



# Cavanaugh Macdonald

CONSULTING, LLC

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June 19, 2009

Ms. Pamela Pharris  
Executive Director  
Employees' Retirement System of Georgia  
Two Northside 75, Suite 300  
Atlanta, GA 30318-7778

Dear Ms. Pharris:

Enclosed are 40 bound copies and one unbound copy of the "Georgia Employees' Group Term Life Insurance Plan for Pre-Retirement Benefits Report of the Actuary on the Valuation Prepared as of June 30, 2008".

The valuation indicates that no employer contributions are required for the fiscal year ending June 30, 2011 on account of life insurance benefits payable under the Plan for active members who die in service.

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/CT:mjn

Enclosure

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EMPLOYEES'  
RETIREMENT SYSTEM  
OF GEORGIA

**GEORGIA EMPLOYEES'  
GROUP TERM LIFE INSURANCE PLAN  
FOR PRE-RETIREMENT BENEFITS**

**REPORT OF THE ACTUARY ON THE VALUATION  
PREPARED AS OF JUNE 30, 2008**



# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

June 19, 2009

Board of Trustees  
Employees' Retirement System of Georgia  
Two Northside 75, Suite 300  
Atlanta, GA 30318-7778

Attention: Ms. Pamela Pharris, Executive Director

Members of the Board:

Chapters 47-2 and 47-19 of the Code of Georgia which govern the operation of the Georgia Employees' Group Term Life Insurance Plan provide that the actuary shall make periodic valuations of the contingent assets and liabilities of the Insurance Plan on the basis of regular interest and the tables last adopted by the Board of Trustees. In this report, we have determined liabilities for life insurance benefits payable upon death in active service (Pre-Retirement).

We have submitted the report giving the results of the valuation of the Plan prepared as of June 30, 2008. The report indicates that employee contributions at the rate of 0.05% of active payroll for Old Plan members, and 0.02% of active payroll for New Plan members, members of the Legislative Retirement System and members of the Judicial Retirement System are sufficient to support the pre-retirement benefits of the Plan. No employer contributions are required for the fiscal year ending June 30, 2011 for pre-retirement benefits.

The funding method used for this valuation is the unit credit actuarial cost method with projected benefits. Gains and losses are reflected in the unfunded accrued liability. The actuarial assumptions used are in the aggregate reasonably related to the experience under the Plan and to reasonable expectations of anticipated experience under the Plan. In our opinion, the Plan is operating on an actuarially sound basis and the sufficiency of the funds to provide the benefits called for by the Plan 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 Plan.

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Board of Trustees  
June 19, 2009  
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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 black ink, appearing to read 'Edward A. Macdonald', written in a cursive style.

Edward A. Macdonald, ASA, FCA, MAAA  
President

EAM/CT:mjn

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

Cathy Turcot  
Principal and Managing Director



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**GEORGIA EMPLOYEES' GROUP TERM LIFE INSURANCE PLAN  
FOR PRE-RETIREMENT BENEFITS  
REPORT OF THE ACTUARY  
ON THE VALUATION  
PREPARED AS OF JUNE 30, 2008**

**SECTION I - SUMMARY OF PRINCIPAL RESULTS**

1. For convenience of reference, the principal results of the valuation are summarized below:

	<b>June 30, 2008</b>	<b>June 30, 2007</b>
Active members:		
Number	75,859	74,549
Annual compensation	\$ 2,850,849,928	\$ 2,720,771,905
Retired members:		
Number	N/A	N/A
Insurance amount	N/A	N/A
Actuarial Accrued Liability	\$ 62,170,533	\$ 59,508,589
Market Value of Assets	\$ 172,595,000	\$ 185,335,000
Unfunded Actuarial Accrued Liability	\$ (110,424,467)	\$ (125,826,411)
Funding Period	27 years	40 years
Funded Ratio	277.6%	311.4%
<b>For Fiscal Year Ending</b>	<b>June 30, 2011</b>	<b>June 30, 2010</b>
Annual Required Contribution rates:		
Total Normal Rate	0.25%	0.25%
Employee Rates:		
Old Plan Members	0.05%*	0.05%*
New Plan, LRS and JRS Members	0.02%	0.02%
Employer Normal Rate	0.23%	0.22%
Accrued Liability Rate	<u>(0.23)%</u>	<u>(0.22)%</u>
Total Employer Rate	0.00%	0.00%

\*0.03% paid by employer.



2. In accordance with GASB 43 and 45, we have determined liabilities separately for life insurance benefits payable upon death in active service (pre-retirement) and those payable upon death after retirement (post-retirement). Separate trusts for pre-retirement life insurance benefits and post-retirement life insurance benefits were established and assets were split during 2007.
3. The major benefit and contribution provisions of the Plan as reflected in the valuation are summarized in Schedule C. Since the previous valuation, the Plan has been amended to exclude members of the Legislative Retirement System and the Judicial Retirement System hired on and after July 1, 2009.
4. Schedule B of this report outlines the full set of actuarial assumptions and methods used in the valuation. There have been no changes since the previous valuation.
5. Comments on the valuation results as of June 30, 2008 are given in Section IV and further discussion of the contribution levels is set out in Section V.

