

Schedule C: Summary of Main Benefit & Contribution Provisions

The maximum covered earnings for employers and employees over the years are as follows:

EMPLOYER AND EMPLOYEE RATES OF CONTRIBUTION AND MAXIMUM COVERED EARNINGS

| Fiscal Date From | Fiscal Date To | Employer Rate | Employee Rate | Maximum Covered Earnings* |
|------------------|----------------|---------------|---------------|---------------------------|
| 7/1/1958 | 6/30/1968 | 13.33% | 5.00% | |
| 7/1/1968 | 6/30/1971 | 15.33 | 5.00 | |
| 7/1/1971 | 6/30/1973 | 18.59 | 5.00 | |
| 7/1/1973 | 6/30/1975 | 20.77 | 5.00 | |
| 7/1/1975 | 6/30/1978 | 24.65 | 5.00 | |
| 7/1/1978 | 6/30/1980 | 26.16 | 6.00 | |
| 7/1/1980 | 6/30/1989 | 26.16 | 6.50 | |
| 7/1/1989 | 6/30/1990 | 27.97 | 6.50 | |
| 7/1/1990 | 6/30/2003 | 26.16 | 6.50 | |
| 7/1/2003 | 6/30/2006 | 28.16 | 6.50 | |
| 7/1/2006 | 6/30/2008 | 30.30 | 6.50 | |
| 7/1/2008 | 12/31/2011 | 30.30 | 7.25 | |
| 1/1/2012 | 6/30/2012 | 35.21 | 7.25 | |
| 7/1/2012 | 6/30/2018 | 37.00 | 7.25 | |
| 7/1/2018 | 6/30/2019 | 49.08 | 7.25 | |

*Maximum covered earnings equal wages paid, not to exceed wages paid to the Commissioner of the Department of Public Safety (currently \$146,850).

Effective July 1, 2019, additional contributions from SB 2659 and HB 1015 are estimated to be \$3,700,000 combined.



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BENEFITS

Superannuation Retirement

Condition for Retirement

A retirement allowance is payable to any member who retires and has attained age 55 and completed at least five years of membership service, or has attained age 45 and completed at least 20 years of creditable service, or has completed 25 years of creditable service regardless of age.

Any member who has attained age 63 shall be retired forthwith. Effective July 1, 2011, the Commissioner of Public Safety is authorized to allow a member who has attained age 63 to continue in active service. Such continued service may be authorized annually until the member attains age 65.

Amount of Allowance

The annual retirement allowance payable to a retired member is equal to:

1. A member's annuity which is the actuarial equivalent of the member's accumulated contributions at the time of his or her retirement, plus
2. An employer's annuity which, together with the member's annuity, is equal to 2-1/2% of his or her average compensation for each year of membership service, plus
3. A prior service annuity equal to 2-1/2% of average compensation for each year of prior service.

The aggregate amounts of (2) and (3) above shall not exceed 100% of average compensation, regardless of service, for retirements on or after January 1, 2000; 85% for retirements prior to January 1, 2000.

The minimum allowance for both service and disability retirement based on the following table for each year of creditable service, reduced if necessary as indicated below.

| Service | Monthly Benefit |
|--------------------|-----------------|
| Less than 10 years | \$250 |
| 10-15 years | \$300 |
| 15 or more years | \$500 |



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The annual retirement allowance payable to a member who retires under condition (a) above prior to age 55 is computed in accordance with the above formula except that the employer's annuity and prior service annuity are reduced 3% for each year of age below age 55, or 3% for each year of service below 25 years of creditable service, whichever is less.

Deferred Vested

Condition for Vesting

Any member who withdraws from service prior to his or her attainment of age 55 but after having completed five or more years of creditable service is entitled to receive, in lieu of a refund of his or her accumulated contributions, a retirement allowance commencing at age 55.

