

LOUISIANA STATE EMPLOYEES'  
RETIREMENT SYSTEM  
JUNE 30, 1998  
ACTUARIAL VALUATION

---

**HALL ACTUARIAL ASSOCIATES**

---

Charles G. Hall  
F.C.A., M.A.A.A., A.S.A.  
Enrolled Actuary

1433 Hideaway Court  
Baton Rouge, LA. 70806  
(504) 924-6209

September 11, 1998

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, 1998.

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  
**LASERS**  
 September 11, 1998

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

	<u>June 30, 1998</u>	<u>-----Prior Years-----</u>	
		<u>June 30, 1997</u>	<u>June 30, 1996</u>
I. Membership Census			
1) Retirees	29,420	28,796	28,030
2) Actives	69,949	69,444	69,680
3) DROP	2,766	2,562	2,320
II. Annual Benefits	\$ 351,847,577	\$ 324,926,306	\$ 306,403,091
III. Total Payroll	1,653,863,410	1,607,371,721	1,584,357,131
IV. Valuation Assets	4,972,079,610	4,453,189,233	4,040,840,039
V. Experience Account	255,079,268	212,947,917	84,818,098
VI. Investment Yield			
Realized Income	10.60%	12.34%	8.91%
Actuarial Value	12.97%	14.03%	12.34%
VII. Cost to Fund Annual Pension Accruals (Normal Costs)	232,806,045 14.08%	220,968,688 13.75%	214,737,815 13.55%
VIII. Unfunded Actuarial Accrued Liability	1,981,016,859	2,036,171,904	2,213,565,224
IX. Funded Percentage	71.5%	68.6%	64.6%
X. Funding Requirements to Pay (Mid-year Payment)			
1) Employee Contribution Rate	129,012,943 7.677%	125,292,071 7.670%	121,406,118 7.663%
2) Employer Contribution Rate - Current Year	208,203,728 12.4%	205,934,238 12.6%	205,875,608 12.8%
3) Projected Employer Contribution - Next Year	216,917,918 12.3%	212,705,471 12.4%	219,357,113 13.0%

The above funding requirements measure the cost of benefits that were in effect on June 30, 1998, plus Acts of the 1998 Legislative Session which have prospective effects on current active members.

Board of Trustees  
**LASERS**  
September 11, 1998

**Current Funding**

The Actuarial Valuation for the plan year ending June 30, 1998 discloses a general decrease 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 6/30/97		\$ 2,036,171,904
<b>INCREASES</b>		
Interest on Unfunded Liability	\$ 167,984,182	
Experience Account Allocation	104,560,398	
Experience Loss	<u>12,342,815</u>	
Incurred Increases	284,887,395	
<b>DECREASES</b>		
Investment Gains	209,120,795	
Employer Amtz. Payment	120,011,718	
Employer Credit	<u>10,909,927</u>	
Incurred Decreases	340,042,440	
Unfunded Liability 6/30/98		\$ 1,981,016,859

Board of Trustees  
**LASERS**  
 September 11, 1998

The employer contribution rate established by the Public Retirement Systems' Actuarial Committee for the 1998-1999 plan year was 12.4%. The actual employer contribution rates determined by this valuation for the current plan year is 12.4%. The current adjusted rate is equal to 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. This year, the Market Value of Real Estate and Real Estate shares has been included with the Market Value of Equities in the Asset Valuation Method without adjustment for prior years. The Valuation Assets exclude the side-fund accounts for purposes of determining the employer contribution rate as illustrated on page 5 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 \$95,715,679.
- **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 ancillary benefits for members such as retiree COLA's. The benefit granted must be funded at 100% of actuarial cost. The actuarial cost of benefits granted is deducted from the fund and transferred to Valuation Assets. The current balance is \$255,079,268.

**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>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>5 Yr. Aver.</u>
8.88%	9.49%	12.34%	14.03%	12.97%	11.52%

Board of Trustees  
**LASERS**  
September 11, 1998

The net actuarial rate of return assumed in the valuation was 8.25%. For the plan year ending June 30, 1998, the net realized actuarial rate of return was greater than the long-term investment assumption used to project benefits. The result was a net investment experience gain of \$209,120,795 above 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 1997-1998 plan year, the system incurred a \$12,342,815 experience loss from sources other than investments.

#### 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 thirty-one (31) years. To determine whether this is a reasonable expectation, aggregate salary growth during the past eight (8) years is illustrated as follows:

<u>June 30</u>	<u>Payroll/\$1000</u>	<u>Percent Increase</u>
1991	1,368,480	11.6%
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%

During the last seven (7) 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.

Board of Trustees  
LASERS  
September 11, 1998

Comments and Disclosures

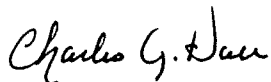
Exhibit 3, "Pension Accounting and Financial Disclosure", contains disclosure of the accrued liabilities under the Entry Age Normal Actuarial Cost Method required by the Governmental Accounting Standards Board Statement No. 25. Pension Benefit Obligation financial disclosure continues to be reported in Exhibit 7, Legislative Auditor's Report.

Finally, the actuarial disclosure form required by the Actuarial Department of the Legislative Auditor's office (see Exhibit 7) makes specific provisions for the determination of whether or not a retirement system is systematically approaching the targeted funding ratio. This is an important consideration for both retired members and members of the Board of Trustees. The Board is specifically prohibited from granting a cost-of-living raise in the absence of the Experience Account Fund to retirees and survivors by Act 256 of the 1986 regular legislative session unless the system has met the Funding Target.

For the plan year ending June 30, 1998 the funding target is .74177, which is greater than the current .71509 funding ratio. Therefore, the Board is prohibited from granting a cost-of-living increase by statute. However, there are sufficient assets in the Experience Account for the Board of Trustees to consider a COLA for current retirees.

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

**TABLE OF CONTENTS**

		<u>Pages</u>
<b>EXHIBIT 1</b>	<b>DEVELOPMENT OF COSTS, LIABILITIES &amp; CONTRIBUTIONS</b> Provides a detail by benefit type of the cost to accrue annual pension benefits, liabilities accrued to date, and funding requirements	1 - 2
<b>EXHIBIT 2</b>	<b>FINANCIAL SUMMARY</b> Contains the statement of revenues and expenses as well as assets available to pay pension benefits	3 - 5
<b>EXHIBIT 3</b>	<b>PENSION ACCOUNTING AND FINANCIAL DISCLOSURE</b> NCGA STMT 6 changes in credited projected benefits	6 - 8
<b>EXHIBIT 4</b>	<b>CENSUS DATA</b> Describes the employee data, data processing for valuation purposes and depicts employee profiles by classification, age and service	9 - 91
<b>EXHIBIT 5</b>	<b>PRINCIPLE PROVISIONS OF THE RETIREMENT SYSTEM</b> Restates in summary outline form the basic plan provisions which were incorporated in the projected retirement pension benefit	10 - 16
<b>EXHIBIT 6</b>	<b>ACTUARIAL COST METHODS AND ASSUMPTIONS</b> Discloses rates of mortality, disability, retirement termination and other assumptions which are presumed to reflect the experience of the retirement system in aggregate	17 - 21
<b>EXHIBIT 7</b>	<b>LEGISLATIVE AUDITOR'S REPORT</b> Actuarial disclosures to the Legislative Auditor's Office	22 - 25



