



**EMPLOYEES'  
RETIREMENT SYSTEM  
OF GEORGIA**

**GEORGIA PUBLIC SCHOOL EMPLOYEES'  
RETIREMENT SYSTEM**

**REPORT OF THE ACTUARY ON THE VALUATION  
PREPARED AS OF JUNE 30, 2007**



# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

June 20, 2008

Mr. Michael Nehf  
Executive Director  
Georgia Public School Employees' Retirement System  
Two Northside 75, Suite 300  
Atlanta, GA 30318-7778

Dear Mr. Nehf:

Enclosed are 40 bound copies and one unbound copy of the "Georgia Public School Employees' Retirement System Report of the Actuary on the Valuation Prepared as of June 30, 2007".

Based on a monthly benefit accrual rate of \$14.75, which is effective July 1, 2008, the valuation indicates that employer contributions for the fiscal year ending June 30, 2010 of \$5,529,000 or \$141.46 per active member are sufficient to support the benefits of the System.

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

Sincerely yours,

Edward A. Macdonald, ASA, FCA, MAAA  
President

Cathy Turcot  
Managing Director

EAM:mjn

Enclosure

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# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

June 20, 2008

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

Members of the Board:

Section 47-4-60 of the law governing the operation of the Georgia Public School Employees' Retirement System provides that the employer contribution shall be actuarially determined and approved 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, 2007. Based on a monthly benefit accrual rate of \$14.75, which is effective July 1, 2008, the valuation indicates that annual employer contributions of \$5,529,000 or \$141.46 per active member for the fiscal year ending June 30, 2010 are sufficient to support the benefits of the System.

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. Since the previous valuation, the monthly benefit rate has been increased to \$14.75 per year of creditable service with an effective date of July 1, 2008. The valuation takes into account the effect of all amendments to the System enacted through the 2007 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 funding purposes meet the parameters set for the disclosures presented in the financial section by Governmental Accounting Standards Board (GASB) Statement Nos. 25 and 27. The funding objective of the plan is that contribution rates over time will remain level as a dollar per active member. The valuation method used is the entry age normal cost method. The normal contribution rate to cover current cost has been determined as a dollar per active member. Gains and losses are reflected in the unfunded accrued liability which is negative and being amortized as a level dollar per active member within a 15-year period.



June 20, 2008  
Board of Trustees  
Page 2

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. 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 actuarial 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 retirement 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 'E. Macdonald', with a stylized, flowing script.

Edward A. Macdonald, ASA, FCA, MAAA  
President

A handwritten signature in blue ink, appearing to read 'Cathy Turcot', with a cursive script.

Cathy Turcot  
Managing Director

EAM:mjn



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**GEORGIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM  
REPORT OF THE ACTUARY  
ON THE VALUATION  
PREPARED AS OF JUNE 30, 2007**

**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:

<b>Valuation Date</b>	<b>June 30, 2007</b>	<b>June 30, 2006</b>
Number of active members	39,086	37,587
Retired members and beneficiaries:		
Number	13,193	13,014
Annual allowances <sup>1</sup>	\$ 46,661,948	\$ 44,266,003
Assets:		
Market Value	\$ 811,649,000	\$ 743,689,000
Actuarial Value	785,460,000	766,277,000
Unfunded actuarial accrued liability	\$ (39,382,352)	\$ (74,625,572)
Amortization period (years)	15	20
Funded Ratio	105.3%	110.8%
<b>For Fiscal Year Ending</b>	<b>June 30, 2010</b>	<b>June 30, 2009</b>
Employer contribution rate per active member:		
Normal	\$ 259.33	\$ 237.64
Accrued liability	<u>(117.87)</u>	<u>(196.82)</u>
Total	\$ 141.46	\$ 40.82
Annual Required Employer Contribution (ARC) <sup>2</sup> :		
Normal	\$ 10,136,000	\$ 8,932,175
Accrued liability	<u>(4,607,000)</u>	<u>(7,397,873)</u>
Total	\$ 5,529,000	\$ 1,534,302

<sup>1</sup> Does not include increases in benefit accrual rate effective after the valuation date. The results of the valuation have been adjusted to include these increases.

