or children equal to 50% of current pay (no service requirement). |
| Optional Forms of Payment (Death After Retirement) | Survivor benefit to eligible spouse calculated using the Unreduced Joint and 50% survivor option or 50% of member's life income annuity paid to eligible children. | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: - Life Income Annuity - Joint & 50% Survivor - Joint & 100% Survivor - 120 or 180 Guaranteed Payments |

Missouri State Employees' Plan

Elected State Officials

As of June 30, 2000

Comparison of the MSEP and the MSEP 2000 for Elected State Officials

| Plan Provision | MSEP | MSEP 2000 |
|--|--|---|
| Membership Eligibility | Elected to a statewide office. | Elected to a statewide office on or after July 1, 2000. |
| Normal Retirement Eligibility | Age 65 with one 4-year term, Age 60 with 15 years of service, or "Rule of 80" - minimum age 50. | 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 Formula Life Benefit | <u>12 or more years of service</u> 50% of 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 | One 4-year term of office. | 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 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, COLA is equal to 80% of 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 CPI with maximum rate of 5%. If hired on or after August 28, 1997, COLA is equal to 80% of the CPI with maximum rate of 5%. | Benefit adjusted each year based on the increase in the current pay for an active elected state official in the highest position held. |
| Survivor Benefit (Death Before Retirement) Nonduty-Related Death | Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 50% 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 equal to 50% of current pay (no service requirement). | Survivor benefit to eligible spouse or children equal to 50% of current pay (no service requirement). |
| Optional Forms of Payment (Death After Retirement) | <u>12 or more years of service</u> Survivor benefit to eligible spouse calculated using the Unreduced Joint and 50% survivor option. <u>Less than 12 years of service</u> Survivor benefit to eligible spouse based on payment option elected at retirement. | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: - Life Income Annuity - Joint & 50% Survivor - Joint & 100% Survivor - 120 or 180 Guaranteed Payments |

Administrative Law Judges and Legal Advisors' Retirement Plan
As of June 30, 2000

| Plan Provision | Requirement |
|--|--|
| Membership Eligibility | Administrative law judge or legal advisor in the Division of Worker's Compensation or the Office of Administration, a member or legal counsel of the Labor and Industrial Relations Commission, chairperson of the State Board of Mediation, or an administrative hearing commissioner. |
| Normal Retirement Eligibility | Age 65 with 12 years of service, Age 60 with 15 years of service, or Age 55 with 20 years of service. |
| Early Retirement Eligibility | Age 65 with less than 12 years of service with reduced benefit, based upon years of service relative to 12 or 15 years. |
| Benefit Formula | <u>12 or more years of service</u> 50% of the average highest 12 consecutive months of salary. |
| Vesting | Immediate. |
| In-Service COLA | Not available. |
| COLA | If hired before August 28, 1997, COLA is equal to 80% of 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 CPI with a maximum rate of 5%. If hired before August 28, 1997, COLA is equal to 80% of the CPI with a minimum of 5%. |
| Survivor Benefit (Death Before Retirement) Nonduty-Related Death | Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service to age 70. |
| Survivor Benefit (Death After Retirement) | Survivor benefit to eligible spouse equal to 50% of the benefit the member's annuity at the time of death. |

Judicial Plan
As of June 30, 2000

| Plan Provision | Requirement |
|--|---|
| Membership Eligibility | Must be a judge or commissioner of the supreme court or of the court of appeals, or a judge of any circuit court, probate court, magistrate court, court of common pleas, or court of criminal corrections, or a justice of the peace, or a commissioner or deputy commissioner of the circuit court appointed after February 29, 1972. |
| Normal Retirement Eligibility | Age 65 with 12 years of service, Age 60 with 15 years of service, or Age 55 with 20 years of service. |
| Early Retirement Eligibility | Age 62 with less than 12 years of service or age 60 with less than 15 years service with a reduced benefit based on years of service relative to 12 or 15 years. |
| Benefit Formula | <u>12 or more years of service</u> 50% of the FAP. <u>Less than 12 or 15 years of service</u> If between age 60 and 62, (years of service ÷ 15) x 50% of compensation. If age 62, (years of service ÷ 12) x 50% of compensation. |
| 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, COLA is equal to 80% of 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 CPI with a maximum rate of 5%. If hired on or after August 28, 1997, COLA is equal to 80% of the CPI with a minimum of 5%. |
| Survivor Benefit (Death Before Retirement) Nonduty-Related Death | Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service to age 70. |
| Survivor Benefit (Death After Retirement) | Survivor benefit to eligible spouse equal to 50% of the benefit the member's annuity at the time of death. |

Contributions

The plans previously described are noncontributory with the entire cost paid by the state of Missouri. The contribution rate paid by the state for the general state employees, uniformed members of the water patrol, legislators, and elected state officials retirement plan for FY2000 was 11.91 percent of the membership payroll. The contribution rate paid by the state for the ALJLAP for FY2000 was 20.10 percent of the membership payroll. The contribution rate paid by the state for the Judicial Plan for FY2000 was 53.92 percent of the membership payroll.

