

## *Hall Actuarial Associates*

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September 17, 2010

Board of Trustees  
**LOUISIANA STATE POLICE**  
**RETIREMENT SYSTEM**  
3100 Brentwood Drive, Suite B  
Baton Rouge, Louisiana 70809

Gentlemen:

This report presents the results of the actuarial valuation of assets and liabilities, as well as funding requirements, for the Louisiana State Police Retirement System as of June 30, 2010.

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 Police 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 provided by the Fund's external auditors, Hientz & Macaloso LLC.

The present values shown herein have been calculated on the basis of the actuarial cost method specified in Louisiana Revised Statutes Title 11 Section 22(12). The actuarial assumptions, which have been approved by the Board of Trustees, are appropriate for the purpose of this valuation, are reasonable in the aggregate, and when applied in combination represent my best estimates of the anticipated experience under the plan.

Board of Trustees  
September 17, 2010

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

	<u>June 30, 2010</u>	<u>-----Prior Years-----</u>	
		<u>June 30, 2009</u>	<u>June 30, 2008</u>
I. Membership Census			
1) Retirees	1,181	1,175	1,153
2) Actives	1,065	1,103	1,059
3) Terminated Vested	29	25	24
4) DROP	5	18	27
II. Annual Benefits	\$ 34,390,608	\$ 33,536,628	\$ 31,258,056
III. Total Payroll	59,340,901	59,556,036	56,728,212
IV. Valuation Assets	391,669,402	395,905,112	438,074,647
V. Investment Yield <sup>1</sup>			
Market Value	11.46%	-18.96%	-5.24%
5 year avg.	1.31%	0.86%	7.51%
10 year avg.	2.80%	2.15%	4.92%
Actuarial Value <sup>1</sup>	0.32%	-7.13%	4.55%
5 year avg.	3.67%	5.33%	7.80%
10 year avg.	3.51%	4.43%	6.31%
DROP Accounts <sup>1</sup>	0.00%	0.00%	4.05%
VI. Experience Account	0	0	0
VII. Cost to Fund Annual Pension Accruals (Normal Costs)	15,767,888 26.57%	15,716,185 26.39%	14,800,890 26.09%
VIII. Unfunded Actuarial Accrued Liability	313,078,407	282,401,551	199,757,220
IX. Funded Percentage	55.58%	58.37%	68.7%
X. Funding Requirements (Mid Year Payment)			
1) Employee Contribution Rate	8.50%	8.50%	8.00%
		Eff. 10/1/2009	
2) Employer Rate, plus Premium Tax Allocation (Current Year)	55.5% 1,500,000	51.1% 1,500,000	30.9% 1,500,000
3) Projected Employer Rate, plus Premium Tax Allocation (Next Year)	55.9% 1,500,000	50.9% 1,500,000	41.3% 1,500,000

Funding Requirements measure the cost of benefits in effect on June 30, 2010.

<sup>1</sup>Excludes Money Market DROP Accounts effective June 30, 2008.

Board of Trustees  
September 17, 2010

**UNFUNDED LIABILITY**

The Actuarial Valuation for the plan year ending June 30, 2010 discloses an increase in the value of the plan's unfunded actuarial accrued liability due in part to the actuarial smoothing of assets which partially defers investment losses from prior years. The dollar funding requirements have increased, and the funding as a percentage of payroll, has increased. It is generally appropriate for the current valuation process to disclose the source and causes of any significant changes in the plan from year to year. Changes that occur are generally the result of changes in actuarial assumptions, gains or losses resulting from actual experience which differs significantly from expected plan experience or some external force such as plan restructuring.

In accordance with Act 165 of the 1992 Legislative Session, beginning with the 1992-1993 plan year, the actuarial cost method was changed from the "Projected Unit Credit" to the "Entry Age Normal" cost method. Changes in actuarial methods, assumptions, benefit changes or plan experience are amortized as a level annuity. The amortization period is the later of the year 2029 or 30 years for changes after 6/30/2008 as provided for in Act 852 of the 2008 Legislative Session.

During the past fiscal year the actuarial accrued liability in excess of assets to pay benefits increased from 282.4 million to a 313.1 million dollar deficit.

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 6/30/2009 \$ 282,401,551

**INCREASES**

Interest on Unfunded Liability	\$ 21,180,116
Employer Shortfall Loss	5,294,276
Investment Loss	<u>28,130,535</u>
Incurred Increases	54,604,927

**DECREASES**

Experience gain	1,285,871
Net Amortization Payment	<u>22,642,200</u>
Incurred Decreases	23,928,071

Unfunded Liability 6/30/2010 \$ 313,078,407

Board of Trustees  
September 17, 2010

**Funding**

The projected employer contribution rate for the 2010-2011 plan year was set by PERSAC at 50.9%. The actual employer contribution rate determined by this valuation for the current plan year is 55.5%. Therefore, the current plan year should generate a contribution shortfall loss since the PERSAC approved rate understates the valuation rate by 4.6%.

**Legislative Changes**

Act 992 provides for substantial benefit structural changes applicable only to new hires effective January 1, 2011 as follows:

- The determination of final average salary is increased from 3 years to 5 years.
- Anti-spiking annual limits set at 15%.
- Retirement is substantially the same, plus 20 year actuarially reduced eligibility.
- Disability and survivor benefits have been altered to uniformly apply to all State Retirement Systems.

**Comments and Disclosures**

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

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

Sincerely,

Charles G. Hall, FCA,MAAA,ASA  
Actuary

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**EXHIBIT 1**  
**DEVELOPMENT**  
**OF**  
**COSTS, LIABILITIES AND CONTRIBUTIONS**