Amount of Allowance

The annual retirement allowance payable at age 55 is equal to:

1. A member's annuity which is the actuarial equivalent of the member's accumulated contributions at the time of his or her retirement, plus
2. An employer's annuity which, together with the member's annuity, is equal to 2-1/2% of his or her average compensation for each year of membership service, plus
3. A prior service annuity equal to 2-1/2% of average compensation for each year of prior service.

The aggregate amounts of (2) and (3) above shall not exceed 100% of average compensation, regardless of service, for retirements on or after January 1, 2000; 85% for retirements prior to January 1, 2000.

The minimum allowance for both service and disability retirement based on the following table for each year of creditable service, reduced if necessary as indicated below.

| Service | Monthly Benefit |
|--------------------|-----------------|
| Less than 10 years | \$250 |
| 10-15 years | \$300 |
| 15 or more years | \$500 |



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Disability Retirement

Non-Duty-Related

Non-duty related disability benefits are available to vested members under the age of 55. Vested members age 55 or older are not eligible for disability benefits but may apply for service retirement benefits. For purposes of disability benefits, average annual compensation is calculated using the last two years of salary before retirement.

Duty-Related

If you become permanently disabled due to sickness or injury caused or sustained as a direct result of duty, you may be eligible for duty-related disability retirement. You are covered for this benefit from the first day of employment if you have not reached age 55, regardless of your years of service. Duty-related disability retirement benefits are calculated at either 50 percent of average compensation of the last two years of salary before retirement (this portion is not taxable) or the non-duty-related disability retirement amount, whichever provides the higher benefit.

Death Benefits

Non-Duty-Related

If you are vested, your spouse and dependent children may be eligible to receive certain statutory benefits. Claims for non-duty-related death benefits are calculated at 2.5 percent of average compensation for each year of service credit, as calculated under Option 9, Maximum Benefit. Under this option, 50 percent of the accrued benefit is payable to your spouse until death, with 25 percent of the accrued benefit payable to one dependent child and 50 percent of the accrued benefit payable for two or more dependent children (under age 19 and never married or under age 23 if a full-time student and never married). Upon application and approval by the Medical Board, benefits to a physically or mentally disabled child may continue as long as the disability exists.

Duty-Related

Coverage for duty-related death benefits begins on the first day of employment and is available to your spouse and dependent children regardless of your vesting status. If you are vested, your spouse and dependent children may be eligible to receive benefits under either non-duty or duty-related death benefit provisions, whichever provided the higher benefit.

Claims for duty-related death benefits are calculated at 50 percent of average compensation, payable to your spouse until death, with 25 percent of average compensation payable to one dependent child and 50 percent of average compensation payable for two or more dependent children (under age 19 and never married or under age 23 if a full-time student and never married).



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Upon application and approval by the Medical Board, benefits to a physically or mentally disabled child may continue as long as the disability exists.

Death After Retirement

Upon the death of a highway patrolman who has retired for service or disability and who has not elected any other optional form of benefit, his widow or her widower is eligible for a benefit equal to 50% of his or her retirement allowance and each child (but not more than 2) who has not attained age 19 (23 if a full-time student) is eligible for a benefit equal to 25% of his or her retirement allowance. The benefit to the widow is payable for life and to children until they attain age 19 (23 if a full-time student) or for life if they are totally and permanently disabled.

Refund of Contributions

Upon a member's termination of employment for any reason before retirement, his or her accumulated contributions, together with regular interest thereon, are refunded. Upon the death of a member who is not eligible for any other death benefit, his or her accumulated contributions, together with regular interest thereon, are paid to his or her beneficiary.

Effective July 1, 2016, the interest rate on employee contributions shall be calculated based on the money market rate as published by the Wall Street Journal on December 31 of each preceding year with a minimum rate of one percent and a maximum rate of five percent.

Normal Form of Benefit

For single retirees, the normal form of benefit is an allowance payable during the life of the member. For married retirees, the normal form of benefit is an allowance payable as described in Option 9 below. Upon death the benefits described above are payable.

