



Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

April 21, 2016

Mr. James A. Potvin
Executive Director
Employees' Retirement System of Georgia
Two Northside 75, Suite 300
Atlanta, GA 30318-7701

Dear Mr. Potvin:

Enclosed is the "Employees' Retirement System of Georgia Report of the Actuary on the Valuation Prepared as of June 30, 2015".

The valuation indicates that employer contributions for the fiscal year ending June 30, 2018 at the rate 19.94% of compensation for Old Plan Members, 24.69% of compensation for New Plan Members and 21.66% of compensation for GSEPS Members are sufficient to support the benefits of the System. The valuation takes into account the effect of all amendments to the System enacted through the 2015 session of the General Assembly.

Please let us know if there are any questions concerning the report.

Sincerely yours,

Edward A. Macdonald, ASA, FCA, MAAA
President

Cathy Turcot
Principal and Managing Director

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

Enclosure

S:\Georgia Employees\Valuations\2015\Report Template GERS 2015-06-30.docx



Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve



EMPLOYEES'
RETIREMENT SYSTEM
OF GEORGIA

EMPLOYEES' RETIREMENT SYSTEM OF GEORGIA
REPORT OF THE ACTUARY ON THE VALUATION
PREPARED AS OF JUNE 30, 2015





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

April 21, 2016

Board of Trustees
Employees' Retirement System of Georgia
Two Northside 75, Suite 300
Atlanta, GA 30318-7701

Attention: Mr. James Potvin, Executive Director

Members of the Board:

Section 47-2-26 of the law governing the operation of the Employees' Retirement System of Georgia provides that the actuary shall make annual valuations of the contingent assets and liabilities of the Retirement System on the basis of regular interest and the tables last adopted by the Board of Trustees. We have submitted the report giving the results of the actuarial valuation of the System prepared as of June 30, 2015. The report indicates that annual employer contributions at the rate of 19.94% of compensation for Old Plan Members, 24.69% of compensation for New Plan Members, and 21.66% of compensation for GSEPS Members for the fiscal year ending June 30, 2018 are sufficient to support the benefits of the System.

Since the previous valuation, various assumptions and methods have been revised to reflect the results of the experience investigation for the five-year period ending June 30, 2014.

In preparing the valuation, the actuary relied on data provided by the System. While not verifying data at the source, the actuary performed tests for consistency and reasonableness. Our firm, as actuary, is responsible for all of the actuarial trend data in the financial section of the annual report and the supporting schedules in the actuarial section of the annual report.

In our opinion, the valuation is complete and accurate, and the methodology and assumptions are reasonable as a basis for the valuation. The valuation takes into account the effect of all amendments to the System enacted through the 2015 session of the General Assembly.

The System is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The assumptions and methods used for financial reporting purposes meet the parameters set by Actuarial Standards of Practice (ASOPs). The funding objective of the plan is that contribution rates over time will remain level as a percent of payroll. The valuation method used is the entry age normal cost method. The normal contribution rate to cover current cost has been determined as a level percent of payroll. Gains and losses are reflected in the total unfunded accrued liability which is being amortized on a level dollar basis in accordance with the funding policy adopted by the Board.

The Plan and the employers are required to comply with the financial reporting requirements of GASB Statements No. 67 and 68. The necessary disclosure information is provided in separate supplemental reports.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144

Phone (678) 388-1700 • Fax (678) 388-1730

www.CavMacConsulting.com

Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE



April 21, 2016
Board of Trustees
Page 2

We have provided the following information and supporting schedules for the Actuarial Section of the Comprehensive Annual Financial Report:

- Summary of Actuarial Assumptions
- Schedule of Active Members
- Schedule of Funding Progress
- Schedule of Retirees Added to and Removed from Rolls
- Analysis of Change in Unfunded Accrued Liability
- Solvency Test Results

The System is being funded in conformity with the minimum funding standard set forth in Code Section 47-20-10 of the Public Retirement Systems Standards Law and the funding policy adopted by the Board. In our opinion the System is operating on an actuarially sound basis. Assuming that contributions to the System are made by the employer from year to year in the future at the rates recommended on the basis of the successive valuations, the continued sufficiency of the retirement fund to provide the benefits called for under the System may be safely anticipated.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the System and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

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.

Sincerely yours,

A handwritten signature in blue ink, appearing to read 'Edward Macdonald'.

Edward A. Macdonald, ASA, FCA, MAAA
President

A handwritten signature in blue ink, appearing to read 'Cathy Turcot'.

Cathy Turcot
Principal and Managing Director

A handwritten signature in blue ink, appearing to read 'Edward J. Koebel'.

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



TABLE OF CONTENTS

<u>Section</u>	<u>Item</u>	<u>Page No.</u>
I	Summary of Principal Results	1
II	Membership	3
III	Assets	5
IV	Comments on Valuation	6
V	Contributions Payable by Employers	8
VI	Accounting Information	10
VII	Experience	12
 <u>Schedule</u>		
A	Valuation Balance Sheet	14
B	Development of Actuarial Value of Assets	15
C	Summary of Receipts and Disbursements	16
D	Outline of Actuarial Assumptions and Methods	17
E	Actuarial Cost Method	22
F	Board Funding Policy	23
G	Amortization of UAAL	25
H	Summary of Main Plan Provisions as Interpreted for Valuation Purposes	28
I	Tables of Membership Data	33
J	Contribution Rates for Members with a Special Benefit	36
K	CAFR Schedules	37



**EMPLOYEES' RETIREMENT SYSTEM OF GEORGIA
REPORT OF THE ACTUARY
ON THE VALUATION
PREPARED AS OF JUNE 30, 2015**

SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below (all dollar amounts are in thousands):

Valuation Date	June 30, 2015	June 30, 2014
Number of active members	60,416	60,486
Annual earnable compensation	\$ 2,352,920	\$ 2,315,625
Number of retired members and beneficiaries	47,035	45,729
Annual allowances	\$ 1,311,958	\$ 1,288,882
Number of deferred vested members	5,878	5,603
Annual allowances	\$ 68,734	\$ 65,067
Assets:		
Market Value	\$ 12,967,964	\$ 13,291,531
Actuarial Value	12,675,649	12,376,120
Unfunded actuarial accrued liability	\$ 4,423,878	\$ 4,615,843
Blended Amortization period (years)	19.4	22.6
Funding Ratio	74.1%	72.8%
For Fiscal Year Ending	June 30, 2018	June 30, 2017
Actuarially Determined Employer Contribution Rates (ADEC):		
Old Plan (prior to 7/1/1982)		
Initial Normal Rate*	5.99%	6.13%
Employer Paid on Behalf of Employee	<u>(4.75)</u>	<u>(4.75)</u>
Normal Rate*	1.24%	1.38%
Accrued Liability Rate	<u>18.70%</u>	<u>18.56%</u>
Total	19.94%	19.94%
New Plan (7/1/1982 through 12/31/2008)		
Normal Rate*	5.99%	6.13%
Accrued Liability Rate	<u>18.70%</u>	<u>18.56%</u>
Total	24.69%	24.69%
GSEPS (on and after 1/1/2009)		
Normal Rate*	2.96%	3.13%
Accrued Liability Rate	<u>18.70%</u>	<u>18.56%</u>
Total	21.66%	21.69%

* The normal contribution includes administrative expenses.