Normal Costs and Accrued Liabilities are calculated in accordance with the Individual entry Age Normal Actuarial 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, 2010</u>		<u>June 30, 2009</u>	
	<u>Dollar</u> <u>Amount</u>	<u>% of</u> <u>Salary</u>	<u>Dollar</u> <u>Amount</u>	<u>% of</u> <u>Salary</u>
I. Normal Costs (to fund annual pension accruals)				
Active Members				
a) Retirement Benefits\$	13,651,433	23.00%	\$ 13,552,664	22.76%
b) Disability Benefits	440,993	.74%	439,139	.74%
c) Survivor Benefits	360,959	.61%	394,970	.66%
d) Voluntary Termination	757,503	1.28%	744,412	1.25%
e) Expenses	<u>557,000</u>	<u>.94%</u>	<u>585,000</u>	<u>.98%</u>
TOTAL	15,767,888	26.57%	15,716,185	26.39%
II. Actuarial Accrued Liability				
a) Active Members				
1) Retirement Benefits	\$ 261,177,410		\$ 239,706,682	
2) Disability Benefits	2,448,755		2,392,517	
3) Survivor Benefits	2,450,664		2,551,356	
4) Voluntary Termination	<u>5,222,424</u>		<u>4,865,649</u>	
	271,299,253		249,516,204	
b) Retired and Inactive Members				
1) Regular Retirees	318,449,158		308,544,207	
2) Disabled Retirees	15,763,097		15,520,750	
3) Survivors	45,080,751		42,488,112	
4) Vested Deferred & Transfers	5,009,003		4,173,879	
5) Contribution Refunds	605,481		433,377	
6) DROP Account Balance	34,567,599		34,565,918	
7) DROP Annuity Reserve	<u>13,973,467</u>		<u>23,064,216</u>	
	433,448,556		428,790,459	
c) TOTAL	704,747,809		678,306,663	

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

	<u>June 30, 2010</u>	<u>--Prior Year--</u> <u>June 30, 2009</u>
II. Actuarial Accrued Liability	\$ 704,747,809	\$ 678,306,663
III. Actuarial Assets	391,669,402	395,905,112
IV. Unfunded Actuarial Accrued Liabilities	313,078,407	282,401,551
a) Change over prior year	30,676,856	82,644,331
b) Funded Percentage	55.58%	58.37%
V. Employer Contributions to Fund		
<u>Current Plan Year<sup>1</sup></u>		
a) Employer Portion of Normal Cost	10,605,158	10,513,509
b) Amortization Payments	29,240,999	27,048,751
c) Prior Contribution Variance	-4,956,075	-5,210,674
GROSS Required Contribution	34,890,082	32,351,586
d) Insurance Premium Tax Fund (IPTF) Offset		
ACT 1160 Normal Cost	989,362	993,571
ACT 1160 Amortization payment	1,727,542	1,653,150
TOTAL ITPF Allocation <sup>2</sup>	1,500,000	1,500,000
TOTAL Required Contribution	33,390,082	30,851,586
	55.5%	51.1%
<u>PERSAC approved Rate</u>	<u>50.9%</u>	<u>41.3%</u>
VI. Projected Employer Contributions		
<u>To Fund 2010-11 Plan Year<sup>1</sup></u>		
a) Employer Portion of Normal Cost	10,892,455	10,806,048
b) Amortization Payments	29,240,999	27,048,751
c) Prior Contribution Variance	-4,085,154	-4,755,157
d) IPTF allocation <sup>2</sup>	-1,500,000	-1,500,000
TOTAL Projected Contribution	34,548,300	31,599,642
	55.9%	50.9%
VII. Current Payroll	59,340,901	59,556,036
Projected Payroll - Mid Year	60,143,607	60,399,430
Projected Payroll - Next Year	61,772,919	62,080,051

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

<sup>2</sup>ITPF allocation is the lesser of the normal cost plus amortization or \$1,500,000.

## EXHIBIT 2

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

	<u>June 30, 2010</u>	-----Prior Years----- <u>June 30, 2009</u>	<u>June 30, 2008</u>
<b><u>OPERATING REVENUES:</u></b>			
1. Contribution Income			
Member	\$ 5,449,494	\$ 4,919,092	\$ 4,608,593
MV Fees	3,276,965	2,829,204	2,983,488
Appropriations	23,812,028	14,834,075	13,753,551
Insurance Premium Tax	1,500,000	1,500,000	1,500,000
2. Other Income			
Transfers/Purchases	392,465	1,431,620	1,302,820
Miscellaneous	113,322	83,265	137,242
TOTAL CONTRIBUTIONS	<u>34,544,274</u>	<u>25,597,256</u>	<u>24,285,694</u>
3. Investment Income			
Investments	39,536,833	-77,875,453	-22,178,691
Less, Manager fees	-1,170,877	-1,066,596	-1,446,184
TOTAL INVESTMENT INCOME	<u>38,365,956</u>	<u>-78,942,049</u>	<u>-23,624,875</u>
4. Total Revenues	72,910,230	-53,344,793	660,819
<b><u>OPERATING EXPENSES:</u></b>			
1. General Administration	556,590	584,866	572,064
Other Expenses	1,818	2,481	3,472
2. Benefits Paid			
a) Pension Benefits	39,960,755	36,091,478	33,321,008
b) Transfers Out	0	193,620	0
c) Return of Contributions	66,707	113,351	507,995
TOTAL BENEFITS PAID	<u>40,027,462</u>	<u>36,204,829</u>	<u>33,829,003</u>
3. Total Expenses	40,585,870	36,985,796	34,404,539
<b><u>NET INCREASE:</u></b>	32,324,360	-90,330,589	-33,743,720

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

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

<u>ASSETS</u>	<u>June 30, 2010</u>	<u>-----Prior Years-----</u>	
		<u>June 30, 2009</u>	<u>June 30, 2008</u>
1. Cash Equivalents	\$ 23,010	\$ 26,030	\$ 73,476
Short Term	6,000,789	7,747,883	-
2. Bonds			
United States Obligations	14,475,127	13,605,060	17,026,853
Bonds - General	81,458,875	80,481,818	32,137,520
3. Equities			
Property and Equipment	6,370	8,188	7,865
Common Stock - Domestic	108,247,221	93,005,057	124,187,839
- Foreign	43,513,069	40,940,747	53,164,769
Mutual Funds - Index	64,348,877	54,170,395	169,181,860
Real Estate	25,688,485	27,836,803	28,501,687
Alternatives	17,526,318	16,970,262	-
4. Receivables (-) Payables	<u>5,233,341</u>	<u>-595,119</u>	<u>245,842</u>
TOTAL ASSETS - Market Value	366,521,482	334,197,124	424,527,711
- Valued at Cost	369,904,357	363,788,005	386,396,582

**INVESTMENT YIELD:**

Actuarial Value	0.32%	-7.13%	4.55%
DROP Account Yield <sup>1</sup>	0.00%	0.00%	4.05%
Market Value	11.46%	-18.96%	-5.24%

**EXPERIENCE ACCOUNT FUND:**

Prior Year End Balance	0	0	0
+ Experience Account Allocation	0	0	0
- Current Year Distribution	0	0	0
+ Accumulated Interest	<u>0</u>	<u>0</u>	<u>0</u>
Fund Balance - Year End	0	0	0

**ACTUARIAL VALUE OF ASSETS:**

Total Assets, less	366,521,482	334,197,124	424,527,711
Change in Unrealized (G/L)			
Plan Year - 2 (wt. 1/4)	-43,771,679	43,877,439	-10,627,587
Plan Year - 1 (wt. 2/4)	-67,722,010	-43,771,679	43,877,439
Plan Year - (wt. 3/4)	<u>26,208,006</u>	<u>-67,722,010</u>	<u>-43,771,679</u>
Gross Actuarial Value of Assets	391,669,402	395,905,112	438,074,647
Less, Side Fund Accounts	<u>0</u>	<u>0</u>	<u>0</u>
Valuation Assets	391,669,402	395,905,112	438,074,647

<sup>1</sup> Effective 7/1/2003 new DROP Accounts are credited with Money Market rates.

