**2014 Actuarial Report** 

For The January 1, 2015 through December 31, 2015 Fiscal Year

Prepared By:

THE NYHART COMPANY, INC. 2000 RiverEdge Parkway/ Suite 900 Atlanta, GA 30328 (770) 933-1933

May 21, 2014

# nyhart

May 21, 2014

(Via e-mail)

Board of Trustees Employees' Retirement System City of Baton Rouge and Parish of East Baton Rouge 209 St. Ferdinand Street Baton Rouge, Louisiana 70821

Attention: Mr. Jeffrey R. Yates

2014 Actuarial Report

Dear Board Members:

Enclosed is our report on the January 1, 2014 actuarial valuation of the Employees' Retirement System for the City of Baton Rouge and Parish of East Baton Rouge, applicable to the 2015 fiscal year.

The 14.9% net investment return on market value in 2013 produced a 7.2% rate of return on the actuarial value of assets and increased market value from approximately 92% of actuarial asset value to 99%. The City/Parish contribution increased from 27.23% to 28.10%.

The report is based upon our understanding of the terms of Ordinance No. 10779 and the changes to the actuarial assumptions and methods recommended in the 2004-2008 Experience Study and adopted by the Board, effective with the January 1, 2011 actuarial valuation.

Respectfully submitted,

THE NYHART COMPANY, INC.

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Enclosures (25)

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## 2014 ACTUARIAL REPORT

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## Comparative Summary of Principal Valuation Results

				rial Valuation
			1/1/2014	1/1/2013
A.	Participant Data (Ex Active Members Total Annual Payrol		3,283 \$137,789,518	3,226 \$137,426,654
	Retired Members ar Total Annualized Be		2,924 \$66,424,415	2,869 \$63,410,451
	Drop Members Total Annualized Be	enefits	302 \$12,267,604	304 \$12,148,486
	Disabled Members Total Annualized Be	enefits	202 \$3,092,343	189 \$2,745,000
	Terminated Vested Total Annualized Be		24 \$299,639	39 \$502,188
В.	<u>Assets</u>		-\$-	-\$-
	Actuarial Value (Ex. Market Value (Ex. 3		1,074,038,336 1,060,092,202	1,041,229,857 960,010,682
C.	Liabilities			
	Present Value of Be	enefits (Ex. 1)	1,645,496,484	1,612,222,378
	Entry Age Actuarial	Accrued Liability (Ex. 1)		
	Active Members -	Retirement Disability Death Vesting Total	440,524,585 15,330,915 4,244,111 <u>7,040,242</u> 467,139,853	459,850,095 7,462,298 5,251,841 <u>7,783,991</u> 480,348,225
	Inactive Members -	Retired and Beneficiaries DROPs RBA Benefits Disabled Terminated Vested Total	643,860,225 312,004,950 10,446,000 31,648,502 <u>6,877,744</u> 1,004,837,421	608,399,833 311,493,376 10,446,000 27,884,501 <u>8,237,527</u> 966,461,237
	Total Actuarial Accr	ued Liability	<u>1,471,977,274</u>	<u>1,446,809,462</u>
	Unfunded Actuarial	Accrued Liability	397,938,938	405,579,605

## Comparative Summary of Principal Valuation Results

(Continued)

			ial Valuation
		1/1/2014	<u>1/1/2013</u> -\$-
D.	Disclosure Information	-\$-	-⊅-
	Entry Age Actuarial Accrued Liability (GASB25) Inactive Members and Beneficiaries Active Members Total GASB 25 Expense (Ex. 10) As % of Payroll	1,004,837,421 <u>467,139,853</u> 1,471,977,274 38,715,270 28.10%	966,461,237 <u>480,348,225</u> 1,446,809,462 37,417,818 27.23%
E.	<u>Actuarial Present Value of Accrued Benefits</u> (Exhibit 9)		
	Vested Accrued Benefits Inactive Members and Beneficiaries Active Members, DROP Total Non-Vested Accrued Benefits Total	692,832,471 <u>612,338,667</u> 1,305,171,138 <u>68,971,812</u> 1,374,142,950	654,967,861 <u>617,207,362</u> 1,272,175,223 <u>57,565,536</u> 1,329,740,759
F.	Employer Pension Cost (Exhibit 10)		
	Normal Cost plus Expense, adjusted for timing Payment to Amortize Unfunded Liability	13,478,585 25,236,685	11,696,575 25,721,243
G.	Sources of Contributions		
	Expected Plan Sponsor Contribution As % of Payroll Expected Member Contribution As % of Payroll	38,715,270 28.10% 13,090,004 9.50%	37,417,818 27.23% 13,055,532 9.50%

