# Cavanaugh Macdonald 

CONSULTING, LLC

The experience and dedication you deserve


Report on the Annual Valuation of the Supplemental Legislative Retirement Plan of Mississippi

Prepared as of June 30, 2016


# Cavanaugh Macdonald <br> C O N SULTIN G, LLC <br> The experience and dedication you deserve 

October 21, 2016
Board of Trustees
Public Employees' Retirement System of Mississippi
429 Mississippi Street
Jackson, MS 39201-1005
Ladies and Gentlemen:
Presented in this report are the results of the annual actuarial valuation of the Supplemental Legislative Retirement Plan of Mississippi. The purpose of the valuation was to measure the Plan's funding progress and to determine the unfunded actuarial accrued liability amortization period beginning July 1, 2016. The results may not be applicable for other purposes.

The date of the valuation was June 30, 2016.
The valuation was based upon data, furnished by the Executive Director and the PERS staff, concerning active, inactive and retired members along with pertinent financial information. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. The complete cooperation of the PERS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the presentation of results on page 1 and the comments on page 8.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems. The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board. We have reviewed the actuarial methods, including the asset valuation method, and continue to believe they are appropriate for the purpose of determining employer contribution levels.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

## Board of Trustees

October 21, 2016
Page 2

This actuarial valuation was performed to determine the adequacy of statutory contributions to fund the plan. The asset values used to determine unfunded liabilities and funded ratios are not market values but less volatile market related values. A smoothing technique is applied to market values to determine the market related values. The unfunded liability amounts and funded ratios using the market value of assets would be different. The interest rate used for determining liabilities is based on the expected return on assets. Therefore, liability amounts in this report cannot be used to assess a settlement of the obligation.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the plan, and on actuarial assumptions that are, in the aggregate, internally consistent and reasonably based on the actual experience of the plan.

Respectfully submitted,


Edward A. Macdonald, ASA, FCA, MAAA President


Edward J. Koebel, EA, FCA, MAAA Principal and Consulting Actuary


Jonathan T. Craven, ASA, EA, FCA, MAAA Senior Actuary

## EAM/EJK/JTC:kc

## TABLE OF CONTENTS

| Section | Item | Page No. |
| :--- | :--- | :---: |
| I | Summary of Principal Results | 1 |
| II | Membership Data | 4 |
| III | Valuation Balance Sheet | 5 |
| IV | Comments on Valuation | 8 |
| V | Derivation of Experience Gains and Losses | 9 |
| VI | Required Contribution Rates | 10 |
| VII | Cash Flow Projection | 11 |
| VIII | Supplemental Disclosure Information | 14 |

## Schedule

A

B

C
D

E

F

Development of Actuarial Value of Assets
Statement of Actuarial Assumptions and Methods 24

Summary of Main Benefit and Contribution Provisions 26
Detailed Tabulations of the Data 34

Analysis of Financial Experience 39
Glossary 40

# REPORT ON THE ANNUAL VALUATION OF THE SUPPLEMENTAL LEGISLATIVE RETIREMENT PLAN OF MISSISSIPPI PREPARED AS OF JUNE 30, 2016 

## SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30, 2016, presents the results of the annual actuarial valuation of the Plan. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below. The current valuation and reported benefits amount reflect any benefit increases granted to retirees as of July 1, 2016. Based on the funding policy adopted by the Board in 2012, the employer contribution rate is to be set at $7.40 \%$ of annual compensation and the amortization period calculated on an open basis.

SUMMARY OF PRINCIPAL RESULTS


[^0]2. The valuation balance sheet showing the results of the valuation is given in Section III.
3. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains and losses during the valuation year are given in Section V and the rates of contribution payable by employers are given in Section VI.
4. Schedule A of this report presents the development of the actuarial value of assets. Schedule B details the actuarial assumptions and methods employed. Since the previous valuation, the assumed rate of interest credited to employee contributions has been changed from $3.50 \%$ to 2.00\%.
5. Schedule C gives a summary of the benefit and contribution provisions of the plan. 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. The rate for the fiscal year 2016 will be one percent.
6. The table on page 3 provides a ten-year history of some pertinent figures.
7. GASB 67 has replaced GASB 25 for accounting results and a separate GASB 67 report will be prepared for the Board. For continuity and informational purposes, we have included GASB 25 results in Section VIII of this report.

## Comparative Schedule

| Valuation Date June 30 | Active Members |  |  |  | Retired Lives |  |  |  | Valuation Results (\$ thousands) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Payroll (\$ thousands) | Average Salary | \% increase from previous year | Number | Active/ Retired Ratio | Annual Benefits (\$ thousands) | Benefits as \% of Payroll | Accrued Liability | Valuation Assets | UAAL |
| 2007 | 175 | \$6,554 | \$37,453 | 2.0\% | 126 | 1.4 | \$ 657.8 | 10.0\% | \$15,054 | \$12,722 | \$2,332 |
| 2008 | 175 | 6,753 | 38,588 | 3.0 | 138 | 1.3 | 754.8 | 11.2 | 15,615 | 13,412 | 2,203 |
| 2009 | 174 | 6,803 | 39,100 | 1.3 | 141 | 1.2 | 781.2 | 11.5 | 16,535 | 13,386 | 3,149 |
| 2010 | 175 | 6,605 | 37,743 | (3.5) | 142 | 1.2 | 792.7 | 12.0 | 17,081 | 13,241 | 3,840 |
| 2011 | 174 | 6,810 | 39,137 | 3.7 | 147 | 1.2 | 823.9 | 12.1 | 18,605 | 13,606 | 4,999 |
| 2012 | 175 | 6,872 | 39,267 | 0.3 | 173 | 1.0 | 1,046.7 | 15.2 | 19,537 | 13,268 | 6,269 |
| 2013 | 175 | 6,695 | 38,259 | (2.6) | 188 | 0.9 | 1,121.4 | 16.7 | 19,978 | 13,554 | 6,424 |
| 2014 | 175 | 6,918 | 39,531 | 3.3 | 187 | 0.9 | 1,139.5 | 16.5 | 20,240 | 14,899 | 5,341 |
| 2015 | 174 | 6,861 | 39,432 | (0.3) | 185 | 0.9 | 1,133.6 | 16.5 | 21,213 | 16,098 | 5,115 |
| 2016 | 171 | 6,862 | 40,130 | 1.8 | 207 | 0.8 | 1,277.8 | 18.6 | 21,259 | 16,447 | 4,812 |

## SECTION II - MEMBERSHIP DATA

Data regarding the membership of the Plan for use as a basis for the valuation were furnished by the Plan's office. The following tables summarize the membership of the Plan as of June 30, 2016 upon which the valuation was based. Detailed tabulations of the data are given in Schedule D.

Active Members

| Employers | Number of Employers | Number | Payroll |  | Group Averages |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Salary | Age | Benefit Service* |
| State Agencies | 5 | 171 | \$ | 6,862,262 | \$40,130 | 54.9 | 10.5 |

* Eligibility service is 14.5 years.

Of the 171 active members, 109 are vested and 62 are non-vested.