**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, 1998</u>		<u>---Prior Year---</u> <u>June 30, 1997</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>
<b>I. Normal Costs</b>				
(to fund annual pension accruals)				
Active Members with Complete Data				
a) Retirement Benefits	\$ 178,588,791	10.80%	\$ 169,719,582	10.56%
b) Disability Benefits	8,512,778	.51%	8,277,455	.51%
c) Survivor Benefits	9,877,943	.60%	9,594,561	.60%
d) Voluntary Termination	29,126,533	1.76%	28,877,090	1.80%
e) Expenses	<u>6,700,000</u>	<u>.41%</u>	<u>4,500,000</u>	<u>.28%</u>
TOTAL	232,806,045	14.08%	220,968,688	13.75%
<b>II. Actuarial Accrued Liability</b>				
a) Active Members				
1) Retirement Benefits	2,778,473,813		2,610,787,539	
2) Disability Benefits	114,682,942		111,293,779	
3) Survivor Benefits	109,220,773		105,958,893	
4) Voluntary Termination	<u>188,297,459</u>		<u>188,088,156</u>	
	3,190,674,987		3,016,128,367	
b) Retired and Inactive Members				
1) Regular Retirees	2,512,698,275		2,336,003,925	
2) Disabled Retirees	85,442,531		81,989,907	
3) Survivors	331,175,383		304,265,655	
4) Vested Deferred	45,400,235		38,225,529	
5) Contributions Refunded	17,780,958		15,661,545	
6) DROP Deferral	575,046,101		531,834,866	
7) DROP Deposits	<u>110,873,566</u>		<u>86,171,651</u>	
	3,678,417,049		3,394,153,078	
c) SUB TOTAL	6,869,092,036		6,410,281,445	

**Exhibit 1 (Continued)**

**Costs, Liabilities & Contributions**

	<u>June 30, 1998</u>	<u>---Prior Year---</u> <u>June 30, 1997</u>
<b>II. Actuarial Accrued Liability</b>		
c) SUB TOTAL (Preceding page)	\$ 6,869,092,036	\$ 6,410,281,445
d) Adjustments to Regular Plan		
1) Active Judges	77,246,820	73,287,898
2) Active Legislators	<u>6,757,613</u>	<u>5,791,794</u>
Adjusted TOTAL	6,953,096,469	6,489,361,137
<b>III. Valuation Assets</b>	4,972,079,610	4,453,189,233
<b>IV. Unfunded Actuarial Accrued Liabilities - Projected Unit Credit*</b>	1,981,016,859	2,036,171,904
a) Change over prior year	(55,155,045)	(177,393,320)
b) Funded Percentage	71.5%	68.6%
<b>V. Employer Contributions To Fund Current Plan Year*</b>		
a) Employer Portion of Normal Cost	100,736,399	94,699,978
b) Amortization Payments	110,007,832	110,425,607
c) Prior Contribution Variance	<u>(2,540,503)</u>	<u>808,653</u>
TOTAL Required Contribution	208,203,728	205,934,238
	12.4%	12.6%
Plus State Appropriation	4,298,757	4,113,643
Actuarial Forecast Rate**	12.4%	13.0%
<b>VI. Projected Employer Contributions To Fund Next Plan Year*</b>		
a) Employer Portion of Normal Cost	105,519,723	99,241,989
b) Amortization Payments	114,571,121	115,007,696
c) Prior Contribution Variance	<u>(3,172,926)</u>	<u>(1,544,214)</u>
TOTAL Projected Contribution	216,917,918	212,705,471
	12.3%	12.4%
Plus State Appropriation	4,492,201	4,298,757
<b>VII. Current Payroll</b>	1,653,863,410	1,607,371,721
Projected Payroll - Mid Year	1,680,512,484	1,633,534,173
Projected Payroll - Next Year	1,760,309,224	1,711,881,924

\*Dollar Amounts reflect estimated payments due mid-year on January 1st per Act 81.

\*\*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, 1998</u>	<u>-----Prior Years-----</u> <u>June 30, 1997</u>	<u>June 30, 1996</u>
<b><u>OPERATING REVENUES:</u></b>			
1. Contribution Income			
Member	\$ 129,724,456	\$ 126,793,791	\$ 126,073,816
Employer	219,680,934	204,985,747	197,456,874
2. Other Income			
Legislative Appropriations	4,113,643	3,936,500	3,766,986
Miscellaneous	6,039,951	4,963,350	21,926,336
Texaco Settlement	<u>0</u>	<u>0</u>	<u>13,817,580</u>
TOTAL CONTRIBUTIONS	359,558,984	340,679,388	363,041,592
3. Investment Income			
Realized Income	481,932,100	500,838,741	341,738,080
Less, investment expenses	<u>-17,162,772</u>	<u>-15,143,892</u>	<u>-13,318,452</u>
TOTAL INVESTMENT INCOME	464,769,328	485,694,849	328,419,628
4. Total Revenues	824,328,312	826,374,237	691,461,220
<b><u>OPERATING EXPENSES:</u></b>			
1. General Administration	6,703,504	4,531,466	4,390,986
Other Expenses	2,501,942	2,242,442	2,277,969
2. Benefits Paid			
a) Pension Benefits	359,625,826	340,052,578	317,340,115
b) Return of Contrib.	<u>32,156,373</u>	<u>28,945,409</u>	<u>27,222,153</u>
TOTAL BENEFITS PAID	391,782,199	368,997,987	344,562,268
3. Total Operating Expenses	400,987,645	375,771,895	351,231,223
<b><u>NET INCOME:</u></b>	423,340,667	450,602,342	340,229,997

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

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

	<u>June 30, 1998</u>	<u>June 30, 1997</u>	<u>June 30, 1996</u>
<b>ASSETS:</b>			
1. Short Term Assets			
Cash/Cash Equivalencies	\$ 25,337,788	\$ 23,396,887	\$ 42,787,002
Short-term Investments	50,976,160	88,958,503	175,159,847
2. Bonds (at amortized cost)			
Bonds - Government/Agency	512,637,512	515,580,316	527,617,738
Bonds - Municipal/Other	53,328,971	45,695,727	36,706,079
U.S. Government Obligations	239,462,226	376,428,049	452,065,736
Corporate Foreign Issues	1,120,923,483	1,166,956,965	997,034,563
3. Equities			
Common Stock	1,895,864,116	1,197,413,638	921,513,676
Foreign Stock	731,583,847	632,526,281	516,319,282
Preferred Stock	3,891,446	-	-
4. Other Assets			
Fixed Assets	9,807,478	8,120,205	6,064,694
Mortgages - Real Estate	131,464,339	134,573,851	123,048,222
5. Receivables - Payables	<u>51,950,308</u>	<u>214,236,585</u>	<u>154,967,825</u>
TOTAL ASSETS			
Equities at Cost	4,827,227,674	4,403,887,007	3,953,284,665
Equities at Market	5,568,262,649	5,041,143,224	4,350,524,222
Market Value	5,608,533,887	5,044,261,699	4,346,883,205
<b>RATIO: ASSETS/EXPENSES:</b>	12.03	11.75	11.26
<b>INVESTMENT YIELD:</b>			
Realized Income	10.60%	12.34%	9.09%
Yield to Actuarial Value	12.97%	14.03%	12.34%
Five Year Actuarial Value	11.52%	10.85%	10.14%
Yield to Market Value	12.06%	16.92%	14.40%
DROP Account Yield	12.47%	13.53%	11.84%