<sup>2</sup> The ARC is in addition to any administrative expense allotments that are contributed to the System.



2. The valuation takes into account the effect of amendments of the System enacted through the 2007 session of the General Assembly. The major benefit and contribution provisions of the System as reflected in the valuation are summarized in Schedule F. Since the previous valuation, the monthly benefit rate has been increased to \$14.75 per year of creditable service with an effective date of July 1, 2008.
3. Schedule D of this report outlines the full set of actuarial assumptions and methods used to prepare the current valuation. There have been no changes since the previous valuation.
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, 2007 are given in Section IV, and further discussion of the contributions is set out in Section V.

## **SECTION II - MEMBERSHIP**

1. Data regarding the membership of the System for use as a basis of the valuation were furnished by the Retirement System office. The valuation included 39,086 active members.
2. The following table shows the number of retired members and beneficiaries on the roll as of June 30, 2007, together with the amount of their annual allowances payable under the System as of that date.



**THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF  
RETIRED MEMBERS AND BENEFICIARIES ON THE ROLL  
AS OF JUNE 30, 2007**

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES*
Service Retirements	11,411	\$ 40,297,408
Disability Retirements	1,058	4,795,983
Beneficiaries of Deceased Members	<u>724</u>	<u>1,568,557</u>
Total	13,193	\$ 46,661,948

\*The allowances do not reflect the increases in benefit accrual rates after the valuation date.

**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 portion of the allowance which these contributions provide is then paid from the Pension Accumulation Fund. On June 30, 2007 the value of assets credited to the Annuity Savings Fund amounted to \$21,733,000.

- (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 member-contributed portion of the allowance. On June 30, 2007 the market value of assets credited to the Pension Accumulation Fund amounted to \$789,916,000.





2. As of June 30, 2007 the total market value of assets amounted to \$811,649,000 as reported by the Auditor of the System. The actuarial value of assets used for the current valuation was \$785,460,000. Schedule B shows the development of the actuarial value of assets as of June 30, 2007.
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, 2007. The valuation was prepared in accordance with the actuarial assumptions and methods set forth in Schedule D and the actuarial cost method which is described in Schedule E.
2. The valuation balance sheet shows that the System has total prospective liabilities of \$804,437,219, of which \$456,868,328 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and \$347,568,891 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 \$785,460,000 as of June 30, 2007. The difference of \$18,977,219 between the total liabilities and the total present assets represents the present value of contributions to be made in the future. Of this amount, \$7,113,888 is the present value of future contributions expected to be made by or on behalf of members, and the balance of \$11,863,331 represents the present value of future contributions payable by the employers to the Pension Accumulation Fund.
3. The employer's contributions to the System consist of normal contributions and accrued liability contributions. The valuation indicates that annual employer normal contributions at the rate of \$259.33 per active member are required to provide the currently accruing benefits of the System.



4. Prospective normal contributions at the rate of \$259.33 have a present value of \$51,245,683. When this amount is subtracted from \$11,863,331, which is the present value of the total future contributions to be made by the employers, the result is a prospective unfunded actuarial accrued liability of (\$39,382,352).

#### **SECTION V – CONTRIBUTIONS PAYABLE BY EMPLOYERS**

1. The contributions of employers consist of a normal contribution and an accrued liability contribution as determined by actuarial valuation.
2. The normal contribution rate is calculated as the level dollar which, if applied for the average 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. On the basis of the valuation, the normal contribution rate was determined to be \$259.33 per active member, or \$10,136,000 based on 39,086 active members as of June 30, 2007.
3. The accrued liability contribution is the level annual amount which will be sufficient to amortize the unfunded actuarial accrued liability within 15 years following the valuation date. The annual accrued liability contribution determined on this basis by the June 30, 2007 valuation is (\$4,607,000), or (\$117.87) per active member.
4. The following table summarizes the employer contribution rates which were determined by the June 30, 2007 valuation and are recommended for use

