

## *Hall Actuarial Associates*

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September 17, 2001

Board of Trustees  
**LOUISIANA STATE EMPLOYEES'**  
**RETIREMENT SYSTEM**

Post Office Box 44213  
Baton Rouge, Louisiana 70804-4213

Ladies and Gentlemen:

This report presents the results of the actuarial valuation of assets and liabilities, as well as funding requirements, for the Louisiana State Employees' Retirement System as of June 30, 2001.

This report has been prepared in accordance with generally accepted actuarial principles and practices and to the best of my knowledge, fairly reflects the actuarial present value of accrued benefits of the Louisiana State Employees' Retirement System.

In preparing this valuation, I have relied upon the information provided regarding plan provisions, plan membership, plan assets and other matters as detailed in the exhibits of this report. In particular, I have relied upon the statement of assets as audited by Postlethwaite & Netterville, Certified Public Accountants.

The present values shown herein have been calculated on the basis of the actuarial cost methods as specified in Louisiana Revised Statutes Title 11 Section 22(6). The Actuarial Assumptions, which have been approved by the Board of Trustees, are appropriate for the purposes of this valuation, are reasonable in the aggregate, and when applied in combination represents my best estimates of the anticipated experience under the plan.

Board of Trustees  
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 September 17, 2001

A brief summary of the more important figures developed in this valuation, with comparable results from previous valuations are as follows:

	<u>June 30, 2001</u>	-----Prior Years-----	
		<u>June 30, 2000</u>	<u>June 30, 1999</u>
I. Membership Census			
1) Retirees	32,292	31,252	30,310
2) Actives	64,519	66,642	67,680
3) DROP	2,365	2,421	2,316
II. Annual Benefits	\$ 437,190,173	\$ 408,609,609	\$ 380,451,933
III. Total Payroll	1,782,884,536	1,820,131,590	1,736,963,422
IV. Valuation Assets	6,294,673,646	6,047,811,618	5,466,705,865
V. Experience Account	184,023,157	507,541,113	365,143,591
VI. Investment Yield			
Market Value	-6.25%	11.14%	8.44%
Actuarial Value	.37%	13.78%	13.10%
VII. Cost to Fund Annual Pension Accruals (Normal Costs)	260,560,598 14.61%	261,386,746 14.36%	248,945,409 14.33%
VIII. Unfunded Actuarial Accrued Liability	2,357,917,090	2,209,500,996	2,116,151,098
IX. Funded Percentage	72.8%	73.2%	72.1%
X. Funding Requirements to Pay (Mid-year payment)			
1) Employee Contribution Rate	141,151,604 7.670%	144,131,843 7.670%	137,614,795 7.674%
2) Employer Contribution Rate - Current Year	254,941,109 13.9%	243,162,427 12.9%	228,583,900 12.7%
3) Projected Employer Contribution - Next Year	267,823,237 14.1%	251,825,431 13.0%	240,620,254 13.0%

The above funding requirements measure the cost of benefits that were in effect on June 30, 2001, plus Acts of the 2001 Legislative Session which have prospective effects on current active members.

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**Current Funding**

The Actuarial Valuation for the plan year ending June 30, 2001 discloses an expected increase in the value of the plan's unfunded accrued liability as well as prospective funding requirements. It is generally appropriate for the current valuation process to disclose the source or cause of any significant changes in the plan from year to year. Changes that occur are usually the result of changes in actuarial assumptions, gains or losses resulting from actual experience which differs significantly from expected plan experience.

The basic elements of the annual required contribution are the normal cost and amortization of the Unfunded Actuarial Liability (UAL). The normal cost is the annual cost to provide an additional year of benefit accrual. The normal cost is divided into two parts, the employee portion and the employer portion, both expressed as a percentage of payroll. Act 81 of the 1988 Legislative Session provides for the amortization of the initial UAL, plus subsequent changes in benefits, methods or gain/loss experience.

To assist the Board of Trustees in reconciling changes in the unfunded actuarial accrued liability, the following gain/loss analysis is presented as follows:

**CHANGE IN UNFUNDED LIABILITY**

Unfunded Liability 6/30/2000		\$ 2,209,500,996
<b>INCREASES</b>		
Interest on Unfunded Liability	\$ 182,283,832	
Experience Account Allocation	-236,334,026	
Investment Loss	<u>472,668,051</u>	
Incurred Increases	418,617,857	
<b>DECREASES</b>		
Experience Gains	133,872,341	
Employer Amtz. Payment	134,581,416	
Employer Credit	<u>1,748,006</u>	
Incurred Decreases	270,201,763	
Unfunded Liability 6/30/2001		\$ 2,357,917,090

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The employer contribution rate established by the Public Retirement Systems' Actuarial Committee for the 2001-2002 plan year was 13.0%. The actual employer contribution rates determined by this valuation for the current plan year is 13.9%. The current adjusted rate is greater than the required employer's contributions when compared to the projected rates. Since the contribution rate is attributable to many factors, the following sections address the source and respective impact to the required employer contribution rate.

#### Actuarial Assets/Valuation Assets

The Actuarial Value of assets represents the gross actuarial assets determined in accordance with the methodology set forth in Exhibit 6 to fund all liabilities of the pension plan as well as side-fund accounts dedicated for other programs. The Asset Valuation Method utilizes a four year weight average of the unrealized gain/loss in the value of all assets at market. The Valuation Assets exclude the side-fund accounts for purposes of determining the employer contribution rate as illustrated on page 12 of Exhibit 2.

The side-fund accounts excluded are as follows:

- **Texaco Settlement Fund:** The purpose of this fund is to accumulate Texaco settlement contributions as a separate account invested at LASERS' actuarial rate of return. Once the accumulated value of the account equals the outstanding balance of the initial unfunded actuarial liability, the account and initial liability will be liquidated. The current account balance is \$123,622,555.
- **Experience Account Fund:** The purpose of this fund is to accumulate 50% of the excess investment gain or loss relative to the actuarial valuation rate of 8.25%. The account can be used to fund retiree COLA's. The benefit granted must be funded at 100% of actuarial cost. The current balance is \$184,023,157.

#### Investment Experience

The investment yield on the actuarial value of assets during the last five (5) years has been as follows for plan years ending June 30:

<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>5 Yr. Aver.</u>
14.03%	12.97%	13.10%	13.78%	.37%	10.72%

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The net actuarial rate of return assumed in the valuation was 8.25%. For the plan year ending June 30, 2001, the net realized actuarial rate of return was less than the long-term investment assumption used to project benefits. The result was a net investment experience loss of \$472,668,051 below projected investment income.

### Plan Experience

The actuary is charged with making the best estimate of future plan experience to properly fund future benefits. If the actual experience differs from the projected plan experience, a gain or loss occurs. This gain or loss is then amortized over the later of the year 2029 or a fifteen year period to make a mid-course adjustment in future funding requirements. During the 2000-2001 plan year, the system incurred a \$133,872,342 experience gain from sources other than investments. Part of this year's experience loss is due to data corrections.

