



# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

April 11, 2011

Ms. Pamela Pharris  
Executive Director  
Georgia Public School Employees Retirement System  
Two Northside 75, Suite 300  
Atlanta, GA 30318-7701

Dear Ms. Pharris:

Enclosed is a copy of the "Georgia Public School Employees Retirement System Report of the Actuary on the Valuation Prepared as of June 30, 2010".

Based on a monthly benefit accrual rate of \$14.75, the valuation indicates that employer contributions for the fiscal year ending June 30, 2013 of \$24,829,000 or \$621.31 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  
Principal and Managing Director

EAM:mjn

Enclosure

S:\Georgia Public Schools\Valuations\6-30-2010\Report GPSERS 20100630 FINAL

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144

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

[www.CavMacConsulting.com](http://www.CavMacConsulting.com)

Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE • Hilton Head Island, SC



**Cavanaugh Macdonald**  
CONSULTING, LLC

*The experience and dedication you deserve*



**EMPLOYEES'**  
**RETIREMENT SYSTEM**  
OF GEORGIA

**GEORGIA PUBLIC SCHOOL EMPLOYEES  
RETIREMENT SYSTEM**

**REPORT OF THE ACTUARY ON THE VALUATION  
PREPARED AS OF JUNE 30, 2010**





# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

April 11, 2011

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, 2010. Based on a monthly benefit accrual rate of \$14.75, the valuation indicates that annual employer contributions of \$24,829,000 or \$621.31 per active member for the fiscal year ending June 30, 2013 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, 2009. In addition, the results of the valuation reflect that the Board did not grant the anticipated cost-of-living increases (COLAs) to retired members July 1, 2010 and January 1, 2011.

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 2010 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 being amortized as a level dollar per active member within a 30-year period.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144

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

[www.CavMacConsulting.com](http://www.CavMacConsulting.com)

Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE • Hilton Head Island, SC



April 11, 2011  
Board of Trustees  
Page 2

The System is currently 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 currently 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 'Edward Macdonald', written in a cursive style.

Edward A. Macdonald, ASA, FCA, MAAA  
President

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

Cathy Turcot  
Principal and Managing Director

EAM:mjn



## **TABLE OF CONTENTS**

<b><u>Section</u></b>	<b><u>Item</u></b>	<b><u>Page No.</u></b>
I	Summary of Principal Results	1
II	Membership	3
III	Assets	4
IV	Comments on Valuation	5
V	Contributions Payable by Employers	6
VI	Accounting Information	7
VII	Experience	10
<b><u>Schedule</u></b>		
A	Valuation Balance Sheet	11
B	Development of Actuarial Value of Assets	12
C	Summary of Receipts and Disbursements	13
D	Outline of Actuarial Assumptions and Methods	14
E	Actuarial Cost Method	17
F	Summary of Main Plan Provisions as Interpreted for Valuation Purposes	18
G	Tables of Membership Data	20
H	Allocation of Annual Required Contribution by School System	23



**GEORGIA PUBLIC SCHOOL EMPLOYEES RETIREMENT SYSTEM  
REPORT OF THE ACTUARY  
ON THE VALUATION  
PREPARED AS OF JUNE 30, 2010**

**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:

Valuation Date	June 30, 2010	June 30, 2009
Number of active members	39,962	40,581
Retired members and beneficiaries:		
Number	14,157	13,798
Annual allowances	\$ 53,662,860	\$ 51,834,562
Deferred Vested Members:		
Number	3,468	3,207
Annual allowances	\$ 8,961,815	\$ 8,248,181
Assets:		
Market Value	\$ 615,333,000	\$ 597,318,000
Actuarial Value	737,406,000	769,618,000
Unfunded actuarial accrued liability	\$ 137,990,093	\$ 53,613,829
Amortization period (years)	30	30
Funded Ratio	84.2%	93.5%
<b>For Fiscal Year Ending</b>	<b>June 30, 2013</b>	<b>June 30, 2012</b>
Employer contribution rate per active member:		
Normal <sup>1</sup>	\$ 328.93	\$ 279.56
Accrued liability	<u>292.38</u>	<u>111.86</u>
Total	\$ 621.31	\$ 391.42
Annual Required Employer Contribution (ARC):		
Normal <sup>1</sup>	\$ 13,145,000	\$ 11,345,000
Accrued liability	<u>11,684,000</u>	<u>4,539,000</u>
Total	\$ 24,829,000	\$ 15,884,000

<sup>1</sup> The normal contribution includes administrative expenses.