2. The major benefit and contribution provisions of the System are summarized in Schedule H. The valuation takes into account the effect of amendments of the System enacted through the 2015 session of the General Assembly. There have been no changes since the previous valuation.
3. Since the previous valuation, various assumptions and methods have been revised to reflect the results of the experience investigation for the five-year period ending June 30, 2014. These revised assumptions were adopted by the Board on December 17, 2015 and are summarized below. Schedule D of this report outlines the full set of actuarial assumptions used to prepare the current valuation. The Board Funding Policy is shown in Schedule F.

Summary of Assumptions and Methods	
Economic Assumptions	
Price Inflation	Lowered assumption from 3.00% to 2.75%.
Investment Return (net of investment expenses)	No changes to assumed rate of 7.50%.
Wage Inflation	Lowered assumption from 3.75% to 3.25%.
Demographic Assumptions	
Withdrawal	Changed assumed rates for all members.
Pre-Retirement Mortality	Changed assumed rates for all members.
Disability Retirement	Changed assumed rates for all members.
Service Retirement	Changed assumed rates for all members.
Post-Retirement Mortality	Changed assumed rates for all members.
Salary Scale	Changed assumed rates for all members.
Other Actuarial Methods and Assumptions	
Administrative Expenses	No change to current method.
Amortization Method	No change to current method.
Asset Smoothing	No change to current method.
Option Factors	Changed option factors to reflect change in mortality rate table.
Unused Sick Leave	Changed assumption.
Termination Benefits	Changed assumption.
Valuation Cost Method	No change to current method.



4. The entry age actuarial cost method was used to prepare the valuation. Schedule E contains a brief description of this method.
5. Comments on the valuation results as of June 30, 2015 are given in Section IV and further discussion of the employer contribution levels is set out in Section V.
6. We have prepared the Solvency Test and the Schedule of Retirants Added to and Removed from Rolls for the System's Comprehensive Annual Financial Report. These tables are shown in Schedule K.

SECTION II - MEMBERSHIP

1. Data regarding the membership of the System for use as a basis for the valuation were furnished by the Retirement System office. The following table shows the number of active members, their annual compensation and average annual compensation as of June 30, 2015 on whose account benefits may be payable under the Retirement System.

THE NUMBER, ANNUAL COMPENSATION AND AVERAGE ANNUAL COMPENSATION OF ACTIVE MEMBERS AS OF JUNE 30, 2015

GROUP	NUMBER	ANNUAL COMPENSATION (\$1,000's)	AVERAGE ANNUAL COMPENSATION
Old Plan	171	\$ 10,017	\$ 58,579
New Plan	34,577	1,473,037	42,602
GSEPS	<u>25,668</u>	<u>869,866</u>	<u>33,889</u>
Total	60,416	\$ 2,352,920	\$ 38,945



2. Data was provided by the Retirement System for inactive members who are eligible for deferred vested benefits. The valuation included 5,878 deferred vested members with annual allowances totaling \$68,734,492. In addition, there are 78,913 inactive non-vested members included in the valuation entitled to a refund of member contributions.
3. The following table shows the number of retired members and beneficiaries on the roll as of June 30, 2015, together with the amount of their annual retirement allowances payable under the System as of that date.

**THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES
OF RETIRED MEMBERS AND BENEFICIARIES RECEIVING BENEFITS
AS OF JUNE 30, 2015**

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES (\$1,000's)
Service Retirements	36,294	\$ 1,081,714
Disability Retirements	5,281	145,988
Beneficiaries of Deceased Active and Retired Members	<u>5,460</u>	<u>84,256</u>
Total	47,035	\$ 1,311,958



SECTION III - ASSETS

1. The retirement law provides for the maintenance of two funds for the purpose of recording the financial transactions of the System; namely, the Annuity Savings Fund and the Pension Accumulation Fund.

(a) Annuity Savings Fund

The Annuity Savings Fund is the fund to which are credited all contributions made by members together with regular interest thereon. When a member retires, or if a death benefit allowance becomes payable to his beneficiary, his accumulated contributions are transferred from the Annuity Savings Fund to the Pension Accumulation Fund. The annuity which these contributions provide is then paid from the Pension Accumulation Fund. On June 30, 2015 the value of assets credited to the Annuity Savings Fund amounted to \$457,464,000.

(b) Pension Accumulation Fund

The Pension Accumulation Fund is the fund to which all income from investments and all contributions made by employers of members of the System and by the State for members of local retirement funds are credited. All retirement allowance and death benefit allowance payments are disbursed from this fund. Upon the retirement of a member, or upon his death if a death benefit allowance is payable, his accumulated contributions are transferred from the Annuity Savings Fund to this fund to provide the annuity portion of the allowance. On June 30, 2015 the market value of assets credited to the Pension Accumulation Fund amounted to \$12,510,500,000.

2. As of June 30, 2015, the total market value of assets amounted to \$12,967,964,000 as reported by the Auditor of the System. The actuarial value of assets used for the current valuation was determined to be \$12,675,649,000 based on a five-year smoothing of investment gains and losses. Schedule B shows the development of the actuarial value of assets as of June 30, 2015.

3. Schedule C shows receipts and disbursements of the System for the two years preceding the valuation date and a reconciliation of the fund balances at market value.



SECTION IV – COMMENTS ON VALUATION

1. Schedule A of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the System as of June 30, 2015 (all amounts are in thousands).
2. The valuation balance sheet shows that the System has total prospective liabilities of \$17,854,725, of which \$12,520,321 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and \$5,334,404 is for the prospective benefits payable on account of present active members. Against these liabilities, the System has total present assets for valuation purposes of \$12,675,649 as of June 30, 2015. The difference of \$5,179,076 between the total liabilities and the total present assets represents the present value of contributions to be made in the future.
3. The employer's contributions to the System consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of 1.24% (5.99% less 4.75% Employer paid on behalf of Employee) of compensation for Old Plan members, 5.99% of compensation for New Plan members, and 2.96% of compensation for GSEPS members are required.
4. Beginning with the July 1, 2010 valuation, estimated budgeted administrative expenses are included in the normal rates. The expenses for the fiscal year ending June 30, 2018 are estimated to be 0.62% of payroll.
5. Prospective employer and employee normal contributions (excluding administrative expenses) have a present value of \$755,198. When this amount is subtracted from \$5,179,076, which is the present value of the total future contributions to be made in the future, there remains \$4,423,878 as the unfunded actuarial accrued liability. Of this amount, \$3,421 is attributable to the contribution shortfall for the tax commissioners, leaving \$4,420,457 to be paid by all employers.



6. The funding policy adopted by the Board, as shown in Schedule F, provides that the unfunded actuarial accrued liability as of June 30, 2013 (Transitional UAAL) will be amortized as a level dollar amount over a closed 25-year period. In each subsequent valuation, all benefit changes, assumption and method changes, and experience gains and/or losses that have occurred since the previous valuation will determine a New Incremental UAAL. Each New Incremental UAAL will be amortized as a level dollar amount over a closed 25-year period from the date it is established.
7. The funding policy also states that the employer contribution rates determined in an actuarial valuation will be at least sufficient to satisfy the normal cost of the System and amortize the UAAL as a level dollar amount over a period not to exceed 25 years (for the UAAL as of the June 30, 2013 valuation date and for each successive year of gains and losses incurred in years following the June 30, 2013 valuation date).
8. We have determined that an accrued liability contribution rate of 18.70% of active member's compensation will comply with the Board's funding policy.
9. Schedule H of this report shows the amortization schedules for the Transitional UAAL and New Incremental UAALs.