Retired Lives

| Type of Benefit <br> Payment | No. | Annual Benefits | Group Averages |  |
| :--- | ---: | ---: | ---: | ---: |
| Benefit | Age |  |  |  |
| Retirement | 167 | $\$ 1,043,944$ | $\$ 6,251$ | 71.4 |
| Disability | 2 | 14,883 | 7,442 | 63.8 |
| Survivor | 38 | 218,936 | 5,761 | 72.2 |
| Total in SLRP | 207 | $\$ 1,277,763$ | $\$ 6,173$ | 71.5 |

Deferred Vested/Inactive Lives

| Type of Member | No. | Deferred Benefits | Outstanding Balance |
| :--- | ---: | ---: | ---: |
| Deferred Vested - Benefit Included | 36 | $\$ 126,747$ | N/A |
| Inactive | 27 | N/A | $\$ 151,423$ |
| Total in SLRP | 63 | $\$ 126,747$ | $\$ 151,423$ |

## SECTION III - VALUATION BALANCE SHEET

The following valuation balance sheet shows the assets and liabilities of the retirement plan as of the current valuation date of June 30, 2016 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2015. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date. The development of the actuarial value of assets is presented in Schedule
A.

VALUATION BALANCE SHEET
SHOWING THE ASSETS AND LIABILITIES OF THE SUPPLEMENTAL LEGISLATIVE RETIREMENT PLAN OF MISSISSIPPI

|  | JUNE 30, 2016 |  | JUNE 30, 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
| ASSETS |  |  |  |  |
| Current actuarial value of assets: |  |  |  |  |
| Annuity Savings Account | \$ | 2,485,280 | \$ | 2,861,601 |
| Annuity Reserve |  | 2,641,050 |  | 2,157,189 |
| Employers' Accumulation Account |  | 11,320,670 |  | 11,079,210 |
| Total current assets | \$ | 16,447,000 | \$ | 16,098,000 |
| Future member contributions to Annuity Savings Account | \$ | 1,820,044 | \$ | 1,454,976 |
| Prospective contributions to Employer's Accumulation Account |  |  |  |  |
| Normal contributions | \$ | 1,601,639 | \$ | 1,202,780 |
| Unfunded actuarial accrued liability contributions |  | 4,811,800 |  | 5,115,446 |
| Total prospective contributions | \$ | 6,413,439 | \$ | 6,318,226 |
| Total assets | \$ | 24,680,483 | \$ | 23,871,202 |
| LIABILITIES |  |  |  |  |
| Present value of benefits payable on account of present retired members and beneficiaries | \$ | 13,757,758 | \$ | 12,329,200 |
| Present value of benefits payable on account of inactive members for service rendered before the valuation date |  |  |  |  |
| Present value of benefits payable on account of active members |  |  |  |  |
| Total liabilities | \$ | 24,680,483 |  | 23,871,202 |

## BREAKDOWN OF TOTAL AND ACCRUED LIABILITIES AS OF JUNE 30, 2016

|  | Total Liability |  | Accrued <br> Liability |  |
| :---: | :---: | :---: | :---: | :---: |
| Active Members |  |  |  |  |
| Retirement | \$ | 7,918,398 | \$ | 5,723,623 |
| Death |  | 411,096 |  | 276,596 |
| Disability |  | 246,985 |  | 52,778 |
| Termination |  | 1,010,689 |  | 112,488 |
| Total | \$ | 9,587,168 | \$ | 6,165,485 |
| Retirees |  |  |  |  |
| Retirement | \$ | 11,585,704 | \$ | 11,585,704 |
| Survivor |  | 2,018,811 |  | 2,018,811 |
| Disability |  | 153,243 |  | 153,243 |
| Total | \$ | 13,757,758 | \$ | 13,757,758 |
| Deferred Vested Members |  | 1,032,712 |  | 1,032,712 |
| Inactive Members |  | 302,845 |  | 302,845 |
| Total Actuarial Values | \$ | 24,680,483 | \$ | 21,258,800 |
| Actuarial Value of Assets |  |  |  | 16,447,000 |
| Unfunded Actuarial Accrued Liability |  |  | \$ | 4,811,800 |

## SECTION IV - COMMENTS ON VALUATION

The valuation balance sheet gives the following information with respect to the funds of the Plan as of June
30, 2016.

## Total Assets

The Annuity Savings Account is the fund to which are credited contributions made by members together with interest thereon. When a member retires, the amount of his or her accumulated contributions is transferred from the Annuity Savings Account to the Annuity Reserve. The Employer's Accumulation Account is the fund to which are credited employer contributions and investment income, and from which are paid all employer-provided benefits under the plan. The assets credited to the Annuity Savings Account as of the valuation date, which represent the accumulated contributions of members to that date, amounted to $\$ 2,485,280$. The assets credited to the Annuity Reserve were $\$ 2,641,050$ and the assets credited to the Employer's Accumulation Account totaled $\$ 11,320,670$. Current actuarial assets as of the valuation date equaled the sum of these three funds, $\$ 16,447,000$. Future member contributions to the Annuity Savings Account were valued to be $\$ 1,820,044$. Prospective contributions to the Employer's Accumulation Account were calculated to be $\$ 6,413,439$ of which $\$ 1,601,639$ is attributable to service rendered after the valuation date (normal contributions) and $\$ 4,811,800$ is attributable to service rendered before the valuation date (unfunded actuarial accrued liability contributions).

Therefore, the balance sheet shows the present value of current and future assets of the Plan to be $\$ 24,680,483$ as of June 30, 2016.

## Total Liabilities

The present value of benefits payable on account of presently retired members and beneficiaries totaled $\$ 13,757,758$ as of the valuation date. The present value of future benefit payments on behalf of active members amounted to $\$ 9,587,168$. In addition, the present value of benefits for inactive members, due to service rendered before the valuation date, was calculated to be \$1,335,557.

Therefore, the balance sheet shows the present value for all prospective benefit payments under the Plan to be $\$ 24,680,483$ as of June 30, 2016.

Section 25-11-307(1) of State law requires that active members contribute 3.00\% of annual compensation to the Plan.

Section 25-11-307(2) requires that the State contribute a certain percentage of the annual compensation of members to cover the normal contributions and a certain percentage to cover the accrued liability contributions of the Plan. These individual contribution percentages are established in accordance with an actuarial valuation. Based on the new funding policy adopted by the Board in October, 2012, the employer rate is set at $7.40 \%$ of annual compensation and the amortization period calculated on an open basis. Therefore, the amortization period for the June 30, 2016 valuation is 22.6 years, compared to 23.6 years for the last valuation.

The primary reasons for the decrease in the amortization period are experience gains on termination and retirement offset by the loss on investment return. See Schedule E for a complete analysis of the Financial Experience.