Optional Benefits

A member upon retirement may elect to receive his allowance in one of the following forms which are computed to be actuarially equivalent to the applicable retirement allowance.

Option 1. Reduced allowance with the provision that if the pensioner dies before he receives the value of the member's annuity as it was at the time of retirement, the balance shall be paid to his or her beneficiary.

Option 2. Upon his or her death, his or her reduced retirement allowance shall be continued throughout the life of, and paid to, his or her beneficiary.

Option 3. Upon his or her death, 50% of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary and the other 50% of his or her reduced



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retirement allowance to some other designated beneficiary.

Option 4. Upon his or her death, 75% of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.

Option 4A. Upon his or her death, 50% of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.

Option 4B. A reduced retirement allowance shall be continued throughout the life of the pensioner, but with the further guarantee of payment to the pensioner or his or her beneficiary for a specified number of years certain.

Option 4C. A member may elect any option with the added provision that the member shall receive, so far as possible, the same total amount annually (considering both HSPRS and Social Security benefits) before and after the earliest age at which the member becomes eligible for a Social Security benefit. This option was only available to those who retired prior to July 1, 2004.

Option 9. Upon his or her death, spouse will receive 50% of the benefit member was receiving for life. Each dependent child (under age 19 and never married or under age 23 if a full-time student and never married) will receive 25% of the benefit member was receiving with a maximum of 50% for the support and care of two or more children. Any contribution and interest remaining after member death and after all monthly benefits due to spouse and children have been paid will be refunded to designated beneficiaries. If the member marries after retirement while receiving benefits under this option, they may apply to Pop-Down to Option 2 to provide 100% beneficiary protection to new spouse, or Pop-down to Option 4 or Option 4A for other beneficiary protections for the new spouse. PLSO is available with this option, if eligible.

A member who elects Option 2, Option 4, or Option 4A, at retirement may revert to the normal form of benefit if the designated beneficiary predeceases the retired member or if the retired member divorces the designated beneficiary. A member who elects the normal form of benefit or Option 1 at retirement may select Option 2, Option 4, or Option 4A to provide beneficiary protection to a new spouse if married after retirement.



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A member who qualifies for an unreduced retirement allowance may select a partial lump-sum option at retirement. Under this option, the retiree has the option of taking a partial lump-sum distribution equal to either 12, 24, or 36 times the base maximum monthly benefit. With each lump-sum amount, the base maximum monthly benefit will be actuarially reduced. A member selecting this option may also select any of the regular options except Option 1, the prorated single-life annuity, and Option 4-C, the Social Security leveling provision. The benefit is then calculated using the new reduced maximum benefit as a starting point in applying the appropriate option factors for the reduction.

Post-Retirement Adjustments In Allowances

The allowances of retired members are adjusted annually by an amount equal to (a) 3% of the annual retirement allowance for each full fiscal year of retirement prior to the year in which the member reaches age 60*, plus (b) 3% compounded for each year thereafter beginning with the fiscal year in which the member turns age 60*.

A prorated portion of the annual adjustment will be paid to the member, beneficiary, or estate of any member or beneficiary who is receiving the annual adjustment in a lump sum, but whose benefits are terminated between July 1 and December 1.

Those members who retired on or before July 1, 1999 received an ad hoc benefit increase in the amount of \$3.50 per month per each full fiscal year of retirement through June 30, 1999 plus \$1.00 per month for each year of credited service. The benefits were increased on July 1, 1999.

*this age will be reduced in five phases to age 55 if the actuary certifies that reducing the age will not result in the amortization period of the unfunded actuarial accrued liability exceeding 20 years.

CONTRIBUTIONS

Members contribute 7.25% of compensation and the employer contributes 49.08% of compensation. Funds from SB 2659 and HB 1015 are also provided.