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

**HALL ACTUARIAL ASSOCIATES**

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

<u>ACTUARIAL VALUE OF ASSETS:</u>	<u>June 30, 1998</u>	<u>-----Prior Years-----</u>	
		<u>June 30, 1997</u>	<u>June 30, 1996</u>
TOTAL ASSETS	\$ 5,568,262,649	\$ 5,041,143,224	\$ 4,350,524,222
Change in Unrealized (G/L)			
Plan Year - 2 (wt. 1/4)	190,182,775	60,698,290	(86,862,921)
Plan Year - 1 (wt. 2/4)	240,016,660	190,182,775	60,698,290
Plan Year (wt. 3/4)	<u>103,778,758</u>	<u>240,016,660</u>	<u>190,182,775</u>
Actuarial Value of Assets	5,322,874,557	4,750,864,769	4,199,278,726

**TEXACO SETTLEMENT FUND:**

Prior Year Ending Balance	84,727,619	73,620,589	53,234,368
+ Current Year Allocation	0	682,619*	13,817,580
+ Accumulated Interest	<u>10,988,060</u>	<u>10,424,411</u>	<u>6,568,641</u>
Fund Balance - Year End	95,715,679	84,727,619	73,620,589

**EXPERIENCE ACCOUNT FUND:**

Prior Year Ending Balance	212,947,917	84,818,098	61,772,504
+ Experience Account Allocation	104,560,398	116,230,215	73,840,631
- Benefit Disbursements	90,045,598	0	58,417,207
+ Accumulated Interest	<u>27,079,268</u>	<u>11,899,604</u>	<u>7,622,170</u>
Fund Balance - Year End	255,079,268	212,947,917	84,818,098

**DEVELOPMENT OF ACTUARIAL**  
**VALUATION ASSETS**

Total Actuarial Value of Assets Adjusted for:	5,322,874,557	4,750,864,769	4,199,278,726
Texaco Settlement Fund	-95,715,679	-84,727,619	-73,620,589
Experience Account Fund	<u>-255,079,268</u>	<u>-212,947,917</u>	<u>-84,818,098</u>
Valuation Assets	4,972,079,610	4,453,189,233	4,040,840,039

\*The June 30, 1994 initial allocation was under-reported by \$555,012. The current allocation for June 30, 1997 is the under-reported amount plus interest accumulated to June 30, 1996.

**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)
1989	2,179,402	4,021,933	1,848,531	54.0	1,141,080	162.0
1990	2,321,259	4,210,107	1,888,848	55.1	1,226,065	154.1
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

The total actuarial accrued liability determined using the Projected Unit Credit cost method increased by \$463,735,332 from June 30, 1997 to June 30, 1998. There were no changes in benefit provisions during the year. There was a net experience gain of \$92,217,582 after allocating \$104,560,398 of excess investment income to the Experience Account in accordance with Act 1031. A COLA was granted to retirees on July 1, 1998 which reduced the Experience Account \$90,045,598.

<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.

**EXHIBIT 3 (Continued)****Pension Accounting & Financial Disclosure****HALL ACTUARIAL ASSOCIATES****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>
1991	106,397,079	101.2	102,478,348	107,700,340	105.1	1,303,263
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

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 24).

**DEVELOPMENT OF NET  
PENSION OBLIGATION**

(1) Actuarial Required Contribution	221,933,246
(2) Interest on Net Pension Obligation	158,588
(3) Amortization of Net Pension Obligation	<u>841,345</u>
(4) Annual Pension Cost (1)+(2)-(3)	221,250,489
(5) Employer Contribution	<u>232,843,174</u>
(6) Increase (decrease) in Net Pension Obligation	-11,592,685
(7) Net Pension Obligation Beginning of Year	1,922,284
(8) Net Pension Obligation End of Year (6)+(7)	- 9,670,401

\*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 & Financial Disclosure****STATISTICAL DATA****COMPARATIVE SUMMARY OF REVENUES BY SOURCE  
AND EXPENSES BY TYPE****Revenues by Source**

<u>Fiscal Year</u>	<u>Members Contribution</u>	<u>Employer Contribution*</u>	<u>Investment Income</u>	<u>Total</u>
1989	81,925,366	134,314,360	181,179,170	397,418,896
1990	92,339,927	99,536,184	206,633,219	398,509,330
1991	104,020,927	149,859,389	225,267,421	479,147,276
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

**Expenses by Type**

<u>Fiscal Year</u>	<u>Benefits</u>	<u>Refunds</u>	<u>Administrative Expenses**</u>	<u>Total</u>
1989	228,603,084	32,548,038	2,267,848	263,418,970
1990	234,066,890	26,880,996	2,577,670	263,525,556
1991	240,622,226	22,955,119	3,145,390	266,722,735
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

\*Includes transfers and purchases not directly related to the annual employer contribution.

\*\*Includes other expenses incurred not directly related to the administration of daily operation.



## EXHIBIT 4

## CENSUS DATA

## GENERAL COMMENTS

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 23,451 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:

	---1998---	---1997---
	<u>Census</u>	<u>Census</u>
Active Members	69,949	69,444
Regular Retirees	22,314	21,839
Disability Retirees	1,110	1,119
Survivors	4,902	4,808
Vested & Reciprocals	1,094	1,030
Due Refunds	23,451	22,615
DROP Participants	<u>2,766</u>	<u>2,562</u>
TOTAL	125,586	123,417

# HALL ACTUARIAL ASSOCIATES

## MEMBERSHIP PROFILE CATEGORIZED BY AGE AND YEARS EMPLOYED

STATE EMPLOYEES' SYSTEM  
ACTIVE REGULAR MEMBERS

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	: Total :
[ 0 - 19) :	322	111	0	0	0	0	0	0	0	: 433 :
: 1468807	1209726	0	0	0	0	0	0	0	0	: 2678533 :
[20 - 24) :	985	1174	5	0	0	0	0	0	0	: 2164 :
: 6295372	16126721	74087	0	0	0	0	0	0	0	: 22496181 :
[25 - 29) :	1450	3807	577	22	0	0	0	0	0	: 5856 :
: 11485631	71831390	11468619	458304	0	0	0	0	0	0	: 95243944 :
[30 - 34) :	1051	3445	1986	758	119	0	0	0	0	: 7359 :
: 8729020	69297863	48914842	17801562	2928847	0	0	0	0	0	: 147672134 :
[35 - 39) :	1171	3166	1933	1662	2088	202	2	0	2	: 10226 :
: 8752083	65955980	47525318	45408665	55470372	5467118	60015	0	30992	0	: 228670543 :
[40 - 44) :	753	2731	2085	1462	2721	1733	108	1	1	: 11595 :
: 6872814	57694915	52405954	39456061	82090148	53117161	3155816	18864	20105	1	: 294831838 :
[45 - 49) :	617	2087	1959	1250	1912	2228	1227	19	1	: 11300 :
: 5714281	45112488	50509955	34600375	56866417	76305079	41324538	560281	49581	1	: 311042995 :
[50 - 54) :	355	1308	1501	917	1316	1396	1141	86	3	: 8023 :
: 3307366	27431284	38145258	25223662	38831054	45645961	41050191	3004929	57529	3	: 222697234 :
[55 - 59) :	117	489	1004	597	839	754	147	103	12	: 4062 :
: 1246636	10627163	25197468	16633739	24312651	22814389	5016994	3704467	364188	12	: 109917696 :
[60 - 64) :	28	113	508	217	197	149	86	61	17	: 1376 :
: 289808	2934547	13138953	6374614	6447532	3917849	2566607	2308383	760641	17	: 38738934 :
[65 - 69) :	8	35	110	59	88	55	24	13	10	: 402 :
: 56272	1077830	3024522	1987456	2611456	1573779	753848	448260	453512	10	: 11986935 :
[70 - 74) :	4	10	10	40	50	44	22	9	8	: 197 :
: 21752	447563	312003	1062585	1361819	1124668	703046	266617	184004	8	: 5484057 :
Total :	6861	18476	11678	6984	9330	6561	2757	292	54	: 62993 :
Total :	54239843	369747470	290716979	189007024	270920297	209966003	94631055	10311801	1920552	: 1491461024 :