### Funding as a Percentage of Payroll

The funding requirements mandated by Act 81 require the employee to contribute 7.5% of payroll for the plan year beginning in 1989. The employer will pay a percentage of the normal cost plus a dollar amount sufficient to amortize the unfunded liability over a 40 year period. However, in no event can the employer contribution rate drop below 12% without regard to employer credits without a corresponding adjustment to the employee contribution rate. To convert the dollar amortization payment to a percentage of payroll would suggest that the aggregate employer contribution rate would remain level as a percentage of pay provided aggregate salaries increase in unison with the rate of increase in annuity payments. This would imply that aggregate salaries should increase at a rate of at least 4.5% during the next twenty-eight (28) years. To determine whether this is a reasonable expectation, aggregate salary growth during the past ten (10) years is illustrated as follows:

<u>June 30</u>	<u>Payroll/\$1000</u>	<u>Percent Increase</u>
1992	1,454,370	6.3%
1993	1,504,147	6.2%
1994	1,546,465	5.7%
1995	1,547,977	0.1%
1996	1,584,357	2.4%
1997	1,607,371	1.5%
1998	1,653,863	2.9%
1999	1,736,963	5.0%
2000	1,820,132	4.8%
2001	1,782,884	2.7%

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During the last ten (10) years the aggregate salaries have increased at an annualized rate of 2.7%. If this trend continues, the percentage of pay required to amortize the unfunded liability can be expected to slightly increase in the absence of other experience gains or losses.

**Comments and Disclosures**

Exhibit 3, "Pension Accounting and Financial Disclosure", contains disclosure of the accrued liabilities under the Entry Age Normal Actuarial Cost Method required by the Governmental Accounting Standards Board Statement No. 25.

The format of this report was designed with the intent of highlighting the pertinent results of the valuation's funding requirements. Should you have any questions or comments, please do not hesitate to contact me.

Sincerely,

Charles G. Hall, FCA,MAAA,ASA  
Actuary

CGH/tt

Enclosure

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## EXHIBIT 1

DEVELOPMENT OF  
COSTS, LIABILITIES AND CONTRIBUTIONS

Normal Costs and Accrued Liabilities are calculated in accordance with the Projected Unit Credit Cost Method, and the Actuarial Assumptions outlined in Exhibit 6 based on the Provisions of the Plan as summarized in Exhibit 5.

	<u>June 30, 2001</u>		<u>---Prior Year---</u> <u>June 30, 2000</u>	
	<u>Dollar</u> <u>Amount</u>	<u>% of</u> <u>Salary</u>	<u>Dollar</u> <u>Amount</u>	<u>% of</u> <u>Salary</u>
I. Normal Costs				
Active Members with Complete Data				
a) Retirement Benefits	\$ 202,819,074	11.38%	\$ 202,731,984	11.14%
b) Disability Benefits	9,216,712	.52%	9,456,361	.52%
c) Survivor Benefits	10,690,362	.60%	10,933,283	.60%
d) Voluntary Termination	30,134,450	1.68%	31,265,118	1.72%
e) Expenses	7,700,000	.43%	7,000,000	.38%
TOTAL	<u>260,560,598</u>	<u>14.61%</u>	<u>261,386,746</u>	<u>14.36%</u>
II. Actuarial Accrued Liability				
a) Active Members				
1) Retirement Benefits	3,203,300,359		3,158,546,945	
2) Disability Benefits	128,964,714		130,657,929	
3) Survivor Benefits	121,193,541		122,797,565	
4) Voluntary Termination	200,443,234		204,032,097	
	<u>3,653,901,848</u>		<u>3,616,034,536</u>	
b) Retired and Inactive Members				
1) Regular Retirees	3,196,849,210		2,970,034,990	
2) Disabled Retirees	103,609,905		96,256,329	
3) Survivors	389,460,912		372,109,074	
4) Vested Deferred	62,930,969		49,779,120	
5) Contributions Refunded	29,573,052		23,951,064	
6) DROP Deferred Benefits	760,586,454		778,301,923	
7) DROP Account Balances	344,794,272		276,722,430	
	<u>4,887,804,774</u>		<u>4,567,154,930</u>	
c) SUB TOTAL	8,541,706,622		8,183,189,466	



**Exhibit 1 (Continued)**  
**Costs, Liabilities & Contributions**

	<u>June 30, 2001</u>	---Prior Year--- <u>June 30, 2000</u>
II. Actuarial Accrued Liability		
c) SUB TOTAL (Preceding page)	\$ 8,541,706,622	\$ 8,183,189,466
d) Adjustments to Regular Plan		
1) Active Judges	73,670,233	67,412,186
2) Active Legislators	8,762,907	6,710,962
3) Act 900 of 2001	<u>28,450,974</u>	-
Adjusted TOTAL	8,652,590,736	8,257,312,614
III. Valuation Assets	6,294,673,646	6,047,811,618
IV. Unfunded Actuarial Accrued Liabilities - Projected Unit Credit <sup>1</sup>	2,357,917,090	2,209,500,996
a) Change over prior year	148,416,094	93,349,898
b) Funded Percentage	72.8%	73.2%
V. Employer Contributions To Fund Current Plan Year <sup>1</sup>		
a) Employer Portion of Normal Cost	119,853,138	118,505,375
b) Amortization Payments	138,322,516	127,103,477
c) Prior Contribution Variance	<u>-3,234,545</u>	<u>-2,446,425</u>
TOTAL Required Contribution	254,941,109	243,162,427
	13.9%	12.9%
Plus State Appropriation	4,905,596	4,694,350
Actuarial Forecast Rate <sup>2</sup>	13.0%	13.0%
Employer Normal Cost Rate	6.5127%	6.6085%
VI. Projected Employer Contributions To Fund Next Plan Year <sup>1</sup>		
a) Employer Portion of Normal Cost	123,553,285	122,200,345
b) Amortization Payments	144,159,965	132,436,069
c) Prior Contribution Variance	<u>109,987</u>	<u>-2,810,983</u>
TOTAL Projected Contribution	267,823,237	251,825,431
	14.1%	13.0%
Plus State Appropriation	5,126,348	4,905,596
VII. Current Payroll	1,782,884,536	1,820,131,590
Projected Payroll - Mid Year	1,840,307,754	1,879,163,537
Projected Payroll - Next Year	1,897,122,360	1,937,755,420

<sup>1</sup> Dollar Amounts reflect estimated payments due mid-year on January 1st per Act 81.

<sup>2</sup> Constitutional Minimum is 12% without regards to Employer Credits.