#### **ANNUAL REQUIRED EMPLOYER CONTRIBUTION (ARC) FOR FISCAL YEAR ENDING JUNE 30, 2010**

<b>CONTRIBUTION</b>	<b>PER ACTIVE MEMBER</b>	<b>ANNUAL AMOUNT</b>
Normal	\$ 259.33	\$ 10,136,000
Accrued Liability	<u>(117.87)</u>	<u>(4,607,000)</u>
Total	\$ 141.46	\$ 5,529,000



5. Schedule H shows the allocation of the annual required contribution for fiscal year ending June 30, 2010 by school system.

**SECTION VI – ACCOUNTING INFORMATION**

1. Governmental Accounting Standards Board Statements 25 and 27 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED MEMBERS  
AS OF JUNE 30, 2007**

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	13,193
Terminated employees entitled to benefits but not yet receiving benefits	64,248
Active plan members	<u>39,086</u>
Total	116,527



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

**SCHEDULE OF FUNDING PROGRESS**  
(Dollar amounts in thousands)

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) - Entry Age (b)</b>	<b>Unfunded AAL (UAAL) (b - a)</b>	<b>Funded Ratio (a / b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll ((b - a) / c)</b>
6/30/2002	\$ 727,529	\$ 630,295	\$ (97,234)	115.4%	N/A	N/A
6/30/2003	734,879	664,207	(70,672)	110.6	N/A	N/A
6/30/2004	743,815	666,883	(76,932)	111.5	N/A	N/A
6/30/2005*	753,767	671,040	(82,727)	112.3	N/A	N/A
6/30/2006	766,277	691,651	(74,626)	110.8	N/A	N/A
6/30/2007**	785,460	746,078	(39,382)	105.3	N/A	N/A

All figures prior to 6/30/2005 were reported by prior actuarial firm.

\*Reflects increase in benefit accrual rate to \$14.00.

\*\*Reflects increase in benefit accrual rate to \$14.75.

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

<b>Year Ending</b>	<b>Annual Required Contribution</b>	<b>Percentage Contributed</b>
6/30/2002	\$ 11,623	100%
6/30/2003	4,121	86
6/30/2004	833	100
6/30/2005	833	100
6/30/2006	3,634	100
6/30/2007	6,484	100

All figures prior to 6/30/2005 were reported by the prior actuarial firm.



4. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2007.

**Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending June 30, 2007**

(a)	Employer annual required contribution	\$ 6,484,000
(b)	Interest on net pension obligation	(1,202,000)
(c)	Adjustment to annual required contribution	<u>(1,438,000)</u>
(d)	Annual pension cost (a) + (b) – (c)	\$ 6,720,000
(e)	Employer contributions made for fiscal year ending 06/30/07	<u>6,490,000</u>
(f)	Increase (decrease) in net pension obligation (d) – (e)	\$ 230,000
(g)	Net pension obligation beginning of fiscal year	<u>(16,026,000)</u>
(h)	Net pension obligation end of fiscal year (f) + (g)	\$ (15,796,000)

**TREND INFORMATION**  
(Dollar amounts in thousands)

<u>Year Ending</u>	<u>Annual Pension Cost (APC)</u>	<u>Percentage of APC Contributed</u>	<u>Net Pension Obligation</u>
June 30, 2005	\$ 2,014	41%	\$ (17,084)
June 30, 2006	4,696	77	(16,026)
June 30, 2007	6,720	97	(15,796)

5. The annual required contribution (ARC) of the employer in dollars, determined in accordance with the parameters of GASB 25/27 is shown below. The accrued liability rate is based on amortization of the unfunded accrued liability of (\$39,382,352) within a 15-year period from the valuation date.

