

**GEORGIA LEGISLATIVE RETIREMENT SYSTEM**

**REPORT OF THE ACTUARY**

**ON THE VALUATION**

**PREPARED AS OF JUNE 30, 2000**

# BUCK CONSULTANTS®

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August 8, 2001

Board of Trustees  
Georgia Legislative Retirement System  
Two Northside 75  
Atlanta, Georgia 30318

**Members of the Board:**

Section 47-6-22 of the law governing the operation of the Georgia Legislative Retirement System provides that the actuary shall make valuations of the contingent assets and liabilities of the Retirement System on the basis of regular interest and tables last adopted by the Board of Trustees. We are pleased to submit herewith the results of the actuarial valuation of the Georgia Legislative Retirement System prepared as of June 30, 2000. The delay in issuing this report was due solely to the difficulty in being provided credible valuation data from the new LRS data system.

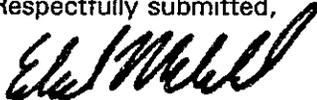
The valuation reflects an increase in the accrual rate for active and retired members from \$28 to \$32. In our opinion the valuation is complete and accurate, and the methodology and assumptions used are reasonable as a basis for the valuation. On the basis of the recommended contribution rates, the Retirement System is being funded in conformity with the minimum funding standards set forth in Code Section 47-20-10 of the Public Retirement Systems Standards Law.

The valuation has been prepared in accordance with the parameters set forth in Statement Nos. 25 and 27 of the Governmental Accounting Standards Board. The annual required contribution (ARC) of the employer under GASB for the fiscal year ending June 30, 2002 is \$0. The System has a negative Net Pension Obligation (NPO) because more than the annual required contribution under GASB 25/27 was made for the fiscal years ending June 30, 1998, June 30, 1999 and June 30, 2000. Since the appropriation amounts for fiscal years 2001 and 2002 are greater than the ARC, the plan will continue to increase the negative NPO.

We trust that the report will meet the approval of the Board and will furnish the desired information concerning the financial condition of the Retirement System.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,



Edward A. Macdonald  
Principal and Consulting Actuary

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**Georgia Legislative Retirement System  
Report of the Actuary on the Valuation  
Prepared as of June 30, 2000**

**Section I - Summary of the Principal Results**

- 1: For convenience of reference, the principal results of the current and preceding valuations are summarized below.

<b>Valuation Date</b>	<b>June 30, 2000</b>	<b>June 30, 1999</b>
Number of active members	210	210
Retired members and beneficiaries:		
Number	189	190
Annual allowances	\$ 1,056,360	\$ 1,057,265
Assets:		
Market Value	\$ 29,525,000	\$ 29,358,000
Actuarial Value	24,666,000	22,679,000
Unfunded actuarial accrued liability	\$ (3,038,310)	\$ (2,550,350)
Amortization period	N/A*	N/A*
<b>For Fiscal Year Ending</b>	<b>June 30, 2002</b>	<b>June 30, 2001</b>
Employer contribution rate per active member:		
Normal	\$ 780.23	\$ 507.53
Accrued Liability	<u>(780.23)</u>	<u>(507.53)</u>
Total	\$ 0.00	\$ 0.00
Annual required employer contributions (ARC):		
Normal	\$ 163,848	\$ 106,581
Accrued Liability	<u>(163,848)</u>	<u>(106,581)</u>
Total	\$ 0	\$ 0

\* If the annual required employer contribution (ARC) is based on 40 year amortization of the unfunded accrued liability, the ARC is less than \$0, which is not allowed under GASB 25/27. Therefore, the accrued liability contribution has been set such that the total ARC equals \$0.

2. The valuation takes into account the effect of amendments to the System enacted through the 2000 session of the General Assembly. The valuation reflects an increase in the benefit accrual rate for active and retired members from \$28 to \$32. The major benefit and contribution provisions of the System as reflected in the valuation are summarized in Schedule F.

3. Schedule D of this report outlines the full set of actuarial assumptions and methods used. There have been no changes since the previous valuation.
4. The unit credit actuarial cost method was used to prepare the valuation. Schedule E contains a brief description of the valuation cost method.
5. Comments on the valuation results as of June 30, 2000 are given in Section IV, and further discussion of the contributions is set out in Section V.

