

**GEORGIA JUDICIAL  
RETIREMENT SYSTEM  
REPORT OF THE ACTUARY  
ON THE VALUATION  
PREPARED AS OF JULY 1, 2001**

# BUCK CONSULTANTS<sup>®</sup>

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July 9, 2002

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

Dear Members of the Board:

We are pleased to submit herewith the results of the actuarial valuation of the Georgia Judicial Retirement System prepared as of July 1, 2001.

Since the previous valuation, the post-retirement mortality tables have been revised. In our opinion the valuation is complete and accurate, and the methodology and assumptions used are reasonable as a basis for the valuation. The valuation indicates that there is no contribution required for the fiscal year ending June 30, 2003. The valuation takes into account the effect of amendments of the System enacted through the 2002 session of the General Assembly. The valuation reflects the 1.5% Ad Hoc COLA's effective July 1, 2002 and January 1, 2003. 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. Although there was an annual required contribution (ARC) of the employer under GASB for the fiscal year ending June 30, 2001 of 4.62% of payroll, the employer contribution made was less than that amount, and the System barely met the minimum funding standards set forth in Code Section 47-20-10. The System will have a Net Pension Obligation (NPO) because less than the ARC contributions were made for the fiscal year ending June 30, 2001. The NPO will be paid off by higher future contributions.

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, Consulting Actuary

EAM:sr

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**Georgia Judicial Retirement System  
Report of the Actuary on the Valuation  
Prepared as of July 1, 2001**

**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>July 1, 2001</b>	<b>July 1, 2000</b>
<b>Active members:</b>		
Number	435	416
Annual compensation	\$ 37,687,700	\$ 34,855,836
<b>Retired members and beneficiaries:</b>		
Number	130	116
Annual allowances	\$ 5,615,022	\$ 4,561,959
<b>Assets:</b>		
Market Value	\$ 225,173,000	\$ 239,644,000
Actuarial Value	219,288,000	204,136,000
Unfunded actuarial accrued liability	\$ (63,204,705)	\$ (65,708,156)
Amortization Period	10 years	12 years
<b>For Fiscal Year Ending</b>		
	<b>June 30, 2003</b>	<b>June 30, 2002</b>
<b>Annual required employer contribution rates (ARC):</b>		
Normal	20.33%	19.98%
Accrued liability	<u>(20.33)</u>	<u>(19.98)</u>
Total	0.00%	0.00%

2. The valuation takes into account the effect of amendments of the System enacted through the 2002 session of the General Assembly. The valuation reflects the 1.5% Ad Hoc COLA's effective July 1, 2002 and January 1, 2003. The major benefit and contribution provisions of the System as reflected in the valuation are summarized in Schedule F.
3. Since the previous valuation, the post retirement mortality tables have been revised. Schedule D of this report outlines the full set of actuarial assumptions and methods used.
4. The entry age actuarial cost method was used to prepare the valuation. Schedule E contains a brief description of the actuarial cost method.

5. Comments on the valuation results as of July 1, 2001 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 435 active members, with annual compensation of \$37,687,700.
2. The following table shows the number of retired members and beneficiaries on the roll as of June 30, 2001, 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, 2001**

Group	Number	Annual Retirement Allowances
Service Retirements	100	\$ 4,937,072
Disability Retirements	1	44,516
Beneficiaries of Deceased Members	<u>29</u>	<u>633,434</u>
Total	130*	\$ 5,615,022

\* In addition, there are 5 spouses who are eligible to receive death benefits from the System

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. As of June 30, 2001 the total market value of assets amounted to \$225,173,000 as reported by the independent Auditor of the System. The actuarial value of assets at June 30, 2001 is \$219,288,000. Schedule B shows the development of the actuarial value of assets as of June 30, 2001.
2. 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 July 1, 2001. 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 \$256,263,164, of which \$51,093,721 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits, and \$205,169,443 is for the prospective benefits payable on account of present active members. Against these liabilities, the System has total present assets of \$219,288,000 as of June 30, 2001. The difference of \$36,975,164 between the total liabilities and the total present assets represents the present value of contributions to be made in the future. Of this amount, \$28,273,980 is the present value of future contributions expected to be made by or on

behalf of members, and the balance of \$8,701,184 represents the present value of future contributions payable by the employers.