2. The valuation takes into account the effect of amendments of the System enacted through the 2010 session of the General Assembly. The major benefit and contribution provisions of the System as reflected in the valuation are summarized in Schedule F. There have been no changes since the previous valuation. The valuation reflects that the Board did not grant the anticipated cost-of-living increases July 1, 2010 and January 1, 2011.
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, 2009. These revised assumptions were adopted by the Board on December 16, 2010 and are shown below. Schedule D of this report outlines the full set of actuarial assumptions used to prepare the current valuation.

<b>Summary of Assumptions and Methods</b>	
<b>Economic Assumptions</b>	
<b>Investment Rate of Return</b>	Composed of Inflation component and Real Rate of Return component.
Inflation	Changed annual rate of inflation assumption from 3.75% to 3.00%.
Real Rate of Investment Return	Changed to a 4.50% assumption resulting in no change to the 7.50% net investment return assumption.
<b>Demographic Assumptions</b>	
<b>Withdrawal</b>	Changed assumed rates.
<b>Retirement</b>	Changed assumed rates.
<b>Mortality</b>	Changed assumed rates.
<b>Disability</b>	Changed assumed rates.
<b>Other Assumptions and Methods and Administrative Changes</b>	
<b>Administrative Expenses</b>	Changed assumption.
<b>Amortization Method</b>	No change to current method.
<b>Asset Smoothing</b>	No change to current method.
<b>Option Factors</b>	Changed option factors to reflect change in mortality rate table.
<b>All others</b>	No change to other actuarial methods.

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, 2010 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 39,962 active members.
2. For the June 30, 2010 valuation, data was provided by the Retirement System for inactive members who are eligible for deferred vested benefits. The valuation included 3,468 deferred vested members with annual allowances totaling \$8,961,815.
3. The following table shows the number of retired members and beneficiaries on the roll as of June 30, 2010, 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, 2010**

GROUP	NUMBER	ANNUAL RETIREMENT ALLOWANCES
Service Retirements	12,291	\$ 46,436,826
Disability Retirements	1,076	5,357,848
Beneficiaries of Deceased Members	<u>790</u>	<u>1,868,186</u>
Total	14,157	\$ 53,662,860





### **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, 2010 the value of assets credited to the Annuity Savings Fund amounted to \$24,230,000.

(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, 2010 the market value of assets credited to the Pension Accumulation Fund amounted to \$591,103,000.

2. As of June 30, 2010 the total market value of assets amounted to \$615,333,000 as reported by the Auditor of the System. The actuarial value of assets used for the current valuation was \$737,406,000. Schedule B shows the development of the actuarial value of assets as of June 30, 2010.

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, 2010. 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 \$937,210,937, of which \$528,807,865 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and \$408,403,072 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 \$737,406,000 as of June 30, 2010. The difference of \$199,804,937 between the total liabilities and the total present assets represents the present value of contributions to be made in the future. Of this amount, \$7,513,812 is the present value of future contributions expected to be made by or on behalf of members, and the balance of \$192,291,125 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 \$274.03 per active member are required to provide the currently accruing benefits of the System. An additional \$54.90 per active member is required to fund the administrative expenses of the System.
4. Prospective normal contributions (net of expenses) have a present value of \$54,301,032. When this amount is subtracted from \$192,291,125, 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 \$137,990,093.



**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 \$274.03 per active member, or \$10,951,000 based on 39,962 active members as of June 30, 2010. An additional \$2,194,000, or \$54.90 per active member, is required to fund the administrative expenses of the System
3. The accrued liability contribution is the level annual amount which will be sufficient to amortize the unfunded actuarial accrued liability within 30 years following the valuation date. The annual accrued liability contribution determined on this basis by the June 30, 2010 valuation is \$11,684,000, or \$292.38 per active member.
4. The following table summarizes the employer contribution rates which were determined by the June 30, 2010 valuation and are recommended for use.