## SECTION V - DERIVATION OF EXPERIENCE GAINS AND LOSSES

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, 2016 is shown below.

|  |  | \$ Thousands |  |
| :---: | :---: | :---: | :---: |
| (1) | UAAL* as of June 30, 2015 | \$ | 5,115.4 |
| (2) | Total normal cost from last valuation |  | 390.1 |
| (3) | Total contributions |  | 722.0 |
| (4) | Interest accrual: [[(1) + (2)] x .0775] - [(3) x .03875] |  | 398.7 |
| (5) | Expected UAAL before changes: $(1)+(2)-(3)+(4)$ | \$ | 5,182.2 |
| (6) | Change due to plan amendments |  | 0.0 |
| (7) | Change due to actuarial assumptions or methods |  | (5.6) |
| (8) | Expected UAAL after changes: $(5)+(6)+(7)$ | \$ | 5,176.6 |
| (9) | Actual UAAL as of June 30, 2016 | \$ | 4,811.8 |
| (10) | Gain/(loss): $(8)$ - (9) | \$ | 364.8 |
| (11) | Gain/(loss) as percent of actuarial accrued liabilities at start of year $(\$ 21,213.4)$ |  | 1.7\% |

*Unfunded actuarial accrued liability.

| Valuation Date June 30 | Actuarial Gain/(Loss) as a \% of <br> Beginning Accrued Liabilities |
| :---: | :---: |
| 2011 | $(6.1) \%$ |
| 2012 | $(6.4)$ |
| 2013 | $(0.9)$ |
| 2014 | 6.3 |
| 2015 | 4.4 |
| 2016 | 1.7 |

## SECTION VI - REQUIRED CONTRIBUTION RATES

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement Plan. The following table shows the rates of contribution payable by employers as determined from the present valuation for the 2017/2018 fiscal year and a comparison to the previous valuation results.

| Contribution for | 2017/2018 Fiscal Year | 2016/2017 Fiscal Year |
| :---: | :---: | :---: |
| Normal Cost: |  |  |
| Service retirement benefits | 4.51\% | 4.07\% |
| Disability benefits | 0.28 | 0.25 |
| Survivor benefits | 0.20 | 0.18 |
| Total | 4.99\% | 4.50\% |
| Member Contributions: | 3.00\% | 3.00\% |
| Less future refunds | (0.65) | (0.98) |
| Available for benefits | 2.35\% | 2.02\% |
| Employer Normal Cost | 2.64\% | 2.48\% |
| Administrative Expense Load | 0.23\% | 0.23\% |
| Unfunded Actuarial Accrued Liabilities (22.6 year level \% of payroll amortization*) | 4.53\% | 4.69\% |
| Total Statutory Employer Contribution Rate | 7.40\% | 7.40\% |

*Amortization period a year ago was 23.6 years.

The components of the change in the computed unfunded actuarial accrued liability amortization period from 23.6 years to 22.6 years are as follows:

| Previously Reported Period |
| :---: |
| Change due to: |
| Normal amortization |
| Actuarial experience |
| Assumption changes |
| Plan amendments |
| Method Change |
| Contribution experience |
| Computed Period |

## SECTION VII - CASH FLOW PROJECTION

Regular actuarial valuations measure the Retirement Plan's present financial position and contributions adequacy by calculating and financing the liabilities created by the present benefit program. This process involves discounting to present values the future benefit payments on behalf of present active and retired members and their survivors. However, valuations do not produce information regarding future changes in the makeup of the covered group or the amounts of benefits to be paid or investment income to be received - actuarial projections do.

Whereas valuations provide a snapshot of the retirement plan as of a given date, projections provide a moving picture. Projected active and retired groups are developed from year to year by the application of assumptions regarding pre-retirement withdrawal from service, retirements, deaths, disabilities, and the addition of new members. Projected information regarding the retired life group leads to assumed future benefit payout. Combining future benefit payments with assumed contributions and expected investment earnings produces the net cash flow of the Plan each year, and thus end of year asset levels.

Projections are used for many purposes. Among them are (i) developing cash flow patterns for investment policy and asset mix consideration, (ii) exploring the effect of alternative assumptions about future experience, (iii) analyzing the impact on plan funding progress of changes in the workforce, and (iv) examining the potential effect of changes in benefits on plan financial activity.

Projection results are useful in demonstrating changing relationships among key elements affecting plan financial activity. For example: how benefits payable and plan assets will grow in future decades. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. For instance, cash flow projected to occur 10 years in the future will not be exact (except by coincidence), but understanding the changed relationship between future benefit payout and future investment income can be very useful.

The following projections assume a $7.75 \%$ investment return and salary increases of $3.75 \%$ each year in the future. Due to the funding policy adopted in 2012, all future contribution rates are assumed to remain at $7.40 \%$ of payroll.

## Mississippi Supplemental Legislative Retirement Plan

Twenty-five Year Cash Flow Projection

| Year | Valuation Payrol | Market Value of Assets Balance July 1 | Contributions | Projected <br> Benefit <br> Payments* | Expected Investment Return | Cash Flow | Market Value of Assets Balance June 30 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2016 | \$7,119,596 | \$15,768,000 | \$740,438 | \$1,469,959 | \$1,194,279 | \$464,757 | \$16,232,757 |
| 2017 | 7,386,581 | 16,232,757 | 768,204 | 1,478,053 | 1,231,045 | 521,197 | 16,753,954 |
| 2018 | 7,663,578 | 16,753,954 | 797,012 | 1,494,259 | 1,271,917 | 574,670 | 17,328,624 |
| 2019 | 7,950,962 | 17,328,624 | 826,900 | 1,640,013 | 1,312,048 | 498,935 | 17,827,559 |
| 2020 | 8,249,123 | 17,827,559 | 857,909 | 1,696,035 | 1,349,764 | 511,639 | 18,339,198 |
| 2021 | 8,558,465 | 18,339,198 | 890,080 | 1,704,062 | 1,390,335 | 576,353 | 18,915,551 |
| 2022 | 8,879,407 | 18,915,551 | 923,458 | 1,713,823 | 1,435,900 | 645,535 | 19,561,086 |
| 2023 | 9,212,385 | 19,561,086 | 958,088 | 1,812,086 | 1,483,509 | 629,511 | 20,190,597 |
| 2024 | 9,557,849 | 20,190,597 | 994,016 | 1,910,768 | 1,529,910 | 613,158 | 20,803,755 |
| 2025 | 9,916,268 | 20,803,755 | 1,031,292 | 1,906,281 | 1,579,018 | 704,029 | 21,507,784 |
| 2026 | 10,288,128 | 21,507,784 | 1,069,965 | 1,950,591 | 1,633,366 | 752,740 | 22,260,524 |
| 2027 | 10,673,933 | 22,260,524 | 1,110,089 | 2,077,026 | 1,688,421 | 721,484 | 22,982,008 |
| 2028 | 11,074,205 | 22,982,008 | 1,151,717 | 2,167,219 | 1,742,489 | 726,987 | 23,708,995 |
| 2029 | 11,489,488 | 23,708,995 | 1,194,907 | 2,169,742 | 1,800,377 | 825,542 | 24,534,537 |
| 2030 | 11,920,344 | 24,534,537 | 1,239,716 | 2,202,361 | 1,864,820 | 902,176 | 25,436,713 |
| 2031 | 12,367,357 | 25,436,713 | 1,286,205 | 2,317,620 | 1,932,124 | 900,708 | 26,337,421 |
| 2032 | 12,831,133 | 26,337,421 | 1,334,438 | 2,406,701 | 2,000,375 | 928,112 | 27,265,533 |
| 2033 | 13,312,300 | 27,265,533 | 1,384,479 | 2,379,828 | 2,075,229 | 1,079,880 | 28,345,413 |
| 2034 | 13,811,511 | 28,345,413 | 1,436,397 | 2,396,499 | 2,160,260 | 1,200,158 | 29,545,571 |
| 2035 | 14,329,443 | 29,545,571 | 1,490,262 | 2,472,470 | 2,252,431 | 1,270,223 | 30,815,794 |
| 2036 | 14,866,797 | 30,815,794 | 1,546,147 | 2,530,479 | 2,350,793 | 1,366,461 | 32,182,255 |
| 2037 | 15,424,302 | 32,182,255 | 1,604,127 | 2,476,649 | 2,460,945 | 1,588,424 | 33,770,678 |
| 2038 | 16,002,713 | 33,770,678 | 1,664,282 | 2,426,555 | 2,588,241 | 1,825,968 | 35,596,646 |
| 2039 | 16,602,815 | 35,596,646 | 1,726,693 | 2,458,842 | 2,730,899 | 1,998,749 | 37,595,395 |
| 2040 | 17,225,421 | 37,595,395 | 1,791,444 | 2,453,306 | 2,888,475 | 2,226,612 | 39,822,008 |