Schedule D: Detailed Tabulations of the Data

RECONCILIATION OF DATA RECEIVED FROM PERS

| Reconciliation of Data received from PERS | Active File | | | Pensioner File | | | Total |
|-------------------------------------------|-------------|-----------|-----------------|----------------|-----------|-----------|-------|
| | Active | Inactives | Deferred Vested | Retirees | Disableds | Survivors | |
| From PERS | 531 | 19 | 57 | 557 | 18 | 187 | 1,369 |
| Refunded | | (2) | (1) | | | | (3) |
| Certain Period End | | | | | | | |
| Deceased | | | (2) | (13) | (1) | (14) | (30) |
| Disabled | | | (1) | | | | (1) |
| Retired | (9) | | (9) | | | | (18) |
| For Valuation | 522 | 17 | 44 | 544 | 17 | 173 | 1,317 |

STATUS RECONCILIATION FROM 2018 TO 2019

| Reconciliation of Data from Last Year to This Year | Actives | Retirees | Disableds | Survivors | Deferred Vested | Inactives | Total |
|----------------------------------------------------|---------|----------|-----------|-----------|-----------------|-----------|-------|
| As of June 30, 2018 | 511 | 534 | 17 | 174 | 40 | 15 | 1,291 |
| Retirement | (19) | 23 | | | (4) | | |
| Disabled | | | 1 | | (1) | | |
| Death with Survivor | (2) | (8) | | 10 | | | |
| Terminated Def Vested | (10) | | | | 10 | | |
| Inactives | (4) | | | | | 4 | |
| Return to Active Svc | 2 | | | | | (2) | |
| Refunded | (1) | | | | (1) | | (2) |
| Death No Survivor | | (5) | (1) | (13) | | | (19) |
| Benefit Ended | | | | | | | |
| Removed/Cleanup | | | | | | | |
| New / Pick-up | 45 | | | 2 | | | 47 |
| As of June 30, 2019 | 522 | 544 | 17 | 173 | 44 | 17 | 1,317 |



Schedule D: Detailed Tabulations of the Data

Retirants & Beneficiaries as of June 30, 2019

Tabulated by Year of Retirement

| Valuation Year of Retirement Ending June 30 | No. | Total Annual Benefits, excluding COLA | COLA | Total Annual Benefits | Average Monthly Total Benefit |
|---------------------------------------------|------------|---------------------------------------|---------------------|-----------------------|-------------------------------|
| 2019 | 27 | \$1,175,742 | \$0 | \$1,175,742 | \$3,629 |
| 2018 | 16 | 786,061 | 10,498 | 796,559 | 4,149 |
| 2017 | 18 | 794,711 | 30,387 | 825,098 | 3,820 |
| 2016 | 12 | 504,074 | 37,359 | 541,433 | 3,760 |
| 2015 | 15 | 703,343 | 74,753 | 778,096 | 4,323 |
| 2014 | 21 | 941,868 | 122,388 | 1,064,256 | 4,223 |
| 2013 | 16 | 644,831 | 105,943 | 750,774 | 3,910 |
| 2012 | 18 | 793,186 | 154,170 | 947,356 | 4,386 |
| 2011 | 20 | 883,693 | 199,420 | 1,083,113 | 4,513 |
| 2010 | 45 | 1,797,873 | 486,743 | 2,284,616 | 4,231 |
| 2009 | 30 | 1,279,910 | 372,185 | 1,652,095 | 4,589 |
| 2008 | 14 | 558,501 | 186,310 | 744,811 | 4,433 |
| 2007 | 20 | 687,798 | 239,555 | 927,353 | 3,864 |
| 2006 | 19 | 599,553 | 232,809 | 832,362 | 3,651 |
| 2005 | 19 | 600,369 | 255,601 | 855,970 | 3,754 |
| 2004 | 18 | 672,565 | 314,905 | 987,470 | 4,572 |
| 2003 | 9 | 232,883 | 113,564 | 346,447 | 3,208 |
| 2002 | 29 | 809,852 | 445,736 | 1,255,588 | 3,608 |
| 2001 | 22 | 646,828 | 362,119 | 1,008,947 | 3,822 |
| 2000 | 14 | 428,057 | 261,912 | 689,969 | 4,107 |
| 1999 | 14 | 400,097 | 264,622 | 664,719 | 3,957 |
| 1998 | 29 | 862,890 | 605,323 | 1,468,213 | 4,219 |
| 1997 | 29 | 742,992 | 559,059 | 1,302,051 | 3,742 |
| 1996 | 21 | 514,584 | 387,995 | 902,579 | 3,582 |
| 1995 | 16 | 411,991 | 326,186 | 738,177 | 3,845 |
| 1994 | 13 | 298,076 | 231,213 | 529,289 | 3,393 |
| 1993 | 17 | 342,906 | 304,511 | 647,417 | 3,174 |
| 1992 | 3 | 64,186 | 58,800 | 122,986 | 3,416 |
| 1991 | 5 | 69,809 | 71,061 | 140,870 | 2,348 |
| 1990 | 12 | 166,765 | 163,342 | 330,107 | 2,292 |
| 1989 | 1 | 20,314 | 22,351 | 42,665 | 3,555 |
| 1988 | 4 | 45,039 | 53,934 | 98,973 | 2,062 |
| 1987 | 97 | 1,611,513 | 1,921,258 | 3,532,771 | 3,035 |
| 1986 | 9 | 157,175 | 213,099 | 370,274 | 3,428 |
| 1985 | 8 | 115,286 | 161,598 | 276,884 | 2,884 |
| 1984 | 7 | 76,407 | 119,505 | 195,912 | 2,332 |
| 1983 & Prior | 47 | 328,839 | 574,116 | 982,955 | 1,601 |
| TOTAL | 734 | \$21,770,567 | \$10,044,330 | \$31,814,897 | \$3,612 |



