

## *Hall Actuarial Associates*

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Enrolled Actuary

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September 23, 2013

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

Post Office Box 44516  
Baton Rouge, Louisiana 70804-4516

Ladies and Gentlemen:

This report presents the results of the actuarial valuation of assets and liabilities, as well as funding requirements, for the Louisiana School Employees' Retirement System as of June 30, 2013.

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 School 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 provided by Duplantier, Hrapmann, Hogan & Maher; Certified Public Accountants.

The present values shown herein have been estimated on the basis of the actuarial cost method specified in Louisiana Revised Statutes Title 11 Section 22(5). In my opinion, the Actuarial Assumptions, which have been approved by the Board of Trustees, are appropriate and reasonable for the purposes of this valuation as noted in the Exhibit 6, and represents my best estimates of the anticipated experience under the plan.

Board of Trustees  
LSERS  
September 23, 2013

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

	<u>June 30, 2013</u>	<u>-----Prior Years-----</u>	
		<u>June 30, 2012</u>	<u>June 30, 2011</u>
I. Membership Census			
1) Retirees	13,369	12,930	12,717
2) Actives	12,184	12,416	12,854
3) DROP	559	612	619
4) Terminated Vested	355	339	351
II. Annual Benefits	\$ 142,752,516	\$ 134,573,580	\$ 128,989,260
III. Total Payroll	290,013,756	277,191,001	296,693,950
IV. Valuation Assets	1,492,914,745	1,403,463,883	1,349,829,757
V. Investment Yield <sup>1</sup>			
Market Value	<u>13.73%</u>	<u>2.27%</u>	<u>23.28%</u>
5 year avg.	6.12%	2.43%	4.84%
10 year avg.	6.57%	5.60%	5.10%
Actuarial Value <sup>1</sup>	<u>12.04%</u>	<u>9.07%</u>	<u>4.35%</u>
5 year avg.	3.57%	2.39%	2.54%
10 year avg.	5.54%	4.26%	3.17%
DROP Accounts <sup>1</sup>	<u>11.54%</u>	<u>8.57%</u>	<u>3.85%</u>
VI. Experience Account	31,668,697	11,641,275	0
VI. Cost to Fund Annual Pension Accruals (Normal Costs)	52,656,347 18.16%	50,406,331 18.18%	53,731,750 18.11%
VII. Unfunded Actuarial Accrued Liability	911,099,504	875,008,244	904,521,699
VIII. Funded Percentage	62.1%	61.6%	59.9%
IX. Funding Requirements (Mid-year Payment)			
1) Employee Contribution	7.50%	7.50%	7.50%
New Hires 7/1/2010	8.00%	8.00%	8.00%
2) Employer Contribution Rate (Current Year)	95,596,813 32.6%	88,531,775 31.6%	90,345,490 30.1%
3) Projected Employer Rate (Next Fiscal Year)	106,454,534 35.4%	93,261,688 32.3%	95,296,208 30.8%

Funding Requirements measure the cost of benefits in effect on June 30, 2013.

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

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September 23, 2013

UNFUNDED LIABILITY

The Actuarial Valuation for the plan year ending June 30, 2013 discloses an increase in the plan's unfunded actuarial accrued liability. The system's unfunded accrued liability increased from a prior year balance of \$875.0 million to the current deficit of \$911.1 million. It is generally appropriate for the current valuation process to disclose the source and cause of any significant 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 are 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 6/30/2012 \$ 875,008,244

**INCREASES**

Interest on Unfunded Liability	\$ 65,625,618
Experience Account allocation	30,226,741
Experience Account excess interest	528,919
Experience Loss	29,115,187
COLA to Retirees	11,601,334
Employer Shortfall Loss	3,016,050
5 Year Experience Study Loss	<u>34,931,724</u>
Incurred Increases	175,045,573

**DECREASES**

Investment Gain	59,292,453
Asset Valuation Method Change	2,511,629
Experience Account distribution	11,601,334
Net Amortization Payment	<u>65,548,897</u>
Incurred Decreases	138,954,313

Unfunded Liability 6/30/2013 \$ 911,099,504

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September 23, 2013

**Funding**

The projected employer contribution rate for the 2013-2014 plan year was set by PERSAC at 32.3%. The actual employer contribution rate determined by this valuation for the current plan year is 32.6%. Therefore, the current plan year should generate a contribution shortfall loss since the Public Retirement Systems' Actuarial Committee (PRSAC) approved rate understates the valuation rate by 0.3%.

**Legislative Changes**

Act 992 of 2010 provided 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.
- Retirement eligibility is deferred to age 60 with five years of service.
- Disability and survivor benefits have been altered to conform to the 2.5% accrual.
- These general provision changes apply to all State Retirement Systems.

Act 368 of 2011 clarifies and made technical corrections to Act 992 of 2010, applicable only to new hires as follows:

- Restates the effective date of the provisions listed above from January 1, 2011 to June 30, 2010.
- Changes survivor benefits for minors to include up to 50% of the spouses benefit per child (maximum of 2) and includes physically handicapped or mentally disabled children as eligible survivors.
- Eligibility for DROP participation is defined as first eligibility for regular retirement.

Act 483 of 2012 (cash balance plan) has been rejected by the La. Supreme Court

Act 297 of 2013 authorized a cost of living adjustment. A benefit increase of 3.15% was grant to all members who satisfied the following criteria.

- All regular retirees who retired before 7/1/2001 and had attained age 60 before 7/1/2013.
- All DROP retirees who entered DROP before 7/1/2001 and retired before 7/1/2012 and who had attained age 60 before 7/1/2013.
- All disability retirees who retired before 7/1/2001.
- All disability beneficiaries whose benefit was effective or member's retirement date was, before 7/1/2001.
- All beneficiaries or benefit recipients (split benefits) whose benefit was effective or member's retirement date was, before 7/1/2001 and the member would have attained age 60 before 7/1/2013.
- All DROP beneficiaries or benefit recipients (split benefits) of DROP retirees who entered DROP before 7/1/2001 and whose benefit was effective before 7/1/2012 and the member would have attained age 60 before 7/1/2013.

Board of Trustees  
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September 23, 2013

**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.

I am a Fellow of the Conference of Consulting Actuaries, an Associate of the Society of Actuaries, an Enrolled Actuary #4199-11 with the Joint Board for the enrollment of Actuaries under ERISA, a Member of the American Academy of Actuaries, and have met the Qualification Standards of the Academy necessary to render the actuarial opinions expressed in this report.

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  
Consulting Actuary

## TABLE OF CONTENTS

		<u>Pages</u>
<b>EXHIBIT 1</b>	<b>DEVELOPMENT OF COSTS, LIABILITIES &amp; CONTRIBUTIONS</b> Provides a detail by benefit type of the cost to accrue annual pension benefits, liabilities accrued to date and funding requirements	7 - 8
<b>EXHIBIT 2</b>	<b>FINANCIAL SUMMARY</b> Contains the statement of revenue and expenses as well as assets available to pay pension benefits	9 - 10
<b>EXHIBIT 3</b>	<b>PENSION ACCOUNTING AND FINANCIAL DISCLOSURE</b> NCGA STMT 6 changes in credited projected benefits	11 - 13
<b>EXHIBIT 4</b>	<b>CENSUS DATA</b> Describes the employee data, data processing for valuation purposes and depicts employee profiles by classification, age and service	14 - 24
<b>EXHIBIT 5</b>	<b>PRINCIPLE PROVISIONS OF THE RETIREMENT SYSTEM</b>  Restates in summary outline form the basic plan provisions which serve as the basis for the projected retirement pension benefit	25 - 31
<b>EXHIBIT 6</b>	<b>ACTUARIAL COST METHODS AND ASSUMPTIONS</b> Discloses rates of mortality, disability, retirement termination and other assumptions which are presumed to reflect the experience of the retirement system in aggregate	32 - 37
<b>EXHIBIT A</b>	<b>AMORTIZATION SCHEDULE</b>	38

