

LOUISIANA STATE EMPLOYEES'  
RETIREMENT SYSTEM  
JUNE 30, 1996  
ACTUARIAL VALUATION

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**HALL ACTUARIAL ASSOCIATES**

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*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, 1996

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, 1996.

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 certified by Postlethwaite & Netterville, Certified Public Accountants.

The present values shown herein have been estimated on the basis of actuarial methods as specified in Louisiana Revised Statutes Title 11 Section 22(6), and assumptions which 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.

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

	<u>June 30, 1996</u>	<u>-----Prior Years-----</u>	
		<u>June 30, 1995</u>	<u>June 30, 1994</u>
I. Membership Census			
1) Retirees	28,030	27,761	27,093
2) Actives	69,680	66,628	68,966
3) DROP	2,320	1,453	1,072
II. Annual Benefits	\$ 306,403,091	\$ 272,435,493	\$ 265,438,765
III. Total Payroll	1,584,357,131	1,547,977,166	1,546,464,828
IV. Valuation Assets	4,040,840,039	3,612,628,700	3,311,602,209
V. Experience Account	84,818,098	61,772,504	37,627,187
VI. Investment Yield			
Realized Income	8.91%	9.67%	7.95%
Actuarial Value	12.34%	9.49%	8.88%
VII. Cost to Fund Annual Pension Accruals (Normal Costs)	214,737,815 13.55%	211,033,659 13.63%	206,164,105 13.33%
VIII. Unfunded Actuarial Accrued Liability	2,213,565,224	2,084,280,556	2,055,792,343
IX. Funded Percentage	64.61%	64.35%	61.95%
X. Funding Requirements to Pay (Mid-year Payment)			
1) Employee Contribution Rate	121,406,118 7.663%	122,450,384 7.661%	122,398,135 7.664%
2) Employer Contribution Rate - Current Year	205,875,608 12.8%	197,339,946 12.3%	192,613,268 12.0%
3) Projected Employer Contribution - Next Year	219,357,113 13.0%	207,388,984 12.4%	201,195,093 12.0%

The above funding requirements measure the cost of benefits that were in effect on June 30, 1996, plus Acts of the 1996 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, 1996 discloses a general 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 6/30/95		\$ 2,084,280,556
<b>INCREASES</b>		
Interest on Unfunded Liability	\$ 171,953,146	
Experience Account Allocation	73,840,631	
Employer Charge	1,504,500	
Experience Loss	<u>144,751,170</u>	
Incurred Increases	392,049,447	
<b>DECREASES</b>		
Investment Gains	147,681,262	
Employer Amtz. Payment	<u>115,083,517</u>	
Incurred Decreases	262,764,779	
Unfunded Liability 6/30/96		\$ 2,213,565,224

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The employer contribution rate established by the Public Retirement Systems' Actuarial Committee for the 1996-1997 plan year was 12.4%. The actual employer contribution rates determined by this valuation for the current plan year is 12.8%. The current adjusted rate is greater than the 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 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 \$73,620,589.
- **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 \$84,818,098.

**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>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>5 Yr. Aver.</u>
10.40%	8.05%	8.88%	9.49%	12.34%	10.14%

The net actuarial rate of return assumed in the valuation was 8.25%. For the plan year ending June 30, 1996 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 \$147,241,178 above projected investment income.

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### **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 1995-1996 plan year, the system incurred a \$166,207,035 plan experience gain. The experience loss, when affected by investment gains and adjusted for revenue not attributable to contributions or investments, yields a net experience loss of \$70,910,540.

### **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-three (33) 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>
1990	1,226,065	7.4%
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%

During the last seven (7) years the aggregate salaries have increased at an annualized rate of 4.8%. If this trend continues during the next seven (7) years, the percentage of pay required to amortize the unfunded liability can be expected to slightly decrease 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. Pension Benefit Obligation financial disclosure continues to be reported in Exhibit 7, Legislative Auditor's Report.

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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, 1996 the funding target is .700450, which is greater than the current .64608 funding ratio. Therefore, the Board is prohibited from granting a cost-of-living increase by statute.

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, 1996</u>		<u>---Prior Year---</u> <u>June 30, 1995</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	\$ 164,027,412	10.35%	\$ 161,043,861	10.40%
b) Disability Benefits	8,134,065	.51%	7,904,954	.51%
c) Survivor Benefits	9,395,783	.59%	9,113,630	.59%
d) Voluntary Termination	28,780,555	1.82%	28,171,214	1.82%
e) Expenses	<u>4,400,000</u>	<u>.28%</u>	<u>4,800,000</u>	<u>.31%</u>
TOTAL	214,737,815	13.55%	211,033,659	13.63%
<b>II. Actuarial Accrued Liability</b>				
a) Active Members				
1) Retirement Benefits	2,516,299,921		2,517,642,065	
2) Disability Benefits	107,683,774		105,991,467	
3) Survivor Benefits	103,113,198		102,443,088	
4) Voluntary Termination	<u>181,796,301</u>		<u>176,500,218</u>	
	2,908,893,194		2,902,576,838	
b) Retired and Inactive Members				
1) Regular Retirees	2,203,081,857		1,933,411,032	
2) Disabled Retirees	78,753,242		71,029,951	
3) Survivors	249,558,225		309,778,100	
4) Vested Deferred	36,302,354		34,489,662	
5) Contributions Refunded	13,561,804		11,668,740	
6) DROP Deferral	524,638,192		299,391,599	
7) DROP Deposits	<u>65,514,390</u>		<u>57,354,479</u>	
	3,271,410,064		2,717,123,563	
c) SUB TOTAL	6,180,303,258		5,619,700,401	