* Includes expected administrative expenses


## Mississippi Supplemental Legislative Retirement Plan

 Twenty-five Year Cash Flow Projection Based on Valuation AssumptionsProjected Contributions and Benefits Expressed as Percents of Active Member Payroll



## SECTION VIII - SUPPLEMENTAL DISCLOSURE INFORMATION

1. Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 replaced Statement No. 25 and 27 for plan years beginning after June 15, 2013. The information required under the new GASB Statements will be issued in separate reports. The following supplemental disclosure information is provided for informational purposes only. One such item is a distribution of the number of employees by type of membership, as follows:

NUMBER OF ACTIVE AND RETIRED PARTICIPANTS AS OF JUNE 30, 2016

| GROUP | NUMBER |
| :--- | :---: |
| Retired participants and beneficiaries <br> currently receiving benefits | 207 |
| Terminated participants and beneficiaries <br> entitled to benefits but not yet receiving <br> benefits | 63 |
| Active Participants | $\underline{171}$ |

2. Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS

| Plan Year Ended | (1) <br> Actuarial Value of Assets | (2) <br> Actuarial <br> Accrued <br> Liability <br> (AAL) <br> Entry Age | (3) <br> Percent Funded (1)/(2) | (4) Unfunded AAL $(2)-(1)$ | (5) <br> Annual Covered Payroll | (6) <br> Unfunded AAL as a Percentage of Covered Payroll (4)/(5) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 06/30/2007 | \$12,722,000 | \$15,053,526 | 84.5\% | \$2,331,526 | \$6,554,229 | 35.6\% |
| 06/30/2008* | 13,412,000 | 15,614,687 | 85.9 | 2,202,687 | 6,752,960 | 32.6 |
| 06/30/2009\# | 13,386,000 | 16,534,870 | 81.0 | 3,148,870 | 6,803,339 | 46.3 |
| 06/30/2010 | 13,241,000 | 17,081,278 | 77.5 | 3,840,278 | 6,605,037 | 58.1 |
| 06/30/2011\# | 13,606,000 | 18,605,301 | 73.1 | 4,999,301 | 6,809,770 | 73.4 |
| 06/30/2012 | 13,268,000 | 19,536,604 | 67.9 | 6,268,604 | 6,871,757 | 91.2 |
| 06/30/2013\# | 13,554,000 | 19,977,584 | 67.8 | 6,423,584 | 6,695,359 | 95.9 |
| 06/30/2014 | 14,899,000 | 20,239,757 | 73.6 | 5,340,757 | 6,917,939 | 77.2 |
| 06/30/2015\# | 16,098,000 | 21,213,446 | 75.9 | 5,115,446 | 6,861,166 | 74.6 |
| 06/30/2016 | 16,447,000 | 21,258,800 | 77.4 | 4,811,800 | 6,862,262 | 70.1 |

* After change in benefit provisions.
\# After change in actuarial assumptions.

3. Under GASB 25/27, the determination of the employer contribution as a percentage of payroll was referred to as the annual required contribution (ARC) and was the basis of the prior funding policy. In the calculation of the ARC, the accrued liability rate was based on the amortization of the unfunded actuarial accrued liability over a fixed 30 year period from the valuation date. The calculation of the ARC for the past two valuations is shown below:

| Annual Required Contribution (ARC) |  | 2015 |
| :---: | :---: | :---: |
| Valuation Date June 30 | 2016 |  |
| Employer contribution rate |  | $2.71 \%$ |
| Normal Cost* | $2.87 \%$ | $\underline{4.08}$ |
| Accrued liability |  |  |
| Total | $\frac{3.84}{6.71 \%}$ | 30 years |

* Includes load for administrative expenses. See page 10 for more contribution rate detail.

4. Additional information for the calculation of the ARC as of June 30, 2016 follows.

| Valuation date | $6 / 30 / 2016$ |
| :--- | :---: |
| Actuarial cost method | Entry age |
| Amortization method | Level percent open |
| Amortization period | 30 years |
| Asset valuation method | 5-year smoothed market |
| Actuarial assumptions: |  |
| Investment rate of return* | $7.75 \%$ |
| Projected salary increases\# | $3.75 \%$ |
| Cost-of-living adjustments | $3.00 \%$ |
| ${ }^{*}$ Includes price inflation at | $3.00 \%$ |
| \# Includes wage inflation at | $3.75 \%$ |

Solvency Tests (\$ in Thousands)


Schedule of Active Member Valuation Data

| Valuation Date | Number of Employers | Number | Active Members |  | \% Increase in Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Annual Payroll | Annual Average Pay |  |
| 2007 | 5 | 175 | \$6,554,229 | \$37,453 | 2.0\% |
| 2008 | 5 | 175 | 6,752,960 | 38,588 | 3.0 |
| 2009 | 5 | 174 | 6,803,339 | 39,100 | 1.3 |
| 2010 | 5 | 175 | 6,605,037 | 37,743 | (3.5) |
| 2011 | 5 | 174 | 6,809,770 | 39,137 | 3.7 |
| 2012 | 5 | 175 | 6,871,757 | 39,267 | 0.3 |
| 2013 | 5 | 175 | 6,695,359 | 38,259 | (2.6) |
| 2014 | 5 | 175 | 6,917,939 | 39,531 | 3.3 |
| 2015 | 5 | 174 | 6,861,166 | 39,432 | (0.3) |
| 2016 | 5 | 171 | 6,862,262 | 40,130 | 1.8 |

Schedule of Number of Retirants Added To and Removed From Rolls Last Ten Fiscal Years

| Item | Fiscal Year Ended June 30 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Beginning of Year | 122 | 126 | 138 | 141 | 142 | 147 | 173 | 188 | 187 | 185 |
| Added | 6 | 20 | 7 | 6 | 7 | 33 | 20 | 6 | 8 | 28 |
| Removed | (2) | (8) | (4) | (5) | (2) | (7) | (5) | (7) | (10) | (6) |
| End of Year | 126 | 138 | 141 | 142 | 147 | 173 | 188 | 187 | 185 | 207 |

## Schedule of Benefit Payments Added To and Removed From Rolls

 Last Seven Fiscal Years| Year Ending | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Beginning of Year | \$781,231 | \$792,670 | \$823,936 | \$1,046,672 | \$1,121,404 | \$1,139,477 | \$1,133,588 |
| Added | 36,400 | 30,133 | 230,576 | 77,003 | 32,688 | 58,303 | 177,207 |
| Removed | $(46,742)$ | $(22,703)$ | $(31,217)$ | $(26,497)$ | $(44,780)$ | $(95,910)$ | $(57,546)$ |
| Benefit increase due to annual COLA | 21,781 | 23,836 | 23,377 | 24,226 | 30,165 | 31,718 | 24,514 |
| Benefit increase due to plan amendments | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| End of Year | \$792,670 | \$823,936 | \$1,046,672 | \$1,121,404 | \$1,139,477 | \$1,133,588 | \$1,277,763 |