**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, 2013<sup>1</sup></u>		<u>June 30, 2012</u>	
	<u>Dollar</u>	<u>% of</u>	<u>Dollar</u>	<u>% of</u>
	<u>Amount</u>	<u>Salary</u>	<u>Amount</u>	<u>Salary</u>
I. Normal Costs				
(to fund annual pension accruals)				
Active Members with Complete Data				
a) Retirement Benefits	\$ 36,017,890	12.42%	\$ 33,788,413	12.19%
b) Disability Benefits	1,573,201	.54%	1,700,439	.61%
c) Survivor Benefits	2,122,987	.73%	2,016,075	.73%
d) Voluntary Termination	8,442,269	2.91%	8,301,404	3.00%
e) Expenses	<u>4,500,000</u>	<u>1.55%</u>	<u>4,600,000</u>	<u>1.67%</u>
TOTAL	52,656,347	18.15%	50,406,331	18.18%
II. Actuarial Accrued Liability				
a) Active Members				
1) Retirement Benefits	\$ 666,573,205		\$ 647,598,222	
2) Disability Benefits	16,739,115		18,243,702	
3) Survivor Benefits	17,952,037		16,649,239	
4) Voluntary Termination	<u>63,202,408</u>		<u>60,630,761</u>	
	764,466,765		743,121,924	
b) Retired and Inactive Members				
1) Regular Retirees	1,153,858,010		1,072,982,078	
2) Disabled Retirees	22,337,395		22,948,279	
3) Survivors	152,877,030		136,051,821	
4) Vested Deferred & Reciprocals	37,438,696		32,236,113	
5) Contributions Refunded	5,165,696		4,459,588	
6) DROP Deferred Benefits	200,207,166		200,334,428	
7) DROP Account Balances	<u>67,663,491</u>		<u>66,337,896</u>	
	1,639,547,484		1,535,350,203	
c) TOTAL	2,404,014,249		2,278,472,127	

<sup>1</sup>Actuarial discount rate changed from 7.50% to 7.25% effective July 1, 2013

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

	<u>June 30, 2013<sup>2</sup></u>	<u>June 30, 2012</u>
II. Actuarial Accrued Liability		
TOTAL (Preceding page)	\$ 2,404,014,249	\$ 2,278,472,127
III. Assets	1,492,914,745	1,403,463,883
IV. Unfunded Actuarial Accrued Liabilities - (Surplus)	911,099,504	875,008,244
a) Change over prior year	36,091,260	-29,513,455
b) Funded Percentage	62.1%	61.6%
V. Employer Contributions		
<u>To Fund Current Plan Year<sup>1</sup></u>		
a) Employer Portion of Normal Cost	26,689,875	25,310,805
b) Amortization Payments	57,569,001	53,771,011
c) Previous Year (Short-fall)	<u>11,337,937</u>	<u>9,449,959</u>
	95,596,813	88,531,775
	32.6%	31.6%
	<u>PERSAC approved Rate</u>	<u>30.8%</u>
	32.3%	
VI. Projected Employer Contributions		
<u>To Fund 2014-15 Plan Year<sup>1</sup></u>		
a) Employer Portion of Normal Cost	27,398,041	26,064,820
b) Amortization Payments	59,837,003	55,985,580
c) Short-fall Charge	<u>19,219,490</u>	<u>11,211,288</u>
TOTAL Projected Contribution	106,454,534	93,261,688
	35.4%	32.3%
VII. Current Payroll	290,013,756	277,191,001
Projected Payroll - Mid Year	293,139,121	280,446,322
Projected Payroll - Next Year	300,917,021	288,800,891

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

<sup>2</sup>Actuarial discount rate changed from 7.50% to 7.25% effective July 1, 2013



## EXHIBIT 2

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

	<u>June 30, 2013</u>	-----Prior Years----- <u>June 30, 2012</u>	<u>June 30, 2011</u>
<b><u>OPERATING REVENUES:</u></b>			
1. Contribution Income			
Member	\$ 20,830,149	\$ 21,571,589	\$ 22,153,401
Employer	88,164,618	82,687,129	72,917,767
Miscellaneous	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL CONTRIBUTIONS	108,994,767	104,258,718	95,071,168
2. Investment Income			
Investments	202,589,151	37,339,972	291,476,634
Less, Manager Fees	<u>-4,251,013</u>	<u>-3,894,947</u>	<u>-3,842,179</u>
TOTAL INVESTMENT INCOME	198,338,138	33,445,025	287,634,455
3. Total Revenues	307,332,905	137,703,743	382,705,623
<b><u>OPERATING EXPENSES:</u></b>			
1. General Administration	4,405,327	4,551,356	4,577,657
Other Expenses	120,854	118,799	123,539
2. Benefits Paid			
a) Pension Benefits	154,135,219	148,526,171	143,626,224
b) Return of Contrib.	4,371,042	3,606,711	3,214,342
c) Transfers to/from	<u>244,716</u>	<u>426,160</u>	<u>381,462</u>
TOTAL BENEFITS PAID	158,750,977	152,559,042	147,222,028
3. Total Operating Expenses	163,277,158	157,229,197	151,923,224
<b><u>NET INCREASE:</u></b>	144,055,747	-19,525,454	230,782,399

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

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

<b>ASSETS:</b>	<b>June 30, 2013</b>	<b>-----Prior Years-----</b>	
		<b>June 30, 2012</b>	<b>June 30, 2011</b>
1. Short Term Assets			
Cash in Banks	\$ 44,385,913	\$ 40,041,958	\$ 38,661,665
Securities	26,571,526	24,254,925	34,643,853
2. Bonds			
U.S. Government Obligations	97,706,157	104,891,037	97,069,700
Bonds - Domestic	136,120,762	135,892,027	152,857,216
Bonds - Foreign	112,246,356	140,477,793	108,098,285
3. Equities			
Domestic Stock	728,286,658	660,843,512	691,109,402
Foreign Stocks	249,364,185	208,994,803	202,800,904
Alternative Investments	231,096,538	188,609,350	160,407,717
4. Real Estate Investments	1,993,124	1,993,124	1,993,124
5. Property and Equipment	3,181,708	3,236,062	3,311,066
6. Other Assets	300,000	0	0
7. Receivables - Payables	9,911,956	-12,125,455	25,681,658
TOTAL ASSETS - Market Value	1,641,164,883	1,497,109,136	1,516,634,590
Valued at Cost	1,366,040,001	1,355,901,843	1,303,372,191

**INVESTMENT YIELD:**

Yield to Actuarial Value	12.04%	9.07%	4.35%
DROP Account Yield	11.54%	8.57%	3.85%
Yield to Market Value	13.73%	2.27%	23.28%

**EXPERIENCE ACCOUNT FUND:**

Prior Year End Balance	11,641,275	0	0
+ Excess Added	30,226,741	11,641,275	0
- Contribution Credited	-11,601,334	0	0
+ Accumulated Interest	1,402,015	0	0
Fund Balance - Year End	31,668,697	11,641,275	0

**ACTUARIAL VALUE OF ASSETS**<sup>2</sup> Developed as the Market Value, less the sum of the weighted deferrals of the unrealized gains/losses relative to the valuation discount rate effective 7/1/2013.

Total Market Value,	1,641,164,883	1,497,109,136	1,516,634,590
less			
Weight x (G/L) deferral	wt. <u>deferral</u>	wt. <u>deferral</u>	<u>deferral</u>
Plan Year - 3	80%    89,907,429	n/a    n/a	n/a
Plan Year - 2	60%   -76,695,989	75%  107,926,676	-204,823,238
Plan Year - 1	40%  194,915,640	50%  218,729,740	107,926,676
Plan Year (current)	20% <u>63,474,179</u>	25% <u>-72,055,114</u>	<u>218,729,740</u>
Gross Actuarial Value of Assets	1,522,071,813	1,414,803,933	1,349,829,757
Less, Experience Account	<u>-31,668,697</u>	<u>-11,641,275</u>	<u>0</u>
Valuation Assets	1,492,914,745	1,403,162,658	1,349,829,757

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

<sup>2</sup> Asset Smoothing Method changed effective 7/1/2013 as described in Exhibit 6.

## 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 <sup>1</sup> 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)
2004	1,381,154	1,820,959	439,805	75.8	259,698	169.4
2005	1,423,207	1,889,445	466,238	75.3	259,232	179.9
2006	1,480,748	1,872,594	391,846	79.1	239,321	163.7
2007	1,558,328	1,947,603	389,275	80.0	259,045	150.3
2008	1,578,991	2,060,242	481,251	76.6	289,529	166.2
2009	1,410,316	2,153,360	743,044	65.5	315,400	235.6
2010	1,350,073	2,213,362	863,289	61.0	306,333	281.8
2011	1,349,830	2,254,351	904,522	59.9	296,693	304.9
2012	1,403,464	2,278,472	873,008	61.6	277,191	315.7
2013	1,492,915	2,404,014	911,100	62.1	290,014	314.2

The total actuarial accrued liability determined using the Individual Entry Age Normal Cost Method increased by \$125,542,122 from June 30, 2012 to June 30, 2013 which includes a \$34,931,724 increase in Actuarial Accrued Liability resulting from a change in actuarial assumptions effective July 1, 2013. There was a \$2,511,629 decrease to the Unfunded Actuarial Accrued Liability resulting from a change in Actuarial Asset Valuation Method.

From all other sources, there was a net experience loss of \$3,383,918.