**EXHIBIT 2**

**FINANCIAL SUMMARY  
STATEMENT OF REVENUES AND EXPENSES  
FOR FISCAL YEAR ENDING**

	<u>June 30, 2001</u>	-----Prior Years----- <u>June 30, 2000</u>	<u>June 30, 1999</u>
<b><u>OPERATING REVENUES:</u></b>			
1. Contribution Income			
Member	\$ 144,603,488	\$ 147,090,812	\$ 135,479,230
Employer	245,213,071	236,104,720	218,929,941
ORP	199,648	N/A	N/A
2. Other Income			
Legislative Appropriations	4,511,921	4,317,628	4,298,757
Miscellaneous	<u>7,391,078</u>	<u>4,340,993</u>	<u>4,876,291</u>
TOTAL CONTRIBUTIONS	401,919,206	391,854,153	363,584,219
3. Investment Income			
Investments	-390,005,584	683,725,329	486,276,546
Less, investment expenses	<u>-18,916,270</u>	<u>-19,295,553</u>	<u>-16,071,796</u>
TOTAL INVESTMENT INCOME	-408,921,854	664,429,776	470,204,750
4. Total Revenues	-7,002,648	1,056,283,929	833,788,969
<b><u>OPERATING EXPENSES:</u></b>			
1. General Administration	7,644,231	7,004,880	6,011,305
Other Expenses	6,228,406	3,237,333	2,778,584
2. Benefits Paid			
a) Pension Benefits	452,637,691	424,142,312	397,966,405
b) Return of Contrib.	<u>36,147,087</u>	<u>32,300,258</u>	<u>31,851,567</u>
TOTAL BENEFITS PAID	488,784,778	456,442,570	429,817,972
3. Total Operating Expenses	502,657,415	466,684,783	438,607,861
<b><u>NET INCOME:</u></b>	-509,660,063	589,599,146	395,181,108

**EXHIBIT 2 (Continued)**  
**Financial Summary**

**FINANCIAL SUMMARY**  
**STATEMENT OF ASSETS**  
**FOR FISCAL YEAR ENDING**

	<u>June 30, 2001</u>	<u>-----Prior Years-----</u>	
		<u>June 30, 2000</u>	<u>June 30, 1999</u>
<b><u>ASSETS:</u></b>			
1. Short Term Assets			
Cash/Cash Equivalencies	\$ 76,140,068	\$ 38,471,817	\$ 33,613,748
Short-term Investments	110,091,497	77,006,786	81,532,677
2. Bonds (at cost)			
Bonds - Government/Agency	491,890,992	640,660,774	538,763,961
Bonds - Municipal/Other	43,848,701	55,905,228	59,374,136
U.S. Government Obligations	45,475,052	125,545,803	184,723,362
Corporate Foreign Issues	1,258,956,320	1,171,331,352	1,221,122,416
3. Equities			
Common Stock	2,601,718,165	2,917,973,850	2,700,148,424
Foreign Stock	905,856,177	1,127,483,547	972,218,352
Preferred Stock	11,318,406	7,442,751	5,413,851
4. Other Assets			
Fixed Assets	5,936,957	5,696,807	7,073,482
Mortgages - Real Estate	380,168,063	368,534,535	184,430,016
5. Receivables - Payables	<u>152,253,680</u>	<u>57,260,892</u>	<u>15,300,570</u>
TOTAL ASSETS			
Market Value	6,083,654,078	6,593,314,141	6,003,714,995
Cost Value	6,088,049,624	6,003,057,015	5,313,803,853

**INVESTMENT YIELD:**

Yield to Actuarial Value	.37%	13.78%	13.10%
Five Year Actuarial Value	10.72%	13.24%	12.37%
Yield to Market Value	-6.25%	11.14%	8.44%
DROP Account Yield	-.13%	13.28%	12.60%

**EXHIBIT 2 (Continued)**  
**Financial Summary**

**FINANCIAL SUMMARY**  
**STATEMENT OF ASSETS**  
**FOR FISCAL YEAR ENDING**

	<u>June 30, 2001</u>	-----Prior Years-----	
		<u>June 30, 2000</u>	<u>June 30, 1999</u>
<b><u>ACTUARIAL VALUE OF ASSETS:</u></b>			
TOTAL ASSETS	\$ 6,083,654,078	\$ 6,593,314,141	\$ 6,003,714,995
Change in Unrealized (G/L)			
Plan Year - 2 (wt. 1/4)	-91,395,071	140,931,521	246,776,152
Plan Year - 1 (wt. 2/4)	-99,654,016	-91,395,071	140,931,521
Plan Year (wt. 3/4)	<u>-594,652,672</u>	<u>-99,654,016</u>	<u>-91,395,071</u>
Actuarial Value of Assets	<u>6,602,319,358</u>	<u>6,678,519,308</u>	<u>5,940,101,500</u>
<b><u>TEXACO SETTLEMENT FUND:</u></b>			
Prior Year Ending Balance	123,166,577	108,252,044	95,715,679
+ Current Year Allocation	0	0	0
+ Accumulated Interest	<u>455,978</u>	<u>14,914,533</u>	<u>12,536,365</u>
Fund Balance - Year End	123,622,555	123,166,577	108,252,044
<b><u>EXPERIENCE ACCOUNT FUND:</u></b>			
Prior Year Ending Balance	507,541,113	365,143,591	255,079,268
+ Experience Account Allocation	-236,334,026	150,024,124	119,571,018
- Benefit Disbursements	89,062,912	57,934,622	42,915,713
+ Accumulated Interest	<u>1,878,982</u>	<u>50,308,020</u>	<u>33,409,018</u>
Fund Balance - Year End	184,023,157	507,541,113	365,143,591
<b><u>DEVELOPMENT OF ACTUARIAL VALUATION ASSETS :</u></b>			
Total Actuarial Value of Assets Adjusted for:			
Texaco Settlement Fund	-123,622,555	-123,166,577	-108,252,044
Experience Account Fund	<u>-184,023,157</u>	<u>-507,541,113</u>	<u>-365,143,591</u>
Valuation Assets	<u>6,294,673,646</u>	<u>6,047,811,618</u>	<u>5,466,705,865</u>

## EXHIBIT 3

**PENSION ACCOUNTING  
AND  
FINANCIAL DISCLOSURE**

The Governmental Accounting Standards Board (GASB) was established as an arm of the Financial Accounting Foundation in April, 1984 by amendment to the Foundation's certificate of incorporation and by-laws. GASB's objective is to promulgate standards of financial accounting and reporting relative to the activities and transactions of state and local governmental entities. The following disclosures and statistical tables are in accordance with the GASB's Statement No. 25.

SCHEDULE OF FUNDING PROGRESS  
(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets <sup>1</sup> (a)	Actuarial Accrued Liability(AAL) (b)	Unfunded AAL (UAAL) <sup>1</sup> (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Payroll ((b-a)/c)
1991	2,516,742	4,499,312	1,982,570	55.9	1,368,480	144.9
1992	2,802,667	4,884,509	2,081,842	57.4	1,454,371	143.1
1993	3,044,727	5,123,410	2,078,683	59.4	1,504,147	138.2
1994	3,347,602	5,403,394	2,055,792	61.9	1,546,465	132.9
1995	3,665,863	5,696,909	2,031,046	64.3	1,547,977	131.2
1996	4,114,461	6,254,405	2,139,944	65.8	1,584,357	135.1
1997	4,537,917	6,489,361	1,951,444	69.9	1,607,371	121.5
1998	5,067,795	6,953,096	1,885,301	72.9	1,653,863	114.0
1999	5,574,958	7,582,856	2,007,898	73.5	1,736,963	115.6
2000	6,170,978	8,257,313	2,086,335	74.7	1,820,132	114.6
2001	6,418,296	8,652,591	2,234,295	74.2	1,782,884	125.3

The total actuarial accrued liability determined using the Projected Unit Credit cost method increased by \$395,278,122 from June 30, 2000 to June 30, 2001. There were de minimus changes in benefit provisions during the year. There was a net experience loss of \$102,461,684 after allocating \$236,334,026 of deficit investment income to the Experience Account in accordance with Act 1031. A COLA was granted to retirees on July 1, 2001 which reduced the Experience Account \$60,611,938. Act 900 of 2001, effective September 1, 2001, grants minimum benefits on an Ad-hoc basis which reduces the Experience Account \$28,450,974.