10. The following table shows the components of the total UAAL and the derivation of the UAAL contribution rate in accordance with the funding policy (all dollar amounts are in thousands):

**TOTAL UAAL AND UAAL CONTRIBUTION RATE
(\$1,000's)**

	<u>UAAL</u>	<u>Remaining Amortization Period (years)</u>	<u>Amortization Payment</u>
Transitional	\$4,689,818	19.6	\$464,364
New Incremental 6/30/2014	(162,299)	24.0	(14,777)
New Incremental 6/30/2015	<u>(107,062)</u>	25.0	<u>(9,605)</u>
Total UAAL	\$4,420,457*		\$439,982
Blended Amortization Period (years)			19.4
Estimated Payroll			\$2,352,920
UAAL Contribution Rate			18.70%

* An additional UAAL amount of \$3,421 is attributable to the contribution shortfall for the tax commissioners. Additional contributions are made to amortize this shortfall.

SECTION V – CONTRIBUTIONS PAYABLE BY EMPLOYERS

1. The following table summarizes the employer contribution rates, which were determined by the June 30, 2015 valuation and are recommended for use.

**ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION RATES (ADEC)
FOR FISCAL YEAR ENDING JUNE 30, 2018**

	Old Plan	New Plan	GSEPS
Normal Rate			
Initial Normal Rate	5.99%	5.99%	2.96%
Employer Paid on behalf of Employee	<u>(4.75)</u>	<u>(0.00)</u>	<u>(0.00)</u>
Employer Normal Rate	1.24%	5.99%	2.96%
Accrued Liability Rate	18.70%	18.70%	18.70%
Total	19.94%	24.69%	21.66%



2. An employer group within ERS representing tax commissioners did not contribute the full ADEC every year. The following is a schedule by year of the contribution shortfalls and the accumulated repayment amounts.

Fiscal Year Ending	Actuarially Determined Employer Contribution	Actual Contribution	Annual Deficit / (Contribution)	Accumulated Repayment Balance
6/30/1997				\$990,312
6/30/1998	\$3,532,157	\$2,219,575	\$1,312,582	2,302,894
6/30/1999	3,986,055	2,301,608	1,684,447	3,987,341
6/30/2000	4,469,144	3,194,110	1,275,034	5,262,375
6/30/2009	4,971,153	4,074,094	897,059	6,159,434
6/30/2012	5,749,648	6,160,277	(410,629)	5,748,805
6/30/2013	11,365,919	11,981,862	(615,943)	5,132,862
6/30/2014	10,038,596	10,808,525	(769,929)	4,362,933
6/30/2015	9,700,739	10,643,166	(942,427)	3,420,506

In addition to the actuarially determined employer contribution, this employer is scheduled to remit an additional \$615,943 each year beginning October 1, 2011 over a ten year period in order to repay this shortfall.

3. Schedule J summarizes the contribution rates required for groups of members with special benefits.



SECTION VI – ACCOUNTING INFORMATION

The information required under the Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 will be issued in separate reports. The following information is provided for informational purposes only.

- The following is a distribution of the number of employees by type of membership.

**NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF JUNE 30, 2015**

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	47,035
Terminated employees entitled to benefits but not yet receiving benefits	84,791
Active plan members	<u>60,416</u>
Total	192,242

- The schedule of funding progress is shown below.

SCHEDULE OF FUNDING PROGRESS
(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
6/30/2010	\$ 13,046,193	\$ 16,295,352	\$ 3,249,159	80.1%	\$ 2,571,042	126.4%
6/30/2011	12,667,557	16,656,905	3,989,348	76.0	2,486,780	160.4
6/30/2012	12,260,595	16,777,922	4,517,327	73.1	2,414,884	187.1
6/30/2013	12,129,804	16,982,449	4,852,645	71.4	2,335,773	207.8
6/30/2014	12,376,120	16,991,963	4,615,843	72.8	2,315,625	199.3
6/30/2015	12,675,649	17,099,527	4,423,878	74.1	2,352,920	188.0



3. The following shows the schedule of employer contributions (all dollar amounts are in thousands).

<u>Year Ending</u>	<u>Actuarially Determined Employer Contribution</u>	<u>Percentage Contributed</u>
6/30/2010	\$ 263,064	100.0%
6/30/2011	261,132	100.0
6/30/2012*	273,623	100.2
6/30/2013*	358,376	100.2
6/30/2014*	429,136	100.1
6/30/2015*	517,221	100.2

* An employer group within ERS did not contribute the full ADEC every year. This employer is making additional contributions to repay this shortfall.

4. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2015. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2015
Actuarial cost method	Entry age
Amortization method	Level dollar, closed
Remaining amortization period	19.4 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.50%
Projected salary increases**	3.25% - 7.00%
Cost-of-living adjustments	None

* Includes inflation at 2.75%



SECTION VII – EXPERIENCE

1. Section 47-2-26 of the act governing the operation of the System provides that as an aid to the Board in adopting service and mortality tables, the actuary will prepare an experience investigation at least once in each five-year period. The last experience investigation was prepared for the five-year period ending June 30, 2014 and based on the results of the investigation, various new assumptions and methods were adopted by the Board on December 17, 2015. The next experience investigation will be prepared for the period July 1, 2014 through June 30, 2019.
2. The following table shows the estimated gain or loss from various factors that resulted in a decrease of \$191,965,000 in the unfunded actuarial accrued liability (UAAL) from \$4,615,843,000 to \$4,423,878,000 during the fiscal year ending June 30, 2015.
3. The most significant item contributing to the \$192.0 million decrease in the UAAL was a \$198.9 million gain due to greater than expected investment return on actuarial value of assets. Although the market value return for the fiscal year ending June 30, 2015 was less than the assumed rate of 7.50%, the return on the actuarial value of assets was 9.16% due to the smoothing of investment gains and losses over a 5-year period. In addition, there was a gain of \$89.6 million due to salary increases less than expected. These gains were offset by small losses in mortality and turnover and retirements. The assumption changes due to the experience study increased the UAAL approximately \$80 million.