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

<sup>1</sup>Actuarial discount rate changed from 7.50% to 7.25% effective July 1, 2013

**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>
2004	47,980,745	58.7	41,929,947	28,163,575	67.2	19,817,170
2005	46,187,680	61.0	42,775,863	37,753,893	88.3	24,839,140
2006	50,768,224	85.6	45,648,519	43,458,220	95.2	27,029,439
2007	46,711,648	108.1	39,949,441	50,489,918	126.4	16,488,962
2008	50,003,327	103.5	43,384,440	51,765,697	119.3	8,107,705
2009	57,895,311	96.2	51,083,424	55,715,529	109.1	3,475,600
2010	75,027,998	71.0	72,228,043	53,297,405	73.8	22,406,238
2011	88,620,630	82.3	83,953,974	72,917,767	86.9	33,442,445
2012	92,137,088	89.7	86,223,728	82,687,131	95.9	36,979,042
2013	91,531,548	99.9	84,507,050	91,411,022	108.2	30,075,070

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 School 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).

**DEVELOPMENT OF NET  
PENSION OBLIGATION:**

(1) Actuarial Required Contribution	91,531,548
(2) Interest on Net Pension Obligation	2,773,428
(3) Amortization of Net Pension Obligation	9,797,926
(4) Annual Pension Cost (1)+(2)-(3)	84,507,050
(5) Employer Contribution	91,411,022
(6) Increase (decrease) in Net Pension Obligation	-6,903,972
(7) Net Pension Obligation Beginning of Year	36,979,042
(8) Net Pension Obligation End of Year (6)+(7)	30,075,070

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

<u>Fiscal Year End</u>	<u>Members Contribution</u>	<u>Employer Contribution</u>	<u>Investment Income</u>	<u>Total</u>
2004	19,676,052	21,940,471 <sup>1</sup>	157,897,575	199,514,098
2005	18,946,671	37,753,893	115,092,079	171,792,643
2006	17,716,761	43,458,220	84,039,860	145,214,841
2007	19,258,618	50,489,918	221,780,721	291,529,257
2008	21,398,728	51,765,697	-76,115,398	-2,950,973
2009	23,017,957	55,715,529	-248,186,444	-169,452,955
2010	22,348,841	53,297,405	149,812,525	225,458,771
2011	22,153,401	72,917,767	287,634,455	382,705,623
2012	21,571,589	82,687,129	33,445,025	137,703,743
2013	20,830,149	88,164,618	198,338,138	307,332,905

**Expenses by Type**

<u>Fiscal Year End</u>	<u>Benefits</u>	<u>Refunds/ Transfers</u>	<u>Administrative Expenses</u>	<u>Total</u>
2004	102,474,273	3,866,339	2,782,636	109,123,248
2005	109,842,001	3,077,121	3,259,996	116,179,118
2006	119,959,677	7,848,744	3,410,071	131,218,492
2007	130,256,443	5,323,626	3,715,526	139,295,595
2008	133,619,893	3,123,097	4,693,521	141,436,511
2009	131,126,987	3,326,073	4,648,077	139,101,137
2010	135,746,109	3,061,336	4,486,892	143,294,337
2011	143,626,224	3,595,804	4,701,196	151,923,224
2012	148,526,171	4,032,871	4,670,155	157,229,197
2013	154,135,219	4,615,758	4,526,181	163,277,158

<sup>1</sup> Employer Contributions exclude the Employer Contribution Credit.

## 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

This year there were no records purged from the database containing errors or categorized as suspicious data, which is a significant improvement in the quality of data reported when compared to previous years. Suspicious data are not necessarily errors, but data, which falls outside the parameters of the editing process for further checking.

Salary data contained in the profiles and valuation report exceed the amount reported by internal audit due the annualization of salaries. In the valuation process, membership data with fractional service in the first year of employment annualizes the salary.

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

	---2013---	---2012---	---2011---
	<u>Census</u>	<u>Census</u>	<u>Census</u>
Active Members	11,599	11,816	12,197
After DROP	585	600	657
Regular Retirees	10,711	10,520	10,353
Disability Retirees	340	369	381
Survivors	2,318	2,041	1,983
Terminated Vested	355	339	351
DROP Participants	<u>559</u>	<u>612</u>	<u>619</u>
TOTAL	26,467	26,297	26,541

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

LSEER RETIREMENT SYSTEM  
ACTIVE (hired < 7/1/2006)

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2013

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	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	12	3	0	0	0	0	0	15
:	0	0	320987	106045	0	0	0	0	0	427032
:	:	:	:	:	:	:	:	:	:	:
[30-34)	0	0	71	39	1	0	0	0	0	111
:	0	0	1741535	1020337	27711	0	0	0	0	2789583
:	:	:	:	:	:	:	:	:	:	:
[35-39)	0	0	119	103	32	0	0	0	0	254
:	0	0	2729613	2796282	1016847	0	0	0	0	6542742
:	:	:	:	:	:	:	:	:	:	:
[40-44)	0	0	174	238	113	37	2	0	0	564
:	0	0	3994447	5927883	3099696	1147166	88625	0	0	14257817
:	:	:	:	:	:	:	:	:	:	:
[45-49)	0	0	291	407	286	145	47	0	0	1176
:	0	0	6890034	9731195	7519175	4315280	1547473	0	0	30003157
:	:	:	:	:	:	:	:	:	:	:
[50-54)	0	0	304	517	430	262	117	10	2	1642
:	0	0	7144293	12171933	11231165	7135386	3664563	326961	65427	41739728
:	:	:	:	:	:	:	:	:	:	:
[55-59)	0	0	256	386	421	340	36	10	3	1452
:	0	0	6120622	9463789	10747958	9322008	1013661	220116	241348	37129502
:	:	:	:	:	:	:	:	:	:	:
[60-64)	0	0	184	160	98	68	31	14	4	559
:	0	0	4167208	3742728	2511210	1679147	854303	362902	130878	13448376
:	:	:	:	:	:	:	:	:	:	:
[65-69)	0	0	101	75	37	24	14	5	2	258
:	0	0	2311946	1678090	806233	612602	335219	118557	70619	5933266
:	:	:	:	:	:	:	:	:	:	:
[70-74)	0	0	55	39	26	16	4	4	6	150
:	0	0	1099887	790229	615166	390074	97620	95227	186311	3274514
:	:	:	:	:	:	:	:	:	:	:
TOTALS	:	:	:	:	:	:	:	:	:	:
count	0	0	1567	1967	1444	892	251	43	17	6181
salary	0	0	36520572	47428511	37575161	24601663	7601464	1123763	694583	155545717

AVERAGES --- Attained Age 52.77  
Service Years 14.78  
Active Salary 25,165

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

LSEER RETIREMENT SYSTEM  
ACTIVE (hired 7/06 - 7/11)

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2013

Age	YEARS EMPLOYED									Total
	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	
[ 0-19)	0	1	2	0	0	0	0	0	0	3
	0	23151	37118	0	0	0	0	0	0	60269
[20-24)	0	15	4	0	0	0	0	0	0	19
	0	363057	93881	0	0	0	0	0	0	456938
[25-29)	0	57	67	0	0	0	0	0	0	124
	0	1361792	1534432	0	0	0	0	0	0	2896224
[30-34)	0	96	110	0	0	0	0	0	0	206
	0	2044515	2510882	0	0	0	0	0	0	4555397
[35-39)	0	118	171	1	0	0	0	0	0	290
	0	2707932	3853090	23585	0	0	0	0	0	6584607
[40-44)	0	169	229	0	0	0	0	0	0	398
	0	3891035	5573455	0	0	0	0	0	0	9464490
[45-49)	0	188	334	5	2	0	1	0	0	530
	0	4303097	7702772	120713	78248	0	36491	0	0	12241321
[50-54)	0	230	334	0	1	2	0	0	0	567
	0	5197041	8397526	0	19936	68918	0	0	0	13683421
[55-59)	0	180	278	1	1	0	1	0	0	461
	0	4155118	6724460	20230	43164	0	58838	0	0	11001810
[60-64)	0	107	171	0	0	1	0	0	0	279
	0	2427313	3985703	0	0	67005	0	0	0	6480021
[65-69)	0	41	61	0	0	1	0	0	0	103
	0	890361	1264419	0	0	21395	0	0	0	2176175
[70-74)	0	26	57	0	0	0	0	0	0	83
	0	511285	1154923	0	0	0	0	0	0	1666208
TOTALS										
count	0	1228	1818	7	4	4	2	0	0	3063
salary	0	27875697	42832661	164528	141348	157318	95329	0	0	71266881

AVERAGES --- Attained Age 49.04  
Service Years 5.39  
Active Salary 23,267



MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

LSEER RETIREMENT SYSTEM  
ACTIVE (hired > 6/30/2011)