## **REVIEW OF COSTS**

## Background and Scope

This is the 2014 actuarial report for the Employees' Retirement System of the City of Baton Rouge and Parish of East Baton Rouge. This report is intended to reflect the provisions and requirements of Ordinance No. 10779. This is the twenty-first annual actuarial valuation report prepared by The Nyhart Company.

This report is to be used for determining City/Parish funding for the 2015 fiscal year.

The results are intended to provide a measure of funding adequacy, quantification of the impact of actual experience (as compared to the assumptions), and a basis for future refinements in methods and assumptions.

#### Cost Calculation Results

#### Cost Calculation Results

The results of the 2014 cost calculations are summarized in Exhibit 1 and compared to those for 2013. The 2014 results reflect the System's experience in 2013.

These results compare to those previously reported, as follows:

		Contribution Rates	
		City/Parish	Member
	Year	%	%
2014 Report	2015	28.10	9.50
2013 Report	2014	27.23	9.50
2012 Report	2013	26.89	9.50
2011 Report	2012	25.71	9.50
2010 Report (revised assumptions, cost method)	2011	24.90	9.50
2010 Report (prior assumptions, cost method)	2011	24.38	9.50
2009 Report	2010	22.17	9.50
2008 Report	2009	18.56	9.50
2007 Report	2008	18.68	9.50
2006 Report	2007	19.15	9.50
2005 Report	2006	18.88	9.50

As will be noted, the City contribution requirement is increased from 27.23% to 28.10%. The member rate was 9.50% for 2013 and is 9.50% for 2014.

#### Experience Review

The following table quantifies the effects of each component of experience in 2013, based on the latest assumptions and method changes adopted by the Board as a result of the 2004-2008 Experience Study.

#### Table 1 - 2013 Gain/Loss Analysis

	No. Active	Unfunded Actuarial Liability -\$-	Employe <u>Contribut</u> -\$-	
2013 - Actual	3,226	- <del>-</del> - 405,579,605	-۶- 37,417,818	27.23
2014 - Expected (for Continuing Members)	2,815	405,219,639	36,920,376	28.36
Elements of Experience				
Investment Return Salary Increases Retirements, DROP Mortality Disability Turnover New Members Data (Optional Forms) Programming	+67 +1 +4 +19 +377	+3,486,533 -12,896,696 +398,081 -1,047,985 +698,808 +1,710,221 +1,417,682 +12,509,006 -13,556,351	+221,110 -1,068,600 +25,245 -66,461 +44,318 +108,459 +892,327 +793,303 +845,193	+0.16 -0.35 +0.02 -0.05 +0.03 +0.08 -1.32 +0.58 +0.59
Total	+468	-7,280,701	+1,794,894	-0.26
2014 Actual	3,283	397,938,938	38,715,270	28.10

The expected 2014 components reflects a primary objective of the actuarial cost method, under which normal costs are a level percentage of payroll, and the unfunded liability is amortized over 30 years, increasing by 2.5% annually, if the aggregate experience of the Retirement System is the same as that predicted by the actuarial assumptions. This means that the expected 2014 Normal Cost is 9.4% of expected payroll, and the expected 2014 City/Parish contribution is \$36,920,376.

Each element of experience can be expected to produce deviations from the expected results in any year. The quantification for each element determines how "explicitly" realistic each assumption is. However, to the extent that gains and losses are offsetting, and the resultant percentages of payrolls are stable, the actuarial assumption basis in total may be considered to have fulfilled its primary objective. This measurement, in the aggregate, determines whether the assumption basis is "implicitly" realistic.