### Section II - Membership Data

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 210 active members.
2. The following table shows the number of retired members and beneficiaries as of June 30, 2000, together with the amount of their annual retirement allowances payable under the System as of that date.

**The Number and Annual Retirement Allowances of  
Retired Members and Beneficiaries on the Roll  
as of June 30, 2000**

Group	Number	Annual Retirement Allowances*
Service Retirements	140	\$ 789,058
Disability Retirements	0	0
Beneficiaries of Deceased Members	<u>49</u>	<u>267,302</u>
Total	189	\$ 1,056,360

\* These amounts do not reflect the semi-annual 1-1/2% cost-of-living increase effective July 1, 2000 or the increase in the accrual rate from \$28 to \$32.

3. Tables 1 and 2 of Schedule G give the distribution by age and by years of creditable service of the number of active members included in the valuation, while Table 3 gives the number and annual retirement allowances of retired members and beneficiaries included in the valuation, distributed by age.

### Section III - Assets

1. Two funds are maintained for the purpose of recording the financial transactions of the System, namely, the Members' Account and the Accumulation Account.

- (a) Members' Account

The Members' Account is the account to which are credited all contributions made by or on behalf of 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 Members' Account to the Accumulation Account. The portion of the allowance which these contributions provide is then paid from the Accumulation Account. On June 30, 2000 the market value of assets credited to the Members' Account amounted to \$2,958,000.

- (b) Accumulation Account

The Accumulation Account is the account to which all income from investments and all contributions made by employers of members of the System 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 Members' Account to this account to provide the member-contributed portion of the allowance. On June 30, 2000 the market value of assets credited to the Accumulation Account amounted to \$26,567,000.

2. As of June 30, 2000 the total market value of assets amounted to \$29,525,000 as reported by the independent Auditor of the System. The actuarial value of assets used for the current valuation was \$24,666,000. Schedule B shows the development of the actuarial value of assets as of June 30, 2000.
3. Schedule C shows the receipts and disbursements of the System for the two years preceding the valuation date and a reconciliation of the fund balances.

#### 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, 2000. 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 \$24,442,728, of which \$15,620,590 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and \$8,822,138 is for the prospective benefits payable on account of present active members. Against these liabilities, the System has total present assets of \$24,666,000 as of June 30, 2000. The difference of (\$223,272) between the total liabilities and the total present assets represents the present value of contributions to be made in the future. The present value of future contributions expected to be made by or on behalf of members to the Members' Account is \$1,080,536, and the balance of (\$1,303,808) represents the present value of future contributions payable by the employers to the Accumulation Account.
3. The employers' contributions to the System consist of normal contributions and accrued liability contributions. The valuation indicates that annual employer normal contributions at the rate of \$780.23 per active member are required to provide the currently accruing benefits of the System.
4. Prospective normal contributions have a present value of \$1,734,502. When this amount is subtracted from (\$1,303,808), which is the present value of the total future contributions to be made by the employers, the result is an unfunded actuarial accrued liability of \$(3,038,310).

**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 equal to the actuarial present value of benefits accruing during the current year divided by the number of active members as of the valuation date. The normal contribution rate is determined to be \$780.23 per active member, or \$163,848 based on 210 active members as of June 30, 2000.
3. The annual accrued liability contribution determined by the June 30, 2000 valuation is \$(163,848) or \$(780.23) per active member.
4. The following table summarizes the employer contributions which were determined by the June 30, 2000 valuation and are recommended for use:

**Annual Required Employer Contributions (ARC)  
For Fiscal Year Ending June 30, 2002**

Contribution	Per Active Member	Annual Amount
Normal	\$ 780.23	\$ 163,848
Accrued Liability	<u>(780.23)</u>	<u>(163,848)</u>
Total	\$ 0.00	\$ 0

### 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, 2000**

Group	Number
Retirees and beneficiaries receiving benefits	189
Terminated plan members entitled to benefits but not yet receiving benefits	123
Active plan members	<u>210</u>
Total	<u>522</u>

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

**Schedule of Funding Progress**

Actuarial Valuation Date	Actuarial Value of Assets ( a )	Actuarial Accrued Liability (AAL) Unit Credit ( b )	Unfunded AAL (UAAL) ( b - a )	Funded Ratio ( a / b )	Covered Payroll ( c )	UAAL as a Percentage of Covered Payroll ( ( b - a ) / c )
6/30/95	\$13,137,000	\$13,860,275	\$723,275	94.8%	N/A	N/A
6/30/97	18,197,000	18,086,266	(110,734)	100.6	N/A	N/A
6/30/98	20,375,000	19,272,467	(1,102,533)	105.7	N/A	N/A
6/30/99	22,679,000	20,128,650	(2,550,350)	112.7	N/A	N/A
6/30/00*	24,666,000	21,627,690	(3,038,310)	114.0	N/A	N/A

\* Reflects increase in benefit accrual rate from \$28 to \$32.