## 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)
2001	261,576	355,629	94,053	73.6	32,157	292.5
2002	271,694	386,698	115,004	70.3	31,695	362.8
2003	271,062	447,694	176,631	60.6	44,148	400.1
2004	288,865	477,085	188,220	60.6	47,923	392.8
2005	322,482	516,427	193,945	62.4	49,290	393.5
2006	379,704	546,238	166,534	69.5	49,256	338.1
2007	428,880	587,527	158,646	73.0	49,763	318.8
2008	438,075	637,832	199,757	68.7	56,728	352.1
2009	395,905	678,307	282,402	58.4	59,556	474.2
2010	391,669	704,747	313,078	55.6	59,340	527.3

The total actuarial accrued liability determined using the Individual Entry Age Normal cost method increased by \$26,441,146 from June 30, 2009 to June 30, 2010. From all sources, there was a net experience loss of \$26,844,661.

Fiscal year gains/losses are summarized on page 3 under "Change in Unfunded Liability".

<sup>1</sup> UAAL differs from the UFAL for funding purposes. UFAL for funding purposes excludes the Texaco Settlement Fund Assets, which appear on page 9.

**EXHIBIT 3 (Continued)****Pension Accounting & Financial Disclosure****SUPPLEMENTARY INFORMATION****SCHEDULE OF EMPLOYER CONTRIBUTIONS**

<u>Fiscal Year</u>	<u>Actuarial Required Contribution</u> <sup>1</sup>	<u>Percent Contributed</u>	<u>Annual Pension Cost (APC)</u> <sup>1</sup>	<u>Actual Contribution</u> <sup>1</sup>	<u>Percentage of APC Contributed</u>	<u>Net Pension Obligation</u> <sup>1</sup>
2001	20,152,607	120.0	23,198,292	24,174,644	104.2	-11,079,317
2002	21,153,440	124.6	24,483,266	26,362,607	107.7	-12,958,661
2003	24,411,521	107.2	28,272,466	26,126,060	92.4	-10,812,252
2004	30,288,239	87.0	33,855,791	26,347,773	77.8	-3,304,234
2005	33,658,907	87.4	35,886,584	29,432,635	82.0	3,149,715
2006	36,698,310	102.1	37,621,412	37,483,229	99.6	3,287,896
2007	18,482,551	226.8	18,615,913	41,919,040	225.2	-20,015,231
2008	16,208,885	116.7	19,099,665	18,908,564	99.0	-19,824,130
2009	20,705,663	96.0	23,854,267	19,868,911	83.3	-15,838,774
2010	34,935,975	84.9	39,150,610	29,641,699	75.7	-6,329,863

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 Police Retirement System.

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

**Development of Net Pension Obligation**

Actuarial Required Contribution	34,935,975
Interest on Net Pension Obligation (+)	-1,187,907
Amortization of Net Pension obligation (-)	-5,402,542
Annual Pension Cost	39,150,610
Employer Contribution <sup>1</sup>	29,641,699
Increase (decrease) in Net Pension Obligation	9,508,911
Net Pension Obligation - Beginning of Year	-15,838,774
Net Pension Obligation - End of Year	-6,329,863

<sup>1</sup> Actuarial Contributions, the Annual Pension Cost (APC), and the actual employer contribution made have been adjusted with interest at the valuation rate to the end of the fiscal year in accordance with GASB's Statement No. 27, paragraph 21.

EXHIBIT 3 (Continued)

## Pension Accounting &amp; Financial Disclosure

## STATISTICAL DATA

COMPARATIVE SUMMARY OF REVENUES BY SOURCE  
AND EXPENSES BY TYPE

## Revenues by Source

<u>Fiscal</u> <u>Year End</u>	<u>Members</u> <u>Contribution</u>	<u>Employer</u> <u>Contribution</u>	<u>Investment</u> <u>Income</u>	<u>Total</u>
2001	2,748,089	23,316,097	-1,388,040	24,676,146
2002	2,880,248	25,426,356	-7,113,040	21,193,564
2003	4,015,207	25,198,210	12,889,340	42,102,757
2004	4,090,079	26,252,523	31,363,198	61,705,800
2005	4,182,096	30,177,649	27,796,776	62,156,521
2006	3,997,156	37,560,697	25,561,079	67,118,932
2007	4,020,197	41,558,739	63,735,798	109,314,734
2008	4,608,593	19,677,101	-23,624,875	660,819
2009	4,919,092	20,678,164	-78,942,049	-53,344,793
2010	5,449,494	29,094,780	38,365,956	72,910,230

## Expenses by Type

<u>Fiscal</u> <u>Year End</u>	<u>Benefits</u>	<u>Refunds</u>	<u>Administrative</u> <u>Expenses</u>	<u>Total</u>
2001	20,000,815	208,673	396,623	20,606,111
2002	22,197,351	203,420	419,195	22,819,966
2003	22,484,503	193,891	444,651	23,123,045
2004	23,889,741	298,653	429,177	24,617,571
2005	25,216,731	309,370	416,736	25,942,837
2006	27,039,512	218,572	415,344	27,673,428
2007	30,430,391	162,483	432,781	31,025,655
2008	33,321,008	507,995	575,536	34,404,539
2009	36,091,478	113,351	587,347	36,985,796
2010	39,960,755	66,707	558,408	32,324,360

## 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 database. 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

This year there were no records purged from the database containing errors or categorized as suspicious data, which is consistent with recent years' reporting. Suspicious data are not necessarily errors, but is data which falls outside the parameters of the editing process for further checking.