**Exhibit 1 (Continued)**

**Costs, Liabilities & Contributions**

	<u>June 30, 1996</u>	<u>---Prior Year---</u> <u>June 30, 1995</u>
<b>II. Actuarial Accrued Liability</b>		
c) SUB TOTAL (Preceding page)	\$ 6,180,303,258	\$ 5,619,700,401
d) Adjustments to Regular Plan		
1) Active Judges	69,402,926	69,144,367
2) Active Legislators	<u>4,699,079</u>	<u>8,064,488</u>
Adjusted TOTAL	6,254,405,263	5,696,909,256
<b>III. Valuation Assets</b>	4,040,840,039	3,612,628,700
<b>IV. Unfunded Actuarial Accrued Liabilities - Projected Unit Credit*</b>		
a) Change over prior year	129,284,668	(7,511,787)
b) Funded Percentage	64.6%	64.3%
<b>V. Employer Contributions To Fund Current Plan Year*</b>		
a) Employer Portion of Normal Cost	90,388,678	90,495,714
b) Amortization Payments	118,237,731	109,959,621
c) Prior Contribution Variance	<u>(2,750,801)</u>	<u>(3,115,389)</u>
TOTAL Required Contribution	205,875,608	197,339,946
	12.8%	12.3%
Plus State Appropriation	3,936,500	3,766,986
Actuarial Forecast Rate**	12.4%	12.0%
<b>VI. Projected Employer Contributions To Fund Next Plan Year*</b>		
a) Employer Portion of Normal Cost	94,647,449	94,774,749
b) Amortization Payments	123,171,395	114,520,742
c) Prior Contribution Variance	<u>1,538,269</u>	<u>(1,906,507)</u>
TOTAL Projected Contribution	219,357,113	207,388,984
	13.0%	12.4%
Plus State Appropriation	4,113,643	3,936,500
<b>VII. Current Payroll</b>	1,584,357,131	1,547,977,166
Projected Payroll - Mid Year	1,610,224,805	1,598,360,324
Projected Payroll - Next Year	1,686,092,480	1,673,937,824

\*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, 1996</u>	<u>June 30, 1995</u>	<u>June 30, 1994</u>
<b>-----Prior Years-----</b>			
<b><u>OPERATING REVENUES:</u></b>			
1. Contribution Income			
Member	\$ 126,073,816	\$ 123,370,058	\$ 118,255,907
Employer	197,456,874	191,640,907	183,608,465
2. Other Income			
Legislative Appropriations	3,766,986	3,604,770	3,449,541
Miscellaneous	21,926,336	8,527,568	4,611,685
Texaco Settlement	<u>13,817,580</u>	<u>13,817,572</u>	<u>36,000,000</u>
TOTAL CONTRIBUTIONS	363,041,592	340,960,875	345,925,598
3. Investment Income			
Realized Income	335,069,125	326,010,399	246,845,710
Less, investment expenses	<u>-13,318,452</u>	<u>-9,006,271</u>	<u>-8,358,479</u>
TOTAL INVESTMENT INCOME	321,750,673	317,004,128	238,487,231
4. Total Revenues	684,792,265	657,965,003	584,412,829
<b><u>OPERATING EXPENSES:</u></b>			
1. General Administration	4,390,986	4,740,662	4,787,926
Other Expenses	2,277,969	1,724,914	936,571
2. Benefits Paid			
a) Pension Benefits	317,340,115	288,641,870	275,503,281
b) Return of Contrib.	<u>27,222,153</u>	<u>25,072,191</u>	<u>23,955,748</u>
TOTAL BENEFITS PAID	344,562,268	313,714,061	299,459,029
3. Total Operating Expenses	351,231,223	320,179,637	305,183,526
<b><u>NET INCOME:</u></b>	340,229,997	337,785,366	279,229,303

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

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

	<u>June 30, 1996</u>	<u>June 30, 1995</u>	<u>June 30, 1994</u>
<b>-----Prior Years-----</b>			
<b>ASSETS:</b>			
1. Short Term Assets			
Cash in Banks	\$ 16,756,002	\$ 4,251,287	\$ 5,538,400
Commercial/Certificates	201,190,847	364,705,647	363,431,594
Securities	0	0	0
2. Bonds (at amortized cost)			
U.S. Government Agency	144,423,815	99,505,559	166,015,523
United States Issues	452,065,736	475,445,160	506,772,432
Corporate Issues	1,001,652,675	911,865,841	609,329,060
Long Term/Financial	415,281,891	329,770,665	304,739,570
3. Equities			
Common Stock	921,513,676	848,989,483	899,841,092
Foreign Stock	516,319,282	325,379,577	321,319,617
Preferred Stock	0	3,549,218	7,208,424
Fixed Assets	6,064,694	6,236,436	6,653,043
Mortgages - Real Estate	123,048,222	110,561,776	105,198,309
4. Receivables - Payables	<u>154,967,825</u>	<u>132,794,018</u>	<u>(20,777,761)</u>
TOTAL ASSETS			
Equities at Cost	3,953,284,665	3,613,054,668	3,275,269,303
Equities at Market	4,350,524,222	3,820,111,450	3,421,627,795
Market Value	4,346,883,205	3,789,451,813	3,286,667,495

<b><u>RATIO: ASSETS/EXPENSES:</u></b>	11.26	11.28	10.73
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**INVESTMENT YIELD:**

Realized Income	8.91%	9.67%	7.95%
Yield to Actuarial Value	12.34%	9.49%	8.88%
Five Year Actuarial Value	10.14%	9.67%	9.52%
Yield to Market Value	14.40%	14.66%	0.25%
DROP Account Yield	11.84%	8.99%	8.38%

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

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

	<u>June 30, 1996</u>	<u>-----Prior Years-----</u>	
		<u>June 30, 1995</u>	<u>June 30, 1994</u>
<b><u>ACTUARIAL VALUE OF ASSETS:</u></b>			
TOTAL ASSETS	\$ 4,350,524,222	\$ 3,820,111,451	\$ 3,421,627,795
Change in Unrealized (G/L)			
Plan Year - 2 (wt. 1/4)	(86,962,921)	167,766,189	62,857,846
Plan Year - 1 (wt. 2/4)	60,698,290	(84,265,543)	167,766,189
Plan Year (wt. 3/4)	<u>190,182,775</u>	<u>123,556,136</u>	<u>(84,265,543)</u>
Actuarial Value of Assets	4,199,278,726	3,727,635,572	3,385,229,396
<b><u>TEXACO SETTLEMENT FUND:</u></b>			
Prior Year Ending Balance	53,234,368	36,000,000	0
+ Current Year Allocation	13,817,580	13,817,572	36,000,000
+ Accumulated Interest	<u>6,568,641</u>	<u>3,416,796</u>	<u>0</u>
Fund Balance - Year End	73,620,589	53,234,368	36,000,000
<b><u>EXPERIENCE ACCOUNT FUND:</u></b>			
Prior Year Ending Balance	61,772,504	37,627,187	26,706,597
+ Experience Account Allocation	73,840,631	20,574,083	8,548,243
- Benefit Disbursements	58,417,207	0	0
+ Accumulated Interest	<u>7,622,170</u>	<u>3,571,234</u>	<u>2,372,347</u>
Fund Balance - Year End	84,818,098	61,772,504	37,627,187
<b><u>DEVELOPMENT OF ACTUARIAL VALUATION ASSETS :</u></b>			
Total Actuarial Value of Assets Adjusted for:	4,199,278,726	3,727,635,572	3,385,229,396
Texaco Settlement Fund	-73,620,589	-53,234,368	-36,000,000
Experience Account Fund	<u>-84,818,098</u>	<u>-61,772,504</u>	<u>-37,627,187</u>
Valuation Assets	4,040,840,039	3,612,628,700	3,311,602,209