**ANNUAL REQUIRED EMPLOYER CONTRIBUTION (ARC)  
FOR FISCAL YEAR ENDING JUNE 30, 2013**

<b>CONTRIBUTION</b>	<b>PER ACTIVE MEMBER</b>	<b>ANNUAL AMOUNT</b>
Normal	\$ 328.93	\$ 13,145,000
Accrued Liability	<u>292.38</u>	<u>11,684,000</u>
Total	\$ 621.31	\$ 24,829,000

5. Schedule H shows the allocation of the annual required contribution for fiscal year ending June 30, 2013 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, 2010**

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	14,157
Terminated employees entitled to benefits but not yet receiving benefits	70,880
Active plan members	<u>39,962</u>
Total	124,999

2. Another such item is the schedule of funding progress as 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)
6/30/2005*	\$ 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
6/30/2008	791,855	770,950	(20,905)	102.7	N/A	N/A
6/30/2009	769,618	823,232	53,614	93.5	N/A	N/A
6/30/2010	737,406	875,396	137,990	84.2	N/A	N/A

\*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).

<u>Year Ending</u>	<u>Annual Required Contribution</u>	<u>Percentage Contributed</u>
6/30/2005	\$ 833	100%
6/30/2006	3,634	100
6/30/2007	6,484	100
6/30/2008	2,866	100
6/30/2009	5,529	100
6/30/2010	5,529	100

4. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2010. Since PSERS is a cost sharing multiple employer pension plan, GASB Statement 27 does not require the participating employers to disclose this information.

**Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending June 30, 2010**

(a)	Employer annual required contribution	\$ 5,529,000
(b)	Interest on net pension obligation	(1,146,000)
(c)	Adjustment to annual required contribution	<u>(1,732,000)</u>
(d)	Annual pension cost (a) + (b) – (c)	\$ 6,115,000
(e)	Employer contributions made for fiscal year ending 06/30/10	<u>5,530,000</u>
(f)	Increase (decrease) in net pension obligation (d) – (e)	\$ 585,000
(g)	Net pension obligation beginning of fiscal year	<u>(15,286,000)</u>
(h)	Net pension obligation end of fiscal year (f) + (g)	\$ (14,701,000)

**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, 2008	\$ 3,018	95%	\$ (15,647)
June 30, 2009	5,890	94	(15,286)
June 30, 2010	6,115	90	(14,701)



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 \$137,990,093 within a 30-year period from the valuation date.

**2012/2013 FISCAL YEAR  
ANNUAL REQUIRED CONTRIBUTION (ARC)  
BASED ON THE VALUATION AS OF JUNE 30, 2010**

ANNUAL REQUIRED CONTRIBUTION (ARC)	AMOUNT
Normal	\$ 13,145,000
Accrued Liability	<u>11,684,000</u>
Total	\$ 24,829,000

6. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2010. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2010
Actuarial cost method	Entry age
Amortization method	Level dollar, open
Remaining amortization period	30 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	3.00%



## SECTION VII – EXPERIENCE

1. The last experience investigation was prepared for the five-year period ending June 30, 2009, and based on the results of the investigation various assumptions and methods were revised and adopted by the Board on December 16, 2010. The next experience investigation will be prepared for the period July 1, 2009 through June 30, 2014.
2. The following table shows the estimated gain or loss from various factors that resulted in an increase of \$84,376,264 in the unfunded accrued liability from \$53,613,829 to \$137,990,093 during the fiscal year ending June 30, 2010.

### 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	\$ 4,021.0
Accrued liability contribution	6,403.4
Experience:	
Valuation asset growth	39,729.0
Pensioners' mortality	(828.9)
Turnover and retirements	12,375.8
New entrants	3,047.8
Method changes	0.0
Assumption changes	33,717.7
No 7/1/2010, 1/1/2011 COLAs	(14,121.2)
Data changes	(2,192.3)
Expense Deficit	2,029.0
Miscellaneous	<u>195.0</u>
Total	\$ 84,376.3