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 20.33% of active members' compensation are required to provide the currently accruing benefits of the System.
4. Prospective normal contributions at the rate of 20.33% of active members' compensation have a present value of \$71,905,889. When this amount is subtracted from \$8,701,184, 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 \$(63,204,705).

#### **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 percentage rate which, if applied to the compensation of 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 20.33% of active members' compensation.
3. The accrued liability contribution at the rate of (20.33)% of active members' compensation is sufficient to amortize the unfunded actuarial accrued liability within 10 years following the valuation date assuming that the amount of accrued liability payment increases 3.50% each year.

4. The following table summarizes the employer contribution rates which were determined by the July 1, 2001 valuation and are recommended for use.

**Annual Required Employer Contribution Rates (ARC)  
For Fiscal Year Ending June 30, 2003**

Contribution	Percentage of Active Members' Compensation
Normal	20.33%
Accrued Liability	<u>(20.33)</u>
Total	0.00%

**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, 2001**

Group	Number
Retirees and beneficiaries receiving benefits	130
Terminated plan members entitled to benefits but not yet receiving benefits	41
Active plan members	<u>435</u>
Total	<u>606</u>

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)
6/30/1998	\$160,171	\$117,771	\$(42,400)	136.0%	\$26,226	(161.7)%
6/30/1999	183,249	129,233	(54,016)	141.8	29,594	(182.5)
6/30/2000	204,136	138,427	(65,709)	147.5	34,856	(188.5)
6/30/2001	219,288	156,083	(63,205)	140.5	37,688	(167.7)

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

Year Ending	Annual Required Contribution	Percentage Contributed
6/30/1999	\$ 694	100%
6/30/2000	834	100
6/30/2001	1,741	11

4. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2001.

**Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending June 30, 2001**

(a)	Employer annual required contribution	\$1,741,000
(b)	Interest on net pension obligation	0
(c)	Adjustment to annual required contribution	0
(d)	Annual pension cost (a) + (b) - (c)	<u>\$1,741,000</u>
(e)	Employer contributions made for fiscal year ending 6/30/01	<u>200,000</u>
(f)	Increase (decrease) in net pension obligation (d) - (e)	\$1,541,000
(g)	Net pension obligation beginning of fiscal year	0
(h)	Net pension obligation end of fiscal year (f) + (g)	<u>\$1,541,000</u>

**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 (NPO)</u>
June 30, 1999	\$ 694	100%	\$ 0
June 30, 2000	834	100	0
June 30, 2001	1,741	11	1,541

5. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at July 1, 2001. Additional information as of this actuarial valuation follows.

Valuation date	7/1/2001
Actuarial cost method	Entry age
Amortization method	Level percent of pay, open
Remaining amortization period	10 years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return*	7.00%
Projected salary increases*	5.50%
Cost-of-living adjustments	None
*Includes inflation at	3.50%

**SCHEDULE A****Valuation Balance Sheet****Present and Prospective Assets and Liabilities  
as of July 1, 2001**

<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		\$ 51,093,721
(2) Present active members		<u>205,169,443</u>
(3) Total Actuarial Liabilities		<u>\$ 256,263,164</u>
<u>Present and Prospective Assets</u>		
(4) Actuarial Value of Assets:		\$ 219,288,000
(5) Present value of total future contributions = (3) - (4)	\$ 36,975,164	
(6) Present value of future member contributions		28,273,980
(7) Present value of future employer contributions = (5) - (6)	\$ 8,701,184	
(8) Employer normal contribution rate		20.33%
(9) Present value of future payroll (1%)	\$ 3,536,935	
(10) Prospective normal contributions = (8) x (9)		71,905,889
(11) Prospective unfunded actuarial accrued liability contributions = (7) - (10)		<u>(63,204,705)</u>
(12) Total Present and Prospective Assets		<u>\$ 256,263,164</u>