AVERAGES :    Attained Age    42.12  
                  Service Years    10.05  
                  Active Salary    23,677

# HALL ACTUARIAL ASSOCIATES

## MEMBERSHIP PROFILE CATEGORIZED BY AGE AND YEARS EMPLOYED

STATE EMPLOYEES' SYSTEM  
ACTIVE LEGISLATORS

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	:	Total :
.....											
[ 0 - 19) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[20 - 24) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[25 - 29) :	0	2	0	0	0	0	0	0	0	:	2 :
:	0	68224	0	0	0	0	0	0	0	:	68224 :
:										:	:
[30 - 34) :	0	1	1	0	0	0	0	0	0	:	2 :
:	0	33406	31733	0	0	0	0	0	0	:	65139 :
:										:	:
[35 - 39) :	0	1	4	1	0	0	0	0	0	:	6 :
:	0	33196	122349	30072	0	0	0	0	0	:	185617 :
:										:	:
[40 - 44) :	0	3	6	1	0	0	0	0	0	:	10 :
:	0	94815	184994	56166	0	0	0	0	0	:	335975 :
:										:	:
[45 - 49) :	1	9	4	1	1	0	0	0	0	:	16 :
:	19379	292562	126257	32804	30367	0	0	0	0	:	501369 :
:										:	:
[50 - 54) :	0	5	4	4	3	3	0	0	0	:	19 :
:	0	157668	127457	137186	97252	99759	0	0	0	:	619322 :
:										:	:
[55 - 59) :	0	1	3	4	2	1	3	0	0	:	14 :
:	0	32901	100327	128524	83505	30266	94518	0	0	:	470041 :
:										:	:
[60 - 64) :	0	4	4	1	0	0	0	1	0	:	10 :
:	0	128528	129696	32840	0	0	0	59046	0	:	350110 :
:										:	:
[65 - 69) :	0	0	1	0	1	0	1	0	0	:	3 :
:	0	0	33002	0	31927	0	24874	0	0	:	89803 :
:										:	:
[70 - 74) :	0	0	1	0	0	0	1	0	0	:	2 :
:	0	0	32525	0	0	0	28829	0	0	:	61354 :
.....											
Total :	1	26	28	12	7	4	5	1	0	:	84 :
Total :	19379	841300	888340	417592	243051	130025	148221	59046	0	:	2746954 :
.....											

AVERAGES :   Attained Age     50.56  
              Service Years    33.23  
              Active Salary    32,702

# HALL ACTUARIAL ASSOCIATES

## MEMBERSHIP PROFILE CATEGORIZED BY AGE AND YEARS EMPLOYED

STATE EMPLOYEES' SYSTEM  
ACTIVE JUDGES

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	:	Total :
.....											
[ 0 - 19) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[20 - 24) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[25 - 29) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[30 - 34) :	1	3	0	0	0	0	0	0	0	:	4 :
:	21922	272033	0	0	0	0	0	0	0	:	293955 :
:										:	:
[35 - 39) :	1	19	4	0	0	0	0	0	0	:	24 :
:	53473	1716803	341099	0	0	0	0	0	0	:	2111375 :
:										:	:
[40 - 44) :	4	30	25	3	4	0	0	0	0	:	66 :
:	149521	2647773	2244361	245719	325056	0	0	0	0	:	5612430 :
:										:	:
[45 - 49) :	1	26	32	16	7	2	0	0	0	:	84 :
:	8589	2256801	2861538	1326528	601434	185040	0	0	0	:	7239930 :
:										:	:
[50 - 54) :	1	10	17	12	24	6	0	0	0	:	70 :
:	46260	846880	1476029	1090937	2221384	531555	0	0	0	:	6213045 :
:										:	:
[55 - 59) :	0	9	10	6	9	8	0	0	0	:	42 :
:	0	838088	879865	486395	901128	740332	0	0	0	:	3845808 :
:										:	:
[60 - 64) :	0	6	4	5	8	5	3	0	0	:	31 :
:	0	555120	370080	461767	731935	379171	288376	0	0	:	2786449 :
:										:	:
[65 - 69) :	0	0	1	4	1	1	3	0	0	:	10 :
:	0	0	97928	370080	92520	92520	319355	0	0	:	972403 :
:										:	:
[70 - 74) :	0	0	0	0	0	0	0	1	1	:	2 :
:	0	0	0	0	0	0	0	105587	121336	:	226923 :
.....											
Total :	8	103	93	46	53	22	6	1	1	:	333 :
Total :	279765	9133498	8270900	3981426	4873457	1928618	607731	105587	121336	:	29302318 :
.....											

AVERAGES :   Attained Age     49.95  
              Service Years     9.47  
              Active Salary    87,995

# HALL ACTUARIAL ASSOCIATES

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

STATE EMPLOYEES' SYSTEM  
ACTIVE WILDLIFE AGENTS

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	:	Total :
[ 0 - 19) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[20 - 24) :	3	1	0	0	0	0	0	0	0	:	4 :
:	26024	19470	0	0	0	0	0	0	0	:	45494 :
:										:	:
[25 - 29) :	8	21	12	0	0	0	0	0	0	:	41 :
:	36548	457209	310220	0	0	0	0	0	0	:	803977 :
:										:	:
[30 - 34) :	0	9	21	3	1	0	0	0	0	:	34 :
:	0	191283	574927	88981	33376	0	0	0	0	:	888567 :
:										:	:
[35 - 39) :	2	6	16	4	8	0	0	0	0	:	36 :
:	6555	148689	454143	119715	271485	0	0	0	0	:	1000587 :
:										:	:
[40 - 44) :	0	2	3	4	12	5	0	0	0	:	26 :
:	0	46124	64502	134293	406448	187803	0	0	0	:	839170 :
:										:	:
[45 - 49) :	0	0	2	5	12	6	0	0	0	:	25 :
:	0	0	56487	164211	396776	218947	0	0	0	:	836421 :
:										:	:
[50 - 54) :	0	0	1	5	7	2	1	0	0	:	16 :
:	0	0	32128	159998	241481	85716	54340	0	0	:	573663 :
:										:	:
[55 - 59) :	0	0	0	0	2	1	0	0	0	:	3 :
:	0	0	0	0	62073	38027	0	0	0	:	100100 :
:										:	:
[60 - 64) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[65 - 69) :	0	0	0	0	0	1	0	0	0	:	1 :
:	0	0	0	0	0	32997	0	0	0	:	32997 :
:										:	:
[70 - 74) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
Total :	13	39	55	21	42	15	1	0	0	:	186 :
Total :	69127	862775	1492407	667198	1411639	563490	54340	0	0	:	5120976 :