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY

VALUATION DATE 6/30/2013

Age	YEARS EMPLOYED									Total
	(0-1)	[1-5)	[5-10)	[10-15)	[15-20)	[20-25)	[25-30)	[30-35)	[35- )	
[ 0-19)	4	3	0	0	0	0	0	0	0	7
	82043	47434	0	0	0	0	0	0	0	129477
[20-24)	48	39	0	0	0	0	0	0	0	87
	917755	866554	0	0	0	0	0	0	0	1784309
[25-29)	76	85	0	0	0	0	0	0	0	161
	1514058	1729212	0	0	0	0	0	0	0	3243270
[30-34)	92	126	1	0	0	0	0	0	0	219
	1922664	2616912	51002	0	0	0	0	0	0	4590578
[35-39)	95	163	0	0	0	0	0	0	0	258
	1910863	3507408	0	0	0	0	0	0	0	5418271
[40-44)	104	196	1	0	0	0	0	0	0	301
	2029043	4218970	46646	0	0	0	0	0	0	6294659
[45-49)	133	252	0	0	0	0	0	0	0	385
	2715628	5626983	0	0	0	0	0	0	0	8342611
[50-54)	119	240	0	0	0	0	0	0	0	359
	2399325	5196807	0	0	0	0	0	0	0	7596132
[55-59)	105	194	0	0	0	0	0	0	0	299
	2135559	4241657	0	0	0	0	0	0	0	6377216
[60-64)	62	116	0	0	0	0	0	0	0	178
	1221333	2261057	0	0	0	0	0	0	0	3482390
[65-69)	25	41	0	0	0	0	0	0	0	66
	457397	851343	0	0	0	0	0	0	0	1308740
[70-74)	8	27	0	0	0	0	0	0	0	35
	129119	513850	0	0	0	0	0	0	0	642969
TOTALS	871	1482	2	0	0	0	0	0	0	2355
salary	17434787	31678187	97648	0	0	0	0	0	0	49210622

AVERAGES --- Attained Age 46.09  
Service Years 1.53  
Active Salary 20,896

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

LSEER RETIREMENT SYSTEM  
ACTIVE AFTER DROP

CELLS DEPICT - MEMBER COUNT  
TOTAL SALARY  
DROP BENEFITS

VALUATION DATE 6/30/2013

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)	3	1	0	0	0	0	0	0	0	0	4
	135240	30876	0	0	0	0	0	0	0	0	166116
	128316	30876	0	0	0	0	0	0	0	0	159192
[55-59)	15	12	3	5	2	1	0	0	0	0	38
	386268	285288	77448	121920	79440	65340	0	0	0	0	1015704
	350904	261072	70524	117012	52224	42708	0	0	0	0	894444
[60-64)	84	45	23	10	10	27	0	0	0	0	199
	2005188	1060548	419436	236484	284064	715932	0	0	0	0	4721652
	1147056	612768	346428	187008	160464	446820	0	0	0	0	2900544
[65-69)	10	9	43	44	28	67	9	0	0	0	210
	185832	195300	894996	862524	709716	1671864	289380	0	0	0	4809612
	61752	73356	431844	412164	288720	771972	99948	0	0	0	2139756
[70-74)	3	2	4	3	7	60	53	2	0	0	134
	52416	45228	62988	53340	191220	1521264	1287024	63972	0	0	3277452
	17136	12732	22104	14292	38280	477252	360060	17484	0	0	959340
TOTALS											
count	115	69	73	62	47	155	62	2	0	0	585
salary	2764944	1617240	1454868	1274268	1264440	3974400	1576404	63972	0	0	13990536
benefit	1705164	990804	870900	730476	539688	1738752	460008	17484	0	0	7053276

AVERAGES --- Attained Age 66.22  
Post Drop Years 4.51  
Active Salary 23,915  
Annual Benefit 12,057

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

LSER RETIREMENT SYSTEM  
REGULAR RETIREES

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2013

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
	0	0	0	0	0	0	0	0	0	0	0
[40-44)	1	1	0	0	0	0	0	0	0	0	2
	11688	7068	0	0	0	0	0	0	0	0	18756
[45-49)	8	6	5	0	1	9	0	0	0	0	29
	96120	124620	114312	0	5664	77436	0	0	0	0	418152
[50-54)	36	33	19	12	6	82	21	4	3		216
	911640	802188	416292	242124	158016	1196868	197856	39156	21420		3985560
[55-59)	88	97	60	54	37	235	64	17	5		657
	1793748	2226216	1344300	1262820	725424	3950916	612036	103332	27060		12045852
[60-64)	207	195	148	153	103	625	166	53	32		1682
	3077532	2830884	2319744	2286660	1424496	10974888	1803816	310860	199680		25228560
[65-69)	100	129	152	144	113	1071	367	98	61		2235
	1142784	1657968	1833492	1722168	1210152	13817028	4171164	788268	367848		26710872
[70-74)	45	52	55	47	61	777	830	290	91		2248
	362352	509772	510768	431616	530688	7344912	7564704	2783520	652560		20690892
[75-79)	11	26	23	14	18	206	612	593	228		1731
	98172	209400	179844	103716	165048	1572588	4634064	5079132	2324268		14366232
[80-84)	5	5	2	5	4	56	137	442	519		1175
	19500	36012	28632	28536	18876	445068	854724	3562908	4885884		9880140
[85-89)	0	1	0	0	0	5	24	59	448		537
	0	4848	0	0	0	54660	178056	521448	4523160		5282172
[90-99)	0	0	0	0	0	1	3	9	185		198
	0	0	0	0	0	8496	28632	75408	1892400		2004936
TOTALS											
count	501	545	464	429	343	3067	2224	1565	1572		10710
benefit	7513536	8408976	6747384	6077640	4238364	39442860	20045052	13264032	14894280		120632124

AVERAGES --- Attained Age 71.55  
Years Retired 11.34  
Annual Benefit 11,264

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

LSER RETIREMENT SYSTEM  
REGULAR RETIREES w/COLA

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2013

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
[ 40-44)	0	0	0	0	0	0	0	0	0	0
[ 45-49)	0	0	0	0	0	0	0	0	0	0
[ 50-54)	0	0	0	0	0	0	1	0	0	1
	0	0	0	0	0	0	177000	0	0	17700
[ 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	0	0	0	0	0	1	0	0	1
count	0	0	0	0	0	0	1	0	0	1
benefit	0	0	0	0	0	0	17700	0	0	17700

AVERAGES --- Attained Age 52.39  
Years Retired 11.73  
Annual Benefit 17,700

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

LSEER RETIREMENT SYSTEM  
DISABILITY RETIREES

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2013

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	1	0	0	0	0	0	2
	11184	0	0	5364	0	0	0	0	0	16548
[40-44)	0	5	1	1	1	1	0	1	0	10
	0	42228	6984	5712	4560	12564	0	2592	0	74640
[45-49)	4	5	5	5	0	10	5	3	1	38
	44124	41856	47148	35004	0	71448	31716	13440	5556	290292
[50-54)	14	10	9	12	8	31	14	5	0	103
	133356	82356	96432	100704	45948	206304	80352	22572	0	768024
[55-59)	8	16	20	15	8	40	26	10	7	150
	63168	132036	182304	110172	71844	239412	126252	47916	43320	1016424
[60-64)	3	2	5	2	2	2	1	0	2	19
	24432	14400	48084	13788	12492	7920	5520	0	8688	135324
[65-69)	2	1	1	1	0	1	1	0	0	7
	14880	5808	9768	3888	0	6336	4212	0	0	44892
[70-74)	1	1	0	1	0	0	0	0	3	6
	6168	8448	0	4188	0	0	0	0	14808	33612
[75-79)	0	0	1	1	0	0	0	0	0	2
	0	0	7368	4260	0	0	0	0	0	11628
[80-84)	1	1	0	0	0	0	0	0	1	3
	4224	5904	0	0	0	0	0	0	4068	14196
[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	34	41	42	39	19	85	47	19	14	340
benefit	301536	333036	398088	283080	134844	543984	248052	86520	76440	2405580

AVERAGES --- Attained Age 55.66  
Years Retired 6.75  
Annual Benefit 7,075

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

LSEER RETIREMENT SYSTEM  
SURVIVOR BENEFITS

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2013

Age	YEARS RETIRED									Total
	(0-1)	[1-2)	[2-3)	[3-4)	[4-5)	[5-10)	[10-15)	[15-20)	[20- )	
[ 0-39)	4	0	1	4	0	8	9	6	7	39
	32064	0	8280	41040	0	68268	88344	47940	39648	325584
[40-44)	0	1	0	0	3	6	0	5	6	21
	0	18456	0	0	22572	51840	0	32424	50844	176136
[45-49)	2	3	1	0	1	9	7	6	3	32
	33324	54636	15840	0	16656	77148	46752	38088	18420	300864
[50-54)	3	0	4	5	1	18	8	11	7	57
	56832	0	47940	82968	11928	173988	64620	53532	49536	541344
[55-59)	4	6	2	8	3	20	20	10	11	84
	103476	74616	12300	109932	33552	188100	192576	76380	67164	858096
[60-64)	14	7	12	5	12	41	41	29	20	181
	227424	107508	179028	62664	191532	419988	347232	182844	135408	1853628
[65-69)	15	14	21	16	23	59	43	44	24	259
	189972	159912	235644	185892	276732	651204	347040	342288	173868	2562552
[70-74)	26	26	29	20	22	99	64	60	57	403
	250260	268272	254220	168528	182016	900120	497532	442164	455400	3418512
[75-79)	30	30	21	29	22	93	77	80	112	494
	229788	264504	167580	191724	152112	721800	560928	602280	897492	3788208
[80-84)	25	15	22	14	17	77	56	60	159	445
	170352	95280	183900	111624	122376	542520	426156	491628	1329312	3473148
[85-89)	8	6	7	8	5	27	29	20	108	218
	62232	35076	55704	43152	20472	197988	236016	144636	928332	1723608
[90-99)	1	2	2	3	0	7	8	22	40	85
	7200	12600	12768	19296	0	54744	88464	167028	313332	675432
TOTALS	132	110	122	112	109	464	362	353	554	2318
benefit	1362924	1090860	1173204	1016820	1029948	4047708	2895660	2621232	4458756	19697112