**SCHEDULE B****Development of the June 30, 2001 Actuarial Value of Assets**

	<u>Total</u>
(1) Actuarial Value of Assets on June 30, 2000	\$ 204,136,000
(2) 2000/2001 Net Cash Flow	
a. Contributions	4,616,000
b. Disbursements	<u>5,204,000</u>
c. Net Cash Flow	
(2)a – (2)b	(588,000)
(3) Expected Investment Return [(1) x .07] + [(2)c. x .035]	14,269,000
(4) Expected Actuarial Value of Assets on June 30, 2001 (1) + (2)c + (3)	217,817,000
(5) Market Value of Assets on June 30, 2001	225,173,000
(6) Excess of Market Value over Expected Actuarial Value (5) – (4)	7,356,000
(7) 20% Adjustment towards Market .20 x (6)	1,471,000
(8) Actuarial Value of Assets on June 30, 2001 (4) + (7)	\$ 219,288,000

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

	<b>Year Ending</b>	
	<b><u>June 30, 2001</u></b> (\$ thousand)	<b><u>June 30, 2000</u></b> (\$ thousand)
<b><u>Receipts for the Year</u></b>		
Contributions:		
Members	\$ 3,347	\$ 2,884
Employers	<u>1,269</u>	<u>834</u>
Total	\$ 4,616	\$ 3,718
Investment earnings	(13,883)	14,350
Administrative expense allotment	<u>175</u>	<u>94</u>
TOTAL	\$ (9,092)	\$ 18,162
<b><u>Disbursements for the Year</u></b>		
Retirement allowances	\$ 5,150	\$ 4,480
Refunds to members	54	28
Administrative expense	<u>175</u>	<u>94</u>
TOTAL	\$ 5,379	\$ 4,602
<b><u>Excess of Receipts over Disbursements</u></b>	\$ (14,471)	\$ 13,560
<b><u>Reconciliation of Asset Balances</u></b>		
Asset balance as of the beginning of year	\$ 239,644	\$ 226,084
Excess of receipts over disbursements	<u>(14,471)</u>	<u>13,560</u>
Asset balance as of the end of year	<u>\$ 225,173</u>	<u>\$ 239,644</u>

**SCHEDULE D****Outline of Actuarial Assumptions and Methods**

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

**SALARY INCREASES:** 5.5% per annum.

**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	0%	.062%	.038%	.1%
25	0	.077	.050	.1
30	0	.100	.068	.2
35	0	.139	.094	.3
40	0	.203	.135	.4
45	0	.362	.202	.7
50	0	.656	.311	1.0
55	0	1.056	.471	1.8
60	0	1.566	.750	2.9
65	0	2.307	1.241	-

**RETIREMENT:** 10% retire each year beginning at age 60 with 10 years of service. An additional 40% retire at 16 years of service and the balance retire at 24 years of service or age 70.

**DEATHS AFTER RETIREMENT:** The 1994 Group Annuity Mortality Table rated forward two years 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	.125%	.082%	65	1.803%	1.076%
45	.190	.111	70	2.848	1.651
50	.321	.173	75	4.517	2.837
55	.558	.292	80	7.553	4.915
60	1.015	.583	85	11.567	8.402

**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:** Entry age actuarial cost method. See Schedule E for a brief description of this method.

**SPOUSES:** For members who have elected spouse coverage, husbands are assumed to be three years older than their wives.

**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 7.0%), 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. Future salary increases are also anticipated. 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 Major System Provisions as Interpreted for Valuation Purposes**

#### Service Retirement Benefit

Eligibility	Age 60 and 16 years of creditable service.
Benefit	Annual benefit is 66-2/3% of the annual salary plus 1% for each year of credited service over 16 years, not to exceed 24 years.

#### Early Retirement Benefit

Eligibility	Age 60 and 10 years of creditable service.
Benefit	A pro-rata portion of the normal retirement benefit, based on service not to exceed 16 years.

#### Disability Retirement Benefit

Eligibility	4 years of creditable service.
Benefit	For members with less than 10 years of creditable service: 1/2 of projected normal retirement benefit. For members with 10 or more years of creditable service: 2/3 of projected normal retirement benefit.