<sup>1</sup> UAAL differs from the UFAL for funding purposes. UFAL for funding purposes excludes Texaco Settlement Fund Assets which appears on page 5.

## SUPPLEMENTARY INFORMATION

## SCHEDULE OF EMPLOYER CONTRIBUTIONS

<u>Fiscal Year</u>	<u>Actuarial Required Contribution</u>	<u>Percent Contributed</u>	<u>Annual Pension Cost (APC)</u>	<u>Actual Contribution</u>	<u>Percentage of APC Contributed</u>	<u>Net Pension Obligation*</u>
1992	198,167,515	105.5	199,470,778	208,989,801	104.8	-11,259,859
1993	183,507,210	98.5	186,235,605	180,708,603	97.0	- 6,438,324
1994	189,566,536	98.7	191,589,377	187,058,006	97.6	- 2,254,901
1995	196,931,081	103.5	198,321,499	203,773,245	102.7	- 8,113,103
1996	203,762,677	99.3	206,878,066	202,316,644	97.8	- 4,036,582
1997	212,221,189	98.4	214,971,990	208,924,646	97.3	1,922,284
1998	221,933,246	104.9	221,250,489	232,843,174	105.2	- 9,670,401
1999	226,387,848	102.1	228,233,262	231,043,705	101.2	-12,480,844
2000	250,678,505	99.8	254,123,833	250,143,249	98.4	-8,500,260
2001	258,281,738	100.7	260,125,807	260,029,744	100.0	-8,404,197

Analysis of the percentage contributed over a period of years will give a relative indication of the funding progress for the liabilities of the Louisiana State Employees' Retirement System.

The difference between the Actuarial Required Contribution and the APC is the amortization payment for the Net Pension Obligation (see Exhibit A page 29).

**DEVELOPMENT OF NET PENSION OBLIGATION**

(1) Actuarial Required Contribution	258,281,738
(2) Interest on Net Pension Obligation	-701,271
(3) Amortization of Net Pension Obligation	<u>-2,545,340</u>
(4) Annual Pension Cost (1)+(2)-(3)	260,125,807
(5) Employer Contribution	260,029,744
(6) Increase (decrease) in Net Pension Obligation	96,063
(7) Net Pension Obligation Beginning of Year	-8,500,260
(8) Net Pension Obligation End of Year (6)+(7)	-8,404,197

\*Actuarial Contributions, the Annual Pension Cost (APC), and the actual employer contribution made have been adjusted with interest at the valuation rate to the end of the fiscal year in accordance with GASB's Statement No. 27, paragraph 21.

EXHIBIT 3 (Continued)

## Pension Accounting &amp; Financial Disclosure

## STATISTICAL DATA

COMPARATIVE SUMMARY OF REVENUES BY SOURCE  
AND EXPENSES BY TYPE

## Revenues by Source

<u>Fiscal</u> <u>Year</u>	<u>Members</u> <u>Contribution</u>	<u>Employer</u> <u>Contribution</u> <sup>1</sup>	<u>Investment</u> <u>Income</u>	<u>Total</u>
1992	110,481,391	214,125,413	273,259,377	598,259,377
1993	114,443,629	186,827,419	179,402,382	480,673,430
1994	118,255,907	227,669,691	238,487,231	584,412,829
1995	123,370,058	217,590,817	317,004,128	657,965,003
1996	126,073,816	236,967,776	328,419,628	691,461,220
1997	126,793,791	213,885,597	485,694,849	826,374,237
1998	129,724,456	229,834,528	464,769,328	824,328,312
1999	135,479,230	228,104,989	470,204,750 <sup>2</sup>	833,788,969
2000	147,090,812	244,763,341	665,087,756	1,056,941,909
2001	144,603,488	257,315,718	-408,921,854	-7,002,648

## Expenses by Type

<u>Fiscal</u> <u>Year</u>	<u>Benefits</u>	<u>Refunds</u>	<u>Administrative</u> <u>Expenses</u> <sup>3</sup>	<u>Total</u>
1992	250,765,789	23,820,931	3,494,170	278,080,890
1993	261,822,720	21,720,224	4,702,924	288,245,868
1994	275,503,281	23,955,748	5,724,497	305,183,526
1995	288,641,870	25,072,191	6,465,576	320,179,637
1996	317,340,115	27,222,153	6,668,955	351,231,223
1997	340,052,578	28,945,409	6,773,908	375,771,895
1998	359,625,826	32,156,373	9,205,446	400,987,645
1999	397,966,405	31,851,567	8,789,889	438,607,861
2000	424,142,312	32,300,258	10,242,213	466,684,783
2001	452,637,691	36,147,087	13,872,637	502,657,415

<sup>1</sup>Includes transfers and purchases and the annual employer contribution.<sup>2</sup>Prior to 6/30/99, reported realized investment income. A change in Asset Valuation Method now reports realized and unrealized investment income at market (see Exhibit 6, page 26).<sup>3</sup>Includes other expenses, not related to the administration of daily operation.

## EXHIBIT 4

## CENSUS DATA

The data contained in this valuation is summarized on the following pages with exceptions noted below. The profile depicted in the cellular graphs represents "error-free data," which serves as the basis for determining costs and liabilities. Active members are allocated to cells based upon attained age and years of service. Retirees and Survivors are allocated to cells based upon attained age and years elapsed since retirement or commencement of benefits.

The validity of the results of any actuarial valuation is dependent upon the accuracy of the data base. Prior to processing, suspicious data and data containing errors were purged from the data base and processed separately based on the following error types:

- missing sex code
- missing or invalid date of birth
- missing or invalid date of employment
- missing or invalid salary
- invalid retirement dates.

There were numerous records purged from the data base containing errors or categorized as suspicious data which is not necessarily significant. These records had the basic characteristic of a terminated non-vested participant which have balances of \$50 or less in their accumulated employee contribution account. Suspicious data are not necessarily errors, but data which falls outside the parameters of the editing process for further checking. There were 28,223 records for terminated non-vested members due a refund.

Salary data contained in the profiles and valuation report exceed the amount reported by internal audit due to salary annualization. In the valuation process, membership data with fractional service in the first year of employment annualizes the salary. The following is a summary by plan of the data submitted for valuation:

	---2001---	---2000---
	<u>Census</u>	<u>Census</u>
Active Members	64,519	66,642
Regular Retirees	24,606	23,900
Disability Retirees	1,184	1,150
Survivors	5,202	5,147
Vested & Reciprocals	1,300	1,055
Due Refunds	28,223	26,469
DROP Participants	<u>2,365</u>	<u>2,421</u>
TOTAL	127,399	126,784



EXHIBIT 5

PRINCIPLE PROVISIONS OF THE PLAN  
(Including Acts of 2001 Regular Session)

EFFECTIVE DATE:

July 1, 1947; last amendment date - July 1, 2001.

EMPLOYEE:

Any person legally occupying a position in the state service.