AVERAGES :    Attained Age    37.89  
                 Service Years    9.93  
                 Active Salary    27,532

# HALL ACTUARIAL ASSOCIATES

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

STATE EMPLOYEES' SYSTEM  
CORRECTIONS before 1986

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	:	Total :
[ 0 - 19) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[20 - 24) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[25 - 29) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[30 - 34) :	0	0	0	49	10	0	0	0	0	:	59 :
:	0	0	0	1293707	290182	0	0	0	0	:	1583889 :
:										:	:
[35 - 39) :	0	0	0	97	144	2	0	0	0	:	243 :
:	0	0	0	2728037	4178419	77296	0	0	0	:	6983752 :
:										:	:
[40 - 44) :	0	0	0	79	155	24	3	0	0	:	261 :
:	0	0	0	2137752	4756107	794665	99596	0	0	:	7788119 :
:										:	:
[45 - 49) :	0	0	0	59	137	35	17	0	0	:	248 :
:	0	0	0	1586554	3966351	1421435	846801	0	0	:	7821142 :
:										:	:
[50 - 54) :	0	0	0	54	103	13	14	1	0	:	185 :
:	0	0	0	1474851	3093444	460870	611283	41174	0	:	5681623 :
:										:	:
[55 - 59) :	0	0	0	40	64	7	2	5	0	:	118 :
:	0	0	0	1084288	1847591	195446	79133	240270	0	:	3446727 :
:										:	:
[60 - 64) :	0	0	0	5	15	1	1	1	2	:	25 :
:	0	0	0	142780	406663	25355	45620	32867	110904	:	764189 :
:										:	:
[65 - 69) :	0	0	0	1	5	0	0	0	1	:	7 :
:	0	0	0	25682	130426	0	0	0	69945	:	226053 :
:										:	:
[70 - 74) :	0	0	0	0	2	0	0	0	1	:	3 :
:	0	0	0	0	49036	0	0	0	72375	:	121411 :
:										:	:
Total :	0	0	0	384	635	82	37	7	4	:	1149 :
Total :	0	0	0	10473651	18718220	2975067	1682434	314311	253224	:	34416907 :

AVERAGES :    Attained Age    45.78  
                 Service Years    16.97  
                 Active Salary    29,954

# HALL ACTUARIAL ASSOCIATES

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

STATE EMPLOYEES' SYSTEM  
CORRECTIONS after 1986

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	: Total :
[ 0 - 19) :	112	41	0	0	0	0	0	0	0	153 :
: 588769	495231	0	0	0	0	0	0	0	0	1084000 :
[20 - 24) :	283	343	17	0	0	0	0	0	0	643 :
: 1650621	4982487	306480	0	0	0	0	0	0	0	6939588 :
[25 - 29) :	309	570	202	3	0	0	0	0	0	1084 :
: 2071350	9430137	4051215	73702	0	0	0	0	0	0	15626404 :
[30 - 34) :	177	341	304	69	0	0	0	0	0	891 :
: 1155150	5729161	6906670	1612356	0	0	0	0	0	0	15403338 :
[35 - 39) :	186	198	211	62	0	0	0	0	0	657 :
: 1223960	3249067	4581760	1515132	0	0	0	0	0	0	10569918 :
[40 - 44) :	81	150	179	59	0	0	0	0	0	469 :
: 580070	2927571	4023734	1414504	0	0	0	0	0	0	8945879 :
[45 - 49) :	55	114	163	46	0	0	0	0	0	378 :
: 374791	1948314	3750824	1135987	0	0	0	0	0	0	7209916 :
[50 - 54) :	35	97	90	31	0	0	0	0	0	253 :
: 327452	1678629	2040926	751493	0	0	0	0	0	0	4798500 :
[55 - 59) :	15	36	70	13	0	0	0	0	0	134 :
: 117059	639175	1519344	309259	0	0	0	0	0	0	2584837 :
[60 - 64) :	5	7	28	7	0	0	0	0	0	47 :
: 63378	132440	632405	166392	0	0	0	0	0	0	994615 :
[65 - 69) :	2	1	6	0	0	0	0	0	0	9 :
: 13408	31387	114949	0	0	0	0	0	0	0	159744 :
[70 - 74) :	0	1	0	0	0	0	0	0	0	1 :
: 0	15661	0	0	0	0	0	0	0	0	15661 :
Total :	1260	1899	1270	290	0	0	0	0	0	4719 :
Total :	8166008	31259259	27928307	6978825	0	0	0	0	0	74332399 :

AVERAGES :    Attained Age    34.62  
                 Service Years    3.85  
                 Active Salary    15,752

# HALL ACTUARIAL ASSOCIATES

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

STATE EMPLOYEES' SYSTEM  
REGULAR RETIREES

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	:	Total :
[ 0 - 39) :	3	2	0	0	0	0	1	0	0	:	6 :
:	37082	26874	0	0	0	0	5777	0	0	:	69733 :
:										:	:
[40 - 44) :	30	30	18	5	5	3	1	0	0	:	92 :
:	303062	326997	225568	75925	73970	54174	18401	0	0	:	1078097 :
:										:	:
[45 - 49) :	55	52	67	10	10	18	2	0	0	:	214 :
:	750726	616676	805006	175596	148728	240093	27620	0	0	:	2764444 :
:										:	:
[50 - 54) :	123	146	170	39	38	54	13	0	0	:	583 :
:	2407160	2841366	2823097	769974	752173	1083686	198148	0	0	:	10875604 :
:										:	:
[55 - 59) :	199	247	355	185	138	224	251	4	0	:	1603 :
:	4097380	5374023	6218372	3854847	2897386	4106247	4241870	49701	0	:	30839826 :
:										:	:
[60 - 64) :	349	449	458	328	248	674	1208	74	21	:	3809 :
:	4519100	7331838	6665824	5180527	3804414	10800796	19022074	741757	155788	:	58222117 :
:										:	:
[65 - 69) :	138	267	291	369	333	1292	1618	343	73	:	4724 :
:	1645210	4369850	4011613	4828324	4176113	15400162	23704509	4955043	732145	:	63822969 :
:										:	:
[70 - 74) :	33	65	72	97	157	1112	1912	818	200	:	4466 :
:	580306	1259600	1310421	1862771	2181375	12419483	22784520	11799037	2441778	:	56639290 :
:										:	:
[75 - 79) :	6	15	19	14	28	294	1229	1449	452	:	3506 :
:	69801	284505	319954	226332	433919	3718156	14281361	15831412	5607598	:	40773038 :
:										:	:
[80 - 84) :	1	1	3	6	1	16	252	859	828	:	1967 :
:	8660	8624	59129	138737	80387	228686	3320894	8143164	8260077	:	20248358 :
:										:	:
[85 - 89) :	0	0	0	0	0	2	13	66	877	:	958 :
:	0	0	0	0	0	35823	264219	727417	7603141	:	8630600 :
:										:	:
[90 - 99) :	0	0	0	0	0	0	1	4	381	:	386 :
:	0	0	0	0	0	0	36770	26731	3039136	:	3102637 :
:										:	:
Total :	937	1274	1453	1053	958	3689	6501	3617	2832	:	22314 :
Total :	14418487	22440353	22438982	17113033	14548466	48087307	87906163	42274261	27839663	:	297066714 :