**2009/2010 FISCAL YEAR  
ANNUAL REQUIRED CONTRIBUTION (ARC)  
BASED ON THE VALUATION AS OF JUNE 30, 2007**

<b>ANNUAL REQUIRED CONTRIBUTION (ARC)</b>	<b>AMOUNT</b>
Normal	\$ 10,136,000
Accrued Liability	<u>(4,607,000)</u>
Total	\$ 5,529,000



6. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2007. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2007
Actuarial cost method	Entry age
Amortization method	Level dollar, open
Remaining amortization period	15 years
Asset valuation method	7-year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.50%
Projected salary increases*	N/A
Cost-of-living adjustments	3.00% Annually
*Includes inflation at	3.75%

#### **SECTION VII – EXPERIENCE**

1. The last experience investigation was prepared for the four-year period ending June 30, 2004, and based on the results of the investigation, new rates of separation and mortality were adopted by the Board on April 20, 2006. The next experience investigation will be prepared for the period July 1, 2004 through June 30, 2009.



2. The following table shows the estimated gain or loss from various factors that resulted in an increase of \$35,243,220 in the unfunded accrued liability from (\$74,625,572) to (\$39,382,352) during the fiscal year ending June 30, 2007.

**ANALYSIS OF THE INCREASE IN UNFUNDED ACCRUED LIABILITY**  
(in thousands of dollars)

ITEM	AMOUNT OF INCREASE/ (DECREASE)
Interest (7.50%) added to previous unfunded accrued liability	\$ (5,596.9)
Accrued liability contribution	4,729.2
Experience:	
Valuation asset growth	(3,737.0)
Pensioners' mortality	(320.5)
Turnover and retirements	1,053.3
New entrants	3,556.9
Method changes	0.0
Amendments	36,404.3
Assumption changes	0.0
Miscellaneous changes	<u>(846.1)</u>
Total	\$ 35,243.2



**SCHEDULE A**

**VALUATION BALANCE SHEET  
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF  
THE GEORGIA PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM  
AS OF JUNE 30, 2007**

<b><u>ACTUARIAL LIABILITIES</u></b>		
(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	\$ 411,562,719
-	Death and survivor benefits	17,557,778
-	Deferred vested benefits	<u>27,747,831</u>
	Total	\$ 456,868,328
(2)	Present value of prospective benefits payable on account of present active members	<u>347,568,891</u>
(3)	TOTAL ACTUARIAL LIABILITIES	<u>\$ 804,437,219</u>
<b><u>PRESENT AND PROSPECTIVE ASSETS</u></b>		
(4)	Actuarial value of assets	\$ 785,460,000
(5)	Present value of total future contributions = (3)-(4)	\$ 18,977,219
(6)	Present value of future member contributions	7,113,888
(7)	Present value of future employer contributions = (5)-(6)	\$ 11,863,331
(8)	Employer normal contribution rate	\$259.33
(9)	Present value of future membership service	197,608
(10)	Prospective normal contributions = (8) x (9)	51,245,683
(11)	Prospective unfunded actuarial accrued liability contributions = (7)-(10)	<u>(39,382,352)</u>
(12)	TOTAL PRESENT AND PROSPECTIVE ASSETS	<u>\$ 804,437,219</u>





**SCHEDULE B**

**DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS**

(1)	Actuarial Value Beginning of Year	\$ 766,277,000
(2)	Market Value End of Year	\$ 811,649,000
(3)	Market Value Beginning of Year	\$ 743,689,000
(4)	Cash Flow	
	(a) Contributions	\$ 7,910,000
	(b) Benefit Payments and Expenses	<u>(46,783,000)</u>
	(c) Net: (4)(a) + (4)(b)	\$ (38,873,000)
(5)	Investment Income	
	(a) Market Total: (2) – (3) – (4)(c)	\$ 106,833,000
	(b) Assumed Rate	7.50%
	(c) Amount for Immediate Recognition: [(3) x (5)(b)] + [(4)(c) x (5)(b) x 0.5]	\$ 54,319,000
	(d) Amount for Phased-In Recognition: (5)(a) - (5)(c)	52,514,000
(6)	Phased-In Recognition of Investment Income	
	(a) Current Year: (5)(d) / 7	\$ 7,502,000
	(b) First Prior Year	(3,765,000)
	(c) Second Prior Year	0
	(d) Third Prior Year	0
	(e) Fourth Prior Year	0
	(f) Fifth Prior Year	0
	(g) Sixth Prior Year	<u>0</u>
	(h) Total Recognized Investment Gain	\$ 3,737,000
(7)	Actuarial Value End of Year: (1) + (4)(c) + (5)(c) + (6)(h)	\$ 785,460,000
(8)	Difference Between Market & Actuarial Values: (2) – (7)	\$ 26,189,000
(9)	Rate of Return on Actuarial Value	7.77%