Salary data contained in the profiles and valuation report may exceed the sums reported by internal audit due to salary annualization. Retiree data reflects the benefit amount in pay status on the 1<sup>st</sup> day of the next fiscal year. In the valuation process, membership data with fractional service annualizes the salary in the first year of employment.

The following is a summary by participant status of the data submitted for valuation:

	----- June 30 -----		
	---2010---	---2009---	---2008---
	<u>Census</u>	<u>Census</u>	<u>Census</u>
Active Members	1,065	1,103	1,059
Regular Retirees	793	795	782
Disability Retirees	56	56	55
Survivors	332	324	316
Vested & Reciprocals	29	25	24
DROP Participants	<u>5</u>	<u>18</u>	<u>27</u>
TOTAL	2,280	2,321	2,263

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

LOUISIANA STATE POLICE  
ACTIVE MEMBERS

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2010

Age	YEARS EMPLOYED									Total	
	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )		
[ 0-19)	0	0	0	0	0	0	0	0	0	0	0
[ 20-24)	0	11	0	0	0	0	0	0	0	0	11
[ 25-29)	0	81	21	0	0	0	0	0	0	0	102
[ 30-34)	0	53	91	27	1	0	0	0	0	0	172
[ 35-39)	0	23	73	134	59	0	0	0	0	0	289
[ 40-44)	0	12	23	71	131	36	0	0	0	0	273
[ 45-49)	0	4	11	16	44	65	3	0	0	0	143
[ 50-54)	0	0	0	1	9	19	12	0	0	0	41
[ 55-59)	0	0	0	2	3	5	4	0	0	0	14
[ 60-64)	0	0	0	0	0	1	0	0	0	0	1
[ 65-69)	0	0	0	0	0	0	0	0	0	0	0
[ 70-74)	0	0	0	0	0	0	0	0	0	0	0
TOTALS	0	184	219	251	247	126	19	0	0	0	1046
salary	0	7539745	10137502	14046926	15889363	9047051	1446343	0	0	0	58106930

AVERAGES --- Attained Age 39.09  
Service Years 12.04  
Active Salary 55,552

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

LOUISIANA STATE POLICE  
ACTIVE AFTER DROP

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY  
DROP BENEFITS

VALUATION DATE 6/30/2010

Age	YEARS EMPLOYED									Total	
	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )		
[ 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	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	0	0	0
[40-44)	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	0	0	0
[45-49)	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	0	0	0
[50-54)	6	5	1	0	0	0	0	0	0	0	12
:	148373	495669	93995	0	0	0	0	0	0	0	738037
:	331872	305772	61992	0	0	0	0	0	0	0	699636
[55-59)	0	0	2	1	1	2	0	0	0	0	6
:	0	0	146578	66307	75622	141929	0	0	0	0	430436
:	0	0	106788	40284	49572	54084	0	0	0	0	250728
[60-64)	0	0	0	0	0	1	0	0	0	0	1
:	0	0	0	0	0	65498	0	0	0	0	65498
:	0	0	0	0	0	29484	0	0	0	0	29484
[65-69)	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	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	0	0
:	0	0	0	0	0	0	0	0	0	0	0
TOTALS	6	5	3	1	1	3	0	0	0	0	19
count	6	5	3	1	1	3	0	0	0	0	19
salary	148373	495669	240573	66307	75622	207427	0	0	0	0	1233971
benefit	331872	305772	168780	40284	49572	83568	0	0	0	0	979848

AVERAGES --- Attained Age 54.79  
Post Drop Years 2.39  
Active Salary 64,946  
Annual Benefit 51,571

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

LOUISIANA STATE POLICE  
REGULAR RETIREES

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2010

Age	YEARS RETIRED									Total	
	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )		
[ 0-39)	0	0	0	0	0	0	0	0	0	0	0
[40-44)	0	0	0	0	0	0	0	0	0	0	0
[45-49)	2	2	2	2	0	0	0	0	0	0	8
	170988	193956	126036	138816	0	0	0	0	0	0	629796
[50-54)	3	9	7	14	21	10	6	1	0	0	71
	138420	513564	380448	784368	1282068	630180	365136	12372	0	0	4106556
[55-59)	0	3	2	5	15	62	23	41	20	0	171
	0	178032	160104	318024	954828	3380376	1124172	1116024	237252	0	7468812
[60-64)	0	0	0	1	1	16	53	86	52	0	209
	0	0	0	70476	71316	845424	2661408	2587896	860412	0	7096932
[65-69)	0	0	0	1	0	2	7	41	90	0	141
	0	0	0	79332	0	146172	290580	1298868	1907736	0	3722688
[70-74)	0	0	0	0	0	0	0	25	66	0	91
	0	0	0	0	0	0	0	850500	1471140	0	2321640
[75-79)	0	0	0	0	0	0	0	1	58	0	59
	0	0	0	0	0	0	0	45444	1105860	0	1151304
[80-84)	0	0	0	0	0	0	0	1	27	0	28
	0	0	0	0	0	0	0	20460	483180	0	503640
[85-89)	0	0	0	0	0	1	0	1	8	0	10
	0	0	0	0	0	72	0	35088	133236	0	168396
[90-99)	0	0	0	0	0	0	0	0	5	0	5
	0	0	0	0	0	0	0	0	74280	0	74280
TOTALS	5	14	11	23	37	91	89	197	326	0	793
benefit	309408	885552	666588	1391016	2308212	5002224	4441296	5966652	6273096	0	27244044

AVERAGES --- Attained Age 64.73  
Years Retired 18.08  
Annual Benefit 34,356

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

LOUISIANA STATE POLICE  
DISABILITY RETIREES

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2010

Age	YEARS RETIRED									Total
	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	
[ 0-39)	0	0	1	0	0	0	0	0	0	1
	0	0	25980	0	0	0	0	0	0	25980
[40-44)	1	1	0	0	0	0	1	0	0	3
	38340	38820	0	0	0	0	36132	0	0	113292
[45-49)	0	2	0	0	0	3	2	0	0	7
	0	80172	0	0	0	73908	59520	0	0	213600
[50-54)	0	0	0	0	0	1	1	0	2	4
	0	0	0	0	0	37380	14604	0	36684	88668
[55-59)	0	0	0	0	0	0	0	4	6	10
	0	0	0	0	0	0	0	88200	162048	250248
[60-64)	0	0	0	0	0	0	1	4	9	14
	0	0	0	0	0	0	22320	88620	183972	294912
[65-69)	0	0	0	0	0	0	1	0	8	9
	0	0	0	0	0	0	24708	0	172284	196992
[70-74)	0	0	0	0	0	0	0	0	4	4
	0	0	0	0	0	0	0	0	103212	103212
[75-79)	0	0	0	0	0	0	0	0	3	3
	0	0	0	0	0	0	0	0	65376	65376
[80-84)	0	0	0	0	0	0	0	0	1	1
	0	0	0	0	0	0	0	0	15288	15288
[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
TOTALS										
count	1	3	1	0	0	4	6	8	33	56
benefit	38340	118992	25980	0	0	111288	157284	176820	738864	1367568