Schedule D: Detailed Tabulations of the Data

Schedule of Retired Members by Type of Retirement

Benefits Payable June 30, 2019

| Amount of Monthly Benefit | Number of Rets. | Ret Type 1* | Ret Type 2* | Ret Type 3* |
|---------------------------|-----------------|-------------|-------------|-------------|
| \$1 – \$500 | 34 | 2 | 2 | 30 |
| 501 – 1,000 | 90 | 8 | 3 | 79 |
| 1,001 – 1,500 | 68 | 26 | 5 | 37 |
| 1,501 – 2,000 | 102 | 85 | 5 | 12 |
| 2,001 – 2,500 | 103 | 97 | 1 | 5 |
| 2,501 – 3,000 | 98 | 93 | 1 | 4 |
| 3,001 – 3,500 | 96 | 91 | | 5 |
| 3,501 – 4,000 | 50 | 50 | | |
| 4,001 – 4,500 | 35 | 34 | | 1 |
| 4,501 – 5,000 | 18 | 18 | | |
| Over 5,000 | 40 | 40 | | |
| Totals | 734 | 544 | 17 | 173 |

*Type of Retirement

- 1 – Retirement for Age & Service
- 2 – Disability Retirement
- 3 – Survivor Payment



Schedule D: Detailed Tabulations of the Data

Schedule of Retired Members by Type of Option Benefits Payable June 30, 2019

| Amount of Monthly Benefit | Number of Rets. | Life | Option 1 | Option 2 | Option 3 | Option 4 | Option 4A | Option 4B | Option 4C* | Option 5 | Option 9 | PLSO* 1 Year | PLSO* 2 Years | PLSO* 3 Years |
|---------------------------|-----------------|------|----------|----------|----------|----------|-----------|-----------|------------|----------|----------|--------------|---------------|---------------|
| \$1 – \$500 | 34 | 30 | | 1 | | | | | | | 3 | | | |
| 501 – 1,000 | 90 | 79 | | 1 | 1 | | | | 1 | | 9 | | 1 | |
| 1,001 – 1,500 | 68 | 40 | | 3 | | | | 1 | 3 | | 24 | 2 | | 4 |
| 1,501 – 2,000 | 102 | 20 | | 9 | 2 | | 1 | 3 | 3 | | 67 | 1 | 1 | 8 |
| 2,001 – 2,500 | 103 | 10 | | 8 | | | 1 | 2 | 1 | | 82 | 9 | 3 | 16 |
| 2,501 – 3,000 | 98 | 9 | | 9 | 1 | | 2 | 5 | 3 | | 72 | 5 | 5 | 35 |
| 3,001 – 3,500 | 96 | 14 | 1 | 9 | | | 0 | 1 | | | 71 | 9 | 5 | 34 |
| 3,501 – 4,000 | 50 | 3 | | 1 | 1 | | 1 | 2 | | | 42 | 7 | 4 | 20 |
| 4,001 – 4,500 | 35 | 1 | 1 | 4 | | | | 1 | | | 28 | 3 | 3 | 9 |
| 4,501 – 5,000 | 18 | | | | | | | | | | 18 | 3 | 0 | 8 |
| Over 5,000 | 40 | 1 | | | | | | | | | 39 | 3 | 7 | 7 |
| Totals | 734 | 207 | 2 | 45 | 5 | 0 | 5 | 15 | 11 | 0 | 455 | 42 | 29 | 141 |

Option Selected

| | | |
|---------|---|------------------------------------------------------|