**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 (a)	Actuarial Accrued Liability(AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Payroll ((b-a)/c)
1987	1,874,258	3,564,219	1,689,561	52.6	1,083,997	154.5
1988	2,019,832	3,845,253	1,825,421	52.5	1,111,015	159.0
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

The total actuarial accrued liability determined using the Projected Unit Credit cost method increased by \$557,496,007 from June 30, 1995 to June 30, 1996. There were no changes in benefit provisions during the year. There was a net experience loss of \$70,910,540 after allocating \$73,840,631 for investment income deficiency to the Experience Account in Accordance with Act 1031.

**EXHIBIT 3 (Continued)**

**Pension Accounting & Financial Disclosure**

**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>
1996	203,762,677	99.3	206,878,066	202,316,644	97.8	-4,036,582

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).

\*Actuarial Contributions, then 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. 25.

**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>
1987	80,984,576	121,880,055	183,843,426	386,708,057
1988	81,197,631	125,430,030	160,911,687	375,065,821
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	321,750,673	684,792,265

**Expenses by Type**

<u>Fiscal Year</u>	<u>Benefits</u>	<u>Refunds</u>	<u>Administrative Expenses*</u>	<u>Total</u>
1987	202,019,494	24,736,748	1,482,591	226,756,242
1988	223,013,862	24,792,168	1,904,259	249,710,289
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

\*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 21,768 records for terminated non-vested members due a refund. Finally, 1,002 terminated vested members and Reciprocal Recognition records were purged as data in error. These participants were assumed to possess the same characteristics as the participants with "good data" in the same cohort.

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:

	---1996---	---1995---
	<u>Census</u>	<u>Census</u>
Active Members	69,680	66,628
Regular Retirees	21,297	20,671
Disability Retirees	1,111	1,056
Survivors	4,620	4,497
Vested & Reciprocals	1,002	1,537
Due Refunds	21,768	20,763
DROP Participants	<u>2,320</u>	<u>1,453</u>
TOTAL	121,798	116,605

**MEMBERSHIP PROFILE**  
**CATEGORIZED BY AGE AND YEARS EMPLOYED**

**STATE EMPLOYEES' SYSTEM**  
**ACTIVE REGULAR MEMBERS**

**CELLS DEPICT - MEMBER COUNT**  
**TOTAL SALARY**

**VALUATION DATE 6/30/96**

Age/Years :	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	:	Total :
[ 0 - 19) :	114	14	0	0	0	0	0	0	0	:	128 :
:	491823	116831	0	0	0	0	0	0	0	:	608654 :
:										:	:
[20 - 24) :	1010	1339	56	0	0	0	0	0	0	:	2405 :
:	6495856	18656968	754882	0	0	0	0	0	0	:	25907706 :
:										:	:
[25 - 29) :	1398	3673	1139	40	0	0	0	0	0	:	6250 :
:	11557940	67288041	22321473	745172	0	0	0	0	0	:	101912626 :
:										:	:
[30 - 34) :	1035	3185	2435	1267	291	1	1	3	0	:	8218 :
:	8624975	60520579	54826333	27946509	6799036	20477	41763	49108	0	:	158828780 :
:										:	:
[35 - 39) :	1088	2959	2352	2173	2368	157	1	0	4	:	11102 :
:	8381813	59509082	53504313	56259438	61404655	4163222	5516	0	44760	:	243272799 :
:										:	:
[40 - 44) :	744	2634	2136	1751	2773	1622	108	0	1	:	11769 :
:	6311047	55078644	50326842	46500952	80749119	49640120	3152229	0	48431	:	291807384 :
:										:	:
[45 - 49) :	599	2038	1826	1410	1986	2194	991	18	1	:	11063 :
:	5987038	42646633	43816180	37620334	56858737	72189177	32585306	598306	44162	:	292345873 :
:										:	:
[50 - 54) :	309	1129	1121	869	1185	1028	900	92	2	:	6635 :
:	2774965	24070286	26686488	22325481	32975376	30498787	31344779	3150325	29502	:	173855989 :
:										:	:
[55 - 59) :	99	659	700	642	869	706	202	54	14	:	3945 :
:	978816	14804004	16653838	17022358	23197391	20471799	6088315	2093310	439885	:	101749716 :
:										:	:
[60 - 64) :	32	178	398	248	308	163	73	22	9	:	1431 :
:	391138	4122410	9958280	7608998	8300830	4184198	2276021	827589	330770	:	38000234 :
:										:	:
[65 - 69) :	13	33	93	84	83	60	29	12	4	:	411 :
:	177107	893662	2244697	2472433	2465726	1734308	671507	371095	124254	:	11154789 :
:										:	:
[70 - 74) :	3	6	5	20	34	26	11	2	5	:	112 :
:	17567	189112	74361	448655	898563	686470	271096	60066	115099	:	2760989 :
:										:	:
Total :	6444	17847	12261	8504	9897	5957	2316	203	40	:	63469 :
Total :	52190085	347896252	281167687	218950330	273649433	183588558	76436532	7149799	1176863	:	1442205539 :

**AVERAGES :**    **Attained Age**    41.59  
                   **Service Years**    9.73  
                   **Active Salary**    22,723

