

April 11, 2011

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

Dear Ms. Pharris:

Enclosed is the "Georgia Employees' Group Term Life Insurance Plan for Pre-Retirement Benefits Report of the Actuary on the Valuation Prepared as of June 30, 2010".

The valuation indicates that no employer contribution is required for the fiscal year ending June 30, 2013 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,

Muldel

Edward A. Macdonald, ASA, FCA, MAAA

President

Cathy Turcot

Principal and Managing Director

athy Turcot

EAM/CT:jl

**Enclosure** 

S:\Georgia SEAD-GTLI\Valuation\2010\GTLI Valuation Pre-Retirement 20100630 FINAL.docx



The experience and dedication you deserve



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

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





The experience and dedication you deserve

April 11, 2011

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, 2010. 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 preretirement benefits of the Plan. No employer contribution is required for the fiscal year ending June 30, 2013 for pre-retirement benefits.

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.

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.



Board of Trustees April 11, 2011 Page 2

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,

Edward A. Macdonald, ASA, FCA, MAAA

al Muldel

President

EAM/CT:jl

Cathy Turcot

Principal and Managing Director



# **TABLE OF CONTENTS**

<u>Section</u>	<u>ltem</u>	Page No.
I	Summary of Principal Results	1
II	Membership Data	2
Ш	Assets	3
IV	Comments on Valuation	3
V	Contributions	4
<u>Schedule</u>		
Α	Valuation Results for Pre-Retirement Benefits	5
В	Summary of Receipts and Disbursements	6
С	Outline of Actuarial Assumptions and Methods	7
D	Summary of Main Plan Provisions as Interpreted for Valuation Purposes	12



## GEORGIA EMPLOYEES' GROUP TERM LIFE INSURANCE PLAN FOR PRE-RETIREMENT BENEFITS 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 are summarized below:

	June 30, 2010	June 30, 2009
Active members: Number	62,305	69,745
Annual compensation	\$ 2,401,973,957	\$2,653,527,165
Retired members:		<del>,</del> , ,
Number	N/A N/A	N/A N/A
Insurance amount	IN/A	IN/A
Actuarial Accrued Liability	\$ 40,523,213	\$ 61,351,482
Market Value of Assets	\$ 156,132,000	\$ 144,161,000
Unfunded Actuarial Accrued Liability	\$ (115,608,787)	\$ (82,809,518)
Funding Period	W/A	Ψ (02,003,310) N/A
Funded Ratio	385.3%	235.0%
For Fiscal Year Ending	June 30, 2013	June 30, 2012
Annual Required Contribution rates:		
Total Normal Rate	0.16%	0.24%
Employee Betoe		
Employee Rates: Old Plan Members	0.05%*	0.05%*
New Plan, LRS and JRS Members	0.02%	0.02%
Employer Normal Rate	0.14%	0.22%
Accrued Liability Rate	<u>(0.14)%</u>	<u>(0.22)%</u>
Total Employer Rate	0.00%	0.00%

<sup>\*0.03%</sup> 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 postretirement 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 D. There have been no changes since the previous valuation.
- 4. Schedule C of this report outlines the full set of actuarial assumptions and methods used in the valuation. As this Plan is now completely closed to new entrants and total payroll is no longer expected to increase over time, the method used for amortization of the unfunded liability is level dollar. 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.
- Comments on the valuation results as of June 30, 2010 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, 2010 on the basis of which the valuation was prepared.

# THE NUMBER AND ANNUAL COMPENSATION OF ACTIVE MEMBERS AS OF JUNE 30, 2010

GROUP	NUMBER	ANNUAL COMPENSATION
Old Plan	2,668	\$ 139,979,596
New Plan	59,059	2,219,204,804
Legislative Retirement System	208	3,607,070
Judicial Retirement System	<u>370</u>	39,182,487
Total	62,305	\$ 2,401,973,957



### **SECTION III - ASSETS**

- In 2007, separate trusts were established for pre-retirement life insurance benefits and for postretirement 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.
- As of June 30, 2010, the total market value of pre-retirement assets amounted to \$156,132,000 as reported by the independent auditor of the Plan. The market value of assets is used for the June 30, 2010 valuation.
- 3. Schedule B 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**

- 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 C.
- 2. The valuation shows that the Plan has an actuarial accrued liability of \$40,523,213 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 \$156,132,000. Therefore, the unfunded actuarial accrued liability is equal to (\$115,608,787).