| Life | - | Return of Contributions |
| Opt. 1 | - | Return of Member's Annuity |
| Opt. 2 | - | 100% Survivorship |
| Opt. 3 | - | 50%/50% Dual Survivorship |
| Opt. 4 | - | 75% Survivorship |
| Opt. 4A | - | 50% Survivorship |
| Opt. 4B | - | Years Certain & Life |
| Opt. 4C | - | Social Security Leveling* |
| Opt. 5 | - | Pop-Up |
| Opt. 9 | - | Maximum Benefit with Pop-Down Provision |
| PLSO | - | Partial Lump Sum* (Reflects reduced monthly benefit) |

*Included in other options



Schedule D: Detailed Tabulations of the Data

Retirant and Beneficiary Information June 30, 2019

| Attained Age | Service Retirement | | Disability Retirement | | Survivors and Beneficiaries | | Total | |
|--------------|--------------------|-----------------|-----------------------|-----------------|-----------------------------|-----------------|-------|-----------------|
| | No. | Annual Benefits | No. | Annual Benefits | No. | Annual Benefits | No. | Annual Benefits |
| Under 20 | | | | | 4 | \$21,416 | 4 | \$21,416 |
| 20 – 24 | | | | | 4 | 34,751 | 4 | 34,751 |
| 25 – 29 | | | | | | | | |
| 30 – 34 | | | | | 2 | 25,951 | 2 | 25,951 |
| 35 – 39 | | | | | 1 | 22,635 | 1 | 22,635 |
| 40 – 44 | | | 2 | \$27,283 | | | 2 | 27,283 |
| 45 – 49 | 13 | \$529,267 | | | 6 | 125,720 | 19 | 654,987 |
| 50 – 54 | 17 | 753,121 | 2 | 70,018 | 2 | 46,982 | 21 | 870,121 |
| 55 – 59 | 75 | 3,598,309 | 3 | 80,962 | 2 | 86,378 | 80 | 3,765,649 |
| 60 – 64 | 130 | 6,798,605 | | | 3 | 99,709 | 133 | 6,898,314 |
| 65 – 69 | 101 | 5,044,393 | 4 | 121,472 | 16 | 423,179 | 121 | 5,589,044 |
| 70 – 74 | 92 | 4,689,115 | 1 | 33,236 | 29 | 810,787 | 122 | 5,533,138 |
| 75 – 79 | 65 | 3,119,638 | 2 | 50,009 | 39 | 1,050,955 | 106 | 4,220,602 |
| 80 – 84 | 33 | 1,697,586 | 2 | 45,585 | 23 | 535,140 | 58 | 2,278,311 |
| 85 – 89 | 14 | 704,601 | 1 | 14,375 | 26 | 579,968 | 41 | 1,298,944 |
| 90 – 94 | 4 | 246,347 | | | 10 | 227,391 | 14 | 473,738 |
| 95 | | | | | 2 | 35,333 | 2 | 35,333 |
| 96 | | | | | 2 | 37,660 | 2 | 37,660 |
| 97 | | | | | 1 | 10,046 | 1 | 10,046 |
| 98 | | | | | | | | |
| 99 | | | | | | | | |
| 100 & Over | | | | | 1 | 16,974 | 1 | 16,974 |
| Totals | 544 | \$27,180,982 | 17 | \$442,940 | 173 | \$4,190,975 | 734 | \$31,814,897 |