**MEMBERSHIP PROFILE**  
**CATEGORIZED BY AGE AND YEARS EMPLOYED**

**STATE EMPLOYEES' SYSTEM**  
**ACTIVE LEGISLATORS**

**CELLS DEPICT - MEMBER COUNT**  
**TOTAL SALARY**

**VALUATION DATE 6/30/96**

Age/Years :	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	:	Total :
[ 0 - 19) :	1	0	0	0	0	0	0	0	0	:	1 :
:	14645	0	0	0	0	0	0	0	0	:	14645 :
:										:	:
[20 - 24) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[25 - 29) :	2	0	0	0	0	0	0	0	0	:	2 :
:	16534	0	0	0	0	0	0	0	0	:	16534 :
:										:	:
[30 - 34) :	1	2	1	0	0	0	0	0	0	:	4 :
:	13970	47100	48700	0	0	0	0	0	0	:	109770 :
:										:	:
[35 - 39) :	1	6	3	0	0	0	0	0	0	:	10 :
:	9150	125941	54477	0	0	0	0	0	0	:	189568 :
:										:	:
[40 - 44) :	1	10	2	2	0	0	0	0	0	:	15 :
:	13820	219927	46125	62225	0	0	0	0	0	:	342097 :
:										:	:
[45 - 49) :	5	8	1	3	3	1	0	0	1	:	22 :
:	51549	158702	26850	71325	72450	22875	0	0	25275	:	429026 :
:										:	:
[50 - 54) :	1	2	5	4	2	3	0	0	0	:	17 :
:	2300	46575	118389	94500	47400	51750	0	0	0	:	360914 :
:										:	:
[55 - 59) :	2	1	1	3	1	2	1	0	0	:	11 :
:	24375	23700	23550	113217	23775	45225	34364	0	0	:	288206 :
:										:	:
[60 - 64) :	3	7	0	0	0	0	0	0	0	:	10 :
:	31060	165825	0	0	0	0	0	0	0	:	196885 :
:										:	:
[65 - 69) :	0	0	1	0	0	1	0	0	0	:	2 :
:	0	0	35264	0	0	24975	0	0	0	:	60239 :
:										:	:
[70 - 74) :	0	0	1	0	0	0	0	0	0	:	1 :
:	0	0	23025	0	0	0	0	0	0	:	23025 :
:										:	:
Total :	17	36	15	12	6	7	1	0	1	:	95 :
Total :	177403	787770	376380	341267	143625	144825	34364	0	25275	:	2030909 :

**AVERAGES :**    **Attained Age**    48.39  
                   **Service Years**    28.29  
                   **Active Salary**    21,378

# HALL ACTUARIAL ASSOCIATES

## MEMBERSHIP PROFILE CATEGORIZED BY AGE AND YEARS EMPLOYED

STATE EMPLOYEES' SYSTEM  
ACTIVE JUDGES

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/96

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) :	2	3	0	0	0	0	0	0	0	:	5 :
:	104390	252900	0	0	0	0	0	0	0	:	357290 :
:										:	:
[35 - 39) :	4	6	6	1	1	0	0	0	0	:	18 :
:	218724	440064	474723	56735	77187	0	0	0	0	:	1267433 :
:										:	:
[40 - 44) :	4	18	26	5	4	0	0	0	0	:	57 :
:	155395	1435874	2096526	395920	279226	0	0	0	0	:	4362941 :
:										:	:
[45 - 49) :	3	19	16	14	13	5	0	0	0	:	70 :
:	126349	1571789	1339191	1068884	1060633	421500	0	0	0	:	5588346 :
:										:	:
[50 - 54) :	2	9	16	15	22	7	0	0	0	:	71 :
:	53895	745149	1261201	1296427	1710410	618502	0	0	0	:	5685584 :
:										:	:
[55 - 59) :	0	4	6	5	8	5	1	0	0	:	29 :
:	0	337200	472307	421491	643592	413991	84300	0	0	:	2372881 :
:										:	:
[60 - 64) :	0	1	5	8	8	5	0	1	0	:	28 :
:	0	84300	421500	654545	594682	436500	0	112300	0	:	2303827 :
:										:	:
[65 - 69) :	1	1	1	2	3	0	0	0	0	:	8 :
:	51062	89300	84300	168600	262900	0	0	0	0	:	656162 :
:										:	:
[70 - 74) :	0	0	0	1	0	0	0	0	0	:	1 :
:	0	0	0	76740	0	0	0	0	0	:	76740 :
:										:	:
Total :	16	61	76	51	59	22	1	1	0	:	287 :
Total :	709815	4956576	6149748	4139342	4628630	1890493	84300	112300	0	:	22671204 :

AVERAGES :    Attained Age    49.95  
                  Service Years    10.10  
                  Active Salary    78,994

# 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 6/30/96

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) :	1	1	0	0	0	0	0	0	0	2 :
:	69	23425	0	0	0	0	0	0	0	23494 :
:										:
[25 - 29) :	2	22	8	0	0	0	0	0	0	32 :
:	28594	505425	207578	0	0	0	0	0	0	741597 :
:										:
[30 - 34) :	3	16	15	3	0	0	0	0	0	37 :
:	42833	369622	393238	90543	0	0	0	0	0	896236 :
:										:
[35 - 39) :	0	7	7	7	9	1	0	0	0	31 :
:	0	154340	190431	207048	286093	29807	0	0	0	867719 :
:										:
[40 - 44) :	2	0	4	8	16	5	0	0	0	35 :
:	28738	0	112885	244626	522860	183982	0	0	0	1093091 :
:										:
[45 - 49) :	0	0	3	8	14	9	1	0	0	35 :
:	0	0	84868	248193	462670	323252	40326	0	0	1159309 :
:										:
[50 - 54) :	0	0	2	4	4	4	0	0	0	14 :
:	0	0	56767	121238	132722	155771	0	0	0	466498 :
:										:
[55 - 59) :	0	0	0	2	2	1	0	0	0	5 :
:	0	0	0	55716	66221	32844	0	0	0	154781 :
:										:
[60 - 64) :	0	0	0	1	1	0	0	0	0	2 :
:	0	0	0	29242	30690	0	0	0	0	59932 :
:										:
[65 - 69) :	0	0	0	0	0	0	0	0	0	0 :
:	0	0	0	0	0	0	0	0	0	0 :
:										:
[70 - 74) :	0	0	0	0	0	0	0	0	0	0 :
:	0	0	0	0	0	0	0	0	0	0 :
:										:
Total :	8	46	39	33	46	20	1	0	0	193 :
Total :	100234	1052812	1045767	996606	1501256	725656	40326	0	0	5462657 :