AVERAGES --- Attained Age 59.96  
Years Retired 21.31  
Annual Benefit 24,421

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

LOUISIANA STATE POLICE  
SURVIVOR BENEFITS

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2010

Age	YEARS RETIRED									Total
	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	
[ 0-39)	1	0	0	0	0	1	1	6	0	9
	42972	0	0	0	0	16944	6972	63828	0	130716
[40-44)	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
[45-49)	0	0	0	0	0	0	2	1	3	6
	0	0	0	0	0	0	12936	9600	57216	79752
[50-54)	0	0	1	1	1	1	1	1	5	11
	0	0	27792	13572	28860	12444	32268	9084	28752	152772
[55-59)	0	1	0	1	2	2	1	5	19	31
	0	40680	0	27600	75096	31032	17184	85464	279468	556524
[60-64)	0	1	1	0	2	2	6	6	31	49
	0	25344	42624	0	87516	45288	161004	91020	412104	864900
[65-69)	0	0	0	0	0	0	0	2	36	38
	0	0	0	0	0	0	0	18108	711312	729420
[70-74)	0	0	0	0	0	0	1	0	55	56
	0	0	0	0	0	0	37032	0	1020480	1057512
[75-79)	0	0	0	0	0	0	0	1	50	51
	0	0	0	0	0	0	0	15240	836232	851472
[80-84)	0	0	0	0	0	0	0	0	40	40
	0	0	0	0	0	0	0	0	690624	690624
[85-89)	0	0	0	0	0	0	0	0	24	24
	0	0	0	0	0	0	0	0	390876	390876
[90-99)	0	0	0	0	0	0	0	0	17	17
	0	0	0	0	0	0	0	0	274428	274428
TOTALS										
count	1	2	2	2	5	6	12	22	280	332
benefit	42972	66024	70416	41172	191472	105708	267396	292344	4701492	5778996

AVERAGES --- Attained Age 70.87  
Years Retired 83.07  
Annual Benefit 17,407

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

LOUISIANA STATE POLICE  
TERM-VESTED/RECIPROCAL

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2010

Age	YEARS EMPLOYED									Total
	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	
[ 0-19)	0	0	0	0	0	0	0	0	0	0
[ 20-24)	0	0	0	0	0	0	0	0	0	0
[ 25-29)	0	0	0	0	0	0	0	0	0	0
[ 30-34)	0	0	0	1	0	0	0	0	0	1
[ 35-39)	0	0	0	28452	0	0	0	0	0	28452
[ 40-44)	0	0	0	3	1	0	0	0	0	4
[ 45-49)	0	0	0	70464	32892	0	0	0	0	103356
[ 50-54)	0	0	1	8	2	2	0	0	0	13
[ 55-59)	0	0	8244	134772	55092	63156	0	0	0	261264
[ 60-64)	0	0	0	3	2	4	0	0	0	9
[ 65-69)	0	0	0	54504	48348	151824	0	0	0	254676
[ 70-74)	0	0	0	1	0	0	0	0	0	1
[ 75-79)	0	0	0	1104	0	0	0	0	0	1104
[ 80-84)	0	0	0	0	0	0	0	0	0	0
[ 85-89)	0	0	0	0	0	0	0	0	0	0
[ 90-94)	0	0	0	0	0	0	0	0	0	0
[ 95-99)	0	0	0	0	0	0	0	0	0	0
TOTALS	0	0	1	16	5	6	0	0	1	29
count	0	0	8244	289296	136332	214980	0	0	0	648852
benefit										

AVERAGES --- Attained Age 45.08  
Service Years 16.54  
Annual Benefit 22,374

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

LOUISIANA STATE POLICE  
DROP PARTICIPANTS

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2010

Age	YEARS PARTICIPATED									Total
	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	
[ 0-39)	0	0	0	0	0	0	0	0	0	0
[40-44)	0	0	0	0	0	0	0	0	0	0
[45-49)	0	0	1	0	0	0	0	0	0	1
[50-54)	0	3	1	0	0	0	0	0	0	4
[55-59)	0	0	0	0	0	0	0	0	0	0
[60-64)	0	0	0	0	0	0	0	0	0	0
[65-69)	0	0	0	0	0	0	0	0	0	0
[70-74)	0	0	0	0	0	0	0	0	0	0
[75-79)	0	0	0	0	0	0	0	0	0	0
[80-84)	0	0	0	0	0	0	0	0	0	0
[85-89)	0	0	0	0	0	0	0	0	0	0
[90-99)	0	0	0	0	0	0	0	0	0	0
TOTALS	0	3	2	0	0	0	0	0	0	5
benefit	0	132828	118548	0	0	0	0	0	0	251376

AVERAGES --- Attained Age 51.30  
Years Retired 1.88  
Annual Benefit 50,275

EXHIBIT 5

SUMMARY OF THE STATE POLICE  
RETIREMENT SYSTEM'S PLAN PROVISIONS

EFFECTIVE DATE:

Legislative Act No. 293 of 1938

EMPLOYEE:

Sworn, commissioned law enforcement officers of the Division of State Police of the Department of Public Safety who have completed the State Police Training Academy Course of Instruction; those members employed on the Effective Date of the Fund, those subsequently employed who did not withdraw employee contributions; the secretary and deputy secretary of the Department of Public Safety, provided they are sworn, commissioned State Police officers as defined above.

EMPLOYER:

Division of State Police of the Department of Public Safety of the State of Louisiana

CREDITABLE SERVICE:

1. Service as defined as a member of the retirement system.
2. Police duty qualifying as having contributed to the war effort during World War II.
3. Credit for military service, not to exceed four years as follows:
  - a) Members employed prior to September 8, 1977 receive a maximum of three years free military service credit. Members may purchase eligible service credit in excess of three years.
  - b) Members employed on or after September 8, 1977 but prior to September 8, 1978 were eligible to purchase military service credit after one year of employment. Military service credit in a) and b) applied to retirement eligibility.
  - c) Members employed on or after September 8, 1978 were eligible to purchase military service credit; however, such service did not apply to retirement eligibility.
  - d) Upon retirement, all unused accumulated sick and annual leave.