AVERAGES --- Attained Age 73.90  
Years Retired 12.39  
Annual Benefit 8,497

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS EMPLOYED

LSER RETIREMENT SYSTEM  
TERM-VESTED/RECIPROCAL

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2013

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	0	0	0	0	0	0	0	0	0
:	:	:	:	:	:	:	:	:	:	:
[20-24)	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0
:	:	:	:	:	:	:	:	:	:	:
[25-29)	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0
:	:	:	:	:	:	:	:	:	:	:
[30-34)	0	0	0	1	0	0	0	0	0	1
:	0	0	0	5652	0	0	0	0	0	5652
:	:	:	:	:	:	:	:	:	:	:
[35-39)	0	0	0	1	0	0	0	0	0	1
:	0	0	0	17304	0	0	0	0	0	17304
:	:	:	:	:	:	:	:	:	:	:
[40-44)	0	1	0	17	3	1	0	0	0	22
:	0	1668	0	157608	32964	10848	0	0	0	203088
:	:	:	:	:	:	:	:	:	:	:
[45-49)	0	2	0	23	10	2	2	0	0	39
:	0	960	0	192720	174180	32544	65244	0	0	465648
:	:	:	:	:	:	:	:	:	:	:
[50-54)	0	1	1	33	28	5	12	1	0	81
:	0	1356	2856	264840	377844	121872	395100	26004	0	1189872
:	:	:	:	:	:	:	:	:	:	:
[55-59)	0	0	2	50	41	23	10	2	1	129
:	0	0	3024	462468	526872	449508	222468	43908	77916	1786164
:	:	:	:	:	:	:	:	:	:	:
[60-64)	0	0	0	25	18	10	3	2	0	58
:	0	0	0	211500	227892	203736	70164	40776	0	754068
:	:	:	:	:	:	:	:	:	:	:
[65-69)	1	1	0	8	2	1	2	0	0	15
:	12	1980	0	52668	15516	19092	53136	0	0	142404
:	:	:	:	:	:	:	:	:	:	:
[70-74)	0	1	0	0	5	0	2	1	0	9
:	0	84	0	0	26832	0	25884	25224	0	78024
:	:	:	:	:	:	:	:	:	:	:
TOTALS	:	:	:	:	:	:	:	:	:	:
count	1	6	3	158	107	42	31	6	1	355
benefit	12	6048	5880	1364760	1382100	837600	831996	135912	77916	4642224

AVERAGES --- Attained Age 56.06  
Service Years 16.37  
Annual Benefit 13,077

MEMBERSHIP PROFILE  
CATEGORIZED BY AGE AND YEARS RETIRED

LSEER RETIREMENT SYSTEM  
DROP PARTICIPANTS

CELLS DEPICT - MEMBER COUNT  
TOTAL BENEFITS

VALUATION DATE 6/30/2013

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
	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
[45-49)	2	1	2	0	0	0	0	0	0	5
	67716	47436	61224	0	0	0	0	0	0	176376
[50-54)	14	20	24	0	0	0	0	0	0	58
	529368	769128	802548	0	0	0	0	0	0	2101044
[55-59)	34	46	33	0	0	0	0	0	0	113
	842556	1116996	786996	0	0	0	0	0	0	2746548
[60-64)	99	134	114	0	0	0	0	0	0	347
	1500156	1940184	1740456	0	0	0	0	0	0	5180796
[65-69)	7	8	11	0	0	0	0	0	0	26
	51180	60276	78048	0	0	0	0	0	0	189504
[70-74)	3	2	2	0	0	0	0	0	0	7
	30444	12096	11664	0	0	0	0	0	0	54204
[75-79)	1	2	0	0	0	0	0	0	0	3
	4848	22680	0	0	0	0	0	0	0	27528
[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
TOTALS										
count	160	213	186	0	0	0	0	0	0	559
benefit	3026268	3968796	3480936	0	0	0	0	0	0	10476000

AVERAGES --- Attained Age 60.33  
Years Retired 1.59  
Annual Benefit 18,741



EXHIBIT 5

PRINCIPLE PROVISIONS OF THE PLAN  
(Including Acts of 2013 Regular Session)

**EFFECTIVE DATE:**

July 1, 1947

**EMPLOYEE:**

Any school bus driver, janitor, custodian, maintenance employee, bus aide, monitor or attendant or other regular school employee helping with the transportation of school children, and who is a legal employee of a parish or city school board of the State of Louisiana.

**EMPLOYER:**

The State of Louisiana, or any parish or city school board from which any employee receives compensation.

**ELIGIBILITY FOR  
PARTICIPATION:**

Contingent upon approval of application filed with the Board of Trustees within 90-days of the date of Employment. However, no employee who is a member of any other retirement system supported in whole or in part by public funds shall be entitled to membership in this retirement system.

**SERVICE:**

Service as an "Employee", defined above.

**CREDITABLE SERVICE:**

Prior Service plus Membership Service, for which credit is allowed.

**PRIOR SERVICE:**

Service prior to July 1, 1947 for which prior service certificates are issued; granted without cost if certified.

**MEMBERSHIP SERVICE:**

Service as an "Employee" while a member of the system.

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

**ADDITIONAL**

**CREDITABLE SERVICE:**

1. Credit for service canceled by withdrawal of accumulated contributions may be restored by member by paying into system the amount withdrawn plus regular interest from date withdrawn until paid.
2. Maximum of 4 years of credit for military service may purchased.
3. Conversion of Sick Leave and Annual Leave at retirement, or death may be converted to membership credit.
4. Part-time employees shall accrue a full year of creditable service for each full year of part-time service for benefit eligibility purposes.
5. Out of State service with other school systems may be purchased.

**EARNABLE COMPENSATION:**

The compensation earned by a member for any given period. Where compensation includes maintenance, the employing agency shall fix the value of that part of compensation not paid directly.

**AVERAGE FINAL COMPENSATION:**

The average annual earnable compensation of a member for the 36 highest successive months of employment or the highest 36 successive joined months of employment where interruption of service occurred (Effective 7/6/84); the average compensation of a member for purposes of computing benefits cannot increase more than 25% per year (Effective 1/1/87).

For those members hired on and after 7/1/2006, the period for determining final average compensation is extended from 36 months to 60 months.

**ACCUMULATED CONTRIBUTIONS:**

Sum of all amounts deducted from compensation of a member plus any interest credited to his individual account in annuity savings fund plus any other amounts credited to the member's account.

**EMPLOYEE CONTRIBUTIONS:**

- 7.00% of earnable compensation.
- 6.65% effective Sept.1, 1990 (Act 340 of 1990).
- 7.00% effective Jan. 1, 1992 (Act 375 of 1991).
- 6.35% effective July 1, 1992 (Act 248 of 1992).
- 7.50% effective July 1, 2001 (Act 897 of 2001).
- 8.00% effective July 1, 2010 (Act 318 of 2010, new hires).

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

**EMPLOYER CONTRIBUTIONS:**

"Normal contribution" rate plus "accrued liability contribution" rate, as determined by the actuary and Board of Trustees. Eff. July 1, 1985, 10.18%. Act 81 of 1988 requires employer rate to be actuarially determined annually.

**RETIREMENT BENEFIT:**

**NORMAL RETIREMENT:**

Eligibility:

Contingent upon written application to the Board of Trustees;

1. For members hired prior to 7/1/2010; attainment of 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. For members hired after 6/30/2010; attainment of age 60 and 5 years of accredited service

Benefit:

1. For members hired prior to 7/1/2010; Act 897 of the 2001 regular legislative session increases the accrual rate to 3 1/3% for all years of service.
2. For members hired after 6/30/2010; Act 318 of the 2010 regular legislative session sets the accrual rate at 2 1/2%.