## **SECTION II – MEMBERSHIP DATA**

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 and their annual compensation as of June 30, 2008 on the basis of which the valuation was prepared.

### **THE NUMBER AND ANNUAL COMPENSATION OF ACTIVE MEMBERS AS OF JUNE 30, 2008**

<b>GROUP</b>	<b>NUMBER</b>	<b>ANNUAL COMPENSATION</b>
Old Plan	4,316	\$ 227,967,510
New Plan	70,977	2,581,231,330
Legislative Retirement System	218	3,778,686
Judicial Retirement System	<u>348</u>	<u>37,872,402</u>
Total	75,859	\$ 2,850,849,928



### **SECTION III - ASSETS**

1. In 2007, separate trusts were established for pre-retirement life insurance benefits and for post-retirement life insurance benefits and assets were split based on actuarial accrued liabilities. Assets in excess of what were actuarially required were transferred to ERS Survivor Benefit Fund.
2. As of June 30, 2008, the total market value of pre-retirement assets amounted to \$172,595,000 as reported by the independent auditor of the Plan. The market value of assets is used for the June 30, 2008 valuation.

### **SECTION IV – COMMENTS ON VALUATION**

1. Schedule A of this report outlines the results of the actuarial valuation for pre-retirement life insurance benefits. The valuation was prepared in accordance with the actuarial assumptions set forth in Schedule B.
2. The valuation shows that the Plan has an actuarial accrued liability of \$62,170,533 for benefits expected to be paid on account of death while in active membership based on service to the valuation date. Against these liabilities, the Plan has present assets for valuation purposes of \$172,595,000. Therefore, the unfunded actuarial accrued liability is equal to (\$110,424,467).



## **SECTION V – CONTRIBUTIONS**

1. The normal contribution rate is equal to the actuarial present value of benefits accruing during the current year as a percent of active member payroll. The total normal contribution rate is determined to be 0.25% of payroll for pre-retirement benefits.
2. The member contribution rate made by or on behalf of ERS Old Plan members is 0.05% of payroll and the member contribution rate made by ERS New Plan members, LRS members and JRS members is 0.02% of payroll. The employer normal contribution rate is determined to be 0.23% of payroll for pre-retirement benefits.
3. The unfunded accrued liability contribution rate for pre-retirement benefits is equal to (0.23%) of active members' payroll based on a 27-year amortization period for the unfunded accrued liability.
4. The total required contribution for pre-retirement benefits is, therefore, 0.00% of active members' payroll.



**SCHEDULE A**

**VALUATION RESULTS**

**PREPARED AS OF JUNE 30, 2008  
OF THE GEORGIA EMPLOYEES' GROUP TERM LIFE INSURANCE PLAN  
FOR PRE-RETIREMENT BENEFITS**

<b>(1) ACTUARIAL ACCRUED LIABILITY:</b>	
Present value of benefits payable on account of present retired members	\$ 0
Present value of benefits payable on account of present active members	<u>62,170,533</u>
<b>TOTAL ACTUARIAL ACCRUED LIABILITY</b>	<b>\$ <u>62,170,533</u></b>
<b>(2) PRESENT ASSETS FOR VALUATION PURPOSES:</b>	<b>\$ 172,595,000</b>
<b>(3) UNFUNDED ACTUARIAL ACCRUED LIABILITY: (1)-(2)</b>	<b>\$(110,424,467)</b>
<b>(4) EMPLOYER NORMAL CONTRIBUTION RATE:</b>	<b>0.23%</b>
<b>(5) ACCRUED LIABILITY CONTRIBUTION:</b>	<b><u>(0.23)</u></b>
<b>(6) TOTAL EMPLOYER CONTRIBUTION: (4)+(5)</b>	<b>0.00%</b>



**SCHEDULE B**

**OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

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

**SALARY INCREASES:**

<b>Members of Employees' Retirement System (ERS)</b>			
<b>Age</b>	<b>Annual Rate</b>	<b>Age</b>	<b>Annual Rate</b>
20	9.25%	45	5.45%
25	8.25	50	5.45
30	6.25	55	5.45
35	5.75	60	0.00
40	5.45	65	0.00

6% Annual increases are assumed for members of the Judicial Retirement System (JRS).  
 No salary increases are assumed for members of the Legislative Retirement System (LRS).