ANALYSIS OF THE CHANGE IN UNFUNDED ACTUARIAL ACCRUED LIABILITY

(in millions of dollars)

ITEM	AMOUNT OF INCREASE/ (DECREASE)
Interest (7.50) added to previous UAAL	\$ 346.2
Accrued liability contribution	(419.4)
Experience:	
Valuation asset growth	(198.9)
Pensioners' mortality	13.9
Turnover and retirements	50.8
New entrants	10.3
Salary increases	(89.6)
Method changes	0.0
Amendments	0.0
Assumption changes	80.4
Data changes	14.4
Miscellaneous changes	<u>(0.1)</u>
Total	\$ (192.0)



SCHEDULE A

**VALUATION BALANCE SHEET
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF
THE EMPLOYEES' RETIREMENT SYSTEM OF GEORGIA
AS OF JUNE 30, 2015
(Dollar amounts in thousands)**

<u>ACTUARIAL LIABILITIES</u>		
(1)	Present value of prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits	
	- Service and disability benefits	\$ 11,331,208
	- Death and survivor benefits	697,640
	- Deferred vested benefits	<u>491,473</u>
	Total	\$ 12,520,321
(2)	Present value of prospective benefits payable on account of present active members	<u>5,334,404</u>
(3)	TOTAL ACTUARIAL LIABILITIES	<u>\$ 17,854,725</u>
<u>PRESENT AND PROSPECTIVE ASSETS</u>		
(4)	Actuarial value of assets	\$ 12,675,649
(5)	Present value of total future contributions = (3)-(4)	\$ 5,179,076
(6)	Present value of future member contributions and employer normal contributions	755,198
(7)	Prospective unfunded accrued liability contributions = (5)-(6)	<u>4,423,878</u>
(8)	TOTAL PRESENT AND PROSPECTIVE ASSETS	<u>\$ 17,854,725</u>



SCHEDULE B

**DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
(Dollar amounts in thousands)**

(1)	Actuarial Value Beginning of Year	\$	12,376,120
(2)	Market Value End of Year	\$	12,967,964
(3)	Market Value Beginning of Year*	\$	13,291,531
(4)	Cash Flow		
	(a) Contributions	\$	551,886
	(b) Benefit Payments		(1,341,728)
	(c) Administrative Expenses		(7,872)
	(d) Investment Expenses		<u>(8,934)</u>
	(e) Net: (4)(a) + (4)(b) + (4)(c) + (4)(d)	\$	(806,648)
(5)	Investment Income		
	(a) Market Total: (2) – (3) – (4)(e)	\$	483,081
	(b) Assumed Rate		7.50%
	(c) Amount for Immediate Recognition: [(3) x (5)(b)] + [(4)(a) + (4)(b) + (4)(c)] x (5)(b) x 0.5] – (4)(d)	\$	975,885
	(d) Amount for Phased-In Recognition: (5)(a) – (5)(c)		(492,804)
(6)	Phased-In Recognition of Investment Income		
	(a) Current Year: (5)(d) / 5	\$	(98,561)
	(b) First Prior Year		228,853
	(c) Second Prior Year		0
	(d) Third Prior Year		0
	(e) Fourth Prior Year		<u>0</u>
	(f) Total Recognized Investment Gain	\$	130,292
(7)	Actuarial Value End of Year: (1) + (4)(e) + (5)(c) + (6)(f)	\$	12,675,649
(8)	Difference Between Market & Actuarial Values: (2) – (7)	\$	292,315
(9)	Rate of Return on Actuarial Value		9.16%



SCHEDULE C

**SUMMARY OF RECEIPTS AND DISBURSEMENTS
(Market Value)**

	YEAR ENDING	
	<u>June 30, 2015</u>	<u>June 30, 2014</u>
	<u>(\$1,000's)</u>	<u>(\$1,000's)</u>
<u>Receipts for the Year</u>		
Contributions:		
Members	\$ 33,713	\$ 32,423
Non-employer	12,495	10,945
Employer	<u>505,668</u>	<u>418,807</u>
Subtotal	\$ 551,876	\$ 462,175
Administrative Expense Allotment	10	0
Net Investment Earnings	<u>474,147</u>	<u>2,021,748</u>
TOTAL	\$ 1,026,033	\$ 2,483,923
<u>Disbursements for the Year</u>		
Benefit Payments	\$ 1,334,278	\$ 1,305,998
Refunds to Members	7,450	8,757
Administration Expense	<u>7,872</u>	<u>7,440</u>
TOTAL	\$ 1,349,600	\$ 1,322,195
<u>Excess of Receipts over Disbursements</u>	\$ (323,567)	\$ 1,161,728
<u>Reconciliation of Asset Balances</u>		
Asset Balance as of the Beginning of Year	\$ 13,291,531	\$ 12,129,803
Excess of Receipts over Disbursements	<u>(323,567)</u>	<u>1,161,728</u>
Asset Balance as of the End of Year	<u>\$ 12,967,964</u>	<u>\$ 13,291,531</u>
Rate of Return	3.68%	17.28%



SCHEDULE D

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

Adopted by the Board December 17, 2015.

VALUATION INTEREST RATE: 7.50 per annum, compounded annually, net of investment expenses, composed of a 2.75% inflation assumption and a 4.75% real rate of investment return assumption.

SALARY INCREASES:

Age	Assumed Annual Rate of Salary Increase
20	7.00%
25	6.25
30	5.15
35	4.55
40	4.30
45	4.05
50	3.80
55	3.55
60	3.30
65	3.25

RATES OF DISABILITY: Representative values of the assumed annual rates of disability are as follows.

	<u>Non-Law Enforcement</u>		<u>Law Enforcement</u>
	<u>Male</u>	<u>Female</u>	
20	0.05%	0.02%	0.02%
25	0.05	0.02	0.05
30	0.05	0.02	0.08
35	0.05	0.02	0.16
40	0.25	0.10	0.85
45	0.48	0.25	1.40
50	0.70	0.45	2.00
55	1.05	0.73	2.70
60	--	--	--



RATES OF WITHDRAWAL: Representative values of the assumed annual rates of withdrawal are as follows.

<u>Non-Law Enforcement</u>			
<u>Years of Service</u>			
<u>Age</u>	<u>0-4</u>	<u>5-9</u>	<u>10 & Over</u>
<u>Male</u>			
20	35.00%		
25	27.50	15.00%	
30	23.00	11.50	7.50%
35	21.50	10.00	6.00
40	19.50	9.50	4.75
45	18.60	9.00	4.00
50	16.60	7.25	4.25
55	14.50	7.00	4.75
60	14.00	6.00	
65	15.00	10.00	
<u>Female</u>			
20	30.00%		
25	25.00	17.50%	
30	21.50	12.50	8.25%
35	19.50	10.50	6.00
40	18.25	9.50	5.00
45	16.50	8.00	4.00
50	15.00	7.25	4.25
55	14.00	7.00	4.50
60	14.50	6.25	
65	17.00	11.00	

<u>Law Enforcement</u>		
<u>Years of Service</u>		
<u>Age</u>	<u>0-9</u>	<u>10 & Over</u>
20	15.00%	
25	5.75	4.00%
30	5.75	4.00
35	5.75	3.75
40	5.75	3.00
45	5.75	2.00
50	5.75	2.00
55	--	--



RATES OF RETIREMENT: Representative values of the assumed annual rates of service retirement are as follows.