**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, 2010**

<b>ACTUARIAL LIABILITIES</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	\$ 448,601,810
-	Death and survivor benefits	18,600,711
-	Deferred vested benefits	<u>61,605,344</u>
	Total	\$ 528,807,865
(2)	Present value of prospective benefits payable on account of present active members	<u>408,403,072</u>
(3)	TOTAL ACTUARIAL LIABILITIES	<u>\$ 937,210,937</u>
<b>PRESENT AND PROSPECTIVE ASSETS</b>		
(4)	Actuarial value of assets	\$ 737,406,000
(5)	Present value of total future contributions = (3)-(4)	\$ 199,804,937
(6)	Present value of future member contributions	7,513,812
(7)	Present value of future employer contributions = (5)-(6)	\$ 192,291,125
(8)	Prospective normal contributions	54,301,032
(9)	Prospective unfunded actuarial accrued liability contributions = (7)-(8)	<u>137,990,093</u>
(10)	TOTAL PRESENT AND PROSPECTIVE ASSETS	<u>\$ 937,210,937</u>





**SCHEDULE B**

**DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS**

(1)	Actuarial Value Beginning of Year	\$ 769,618,000
(2)	Market Value End of Year	\$ 615,333,000
(3)	Market Value Beginning of Year	\$ 597,318,000
(4)	Cash Flow	
	(a) Contributions	\$ 7,013,000
	(b) Benefit Payments and Expenses	<u>(55,402,000)</u>
	(c) Net: (4)(a) + (4)(b)	\$ (48,389,000)
(5)	Investment Income	
	(a) Market Total: (2) – (3) – (4)(c)	\$ 66,404,000
	(b) Assumed Rate	7.50%
	(c) Amount for Immediate Recognition: [(3) x (5)(b)] + [(4)(c) x (5)(b) x 0.5]	\$ 42,984,000
	(d) Amount for Phased-In Recognition: (5)(a) - (5)(c)	23,420,000
(6)	Phased-In Recognition of Investment Income	
	(a) Current Year: (5)(d) / 7	\$ 3,346,000
	(b) First Prior Year	(21,566,000)
	(c) Second Prior Year	(12,324,000)
	(d) Third Prior Year	7,502,000
	(e) Fourth Prior Year	(3,765,000)
	(f) Fifth Prior Year	0
	(g) Sixth Prior Year	<u>0</u>
	(h) Total Recognized Investment Gain	\$ (26,807,000)
(7)	Actuarial Value End of Year: (1) + (4)(c) + (5)(c) + (6)(h)	\$ 737,406,000
(8)	Difference Between Market & Actuarial Values: (2) – (7)	\$ (122,073,000)
(9)	Rate of Return on Actuarial Value	2.17%



**SCHEDULE C**

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

<u>Receipts for the Year</u>	<b>YEAR ENDING</b>	
	<u>June 30, 2010</u> (\$1,000's)	<u>June 30, 2009</u> (\$1,000's)
Contributions:		
Members	\$ 1,483	\$ 1,472
Employer	<u>5,530</u>	<u>5,529*</u>
Subtotal	\$ 7,013	\$ 7,001
Investment Earnings	66,404	(97,156)
Administrative Expense Allotment	<u>0</u>	<u>155*</u>
<b>TOTAL</b>	<b>\$ 73,417</b>	<b>\$ (90,000)</b>
<u>Disbursements for the Year</u>		
Benefit Payments	\$ 53,195	\$ 52,197
Refunds to Members	251	261
Administrative Expenses	<u>1,956</u>	<u>588</u>
<b>TOTAL</b>	<b>\$ 55,402</b>	<b>\$ 53,046</b>
<u>Excess of Receipts over Disbursements</u>	<b>\$ 18,015</b>	<b>\$ (143,046)</b>
<u>Reconciliation of Asset Balances</u>		
Asset Balance as of the Beginning of Year	\$ 597,318	\$ 740,364
Excess of Receipts over Disbursements	<u>18,015</u>	<u>(143,046)</u>
Asset Balance as of the End of Year	<u><b>\$ 615,333</b></u>	<u><b>\$ 597,318</b></u>
Rate of Return	11.59%	-13.54%

\*Revised from audit report based on information received from Retirement System accounting department.



**SCHEDULE D**

**OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

Adopted by the Board December 16, 2010.

**VALUATION INTEREST RATE:** 7.50% per annum, compounded annually, net of expenses, composed of a 3.00% inflation assumption and a 4.50% real rate of investment return assumption.