EMPLOYER:

The State of Louisiana or any of its boards, commissions, departments, agencies and courts which are contributing members and those approved for membership by the legislature from which any employee receives his compensation.

ELIGIBILITY FOR PARTICIPATION:

Condition of employment in state service except the following: elected or appointed officials or employees who are contributing members of any other state system; public officials and state employees who receive a per diem in lieu of compensation; persons employed prior to 1/1/73 who work on a part-time basis and elect not to participate; patient or inmate help in state charitable, penal or correctional institutions; part-time students, interns and resident physicians; independent contractors; employees who are age 60 or older at time of employment; retirees of the retirement system who return to work under certain conditions; judges who failed to elect membership prior to 10/2/76; civilian employees who on 11/1/81 were within five years of retirement eligibility in the Federal Civil Service Retirement and Disability Fund; teachers employed after 9/10/82; nurses employed from employment pools at state charity hospitals; temporary, seasonal, part-time employees of DOTC, or as defined in federal law.

SERVICE:

Service as an "Employee", defined above.

CREDITABLE SERVICE:

For service prior to January 1, 1973: 1/4 year granted for each 89 day interval of service, not to exceed 1 credit per fiscal year. Minimum 50 days required for 1st Quarter credit.

For service on or after January 1, 1973, a member shall receive credit based on the ratio of actual pay to the annual base per calendar year. Fractional service shall be rounded to the next highest 1/10th, not to exceed 100 percent per year.

**EXHIBIT 5 (Continued)**  
**Principle Provisions**

**ADDITIONAL**  
**CREDITABLE SERVICE:**

1. Credit for service canceled by withdrawal of accumulated contributions may be restored by member by paying into system the amount withdrawn plus interest at the Actuarial Valuation rate.
2. Maximum of 4 years of credit for military service may be obtained for each member with at least 2 years service, contingent on payment of Actuarial Cost.
3. Credit for educational leave or any period of training, up to a maximum of three years, for which a stipend was paid and the member was bound to return to the employ and does return to the employ of such agency.
4. Credit for service which was classified as a job appointment or emergency appointment not to exceed 2 years credit.
5. At retirement, all accumulated unused sick and annual leave shall be credited based on the following schedule:

1 - 26 Days	10% of a Year
27 - 52 Days	20% of a Year
53 - 78 Days	30% of a Year
79 - 104 Days	40% of a Year
105 - 130 Days	50% of a Year
131 - 156 Days	60% of a Year
157 - 182 Days	70% of a Year
183 - 208 Days	80% of a Year
209 - 234 Days	90% of a Year
235 - 260 Days	100% of a Year

Actuarial Equivalent Lump-sum is available after August 15, 1993.

**EARNABLE COMPENSATION:**

The base pay earned by an employee for a given pay period as reported by the employing agency including the full amount earned, expense allowances, over-time paid to employees of the legislative branch, per diem paid to members of the legislature, the clerk or sergeant-at-arms of the house and the president and secretary of the senate.

**AVERAGE FINAL COMPENSATION**  
**FOR BENEFIT PURPOSES:**

The average annual earned compensation for the thirty-six highest months of successive employment, or the highest thirty-six successive joined months where interruption of service occurred; part-time employees use the base pay the part-time employee would have received had employment been full-time.

**EXHIBIT 5 (Continued)**  
**Principle Provisions**

**ACCUMULATED CONTRIBUTIONS:**

The sum of all amounts deducted from the earned compensation of a member and credited to the individual account in the employee's savings account, together with regular interest credited prior to July 1971.

**EMPLOYEE CONTRIBUTIONS:**

		<u>After June 30, 1989</u>
Individual Employees	7% of Compensation	7.5%
Agents of DOC	8.5% of Compensation	9.0%, 7.5% after DROP
Wildlife Agents	8% of Compensation	8.5%
Legislators, Judges	11% of Compensation	11.5%

**EMPLOYER CONTRIBUTIONS:**

9% of Compensation by statute; 9.2% effective 8/1/80; 10.2% effective 7/1/84; 11.2% effective 9/11/85. Act 81 of 1988 requires employer rate to be actuarially determined and set annually.

**RETIREMENT BENEFIT:**

**NORMAL RETIREMENT:**

**Eligibility:**

- Written application to the Board and,
1. Member has attained age 60 and 10 years of accredited service, or age 55 and 25 years of accredited service, or at any age and 30 years of accredited service.
  2. Certain members of the Department of Public Safety and Corrections, 20 years of accredited service at any age (age 50 if employed after August 15, 1986, or 25 years of service at any age). For new hires after December 31, 2001, retirement eligibility is 25 years of service at any age.
  3. Service as a judge or court officer, 18 years of creditable service regardless of age, or age 50 and 20 years of accredited service, or age 55 and 12 years of accredited service, or age 70 without regard to accredited service.
  4. Members of the legislature, governor, lieutenant governor and state treasurer, 16 years of such service without regard to age, or age 50 with 20 years of accredited service with 12 years of such service, or age 55 with 12 years of such service.

**Benefit:**

1. Annual pension equal to 2 1/2 percent of average compensation for each year of creditable service, plus \$300 supplemental benefit.
2. Annual pension equal to 2 1/2 percent of average compensation for each year of creditable service, plus \$300 supplemental benefit. For new hires after December 31, 2001, the annual pension equals 3 1/3% of average compensation for each year of creditable service, plus \$300 supplemental benefit.

**EXHIBIT 5 (Continued)**  
**Principle Provisions**

3. Annual pension equal to 3 1/2 percent of average compensation for each year of creditable service as a judge or court officer, plus benefit described in (1) above for other state service.

4. Annual pension equal to 3 1/2 percent of average compensation for each year of creditable service as a legislator, governor, lieutenant governor, employees of the legislature or state treasurer, plus benefit described in (1) above for other state service.

**NOTE:**

A. Benefit not to exceed 100% of average earnable compensation.

B. Retiree who returns to work shall have benefits suspended while so re-employed; benefit in same amount shall resume after re-employment ceases, but shall include any Cost-of-Living benefits or increases granted during suspension (these are not retroactive). Retirees who return to work during a July 1 to June 30 year will not have his benefits reduced if his compensation does not exceed 50% of his annual benefit.

C. The \$300 annual supplemental benefit is discontinued to persons who become members of the retirement system after 6/30/86 (Act 608 of 1986).

D. For members employed after January 1, 1990, the annual pension cannot exceed the maximum benefit provided under Section 415(b)(2)(F) of the Internal Revenue Service Code as adjusted for inflation and form of benefit other than life annuity or qualified joint and survivor annuity for retirement ages as follows:

<u>AGE</u>	<u>MAXIMUM</u>	<u>AGE</u>	<u>MAXIMUM</u>	<u>AGE</u>	<u>MAXIMUM</u>
48	\$26,622	56	\$55,597	64	\$125,422
49	29,106	57	61,229	65	140,000
50	31,844	58	67,517	66	150,215
51	34,865	59	74,551	67	161,360
52	38,205	60	82,440	68	173,533
53	41,900	61	91,309	69	186,044
54	45,995	62	101,306	70	201,420
55	50,541	63	112,607		

**EARLY RETIREMENT:**

Eligibility:

20 years of service credit regardless of attained age.