AVERAGES :    Attained Age    70.40  
                  Years Retired    11.28  
                  Annual Benefit   13,313



# HALL ACTUARIAL ASSOCIATES

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

STATE EMPLOYEES' SYSTEM  
DISABILITY RETIREES

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	:	Total :
[ 0 - 39) :	5	8	4	6	3	13	0	0	0	:	39 :
:	46230	63994	19181	38449	16039	77911	0	0	0	:	261804 :
:										:	
[40 - 44) :	16	20	18	19	12	23	6	1	0	:	115 :
:	148817	187001	186706	179021	97870	140969	32228	4020	0	:	976632 :
:										:	
[45 - 49) :	17	28	25	26	14	58	17	3	0	:	188 :
:	188179	326575	284400	282475	138630	499611	139051	19397	0	:	1878318 :
:										:	
[50 - 54) :	29	41	33	39	34	106	54	12	2	:	350 :
:	295123	486365	384847	426594	330663	915426	467472	67750	8912	:	3383152 :
:										:	
[55 - 59) :	20	42	47	38	33	119	73	30	7	:	409 :
:	227569	408409	452085	354164	295500	900629	579018	235871	46882	:	3500127 :
:										:	
[60 - 64) :	1	0	0	0	0	3	1	3	0	:	8 :
:	3863	0	0	0	0	52544	4934	23247	0	:	84588 :
:										:	
[65 - 69) :	0	0	0	0	0	0	0	1	0	:	1 :
:	0	0	0	0	0	0	0	21631	0	:	21631 :
:										:	
[70 - 74) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	
[75 - 79) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	
[80 - 84) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	
[85 - 89) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	
[90 - 99) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	
Total :	88	139	127	128	96	322	151	50	9	:	1110 :
Total :	909781	1472344	1327219	1280703	878702	2587090	1222703	371916	55794	:	10106252 :

AVERAGES :    Attained Age    52.19  
                  Years Retired    5.93  
                  Annual Benefit    9,105

# HALL ACTUARIAL ASSOCIATES

## MEMBERSHIP PROFILE CATEGORIZED BY AGE AND YEARS RETIRED

STATE EMPLOYEES' SYSTEM  
SURVIVOR BENEFITS

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	:	Total :
[ 0 - 39) :	5	7	3	8	1	15	14	5	3	:	61 :
:	102455	153382	58261	108508	16539	201479	136035	37441	20606	:	834706 :
:										:	:
[40 - 44) :	1	4	8	2	3	14	10	3	4	:	49 :
:	14263	57633	157122	44007	36206	176852	115038	25632	23527	:	650280 :
:										:	:
[45 - 49) :	3	7	7	6	8	23	26	9	1	:	90 :
:	45042	97676	71758	86202	111961	309528	294713	66455	2660	:	1085995 :
:										:	:
[50 - 54) :	14	14	17	14	21	65	58	25	12	:	240 :
:	252857	266429	348112	220258	314793	771547	626446	242321	71214	:	3113976 :
:										:	:
[55 - 59) :	18	16	14	16	20	71	80	56	20	:	311 :
:	239199	203191	239117	306230	314246	947000	901328	528077	109639	:	3788027 :
:										:	:
[60 - 64) :	11	18	22	24	22	112	153	85	48	:	495 :
:	190145	226643	345255	316060	259629	1544882	1580280	671586	364585	:	5499066 :
:										:	:
[65 - 69) :	7	11	15	16	21	102	219	172	114	:	677 :
:	139486	123811	197875	216519	255055	1045341	2197483	1557320	816039	:	6548930 :
:										:	:
[70 - 74) :	3	6	8	6	8	66	233	303	262	:	895 :
:	54585	71653	90386	55502	119325	712008	2218728	2517262	1932327	:	7771776 :
:										:	:
[75 - 79) :	3	4	1	1	2	27	133	267	421	:	859 :
:	40006	82857	14583	5480	27453	323196	1289855	2102676	2923043	:	6809149 :
:										:	:
[80 - 84) :	2	0	1	1	0	5	38	145	457	:	649 :
:	21608	0	12799	10590	0	68724	411936	1153529	3036398	:	4715584 :
:										:	:
[85 - 89) :	0	0	0	0	0	1	4	27	355	:	387 :
:	0	0	0	0	0	6369	28350	217551	2418228	:	2670498 :
:										:	:
[90 - 99) :	0	0	0	0	0	0	2	5	182	:	189 :
:	0	0	0	0	0	0	18052	44325	1124247	:	1186624 :
:										:	:
Total :	67	87	96	94	106	501	970	1102	1879	:	4902 :
Total :	1099646	1283275	1535268	1369356	1455207	6106926	9818245	9164175	12842513	:	44674611 :

AVERAGES :    Attained Age    71.80  
                  Years Retired    17.09  
                  Annual Benefit    9,114

# HALL ACTUARIAL ASSOCIATES

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

STATE EMPLOYEES' SYSTEM  
TERM-VESTED/RECIPROCAL

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	Total :
[ 0 - 39) :	2	1	0	0	0	0	0	0	0	3 :
:	46	66	0	0	0	0	0	0	0	112 :
:										:
[40 - 44) :	6	10	0	0	0	0	0	0	0	16 :
:	354	1993	0	0	0	0	0	0	0	2347 :
:										:
[45 - 49) :	5	9	2	0	0	0	1	0	0	17 :
:	562	6933	4800	0	0	0	3349	0	0	15644 :
:										:
[50 - 54) :	2	12	4	14	2	0	0	0	0	34 :
:	209	4921	7674	54092	32267	0	0	0	0	99163 :
:										:
[55 - 59) :	1	7	5	46	52	3	0	0	0	114 :
:	113	2882	19027	285086	402040	24717	0	0	0	733865 :
:										:
[60 - 64) :	0	6	5	57	77	37	3	0	0	185 :
:	0	4620	6320	419790	698793	320027	17706	0	0	1467256 :
:										:
[65 - 69) :	1	2	3	39	69	78	27	1	0	220 :
:	37	804	32675	273262	589255	961843	281145	8292	0	2147313 :
:										:
[70 - 74) :	0	10	1	41	63	46	48	19	0	228 :
:	0	7112	12	315506	677954	519363	678602	238389	0	2436938 :
:										:
[75 - 79) :	0	1	3	35	57	45	18	21	5	185 :
:	0	1131	19144	264608	589037	490150	232973	216418	26215	1839676 :
:										:
[80 - 84) :	0	0	2	7	10	7	1	4	5	36 :
:	0	0	4042	45768	77762	88691	10769	36806	24421	288259 :
:										:
[85 - 89) :	0	0	1	2	3	2	2	4	2	16 :
:	0	0	582	6376	17330	4831	23618	50893	24116	127746 :
:										:
[90 - 99) :	0	1	0	0	3	3	7	11	15	40 :
:	0	849	0	0	19626	19379	86546	53436	75923	255759 :
:										:
Total :	17	59	26	241	336	221	107	60	27	1094 :
Total :	1321	31311	94276	1664488	3104064	2429001	1334708	604234	150675	9414077 :

AVERAGES :    Attained Age    49.10  
                  Service Years    18.48  
                  Annual Benefit    8,605