3. The following shows the schedule of employer contributions:

<u>Year Ending</u>	<u>Annual Required Contribution</u>	<u>Percent Contributed</u>
6/30/97	\$159,000	100%
6/30/98	164,000	126
6/30/99	84,000	108
6/30/00	22,000	436

4. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2000.

**Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending June 30, 2000**

(a) Employer annual required contribution	\$ 22,000
(b) Interest on net pension obligation	(3,000)
(c) Adjustment to annual required contribution	(4,000)
(d) Annual pension cost: (a) + (b) - (c)	<u>\$ 23,000</u>
(e) Employer contributions made for fiscal year ending 6/30/2000	96,000
(f) Increase (decrease) in net pension obligation: (d) - (e)	<u>\$ (73,000)</u>
(g) Net pension obligation beginning of fiscal year	(49,000)
(h) Net pension obligation end of fiscal year: (f) + (g)	<u>\$ (122,000)</u>

**Trend Information**

<u>Year Ending</u>	<u>Annual Pension Cost (APC)</u>	<u>Percentage of APC Contributed</u>	<u>Net Pension Obligation (NPO)</u>
June 30, 1998	\$164,000	126%	\$ (42,000)
June 30, 1999	84,000	108	(49,000)
June 30, 2000	23,000	417	(122,000)

5. The annual required contribution (ARC) of the employer in dollars, determined in accordance with the parameters of GASB 25/27 is shown below. If the accrued liability contribution is based on amortization of the unfunded accrued liability of \$(3,038,310) over a 40-year period from the valuation date, the total employer ARC would be less than \$0, which is not allowed under GASB 25/27. Therefore, the accrued liability contribution has been set such that the total ARC equals \$0.

**2001/2002 Fiscal Year  
Annual Required Contribution (ARC)  
Based on the Valuation as of June 30, 2000**

ANNUAL REQUIRED CONTRIBUTION (ARC)	AMOUNT
Normal	\$ 163,848
Accrued Liability	<u>(163,848)</u>
Total	\$ 0

6. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2000. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2000
Actuarial cost method	Unit Credit
Amortization method	Level dollar, open
Remaining amortization period	N/A*
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.00%
Projected salary increases	N/A
Cost-of-living adjustments	3% Annually
*Includes inflation at	3.50%

\* If the annual required employer contribution (ARC) is based on 40 year amortization of the unfunded accrued liability, the ARC is less than \$0, which is not allowed under GASB 25/27. Therefore, the accrued liability contribution has been set such that the total employer ARC equals \$0.

**SCHEDULE A****Valuation Balance Sheet****Present and Prospective Assets and Liabilities  
as of June 30, 2000**

<u>Actuarial Liabilities</u>		
Present value of prospective benefits payable on account of:		
(1) Present retired members and beneficiaries of deceased members and members entitled to deferred vested benefits		\$ 15,620,590
(2) Present active members:		
Service retirement allowances	\$ 7,639,294	
Disability retirement allowances	526,244	
Survivor allowances	371,710	
Refunds of members' contributions	<u>284,890</u>	
Total		<u>\$ 8,822,138</u>
(3) Total Actuarial Liabilities		<u>\$ 24,442,728</u>
<u>Present and Prospective Assets</u>		
(4) Actuarial Value of Assets		\$ 24,666,000
(5) Present value of total future contributions = (3) - (4)	\$ (223,272)	
(6) Present value of future member contributions		1,080,536
(7) Present value of future employer contributions = (5) - (6)	\$(1,303,808)	
(8) Prospective normal contributions		1,734,502
(9) Prospective unfunded actuarial accrued liability contributions = (7) - (8)		<u>(3,038,310)</u>
(10) Total Present and Prospective Assets		<u>\$ 24,442,728</u>