Non-Law Enforcement Old Plan								
Age	Early Retirement		Age 60 or 30 years		34 years		More than 34 years	
	Male	Female	Male	Female	Male	Female	Male	Female
50	2.0%	2.0%	7.5%	6.0%	100.0%	100.0%	90.0%	100.0%
52	2.0	2.0	7.5	6.0	100.0	100.0	90.0	100.0
55	3.0	3.5	7.5	10.0	100.0	100.0	75.0	90.0
57	3.5	5.0	10.5	10.0	100.0	100.0	70.0	70.0
60			15.0	20.0	97.5	95.0	40.0	55.0
62			32.0	40.0	97.5	95.0	40.0	65.0
65			35.0	40.0	35.0	40.0	35.0	40.0
67			35.0	35.0	35.0	35.0	35.0	35.0
70			35.0	35.0	35.0	35.0	35.0	35.0
75			100.0	100.0	100.0	100.0	100.0	100.0

Non-Law Enforcement New Plan and GSEPS					Law Enforcement***
Age	Early Retirement		Normal Retirement		
	Male	Female	Male*	Female**	
50	7.0%	4.5%	70.0%	50.0%	
52	7.0	4.5	70.0	45.0	
55	7.0	6.5	60.0	50.0	20.0%
57	8.0	8.0	50.0	40.0	12.0
60			25.0	30.0	30.0
62			40.0	40.0	35.0
65			32.0	35.0	25.0
67			32.0	32.0	25.0
70			30.0	30.0	100.0
75			100.0	100.0	

* An additional 10% for ages below 55 and 20% for ages 55 to 59 are assumed to retire in the first year eligible for unreduced retirement with 30 years of service.

** An additional 20% are assumed to retire in the first year eligible for unreduced retirement with 30 years of service before age 60.

*** In addition, 100% are assumed to retire with 30 years of service on or before age 50 and 75% are assumed to retire with 30 years of service after age 50 but before age 55.



RATES OF DEATH BEFORE RETIREMENT: The RP-2000 Employee Mortality Table projected to 2025 with projection scale BB is used for both males and females while in active service. Representative values of the assumed annual rates of mortality while in active service are as follows:

Age	Males	Females	Age	Males	Females
20	0.0320%	0.0177%	45	0.1399%	0.1043%
25	0.0349	0.0192	50	0.1983	0.1555
30	0.0412	0.0245	55	0.2810	0.2228
35	0.0717	0.0441	60	0.4092	0.3058
40	0.1001	0.0655	65	0.5600	0.4304

RATES OF DEATHS AFTER RETIREMENT: The RP-2000 Combined Mortality Table projected to 2025 with projection scale BB and set forward 2 years for both males and females is used for the period after service retirement and for dependent beneficiaries. The RP-2000 Disabled Mortality Table projected to 2025 with projection scale BB and set back 7 years for males and set forward 3 years for females is used for the period after disability retirement. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the Board on December 17, 2015, the numbers of expected future deaths are 9-12% less than the actual number of deaths that occurred during the study period for service retirements and beneficiaries and for disability retirements. Representative values of the assumed annual rates of mortality after service retirement are as follows:

Age	Males	Females	Age	Males	Females
40	0.1127%	0.0790%	65	1.1300%	0.8994%
45	0.1609	0.1230	70	1.8697	1.5281
50	0.2474	0.1872	75	3.2147	2.5220
55	0.4246	0.2918	80	5.5160	4.1628
60	0.6985	0.4923	85	9.5631	7.1239

ADMINISTRATIVE EXPENSES: Budgeted administrative expenses are added to the normal contribution rate.

AMORTIZATION METHOD: Level dollar amortization.

ASSET METHOD: Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the assumed valuation rate of return. The actuarial value was set equal to the market value as of June 30, 2013. The amount recognized each year beginning June 30, 2014 is 20% of the difference between market value and expected actuarial value.

DEATH BENEFITS: It is assumed that 100% of the membership will select a beneficiary with the male three years older than the female.

VESTED TERMINATION BENEFITS: It is assumed that 50% of active members who terminate with 10 or more years of service before retirement will receive a benefit beginning at age 60 and 50% will receive a refund of member contributions.



SICK LEAVE: Assumed load on service at retirement for the practice of allowing members to convert forfeited sick leave is as follows:

- Old Plan members who retire with 34 years of service – 4.0%
- Old Plan members who retire on normal retirement – 2.0%
- Old Plan members who retire on early retirement – 1.5%
- All New Plan and GSEPS retirements – 3.0%
- All Law Enforcement retirements – 5.0%

VALUATION METHOD: Entry age actuarial cost method. See Schedule E for a brief description of this method.



SCHEDULE E

ACTUARIAL COST METHOD

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 7.50%), of each active member's expected benefit at retirement or death is determined, based on his age, service, sex and compensation. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his terminating with a service, disability or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries and inactive members to obtain the present value of all expected benefits payable from the System on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the System are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made 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.
4. The unfunded accrued liability is determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets held, from the present value of expected benefits to be paid from the System.



SCHEDULE F

FUNDING POLICY OF THE ERS BOARD OF TRUSTEES

The purpose of this Funding Policy is to state the overall objectives for the Employees' Retirement System of Georgia (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. It is the intent of the ERS Board of Trustees that the Funding Policy outlined herein will remain unchanged until the objectives below are met.

I. Funding Objectives

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

- To develop a pattern of contribution rates expressed as a percentage of employer payroll and measured by valuations prepared in accordance with applicable State laws and the principles of practice prescribed by the Actuarial Standards Board.
- To maintain an increasing funded ratio (ratio of actuarial value of assets to actuarial accrued liabilities) that reflects a trend of improved actuarial condition. The long-term objective is to obtain a 100% funded ratio over a reasonable period of future years.
- To maintain adequate asset levels to finance the benefits promised to members and monitor the future demand for liquidity.
- To promote intergenerational equity for taxpayers with respect to contributions required for the benefits provided by the System.

II. Measures of Funding Progress

To track progress in achieving the System's funding objectives, the following measures will be determined 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 assets divided by the actuarial accrued liability, should increase over time, before adjustments for changes in benefits, actuarial methods, and/or actuarial adjustments. The target funded ratio will be 100 percent within 25 years of the valuation date for the first valuation conducted following the adoption of this Policy (i.e. the June 30, 2013 valuation date).
- **Unfunded Actuarial Accrued Liability (UAAL)**
 - **Transitional UAAL** – The UAAL established as of the initial valuation date for which this funding policy is adopted shall be known as the Transitional UAAL.
 - **New Incremental UAAL** – Each subsequent valuation will produce a New Incremental UAAL consisting of all benefit changes, assumption and method changes and experience gains and/or losses that have occurred since the previous valuations.
- **UAAL Amortization Period**
 - The transitional UAAL will be amortized over a closed 25 year period beginning on the initial valuation date for which this funding policy is adopted.
 - Each New Incremental UAAL shall be amortized over a closed 25 year period beginning with the year it is incurred.
- **Employer Contribution Rates**
 - **Employer Normal Contribution Rate** – the contribution rate determined as of the valuation date each year based on the provisions of Georgia Code Section 47-2-55 (1).
 - In each valuation subsequent to the adoption of this funding policy the required employer contribution rate will be determined as the summation of the employer Normal Contribution



Rate, a contribution rate for administrative expenses, the amortization rate for the Transitional UAAL and the individual amortization rate for each of the New Incremental UAAL bases.

- In no event shall the employer contribution rate be less than 0%.
- The valuation methodology, including the amortization of the Unfunded Actuarial Accrued Liability (UAAL), would be expected to maintain reasonably stable contribution rates.