EMPLOYEE CONTRIBUTIONS:

7% of earnable compensation; 8% effective July 1, 1989; 8.5% effective October 1, 2009

EMPLOYER CONTRIBUTIONS:

State contributions each fiscal year consists of various fees and taxes collected by the Motor Vehicle Office within the Department of Public Safety.

Effective June 29, 2001 - 1.5M from Insurance Premium Tax (see RS 22:1419(A)(3)).

EXHIBIT 5 (Continued)  
Plan Provisions

EARNABLE COMPENSATION:

Full salary earned by an employee in qualified service.

AVERAGE FINAL COMPENSATION:

1. For members employed prior to September 8, 1978

Average annual earned compensation for the highest 12 successive or joined months prior to Retirement or Date of Death.

2. For members employed on or after September 8, 1978

Average annual earned compensation for the highest 36 successive or joined months prior to Retirement or Date of Death.

NORMAL RETIREMENT:

ELIGIBILITY:

1. Attained Age 50 with 10 years of creditable service
2. Employed prior to September 8, 1978, 20 years of service regardless of age
3. Employed after September 7, 1978, 25 years of service regardless of age.

Note: Compulsory retirement at age 65  
(except for the Secretary and Deputy Secretary of the Department of Public Safety).

BENEFIT:

3 1/3% of average final compensation for each year of service

Note: Maximum benefit accrual cannot exceed 100% of Average Final Compensation.

ANNUITY FORM:

An Annuity payable for the lifetime of the member

An Initial Benefit Option is available to retirees who have not participated in DROP. Election pays up to 36 months of regular benefits in lump-sum, with monthly annuity actuarially reduced for life.

An increasing annuity option permits the member to make an irrevocable election at retirement to receive a reduced benefit which increases 2.5% annually. The increases begin on the 1<sup>st</sup> retirement anniversary date, but not before the retiree attains age 55 or would have attained age 55 in the case of a surviving spouse. This option is not available to members electing BACK-DROP

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

**DISABILITY BENEFITS:**

ELIGIBILITY:

1. Non-service related total disability - 5 years of service
2. Service related total disability - condition of employment

BENEFIT:

1. Disabled members eligible will receive a benefit equal to fifty percent of average salary, plus one and one-half percent of average salary for each year of service in excess of ten years.
2. Greater of 100% of Average Final Compensation or 36,000 for loss of sight or hearing, permanent damage to brain or spinal cord, paralysis, loss of organ, or loses the use of a limb

**DEATH BENEFITS:**

ELIGIBILITY:

1. Death of an active member in the line of duty
2. Death of an active member not in the line of duty
3. Death of a retiree or terminated vested member

BENEFIT:

1. Surviving Spouse receives 75% of the Average Monthly Salary
  - A. If no surviving spouse, eligible children under the age of 18 receive the following benefit to be shared equally:

<u>Number of Children</u>	<u>Percentage Average Monthly Salary</u>
1	30%
2	40%
3	50%
4	60%

Benefit ceases at age 18 unless child is handicapped or mentally handicapped. Students may have benefits extended to age 23.

- B. If no surviving spouse and no eligible children, dependent parent(s) will receive 25% of the Average Monthly Salary.

2. Surviving Spouse receives benefits according to the following schedule:

<u>Years of Service at Death</u>	<u>Percentage Average Monthly Salary</u>
5 or less	25%
5 - 10	30%
10 - 15	40%
15 - 20	50%
20 or more	Member's Accrued Benefit

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

- A. If no surviving spouse, eligible children receive benefits in accordance with section 1(A) above.
  - B. If no surviving spouse and no surviving eligible children, dependent parent(s) Receive benefits in accordance with section 1(B) above.
3. Surviving spouse, who was married and living with the member at least two years prior to the date of death, eligible surviving children or the dependent parent(s) shall receive the same monthly pension which was paid to the retired member in the following order of priority: Surviving Spouse, Eligible Children, Dependent Parent(s)

**Note:** Under all survivor benefits, the spouse forfeits benefits upon remarriage if remarriage occurs prior to age 55. Subsequent monthly benefit payments will be made to eligible surviving children or dependent parent(s).

**VESTING:**

All members are entitled to a refund of employee contributions in excess of benefits received upon termination or death of the member or survivor(s).

Any member employed on or after September 8, 1978 who is vested for retirement benefits by virtue of 20 years of service but less than attained age 50, who terminates employment will be vested for disability benefits during the deferred period. This provision was deleted in accordance with Act 679 of the 1991 Legislative Session.

**COST OF LIVING INCREASES:**

HB 658 of 2007 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 actuarial yield for the System portfolio. If the balance of the Experience Account is sufficient to grant retirees a COLA, the Board may (with concurrence from the Legislature) grant such COLA not to exceed the lesser of the CPI-U or 3%. Benefits are restricted to those retirees who have attained the age of 60 and have been retired for at least one year.

**DEFERRED RETIREMENT OPTION PLAN:**(To be phased out & replaced with BACK-DROP eff. 10/1/2009)

Instead of terminating employees and accepting a service retirement allowance, any member who has met the following eligibility requirements may elect to participate in the Deferred Retirement Option Plan (DROP) and defer receipt of benefits.

**ELIGIBILITY:**

Any Active member who is eligible to receive a service retirement allowance may begin participation on the eligibility date for a period not to exceed the 3rd anniversary of retirement eligibility.

**EXHIBIT 5 (Continued)**  
**Plan Provisions**

BENEFIT:

Upon termination of employment at the end of or prior to the end of the specified period of participation, a participant will receive, at his option:

- (1) lump sum payment (equal to the payments to the account)
- (2) a true annuity based upon his account; or
- (3) any other option available to a retiree

If a participant dies during the period of participation, a lump sum payment equal to his account balance shall be paid to the beneficiary, or if none, to the estate; in addition, normal survivor benefits payable to survivors of retirees shall be payable.