Life Insurance Plans

As of June 30, 2000

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

| Active Members* | Requirement |
|---|--|
| <p><i>Basic Life Insurance</i> \$15,000 basic life insurance while actively employed. Effective January 1, 2001, the basic life insurance benefit will increase from \$15,000 to one-times annual salary with a \$15,000 minimum.</p> | Actively employed in an eligible state position resulting in membership in MOSERS. |
| <p><i>Duty-Related Death Benefit</i> An amount equal to \$30,000, in addition to the basic life insurance amount of \$15,000, is payable to beneficiaries of members whose death is determined to be duty related. Effective January 1, 2001, duty-related death benefit coverage will increase to two-times the annual salary the member was earning at the time of death (with a minimum of \$15,000), 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><i>Optional Life Insurance</i> Additional life insurance may be purchased in multiples of annual salary up to a maximum of the lesser of six-times annual salary (excluding any nonrecurring, single sum payment) or \$800,000 or in a flat amount in multiples of \$1,000. A flat amount of spouse coverage may be purchased in multiples of \$1,000 up to a maximum of \$100,000; however, the amount of spouse coverage cannot exceed the amount of optional coverage the member has purchased.</p> | Actively employed in an eligible state position resulting in membership in MOSERS. |
| Retired Members | Requirement |
| <p><i>Basic Life Insurance at Retirement</i> \$5,000 basic life insurance during retirement.</p> | Must retire directly from active employment. |
| <p><i>Optional Life Insurance at Retirement</i> An employee may retain up to the lesser of \$60,000 or the amount of optional life insurance coverage held at 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. |

*Terminating employees may convert coverage up to the amount they had as an active employee at individual rates.

Long-Term Disability (LTD) Plan

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

| Plan | Provision |
|---|---|
| <p><i>General State Employees, Legislators, and Elected State Officials</i> 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 percent of their compensation minus primary social security, worker's 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 retirement benefits, (iii) when the member returns to work, or (iv) upon the member's death.</p> <p>Partial Disability - A member may be considered partially disabled during the benefit waiting period and the 24 months following that period if the member is working in an occupation, but as a result of physical disease, injury, pregnancy, or mental disorder, is unable to earn more than 80 percent of pre-disability earnings. After the first 24 months, a member may be considered partially disabled if working in an occupation but unable to earn more than 60 percent of the member's pre-disability earnings. In both instances, work earnings are used to reduce the LTD benefit.</p> |
| <p><i>Water Patrol</i></p> | <p>Uniformed members who are eligible for statutory occupational disability receive benefits equal to 50 percent of compensation at the time of disability. For nonoccupational disabilities, eligible participants receive the same benefit as general employees.</p> |
| <p><i>Judges</i></p> | <p>In addition to the disability benefits provided to general employees, judges also receive benefits under the state constitution. Participants receive 50 percent of salary.</p> |

Changes in Plan Provisions

On May 30, 2000, Governor Mel Carnahan signed into law House Bill 1808 (HB 1808). Most of the provisions contained in HB 1808 involve minor modifications to and clarifications of the new retirement plan enacted last year (hereinafter referred to as the MSEP 2000), and administrative changes to the Missouri State Employees' Plan (hereinafter referred to as the MSEP). Two of the more substantive changes contained in the legislation, however, modify the basic life insurance provision that currently is in place for most state employees, in addition to allowing members on federal social security disability to also receive a temporary annuity under the MSEP 2000.

HB 1808 contained a provision that will increase the basic life insurance benefit from \$15,000 to one-times annual salary with a \$15,000 minimum effective January 1, 2001. Enactment of this provision will complete the last of the recommendations contained in the final report of the Public Safety Retirement Advisory Commission issued in 1998. This benefit enhancement was designed to provide an automatic inflationary adjustment to coverage levels thus requiring no future legislative changes and uniformity in coverage among state employees.

HB 1808 also contained a provision that will allow disabled members who are eligible for a temporary annuity to receive such annuity without regard to any prior receipt of federal Social Security Disability Benefits.

An emergency clause that coincides with the effective date of the new retirement plan (July 1, 2000) was also incorporated into HB 1808 thus allowing MOSERS to begin administering the new plan with no disruption to our members.