III. Methods and Assumptions

The annual actuarial valuations providing the measures to assess funding progress will utilize the actuarial methods and assumptions last adopted by the Board based upon the advice and recommendations of the actuary. These include the following primary methods and assumptions:

- The actuarial cost method used to develop the benchmarks will be the Entry Age Normal (EAN) actuarial cost method.
- The long-term annual investment rate of return assumption will be 7.50% net of investment expenses.
- The actuarial value of assets will be determined by recognizing the annual differences between actual and expected market value of assets over a five-year period, beginning with the June 30, 2013 actuarial valuation.
 - Prior to the June 30, 2013 valuation, the differences between actual and expected market value of assets were recognized over a seven-year period. For the June 30, 2013 valuation, all then-current deferred gains and losses will be recognized immediately, and the initial new five-year period will begin immediately thereafter.

The employer contribution rates determined in an annual actuarial valuation will be at least sufficient to satisfy the annual normal cost of the System and amortize the UAAL as a level dollar amount over a period not to exceed 25 years (for the UAAL as of the June 30, 2013 valuation date, and for each successive year of gains and losses incurred in years following the June 30, 2013 valuation date). However, in no event shall the employer contribution rate be less than 0%.

The actuary shall conduct an investigation into the System's experience at least every five years and utilize the results of the investigation to form the basis for recommended assumptions and methods. Any changes to the recommended assumptions and methods that are approved by the Board will be reflected in this Policy.

IV. Funding Policy Progress

The Board will periodically have actuarial projections of the valuation results performed to assess the current and expected future progress towards the overall funding goals of the System. These periodic projections will provide the expected valuation results over at least a 30-year period. The projected measures of funding progress and the recent historical trend provided in valuations will provide important information for the Board's assessment of the System's funding progress.



SCHEDULE G

**AMORTIZATION OF TRANSITIONAL UAAL
(Dollar amounts in thousands)**

<u>Valuation Date</u>	<u>Amortization Period</u>	<u>Balance of Transitional UAAL</u>	<u>Annual Amortization Payment</u>
6/30/2013	25	\$4,847,512	\$434,874
6/30/2014	22.7	4,776,202	444,599
6/30/2015	19.6	4,689,818	464,364
6/30/2016	18.6	4,577,190	464,364
6/30/2017	17.6	4,456,116	464,364
6/30/2018	16.6	4,325,961	464,364
6/30/2019	15.6	4,186,044	464,364
6/30/2020	14.6	4,035,634	464,364
6/30/2021	13.6	3,873,943	464,364
6/30/2022	12.6	3,700,125	464,364
6/30/2023	11.6	3,513,270	464,364
6/30/2024	10.6	3,312,402	464,364
6/30/2025	9.6	3,096,468	464,364
6/30/2026	8.6	2,864,340	464,364
6/30/2027	7.6	2,614,802	464,364
6/30/2028	6.6	2,346,548	464,364
6/30/2029	5.6	2,058,175	464,364
6/30/2030	4.6	1,748,175	464,364
6/30/2031	3.6	1,414,924	464,364
6/30/2032	2.6	1,056,680	464,364
6/30/2033	1.6	671,567	464,364
6/30/2034	0.6	257,571	276,889
6/30/2035	0	0	0
6/30/2036	0	0	0
6/30/2037	0	0	0
6/30/2038	0	0	0



SCHEDULE G
(Continued)

AMORTIZATION OF 2014 INCREMENTAL UAAL
(Dollar amounts in thousands)

<u>Valuation Date</u>	<u>Amortization Period</u>	<u>Balance of New Incremental UAAL 6/30/2014</u>	<u>Annual Amortization Payment</u>
6/30/2014	25	(\$164,722)	(\$14,777)
6/30/2015	24	(162,299)	(14,777)
6/30/2016	23	(159,694)	(14,777)
6/30/2017	22	(156,894)	(14,777)
6/30/2018	21	(153,883)	(14,777)
6/30/2019	20	(150,647)	(14,777)
6/30/2020	19	(147,168)	(14,777)
6/30/2021	18	(143,429)	(14,777)
6/30/2022	17	(139,409)	(14,777)
6/30/2023	16	(135,087)	(14,777)
6/30/2024	15	(130,441)	(14,777)
6/30/2025	14	(125,447)	(14,777)
6/30/2026	13	(120,078)	(14,777)
6/30/2027	12	(114,307)	(14,777)
6/30/2028	11	(108,102)	(14,777)
6/30/2029	10	(101,433)	(14,777)
6/30/2030	9	(94,263)	(14,777)
6/30/2031	8	(86,555)	(14,777)
6/30/2032	7	(78,270)	(14,777)
6/30/2033	6	(69,362)	(14,777)
6/30/2034	5	(59,787)	(14,777)
6/30/2035	4	(49,494)	(14,777)
6/30/2036	3	(38,429)	(14,777)
6/30/2037	2	(26,534)	(14,777)
6/30/2038	1	(13,746)	(14,777)
6/30/2039	0	0	0



SCHEDULE G
(Continued)

AMORTIZATION OF 2015 INCREMENTAL UAAL
(Dollar amounts in thousands)

<u>Valuation Date</u>	<u>Amortization Period</u>	<u>Balance of New Incremental UAAL 6/30/2015</u>	<u>Annual Amortization Payment</u>
6/30/2015	25	(\$107,062)	(\$9,605)
6/30/2016	24	(105,487)	(9,605)
6/30/2017	23	(103,794)	(9,605)
6/30/2018	22	(101,974)	(9,605)
6/30/2019	21	(100,017)	(9,605)
6/30/2020	20	(97,914)	(9,605)
6/30/2021	19	(95,653)	(9,605)
6/30/2022	18	(93,222)	(9,605)
6/30/2023	17	(90,609)	(9,605)
6/30/2024	16	(87,801)	(9,605)
6/30/2025	15	(84,781)	(9,605)
6/30/2026	14	(81,535)	(9,605)
6/30/2027	13	(78,045)	(9,605)
6/30/2028	12	(74,294)	(9,605)
6/30/2029	11	(70,262)	(9,605)
6/30/2030	10	(65,927)	(9,605)
6/30/2031	9	(61,267)	(9,605)
6/30/2032	8	(56,257)	(9,605)
6/30/2033	7	(50,872)	(9,605)
6/30/2034	6	(45,083)	(9,605)
6/30/2035	5	(38,859)	(9,605)
6/30/2036	4	(32,169)	(9,605)
6/30/2037	3	(24,977)	(9,605)
6/30/2038	2	(17,246)	(9,605)
6/30/2039	1	(8,935)	(9,605)
6/30/2040	0	0	0



SCHEDULE H

SUMMARY OF MAIN SYSTEM PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES

The Employees' Retirement System of Georgia (ERS) was established February 3, 1949 to provide retirement benefits and other benefits to employees of the State of Georgia. The commencement date was January 1, 1950. "Old Plan" means the plan applicable to members beginning employment prior to July 1, 1982, "New Plan" means the plan applicable to members employed on or after July 1, 1982 and before January 1, 2009, and "GSEPS" means the plan applicable to members employed on or after January 1, 2009. The following summary describes the main provisions of the System.

Normal Retirement Benefit

Eligibility A member is eligible for normal retirement upon the attainment of age 60 and 10 years of creditable service (prior service plus membership service plus purchased service plus forfeited leave – minimum 960 hours) or 30 years of creditable service regardless of age.