Average Age: 69.2 years
 Average Age at Retirement: 50.1 years



Schedule D: Detailed Tabulations of the Data

Total Active Member Data as of June 30, 2019
 Tabulated by Attained Ages and Years of Service

| Attained Age | Completed Years of Service | | | | | | | | | Total | |
|--------------|----------------------------|--------|--------|----------|----------|----------|----------|----------|-----------|-------|---------------|
| | Under 1 | 1 to 4 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 & Over | No. | Payroll |
| Under 25 | 12 | 7 | | | | | | | | 19 | \$ 797,405 |
| 25 to 29 | 17 | 29 | 2 | | | | | | | 48 | 2,054,494 |
| 30 to 34 | 10 | 33 | 15 | 9 | | | | | | 67 | 3,167,199 |
| 35 to 39 | 5 | 15 | 17 | 47 | 4 | | | | | 88 | 4,914,519 |
| 40 to 44 | 2 | 9 | 3 | 35 | 33 | 7 | | | | 89 | 5,534,184 |
| 45 to 49 | 1 | 6 | 3 | 22 | 32 | 35 | 7 | | | 106 | 7,230,960 |
| 50 to 54 | 1 | 1 | | 4 | 14 | 18 | 21 | 2 | | 61 | 4,458,861 |
| 55 to 59 | | | | 1 | 2 | 12 | 6 | 7 | 2 | 30 | 2,387,839 |
| 60 to 64 | | | | | 1 | 2 | | 6 | 5 | 14 | 1,265,770 |
| 65 to 69 | | | | | | | | | | | 0 |
| 70 & Over | | | | | | | | | | | 0 |
| Total Count | 48 | 100 | 40 | 118 | 86 | 74 | 35 | 14 | 7 | 522 | \$ 31,811,231 |

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

Age: 42.0 years
 Service: 13.1 years
 Annual Pay: \$60,941



Schedule E: Analysis of Financial Experience

**Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
(\$ Thousands)**

| Type of Activity | \$ Gain (or Loss) For Year Ending 6/30/2019 | \$ Gain (or Loss) For Year Ending 6/30/2018 |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|---------------------------------------------------|
| Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss. | \$ (773.3) | \$ 554.8 |
| Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss. | 57.8 | (19.6) |
| Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss. | 266.8 | 0.6 |
| Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss. | 221.0 | (336.8) |
| Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. | 800.1 | (11,488.1) |
| New Members / Rehires. Additional unfunded actuarial accrued liability will produce a loss. | (49.5) | (3,306.9) |
| Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss. | (3,337.4) | 2,880.3 |
| Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain. | 1,881.8 | 131.8 |
| Other. Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc. | <u>(1,988.0)</u> | <u>(3,122.7)</u> |
| Gain (or Loss) During Year From Financial Experience | \$ (2,920.7) | \$ (14,706.6) |
| Non-Recurring Items. Adjustments for plan amendments, software changes, assumption changes, or method changes. | <u>(3,020.9)</u> | <u>0.0</u> |
| Composite Gain (or Loss) During Year | <u>\$ (5,941.6)</u> | <u>\$ (14,706.6)</u> |



Schedule F: Funding Policy

FUNDING POLICY OF THE MHSPRS BOARD OF TRUSTEES

The purpose of the funding policy is to state the overall funding goals for the System, the benchmarks that will be used to measure progress in achieving those goals, and the methods and assumptions that will be employed to develop the benchmarks.