## Schedule of Average Benefit Payments

|  | Years of Credited Service |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-4 | 5-9 | 10-15 | 16-20 | 21-24 | 25 | 26-29 | 30 | 31+ |
| July 1, 2015 to June 30, 2016 |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$122.08 | \$313.35 | \$349.70 | \$486.61 | \$654.27 | \$522.12 |  |  | \$1,200.33 |
| Average Final Salary | \$36,194.58 | \$36,802.08 | \$39,877.51 | \$35,210.67 | \$39,774.39 | \$41,482.12 |  |  | \$42,237.92 |
| Number of Active Retirants | 2 | 4 | 6 | 4 | 7 | 2 |  |  | 3 |
| July 1, 2014 to June 30, 2015 |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit |  | \$163.64 | \$739.53 | \$720.77 |  | \$578.67 |  |  | \$1,032.05 |
| Average Final Salary |  | \$18,636.25 | \$68,228.41 | \$37,911.50 |  | \$34,790.50 |  |  | \$42,949.00 |
| Number of Active Retirants |  | 2 | 2 | 2 |  | 1 |  |  | 1 |
| July 1, 2013 to June 30, 2014 |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit |  |  | \$345.04 | \$490.81 | \$472.60 |  | \$579.73 |  |  |
| Average Final Salary |  |  | \$34,404.37 | \$34,871.00 | \$39,300.75 |  | \$43,164.50 |  |  |
| Number of Active Retirants |  |  | 2 | 2 | 1 |  | 1 |  |  |
| July 1, 2012 to June 30, 2013 |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit |  | \$168.36 | \$182.74 | \$462.84 | \$550.22 |  | \$730.99 |  |  |
| Average Final Salary |  | \$27,924.79 | \$29,576.45 | \$36,139.50 | \$39,580.94 |  | \$38,727.25 |  |  |
| Number of Active Retirants |  | 6 | 7 | 1 | 4 |  | 2 |  |  |
| July 1, 2011 to June 30, 2012 |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit |  | \$193.84 | \$404.90 | \$429.73 | \$675.67 |  | \$731.32 |  | \$1,237.30 |
| Average Final Salary |  | \$33,827.49 | \$43,765.24 | \$36,045.25 | \$38,900.81 |  | \$38,644.58 |  | \$57,275.51 |
| Number of Active Retirants |  | 10 | 6 | 3 | 4 |  | 3 |  | 7 |

## Schedule of Average Benefit Payments

|  | Years of Credited Service |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-4 | 5-9 | 10-15 | 16-20 | 21-24 | 25 | 26-29 | 30 | 31+ |
| July 1, 2010 to June 30, 2011 |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$103.60 | \$260.72 | \$108.90 |  | \$305.17 |  |  |  | \$369.01 |
| Average Final Salary | \$33,200.00 | \$34,762.00 | \$19,188.49 |  | \$36,781.59 |  |  |  | \$27,287.00 |
| Number of Active Retirants | 1 | 1 | 1 |  | 2 |  |  |  | 2 |
| July 1, 2009 to June 30, 2010 |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit |  | \$129.62 | \$516.63 |  | \$759.42 |  |  |  | \$1,295.33 |
| Average Final Salary |  | \$29,883.00 | \$48,826.77 |  | \$45,504.00 |  |  |  | \$36,180.57 |
| Number of Active Retirants |  | 3 | 1 |  | 1 |  |  |  | 1 |
| July 1, 2008 to June 30, 2009 |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit |  | \$194.61 |  |  | \$547.11 |  | \$833.23 | \$411.03 | \$338.62 |
| Average Final Salary |  | \$29,237.33 |  |  | \$37,853.25 |  | \$39,683.00 | \$41,404.00 | \$34,997.00 |
| Number of Active Retirants |  | 3 |  |  | 1 |  | 1 | 1 | 1 |
| July 1, 2007 to June 30, 2008 |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit | \$117.04 | \$226.10 | \$354.03 | \$446.95 | \$513.00 |  | \$654.58 |  | \$922.68 |
| Average Final Salary | \$32,858.75 | \$34,938.88 | \$36,171.88 | \$40,512.11 | \$32,188.50 |  | \$32,547.92 |  | \$44,455.75 |
| Number of Active Retirants | 2 | 2 | 4 | 7 | 1 |  | 3 |  | 1 |
| July 1, 2006 to June 30, 2007 |  |  |  |  |  |  |  |  |  |
| Average Monthly Benefit |  | \$189.08 | \$256.47 | \$264.75 |  |  |  |  |  |
| Average Final Salary |  | \$27,519.25 | \$34,758.63 | \$22,041.60 |  |  |  |  |  |
| Number of Active Retirants |  | 3 | 2 | 1 |  |  |  |  |  |

## SCHEDULE A

## Development of Actuarial Value of Assets

(\$ thousands)

| Valuation Date June 30: | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A. Actuarial Value Beginning of Year | \$14,899 | \$16,098 |  |  |  |  |
| B. Market Value End of Year | 16,411 | 15,768 |  |  |  |  |
| C. Market Value Beginning of Year | 16,453 | 16,456* |  |  |  |  |
| D. Cash Flow |  |  |  |  |  |  |
| D1. Contributions | 718 | 722 |  |  |  |  |
| D2. Other Revenue | 0 | 0 |  |  |  |  |
| D3. Benefit Payments | $(1,257)$ | $(1,486)$ |  |  |  |  |
| D4. Administrative Expenses | (10) | (10) |  |  |  |  |
| D5. Investment Expenses | (58) | (58) |  |  |  |  |
| D6. Net | (607) | (832) |  |  |  |  |
| E. Investment Income |  |  |  |  |  |  |
| E1. Market Total: B.-C.-D6. | 565 | 144 |  |  |  |  |
| E2. Assumed Rate | 8.00\% | 7.75\% |  |  |  |  |
| E3. Amount for Immediate Recognition | 1,352 | 1,303 |  |  |  |  |
| E4. Amount for Phased-In Recognition | (787) | $(1,159)$ |  |  |  |  |
| F. Phased-In Recognition of Investment Income |  |  |  |  |  |  |
| F1. Current Year: $0.20 * E 4$. | (157) | (232) |  |  |  |  |
| F2. First Prior Year | 295 | (157) | (232) |  |  |  |
| F3. Second Prior Year | 136 | 295 | (157) | (232) |  |  |
| F4. Third Prior Year | (209) | 136 | 295 | (157) | (232) |  |
| F5. Fourth Prior Year | 389 | (209) | 136 | 295 | (157) | (232) |
| F6. Total Recognized Investment Gain | 454 | (167) | 42 | (94) | (389) | (232) |
| G. Adjustment | 0 | 45 |  |  |  |  |
| H. Actuarial Value End of Year: |  |  |  |  |  |  |
| A. + D6.+E3.+F6.+G. | \$16,098 | \$16,447 |  |  |  |  |
| I. Difference Between Market \& Actuarial Values | \$ 313 | \$( 679) | \$(721) | \$(627) | \$(238) | \$(6) |

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 5 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.
*Adjusted from prior year due to revised assets.