**SCHEDULE C**

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

	YEAR ENDING	
	<u>June 30, 2007</u> (\$1,000's)	<u>June 30, 2006</u> (\$1,000's)
<u>Receipts for the Year</u>		
Contributions:		
Members	\$ 1,420	\$ 1,380
Employer	<u>6,490</u>	<u>3,638</u>
Subtotal	\$ 7,910	\$ 5,018
Investment Earnings	106,833	44,561
Administrative Expense Allowance	<u>588</u>	<u>588</u>
TOTAL	\$ 115,331	\$ 50,167
<u>Disbursements for the Year</u>		
Benefit Payments	\$ 46,464	\$ 43,504
Refunds to Members	319	316
Administration Expense	<u>588</u>	<u>588</u>
TOTAL	\$ 47,371	\$ 44,408
<u>Excess of Receipts over Disbursements</u>	\$ 67,960	\$ 5,759
<u>Reconciliation of Asset Balances</u>		
Asset Balance as of the Beginning of Year	\$ 743,689	\$ 737,930
Excess of Receipts over Disbursements	<u>67,960</u>	<u>5,759</u>
Asset Balance as of the End of Year	<u>\$ 811,649</u>	<u>\$ 743,689</u>
Rate of Return	14.75%	6.20%



## SCHEDULE D

### OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

Adopted by the Board April 20, 2006, with the exception of the valuation interest rate, which was adopted June 16, 2005.

**VALUATION INTEREST RATE:** 7.50% per annum, compounded annually.

**SEPARATIONS BEFORE SERVICE RETIREMENT:** Representative values of the assumed annual rates of separation before service retirement are as follows:

<u>Age</u>	<u>Annual Rates of Withdrawal</u>		
	<u>Years of Service</u>		
	<u>0-4</u>	<u>5-9</u>	<u>10 &amp; Over</u>
		<u>Males</u>	
20	36.0%		
25	31.0	19.0%	
30	28.0	16.0	13.0%
35	27.0	15.0	9.0
40	24.0	14.0	8.0
45	21.0	12.5	7.0
50	19.5	11.0	6.5
55	16.0	9.0	6.0
		<u>Females</u>	
20	36.0%		
25	28.0	18.0%	
30	24.0	16.0	11.0%
35	20.0	14.0	10.0
40	19.0	12.5	9.0
45	17.5	11.0	8.0
50	16.0	9.5	7.0
55	13.0	8.0	6.0



Age	Annual Rates of		
	Death		Disability
	Males	Females	
20	0.06%	0.03%	0.00%
25	0.08	0.03	0.00
30	0.08	0.04	0.00
35	0.10	0.06	0.01
40	0.15	0.08	0.02
45	0.23	0.11	0.07
50	0.40	0.17	0.17
55	0.71	0.29	0.45
60	1.29	0.58	0.70
65	2.17	1.08	0.00

**RETIREMENT:**

Age	Annual Rate	Age	Annual Rate
60	17%	68	25%
61	17	69	25
62	26	70	28
63	18	71	28
64	21	72	28
65	32	73	28
66	25	74	28
67	25	75 & Over	100