If employment is not terminated after DROP participation, then:

- (1) payment into account shall cease
- (2) payment from account only upon termination of employment, and
- (3) the participant shall resume active contributing membership

Upon termination of employment, the benefit payments indicated above shall be paid. The participant shall receive a supplemental benefit based on additional service rendered since termination of participation in the fund subject to the following:

- (1) Members employed prior to September 8, 1978
  - (a) If additional service was less than 12 months, average compensation figure used to calculate original benefit.
  - (b) If additional service was 12 or more months, the average compensation figure used to calculate the additional benefit shall be based on compensation during the period of additional service.
- (2) Members employed on or after September 8, 1978
  - (a) If additional service was less than 36 months, average compensation figure used to calculate additional benefit shall be that used to calculate original benefit.
  - (b) If additional service was 36 or more months, the average compensation figure used to calculate the additional benefit shall be based on compensation during the period of additional service.

Effective 10/1/2009 active members who have not participated in the regular DROP program may elect, at retirement, to participate in BACK-DROP. The basic difference in the two plans is that BACK-DROP allows an eligible member, at retirement, to look back up to three years and make an election to have entered DROP, based on the service and final average compensation that existed at that time. Benefit adjustments are made to the benefit accruals and employee contributions that occurred during the DROP period.

**NOTE:** DROP Accounts shall earn interest following termination of DROP at a rate .5% below the actuarial rate of the System's investment portfolio.

Effective 7/1/2003 new DROP accounts are credited with Money Market rates or self directed accounts approved by the Board of Trustees.

## EXHIBIT 6

## ACTUARIAL COST METHODS AND ASSUMPTIONS

**COST METHOD:**

The individual "Entry Age Normal" 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 allocated on a level basis as percentage of payroll for each participant between entry age and assumed retirement age(s). 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 excess of the actuarial present value of future normal costs is called the actuarial accrued liability.

**ASSET VALUATION:**

For the Plan Year ending prior to June 30, 1999 equities are valued at a four year weighted average. The computation of the actuarial value of assets is the sum of the bonds at amortized cost, less a weighted average of unrealized losses or (gains) in the market value of equities, plus the market value of Equities.

Effective June 30, 1999 the Board of Trustees approved a change in the Asset Valuation Method. The Actuarial Value of Assets is the market value of assets adjusted for a four year weighted average in the unrealized gain or loss in the value of all assets. This value is subject to Corridor Limits of 80% to 120% of the Market Value of Assets.

**ACCOUNTING DISCLOSURE:**

The Governmental Accounting Standards Board Statement No. 25 requires disclosure of certain actuarial liabilities for Public Employee Retirement Systems. The disclosures illustrated in Exhibit 3 were developed using the Entry Age Normal cost method. The statement of assets provided by the independent auditors was a copy of 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 to the extent that any difference in reporting affects the employer's contribution rate or the yield to the Actuarial Value of Assets.

**ACTUARIAL ASSUMPTIONS:**

The Retirement System is required to conduct an experience study every five years, but the scope of such a study is not necessarily limited to a five year period. The five year observation period (2003-2007) was chosen to coincide with the most recent period of data reporting following the restructuring of the Deferred Retirement Option Program.

**MORTALITY ASSUMPTIONS:**

Pre-retirement deaths and post-retirement life expectancies were projected in accordance with the experience of the RP-2000 Sex Distinct Mortality Table.

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

**DISABILITY ASSUMPTION:**

Rates of total and permanent disability were projected in accordance in accordance with the experience of the RP-2000 Sex Distinct Disability Mortality Table.

**RETIREMENT/DROP ASSUMPTION:**

Retirement rates are based on age and service eligibility requirements for normal benefits. Back-DROP is viewed as an alternative form of retirement benefit elected at the date of retirement. Retirement rates and DROP utilization probabilities are based on the most recent Experience Study.

**TERMINATION ASSUMPTIONS:**

Voluntary termination or withdrawal rates are based upon the most recent Experience Study. During the first five years of employment, the probability of voluntarily terminating is a multiple of the attained age rate in prior reports and a multiple of employment duration in the current valuation as follows:

1st year	1.00x
2nd year	1.50x
3rd year	1.15x
4th year	1.00x
5th year	1.00x

Furthermore, for members terminating with twenty (20) or more years of service it is assumed that 80% will not withdraw their accumulated employee contributions.

**SALARY GROWTH:**

The rates of annual salary growth are base upon the members years of service and are illustrated in the rate tables at the end of this exhibit.

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

**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	1.2	17
30	1.4	15
35	1.7	13
40	1.7	10
45	1.4	8
50	1.1	4

**REMARRIAGE:**

Annuities payable to a spouse, which cease upon death or remarriage, were taken from A Technical Note for the Construction of Widow's Annuities." The Remarriage and Mortality rates used to develop these annuities were based on the graduated rates from Mortality and Remarriage Experience for Widow's Beneficiaries under OASDI."

**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 7 1/2%, net expenses.

**ADMINISTRATIVE EXPENSES:**

Expenses are included in Aggregate Normal Cost and are assumed to be \$557,000 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 cost-of-living raises already granted is included in the retiree reserve.