Benefit Old Plan

(A) x (B) x (C), where

(A) = Average final compensation (the average annual compensation of a member during the 24 consecutive calendar months of his creditable service that will yield the highest average)

(B) = Creditable service, and

(C) = .0115 + .0003 x (creditable service up to 35 years).

The minimum benefit is 2.00% of average final compensation times years of creditable service.

New Plan

2.00% of average final compensation multiplied by years of creditable service.

GSEPS

1.00% of average final compensation multiplied by years of creditable service.

Uniform division and judicial members may be eligible for additional minimum benefits.

With all plans, for members with retirement dates prior to July 1, 2013, a one-time 3.0% increase on the first \$37,500 is made at time of retirement.



Early Retirement Benefit

Eligibility A member is eligible for early retirement upon the attainment of 25 years of creditable service regardless of age.

Benefit The annual early retirement benefit is determined in the same manner as the normal retirement benefit based on creditable service and average final compensation as of the early retirement date. If the member is less than age 60, the retirement benefit is reduced by the lesser of:

- (i) 7% for each year by which his age is less than 60, and
- (ii) 7% for each year by which his creditable service at retirement is less than 30.

Uniform division and judicial members may be eligible for additional minimum benefits.

Disability Retirement Benefit

Old Plan and New Plan

Eligibility A member is eligible for disability retirement after having at least 13 years and 4 months of service and being certified by the medical board as permanently disabled for the further performance of the duties of the position held at the time of disability.

Benefit The annual disability retirement benefit is an immediate benefit with the amount depending upon service at the time of disability.

Uniform division members may be eligible for an additional benefit if disabled in line of duty.

Service at Disability

Benefit

- | | |
|---|--|
| (1) 13 years 4 months to 18 years | 75% of what the normal retirement benefit would have been had the member continued to work until age 60 with no further change in compensation |
| (2) Over 18 years to 22 years 9 months | 100% of age 60 benefit |
| (3) Over 22 years 9 months to 27 years 6 months | 75% of age 65 benefit |
| (4) Over 27 years 6 months | 100% of age 65 benefit |



GSEPS

Eligibility A member is eligible for disability retirement after having at least 15 years of service and being certified by the medical board as permanently disabled for the further performance of the duties of the position held at the time of disability.

Benefit The annual disability retirement benefit is an immediate benefit equal to 1.00% of average final compensation multiplied by years of credited service at disability.

Involuntary Retirement Benefit

Eligibility Member prior to April 1, 1972, termination is involuntary and without prejudice, and member has more than 18 years of membership service.

For members prior to February 13, 1962, the service requirement is more than 18 years of creditable service.

Benefit Computed as for disability retirement.

Deferred Vested Retirement Benefit

Eligibility 10 years of creditable service. Member contributions not withdrawn.

Benefit Accrued benefit deferred to age 60.

Death Benefit

Old Plan and New Plan

Eligibility

Benefit

(1) Before retirement, before age 60, before completing 13 years 4 months service Refund of all employee contributions plus allowable interest.

(2) Before retirement, before age 60, after completing 13 years 4 months service Benefit equal to disability retirement immediately prior to death under Option 2.

(3) Before retirement, after age 60, more than 10 years creditable service (5 years service if member prior to July 1, 1968) Benefit equal to retirement immediately prior to death under Option 2.



(4) After retirement	Payments continued to spouse as determined by options (if any) elected before retirement.
<u>GSEPS</u>	
Eligibility	15 years of creditable service.
Benefit	Benefit equal to disability retirement immediately prior to death under Option 2.
Termination Benefit	
Eligibility	Termination with less than 10 years creditable service.
Benefit	Return of all member contributions and employer contributions made on behalf of member with allowable interest. Life insurance premiums paid by the employee are not refundable.
Payment Options	At application for retirement, a member must choose one of the following methods of payment. All forms are of equivalent actuarial value.
Maximum Benefit	Life annuity, payable to members for the member's life with the final payment (for month of member's death) going to member's designated beneficiary.
Option 1	Full cash refund, paying a reduced retirement benefit to members so that, upon member's death, the beneficiary receives a lump sum cash settlement equal to the difference between the member's accumulated contributions at retirement and the benefit payments due to member contributions received prior to member's death.
Option 2	Joint and 100% to survivor. Member receives a reduced benefit for life with the same benefit continuing for life of beneficiary upon member's death.
Option 3	Joint and 50% to survivor. Member receives a reduced benefit for life with one-half members' benefit continuing to beneficiary for life upon member's death.
Other Options	Other options are available with certain restrictions.
Post-Retirement Adjustments	The Board may from time to time grant a Cost of Living Adjustment.



Contributions

By Members

Old Plan

4% of annual compensation up to \$4,200 plus 6% of annual compensation over \$4,200. A member with 34 or more years of service may cease contributing until age 65, when he must resume contributing if he continues employment and wishes to receive additional service credit. The State pays member contributions except for 1.25% of annual compensation. These State contributions paid on behalf of members are included in the member's account for refund purposes. Covered tax officials and their employees and covered employees of State Courts continue to pay their full member contributions.

New Plan and GSEPS

Member contributions are 1.25% of annual compensation

By Employers

The employers contribute at a specified percentage of active member payroll determined annually by actuarial valuation. The State contribution is not subject to refund upon member termination.



SCHEDULE I

**The Number and Average Annual Compensation of Active Members
by Age and Service as of June 30, 2015**

Age	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 to 39	40 & Up	
Under 25	708	1,643	11								2,362
Avg. Pay	\$23,849	\$26,495	\$29,867								\$25,718
25 to 29	869	4,143	591	31							5,634
Avg. Pay	\$26,139	\$30,591	\$33,156	\$33,665							\$30,190
30 to 34	530	3,275	1,921	685	18						6,429
Avg. Pay	\$28,353	\$33,253	\$37,219	\$36,556	\$36,876						\$34,396
35 to 39	432	2,391	1,817	1,839	602	10					7,091
Avg. Pay	\$30,967	\$34,337	\$38,354	\$40,114	\$41,220	\$43,125					\$37,256
40 to 44	350	2,092	1,623	1,697	1,644	526	14				7,946
Avg. Pay	\$29,167	\$35,178	\$39,392	\$40,861	\$43,338	\$45,598	\$45,346				\$39,384
45 to 49	301	1,685	1,486	1,517	1,341	1,362	710	15			8,417
Avg. Pay	\$30,890	\$36,228	\$40,434	\$42,228	\$44,146	\$48,379	\$49,484	\$48,415			\$42,229
50 to 54	192	1,456	1,429	1,496	1,263	1,158	1,479	276	1		8,750
Avg. Pay	\$33,213	\$35,302	\$38,528	\$40,180	\$41,648	\$44,009	\$49,164	\$52,911	\$33,508		\$41,584
55 to 59	173	1,116	1,169	1,302	1,208	1,065	1,153	404	12		7,602
Avg. Pay	\$38,251	\$39,017	\$38,636	\$41,758	\$40,786	\$43,477	\$47,544	\$54,873	\$65,957		\$42,495
60 to 64	72	641	915	905	682	518	519	160	28	7	4,447
Avg. Pay	\$32,174	\$39,890	\$42,410	\$42,625	\$44,131	\$46,246	\$47,412	\$57,093	\$56,957	\$68,215	\$43,880
65 to 69	13	165	317	374	169	118	100	49	7	8	1,320
Avg. Pay	\$50,424	\$49,851	\$44,439	\$46,650	\$49,927	\$51,921	\$51,685	\$65,271	\$91,853	\$98,911	\$49,076
70 & up	4	45	97	109	55	41	37	18	6	6	418
Avg. Pay	\$61,470	\$44,020	\$54,605	\$45,470	\$52,358	\$57,824	\$42,985	\$60,158	\$59,879	\$134,484	\$51,602
Total	3,644	18,652	11,376	9,955	6,982	4,798	4,012	922	54	21	60,416
Avg. Pay	\$28,464	\$33,596	\$38,989	\$41,056	\$42,855	\$45,858	\$48,521	\$55,222	\$63,371	\$98,843	\$38,945