|  |  | Asset Summary June 30, 2016 <br> (\$ in Thousands) |  |
| :---: | :---: | :---: | :---: |
|  | Market Value | Book Value | Actuarial Value |
| 1. Assets at June 30, 2015 | \$16,456 | \$13,389 | \$16,098 |
| 2. Contributions and Misc. Revenue | 722 | 722 | 722 |
| 3. Investment Increment | 144 | 1,087 | 1,136 |
| 4. Benefit Payments | $(1,486)$ | $(1,486)$ | $(1,486)$ |
| 5. Expenses | (68) | (68) | (68) |
| 6. Adjustment | 0 | 0 | 45 |
| 7. Assets at June 30, 2016 $(1)+(2)+(3)+(4)+(5)+(6)$ | \$15,768 | \$13,644 | \$16,447 |
| 8. Investment Increment/Mean Assets* | 0.9\% | 8.4\% | 7.2\% |

*Based on the approximation formula: $1 /[.5 \times(\mathrm{A}+\mathrm{B}-\mathrm{I})]$, where
I = Investment increment
$A=$ Beginning of year asset value
$B=$ End of year asset value

## SCHEDULE B

## STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

INTEREST RATE: 7.75\% per annum, compounded annually (net of investment expenses only).
SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed rates of separation from active service are as follows:

| Age | Annual Rate of |  |  |
| :---: | :---: | :---: | :---: |
|  | Death |  |  |
|  | Male | Female | Disability* |
| 20 | 0.02\% | 0.01\% | 0.04\% |
| 25 | 0.03 | 0.01 | 0.05 |
| 30 | 0.03 | 0.01 | 0.07 |
| 35 | 0.03 | 0.01 | 0.11 |
| 40 | 0.04 | 0.01 | 0.17 |
| 45 | 0.05 | 0.02 | 0.23 |
| 50 | 0.09 | 0.04 | 0.30 |
| 55 | 0.15 | 0.06 | 0.35 |
| 60 | 0.24 | 0.08 | 0.40 |
| 65 | 0.41 | 0.12 | 0.00 |
| 70 | 0.69 | 0.20 | 0.00 |
| 75 | 1.12 | 0.34 | 0.00 |

* $94 \%$ are presumed to be non-duty related, and 6\% are assumed to be duty related.

WITHDRAWAL AND VESTING: $20 \%$ in an election year, none in a non-election year.
SERVICE RETIREMENT: 25\% in an election year, none in a non-election year. All members are assumed to retire no later than age 80.

It is assumed that a member will be granted 2.5 years of service credit for unused leave at termination of employment.

PRICE INFLATION: 3.00\% per annum, compounded annually.
PAYROLL GROWTH: 3.75\% per annum, compounded annually.
ADMINISTRATIVE EXPENSES: $0.23 \%$ of payroll.
TIMING OF DECREMENTS AND PAY INCREASES: Middle of Year.
SALARY INCREASES: 3.75\% per annum, for all ages.

DEATH AFTER RETIREMENT: The mortality table, for post-retirement mortality, used in evaluating allowances to be paid was the RP-2014 Healthy Annuitant Blue Collar Mortality Table Projected to 2016 by Scale BB (set forward 1 year for males). The RP-2014 Disabled Mortality Table (set forward 5 years for males and set forward 4 years for females) was used for the period after disability retirement. This assumption is used to measure the probabilities of each benefit payment being made after retirement.

MARRIAGE ASSUMPTION: $85 \%$ married with the husband three years older than his wife.

## ASSUMED INTEREST RATE ON EMPLOYEE CONTRIBUTIONS: 2.00\%

VALUATION METHOD: The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 7.75\%). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of SLRP are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for pension benefits to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.

The unfunded actuarial accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from the SLRP. The accrued liability contribution amortizes the balance of the unfunded actuarial accrued liability over a period of years from the valuation date.

ASSET VALUATION METHOD: Actuarial value, as developed in Schedule A. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is $20 \%$ of the difference between market value and expected market value.

## SCHEDULE C

## SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

The following summary presents the main benefit and contribution provisions of the Plan in effect June 30, 2016 as interpreted in preparing the actuarial valuation.

## DEFINITIONS

| Average Compensation | Average annual covered earnings of an employee during the four |
| :---: | :---: |
|  | highest years of service. |
| Covered Earnings | Gross salary not in excess of the maximum amount on which contributions were required. |
| Fiscal Year | Year commencing on July 1 and ending June 30. |
| Eligibility Service | Service while a contributing member of PERS plus additional service as described below. (OLD: Eligibility service" is all service in PERS, including that credited for SLRP service.) |
| Credited Service | Service while a contributing member of SLRP plus additional service as described below. (OLD: "Creditable service" includes only SLRP service.) |
| Unused Sick and Vacation Leave | Service credit is provided at no charge to members for unused sick and vacation time that has accrued at the time of retirement. |
| Additional Service | Additional service credit may be granted for service prior to July <br> 1, 1989, including active duty military service. |

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 <br> Date From | Fiscal <br> Date To | Employer Rate | Employee Rate | Maximum <br> Covered <br> Earnings |
| :---: | :---: | :---: | :---: | :---: |
| $7 / 1 / 1989$ | $6 / 30 / 1992$ | $6.33 \%$ | $3.00 \%$ | $\$ 75,600$ |
| $7 / 1 / 1992$ | $6 / 30 / 2002$ | 6.33 | 3.00 | $\$ 125,000$ |
| $7 / 1 / 2002$ | $6 / 30 / 2006$ | 6.33 | 3.00 | $\$ 150,000$ |
| $7 / 1 / 2006$ | $6 / 30 / 2008$ | 6.65 | 3.00 | $\$ 150,000$ |
| $7 / 1 / 2008$ | $6 / 30 / 2009$ | 6.65 | 3.00 | $\$ 230,000$ |
| $7 / 1 / 2009$ | $12 / 31 / 2011$ | 6.65 | 3.00 | $\$ 245,000$ |
| $1 / 1 / 2012$ | $6 / 30 / 2012$ | 7.40 | 3.00 | $\$ 245,000$ |
| $7 / 1 / 2012$ | $6 / 30 / 2013$ | 7.40 | 3.00 | $\$ 250,000$ |
| $7 / 1 / 2013$ | $6 / 30 / 2014$ | 7.40 | 3.00 | $\$ 255,000$ |
| $7 / 1 / 2014$ | $6 / 30 / 2015$ | 7.40 | 3.00 | $\$ 260,000$ |
| $7 / 1 / 2015$ | $6 / 30 / 2017$ | 7.40 | 3.00 | $\$ 265,000$ |
|  |  |  |  |  |

## BENEFITS

## Superannuation Retirement

Condition for Retirement

Amount of Allowance

## Disability Retirement

Condition for Retirement

Amount of Allowance
(a) A retirement allowance is paid upon the request of any member who retires and has attained age 60 and completed at least eight years* of membership service under PERS. A retirement allowance may also be paid upon the completion of at least 25 years of creditable service under PERS for members hired prior to July 1, 2011, or upon the completion of 30 years of creditable service for members hired on or after July 1, 2011.
(b) Any member who withdraws from service prior to his or her attainment of age 60 and who has completed at least eight years* of ,membership service under PERS is entitled to receive, in lieu of a refund of his or her accumulated contributions, a retirement allowance commencing at age 60.

The annual retirement allowance payable to a member who retires under condition (a) above 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 $1 \%$ of his or her average compensation for each of the first 25 years of creditable service plus $1.25 \%$ for each year of creditable service over 25 years.

The minimum allowance is $\$ 60$ per year of creditable service.

A retirement allowance is paid to a member who is totally and permanently disabled, as determined by the Board of Trustees, and has accumulated eight or more years* of membership service under PERS.

* four years for those who entered PERS before July 1, 2007.