**DEATHS AFTER RETIREMENT:** The 1994 Group Annuity Table set forward four years for males and set forward two years for females is used for the period after service retirement and for beneficiaries of deceased members. The RP-2000 Disability Mortality Table set forward 5 years for males is used for the period after disability retirement. Representative values of the assumed annual rates of mortality for service retirements and beneficiaries are as follows:

Age	Men	Women	Age	Men	Women
40	0.146%	0.083%	65	2.173%	1.076%
45	0.233	0.111	70	3.405	1.651
50	0.398	0.173	75	5.586	2.837
55	0.709	0.292	80	8.961	4.915
60	1.294	0.583	85	13.945	8.402



**ASSETS:** 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 value of assets, based on the assumed valuation rate of return. The amount recognized each year is  $1/7$  of the difference between market value and expected market value.

**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 member's expected benefits at retirement or death is determined, based on age, service and sex. 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. 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, beneficiaries and members entitled to deferred vested benefits 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 unfunded actuarial accrued liability contribution.
3. The normal contribution is determined using the entry age actuarial cost method. Under this method, a calculation is made to determine the level amount which, if applied for the average 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 actuarial accrued liability contributions are determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets, from the present value of expected benefits to be paid from the System.



**SCHEDULE F**

**SUMMARY OF MAIN SYSTEM PROVISIONS  
AS INTERPRETED FOR VALUATION PURPOSES**

Normal Retirement Benefit

Eligibility	Age 65 and 10 years of creditable service.
Benefit	Monthly benefit is \$14.75 multiplied by years of creditable service. A one-time 1.75% increase is made at time of retirement. In addition, the retirement allowance of each retiree will be subject to a cost-of-living adjustment of 1-1/2% each January 1 and July 1.

Early Retirement Benefit

Eligibility	Age 60 and 10 years of creditable service.
Benefit	Accrued benefit reduced by 6% for each year member is under age 65.

Disability Retirement Benefit

Eligibility	15 years of service.
Benefit	Accrued benefit payable immediately.

Deferred Vested Retirement Benefit

Eligibility	10 years of service. Member contributions not withdrawn.
Benefit	Accrued benefit deferred to age 65 or reduced benefit payable at age 60.

Termination Benefit

If a member dies in service or his service is terminated for reasons other than retirement, he or his beneficiary is entitled to a return of the member's accumulated contributions.

Optional Forms of Benefit

- (1) Life annuity. Guaranteed payment of accumulated member contributions.
- (2) Joint and survivorship annuity.
- (3) Certain and life annuity.

Contributions

Members contribute \$4 per month.

Employer contributions are actuarially determined and approved and certified by the Board.



**SCHEDULE G**

**NUMBER OF ACTIVE MEMBERS  
BY AGE AND SERVICE AS OF JUNE 30, 2007**

Attained Age	Years of Service									
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	159	313	15	0	0	0	0	0	0	487
25 to 29	211	649	185	3	0	0	0	0	0	1,049
30 to 34	341	1,175	471	97	3	0	0	0	0	2,086
35 to 39	403	1,847	1,103	278	96	3	0	0	0	3,730
40 to 44	459	2,227	1,703	711	293	111	18	0	0	5,522
45 to 49	443	2,190	1,742	979	504	192	98	10	0	6,158
50 to 54	379	1,818	1,418	921	628	368	202	58	6	5,798
55 to 59	303	1,713	1,368	810	613	467	286	129	41	5,730
60 to 64	253	1,428	1,227	618	421	293	229	141	70	4,680
65 to 69	135	815	740	309	157	119	96	64	37	2,472
70 & Up	53	357	476	221	108	55	39	32	33	1,374
Total	3,139	14,532	10,448	4,947	2,823	1,608	968	434	187	39,086