Judicial Plan

HB 1808 also contained a provision that will allow a present or former judge who is actively serving as a judge or prosecuting attorney, and who has served for ten years, to receive additional credited service for previous public employment with the state covered by another retirement plan, provided: (a) such member was vested and is not a retiree under the other retirement plan, (b) the other retirement plan transfers to the system an amount equal to the employee's account balance under a defined contribution plan or the amount equal to the employee's pension obligation under a defined benefit plan to the extent that obligation is funded, not to exceed 100 percent, except that in no event shall the transferred amount be less than the employee's accumulated contributions on deposit with the transferring plan, (c) no credited service remains credited in the other retirement plan, and (d) the member applies for the additional credited service in a manner described by the appropriate board.

Lastly, HB 1808 contained a provision that will allow a retired judge to receive additional COLAs based upon the difference between the judge's current benefit amount and the amount the judge would have received had the retired judge been eligible to accrue COLAs from the earliest date of retirement eligibility.

Missouri State Employees' Plan
Actuarial Present Values
 June 30, 2000

| Actuarial Present Value, June 30, 2000 | 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 | \$ 3,883,458,562 | \$ 860,445,132 | \$ 3,023,013,430 |
| Disability benefits likely to be paid to present active members who become totally and permanently disabled | 95,079,836 | 49,993,017 | 45,086,819 |
| Survivor benefits likely to be paid to widows/widowers and children of present active members who die before retiring | 141,004,578 | 47,874,526 | 93,130,052 |
| Separation benefits likely to be paid to present active members | 453,618,473 | 232,172,426 | 221,446,047 |
| Active member totals | <u>\$ 4,573,161,449</u> | <u>\$ 1,190,485,101</u> | <u>3,382,676,348</u> |
| Members on leave of absence & LTD | | | |
| Service retirement benefits based on service rendered before the valuation date | | | 74,005,101 |
| Terminated-vested members | | | |
| Service retirement benefits based on service rendered before the valuation date | | | 321,515,248 |
| Retired lives | | | |
| Total actuarial accrued liability | | | <u>2,142,487,495</u> |
| Assets used in valuation | | | 5,920,684,192 |
| Unfunded actuarial accrued liability | | | <u>5,511,714,616</u> |
| | | | <u>\$ 408,969,576</u> |

Administrative Law Judges and Legal Advisors' Plan

Actuarial Present Values

June 30, 2000

| Actuarial Present Value, June 30, 2000 | 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 | \$ 11,027,227 | \$ 4,776,830 | \$ 6,250,397 |
| Disability benefits likely to be paid to present active members who become totally and permanently disabled | 223,271 | 150,982 | 72,289 |
| Survivor benefits likely to be paid to widows/widowers and children of present active members who die before retiring | 581,361 | 384,270 | 197,091 |
| Separation benefits likely to be paid to present active members | 1,820,407 | 1,243,962 | 576,445 |
| Active member totals | <u>\$ 13,652,266</u> | <u>\$ 6,556,044</u> | <u>7,096,222</u> |
| Terminated-vested members | | | |
| Service retirement benefits based on service rendered before the valuation date | | | 1,899,403 |
| Retired lives | | | |
| Total actuarial accrued liability | | | <u>7,526,118</u> |
| Assets used in valuation | | | 16,521,743 |
| Unfunded actuarial accrued liability | | | <u>13,191,825</u> |
| | | | <u>\$ 3,329,918</u> |

Judicial Plan
Actuarial Present Values
 June 30, 2000

| Actuarial Present Value, June 30, 2000 | 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 | \$ 137,108,732 | \$ 45,610,496 | \$ 91,498,236 |
| Disability benefits likely to be paid to present active members who become totally and permanently disabled | 1,777,541 | 1,368,765 | 408,776 |
| Survivor benefits likely to be paid to widows/widowers and children of present active members who die before retiring | 7,098,434 | 4,123,883 | 2,974,551 |
| Separation benefits likely to be paid to present active members | 13,253,823 | 9,911,247 | 3,342,576 |
| Active member totals | <u>\$ 159,238,530</u> | <u>\$ 61,014,391</u> | <u>98,224,139</u> |
| Terminated-vested members | | | |
| Service retirement benefits based on service rendered before the valuation date | | | 12,373,335 |
| Retired lives | | | |
| Total actuarial accrued liability | | | <u>131,199,867</u> |
| Assets used in valuation | | | 241,797,341 |
| Unfunded actuarial accrued liability | | | <u>13,861,769</u> |
| | | | <u>\$ 227,935,572</u> |