AVERAGES :    Attained Age    39.29  
                  Service Years    11.13  
                  Active Salary    28,304

# 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 6/30/96

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	11	0	0	0	0	0	:	11 :
:	0	0	0	254062	0	0	0	0	0	:	254062 :
:										:	:
[30 - 34) :	0	0	3	122	23	0	0	0	0	:	148 :
:	0	0	73651	2998857	631656	0	0	0	0	:	3704164 :
:										:	:
[35 - 39) :	0	0	3	161	145	5	0	0	0	:	314 :
:	0	0	86422	4091831	4001868	162658	0	0	0	:	8342779 :
:										:	:
[40 - 44) :	0	0	4	127	171	22	1	0	0	:	325 :
:	0	0	109983	3257574	4997074	745766	53380	0	0	:	9163777 :
:										:	:
[45 - 49) :	0	0	4	121	124	38	10	0	0	:	297 :
:	0	0	100604	3013063	3571368	1561028	407555	0	0	:	8653618 :
:										:	:
[50 - 54) :	0	0	0	78	66	9	3	1	0	:	157 :
:	0	0	0	2029351	1927688	255634	114814	34488	0	:	4361975 :
:										:	:
[55 - 59) :	0	0	2	59	53	5	0	0	1	:	120 :
:	0	0	51494	1502143	1424428	144299	0	0	54977	:	3177341 :
:										:	:
[60 - 64) :	0	0	0	15	21	0	2	0	0	:	38 :
:	0	0	0	366671	548280	0	56844	0	0	:	971795 :
:										:	:
[65 - 69) :	0	0	0	4	1	0	0	0	0	:	5 :
:	0	0	0	95689	35627	0	0	0	0	:	131316 :
:										:	:
[70 - 74) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
Total :	0	0	16	698	604	79	16	1	1	:	1415 :
Total :	0	0	422154	17609241	17137989	2869385	632593	34488	54977	:	38760827 :

AVERAGES :    Attained Age    44.38  
                  Service Years    15.19  
                  Active Salary    27,393

# 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 6/30/96

Age/Years :	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	:	Total :
[ 0 - 19) :	53	6	0	0	0	0	0	0	0	:	59 :
:	278325	76287	0	0	0	0	0	0	0	:	354612 :
:										:	:
[20 - 24) :	282	344	27	0	0	0	0	0	0	:	653 :
:	1602841	5085254	521379	0	0	0	0	0	0	:	7209474 :
:										:	:
[25 - 29) :	258	516	247	0	0	0	0	0	0	:	1021 :
:	1578529	8219143	4762304	0	0	0	0	0	0	:	14559976 :
:										:	:
[30 - 34) :	120	281	337	0	0	0	0	0	0	:	738 :
:	747209	4598969	6942900	0	0	0	0	0	0	:	12289078 :
:										:	:
[35 - 39) :	121	180	212	0	0	0	0	0	0	:	513 :
:	685810	2924297	4375460	0	0	0	0	0	0	:	7985567 :
:										:	:
[40 - 44) :	61	147	198	0	0	0	0	0	0	:	406 :
:	426352	2601061	4201037	0	0	0	0	0	0	:	7228450 :
:										:	:
[45 - 49) :	47	118	173	0	0	0	0	0	0	:	338 :
:	339315	2137956	3601063	0	0	0	0	0	0	:	6078334 :
:										:	:
[50 - 54) :	15	56	80	0	0	0	0	0	0	:	151 :
:	77624	1010931	1718242	0	0	0	0	0	0	:	2806797 :
:										:	:
[55 - 59) :	7	44	52	0	0	0	0	0	0	:	103 :
:	42436	765944	1058352	0	0	0	0	0	0	:	1866732 :
:										:	:
[60 - 64) :	4	7	31	0	0	0	0	0	0	:	42 :
:	27565	123271	652938	0	0	0	0	0	0	:	803774 :
:										:	:
[65 - 69) :	1	0	0	0	0	0	0	0	0	:	1 :
:	219	0	0	0	0	0	0	0	0	:	219 :
:										:	:
[70 - 74) :	1	0	0	0	0	0	0	0	0	:	1 :
:	1700	0	0	0	0	0	0	0	0	:	1700 :
:										:	:
Total :	970	1699	1357	0	0	0	0	0	0	:	4026 :
Total :	5807925	27543113	27833675	0	0	0	0	0	0	:	61184713 :

AVERAGES :    Attained Age    34.06  
                 Service Years    3.58  
                 Active Salary    15,197

# HALL ACTUARIAL ASSOCIATES

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

STATE EMPLOYEES' SYSTEM  
ALL REGULAR RETIREES

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFIT

VALUATION DATE 6/30/96

Age/Years :	(0-1)	(1-2)	(2-3)	(3-4)	(4-5)	(5-10)	(10-15)	(15-20)	(20- )	:	Total :
[ 0 - 39) :	1	0	0	0	0	1	0	0	0	:	2 :
:	18098	0	0	0	0	5485	0	0	0	:	23583 :
:										:	:
[40 - 44) :	35	7	10	5	3	3	1	0	0	:	64 :
:	393836	113218	151131	77010	43955	29204	15669	0	0	:	824023 :
:										:	:
[45 - 49) :	77	14	9	9	4	13	1	0	0	:	127 :
:	1072150	245835	132202	179371	85881	174414	7888	0	0	:	1897741 :
:										:	:
[50 - 54) :	218	81	66	37	23	78	6	1	0	:	510 :
:	3584570	1664778	1386480	650826	464027	1210198	65988	7902	0	:	9034769 :
:										:	:
[55 - 59) :	312	217	167	163	95	612	84	2	0	:	1652 :
:	4889754	4520602	3410835	3160272	1649194	10448107	1345792	26522	0	:	29451078 :
:										:	:
[60 - 64) :	360	404	324	304	184	1351	627	70	17	:	3641 :
:	4575688	5143733	4237898	4238556	2193757	19713206	9186407	607215	103651	:	50000111 :
:										:	:
[65 - 69) :	170	245	282	351	270	1802	1171	350	39	:	4680 :
:	2487072	3075357	3367041	4514520	2815381	20475196	16624663	4440147	300764	:	58100141 :
:										:	:
[70 - 74) :	30	55	78	121	114	1306	1833	760	151	:	4448 :
:	432787	1179374	1117338	1980671	1189827	13581169	20834395	9808343	1532117	:	51656021 :
:										:	:
[75 - 79) :	6	7	17	11	15	322	1183	1289	292	:	3142 :
:	139280	147044	394110	124864	201527	4213820	12346862	12515243	3309753	:	33392503 :
:										:	:
[80 - 84) :	0	0	0	0	1	13	220	945	656	:	1835 :
:	0	0	0	0	16842	171258	2597418	8000973	5645363	:	16431854 :
:										:	:
[85 - 89) :	0	0	0	0	0	1	3	62	821	:	887 :
:	0	0	0	0	0	21461	41199	665000	5984031	:	6711691 :
:										:	:
[90 - 99) :	0	0	0	0	0	0	1	4	304	:	309 :
:	0	0	0	0	0	0	35957	35901	2163869	:	2235727 :
:										:	:
Total :	1209	1030	953	1001	709	5502	5130	3483	2280	:	21297 :
Total :	17593235	16089941	14197035	14926090	8660391	70043518	63102238	36107246	19039548	:	259759242 :