**Investment Return**: The investment return on Plan assets (actuarial asset value) resulted in an increase of \$3.5 million in the unfunded actuarial liability. By comparison, 2012 investment experience increased the unfunded liability by \$20.3 million.

Exhibit 5 shows the derivation of the actuarial value of assets. Based on the actuarial asset valuation method adopted January 1, 2002, 20% of the difference between market value and expected actuarial value is recognized. As shown in item II of Exhibit 5, the net result is a return of 7.16% on actuarial value of assets, which resulted in the \$3.5 million increase in the unfunded actuarial liability.

As reported in Exhibit 4, the rate of return on market value was 14.9%, net of investment-related expenses. The gross market value return was 15.6%.

Following the 2004-2008 Experience Study the investment return assumption was reduced from 7.75% to 7.5%.

**Salary Increases**: Compensation increases in 2013 were less than expected under the salary increase assumptions (3.50% plus longevity/merit schedule) which resulted in a \$12.9 million gain and a decrease in unfunded liability. This compares to a \$3.0 million gain in 2012. Please see the tables below for the most recent compensation experience. As a result of the 2004-2008 Experience Study, the salary scale assumption was reduced by 0.25% for 2011 and later.

Ratios of actual to expected compensation for members who were active at the beginning and end of 2013 compare to 2012, 2011, 2010 and 2009, the 2004-2008 average, and the 1999-2003 average as follows:

	Table 2 - Actual Versus Expected - Compensation Increases								
<u> </u>	Actual %	Expected %	<u>2013</u> <u>A/E</u>	<u>2012</u> <u>A/E</u>	<u>2011</u> <u>A/E</u>	<u>2010</u> <u>A/E</u>	<u>2009</u> <u>A/E</u>	<u>2004-2008</u> <u>A/E</u>	<u>1999-2003</u> <u>A/E</u>
BREC	3.01%	4.53%	0.985	0.981	1.002	0.960	1.104	1.047	1.009
Regular	3.59%	4.52%	0.991	0.999	1.005	0.979	0.979	1.026	1.008
Fire	0.22%	5.72%	0.948	0.986	1.019	1.009	0.992	1.032	.993
Police	0.23%	4.86%	0.956	0.993	0.987	0.956	0.963	1.028	.989
ALL	2.69%	4.81%	0.980	0.994	1.007	0.983	0.993	1.029	1.000

## Table 2 - Actual Versus Expected - Compensation Increases

The ratios above do not reflect the special 2001 increases for firefighters. For police, the ratios for 2000 and later are for those remaining in CPERS.

The impact on the entry age reserve, (gains) or losses, is as follows:

## (Gains)/Losses – Compensation Increases

	<u>BREC</u> -\$-	<u>Regular</u> -\$-	<u> </u>	<u>Police</u> -\$-	<u>Total</u> -\$-
2013	(651,410)	(4,357,079)	(7,378,360)	(509,847)	(12,896,696)
2012	(665,917)	(1,155,658)	(1,129,656)	(66,736)	(3,017,967)
2011	(216,166)	(616,620)	1,734,221	(277,712)	623,723
2010	(1,119,267)	(5,547,930)	157,569	(577,922)	(7,087,550)
2009	2,542,260	(3,555,651)	(1,130,288)	(738,685)	(2,882,364)
2004-2008 (Avg.)	764,004	4,843,856	3,047,932	506,869	9,162,661
1999-2003 (Avg.)	26,222	(558,057)	1,522,814	(523,277)	467,702

**Turnover**: The turnover assumptions were modified as of January 1, 2005, in response to the 1999-2003 Experience Study, by reducing the expected terminations for Regular and BREC employees in the first year of employment and increasing expected turnover in years 2 through 15. For fire and police, assumed turnover was reduced at most durations. No further modifications were made due to the 2004-2008 Experience Study.