### SECTION V - CONTRIBUTIONS

- 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 0.16% 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 0.14% of payroll for pre-retirement benefits.
- 3. The unfunded accrued liability contribution rate for pre-retirement benefits is equal to (0.14%) of active members' payroll based. For the June 30, 2010 valuation, the unfunded accrued liability, which is negative, is amortized using a level dollar method. On this basis, the unfunded accrued liability rate of (0.14%) will never fully amortize the unfunded accrued liability.
- 4. However, since the employer contribution cannot be negative, there is no required contribution for pre-retirement benefits.



# **SCHEDULE A**

# **VALUATION RESULTS**

# PREPARED AS OF JUNE 30, 2010 OF THE GEORGIA EMPLOYEES' GROUP TERM LIFE INSURANCE PLAN FOR PRE-RETIREMENT BENEFITS

(1)	ACTUARIAL ACCRUED LIABILITY:		
	Present value of benefits payable on account of present retired members	\$	0
	Present value of benefits payable on account of present active members	<u>40,5</u>	23,213
	TOTAL ACTUARIAL ACCRUED LIABILITY	\$ <u>40,5</u>	523,213
(2)	PRESENT ASSETS FOR VALUATION PURPOSES:	\$ 156,1	32,000
(3)	UNFUNDED ACTUARIAL ACCRUED LIABILITY: (1)-(2)	\$(115,6	608,787)
(4)	EMPLOYER NORMAL CONTRIBUTION RATE:		0.14%
(5)	ACCRUED LIABILITY CONTRIBUTION:		(0.14)
(6)	TOTAL EMPLOYER CONTRIBUTION: (4)+(5)		0.00%



# **SCHEDULE B**

# SUMMARY OF RECEIPTS AND DISBURSEMENTS (Market Value)

	YEAR ENDING		
Receipts for the Year	June 30, 2010	June 30, 2009	
Insurance Premiums	\$ 900,000	\$ 880,000	
Investment Earnings	<u> 15,910,000</u>	(22,656,000)	
TOTAL	\$ 16,810,000	\$ (21,776,000)	
Disbursements for the Year			
Death Benefits	\$ 4,817,000	\$ 6,636,000	
Administration Expense	22,000	22,000	
TOTAL	\$ 4,839,000	\$ 6,658,000	
Excess of Receipts over Disbursements	\$ 11,971,000	\$ (28,434,000)	
Reconciliation of Asset Balances			
Asset Balance as of the Beginning of Year	\$ 144,161,000	\$ 172,595,000	
Excess of Receipts over Disbursements	<u>11,971,000</u>	(28,434,000)	
Asset Balance as of the End of Year	<u>\$ 156,132,000</u>	<u>\$ 144,161,000</u>	
Rate of Return	11.2%	(13.4)%	



# SCHEDULE C

## **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.

## **SALARY INCREASES**:

Members of Employees' Retirement System (ERS)							
Age	FY 2011	FY 2012-2013	FY 2014+				
20	0%	4.625%	9.25%				
25	0	4.125	8.25				
30	0	3.125	6.25				
35	0	2.875	5.75				
40	0	2.725	5.45				
45	0	2.725	5.45				
50	0	2.725	5.45				
55	0	2.725	5.45				
60	0	2.725	5.45				
65	0	2.725	5.45				

Members of Judicial Retirement System (JRS)						
FY 2011 FY 2012-2013 FY 2014+						
0%	3.00%	6.00%				

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 for non-law enforcement officers are as follows. Special rates of separation apply to law enforcement officers.