I. Funding Goals

The objective in requiring employer and member contributions is to accumulate sufficient assets during a member's employment to fully finance the benefits the member receives throughout retirement. In meeting this objective, the System will strive to meet the following funding goals:

- To maintain an increasing ratio of system assets to accrued liabilities and reach an 80 percent minimum funded ratio in 2042;
- To maintain adequate asset levels to finance the benefits promised to members;
- To develop a pattern of stable contribution rates when expressed as a percentage of member payroll as measured by valuations prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board, with a minimum employer contribution equal to the normal cost determined under the Entry Age Normal funding method;
- To provide intergenerational equity for taxpayers with respect to system costs; and
- To fund benefit improvements through increases in contribution rates in accordance with Article 14, § 272A, of the Mississippi Constitution.

II. Benchmarks

To track progress in achieving the previously outlined funding goals, the following benchmarks will be measured annually as of the actuarial valuation date (with due recognition that a single year's results may not be indicative of long-term trends):

- **Funded ratio** – The funded ratio, defined as the actuarial value of system assets divided by the System's actuarial accrued liability, should be increasing over time, before adjustments for changes in benefits, actuarial methods, and/or actuarial assumptions, with a target of at least 80 percent in 2042. If the funded ratio is projected to be less than 60 percent in 2042 or if the funded ratio is projected to be less than 70 percent following three consecutive annual actuarial valuations, a contribution rate increase will be determined that is sufficient to generate a funded ratio of 90 percent in 2042. If a funded ratio of 100 percent or more is attained, and is projected to remain above 100 percent for the ensuing 30 years, a reduced contribution pattern will be established provided the projected funded ratio remains at or above 100 percent in every future year.
- **Contribution rate history** – Employer and member contribution rates should be level from year to year when expressed as a percent of active member payroll unless the projected funded ratio reaches a level that triggers a change in contribution rates. The initial employer contribution rate set under this policy as revised June 19, 2013, was 37.00 percent of active member payroll effective July 1, 2013. This rate was changed effective July 1, 2018 to 49.08 percent.
- **Unfunded Actuarial Accrued Liability (UAAL) amortization period** – The amortization period for the System's UAAL should be declining over time.



Schedule F: Funding Policy

III. Methods and Assumptions

The actuarial funding method used to develop the benchmarks will be entry age normal. The method used to develop the actuarial value of assets will recognize the underlying market value of the assets by spreading each year's unanticipated investment income (gains and losses) over a five-year smoothing period (20 percent per year), as adopted by the Board of Trustees of the Public Employees' Retirement System of Mississippi (PERS).

The actuarial assumptions used will be those last adopted by the PERS Board based upon the advice and recommendation of the System's actuary. The actuary shall conduct an investigation into the System's experience at least every two years on a rolling four year basis, and utilize the results of the investigation to form the basis for those recommendations.

The PERS Board will have an audit of the System's actuarial valuation results conducted by an independent actuary at least every six years. The purpose of such a review is to provide a critique of the reasonableness of the actuarial methods and assumptions in use and the resulting actuarially computed liabilities and contribution rates.

IV. Funding Policy Review

The funding policy components and triggers will be reviewed annually following the annual actuarial valuation and in conjunction with the annual projection report and will be amended as necessary following each experience investigation conducted by the Board.



Schedule G: Glossary

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as “accrued liability” or “past service liability”.

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future plan benefits” between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method”.

Actuarial Equivalent. A series of payments is called on actuarial equivalent of another series of payments if the two series have the same actuarial present value.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost”. Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets.

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.