**SCHEDULE B**

**Development of June 30, 2000 Actuarial Value of Assets**  
 (All dollar amounts are \$1,000's)

(1) Actuarial Value of Assets on June 30, 1999	\$ 22,679
(2) 1999/2000 Net Cash Flow	
a. Contributions	300
b. Disbursements	<u>(1,088)</u>
c. Net Cash Flow	
(2)a - (2)b	(788)
(3) Expected Investment Return [[1] x .07] + [(2)c x .035]	1,560
(4) Expected Actuarial Value of Assets on June 30, 2000 (1) + (2)c + (3)	23,451
(5) Market Value of Assets on June 30, 2000	29,525
(6) Excess of Market Value over Expected Actuarial Value (5) - (4)	6,074
(7) 20% Adjustment towards Market .20 x (6)	1,215
(8) Actuarial Value of Assets on June 30, 2000 (4) + (7)	\$ 24,666

**SCHEDULE C****Summary of Receipts and Disbursements  
(Market Value)**

<u>Receipts for the year</u>	Year Ending	
	<u>June 30, 2000</u>	<u>June 30, 1999</u>
	(\$ thousand)	(\$ thousand)
Contributions:		
Members	\$ 204	\$ 199
Employers	<u>96</u>	<u>91</u>
Total	\$ 300	\$ 250
Net investment income	955	3,692
Administrative expense allotment	<u>68</u>	<u>68</u>
TOTAL	\$ 1,323	\$ 4,050
<u>Disbursements for the year</u>		
Retirement allowances	\$ 1,052	\$ 1,023
Refunds to members	36	32
Administrative expense	<u>68</u>	<u>68</u>
TOTAL	\$ 1,156	\$ 1,123
<u>Excess of receipts over disbursements</u>	\$ 167	\$ 2,927
<u>Reconciliation of asset balances</u>		
Asset balances as of the beginning of year	\$29,358	\$26,431
Excess of receipts over disbursements	<u>167</u>	<u>2,927</u>
Asset balance as of the end of year	<u>\$29,525</u>	<u>\$29,358</u>

## SCHEDULE D

### Outline of Actuarial Assumptions and Methods

**VALUATION INTEREST RATE:** 7.0% per annum, compounded annually, net of expenses.

**SALARY INCREASES:** None.

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

Age	Annual Rates of			
	Withdrawal	Death		Disability
		Men	Women	
20	2.0%	.062%	.038%	.1%
25	2.0	.077	.050	.1
30	2.0	.100	.068	.2
35	2.0	.139	.094	.3
40	2.0	.203	.136	.4
45	2.0	.362	.202	.7
50	2.0	.656	.311	1.0
55	2.0	1.057	.471	1.8
60	2.0	1.566	.750	2.9
65	2.0	2.307	1.241	-

**SERVICE RETIREMENT:** Normal retirement is assumed to occur when a member is first eligible. Early retirement is assumed to occur at the rate of 2% per year provided a member is eligible and is not yet eligible for normal retirement.

**DEATHS AFTER RETIREMENT:** The 1971 Group Annuity Mortality Table rated back one year is used for the period after retirement or disability and for dependent beneficiaries. Representative values of the assumed annual rates of mortality are as follows:

Age	Men	Women	Age	Men	Women
40	.151%	.087%	65	1.918%	0.861%
45	.257	.129	70	3.243	1.446
50	.474	.197	75	5.122	2.863
55	.781	.298	80	7.969	5.062
60	1.192	.490	85	12.112	8.150

**ASSET METHOD:** The actuarial value of assets, as developed in Schedule B. The actuarial value of assets recognizes 20% of the difference between the market value of assets and the expected actuarial value of assets, based on the assumed valuation rate of return.

**VALUATION METHOD:** Unit credit actuarial cost method. See Schedule E for a brief description of this method.

**COST-OF-LIVING ALLOWANCE (COLA):** 3% per year has been assumed for all future years even though increases are ad hoc in nature.

## SCHEDULE E

### **Actuarial Cost Method**

1. The valuation is prepared on the unit credit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 7.0%), 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 consist of a normal contribution and an unfunded actuarial accrued liability contribution.
3. The normal contribution is determined using the unit credit actuarial cost method and is equal to the actuarial present value of benefits accruing during the current year in excess of the contributions of the member.
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 Major System Provisions as Interpreted for Valuation Purposes

#### Normal Retirement Benefit

Eligibility	Age 65 and 8 years of creditable service or age 62 and 8 years of membership service (for eligibility purposes, 4 legislative terms are equivalent to 8 years of membership service).
Benefit	Monthly benefit is \$32 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 increase of 1-1/2% each January 1 and July 1 if the Board of Trustees approves of the increase.