	Table 3 - Actual Versus Expected – Turnover					
2013 2012 2011 2010 2009	<u>Actual</u> 181 229 312 219 211	Expected 200.0 185.2 209.5 216.0 221.3	<u>A/E Ratio</u> 0.905 1.237 1.489 1.014 0.953			
Average 2004-2008	245	201.8	1.214			
Average 1999-2003	238	180.6	1.318			

The expected and actual turnover compare as follows:

The impact on the entry age reserve has been as follows:

#### (Gains)/Losses - Turnover

	<u>BREC</u> -\$-	<u>Regular</u> -\$-	<u> </u>	<u>Police</u> -\$-	<u>Total</u> -\$-
2013	98,452	718,839	839,330	53,600	1,710,221
2012	(2,370,880)	972,523	762,691	64,012	(571,654)
2011	(166,178)	(1,403,038)	(369,084)	59,734	(1,878,566)
2010	1,316,984	7,483,882	1,243,044	75,154	10,119,063
2009	1,011,971	7,682,655	1,093,102	95,279	9,883,007
2004-2008 (Avg.)	(109,947)	1,257,942	305,618	15,311	1,468,924
1999-2003 (Avg.)	(185,869)	(1,312,706)	446,098	(181,205)	1,233,682

Retirements: Expected and actual retirements compare as follows:

Total

154

97

	<u>20</u> Exp.	<u>13</u> <u>Act</u>	<u>201</u> <u>Exp</u>	<u>12</u> <u>Act</u>	<u>20</u> <u>Exp</u>	0 <u>11</u> <u>Act</u>	<u> </u>	2010 <u>Act</u>
BREC	8	20	11	10	14	9	14	7
Regular	147	92	158	91	144	70	135	78
Fire	36	14	29	19	23	6	20	7
Police	4	_2	6	3	4	0	<u> 10</u>	<u>8</u>
Total	195	128	204	123	185	85	179	100
	<u>20</u> Exp	009 <u>Act</u>	Average <u>2004-2008</u> <u>Exp</u> <u>Act</u>			rage <u>-2003</u> <u>Act</u>		erage 4-1999 <u>Act</u>
BREC	8	2	11.4	9.2	14.6	5.8	6.4	2.8
Regular	120	72	144.8	98.6	198.2	85.8	99.9	51.0
Fire	19	20	34.8	20.2	74.4	25.2	32.4	13.4
Police	_7	_3	6.8	2.8	13.4	6.6	31.0	21.4

197.8 130.8

300.5 123.4 169.7

88.6

## Table 4 - Actual Versus Expected - Retirements

The retirement assumptions were changed as a result of the 1999-2003 Experience Study, resulting in the significant decrease in the number of expected retirements, as compared to the 1999-2003 average expectation in Table 4. No further changes were made due to the 2004-2008 Experience Study. The impact on the entry age reserve, due to different retirement incidence than expected and based on actual benefits, has been as follows:

#### (Gains)/Losses - Retirements

	BREC	Regular	Fire	Police	Total
	-\$-	-\$-	-\$-	-\$-	-\$-
2013	434,211	2,036,892	(2,038,365)	(34,657)	398,081
2012	306,187	(2,689,656)	(60,747)	(907,123)	(3,351,339)
2011	(921,753)	(8,197,123)	(4,749,611)	(2,065,562)	(15,933,989)
2010	(1,613,490)	(15,390,921)	(7,888,870)	(2,093,145)	(26,986,427)
2009	(654,186)	(1,115,515)	(1,677,396)	(392,204)	(3,839,301)
2004-2008 (Avg.)	(41,734)	1,164,127	(529,040)	(22,469)	570,884
1999-2003 (Avg.)	(95,408)	(440,539)	(468,895)	(197,938)	(1,202,780)
1994-1998 (Avg.)	3,548	598,673	(168,784)	(500,753)	(67,316)
1989-1993 (Avg.)	117,941	2,656,800	816,877	1,072,104	4,663,722

The small loss in 2013 can be attributed to the demographics of those who retired. In general, fewer retirements than expected should produce a liability gain (reduction). There have been significantly fewer retirements than expected in each group for the past five years.