# HALL ACTUARIAL ASSOCIATES

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

STATE EMPLOYEES' SYSTEM  
DROP PARTICIPANTS

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	:	Total :
[ 0 - 39) :	7	9	0	0	0	0	0	0	0	:	16 :
:	99297	115175	0	0	0	0	0	0	0	:	214472 :
:										:	
[40 - 44) :	18	18	25	0	0	0	0	0	0	:	61 :
:	262008	263582	371105	0	0	0	0	0	0	:	896695 :
:										:	
[45 - 49) :	56	42	43	0	0	0	0	0	0	:	141 :
:	1230274	862735	792222	0	0	0	0	0	0	:	2885231 :
:										:	
[50 - 54) :	187	201	180	0	0	0	0	0	0	:	568 :
:	4717922	5020562	4236961	0	0	0	0	0	0	:	13975445 :
:										:	
[55 - 59) :	264	217	325	0	0	0	0	0	0	:	806 :
:	5949393	4754056	7653978	0	0	0	0	0	0	:	18357426 :
:										:	
[60 - 64) :	345	284	291	0	0	0	0	0	0	:	920 :
:	4665521	4030911	4460384	0	0	0	0	0	0	:	13156817 :
:										:	
[65 - 69) :	41	73	86	0	0	0	0	0	0	:	200 :
:	682039	1130016	1329210	0	0	0	0	0	0	:	3141265 :
:										:	
[70 - 74) :	11	17	21	0	0	0	0	0	0	:	49 :
:	137292	236496	309044	0	0	0	0	0	0	:	682832 :
:										:	
[75 - 79) :	2	1	2	0	0	0	0	0	0	:	5 :
:	32083	5694	24419	0	0	0	0	0	0	:	62196 :
:										:	
[80 - 84) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	
[85 - 89) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	
[90 - 99) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	
Total :	931	862	973	0	0	0	0	0	0	:	2766 :
Total :	17775830	16419227	19177322	0	0	0	0	0	0	:	53372379 :

AVERAGES :    Attained Age    58.00  
                  Years Retired    1.49  
                  Annual Benefit   19,296

# HALL ACTUARIAL ASSOCIATES

## MEMBERSHIP PROFILE CATEGORIZED BY AGE AND YEARS EMPLOYED

STATE EMPLOYEES' SYSTEM  
ACTIVE AFTER DROP

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY  
DROP BENEFITS

VALUATION DATE 6/30/1998

Age/Years :	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	:	Total :
[ 0 - 34) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	
[35 - 39) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	
[40 - 44) :	6	2	1	0	0	0	0	0	0	:	9 :
:	388178	51326	18864	0	0	0	0	0	0	:	458368 :
:	71610	24836	13376	0	0	0	0	0	0	:	109822 :
:										:	
[45 - 49) :	20	8	4	0	0	0	0	0	0	:	32 :
:	1076915	333546	261686	0	0	0	0	0	0	:	1672147 :
:	322560	154224	88372	0	0	0	0	0	0	:	565156 :
:										:	
[50 - 54) :	23	12	5	0	0	0	0	0	0	:	40 :
:	806725	463459	214974	0	0	0	0	0	0	:	1485158 :
:	472788	244236	101405	0	0	0	0	0	0	:	818429 :
:										:	
[55 - 59) :	59	34	8	5	0	1	0	0	0	:	107 :
:	1972070	1302227	296336	142571	0	24018	0	0	0	:	3737222 :
:	1404200	810764	186504	89750	0	15408	0	0	0	:	2506626 :
:										:	
[60 - 64) :	50	42	19	14	1	0	0	0	0	:	126 :
:	1609625	1868810	813397	503769	20222	0	0	0	0	:	4815823 :
:	1045750	1110396	492176	352604	11720	0	0	0	0	:	3012646 :
:										:	
[65 - 69) :	42	47	18	3	4	0	0	0	0	:	114 :
:	1218896	1719888	679027	74176	101895	0	0	0	0	:	3793882 :
:	662760	894833	376002	41184	89728	0	0	0	0	:	2064507 :
:										:	
[70 - 74) :	19	18	11	6	2	1	0	0	0	:	57 :
:	443706	786701	500439	192644	51630	8562	0	0	0	:	1983682 :
:	249964	419940	245938	67800	22586	4797	0	0	0	:	1011025 :
:										:	
Total :	219	163	66	28	7	2	0	0	0	:	485 :
Total :	7516116	6525957	2784723	913160	173747	32580	0	0	0	:	17946282 :
Total :	4229632	3659229	1503773	551338	124034	20205	0	0	0	:	10088211 :

AVERAGES :    Attained Age    60.74  
                  Post Drop Years    1.30  
                  Active Salary    37,003  
                  Annual Benefit    20,800

EXHIBIT 5

PRINCIPLE PROVISIONS OF THE PLAN  
(Including Acts of 1997 Regular Session)

EFFECTIVE DATE:

July 1, 1947; last amendment date - July 1, 1997.

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 DOCT, 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 cancelled 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%
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, 20 years of service).
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.



**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	\$24,721	56	\$51,626	64	\$116,464
49	27,027	57	56,856	65	130,000
50	29,569	58	62,694	66	139,486
51	32,375	59	69,226	67	149,835
52	35,476	60	76,551	68	161,138
53	38,907	61	84,787	69	173,498
54	42,710	62	94,070	70	187,033
55	46,931	63	104,564		

**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. Once the balance of the experience account accumulates to a sum sufficient to grant retirees a COLA, the Board may grant such COLA with legislative approval.

**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.

**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 regardless of date earned.
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).

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

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.

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.

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

- 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.

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

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:

	<u>Regular Members</u>	<u>Corrections &amp; Wildlife</u>
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:

<u>Age at Death</u>	<u>Number of Minor Chn.</u>	<u>Years for Youngest Child to Attain Majority</u>
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:**

Bonds are valued at amortized cost. Fixed assets are valued at cost minus depreciation. For the Plan Year Ending June 30, 1988 equities are valued on a four year weighted average. The computation of the average actuarial value of assets is 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. 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.

**ADMINISTRATIVE EXPENSES:**

Expenses are included in Aggregate Normal Cost and are assumed to be \$6,700,000 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      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
70	.03059	.01570	.03851	.00000	.50000	51	.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
70	.03059	.01570	.03851	.00000	.50000	51	.00000	1.04750

## EXHIBIT 7

## LEGISLATIVE AUDITOR'S REPORT

6 Actuarial information for STATE EMPLOYEES' RETIREMENT SYSTEM.(a) Most recent actuarial valuation date: June 30, 1998.(b) This valuation sets forth information concerning contributions applicable to the plan fiscal year beginning July 1, 1998, and ending June 30, 1999.