For those who were active members prior to July 1, 1992, and did not elect the benefit structure outlined below, the annual disability retirement allowance payable is equal to a superannuation retirement allowance if the member has attained age 60 , otherwise it is equal to a superannuation retirement allowance calculated as follows:

1. A member's annuity equal to the actuarial equivalent of his or her accumulated contributions at the time of retirement, plus
2. An employer's annuity equal to the amount that would have been payable had the member continued in service to age 60.

For those who become active members after June 30, 1992, and for those who were active members prior to July 1, 1992, who so elected, the following benefits are payable:

1. A temporary allowance equal to the greater of (a) $20 \%$ of average compensation plus $5 \%$ for each dependent child up to a maximum of 2 , or (b) the member's accrued allowance. This temporary allowance is paid for a period of time based on the member's age at disability, as follows:

| Age at Disability | $\frac{\text { Duration }}{\text { (o age } 65}$ |
| :---: | :--- |
| 60 and earlier | to age 66 |
| 61 | to age 66 |
| 63 | to age 67 |
| 64 | to age 67 |
| 65 | to age 68 |
| 66 | to age 68 |
| 67 | to age 69 |
| 68 | to age 70 |
| 69 and later | one year |

The minimum allowance is $\$ 60$ per year of service credit.
2. A deferred allowance commencing when the temporary allowance ceases equal to the greater of (a) the allowance the member would have received based on service to the termination age of the temporary allowance, but not more than $20 \%$ of average compensation, or (b) the member's accrued allowance.

The minimum allowance is $\$ 60$ per year of service credit.

Effective July 1, 2004, a temporary benefit can be paid out of a member's accumulated contribution balance while the member is awaiting a determination for eligibility for disability benefits. Future disability payments, if any, would be offset by advanced payments made from the member's accumulated contributions.

## Accidental Disability Retirement

Condition for Retirement

Amount of Allowance

## Accidental Death Benefit

Condition for Benefit

Amount of Allowance

## Ordinary Death Benefit

Condition for Benefit

Amount of Allowance

## Return of Contributions

A retirement allowance is paid to a member who is totally and permanently disabled in the line of performance of duty.

The annual accidental disability retirement allowance is equal to the allowance payable on disability retirement but not less than $25 \%$ of average compensation. There is no minimum benefit.

A retirement allowance is paid to a spouse and/or dependent children upon the death of an active member in the line of performance of duty.

The annual retirement allowance is equal to $25 \%$ of average compensation payable to the spouse and 12$1 / 2 \%$ of average compensation payable to one dependent child or $25 \%$ to two or more children until age 19 (23 if a full time student). There is no minimum benefit.

Upon the death of a member who has completed at least eight years* of membership service, a benefit is payable, in lieu of a refund of the member's accumulated contributions, to his or her spouse, if said spouse has been married to the member for not less than one year.

* four years for those who entered the system before July 1, 2007.

The annual retirement allowance payable to the lawful spouse of a vested member who dies is equal to the greater of (i) the allowance that would have been payable had the member retired and elected Option 2, reduced by an actuarially determined factor based on the number of years the member lacked in qualifying for unreduced benefits, or (ii) a lifetime benefit equal to $20 \%$ of the deceased member's average compensation, but not less than $\$ 25$ per month.

In addition, a benefit is payable to dependent children until age 19 ( 23 if a full time student). The benefit is equal to the greater of $5 \%$ of average compensation or $\$ 25$ per month for each dependent child up to 3 .

Upon the withdrawal of a member without a retirement benefit, his or her contributions are returned to him or her, together with accumulated regular interest thereon.

Upon the death of a member before retirement, his or her contributions, together with the full accumulated regular interest thereon, are paid to his or her designated
beneficiary, if any, otherwise, to his or her estate provided no other survivor benefits are payable.

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.

The normal form of benefit is an allowance payable during the life of the member with the provision that upon his or her death the excess of his or her total contributions at the time of retirement over the total retirement annuity paid to him or her will be paid to his or her designated beneficiary.

A member upon retirement may elect to receive his or her 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 retirement allowance to some other designated beneficiary.

Option 4. Upon his or her death, $75 \%$ of his of 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 of 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 SLRP 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.

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 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 at retirement.

A member who has at least 28 years of creditable service* under PERS can 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 the partial lump-sum 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.
*or at least age 63 with four years of membership service for those who entered PERS before July 1, 2007.

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 55, plus (b) $3 \%$ compounded for each year thereafter beginning with the fiscal year in which the member turns age 55.

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.

## CONTRIBUTIONS

Members currently contribute $3.00 \%$ of covered earnings. The employer contributes $7.40 \%$ of covered earnings.

## SCHEDULE D

## DETAILED TABULATIONS OF THE DATA

Retirants \& Beneficiaries as of June 30, 2016
Tabulated by Year of Retirement

| Year of <br> Retirement <br> Ending June 30 | No. | Total Annual <br> Benefits, <br> excluding COLA | COLA | Total Annual <br> Benefits | Average <br> Monthly Total <br> Benefit |
| :---: | ---: | ---: | ---: | ---: | ---: |
| 2016 | 26 | $\$ 168,027$ | $\$ 0$ | $\$ 168,027$ | $\$ 539$ |
| 2015 | 4 | 35,146 | 0 | 35,146 | 732 |
| 2014 | 5 | 21,980 | 1,050 | 23,030 | 384 |
| 2013 | 16 | 62,958 | 3,830 | 66,788 | 348 |
| 2012 | 28 | 185,464 | 17,371 | 202,835 | 604 |
| 2011 | 4 | 8,322 | 1,134 | 9,456 | 197 |
| 2010 | 5 | 1,979 | 3,213 | 23,192 | 387 |
| 2009 | 5 | 25,467 | 4,943 | 30,410 | 507 |
| 2008 | 16 | 77,967 | 18,908 | 96,875 | 505 |
| 2007 | 1 | 4,417 | 1,179 | 5,596 | 466 |
| 2006 | 6 | 21,944 | 6,910 | 28,854 | 401 |
| 2005 | 5 | 15,970 | 5,464 | 21,434 | 357 |
| 2004 | 21 | 111,144 | 43,417 | 154,561 | 613 |
| 2003 | 1 | 6,156 | 2,621 | 8,777 | 731 |
| 2002 | 3 | 8,492 | 4,076 | 12,568 | 349 |
| 2001 | 8 | 23,099 | 12,343 | 35,442 | 369 |
| 2000 | 14 | 70,232 | 38,859 | 109,091 | 649 |
| 1999 | 5 | 25,692 | 15,290 | 40,982 | 683 |
| 1998 | 2 | 4,590 | 2,821 | 7,411 | 309 |
| 1997 | 4 | 12,076 | 8,090 | 20,166 | 420 |
| 1996 | 5 | 16,488 | 12,423 | 28,911 | 482 |
| 1995 | 1 | 1,058 | 853 | 1,911 | 159 |
| 1994 | 2 | 4,686 | 4,031 | 8,717 | 363 |
| 1993 | 10 | 37,457 | 29,812 | 67,269 | 561 |
| 1992 | 9 | 33,601 | 32,101 | 65,702 | 608 |
| 1991 | 0 | 0 | 0 | 0 | 0 |
| 1990 | 1 | 2,203 | 2,409 | 4,612 | 384 |
| TOTAL | 207 | $\$ 1,004,615$ | $\$ 273,148$ | $\$ 1,277,763$ | $\$ 514$ |