Average Age: 50.4  
Average Service: 7.8





**SCHEDULE G**  
**(Continued)**

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

<b>Age</b>	<b>Number of Members</b>	<b>Total Annual Benefits</b>	<b>Average Annual Benefits</b>
Under 50	0	\$ 0	\$ 0
50 – 54	0	0	0
55 – 59	0	0	0
60 – 64	984	2,508,559	2,549
65 – 69	2,406	7,290,753	3,030
70 – 74	2,652	8,991,868	3,391
75 – 79	2,309	8,686,463	3,762
80 – 84	1,601	6,470,540	4,042
85 – 89	978	4,233,819	4,329
90 – 94	380	1,685,068	4,434
95 & Over	101	430,338	4,261
<b>Total</b>	<b>11,411</b>	<b>\$ 40,297,408</b>	<b>\$ 3,531</b>

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

<b>Age</b>	<b>Number of Members</b>	<b>Total Annual Benefits</b>	<b>Average Annual Benefits</b>
Under 50	154	\$ 265,853	\$ 1,726
50 – 54	71	136,635	1,924
55 – 59	50	91,203	1,824
60 – 64	60	118,334	1,972
65 – 69	76	162,305	2,136
70 – 74	75	186,922	2,492
75 – 79	93	230,440	2,478
80 – 84	70	200,960	2,871
85 – 89	46	120,109	2,611
90 – 94	13	30,705	2,362
95 & Over	16	25,091	1,568
<b>Total</b>	<b>724</b>	<b>\$ 1,568,557</b>	<b>\$ 2,167</b>



**SCHEDULE G**  
**(Continued)**

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

<b>Age</b>	<b>Number of Members</b>	<b>Total Annual Benefits</b>	<b>Average Annual Benefits</b>
Under 50	26	\$ 96,171	\$ 3,699
50 – 54	67	242,808	3,624
55 – 59	132	539,601	4,088
60 – 64	259	1,135,824	4,385
65 – 69	272	1,267,902	4,661
70 – 74	162	777,795	4,801
75 – 79	84	432,264	5,146
80 – 84	29	156,442	5,395
85 – 89	23	125,316	5,449
90 – 94	3	16,142	5,381
95 & Over	1	5,718	5,718
Total	1,058	\$ 4,795,983	\$ 4,533



**SCHEDULE H**

**ALLOCATION OF 2009-2010  
ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM**

<b>System Number</b>	<b>System Name</b>	<b>Contribution Amount</b>
1	Appling	\$ 9,619
2	Atkinson	6,790
3	Bacon	8,487
4	Baker	2,971
5	Baldwin	21,077
6	Banks	12,731
7	Barrow	44,135
8	Bartow	54,178
9	Ben Hill	11,458
10	Berrien	8,912
11	Bibb	96,474
12	Bleckley	12,307
13	Brantley	14,429
14	Brooks	11,175
15	Bryan	20,936
16	Bulloch	41,447
17	Burke	25,179
18	Butts	17,965
19	Calhoun	3,678
20	Camden	33,950
21	Candler	7,497
22	Carroll	63,797
23	Catoosa	41,730
24	Charlton	6,790
25	Chatham	76,104
26	Chattahoochee	2,263
27	Chattooga	11,175
28	Cherokee	121,512
29	Clarke	58,422
30	Clay	1,556
31	Clayton	182,621
32	Clinch	5,234
33	Cobb	362,131
34	Coffee	26,735
35	Colquitt	35,647
36	Columbia	84,591
37	Cook	13,580
38	Coweta	87,562
39	Crawford	8,205



**SCHEDULE H**

**ALLOCATION OF 2009-2010  
ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM  
(Continued)**

<b>System Number</b>	<b>System Name</b>	<b>Contribution Amount</b>
40	Crisp	\$ 20,936
41	Dade	8,205
42	Dawson	14,429
43	Decatur	24,048
44	Dekalb	315,308
45	Dodge	13,580
46	Dooly	8,629
47	Dougherty	71,860
48	Douglas	93,786
49	Early	10,609
50	Echols	2,829
51	Effingham	39,608
52	Elbert	14,287
53	Emanuel	18,389
54	Evans	6,790
55	Fannin	13,014
56	Fayette	77,943
57	Floyd	33,667
58	Forsyth	102,274
59	Franklin	17,824
61	Gilmer	17,541
62	Glascok	3,536
63	Glynn	51,066
64	Gordon	21,643
65	Grady	17,541
66	Greene	8,487
67	Gwinnett	485,196
68	Habersham	26,735
69	Hall	101,708
70	Hancock	8,346
71	Haralson	16,551
72	Harris	25,179
73	Hart	18,531
74	Heard	7,073
75	Henry	122,361
76	Houston	102,839
77	Irwin	4,810
78	Jackson	28,150
79	Jasper	8,912