AVERAGES :    Attained Age    70.34  
                  Years Retired    10.99  
                  Annual Benefit   12,197



# HALL ACTUARIAL ASSOCIATES

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

STATE EMPLOYEES' SYSTEM  
ALL DISABILITY RETIREES

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFIT

VALUATION DATE 6/30/96

Age/Years :	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	Total :
[ 0 - 39) :	7	9	7	10	4	9	0	0	0	46 :
:	53627	63450	53657	58764	21912	49512	0	0	0	300922 :
:										:
[40 - 44) :	15	24	17	10	4	31	5	0	0	106 :
:	170338	213219	147298	87255	18799	180868	21897	0	0	839674 :
:										:
[45 - 49) :	37	39	23	25	17	53	18	1	1	214 :
:	428748	452554	216828	248209	132663	412372	132212	5196	4235	2033017 :
:										:
[50 - 54) :	35	39	35	42	32	99	49	9	2	342 :
:	377712	403272	311576	366818	258393	803205	376781	52820	7954	2958531 :
:										:
[55 - 59) :	40	41	44	30	24	128	55	20	6	388 :
:	343955	329708	378017	246645	180134	896444	415529	145359	26627	2962418 :
:										:
[60 - 64) :	1	1	1	1	1	6	3	0	0	14 :
:	9324	9273	10757	4847	4382	103136	17987	0	0	159706 :
:										:
[65 - 69) :	0	0	0	0	0	0	1	0	0	1 :
:	0	0	0	0	0	0	21309	0	0	21309 :
:										:
[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 :	135	153	127	118	82	326	131	30	9	1111 :
Total :	1383704	1471476	1118133	1012538	616283	2445537	985715	203375	38816	9275577 :

AVERAGES :    Attained Age    52.14  
                  Years Retired    5.42  
                  Annual Benefit   8,349

# HALL ACTUARIAL ASSOCIATES

**MEMBERSHIP PROFILE**  
**CATEGORIZED BY AGE AND YEARS RETIRED**

**STATE EMPLOYEES' SYSTEM**  
**ALL SURVIVOR BENEFITS**

**CELLS DEPICT - MEMBER COUNT**  
**TOTAL BENEFIT**

**VALUATION DATE 6/30/96**

Age/Years :	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	:	Total :
[ 0 - 39) :	4	6	4	5	5	15	22	18	15	:	94 :
:	53439	74735	65761	80112	42128	237330	199077	103826	82588	:	938996 :
[40 - 44) :	5	3	2	1	7	14	15	3	2	:	52 :
:	72797	56149	6529	17618	86222	185889	165543	22809	4912	:	618468 :
[45 - 49) :	5	7	11	9	3	38	27	5	3	:	108 :
:	111375	93230	144510	144446	73983	428494	290401	24784	10286	:	1321509 :
[50 - 54) :	39	46	63	38	61	59	48	15	8	:	377 :
:	584391	667169	914395	634578	858778	688254	472735	90440	40759	:	4951499 :
[55 - 59) :	2	2	4	10	7	252	79	48	17	:	421 :
:	5505	17904	41009	103380	69830	2930640	809735	338918	103885	:	4420806 :
[60 - 64) :	1	5	4	11	14	70	484	84	39	:	712 :
:	5256	50135	20432	91674	115891	551465	4561172	583223	225066	:	6204314 :
[65 - 69) :	0	4	2	5	9	71	103	744	97	:	1035 :
:	0	26808	12974	65913	39160	500960	890718	5375092	593595	:	7505220 :
[70 - 74) :	0	0	1	1	3	47	113	108	733	:	1006 :
:	0	0	7356	4332	20588	370612	902240	809938	4442743	:	6557809 :
[75 - 79) :	0	0	0	0	0	12	52	102	332	:	498 :
:	0	0	0	0	0	99306	395352	745748	1784541	:	3024947 :
[80 - 84) :	0	0	0	0	0	0	8	40	181	:	229 :
:	0	0	0	0	0	0	47668	296322	977507	:	1321497 :
[85 - 89) :	0	0	0	0	0	0	1	4	75	:	80 :
:	0	0	0	0	0	0	23411	32009	390468	:	445888 :
[90 - 99) :	0	0	0	0	0	0	0	1	7	:	8 :
:	0	0	0	0	0	0	0	20636	36683	:	57319 :
Total :	56	73	91	80	109	578	952	1172	1509	:	4620 :
Total :	832763	986130	1212966	1142053	1306580	5992950	8758052	8443745	8693033	:	37368272 :

**AVERAGES :**    **Attained Age**    66.30  
                   **Years Retired**    16.34  
                   **Annual Benefit**   8,088