Mortality: Expected and actual mortality compare as follows:

## Table 5 - Actual Versus Expected - Mortality

2010
Act
6
85
7
_0
98

	200	09	2004-	2008	1999	-2003
	<u>Exp</u>	<u>Act</u>	<u>Exp</u>	Act	<u>Exp</u>	Act
Actives Retirees/	8	2	35	38	40.7	18
Beneficiaries	83	89	375	362	256.5	282
Disabled	3	7	9	26	9.9	33
Deferred	0	_0	0	_2	0.6	0
Totals	94	98	419	428	307.7	333

Disability: Expected and actual disabilities compare as follows:

	20	13	2(	012		201	1	201	0
	<u>Exp</u>	Act	<u>Exp</u>	Act		<u>Exp</u>	Act	<u>Exp</u>	Act
BREC	0.8	1	0.9	1		1.0	0	0.9	1
Regular	5.3	3	5.4	13		5.8	12	6.1	13
Fire	1.3	0	1.3	0		1.3	0	1.2	2
Police	<u>0.1</u>	0	<u>0.1</u>	0		<u>0.1</u>	0	<u>0.1</u>	0
Totals	7.5	4	7.7	14		8.2	12	8.3	16
	200	)9	_	2004-20	08		199	99-2003	
	<u>Exp</u>	Act		<u>Exp</u>	Act		<u>Exp</u>	Act	
BREC	1	0		5	1		1.9	2	
Regular	6	7		30	27		23.9	44	
Fire	1	0		5	2		3.8	8	
Police	0	0	-	0	0		1.3	_2	
Totals	8	7		40	30		30.9	56	

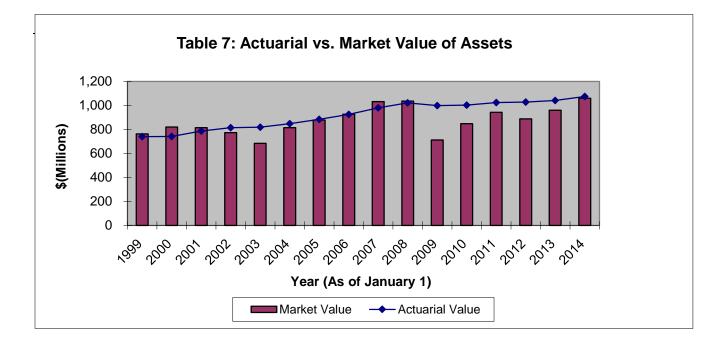
Table 6 - Actual Versus Expected - Disability

**Data and Programming:** As a result of discussions with Baton Rouge, we refined our programming used to identify the optional form of benefit chosen by current retirees. This increased the Unfunded Liability by \$12.5 million and increased the contribution by \$0.8 million. At the same time, we continued with programming modifications for the transition to a new valuation system. These modifications decreased the Unfunded Liability by \$13.6 million, but increased the contribution \$0.8 million.

### Plan Assets

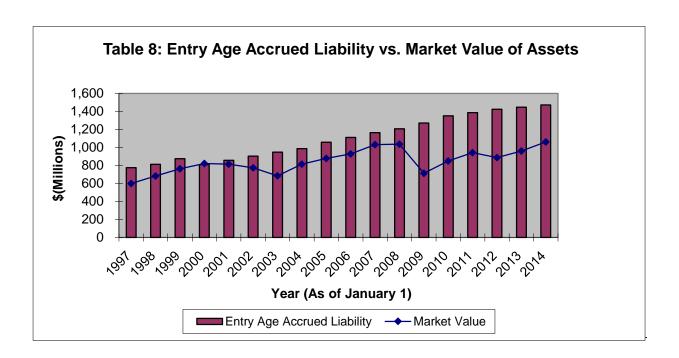
Exhibits 2 and 4 summarize the asset transactions and investment results during the year. The net rate of return on mean market value for the period ending December 31, 2013 was 14.9%.

The actuarial asset valuation method (Exhibit 5) involves the determination of Expected Value, based on the actuarial asset value at the beginning of the year. The difference between the Expected Value and the Market Value is then reflected at the rate of 20%/year. As of December 31, 2013, this resulted in an actuarial asset value of \$1,074 million, which is \$14 million more than market value. The rate of return on the actuarial value of assets during 2013 was 7.16%, as compared to the 7.5% assumption (Exhibit 5). Table 7 displays an historical comparison of actuarial asset and market values.