**SEPARATIONS BEFORE RETIREMENT:** Representative values of the assumed annual rates of separation other than retirement are as follows:

	<b>Annual Rates of</b>						
	<b><u>Death</u></b>				<b><u>Disability</u></b>		<b>JRS &amp; LRS Member</b>
	<b>ERS Members</b>	<b>JRS &amp; LRS Members</b>	<b>ERS Members</b>		<b>ERS Members</b>		
<b><u>Males</u></b>	<b><u>Females</u></b>	<b><u>Males</u></b>	<b><u>Females</u></b>	<b><u>Males</u></b>	<b><u>Females</u></b>		
20	.06%	.03%	.06%	.03%	.05%	.05%	.1%
25	.07	.03	.07	.03	.05	.05	.1
30	.08	.04	.08	.04	.05	.05	.2
35	.09	.06	.09	.06	.10	.05	.3
40	.13	.08	.13	.08	.35	.14	.4
45	.19	.11	.19	.11	.77	.40	.7
50	.32	.17	.32	.17	1.30	.70	1.0
55	.56	.29	.56	.29	2.00	1.20	1.8
60	1.02	.58	1.02	.58			2.9
65	1.80	1.08	1.80	1.08			4.7



<u>Annual Rates of Withdrawal</u>			
<u>Age</u>	<u>Years of Service</u>		
	<u>0-4</u>	<u>5-9</u>	<u>10 &amp; Over</u>
<u>ERS Members – Males</u>			
20	30.00%		
25	24.00	11.00%	
30	22.00	9.00	6.00%
35	22.00	8.00	5.00
40	20.00	8.00	4.00
45	17.00	7.00	3.00
50	14.00	6.00	3.50
55	13.00	5.00	4.00
60	13.00	5.00	4.50
65	16.00	10.00	4.50
<u>ERS Members – Females</u>			
20	28.00%		
25	24.00	11.00%	
30	22.00	11.00	8.00%
35	20.00	9.00	6.00
40	17.00	8.00	4.00
45	16.00	7.00	3.50
50	16.00	6.00	3.50
55	15.00	6.00	5.00
60	15.00	6.00	5.00
65	20.00	11.00	5.00

<u>Age</u>	<u>LRS Members</u>	<u>JRS Members</u>
20	10.00%	13.00%
25	10.00	13.00
30	10.00	13.00
35	10.00	13.00
40	10.00	13.00
45	10.00	4.50
50	10.00	3.00
55	10.00	3.00
60	10.00	3.00
65	10.00	3.00



**RETIREMENT:** Representative values of the assumed annual rates of service retirement for non-law enforcement officers are as follows. Special retirement rates apply to law enforcement officers.

**ERS**

Age	Old Plan <sup>1</sup>				New Plan <sup>2</sup>	
	Age 65 or more than 34 years		Age 60 or 30 years		Male	Female
	Male	Female	Male	Female		
50	50%	50%	9.0%	7.5%	10%	10%
55	50	50	11.0	11.5	10	10
60	50	50	22.0	24.0	15	20
62	50	50	43.0	44.0	38	36
64	50	50	27.0	30.0	29	30
65	44	45			43	38
67	26	28			27	34
70	100	100			100	100

<sup>1</sup> It is also assumed that 95% of active Old Plan members will retire during the year in which they attain 34 years of service. In addition, it is assumed that 3.5% of male members under age 55, 7.5% of male members ages 55 and over, 3.0% of female members under age 55 and 8.0% of female members ages 55 and over will retire under early reduced retirement.

<sup>2</sup> An additional 10% of active New Plan members less than age 65 are expected to retire in the year in which they attain 30 years of service. In addition, it is assumed that 6.0% of male members under age 55, 6.5% of male members ages 55 and over, 5.0% of female members under age 55 and 10.0% of female members ages 55 and over will retire under early reduced retirement.

**LRS**

Age	Annual Rate	Age	Annual Rate
60-69	10%	73	25%
70	35%	74	40%
71	15%	75	100%
72	15%		

**JRS**

Age	Annual Rates of Retirement
60	25%
61 – 64	10
65 – 69	12
70	50
71 – 74	20
75	100



**ASSETS:** Market value

**ACTUARIAL METHOD:** Costs were determined using the Projected Unit Credit Actuarial Cost Method. The annual service cost is the present value of the portion of the projected benefit attributable to participation service during the upcoming year, and the accumulated postretirement benefit obligation (APBO) is equal to the present value of the portion of the projected benefit attributable to service before the valuation date. Service from hire date through the expected retirement date was used in allocating costs.



## SCHEDULE C

### **SUMMARY OF MAIN PLAN PROVISIONS AS INTERPRETED FOR VALUATION PURPOSES**

#### Eligibility for Coverage

Establishment of membership in the Employees' Retirement System of Georgia (ERS), the Georgia Legislative Retirement System (LRS) or the Judicial Retirement System (JRS). ERS new entrants on and after January 1, 2009 are excluded from membership.

#### Premiums

ERS Old Plan Members (Hired before July 1, 1982)  
Member pays 0.05% of monthly salary. State picks up 0.03% of the member premium.

ERS New Plan Members (Hired on or after July 1, 1982 and before January 1, 2009), LRS Members and JRS Members  
Member pays 0.02% of monthly salary.

All ERS and LRS members pay the above premiums. If the member is not covered under the Group Term Life Insurance (GTLI) Plan, employee contributions with interest are refunded upon termination of State employment. Otherwise, no premiums are refundable. Participation is voluntary for JRS Members.

#### Coverage

The amount of insurance is 18 times current monthly earnable compensation (frozen at age 60). For a member with no creditable service prior to April 1, 1964, the amount decreases from age 60 by  $\frac{1}{2}$  of 1% per month until age 65, at which point the member will be covered for 70% of the age 60 coverage.