**SCHEDULE H**

**ALLOCATION OF 2009-2010  
ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM  
(Continued)**

<b>System Number</b>	<b>System Name</b>	<b>Contribution Amount</b>
80	Jeff Davis	\$ 11,599
81	Jefferson	14,712
82	Jenkins	6,507
83	Johnson	5,517
84	Jones	19,521
85	Lamar	12,024
86	Lanier	4,102
87	Laurens	23,765
88	Lee	23,482
89	Liberty	47,105
90	Lincoln	7,780
91	Long	9,336
92	Lowndes	41,164
93	Lumpkin	16,409
94	Macon	10,326
95	Madison	21,360
96	Marion	5,800
97	McDuffie	16,551
98	McIntosh	8,346
99	Meriwether	19,521
100	Miller	4,810
101	Mitchell	9,619
102	Monroe	19,380
103	Montgomery	4,385
104	Morgan	12,448
105	Murray	30,413
106	Muscogee	140,750
107	Newton	76,387
108	Oconee	26,735
109	Oglethorpe	8,205
110	Paulding	89,401
111	Peach	18,389
112	Pickens	23,199
113	Pierce	11,458
114	Pike	13,438
115	Polk	23,058
116	Pulaski	6,648
117	Putnam	14,146
118	Quitman	1,273



**SCHEDULE H**

**ALLOCATION OF 2009-2010  
ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM  
(Continued)**

<b>System Number</b>	<b>System Name</b>	<b>Contribution Amount</b>
119	Rabun	\$ 11,599
120	Randolph	7,922
121	Richmond	140,043
122	Rockdale	66,061
123	Schley	3,254
124	Screven	11,034
125	Seminole	6,790
126	Spalding	51,066
127	Stephens	19,521
128	Stewart	4,102
129	Sumter	24,331
130	Talbot	3,819
131	Taliaferro	1,839
132	Tattnall	15,560
133	Taylor	7,780
134	Telfair	5,092
135	Terrell	6,507
136	Thomas	17,116
137	Tift	21,219
138	Toombs	12,590
139	Towns	5,234
140	Treutlen	4,810
141	Troup	59,271
142	Turner	6,366
143	Twiggs	5,941
144	Union	12,448
145	Upson	23,340
146	Walker	39,750
147	Walton	43,852
148	Ware	25,887
149	Warren	4,244
150	Washington	11,317
151	Wayne	23,058
152	Webster	2,122
153	Wheeler	3,961
154	White	14,004
155	Whitfield	50,925
156	Wilcox	5,658
157	Wilkes	9,478



**SCHEDULE H**  
**ALLOCATION OF 2009-2010**  
**ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM**  
**(Continued)**

<b>System Number</b>	<b>System Name</b>	<b>Contribution Amount</b>
158	Wilkinson	\$ 6,648
159	Worth	15,136
205	Bremen	4,244
206	Buford	7,922
207	Calhoun	10,185
209	Carrollton	17,116
210	Cartersville	11,317
212	Chickamauga	3,112
214	Commerce	4,810
216	Dalton	15,136
217	Decatur	7,922
219	Dublin	8,346
221	Gainesville	14,994
224	Jefferson	7,214
226	Marietta	31,686
230	Pelham	3,536
232	Rome	12,024
247	Social Circle	5,800
236	Thomasville	6,790
239	Trion	3,112
240	Valdosta	29,140
241	Vidalia	7,780
	Georgia Military College	7,780