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

Annual Rates of Withdrawal			
Years of Service			
Age	<u>0-4</u>	<u>5-9</u>	<u>10 &amp; Over</u>
<b><u>Males</u></b>			
20	35.0%		
25	30.0	17.0%	
30	27.0	16.0	14.0%
35	24.0	14.0	9.0
40	21.0	12.0	7.0
45	20.0	11.0	6.5
50	18.0	11.0	6.5
55	15.0	9.0	6.0
60	13.0	9.0	
<b><u>Females</u></b>			
20	34.0%		
25	29.0	19.0%	
30	24.0	15.0	11.0%
35	20.0	13.0	10.0
40	17.0	12.0	8.0
45	16.0	10.0	7.0
50	14.0	9.0	6.5
55	12.0	8.0	6.0
60	11.0	7.0	



Age	Annual Rates of		Disability
	Death		
	Males	Females	
20	0.036%	0.019%	0.00%
25	0.038	0.021	0.00
30	0.050	0.026	0.00
35	0.084	0.048	0.00
40	0.114	0.071	0.01
45	0.162	0.112	0.04
50	0.245	0.168	0.09
55	0.420	0.272	0.23
60	0.778	0.506	0.35
65	1.441	0.971	0.00

**RETIREMENT:**

Age	Annual Rate	Age	Annual Rate
60	15%	68	25%
61	15	69	25
62	22	70	25
63	18	71	25
64	18	72	25
65	28	73	25
66	25	74	25
67	25	75 & Over	100

**DEATHS AFTER RETIREMENT:** The RP-2000 Combined Table set forward one year for males is used for the period after service retirement and for beneficiaries of deceased members. The RP-2000 Disabled Mortality Table set back 2 years for males and set forward one year for females 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	0.114%	0.071%	65	1.441%	0.971%
45	0.162	0.112	70	2.457	1.674
50	0.245	0.168	75	4.217	2.811
55	0.420	0.272	80	7.204	4.588
60	0.768	0.506	85	12.280	7.745



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

**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 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.

**COST-OF-LIVING ADJUSTMENT (COLA):** 1.5% semi-annually.



## 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**

The Public School Employees' Retirement System (PSERS) is a cost-sharing multiple employer defined benefit pension plan established by the Georgia General Assembly in 1969 for the purpose of providing retirement allowances and other benefits for public school employees who are not eligible for membership in the Teachers Retirement System of Georgia.

#### 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.

#### 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 creditable service.
Benefit	Accrued benefit payable immediately.

#### Deferred Vested Retirement Benefit

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

#### Death Benefit

Eligibility	Death in service and the member is at least age 60 and has at least 10 years of creditable service.
Benefit	Benefit payable to beneficiary under the joint and survivor annuity payment option.

If the member dies in service under age 60 or with less than 10 years of creditable service his beneficiary receives a refund of the member's accumulated contributions.



Termination Benefit

Eligibility

Less than 10 years of creditable service.

Benefit

Return of the member's accumulated contributions.

Payment Options

(1) Life annuity. Guaranteed payment of accumulated member contributions.

(2) Joint and survivorship annuity.

(3) Certain and life annuity.

Post-Retirement Adjustments

The Board may from time to time grant a Cost of Living Adjustment.

Contributions

By Members

Members contribute \$4 per month.

By Employers

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, 2010**

Attained 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 & Up	
Under 25	119	339	13	0	0	0	0	0	0	471
25 to 29	136	719	175	10	0	0	0	0	0	1,040
30 to 34	154	1,042	421	106	1	0	0	0	0	1,724
35 to 39	220	1,712	960	324	65	7	0	0	0	3,288
40 to 44	264	2,031	1,470	760	216	88	8	0	0	4,837
45 to 49	260	2,236	1,851	1,161	532	251	96	9	0	6,396
50 to 54	242	2,072	1,659	1,102	626	437	171	83	6	6,398
55 to 59	181	1,799	1,406	923	593	541	261	146	47	5,897
60 to 64	138	1,541	1,411	815	478	394	250	185	87	5,299
65 to 69	72	890	890	461	194	134	98	66	66	2,871
70 & Up	15	400	647	360	114	91	29	40	45	1,741
Total	1,801	14,781	10,903	6,022	2,819	1,943	913	529	251	39,962