Benefit:

Normal retirement benefit based upon service accrued to date, actuarially reduced from the earliest date member would be eligible if employment had continued, to the earliest normal retirement date.

EXHIBIT 5 (Continued)  
Principle Provisions

COST-OF-LIVING BENEFITS:

Act 572 of 1992 establishes an Experience Account which is credited with 50% of the excess investment experience gain and debited with 50% of the net investment experience loss. Balances in the experience account accrue interest at the average actuarial yield for the System portfolio. Act 402 of 1999 establishes that once the balance of the Experience Account accumulates to a sum sufficient to grant retirees a COLA, the Board shall grant such COLA not to exceed the lesser of the CPI-U or 2%. Benefits are restricted to those retirees who have attained the age of 55 and have been retired for at least one year.

Acts 1016 and 1162 of the 2001 legislative session modify previous COLA provisions. The COLA shall be based on the first seventy thousand dollars of the retiree's annual benefit. The 2% COLA may be increased to 3% provided the yield on the investments of the system's assets exceed 8.25%. The minimum age 55 for the receipt of a COLA was removed for disability retirees.

MAXIMUM BENEFITS:

Effective September 1, 2001, retirees and beneficiaries receiving retirement benefits shall be entitled to a minimum benefit which is not less than \$30.00 per month for each year of creditable service. The minimum benefit is adjusted for the option elected at retirement.

DISABILITY RETIREMENT:

Eligibility:

10 years of creditable service; certification of disability by medical board (medical examination may be required once in every year for the first 5 years of disability retirement, and once in every 2 years thereafter, until age 60.)

Benefit:

- 1) The disability retirement annuity shall be equivalent to the regular retirement formula without reduction by reason of age for all classes of membership.
- 2) For judges and court officers, the benefit in (1) but not less than 50% of current salary.
- 3) For certain Wildlife agents; partial disabilities not eligible for (1) above receive 75% of the benefit in (1); total disability in-line-of-duty receive 60% of average compensation.

EXHIBIT 5 (Continued)  
Principle Provisions

SURVIVOR'S BENEFITS:

Eligibility:

1. Surviving spouse with minor children, legally married 2 years prior to date of death of a member with 5 years of service credit, 2 of which were earned immediately prior to death, or 20 years of service.
2. Surviving spouse, legally married 2 years prior to death, of a deceased member with 10 years of service credit, 2 of which were earned immediately prior to death, or 20 years of service regardless of date earned.
3. Surviving minor child, with no spouse of a deceased member with 5 years of service credit, 2 of which were earned immediately prior to death, or 20 years of service regardless of date earned.
4. Surviving handicapped or mentally retarded children.
5. Surviving spouse of a judge or court officer.
6. Beneficiary not eligible for (1), (2), (3), (4) or (5).

Benefit:

1. Greater of 75% of member's average compensation or \$300 per month. One-third of the benefit is designated for survivor, two-thirds for minor children.
2. Greater of 50% of member's average compensation or \$200 per month.
3. Greater of 75% of member's average compensation or \$300 per month.
4. Continuation of minor child's benefit described above in (1) or (3) whichever is applicable.
5. Survivor's benefit described in (1) or (2), but not less than the greater of 1/3 the member's compensation or 50% of the retirement pay which such member was entitled or receiving prior to death.
6. Return of member's accumulated contributions.

OPTIONAL FORMS  
OF BENEFIT:

In lieu of receiving normal retirement benefit, member may elect to receive actuarial equivalent of retirement allowance in a reduced form as follows:

Option 1 - If a member dies before receiving present value of annuity in monthly payments, balance paid to designated beneficiary.

**EXHIBIT 5 (Continued)**  
**Principle Provisions**

Option 2 - Reduced retirement allowance, if member dies, to be continued to designated beneficiary for his lifetime.

Option 3 - 1/2 of reduced retirement allowance, if member dies, to be continued to designated beneficiary for his lifetime.

Option 4 - Other benefits of equal actuarial value may be elected with approval of board.

A. 90% of the maximum retirement allowance to member; if member dies, 55% of the maximum retirement allowance continued to beneficiary.

B. 90% of the maximum retirement allowance to member; if member dies, 55% of the maximum retirement allowance continues to beneficiary adjusted based on the age and relationship of the beneficiary to the member.

Initial Benefit Option - Maximum benefit actuarially reduced for partial lump-sum equal to not more than 36 months of maximum monthly pension.

C. Special reversionary annuities to Options 2, 3, and 4. Member's reduced benefit reverts to the maximum if the beneficiary predeceases the annuitant.

If divorced after retirement, optional benefit can revert to maximum benefit with actuarial adjustment.

**REFUND OF CONTRIBUTIONS:**

If a member ceases to be a member, except by death or retirement, he shall be paid such part of the amount of the accumulated contributions credited to his individual account in annuity savings fund as he shall demand, plus any accumulated interest thereon as of 6/30/71; if member of legislature, no interest. No interest credited after 6/30/71. Death prior to retirement - accumulated contributions credited to individual account in annuity savings fund are returnable to designated beneficiary, if any; otherwise, to his estate.

**WITHDRAWAL AFTER 10 YEARS**  
**OF CREDITABLE SERVICE:**

Any member with credit for 10 years of service who withdraws from service may elect to leave accumulated contributions in system until age 60, when he may apply for retirement and begin receiving a retirement benefit based on the credits he had at date of withdrawal.

**EXHIBIT 6**

**ACTUARIAL COST METHODS AND ASSUMPTIONS**

**COST METHOD:**

The individual "Projected Unit Credit" cost method was used to calculate the funding requirements of the retirement system. Under this cost method, the actuarial present value of projected benefits of each individual included in the valuation is accumulated from the participant's attained age to the anticipated retirement dates. That portion of the actuarial present value attributable to current year benefit accruals is called the Normal Cost. The actuarial present value of future benefits in proportion to service accrued on the date of valuation is called the actuarial accrued liability.

**ACCOUNTING DISCLOSURE:**

The Governmental Accounting Standards Board Statement No. 25 requires the disclosure of certain Actuarial Liabilities for Public Employees Retirement Systems. The disclosures illustrated in Exhibit 3 were developed using the Projected Unit Credit cost method. The statement of assets provided by the audit staff was the final draft prior to publication. Should the statement of assets received differ from the final audit report, a revised actuarial statement will be issued, but only to the extent that any difference in reporting affects the employer's contribution rate or the yield to the Actuarial Value of Assets.

**MORTALITY ASSUMPTIONS:**

Pre-retirement deaths and post-retirement life expectancies were projected in accordance with the experience of the 1983 Sex Distinct Graduated Group Annuity Mortality Table, with female age set at attained age plus one.

**DISABILITY ASSUMPTION:**

Rates of total and permanent disability were projected by age in accordance with the 1981-86 disability experience study of the Retirement System. For mortality after disability, rates were on the Eleventh Actuarial Valuation of the Railroad Retirement Systems for permanent disabilities.

**RETIREMENT ASSUMPTION:**

Retirement without reduction in benefits can occur at any given age after satisfying the service eligibility requirements. Absent from the plan is a traditional "Normal Retirement Age". Since the age and service requirements are varied, the frequency of retirements will depend on the exposure plus intangibles such as health, economy, Social Security and other work patterns. The retirement rates were projected based on the 1981-86 experience study of the Retirement System.