**EARLY-REDUCED 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 earliest normal retirement date.

**COST OF LIVING BENEFITS:**

Prior to July 1, 1970 The Board may grant supplemental COLA not in excess of 2% from investment income, minimum \$20 per month.

After July 29, 1970 Board may grant supplemental COLA not in excess of 3% from investment income, minimum \$30 per month.

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

**DISABILITY RETIREMENT:**

Eligibility:

5 years of creditable service; certification of disability by medical board (medical examination required once in every year for the first 5 years of disability retirement, and once in every 3 years thereafter, until age 60).

Effective 7/1/2006, Act 578 of 2006 changed the requirements for disability retirement from 5 years of creditable service to 10 years.

Benefit:

For members hired prior to 7/1/2010;

A pension equal to 2 1/2% of average final compensation times the years of creditable service, plus two dollars per month for each year of credited service supplemental benefit, not to exceed final average compensation. Act 500 of 1989 provides a minimum disability benefit of 33 1/3% of average final compensation.

For members hired after 6/30/2010;

A pension equal to the accrued retirement benefit, without reduction for age.

**SURVIVOR'S BENEFITS:**

Eligibility:

1. Surviving Spouse with minor children of;
  - an active member with 5 years of creditable service with at least 2 years earned immediately prior to death or,
  - a member with 20 years of service at the time of death.
2. Surviving Spouse without minor children of;
  - an active member with 10 years of creditable service with at least 2 years earned immediately prior to death or,
  - a member with 20 years of service at the time of death.
3. Minor children with no spouse or spouse without legal custody of;
  - an active member with 5 years of creditable service with at least 2 years earned immediately prior to death or,
  - a member with 20 years of service at the time of death.
4. Beneficiary not eligible for (1), (2) or (3)

Act 992 of 2010 includes in the list of eligible survivors, handicapped children, and mentally disabled children.

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

Benefits:

For members hired prior to 7/1/2010;

1. Greater of 75% of member's final average compensation or \$300 per month. Benefit ceases upon remarriage if less than 20 years of service and less than age 55.
2. Greater of 50% of member's final average compensation or \$200 per month. Benefit ceases upon remarriage if less than 20 years of service and less than age 55.
3. Greater of 75% of member's final average compensation or \$300 per month.
4. Return of member's accumulated contributions.

For members hired after 6/30/2010;

1. Greater of 50% of member's final average compensation or \$600 per month. Benefits cease upon remarriage and resume upon subsequent death or divorce of spouse.
2. Members accrued benefit at death.
3. Each child (not to exceed 2) receives 50% of the benefit payable in (1) above.
4. Return of member's accumulated contributions.

**NOTE:** Handicapped or mentally retarded children of a deceased member, regardless of age, who are dependent upon a surviving spouse or legal guardian shall be payable in accordance with minor children benefits of this section. The benefit payable is reduced by state assistance received.

**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 - benefits of equal actuarial value may be elected with approval of board

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

The normal form and options 1-4 can be elected in the form of an increasing annuity which permits the member to make an election at retirement to receive an actuarially 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 for a surviving spouse.

**NOTE:** Revisionary annuities are available for Option 2, Option 3 and Option 4, which provides a return to the maximum benefit if the spouse pre-deceases the retiree.

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

**REFUND OF CONTRIBUTIONS:**

If a member ceases to be eligible, 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.

**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.

**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 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 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:**  
**(Act 56 of 1991)**

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:**

Ten (10) years at age sixty (60), twenty five (25) years at age fifty-five (55), or thirty (30) years of creditable service including reciprocal service, but excluding conversion of sick and annual leave, and eligible to receive a service retirement allowance. However, all unused sick and annual leave is convertible after plan participation when member has terminated employment.

**Benefit:**

Duration of participation is specified and cannot exceed the period terminating on the third anniversary at the earliest date the member qualified for regular retirement.

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:

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

**Benefit (continued):**

- (1) lump sum payment (equal to the payments to the account)
- (2) a true annuity based upon his account; or
- (3) any other method of payment if approved by the board of trustees. Monthly benefits being paid into the fund during participation will begin being paid to the retiree.

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

If employment is not terminated at the end of the specified period of participation, then:

- (1) payment into account shall cease
- (2) payment from account shall not be made until employment is terminated and
- (3) the participant shall resume active contributing membership in the system

Then, upon termination of employment, the benefit payments indicated above shall be paid. The participant shall receive an additional retirement benefit based on additional service rendered since termination of participation in the fund, usually the normal method of computation of benefit subject to the following:

- (1) If additional service was less than 36 months, average compensation figure used to calculate additional benefit shall be that used to calculate original benefit.
- (2) 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.

For those members hired on and after 7/1/2006, the period for determining final average compensation is extended from 36 months to 60 months.

**NOTE:** DROP Accounts shall earn interest subsequent to the termination of DROP participation at a rate of half of one percentage point below the percentage rate of return of the System's investment portfolio as certified by the actuary on an annual basis.

Effective 1/1/2004 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:**

La. R.S. 11:22(B.)(5), prescribes the "Entry Age Normal" cost method to be 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.

The valuation and measurement of all events occur at mid-plan year.

**ASSET VALUATION:**

For the Plan Year ending prior to July 1, 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.

For the Plan Year beginning July 1, 1999 the Board of Trustees approved a change in the Asset Valuation Method which adjusts the market value of assets to a four year weighted average in the unrealized gain or loss in the value of all assets. This value was subject to Corridor Limits of 80% to 120% of the Market Value of Assets.

For the Plan Year beginning July 1, 2013 the Board of Trustees approved a change in the Asset Valuation Method which adjusts the market value of assets to a five year weighted average in the unrealized gain or loss in the value of all assets relative to the discount rate. This value is subject to Corridor Limits of 85% to 115% 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 (2008-2012) ran consecutive to the prior (2003-2007) study. The Board of Trustees approved the recommended changes in actuarial assumptions on May 21, 2013, effective July 1, 2013. A detailed copy of the Experience Study with adopted recommendations is available at the retirement office.



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

**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.

**DISABILITY ASSUMPTION:**

Rates for 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:**

The (2008-2012) Experience Study updated retirement rates are based on age and service eligibility requirements for normal benefits. Age and service requirements vary by plan. DROP is viewed as an alternative form of benefit accrual since mandatory termination is not required following participation. Therefore, at eligibility, the probability of DROP accrual is determined in conjunction with regular benefit accrual. Retirement rates and DROP probabilities are based on the most recent (2008-2012) Experience Study and are illustrated in the rate tables at the end of this exhibit.

**TERMINATION ASSUMPTIONS:**

Voluntary termination or withdrawal rates are based upon the most recent Experience (2008-2012) Study and are illustrated in the rate tables at the end of this exhibit.

Generally during the first five years of employment, there is a higher incidence of voluntarily terminating. In prior valuations this "select period" adjusted the probability of termination using multipliers applied to the "ultimate rate". Over the last two Experience Study observation periods (2003-2012), the select rates have converged with the ultimate rates. Therefore, the select rate multipliers have been eliminated.

For members terminating with less than twenty (20) years of service, it is assumed that 80% will withdraw their accumulated employee contributions. For members terminating with twenty (20) or more years of service, it is assumed that only 30% will withdraw their accumulated employee contributions.

The remaining are assumed to receive a deferred vested retirement benefit

**SALARY GROWTH:**

The (2008-2012) Experience Study updated the salary growth rate to reflect more moderate longevity increases and inflation at 2.75%. The annual salary growth rates are base upon the members' years of service and are illustrated in the rate tables at the end of this exhibit.

**COST-OF-LIVING:**

Cost-of-living raises may be granted from the Experience Account provided there are sufficient funds needed to offset the increase in liability of the COLA.

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

**FAMILY STATISTICS:**

The composition of the Family was based on Age Specific Fertility Rates from the 2007 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

**Accumulated Leave Policies:**

Retirements are monitored to determine the amount of leave converted to service credit. Leave credit is accrued throughout the duration of the member's career. The average service credit converted is expressed as a percentage increase of the accrued benefit as follows:

School Employees	3.0%
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**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:**

For the 1990-1991 plan year, the Public Retirement Systems' Actuarial Committee increased the valuation rate assumption to 7.5% from the system's actuary recommended rate of 7.0%, net expenses. The (2008-2012) Experience Study recommended a reduction to 7.25% based upon reductions in the inflation forecast at 2.75% and an overall reduction in Capital Market for the System's portfolio.

**ADMINISTRATIVE EXPENSES:**

Operating expenses are included in Aggregate Normal Cost and are assumed to be \$4,500,000 per year. Investment Manager Fees are not included in Operating Expenses, but are treated as a direct offset to investment income. The Employer portion of the Normal Cost excludes an allocation for administrative expenses. As a result of the change in Asset Valuation Method, the reporting of realized income has been changed to realized, plus unrealized income for valuations beginning on June 30, 1999 and thereafter.