#### Early Retirement Benefit

Eligibility	Age 60 and 8 years of membership service.
Benefit	Accrued benefit reduced by 5% for each year member is under age 62.

#### Disability Retirement Benefit

No special benefit. Benefit is same as early or normal retirement.

#### Death Benefit

Eligibility	If less than 15 years of creditable service, a refund of accumulated contributions. If at least 15 years of creditable service or eligible for retirement, the benefit below.
Benefit	Benefit equal to retirement benefit immediately prior to death under 100% joint and survivorship option.

#### Deferred Vested Retirement Benefit

Eligibility	8 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 in lieu of any other benefit.

**Optional Forms of Benefit**

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

(2) 100% joint and survivorship annuity.

(3) 50% joint and survivorship annuity.

**Contributions**

Members contribute 8-1/2% of salary.

Employer contributions are actuarially determined and approved and certified by the Board to the legislative fiscal officer.

**SCHEDULE G**

Table 1

The Number of Members Distributed by  
Age as of June 30, 2000

<u>Age</u>	<u>Men</u>	<u>Women</u>
28		1
31	1	
32	1	
33	1	
34	4	
35	1	1
36	2	1
37	3	
38	3	1
39	2	
40	6	
41	2	
42	6	2
43	4	1
44	4	2
45	3	
46	13	2
47	4	1
48	6	2
49	1	1
50	5	1
51	4	1
52	8	1
53	10	3
54	5	2
55	5	2
56	2	
57	5	2
58	5	5
59	5	2
60	4	
61	4	1
62	5	
63	3	
64	3	
65	2	1
66	1	
67	2	1
68	5	1
69	1	

Table 1

The Number of Members Distributed by  
Age as of June 30, 2000

Continued

<u>Age</u>	<u>Men</u>	<u>Women</u>
70	1	
71	1	3
72	4	
73	3	
74	3	
75	1	
77	1	
81	2	
82	1	
84	1	
Total	169	41

Table 2

**The Number of Members Distributed by  
Service as of June 30, 2000**

<u>Years of Service</u>	<u>Men</u>	<u>Women</u>
0	1	
1		2
2	21	11
3	3	1
4	25	5
5	1	1
6	23	2
7	1	
8	27	8
9	1	
10	11	6
11	3	
12	5	
13	1	
14	3	2
16	2	
17	2	
18	5	2
20	8	
22	2	
24	2	
25	2	
26	6	1
28	2	
29	4	
33	2	
34	1	
36	1	
38	3	
52	1	
<b>Total</b>	<b>169</b>	<b>41</b>

Table 3

**The Distribution of the Number and Annual  
Retirement Allowances of Retirees  
Distributed by Age as of June 30, 2000**

**Members and Beneficiaries of the Retirement System**

Age	Men		Women	
	Number	Amount	Number	Amount
48	1	\$ 2,116		
52	1	2,470		
54			1	\$ 1,966
57	1	4,332		
58			2	14,325
59			1	3,334
60			4	17,730
61	1	5,564		
62	1	4,131	1	3,913
63	6	21,394		
64	8	23,957	1	3,444
65	8	38,565		
66	5	18,488	1	1,170
67	3	10,860		
68	6	25,057		
69	2	6,685	2	8,560
70	9	58,292	4	17,978
71	7	38,071		
72	7	37,443	3	18,089
73	10	58,404	2	14,037
74	5	31,874	3	15,878
75	4	38,672	3	22,176
76	5	21,448	2	9,865
77	7	46,722	2	9,259
78	9	58,141	1	6,661
79	5	41,744	1	3,901
80	3	15,693	1	4,775
81	2	11,562	2	16,609
82	2	12,208	2	10,799
83	2	11,361	3	16,018
84	2	17,334	2	6,953
85	4	39,436	1	6,380
86	2	14,588	4	39,610
87			1	7,082
88	3	19,540		
89			1	3,712
91			2	9,261
92	3	17,810	1	4,264
93			1	4,651
<b>Total</b>	<b>134</b>	<b>\$ 753,961</b>	<b>55</b>	<b>\$ 302,398</b>