#### Death Benefit

Eligibility	10 years of creditable service during which the member has contributed for spouse coverage.
Benefit	50% of benefit which member was receiving if retired, or would have received had he retired on the date of his death. If under age 60, and the member was a member of a Predecessor Retirement System, an immediate benefit equal to 50% of the benefit which member would have received had he remained employed and retired at age 60. If under age 60 and not a member of a Predecessor Retirement System, an immediate benefit equal to 50% of the benefit which the member would have received if the member were age 60 on the date of death.

If member rejects spouse coverage or dies before contributing for spouse's coverage for at least 10 years, death benefit is return of member's contributions with interest.

Deferred Vested Retirement Benefit

Eligibility 10 years of creditable service.

Benefit Accrued benefit deferred to age 60.

Termination Benefit If a member terminates for reasons other than retirement, he or his beneficiary is entitled to a return of the member's accumulated contributions with interest in lieu of any other benefit.

Contributions Members contribute 7-1/2% of salary, plus 2-1/2% of salary for up to 16 years if spouse benefit is not rejected.

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

Cost-of-Living Allowance (COLA) There is no automatic provision. The Board or Legislature can make ad hoc increases.

**SCHEDULE G**

Table 1

**The Number of Members Distributed by  
Age as of June 30, 2001**

<u>Age</u>	<u>Men</u>	<u>Women</u>
31	1	
32	1	
33	1	1
34	3	1
35		1
36	3	1
37	2	
38	3	1
39	6	1
40	4	3
41	10	3
42	12	2
43	6	2
44	9	5
45	14	5
46	19	4
47	23	4
48	17	5
49	16	3
50	17	2
51	15	3
52	18	2
53	22	
54	22	1
55	22	1
56	11	1
57	12	2
58	13	
59	13	
60	17	
61	10	1
62	4	1
63	6	1
64		1
65	4	1
66	6	
67	5	
68	1	
70	1	
72	2	
73	1	
74	2	
75	1	
76	1	
<b>Total</b>	<b>376</b>	<b>59</b>

Table 2

**The Number of Members Distributed by  
Years of Creditable Service as of June 30, 2001**

<u>Years of Service</u>	<u>Men</u>	<u>Women</u>
0	8	5
1	33	12
2	21	4
3	20	2
4	26	4
5	37	7
6	17	4
7	12	2
8	19	4
9	13	3
10	9	3
11	7	
12	15	1
13	14	1
14	13	1
15	15	
16	19	4
17	11	1
18	15	
19	13	
20	14	1
21	7	
22	4	
23	7	
24	1	
25	3	
26	2	
31	1	
Total	376	59

Table 3

**The Distribution of the Number and Annual  
Retirement Allowances of Retirees  
Distributed by Age as of June 30, 2001**

**Members and Beneficiaries of the Retirement System**

Age	Men		Women	
	Number	Amount	Number	Amount
46			1	\$ 4,610
50			1	37,193
52	1	\$ 4,304		
55	1	5,084	2	56,845
58	1	44,516		
61	6	364,127		
62	3	114,024		
63			1	2,055
64	2	99,629	1	13,169
65			1	28,457
66	3	217,027	1	6,860
67	3	204,186	2	107,033
68	7	471,344		
69	6	318,542		
70	5	235,638	2	84,661
71	6	286,496	1	8,143
72	4	102,916	1	33,706
73	5	287,175		
74	2	91,530		
75	4	199,230		
76	2	39,038	3	110,322
77	8	416,945	2	46,083
78	7	258,482	1	3,496
79	4	151,797	1	29,879
80	8	407,101		
81	3	97,350	2	63,328
82	1	56,655		
83	1	58,634	2	71,794
84	1	19,068	2	26,352
85	3	126,230	1	46,799
86	1	51,691		
87	2	78,332		
88	1	20,659		
90	1	6,487		
<b>Total</b>	<b>102</b>	<b>\$ 4,834,237</b>	<b>28</b>	<b>\$ 780,785</b>