ACTUARIAL TABLES AND RATES  
NEW RATES 6/30/2008

Age	- Death Rates -		Disability Rates	Termination Rates	Retirement Rates	DROP Rates	Dur	Salary Scale
	Male	Female						
18	.000316	.000188	.0020	.0300	.0000	.000	1	1.1550
19	.000331	.000190	.0020	.0300	.0000	.000	2	1.0600
20	.000345	.000191	.0020	.0300	.0000	.000	3	1.0400
21	.000357	.000192	.0020	.0300	.0000	.000	4	1.0400
22	.000366	.000194	.0020	.0300	.0000	.000	5	1.0500
23	.000373	.000197	.0020	.0300	.0000	.000	6	1.0500
24	.000376	.000201	.0020	.0300	.0000	.000	7	1.0500
25	.000376	.000207	.0020	.0300	.0000	.000	8	1.0500
26	.000378	.000214	.0020	.0300	.0000	.000	9	1.0550
27	.000382	.000223	.0020	.0300	.0000	.000	10	1.0600
28	.000393	.000235	.0020	.0300	.0000	.000	11	1.0500
29	.000412	.000248	.0020	.0300	.0000	.000	12	1.0500
30	.000444	.000264	.0020	.0300	.0000	.000	13	1.0500
31	.000499	.000307	.0020	.0250	.0000	.000	14	1.0500
32	.000562	.000350	.0020	.0250	.0000	.000	15	1.0500
33	.000631	.000394	.0020	.0250	.0000	.000	16	1.0500
34	.000702	.000435	.0020	.0250	.0000	.000	17	1.0500
35	.000773	.000475	.0020	.0250	.0000	.000	18	1.0500
36	.000841	.000514	.0020	.0250	.0000	.000	19	1.0600
37	.000904	.000554	.0020	.0200	.0000	.000	20	1.0600
38	.000964	.000598	.0020	.0200	.0000	.000	21	1.0700
39	.001021	.000648	.0020	.0200	.0000	.000	22	1.0600
40	.001079	.000706	.0020	.0200	.0000	.000	23	1.0600
41	.001142	.000774	.0020	.0200	.0000	.000	24	1.0650
42	.001215	.000852	.0020	.0200	.0000	.000	25	1.0650
43	.001299	.000937	.0020	.0100	.0000	.000	26	1.0650
44	.001397	.001029	.0020	.0100	.0000	.000	27	1.0700
45	.001508	.001124	.0020	.0100	.0000	.000	28	1.0700
46	.001616	.001223	.0020	.0100	.0000	.000	29	1.0700
47	.001734	.001326	.0020	.0100	.1000	.000	30	1.0700
48	.001860	.001434	.0020	.0100	.1000	.400	31	1.0450
49	.001995	.001550	.0020	.0100	.1000	.400	32	1.0450
50	.002138	.001676	.0020	.0100	.2500	.400	33	1.0450
51	.002449	.001852	.0020	.0100	.2500	.050	34	1.0450
52	.002667	.002018	.0020	.0100	.2700	.050	35	1.0450
53	.002916	.002207	.0020	.0100	.2700	.050	36	1.0450
54	.003196	.002424	.0020	.0100	.2700	.050	37	1.0450
55	.003624	.002717	.0020	.0100	.2700	.050	38	1.0450
56	.004200	.003090	.0020	.0100	.4200	.050	39	1.0450
57	.004693	.003478	.0020	.0100	.5000	.050	40	1.0450
58	.005273	.003923	.0020	.0100	.5000	.050	41	1.0450
59	.005945	.004441	.0020	.0100	.5000	.000	42	1.0450
60	.006747	.005055	.0020	.0100	.5000	.000	43	1.0450
61	.007676	.005814	.0020	.0000	.5000	.000	44	1.0450
62	.008757	.006657	.0020	.0000	.5000	.000	45	1.0450
63	.010012	.007648	.0020	.0000	.9900	.000	46	1.0450
64	.011280	.008619	.0020	.0000	.9900	.000	47	1.0450
65	.012737	.009706	.0000	.0000	.9900	.000	48	1.0450
66	.014409	.010954	.0000	.0000	.9900	.000	49	1.0450
67	.016075	.012163	.0000	.0000	.9900	.000	50	1.0450
68	.017871	.013445	.0000	.0000	.9900	.000	51	1.0450
69	.019802	.014860	.0000	.0000	.9900	.000	52	1.0450
70	.022206	.016742	.0000	.0000	.9900	.000	53	1.0450
71	.024570	.018579	.0000	.0000	.9900	.000	54	1.0450
72	.027281	.020665	.0000	.0000	.9900	.000	55	1.0450
73	.030387	.022970	.0000	.0000	.9900	.000	56	1.0450
74	.033900	.025458	.0000	.0000	.9900	.000	57	1.0450

## EXHIBIT A

**AMORTIZATION of UNFUNDED  
ACTUARIAL ACCRUED LIABILITY  
JUNE 30, 2010**

<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>REMAING</u>	<u>REMAINING</u> <u>BALANCE</u>	<u>MID-YEAR</u> <u>PAYMENT</u>
1993	Initial Liability	L	16	171,274,213	0	0	0 <sup>1</sup>
1993	Change in Liability	L	20	21,465,804	19	20,970,112	2,030,848
1994	Change in Liability	L	20	-1,381,660	19	-1,349,754	-130,717
1995	Change in Liability	L	20	20,128,380	19	19,663,572	1,904,316
1996	Change in Liability	L	20	-9,762,782	19	-9,537,338	-923,642
1997	Change in Liability	L	20	4,409,601	19	4,307,774	417,186
1998	Change in Liability	L	20	-2,444,207	19	-2,387,765	-231,243
1999	Change in Liability	L	20	12,418,148	19	12,131,386	1,174,862
2000	Change in Liability	L	20	-21,262,939	19	-20,771,931	-2,011,655
2001	Change in Liability	L	20	14,218,540	19	13,890,203	1,345,195
2002	Change in Liability	L	20	36,882,500	19	36,030,802	3,489,398
2003	Change in Assumptions	L	24	14,644,647	23	14,409,599	1,286,042
2003	Change in Liability	L	20	60,111,382	19	58,723,278	5,687,048
2004	Change in Liability	L	20	16,579,889	19	16,197,023	1,568,599
2005	Change in Liability	L	20	14,086,441	19	13,761,154	1,332,697
2006	Change in Liability	L	20	-11,718,142	19	-11,447,544	-1,108,636
2007	Change in Liability	L	20	13,788,779	19	13,470,366	1,304,536
2008	Change in Assumptions	L	29	9,487,421	28	9,387,821	782,349
2008	Change in Liability	L	20	29,944,312	19	29,252,832	2,832,987
2009	Change in Assumptions	L	30	1,032,469	29	1,022,484	84,316
2009	Change in Benefits	L	10	671,120	9	623,681	94,300
2009	Change in Liability	L	30	74,940,622	29	74,215,854	6,119,965
2010	Change in Liability	L	30	26,844,661	30	26,844,661	2,192,248
TOTAL OUTSTANDING BALANCE						319,408,270	29,240,999
<b>EMPLOYER'S CREDIT BALANCE</b>							
2006	Contribution Variance	L	5	-784,919	1	-180,469	-187,114
2007	Contribution Variance	L	5	-23,436,489	2	-10,401,122	-5,586,950
2008	Contribution Variance	L	5	-2,699,680	3	-1,735,241	-643,568
2009	Contribution Variance	L	5	836,752	4	692,693	199,471
2010	Contribution Variance	L	5	5,294,276	5	5,294,276	1,262,086
TOTAL EMPLOYER CREDIT						-6,329,863	-4,956,075
<b>TOTAL UNFUNDED ACTUARIAL ACCRUED LIABILITY</b>						313,078,407	

<sup>1</sup> Effective 6/30/2006, the accumulated balance of \$50,084,124 in the Texaco Settlement Fund exceeds the outstanding balance of the Initial Unfunded Actuarial Liability. Therefore, the IUAL was liquidated and the corresponding amortization payment eliminated.