# HALL ACTUARIAL ASSOCIATES

## MEMBERSHIP PROFILE CATEGORIZED BY AGE AND YEARS EMPLOYED

STATE EMPLOYEES' SYSTEM  
TERMINATED VESTED

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFIT

VALUATION DATE 6/30/96

Age/Years :	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	:	Total :
[ 0 - 19) :	1	1	0	0	0	0	0	0	0	:	2 :
:	10	62	0	0	0	0	0	0	0	:	72 :
:										:	:
[20 - 24) :	2	7	0	0	0	0	0	0	0	:	9 :
:	60	1151	0	0	0	0	0	0	0	:	1211 :
:										:	:
[25 - 29) :	7	9	0	0	0	1	0	0	0	:	17 :
:	287	3079	0	0	0	3233	0	0	0	:	6599 :
:										:	:
[30 - 34) :	7	8	3	18	3	0	0	0	0	:	39 :
:	1274	2292	8938	88335	27311	0	0	0	0	:	128150 :
:										:	:
[35 - 39) :	3	7	7	57	50	3	0	0	0	:	127 :
:	562	6708	17718	369624	344971	20550	0	0	0	:	760133 :
:										:	:
[40 - 44) :	0	8	8	41	87	38	2	0	0	:	184 :
:	0	6324	13390	280135	735496	334777	7159	0	0	:	1377281 :
:										:	:
[45 - 49) :	4	0	5	44	71	75	20	3	0	:	222 :
:	362	0	10208	330094	635264	873537	207190	32431	0	:	2089086 :
:										:	:
[50 - 54) :	0	1	1	24	51	38	32	12	1	:	160 :
:	0	209	8518	141945	582491	432288	430017	118369	7807	:	1721644 :
:										:	:
[55 - 59) :	1	3	3	29	52	33	21	14	6	:	162 :
:	145	3256	20040	258243	443478	324530	207660	135804	37553	:	1430709 :
:										:	:
[60 - 64) :	1	1	0	5	10	4	3	3	5	:	32 :
:	36	1129	0	21445	59445	18058	18891	34595	42360	:	195959 :
:										:	:
[65 - 69) :	0	0	0	2	3	2	1	3	4	:	15 :
:	0	0	0	6760	8616	11431	20236	23413	19273	:	89729 :
:										:	:
[70 - 74) :	0	0	0	2	3	0	11	6	11	:	33 :
:	0	0	0	9829	26253	0	96747	15810	55292	:	203931 :
:										:	:
Total :	26	45	27	222	330	194	90	41	27	:	1002 :
Total :	2736	24210	78812	1506410	2863325	2018404	987900	360422	162285	:	8004504 :

AVERAGES :    Attained Age    48.32  
                  Service Years    17.98  
                  Annual Benefit    7,989

# HALL ACTUARIAL ASSOCIATES

**MEMBERSHIP PROFILE**  
**CATEGORIZED BY AGE AND YEARS RETIRED**

**STATE EMPLOYEES' SYSTEM**  
**DROP PARTICIPANTS**

**CELLS DEPICT - MEMBER COUNT**  
**TOTAL BENEFIT**

**VALUATION DATE 6/30/96**

Age/Years :	(0-1)	(1-2)	(2-3)	(3-4)	(4-5)	(5-10)	(10-15)	(15-20)	(20- )	Total :
[ 0 - 39) :	4	0	0	0	0	0	0	0	0	4 :
:	61862	0	0	0	0	0	0	0	0	61862 :
[40 - 44) :	41	10	5	0	0	0	0	0	0	56 :
:	666529	173956	71892	0	0	0	0	0	0	912377 :
[45 - 49) :	91	15	7	0	0	0	0	0	0	113 :
:	1948256	317909	127186	0	0	0	0	0	0	2393351 :
[50 - 54) :	282	91	54	0	0	0	0	0	0	427 :
:	6763922	2067179	1283160	0	0	0	0	0	0	10114261 :
[55 - 59) :	351	180	137	0	0	0	0	0	0	668 :
:	7764152	4208258	3575845	0	0	0	0	0	0	15548255 :
[60 - 64) :	411	192	153	0	0	0	0	0	0	756 :
:	5425215	3071453	3303365	0	0	0	0	0	0	11800033 :
[65 - 69) :	78	69	86	0	0	0	0	0	0	233 :
:	1303659	1208809	2106346	0	0	0	0	0	0	4618814 :
[70 - 74) :	14	23	21	0	0	0	0	0	0	58 :
:	175138	439193	304542	0	0	0	0	0	0	918873 :
[75 - 79) :	1	1	3	0	0	0	0	0	0	5 :
:	22730	11143	64812	0	0	0	0	0	0	98685 :
[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 :	1273	581	466	0	0	0	0	0	0	2320 :
Total :	24131463	11497900	10837148	0	0	0	0	0	0	46466511 :

**AVERAGES :**    **Attained Age**    58.63  
                   **Years Retired**    1.14  
                   **Annual Benefit** 20,029

# HALL ACTUARIAL ASSOCIATES

**MEMBERSHIP PROFILE**  
**CATEGORIZED BY AGE AND YEARS EMPLOYED**

**STATE EMPLOYEES' SYSTEM**  
**ACTIVE AFTER DROP**

**CELLS DEPICT - MEMBER COUNT**  
**TOTAL SALARY**

**VALUATION DATE 6/30/96**

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) :	2	0	0	0	0	0	0	0	0	:	2 :
:	1871	0	0	0	0	0	0	0	0	:	1871 :
:										:	:
[25 - 29) :	2	0	0	0	0	0	0	0	0	:	2 :
:	17194	0	0	0	0	0	0	0	0	:	17194 :
:										:	:
[30 - 34) :	0	0	0	0	0	0	0	0	0	:	0 :
:	0	0	0	0	0	0	0	0	0	:	0 :
:										:	:
[35 - 39) :	3	0	0	0	0	0	0	0	0	:	3 :
:	31827	0	0	0	0	0	0	0	0	:	31827 :
:										:	:
[40 - 44) :	3	0	0	0	0	0	0	0	0	:	3 :
:	98542	0	0	0	0	0	0	0	0	:	98542 :
:										:	:
[45 - 49) :	2	0	0	0	0	0	0	0	0	:	2 :
:	55705	0	0	0	0	0	0	0	0	:	55705 :
:										:	:
[50 - 54) :	12	1	0	0	0	0	0	0	0	:	13 :
:	361774	24276	0	0	0	0	0	0	0	:	386050 :
:										:	:
[55 - 59) :	17	18	0	0	0	0	0	0	0	:	35 :
:	687361	631516	0	0	0	0	0	0	0	:	1318877 :
:										:	:
[60 - 64) :	29	32	0	0	0	0	0	0	0	:	61 :
:	1078364	1201487	0	0	0	0	0	0	0	:	2279851 :
:										:	:
[65 - 69) :	16	28	0	0	0	0	0	0	0	:	44 :
:	455867	876363	0	0	0	0	0	0	0	:	1332230 :
:										:	:
[70 - 74) :	8	22	0	0	0	0	0	0	0	:	30 :
:	272144	745734	0	0	0	0	0	0	0	:	1017878 :
:										:	:
Total :	94	101	0	0	0	0	0	0	0	:	195 :
Total :	3060649	3479376	0	0	0	0	0	0	0	:	6540025 :

**AVERAGES :**    **Attained Age**    62.03  
                   **Service Years**    1.16  
                   **Active Salary**    33,539

**EXHIBIT 5**

**PRINCIPLE PROVISIONS OF THE PLAN  
(Including Acts of 1996 Regular Session)**

**EFFECTIVE DATE:**

July 1, 1947; last amendment date - July 1, 1995.