**EXHIBIT 6 (Continued)**  
**Cost Methods & Assumptions**

**TERMINATION ASSUMPTIONS:**

Voluntary termination or withdrawal rates were derived from the 1981-86 termination experience study of the Retirement System. During the first five years of employment, the probability of voluntarily terminating is a multiple of the attained age rate as follows:

	<b><u>Regular Members</u></b>	<b><u>Corrections &amp; Wildlife</u></b>
1st year	1.3x	1.6x
2nd year	1.0x	1.2x
3rd year	1.0x	1.1x
4th year	1.0x	1.1x
5th year	1.0x	1.0x

Furthermore, for members terminating with ten (10) or more years of service, it is assumed that 80% will not withdraw their accumulated employee contributions.

**SALARY GROWTH:**

The rate of annual salary growth is based on the 1981-86 salary growth experience study of the Retirement System.

**FAMILY STATISTICS:**

The composition of the Family was based on Age-Specific Fertility Rates from the 1983 Vital Statistics of the United States. 80% of the membership was assumed to be married with the wife assumed to be three (3) years younger than the husband. Sample rates are as follows:

<b><u>Age at Death</u></b>	<b><u>Number of Minor Chn.</u></b>	<b><u>Years for Youngest Child to Attain Majority</u></b>
25	1.3	17
30	1.8	15
35	2.2	13
40	2.1	10
45	1.7	8
50	1.2	4

**EXHIBIT 6 (Continued)**  
**Cost Methods & Assumptions**

**ASSUMPTION FOR INCOMPLETE DATA:**

Records identified as containing suspicious data or errors in data were assumed to possess the same characteristics of "good data" in the same cohort.

**INVESTMENT EARNINGS:**

An effective annual rate of 8 1/4%, net expenses.

**ASSET VALUATION:**

For Plan Year ending prior to June 30, 1999, equities were valued on a four year weighted average. The computation of the average actuarial value of assets was the sum of the bonds at amortized cost, plus a weighted average of the change in the unrealized losses or (gains) in the market value of equities offset against the market value of equities.

Effective June 30, 1999, the Board of Trustees approved a change in the Asset Valuation Method. The Actuarial Value is the market value of assets adjusted for a four year weighted average of the unrealized gain or loss in the value of all assets. This value is determined in accordance with Reg. 1.412(c)(2)-1-(6) & (7) of the Internal Revenue Service Code and is subject to the Corridor Limits defined therein.

As a result of the change in the Asset Valuation Method, the reporting of realized income has been changed to realized, plus unrealized income for valuations beginning on June 30, 1999 and thereafter.

**ADMINISTRATIVE EXPENSES:**

Expenses are included in Aggregate Normal Cost and are assumed to be \$7,700,000 per year. Investment Manager fees are not included in Normal Cost but are treated as a direct offset to investment income. The Employer portion of the Normal Cost excludes an allocation for administrative expenses.

**COST-OF-LIVING:**

The liability for a cost-of-living raise already granted is included in the retiree reserve.

ACTUARIAL TABLES AND RATES  
(STATE EMPLOYEES' ASSUMPTIONS)

Age	- Death Rates - Male	- Death Rates - Female	Remarriage Rates	Disability Rates	Retirement Rates	Dur	Termination Rates	Salary Scale
20	.00042	.00022	.09350	.00000	.00000	1	.27500	1.11750
21	.00044	.00024	.09152	.00000	.00000	2	.32400	1.10750
22	.00045	.00025	.08954	.00000	.00000	3	.16400	1.09750
23	.00047	.00027	.08757	.00000	.00000	4	.13700	1.08250
24	.00049	.00028	.08569	.00000	.00000	5	.11800	1.07750
25	.00052	.00030	.08402	.00000	.00000	6	.11000	1.07250
26	.00054	.00032	.08225	.00000	.00000	7	.10100	1.07050
27	.00057	.00034	.08028	.00000	.00000	8	.08500	1.06850
28	.00060	.00036	.07802	.00000	.00000	9	.07100	1.06650
29	.00064	.00038	.07556	.00000	.00000	10	.05800	1.06350
30	.00067	.00040	.07281	.00020	.00000	11	.03200	1.06050
31	.00072	.00043	.06976	.00020	.00000	12	.02400	1.05750
32	.00076	.00046	.06652	.00030	.00000	13	.02000	1.05450
33	.00082	.00049	.06308	.00030	.00000	14	.02000	1.05150
34	.00087	.00053	.05945	.00040	.00000	15	.01700	1.04850
35	.00096	.00056	.05582	.00050	.00000	16	.01700	1.04550
36	.00101	.00060	.05230	.00060	.00000	17	.01300	1.04250
37	.00107	.00064	.04890	.00080	.00000	18	.01300	1.04250
38	.00115	.00069	.04570	.00100	.00000	19	.01300	1.04250
39	.00125	.00074	.04271	.00120	.00000	20	.01300	1.04250
40	.00138	.00080	.03993	.00130	.50000	21	.01200	1.04250
41	.00152	.00086	.03769	.00140	.50000	22	.01200	1.04250
42	.00170	.00094	.03480	.00150	.50000	23	.01200	1.04250
43	.00191	.00102	.03256	.00170	.50000	24	.01200	1.04250
44	.00215	.00112	.03037	.00200	.65000	25	.01100	1.04250
45	.00243	.00124	.02822	.00240	.65000	26	.01100	1.04250
46	.00275	.00137	.02632	.00280	.32000	27	.00800	1.04250
47	.00310	.00152	.02455	.00320	.32000	28	.00700	1.04250
48	.00349	.00167	.02303	.00360	.42000	29	.00600	1.04250
49	.00390	.00183	.02154	.00450	.43000	30	.01400	1.04250
50	.00434	.00199	.02019	.00540	.43000	31	.01300	1.04250
51	.00480	.00217	.01889	.00670	.42000	32	.01300	1.04250
52	.00528	.00236	.01808	.00800	.42000	33	.02000	1.04250
53	.00578	.00257	.01733	.00670	.42000	34	.01500	1.04250
54	.00629	.00282	.01671	.00540	.42000	35	.01500	1.04250
55	.00681	.00311	.01622	.00670	.47000	36	.01500	1.04250
56	.00735	.00345	.01596	.00920	.34000	37	.01500	1.04250
57	.00793	.00383	.01584	.01040	.32000	38	.01500	1.04250
58	.00858	.00425	.01589	.01140	.32000	39	.00000	1.04350
59	.00932	.00471	.01622	.01040	.32000	40	.00000	1.04550
60	.01018	.00523	.01682	.00400	.32000	41	.00000	1.04850
61	.01118	.00579	.01764	.00330	.27000	42	.00000	1.05150
62	.01237	.00641	.01906	.00250	.27000	43	.00000	1.05450
63	.01377	.00710	.02061	.00250	.27000	44	.00000	1.05750
64	.01541	.00785	.02239	.00300	.27000	45	.00000	1.05750
65	.01732	.00869	.02446	.00400	.44000	46	.00000	1.05750
66	.01953	.00965	.02684	.00000	.32000	47	.00000	1.05750
67	.02200	.01078	.02952	.00000	.32000	48	.00000	1.05750
68	.02470	.01214	.03209	.00000	.32000	49	.00000	1.05750
69	.02757	.01376	.03504	.00000	.42000	50	.00000	1.05750