	Annual Rates of						
				Disa	bility		
	De	ath	ERS M	embers			
<u>Age</u>	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>	LRS <u>Members</u>	JRS <u>Members</u>	
20	.035%	.019%	.05%	.02%	.1%	.05%	
25	.038	.021	.05	.02	.1	.05	
30	.044	.026	.05	.02	.2	.10	
35	.077	.048	.05	.02	.3	.15	
40	.108	.071	.25	.10	.4	.20	
45	.151	.112	.50	.25	.7	.35	
50	.214	.168	.75	.50	1.0	.50	
55	.362	.272	1.10	.82	1.8	.90	
60	.675	.506			2.9	1.45	
65	1.274	.971				2.35	
69	1.980	1.486					



Annual Rates of Withdrawal							
	Years of Service						
<u>Age</u>	<u>0-4</u>	<u>5-9</u>	<u>10 &amp; Over</u>				
	ERS N	<u> 1embers - Males</u>					
20	31.00%						
25	26.00	17.00%					
30	22.50	12.00	7.50%				
35	21.00	10.00	7.00				
40	19.00	9.50	5.00				
45	18.00	9.00	3.75				
50	15.50	7.00	3.75				
55	13.00	6.50	4.00				
60	15.00	7.00	0.00				
65	15.00	9.50	0.00				
	ERS N	<u> 1embers - Females</u>					
20	31.00%						
25	24.00	19.00%					
30	21.00	13.00	7.75%				
35	19.50	10.50	6.75				
40	17.50	9.00	4.50				
45	15.50	8.00	3.50				
50	15.00	7.00	3.50				
55	12.50	6.50	4.00				
60	12.50	6.50	0.00				
65	17.00	10.00	0.00				

Annual Rates of Withdrawal							
<u>Age</u>	LRS Members	JRS Members					
20	6.00%	8.00%					
25	6.00	8.00					
30	6.00	8.00					
35	6.00	8.00					
40	6.00	8.00					
45	7.50	4.00					
50	8.50	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**

	Old Plan							
Age	Early Ret	irement	Age 60 or	30 years	34 y	ears	More tha	n 34 years
	Male	Female	Male	Female	Male	Female	Male	Female
55	3.0%	4.0%	11.5%	9.0%	100.0%	100.0%	90.0%	90.0%
56	3.5	6.0	12.0	11.0	100.0	100.0	70.0	70.0
57	4.0	6.0	12.0	13.0	100.0	100.0	70.0	70.0
58	5.0	6.0	13.0	15.0	95.0	95.0	70.0	70.0
59	6.0	6.0	16.0	16.0	95.0	95.0	70.0	70.0
60			17.0	20.0	95.0	95.0	50.0	60.0
62			37.0	40.0	90.0	90.0	50.0	60.0
64			20.0	30.0	90.0	90.0	15.0	60.0
66			30.0	35.0	30.0	35.0	30.0	35.0
68			20.0	25.0	20.0	25.0	20.0	25.0
70			45.0	35.0	45.0	35.0	45.0	35.0

	New Plan and GSEPS					
Age	Early Retirement		Normal Re	etirement*		
	Male	Female	Male	Female		
55	10.0%	8.0%	50.0%	40.0%		
56	10.0	8.0	50.0	40.0		
57	10.0	9.0	50.0	40.0		
58	10.0	10.0	30.0	40.0		
59	10.0	15.0	30.0	40.0		
60			17.0	20.0		
62			38.0	36.0		
64			25.0	28.0		
66			35.0	35.0		
68			20.0	25.0		
70			20.0	25.0		

<sup>\*</sup> An additional 10% of active New Plan and GSEPS members less than age 65 are expected to retire in the year in which they attain 30 years of service

<u>LRS</u>

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



<u>JRS</u>

Age	Annual Rates of Retirement	
60 – 64	12%	
65 – 66	15	
67 – 69	20	
70 – 74	30	
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 D**

# 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 and LRS and JRS new entrants on and after July 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.

<u>Coverage</u>

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.