Average Age: 44.4
Average Service: 9.9



SCHEDULE I
(Continued)

**NUMBER OF RETIRED MEMBERS
AND THEIR BENEFITS BY AGE**

Attained Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	101	\$ 2,238,773	\$ 22,166
50-54	936	26,233,550	28,027
55-59	2,704	98,744,970	36,518
60-64	7,224	223,967,804	31,003
65-69	9,821	297,602,661	30,303
70-74	6,514	193,500,353	29,705
75-79	4,302	124,891,984	29,031
80-84	2,641	69,838,635	26,444
85-89	1,346	30,990,164	23,024
90-94	568	11,116,449	19,571
95+	137	2,588,421	18,894
Total	36,294	\$ 1,081,713,764	\$ 29,804

**NUMBER OF BENEFICIARIES
AND THEIR BENEFITS BY AGE**

Attained Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	740	\$ 6,528,541	\$ 8,822
50-54	272	2,764,032	10,162
55-59	310	4,343,871	14,012
60-64	503	8,443,046	16,785
65-69	670	12,839,646	19,164
70-74	698	13,178,813	18,881
75-79	741	12,663,829	17,090
80-84	638	9,935,465	15,573
85-89	523	8,355,218	15,976
90-94	280	4,101,760	14,649
95+	85	1,102,259	12,968
Total	5,460	\$ 84,256,480	\$ 15,432



SCHEDULE I
(Continued)

**NUMBER OF DISABLED RETIREES
AND THEIR BENEFITS BY AGE**

Attained Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 50	333	\$ 8,507,602	\$ 25,548
50-54	549	13,782,072	25,104
55-59	939	24,648,544	26,250
60-64	1,224	34,351,425	28,065
65-69	1,197	38,070,605	31,805
70-74	624	17,203,981	27,570
75-79	281	6,703,667	23,856
80-84	87	1,805,604	20,754
85-89	32	570,600	17,831
90-94	13	308,937	23,764
95+	2	35,391	17,696
Total	5,281	\$ 145,988,428	\$ 27,644

**NUMBER OF DEFERRED VESTED
AND THEIR BENEFITS BY AGE**

Attained Age	Number of Members	Total Annual Benefits	Average Annual Benefits
Under 35	64	\$ 460,454	\$ 7,195
35-39	323	2,964,660	9,179
40-44	688	7,209,067	10,478
45-49	1,127	12,848,290	11,400
50-54	1,416	17,032,351	12,028
55-59	1,613	19,661,144	12,189
60-64	561	7,225,624	12,880
65+	86	1,332,902	15,499
Total	5,878	\$ 68,734,492	\$ 11,694



SCHEDULE J

SPECIAL CONTRIBUTION RATES

Groups that have Age 55 Retirement and Line-of-Duty Disability Benefits:

- Public Safety #466
- Revenue Agents #474
- DNR Conservation Rangers #462
- GBI Officers/Agents #471

PLAN	Additional Rate	Total Rate
Old Plan	0.00%	19.94%
New Plan	5.80%	30.49%
GSEPS	2.18%	23.84%

Groups that have Line-of-Duty Disability Benefits:

- Deputy DNR Conservation Rangers #462
- Probation Officers #467
- Parole Officers – Pardons and Paroles #465

PLAN	Additional Rate	Total Rate
Old Plan	0.00%	19.94%
New Plan	0.06%	24.75%
GSEPS	0.04%	21.70%

Group that has Age 55 Retirement:

- Special Investigators Department of Revenue #474

PLAN	Additional Rate	Total Rate
New Plan	5.74%	30.43%
GSEPS	2.14%	23.80%

Appellate Court Judges: Total rate equal to 44.68% of payroll

Group with Debt Repayment Schedule:

- Tax Commissioners and Employees
- Additional Flat Amount Due = \$615,943 annually



SCHEDULE K

CAFR SCHEDULES

GA ERS: Solvency Test							
Actuarial Accrued Liability for:							
Actuarial Valuation as of 6/30	Active Member Contributions (1)	Retirants & Beneficiaries (2)	Active Members (Employer Funded Portion) (3)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
					(1)	(2)	(3)
2015	\$367,462	\$12,520,321	\$4,211,744	\$12,675,649	100%	98.3%	0.0%
2014	385,058	12,108,737	4,498,168	12,376,120	100%	99.0%	0.0%
2013	405,841	11,935,364	4,641,244	12,129,803	100%	98.2%	0.0%
2012	460,861	11,420,011	4,897,050	12,260,595	100%	100.0%	7.8%
2011	503,867	11,058,344	5,094,694	12,667,557	100%	100.0%	21.7%
2010	551,607	10,652,040	5,091,705	13,046,193	100%	100.0%	36.2%
2009	589,012	10,034,939	5,254,071	13,613,606	100%	100.0%	56.9%
2008	616,177	9,756,529	5,308,151	14,017,346	100%	100.0%	68.7%
2007	645,907	9,020,890	5,218,382	13,843,689	100%	100.0%	80.0%
2006	672,679	8,462,884	5,107,282	13,461,132	100%	100.0%	84.7%

All dollar amounts are in thousands.

GA ERS: Schedule of Retirants Added to and Removed from Rolls								
Year Ended	Added to Rolls		Removed from Rolls		Roll End of Year		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)	Number	Annual Allowances (in thousands)		
June 30, 2015	2,656	\$54,003	1,350	\$30,927	47,035	\$1,311,958	1.8%	\$27,893
June 30, 2014	2,440	51,178	1,059	22,997	45,729	1,288,882	2.2%	28,185
June 30, 2013	3,664	88,855	1,176	26,334	44,348	1,260,701	5.2%	28,427
June 30, 2012	2,956	71,464	1,305	27,696	41,860	1,198,180	3.8%	28,624
June 30, 2011	2,797	69,031	1,170	25,347	40,209	1,154,412	3.9%	28,710
June 30, 2010	2,665	70,383	1,051	22,413	38,582	1,110,728	4.5%	28,789
June 30, 2009	2,444	85,329	1,055	20,194	36,968	1,062,758	6.5%	28,748
June 30, 2008	2,422	82,644	1,017	21,299	35,579	997,623	6.6%	28,040
June 30, 2007	2,410	114,719	1,075	20,598	34,174	936,278	11.2%	27,397
June 30, 2006	2,338	84,982	854	16,270	32,839	842,157	8.9%	25,645