ACTUARIAL TABLES AND RATES  
PRIOR RATES

Age	- Death Rates -		Disability	Termination	Retirement	DROP	Dur	Salary
	Male	Female	Rates	Rates	Rates	Rates		Scale
18	.000316	.000188	.0000	.1500	.0000	.000	1	1.0600
19	.000331	.000190	.0000	.1500	.0000	.000	2	1.0600
20	.000345	.000191	.0000	.1500	.0000	.000	3	1.0450
21	.000357	.000192	.0000	.1500	.0000	.000	4	1.0450
22	.000366	.000194	.0000	.1300	.0000	.000	5	1.0450
23	.000373	.000197	.0000	.1300	.0000	.000	6	1.0450
24	.000376	.000201	.0000	.1300	.0000	.000	7	1.0470
25	.000376	.000207	.0000	.1000	.0000	.000	8	1.0470
26	.000378	.000214	.0000	.1000	.0000	.000	9	1.0470
27	.000382	.000223	.0000	.1000	.0000	.000	10	1.0470
28	.000393	.000235	.0000	.1000	.0000	.000	11	1.0470
29	.000412	.000248	.0000	.1000	.0000	.000	12	1.0470
30	.000444	.000264	.0000	.1000	.0000	.000	13	1.0470
31	.000499	.000307	.0000	.1000	.0000	.000	14	1.0450
32	.000562	.000350	.0000	.1000	.0000	.000	15	1.0450
33	.000631	.000394	.0000	.1000	.0000	.000	16	1.0450
34	.000702	.000435	.0000	.1000	.0000	.000	17	1.0450
35	.000773	.000475	.0010	.0700	.0000	.000	18	1.0450
36	.000841	.000514	.0010	.0700	.0000	.000	19	1.0450
37	.000904	.000554	.0010	.0700	.0000	.000	20	1.0450
38	.000964	.000598	.0010	.0700	.0000	.000	21	1.0450
39	.001021	.000648	.0010	.0700	.0000	.000	22	1.0450
40	.001079	.000706	.0020	.0700	.0000	.000	23	1.0450
41	.001142	.000774	.0020	.0600	.0000	.000	24	1.0450
42	.001215	.000852	.0020	.0600	.0000	.000	25	1.0450
43	.001299	.000937	.0040	.0600	.0000	.000	26	1.0450
44	.001397	.001029	.0040	.0550	.0000	.000	27	1.0450
45	.001508	.001124	.0040	.0550	.0000	.000	28	1.0400
46	.001616	.001223	.0050	.0550	.0000	.000	29	1.0400
47	.001734	.001326	.0060	.0400	.9000	.000	30	1.0400
48	.001860	.001434	.0060	.0400	.9000	.150	31	1.0400
49	.001995	.001550	.0060	.0400	.6800	.150	32	1.0400
50	.002138	.001676	.0060	.0400	.6000	.300	33	1.0400
51	.002449	.001852	.0060	.0400	.6000	.450	34	1.0400
52	.002667	.002018	.0060	.0400	.6000	.270	35	1.0400
53	.002916	.002207	.0060	.0400	.6000	.270	36	1.0400
54	.003196	.002424	.0070	.0400	.4200	.330	37	1.0400
55	.003624	.002717	.0070	.0400	.4200	.330	38	1.0400
56	.004200	.003090	.0070	.0400	.4200	.400	39	1.0400
57	.004693	.003478	.0060	.0400	.4200	.300	40	1.0400
58	.005273	.003923	.0060	.0400	.4200	.300	41	1.0400
59	.005945	.004441	.0050	.0400	.3500	.200	42	1.0400
60	.006747	.005055	.0040	.0400	.3500	.400	43	1.0400
61	.007676	.005814	.0040	.0400	.3500	.350	44	1.0400
62	.008757	.006657	.0040	.0400	.2500	.250	45	1.0400
63	.010012	.007648	.0040	.0400	.2500	.250	46	1.0400
64	.011280	.008619	.0040	.0400	.2500	.250	47	1.0400
65	.012737	.009706	.0040	.0400	.2500	.100	48	1.0400
66	.014409	.010954	.0040	.0400	.2500	.100	49	1.0400
67	.016075	.012163	.0040	.0400	.2500	.100	50	1.0400
68	.017871	.013445	.0040	.0400	.2500	.200	51	1.0400
69	.019802	.014860	.0040	.0400	.2500	.080	52	1.0400
70	.022206	.016742	.0040	.0400	.2500	.050	53	1.0400
71	.024570	.018579	.0040	.0400	.2500	.000	54	1.0400
72	.027281	.020665	.0040	.0400	.2500	.000	55	1.0400
73	.030387	.022970	.0040	.0400	.5000	.000	56	1.0400
74	.033900	.025458	.0040	.0400	.9900	.000	57	1.0400

ACTUARIAL TABLES AND RATES  
NEW RATES FOR HIRES PRIOR TO 7/1/2011

Age	- Death Rates -		Disability Rates	Termination Rates	Retirement Rates	DROP Rates	Dur	Salary Scale
	Male	Female						
18	.000316	.000188	.0000	.0500	.0000	.000	1	1.0550
19	.000331	.000190	.0000	.1500	.0000	.000	2	1.0550
20	.000345	.000191	.0000	.1500	.0000	.000	3	1.0420
21	.000357	.000192	.0000	.1500	.0000	.000	4	1.0420
22	.000366	.000194	.0000	.1500	.0000	.000	5	1.0420
23	.000373	.000197	.0000	.1300	.0000	.000	6	1.0420
24	.000376	.000201	.0000	.1300	.0000	.000	7	1.0420
25	.000376	.000207	.0000	.1300	.0000	.000	8	1.0420
26	.000378	.000214	.0000	.1000	.0000	.000	9	1.0420
27	.000382	.000223	.0000	.1000	.0000	.000	10	1.0420
28	.000393	.000235	.0000	.1000	.0000	.000	11	1.0420
29	.000412	.000248	.0000	.1000	.0000	.000	12	1.0420
30	.000444	.000264	.0000	.1000	.0000	.000	13	1.0420
31	.000499	.000307	.0000	.1000	.0000	.000	14	1.0420
32	.000562	.000350	.0000	.1000	.0000	.000	15	1.0420
33	.000631	.000394	.0000	.0800	.0000	.000	16	1.0420
34	.000702	.000435	.0000	.0800	.0000	.000	17	1.0420
35	.000773	.000475	.0010	.0700	.0000	.000	18	1.0420
36	.000841	.000514	.0010	.0700	.0000	.000	19	1.0400
37	.000904	.000554	.0010	.0700	.0000	.000	20	1.0400
38	.000964	.000598	.0010	.0650	.0000	.000	21	1.0400
39	.001021	.000648	.0010	.0650	.0000	.000	22	1.0400
40	.001079	.000706	.0020	.0650	.0000	.000	23	1.0400
41	.001142	.000774	.0020	.0550	.0000	.000	24	1.0400
42	.001215	.000852	.0020	.0550	.0000	.000	25	1.0400
43	.001299	.000937	.0030	.0550	.0000	.000	26	1.0400
44	.001397	.001029	.0030	.0550	.0000	.000	27	1.0350
45	.001508	.001124	.0030	.0450	.0000	.000	28	1.0350
46	.001616	.001223	.0030	.0450	.0000	.000	29	1.0350
47	.001734	.001326	.0040	.0450	.8000	.000	30	1.0350
48	.001860	.001434	.0040	.0450	.7000	.350	31	1.0320
49	.001995	.001550	.0050	.0400	.5500	.350	32	1.0320
50	.002138	.001676	.0050	.0400	.5500	.350	33	1.0320
51	.002449	.001852	.0060	.0400	.5500	.300	34	1.0320
52	.002667	.002018	.0060	.0400	.5500	.300	35	1.0320
53	.002916	.002207	.0060	.0400	.5500	.200	36	1.0320
54	.003196	.002424	.0060	.0400	.3700	.200	37	1.0320
55	.003624	.002717	.0070	.0400	.3700	.500	38	1.0320
56	.004200	.003090	.0070	.0400	.3700	.150	39	1.0320
57	.004693	.003478	.0060	.0400	.3700	.150	40	1.0320
58	.005273	.003923	.0060	.0400	.4500	.150	41	1.0320
59	.005945	.004441	.0030	.0400	.3000	.150	42	1.0320
60	.006747	.005055	.0030	.0400	.3000	.450	43	1.0320
61	.007676	.005814	.0030	.0400	.2500	.100	44	1.0320
62	.008757	.006657	.0030	.0400	.2500	.050	45	1.0320
63	.010012	.007648	.0030	.0400	.2500	.050	46	1.0320
64	.011280	.008619	.0030	.0400	.2500	.050	47	1.0320
65	.012737	.009706	.0030	.0400	.2500	.050	48	1.0320
66	.014409	.010954	.0030	.0400	.2500	.050	49	1.0320
67	.016075	.012163	.0030	.0400	.2500	.050	50	1.0320
68	.017871	.013445	.0030	.0400	.2500	.050	51	1.0320
69	.019802	.014860	.0030	.0400	.2500	.050	52	1.0320
70	.022206	.016742	.0030	.0400	.2500	.050	53	1.0320
71	.024570	.018579	.0030	.0400	.2500	.000	54	1.0320
72	.027281	.020665	.0030	.0400	.2500	.000	55	1.0320
73	.030387	.022970	.0030	.0400	.2500	.000	56	1.0320
74	.033900	.025458	.0030	.0400	.9900	.000	57	1.0320