ACTUARIAL TABLES AND RATES  
(JUDGES & LEGISLATORS ASSUMPTIONS)

Age	- Death Rates - Male	- Death Rates - Female	Remarriage Rates	Disability Rates	Retirement Rates	Dur	Termination Rates	Salary Scale
20	.00042	.00022	.09350	.00000	.00000	1	.27500	1.04750
21	.00044	.00024	.09152	.00000	.00000	2	.32400	1.04750
22	.00045	.00025	.08954	.00000	.00000	3	.16400	1.04750
23	.00047	.00027	.08757	.00000	.00000	4	.13700	1.04750
24	.00049	.00028	.08569	.00000	.00000	5	.11800	1.04750
25	.00052	.00030	.08402	.00000	.00000	6	.11000	1.04750
26	.00054	.00032	.08225	.00000	.00000	7	.10100	1.04750
27	.00057	.00034	.08028	.00000	.00000	8	.08500	1.04750
28	.00060	.00036	.07802	.00000	.00000	9	.07100	1.04750
29	.00064	.00038	.07556	.00000	.00000	10	.05800	1.04750
30	.00067	.00040	.07281	.00020	.00000	11	.03200	1.04750
31	.00072	.00043	.06976	.00020	.00000	12	.02400	1.04750
32	.00076	.00046	.06652	.00030	.00000	13	.02000	1.04750
33	.00082	.00049	.06308	.00030	.00000	14	.02000	1.04750
34	.00087	.00053	.05945	.00040	.00000	15	.01700	1.04750
35	.00096	.00056	.05582	.00050	.00000	16	.01700	1.04750
36	.00101	.00060	.05230	.00060	.00000	17	.01300	1.04750
37	.00107	.00064	.04890	.00080	.00000	18	.01300	1.04750
38	.00115	.00069	.04570	.00100	.00000	19	.01300	1.04750
39	.00125	.00074	.04271	.00120	.00000	20	.01300	1.04750
40	.00138	.00080	.03993	.00130	.50000	21	.01200	1.04750
41	.00152	.00086	.03769	.00140	.50000	22	.01200	1.04750
42	.00170	.00094	.03480	.00150	.50000	23	.01200	1.04750
43	.00191	.00102	.03256	.00170	.50000	24	.01200	1.04750
44	.00215	.00112	.03037	.00200	.65000	25	.01100	1.04750
45	.00243	.00124	.02822	.00240	.65000	26	.01100	1.04750
46	.00275	.00137	.02632	.00280	.32000	27	.00800	1.04750
47	.00310	.00152	.02455	.00320	.32000	28	.00700	1.04750
48	.00349	.00167	.02303	.00360	.42000	29	.00600	1.04750
49	.00390	.00183	.02154	.00450	.43000	30	.01400	1.04750
50	.00434	.00199	.02019	.00540	.43000	31	.01300	1.04750
51	.00480	.00217	.01889	.00670	.42000	32	.01300	1.04750
52	.00528	.00236	.01808	.00800	.42000	33	.02000	1.04750
53	.00578	.00257	.01733	.00670	.42000	34	.01500	1.04750
54	.00629	.00282	.01671	.00540	.42000	35	.01500	1.04750
55	.00681	.00311	.01622	.00670	.47000	36	.01500	1.04750
56	.00735	.00345	.01596	.00920	.34000	37	.01500	1.04750
57	.00793	.00383	.01584	.01040	.32000	38	.01500	1.04750
58	.00858	.00425	.01589	.01140	.32000	39	.00000	1.04750
59	.00932	.00471	.01622	.01040	.32000	40	.00000	1.04750
60	.01018	.00523	.01682	.00400	.32000	41	.00000	1.04750
61	.01118	.00579	.01764	.00330	.27000	42	.00000	1.04750
62	.01237	.00641	.01906	.00250	.27000	43	.00000	1.04750
63	.01377	.00710	.02061	.00250	.27000	44	.00000	1.04750
64	.01541	.00785	.02239	.00300	.27000	45	.00000	1.04750
65	.01732	.00869	.02446	.00400	.44000	46	.00000	1.04750
66	.01953	.00965	.02684	.00000	.32000	47	.00000	1.04750
67	.02200	.01078	.02952	.00000	.32000	48	.00000	1.04750
68	.02470	.01214	.03209	.00000	.32000	49	.00000	1.04750
69	.02757	.01376	.03504	.00000	.42000	50	.00000	1.04750

## EXHIBIT A

AMORTIZATION OF UNFUNDED  
ACTUARIAL ACCRUED LIABILITY  
JUNE 30, 2001

<u>DATE</u> <u>6/30</u>	<u>DESCRIPTION</u>	<u>AMTZ.</u> <u>METHOD</u>	<u>AMTZ.</u> <u>PERIOD</u>	<u>INITIAL</u> <u>LIABILITY</u>	<u>YEARS</u> <u>REMAIN</u>	<u>REMAINING</u> <u>BALANCE</u>	<u>MID-YEAR</u> <u>PAYMENT</u>
1993	Initial Liability	I	36	2,155,232,774	28	2,674,549,819	153,653,502
1992	Legislative COLA	L	12	66,577,000	3	22,959,333	8,601,429
1993	Change in Liability	I	36	-133,232,174	28	-165,335,314	-9,498,552
1994	Change in Liability	I	35	-48,680,987	28	-58,632,044	-3,368,424
1995	Change in Liability	I	34	-57,826,272	28	-67,644,567	-3,886,196
1996	Change in Liability	I	33	70,910,540	28	80,627,744	4,632,082
1997	Change in Liability	I	32	-239,190,250	28	-264,569,674	-15,199,589
1998	Change in Liability	I	31	-92,217,582	28	-99,315,094	-5,705,675
1999	Change in Liability	I	30	92,641,287	28	97,234,587	5,586,149
2000	Change in Liability	I	29	42,956,768	28	43,984,809	2,526,937
2001	Change in Liability	I	28	102,461,684	28	102,461,684	5,886,447
	LSU Appro. Adj.						<u>-4,905,595</u>
	TOTAL OUTSTANDING BALANCE					2,366,321,283	138,322,515
<b>EMPLOYERS' CREDIT BALANCE</b>							
1997	Contribution Variance	L	5	3,429,831	1	798,791	831,088
1998	Contribution Variance	L	5	-10,909,927	2	-4,888,091	-2,643,602
1999	Contribution Variance	L	5	-4,655,857	3	-3,011,359	-1,128,168
2000	Contribution Variance	L	5	535,256	4	444,472	129,699
2001	Contribution Variance	L	5	-1,748,006	5	<u>-1,748,006</u>	<u>-423,562</u>
	TOTAL CREDIT BALANCE					-8,404,193	-3,234,545
	TOTAL UNFUNDED ACTUARIAL ACCRUED LIABILITY					2,357,917,090	

**\*Note:** LSU and Unfunded Judges equals 3.192635% of the Initial Liability mid-year payment.

Effective July 1, 1992, Amortization Periods changed in accordance with Act 257.