## (c) Data used in this valuation

(i) Number of participants as of the valuation date:

Active members. . . . .	69,949
Regular retirees. + DROP. . . . .	25,080
Disability retirees . . . . .	1,110
Survivors receiving benefits. . . . .	4,902
Terminated employees due benefits upon attaining retirement age	1,094
Terminated employees due refunds. . . . .	23,451

(ii) Payroll of active members on the valuation date . . . . . 1,653,863,410(iii) Annual benefits in payment on the valuation date. . . . . 351,847,577(d) Actuarially required contribution for those systems to which R.S.11:102 applies  
Funding Method Projected Unit Credit.Unfunded Accrued Liability as of the end of fiscal 1988 . . . . . 1,825,421,035Amortization Method Increasing Annuity.Remaining Unamortized Portion of the initial unfunded liability . . 2,483,414,233Current Unfunded Accrued Liability under this method. . . . . 1,981,016,859

Actuarially required employer contribution: (at Mid-year)

(i) Employer Normal Cost. . . . . 100,736,399

Amortization Payments for Previous Years (Detail on Exhibit A):

(ii) Previous year's unpaid underpayment or (overpayment). . . . . (2,540,503)(iii) Initial Unfunded Liability (Excludes \$4,298,757 appropriation). 130,347,285(iv) Changes due to COLA's. . . . . 8,601,429(v) Changes in plan provisions, assumption and experience. . . . . (28,940,882)(vi) Total employer contribution required (Sum of 6(d)(i) - (v)). . 208,203,728(vii) Estimated projected payroll for the coming fiscal year . . . . 1,680,512,484(viii) Required Employer Contribution Rate (6(d)(vi)/6(d)(viii)). . 12.4%+ Appropriation. . . . . 4,298,757(e) Actuarially required contribution for those systems to which R.S. 11:103 applies  
Funding Method Not Applicable.(f) Average yield on investments last fiscal year. . . . . 12.97%

## (g) Actuarial information for accounting purposes (GASB/25 results)

## Pension Benefit Obligation:

(i) Present retirees and beneficiaries. . . . . 3,615,235,856(ii) Terminated participants due benefits at retirement age. . . 45,400,235(iii) Terminated participants due a refund of their contributions 17,780,958

## (iv) Active Members:

(1) Accumulated employee contributions. . . . . 1,008,590,723(2) Employer-financed vested portion. . . . . 1,786,472,155(3) Employer-financed nonvested portion . . . . . 479,616,542(v) Total PBO (sum of 6(g)(i) through 6(g)(iv)) . . . . . 6,953,096,469Actuarial value of assets. . . . . 5,067,795,289Unfunded (Assets in Excess of) Pension Benefit Obligation. . . . . 1,885,301,180

**Exhibit 7 (Continued)**

**Legislative Auditor's Report**

(g) Actuarial assumptions used

Interest rate used . . . . . 8.25%

Give the name (or source reference) of the particular table used or attach a copy of the table used for the each of the following. Indicate where appropriate that no assumption is made with regard to a particular aspect of the valuation.

	<u>Males</u>	<u>Females</u>
Mortality rates (healthy)		
Mortality rates (disabled)	<u>See copies of pages 17 - 21 of the 6/30/98</u>	
Termination rates . . . . .	<u>Actuarial Valuation Report Attached</u>	
Retirement rates . . . . .		
Disability rates . . . . .		
Salary scales . . . . .		

(h) Cost of Living Target Ratio and Funded Ratio of the System: (This section must be completed by state and statewide retirement systems only).

(i) Funded Ratio of the System as of the 1986 fiscal year end . . . . . .53464

(ii) Number of fiscal years elapsed since the 1986 fiscal year end multiplied by one-thirtieth of the difference between one hundred percent and the amount in (6)(h)(i) . . . . . .18614

(iii) Changes in Funded Ratio due to mergers or changes in methods or assumptions after the 1986 fiscal year end;

<u>Date of Change</u>	<u>Change in Funded Ratio</u>
<u>6/30/87</u>	<u>(.03148)</u>
<u>6/30/88</u>	<u>.02822</u>
<u>6/30/89</u>	<u>.02420</u>
<u>6/30/91</u>	<u>(.00781)</u>
<u>6/30/96</u>	<u>.01197</u>

Total Change in Funded Ratio . . . . . .02510

(iv) Number of fiscal years elapsed since the date of each change in (6)(h)(iii) multiplied by one-thirtieth of the amount of such change in funded ratio and of opposite arithmetic sign of such change;

<u>Date of Change</u>	<u>Amortization of Change</u>
<u>6/30/87</u>	<u>.01154</u>
<u>6/30/88</u>	<u>(.00941)</u>
<u>6/30/89</u>	<u>(.00726)</u>
<u>6/30/91</u>	<u>.00182</u>
<u>6/30/96</u>	<u>(.00080)</u>

Total Amortization of Changes . . . . . (.00411)

(v) Target Ratio as of the end of the just completed fiscal year. . . . . .74177  
(Sum of (6)(h) (i) through (iv))

(vi) Actual Funded Ratio of the system as of the just completed fiscal year .71509

(vii) According to my actuarial calculations this system has \_\_\_ has not X met the target ratio required to grant a cost of living increase to current benefit recipients.

To the best of my knowledge, the information supplied in item 6 and on statements attached to item 6, if any, is complete and accurate. In my opinion the assumptions used are in the aggregate reasonably related to the experience of the system and to reasonable expectations and represent my best estimate of anticipated experience under the system.

Date September 11, 1998 Signature of Actuary Charles G. Vane

# HALL ACTUARIAL ASSOCIATES

## EXHIBIT A

### AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY JUNE 30, 1998

DATE 6/30	DESCRIPTION	AMTZ. METHOD	AMTZ. PERIOD	INITIAL LIABILITY	YEARS REMAIN	REMAINING BALANCE	MID-YEAR PAYMENT
1) 1988	Initial Liability	I	40	1,825,421,035	31	2,483,414,233	130,347,285*
2) 1989	Change in Liability	I	36	(219,552,151)	31	(252,983,781)	(13,716,304)
3) 1990	Change in Liability	I	36	105,002,368	31	120,991,281	6,559,919
4) 1991	Change in Liability	I	36	47,088,257	31	54,258,477	2,941,792
5) 1992	Legislative COLA	L	12	66,577,000	6	41,059,206	8,601,429
6) 1992	Change in Liability	I	36	1,651,904	31	1,903,443	103,201
7) 1993	Change in Liability	I	36	(67,422,552)	31	(77,689,114)	(4,212,157)
8) 1994	Change in Liability	I	35	(48,680,987)	31	(54,441,930)	(2,951,739)
9) 1995	Change in Liability	I	34	(57,826,272)	31	(62,810,376)	(3,405,460)
10) 1996	Change in Liability	I	33	70,910,540	31	74,865,716	4,059,078
11) 1997	Change in Liability	I	32	(239,190,250)	31	(245,662,313)	(13,319,348)
12) 1998	Change in Liability	I	31	(92,217,582)	31	(92,217,582)	(4,999,864)
TOTAL OUTSTANDING BALANCE						1,990,687,260	110,007,832
EMPLOYER'S CREDIT BALANCE							
1994	Contribution Variance L		5	2,609,956	1	607,846	632,423
1995	Contribution Variance L		5	(7,118,810)	2	(3,189,516)	(1,724,970)
1996	Contribution Variance L		5	1,504,500	3	973,095	364,558
1997	Contribution Variance L		5	3,429,831	4	2,848,101	831,088
1998	Contribution Variance L		5	(10,909,927)	5	(10,909,927)	(2,643,602)
TOTAL OUTSTANDING BALANCE						(9,670,401)	(2,540,503)
TOTAL UNFUNDED ACTUARIAL ACCRUED LIABILITY						\$1,981,016,859	

**\*Note:** LSU and Unfunded Judges equals 3.192635% of the Initial Liability mid-year payment. The appropriation is \$4,298,757.

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