ACTUARIAL TABLES AND RATES  
NEW RATES FOR HIRES AFTER TO 6/30/2011

Age	- Death Rates -		Disability Rates	Termination Rates	Retirement Rates	DROP Rates	Dur	Salary Scale
	Male	Female						
18	.000316	.000188	.0000	.0500	.0000	.000	1	1.0550
19	.000331	.000190	.0000	.1500	.0000	.000	2	1.0550
20	.000345	.000191	.0000	.1500	.0000	.000	3	1.0420
21	.000357	.000192	.0000	.1500	.0000	.000	4	1.0420
22	.000366	.000194	.0000	.1500	.0000	.000	5	1.0420
23	.000373	.000197	.0000	.1300	.0000	.000	6	1.0420
24	.000376	.000201	.0000	.1300	.0000	.000	7	1.0420
25	.000376	.000207	.0000	.1300	.0000	.000	8	1.0420
26	.000378	.000214	.0000	.1000	.0000	.000	9	1.0420
27	.000382	.000223	.0000	.1000	.0000	.000	10	1.0420
28	.000393	.000235	.0000	.1000	.0000	.000	11	1.0420
29	.000412	.000248	.0000	.1000	.0000	.000	12	1.0420
30	.000444	.000264	.0000	.1000	.0000	.000	13	1.0420
31	.000499	.000307	.0000	.1000	.0000	.000	14	1.0420
32	.000562	.000350	.0000	.1000	.0000	.000	15	1.0420
33	.000631	.000394	.0000	.0800	.0000	.000	16	1.0420
34	.000702	.000435	.0000	.0800	.0000	.000	17	1.0420
35	.000773	.000475	.0010	.0700	.0000	.000	18	1.0420
36	.000841	.000514	.0010	.0700	.0000	.000	19	1.0400
37	.000904	.000554	.0010	.0700	.0000	.000	20	1.0400
38	.000964	.000598	.0010	.0650	.0000	.000	21	1.0400
39	.001021	.000648	.0010	.0650	.0000	.000	22	1.0400
40	.001079	.000706	.0020	.0650	.0000	.000	23	1.0400
41	.001142	.000774	.0020	.0550	.0000	.000	24	1.0400
42	.001215	.000852	.0020	.0550	.0000	.000	25	1.0400
43	.001299	.000937	.0030	.0550	.0000	.000	26	1.0400
44	.001397	.001029	.0030	.0550	.0000	.000	27	1.0350
45	.001508	.001124	.0030	.0450	.0000	.000	28	1.0350
46	.001616	.001223	.0030	.0450	.0000	.000	29	1.0350
47	.001734	.001326	.0040	.0450	.0000	.000	30	1.0350
48	.001860	.001434	.0040	.0450	.0000	.000	31	1.0320
49	.001995	.001550	.0050	.0400	.0000	.000	32	1.0320
50	.002138	.001676	.0050	.0400	.0000	.000	33	1.0320
51	.002449	.001852	.0060	.0400	.0000	.000	34	1.0320
52	.002667	.002018	.0060	.0400	.0000	.000	35	1.0320
53	.002916	.002207	.0060	.0400	.0000	.000	36	1.0320
54	.003196	.002424	.0060	.0400	.0000	.000	37	1.0320
55	.003624	.002717	.0070	.0400	.0000	.000	38	1.0320
56	.004200	.003090	.0070	.0400	.0000	.000	39	1.0320
57	.004693	.003478	.0060	.0400	.0000	.000	40	1.0320
58	.005273	.003923	.0060	.0400	.0000	.000	41	1.0320
59	.005945	.004441	.0030	.0400	.0000	.000	42	1.0320
60	.006747	.005055	.0030	.0400	.4800	.450	43	1.0320
61	.007676	.005814	.0030	.0400	.2500	.100	44	1.0320
62	.008757	.006657	.0030	.0400	.2500	.050	45	1.0320
63	.010012	.007648	.0030	.0400	.2500	.050	46	1.0320
64	.011280	.008619	.0030	.0400	.2500	.050	47	1.0320
65	.012737	.009706	.0030	.0400	.2500	.050	48	1.0320
66	.014409	.010954	.0030	.0400	.2500	.050	49	1.0320
67	.016075	.012163	.0030	.0400	.2500	.050	50	1.0320
68	.017871	.013445	.0030	.0400	.2500	.050	51	1.0320
69	.019802	.014860	.0030	.0400	.2500	.050	52	1.0320
70	.022206	.016742	.0030	.0400	.2500	.050	53	1.0320
71	.024570	.018579	.0030	.0400	.2500	.000	54	1.0320
72	.027281	.020665	.0030	.0400	.2500	.000	55	1.0320
73	.030387	.022970	.0030	.0400	.2500	.000	56	1.0320
74	.033900	.025458	.0030	.0400	.9900	.000	57	1.0320

## EXHIBIT A

**AMORTIZATION of UNFUNDED  
ACTUARIAL ACCRUED LIABILITY  
JUNE 30, 2013**

<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	Change in Liability	L	25	-65,622,628	16	-53,816,508*	-5,592,435
1994	Change in Liability	L	25	-30,846,941	16	-25,297,290	-2,628,812
1995	Change in Liability	L	25	2,558,051	16	2,097,834	218,000
1996	Change in Liability	L	25	-19,620,386	16	-16,090,496	-1,672,072
1997	Change in Liability	L	25	-9,046,638	16	-7,419,064	-770,965
1998	Change in Liability	L	25	-105,844,372	16	-86,801,986	-9,020,178
1999	Change in Liability	L	25	-48,468,045	16	-39,748,193	-4,130,502
2000	Change in Liability	L	25	-8,704,034	16	-7,138,097	-741,768
2001	Change in Liability	I	27	239,310,198	18	265,705,853	18,892,061
2002	Change in Liability	I	28	199,940,651	19	225,825,204	15,394,303
2003	Change in Liability	I	29	214,321,070	20	245,876,853	16,113,698
2004	Change in Liability	L	30	52,010,701	21	45,858,992	4,169,192
2005	Change in Liability	L	30	4,619,288	22	4,152,604	370,056
2006	Change in Liability	L	30	-93,066,596	23	-85,157,400	-7,451,261
2007	Change in Liability	L	30	-8,916,009	24	-8,291,366	-713,442
2008	Change in Liability	L	30	83,881,777	25	79,169,775	6,708,375
2009	Change in Liability	L	30	251,368,124	26	240,494,270	20,092,319
2010	Change in Liability	L	30	89,485,738	27	86,689,833	7,149,118
2011	Change in Liability	L	30	20,356,391	28	19,947,883	1,625,499
2012	Change in Liability	L	30	-41,327,973	29	-40,928,280	-3,298,567
2013	Change in Asset Method	L	30	-2,511,629	30	-2,511,629	-200,373
2013	Change in Assumptions	L	30	34,931,724	30	34,931,724	2,786,792
2013	Change in Liability	L	30	3,383,918	30	3,383,918	269,963
TOTAL OUTSTANDING BALANCE						880,934,434	57,569,001
<b>EMPLOYERS' CREDIT BALANCE</b>							
2009	Contribution Variance	L	5	-2,179,782	1	-501,177	-519,027
2010	Contribution Variance	L	5	21,730,593	2	9,644,045	5,168,454
2011	Contribution Variance	L	5	15,702,862	3	10,093,143	3,730,716
2012	Contribution Variance	L	5	9,449,959	4	7,823,009	2,242,744
2013	Contribution Variance	L	5	3,016,050	5	3,016,050	715,050
TOTAL EMPLOYER CREDIT						30,075,070	11,337,937
<b>TOTAL UNFUNDED ACTUARIAL ACCRUED LIABILITY</b>						<b>911,009,504</b>	

**NOTE:** Effective July 1, 1990, Actuarial Valuation Rate changed from 7% to 7 1/2%.  
Effective July 1, 1992, Amortization Period changed in accordance with Act 257.  
Effective July 1, 2004, Amortization Period changed in accordance with Act 588.  
Effective July 1, 2004, Amortization Period changed in accordance with Act 588.  
Effective July 1, 2013, Actuarial Valuation Rate changed from 7.5% to 7.25%.