Schedule of Retired Members by Type of Retirement
Benefits Payable June 30, 2016

| Amount of Monthly <br> Benefit | Number of <br> Rets. | Ret Type <br> $1^{*}$ | Ret Type <br> $2^{*}$ | Ret Type <br> $3^{*}$ |
| :---: | ---: | ---: | ---: | ---: |
| $\$ 1-\$ 100$ | 12 | 11 |  | 1 |
| $101-200$ | 33 | 28 |  | 5 |
| $201-300$ | 38 | 30 |  | 8 |
| $301-400$ | 46 | 35 | 1 | 10 |
| $401-500$ | 26 | 17 | 1 | 8 |
| $501-600$ | 10 | 6 |  | 4 |
| $601-700$ | 16 | 15 |  | 1 |
| $701-800$ | 5 | 5 |  | 1 |
| $801-900$ | 9 | 8 |  |  |
| $901-1,000$ | 4 | 4 |  |  |
| Over 1,000 | 8 | 8 |  | 38 |
| Totals | 207 | 167 | 2 |  |

*Type of Retirement
1 - Retirement for Age \& Service
2 - Disability Retirement
3 - Survivor Payment

Benefits Payable June 30, 2016

| Amount of Monthly Benefit | Number of Rets. | Life | Option 1 | Option 2 | Option $3$ | Option <br> 4 | Option 4A | Option 4B | Option $4 C^{* *}$ | Option 5 | $\begin{aligned} & \text { PLSO** } \\ & 1 \text { Year } \end{aligned}$ | $\begin{aligned} & \text { PLSO** } \\ & 2 \text { Years } \end{aligned}$ | $\begin{aligned} & \text { PLSO** } \\ & 3 \text { Years } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$1-\$100 | 12 | 5 |  | 4 |  |  |  | 3 | 1 |  |  |  | 1 |
| 101-200 | 33 | 15 | 1 | 16 |  |  |  | 1 |  |  |  |  | 4 |
| 201-300 | 38 | 18 |  | 12 | 2 | 1 | 3 | 2 |  |  | 1 |  | 2 |
| 301-400 | 46 | 21 | 1 | 13 |  |  | 4 | 7 |  |  | 2 |  | 8 |
| 401-500 | 26 | 12 | 1 | 8 | 1 |  | 1 | 3 |  |  | 1 | 3 | 5 |
| 501-600 | 10 | 3 |  | 2 | 1 |  | 1 | 3 |  |  | 1 | 1 | 2 |
| 601-700 | 16 | 4 |  | 9 |  |  | 1 | 2 |  |  |  |  | 2 |
| 701-800 | 5 | 2 |  | 3 |  |  |  |  |  |  |  |  | 1 |
| 801-900 | 9 | 5 |  | 1 |  |  | 1 | 2 |  |  |  |  | 1 |
| 901-1,000 | 4 | 1 |  | 1 |  |  |  | 2 |  |  |  | 1 | 1 |
| Over 1,000 | 8 | 4 |  | 2 | 1 |  |  | 1 |  |  | 1 |  | 4 |
| Totals | 207 | 90 | 3 | 71 | 5 | 1 | 11 | 26 | 1 | 0 | 6 | 5 | 31 |

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 |
| PLSO | - | Partial Lump Sum** (Reflects reduced monthly benefit) |

**Included in other options

## Supplemental Legislative Retirement Plan of Mississippi

Retirant and Beneficiary Information June 30, 2016


| Average Age: | 71.5 years |
| :--- | :--- |
| Average Age at Retirement: | 61.3 years |

## Supplemental Legislative Retirement Plan Of Mississippi

Total Active Member Data as of June 30, 2016
Tabulated by Attained Ages and Years of Service

| Attained Age | Years of Service to Valuation Date |  |  |  |  |  |  | Totals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ | No. | Valuation Payroll |
| Under 20 |  |  |  |  |  |  |  |  |  |
| 20-24 | 1 |  |  |  |  |  |  | 1 | \$38,993 |
| 25-29 | 2 |  |  |  |  |  |  | 2 | 83,300 |
| 30-34 | 4 | 1 |  |  |  |  |  | 5 | 197,523 |
| 35-39 | 10 | 4 | 1 |  |  |  |  | 15 | 592,916 |
| 40-44 | 12 | 2 | 2 | 1 |  |  |  | 17 | 699,283 |
| 45-49 | 18 | 4 |  |  |  |  |  | 22 | 862,502 |
| 50-54 | 17 | 5 | 3 | 2 | 2 |  |  | 29 | 1,195,407 |
| 55-59 | 7 | 3 | 3 | 1 | 4 |  |  | 18 | 713,007 |
| 60 | 1 |  | 3 |  | 1 |  | 1 | 6 | 228,009 |
| 61 | 1 |  |  |  | 3 |  | 1 | 5 | 204,991 |
| 62 | 2 |  |  | 1 | 1 |  |  | 4 | 173,851 |
| 63 | 3 |  |  |  | 2 |  | 1 | 6 | 247,042 |
| 64 |  | 1 |  | 1 | 1 |  |  | 3 | 123,311 |
| 65 |  | 1 | 1 | 1 |  |  | 2 | 5 | 194,527 |
| 66 |  | 1 |  | 1 | 1 |  |  | 3 | 107,403 |
| 67 | 2 | 1 | 1 |  |  |  |  | 4 | 162,804 |
| 68 |  |  | 1 |  |  |  | 1 | 2 | 79,900 |
| 69 |  | 2 | 1 |  | 2 |  | 1 | 6 | 245,736 |
| 70 \& Over |  | 2 | 2 | 2 | 6 | 2 | 4 | 18 | 711,757 |
| Totals | 80 | 27 | 18 | 10 | 23 | 2 | 11 | 171 | \$6,862,262 |

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

Age:
Benefit Service:
Eligibility Service:
Annual Pay:
54.9 years
10.5 years
14.5 years
\$40,130

## SCHEDULE E

MISSISSIPPI SLRP
ANALYSIS OF FINANCIAL EXPERIENCE

## Gains \& Losses in Accrued Liabilities <br> Resulting from Difference Between Assumed Experience \& Actual Experience (\$ Thousands)

| Type of Activity | \$ Gain (or Loss) For Year Ending 6/30/2016 |  | $\begin{aligned} & \text { \$ Gain (or Loss) For } \\ & \text { Year Ending } \\ & 6 / 30 / 2015 \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| Age \& Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss. | \$ | 248.7 | \$ | 45.4 |
| Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss. |  | 11.5 |  | 9.6 |
| Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss. |  | 7.1 |  | (8.8) |
| Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss. |  | 130.0 |  | 0.0 |
| Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. |  | 109.9 |  | 201.0 |
| New Members. Additional unfunded actuarial accrued liability will produce a loss. |  | (129.0) |  | 0.0 |
| Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss. |  | (95.0) |  | 578.0 |
| Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain. |  | 115.9 |  | 248.9 |
| Other. Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, etc. |  | (34.3) |  | (174.1) |
| Gain (or Loss) During Year From Financial Experience | \$ | 364.8 | \$ | 900.0 |
| Non-Recurring Items. Adjustments for plan amendments, software changes, assumption changes, or method changes. |  | 5.6 |  | (587.7) |
| Composite Gain (or Loss) During Year | \$ | 370.4 | \$ | 312.3 |

## SCHEDULE F

## 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.


[^0]:    * Includes load for administrative expenses. See page 10 for more contribution rate detail.