Average Age: 51.5  
Average Service: 8.4



**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	1,052	2,756,074	2,620
65 – 69	2,545	8,194,861	3,220
70 – 74	2,853	10,159,992	3,561
75 – 79	2,530	10,124,286	4,002
80 – 84	1,745	7,744,017	4,438
85 – 89	995	4,676,066	4,700
90 – 94	447	2,181,406	4,880
95 & Over	124	600,124	4,840
Total	12,291	\$ 46,436,826	\$ 3,778

**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	127	\$ 189,505	\$ 1,492
50 – 54	51	100,344	1,968
55 – 59	59	127,780	2,166
60 – 64	65	148,002	2,277
65 – 69	92	202,668	2,203
70 – 74	99	245,598	2,481
75 – 79	104	292,374	2,811
80 – 84	106	302,478	2,854
85 – 89	46	147,856	3,214
90 – 94	24	72,043	3,002
95 & Over	17	39,538	2,326
Total	790	\$ 1,868,186	\$ 2,365



**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	18	\$ 65,706	\$ 3,650
50 – 54	65	258,983	3,984
55 – 59	135	573,002	4,244
60 – 64	218	1,014,788	4,655
65 – 69	272	1,391,329	5,115
70 – 74	194	1,063,620	5,483
75 – 79	106	571,647	5,393
80 – 84	45	277,988	6,178
85 – 89	15	90,500	6,033
90 – 94	7	45,358	6,480
95 & Over	1	4,927	4,927
Total	1,076	\$ 5,357,848	\$ 4,979

**NUMBER OF DEFERRED VESTED 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 35	5	\$ 9,578	\$ 1,916
35 – 39	52	109,485	2,105
40 – 44	206	467,378	2,269
45 – 64	507	1,232,049	2,430
50 – 54	802	2,028,387	2,529
55 – 59	986	2,649,703	2,687
60 – 64	650	1,748,172	2,689
65 – 69	149	414,921	2,785
70 – 74	52	130,943	2,518
75 & Over	59	171,199	2,902
Total	3,468	\$ 8,961,815	\$ 2,584



**SCHEDULE H**

**ALLOCATION OF 2012-2013  
ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM**

<b>System Number</b>	<b>System Name</b>	<b>Contribution</b>
1	Appling	\$ 46,599
2	Atkinson	22,367
3	Bacon	26,717
4	Baker	9,320
5	Baldwin	86,363
6	Banks	54,676
7	Barrow	198,821
8	Bartow	232,993
9	Ben Hill	46,599
10	Berrien	36,036
11	Bibb	429,950
12	Bleckley	52,190
13	Brantley	65,859
14	Brooks	47,841
15	Bryan	95,683
16	Bulloch	199,442
17	Burke	106,866
18	Butts	78,286
19	Calhoun	16,776
20	Camden	145,388
21	Candler	34,172
22	Carroll	257,225
23	Catoosa	201,306
24	Charlton	32,930
25	Chatham	280,213
26	Chattahoochee	8,077
27	Chattooga	47,841
28	Cherokee	570,367
29	Clarke	274,000
30	Clay	8,698
31	Clayton	882,268
32	Clinch	22,989
33	Cobb	1,598,645
34	Coffee	121,156
35	Colquitt	165,891
36	Columbia	383,973
37	Cook	63,995
38	Coweta	415,660
39	Crawford	31,687



**SCHEDULE H**  
**(continued)**

**ALLOCATION OF 2012-2013**  
**ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM**

<b>System Number</b>	<b>System Name</b>	<b>Contribution</b>
40	Crisp	\$ 84,499
41	Dade	36,036
42	Dawson	61,510
43	Decatur	105,002
44	Dekalb	1,425,919
45	Dodge	63,374
46	Dooly	34,794
47	Dougherty	299,474
48	Douglas	434,299
49	Early	39,143
50	Echols	11,184
51	Effingham	172,726
52	Elbert	62,753
53	Emanuel	73,315
54	Evans	32,308
55	Fannin	56,540
56	Fayette	266,544
57	Floyd	147,252
58	Forsyth	549,864
59	Franklin	83,256
61	Gilmer	81,392
62	Glascokk	13,048
63	Glynn	228,644
64	Gordon	101,274
65	Grady	72,073
66	Greene	39,764
67	Gwinnett	2,367,833
68	Habersham	133,583
69	Hall	441,755
70	Hancock	35,415
71	Haralson	58,404
72	Harris	86,363
73	Hart	72,694
74	Heard	33,551
75	Henry	560,426
76	Houston	444,862
77	Irwin	22,989
78	Jackson	127,991