**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%
Wild Life 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	\$22,082	56	\$46,604	64	\$107,147
49	24,168	57	51,418	65	120,000
50	26,468	58	56,807	66	131,442
51	29,016	59	62,856	67	144,375
52	31,833	60	69,663	68	159,048
53	34,950	61	77,344	69	175,787
54	38,431	62	86,037	70	194,948
55	42,295	63	95,906		

**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 Wild Life 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. 6 requires the disclosure of "Credited Projected Benefits" for Public Employee Retirement Systems. The actuarial present value of credited projected benefits are the accumulated accrued benefits of each individual participant projected with salary increases for active members to anticipated retirement. The development of this disclosure utilizes the same actuarial assumptions in the development of funding requirements and actuarial accrued liabilities.

**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 \$4,400,000 per year. Investment Expenses 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.

# HALL ACTUARIAL ASSOCIATES

## 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	1.06350
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



# HALL ACTUARIAL ASSOCIATES

## ACTUARIAL TABLES AND RATES (JUDGES & LEGISLATORS ASSUMPTIONS)

Age	- Death Rates -		Remarriage	Disability	Retirement		Termination	Salary
	Male	Female	Rates	Rates	Rates	Dur	Rates	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, 1996.(b) This valuation sets forth information concerning contributions applicable to the plan fiscal year beginning July 1, 1996, and ending June 30, 1997.

(c) Data used in this valuation

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

Active members. . . . .	69,680
Regular retirees. + DROP. . . . .	21,297
Disability retirees . . . . .	1,111
Survivors receiving benefits. . . . .	4,620
Terminated employees due benefits upon attaining retirement age	1,002
Terminated employees due refunds. . . . .	21,768

(ii) Payroll of active members on the valuation date . . . . . 1,584,357,131(iii) Annual benefits in payment on the valuation date. . . . . 306,403,091(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 . . 2,352,214,793Current Unfunded Accrued Liability under this method. . . . . 2,213,565,224

Actuarially required employer contribution: (at Mid-year)

(i) Employer Normal Cost. . . . . 90,388,678

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

(ii) Previous year's unpaid underpayment or (overpayment). . . . . (2,750,801)(iii) Initial Unfunded Liability (Excludes \$3,936,500 appropriation). 119,362,912(iv) Changes due to COLA's. . . . . 8,601,429(v) Changes in plan provisions, assumption and experience. . . . . (9,726,610)(vi) Total employer contribution required (Sum of 6(d)(i) - (v)). . . 205,875,608(vii) Estimated projected payroll for the coming fiscal year . . . . 1,610,224,805(viii) Required Employer Contribution Rate (6(d)(vi)/6(d)(viii)). . . 12.8%+ Appropriation. . . . . 3,936,500(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. . . . . 12.34%

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

Pension Benefit Obligation:

(i) Present retirees and beneficiaries. . . . . 3,221,545,906(ii) Terminated participants due benefits at retirement age. . . . 36,302,354(iii) Terminated participants due a refund of their contributions 13,561,804

(iv) Active Members:

(1) Accumulated employee contributions. . . . . 920,444,642(2) Employer-financed vested portion. . . . . 1,656,019,848(3) Employer-financed nonvested portion . . . . . 406,530,709(v) Total PBO (sum of 6(g)(i) through 6(g)(iv)) . . . . . 6,254,405,263Actuarial value of assets. . . . . 4,114,460,628Unfunded (Assets in Excess of) Pension Benefit Obligation. . . . . 2,139,944,635

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.

### Females

Salary scales . . . . .

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**EXHIBIT A**

**AMORTIZATION OF UNFUNDED  
ACTUARIAL ACCRUED LIABILITY  
JUNE 30, 1996**

<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>
1) 1988	Initial Liability	I	40	1,825,421,035	33	2,352,214,793	119,362,912*
2) 1989	Change in Liability	I	36	(219,552,151)	33	(239,618,580)	(12,560,430)
3) 1990	Change in Liability	I	36	110,124,801	33	114,599,280	6,007,115
4) 1991	Change in Liability	I	36	47,088,257	33	51,391,987	2,693,887
5) 1992	Legislative COLA	L	12	66,577,000	8	50,943,516	8,601,429
6) 1992	Change in Liability	I	37	6,064,124	33	1,802,883	94,505
7) 1993	Change in Liability	I	36	(67,422,552)	33	(73,584,778)	(3,857,199)
8) 1994	Change in Liability	I	35	(84,680,987)	33	(51,565,748)	(2,702,996)
9) 1995	Change in Liability	I	34	(57,826,272)	33	(59,492,087)	(3,118,482)
10) 1996	Change in Liability	I	33	70,910,540	33	70,910,540	3,717,019
TOTAL OUTSTANDING BALANCE						2,217,601,806	118,237,731
<b>EMPLOYER'S CREDIT BALANCE</b>							
1992	Contribution Variance L	L	5	(11,259,859)	1	(2,622,366)	(2,728,395)
1993	Contribution Variance L	L	5	2,911,762	2	1,304,588	705,554
1994	Contribution Variance L	L	5	2,609,956	3	1,688,092	632,423
1995	Contribution Variance L	L	5	(7,118,810)	4	(5,911,396)	(1,724,971)
1996	Contribution Variance L	L	5	1,504,500	5	1,504,500	364,588
TOTAL OUTSTANDING BALANCE						(4,036,582)	(2,750,801)
TOTAL UNFUNDED ACTUARIAL ACCRUED LIABILITY						\$2,213,565,224	

**\*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.