**SCHEDULE H**  
**(continued)**

**ALLOCATION OF 2012-2013**  
**ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM**

<b>System Number</b>	<b>System Name</b>	<b>Contribution</b>
79	Jasper	\$ 45,356
80	Jeff Davis	54,054
81	Jefferson	62,132
82	Jenkins	26,717
83	Johnson	22,367
84	Jones	90,712
85	Lamar	53,433
86	Lanier	18,018
87	Laurens	106,866
88	Lee	115,565
89	Liberty	205,034
90	Lincoln	32,308
91	Long	47,841
92	Lowndes	183,288
93	Lumpkin	73,937
94	Macon	43,492
95	Madison	105,002
96	Marion	22,989
97	McDuffie	74,558
98	McIntosh	36,036
99	Meriwether	78,907
100	Miller	23,610
101	Mitchell	37,900
102	Monroe	94,440
103	Montgomery	19,882
104	Morgan	54,676
105	Murray	129,855
106	Muscogee	607,646
107	Newton	358,499
108	Oconee	125,506
109	Oglethorpe	39,143
110	Paulding	449,832
111	Peach	88,848
112	Pickens	88,848
113	Pierce	51,569
114	Pike	60,268
115	Polk	106,245
116	Pulaski	28,581
117	Putnam	71,451



**SCHEDULE H**  
**(continued)**

**ALLOCATION OF 2012-2013**  
**ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM**

<b>System Number</b>	<b>System Name</b>	<b>Contribution</b>
118	Quitman	\$ 6,834
119	Rabun	53,433
120	Randolph	30,444
121	Richmond	555,456
122	Rockdale	307,551
123	Schley	18,018
124	Screven	48,463
125	Seminole	27,959
126	Spalding	213,111
127	Stephens	92,576
128	Stewart	18,639
129	Sumter	109,351
130	Talbot	14,290
131	Taliaferro	6,834
132	Tattnall	65,859
133	Taylor	33,551
134	Telfair	24,853
135	Terrell	29,823
136	Thomas	72,073
137	Tift	91,955
138	Toombs	55,297
139	Towns	22,989
140	Treutlen	17,397
141	Troup	251,633
142	Turner	27,338
143	Twiggs	21,746
144	Union	57,161
145	Upton	90,712
146	Walker	173,968
147	Walton	217,460
148	Ware	110,594
149	Warren	19,261
150	Washington	48,463
151	Wayne	104,381
152	Webster	9,941
153	Wheeler	16,154
154	White	79,528
155	Whitfield	192,608
156	Wilcox	22,367



**SCHEDULE H**  
**(continued)**

**ALLOCATION OF 2012-2013**  
**ANNUAL REQUIRED CONTRIBUTION BY SCHOOL SYSTEM**

<b>System Number</b>	<b>System Name</b>	<b>Contribution</b>
157	Wilkes	\$ 35,415
158	Wilkinson	31,066
159	Worth	58,404
205	Bremen	21,125
206	Buford	37,279
207	Calhoun	27,959
209	Carrollton	79,528
210	Cartersville	37,900
212	Chickamauga	13,669
214	Commerce	22,367
216	Dalton	71,451
217	Decatur	34,794
219	Dublin	34,172
221	Gainesville	63,995
224	Jefferson	39,143
226	Marietta	131,719
230	Pelham	16,776
232	Rome	60,889
247	Social Circle	27,959
236	Thomasville	24,853
239	Trion	15,533
240	Valdosta	133,583
241	Vidalia	26,095
	Atlanta Metropolitan College	71,451
	Brighten Academy	621
	Charter Conservatory for L and T	621
	DeKalb Technical College	621
	Fulton Educational Services Inc	621
	Fulton Science Academy CS	621
	Georgia Magnet Charter School	1,243
	Georgia Military College	34,172
	Imagine International Academy of	
	Smyrna Charter School	1,864
	International Community School	1,864
	Kidspeace School of Georgia	3,728
	Kipp Metro Atlanta Collaborative Inc	3,107
	Kipp South Fulton Academy	2,485
	University Community Academy	3,107