## Funding Progress

Table 8 contains the result of the liability calculations as of December 31, 2013. The market value of assets on December 31, 2013 is \$1,060,092,202, as compared to the actuarial accrued liability of \$1,471,977,274 for a funded ratio of 72%. The funded ratio was 66% as of December 31, 2012.



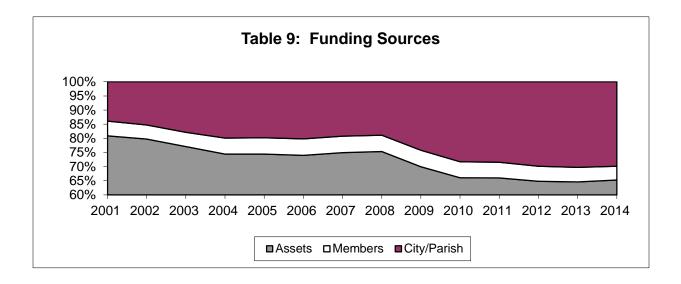
### Member Contributions

The calculation results in this report reflect no change in the member contribution rate. The rate for 2014 is 9.50%, the same as the rate in effect for 2013.

## Expected Ongoing Cost Levels

Retirement System Costs have increased over the last five years, mainly due to the 2008 asset experience. The market value is now 99% of the actuarial asset value, as compared to approximately 92% of actuarial asset value at January 1, 2013.

As shown on page 4, the City/Parish contribution requirement for 2015 will be 28.10% of total active payroll, in conjunction with a Member contribution rate of 9.50%. Table 9 shows the historical sources of funding.



#### **Expected Ongoing Cost Levels (continued)**

One component of the expected ongoing funding level is the normal cost contribution rate, either for the total active members or only for new members. These rates have been as follows:

Total Actives			New Members			
Valuation	City	Member	Entry Age	City	Member	Entry Age
2014	9.78%	9.50%	34	11.86%	9.50%	36
2013	8.51%	9.50%	34	12.09%	9.50%	37
2012	8.56%	9.50%	34	12.36%	9.50%	36
2011	8.83%	9.50%	34	10.56%	9.50%	37
2010	9.27%	9.50%	34	11.43%	9.50%	37
2009	8.64%	9.50%	34	10.98%	9.50%	35
2008	8.75%	9.50%	34	10.93%	9.50%	35
2007	8.72%	9.50%	34	11.11%	9.50%	36
2006	8.66%	9.50%	34	12.03%	9.50%	38
2005	8.59%	9.50%	34	10.00%	9.46%	35

Since the Normal Cost is the theoretical cost for current service, it is unaffected by past asset performance or funding policy.

The remaining component is the unfunded actuarial liability, which is the theoretical cost for past service, net of accumulated System assets.

The unfunded actuarial liability for the past ten years, and the adjusted unfunded liability (using market values of assets) have been as follows:

	Unfunded	Syster	n Assets	Adjusted
Valuation	<u>Liability</u>	Market Value	Actuarial Value	<u>Unfunded Liability</u>
	<u>\$</u>	<u>\$</u>	<u>\$</u>	<u>\$</u>
2014	397, <del>9</del> 38,938	1,060,092,202	1,074,038,336	411,885,072
2013	405,579,605	960,010,682	1,041,229,857	486,798,780
2012	395,264,269	887,029,701	1,027,953,907	536,188,475
2011	362,271,229	941,863,350	1,023,450,890	443,858,769
2010	347,695,469	848,628,273	1,002,378,598	501,445,794
2009	272,251,140	711,989,579	997,853,412	558,114,973
2008	186,072,416	1,035,391,227	1,020,575,797	171,256,986
2007	183,577,585	1,031,031,076	979,597,562	132,144,071
2006	186,176,892	926,869,870	924,904,837	184,211,859
2005	173,606,389	878,148,169	883,663,240	179,121,460

The City/Parish contribution rates necessary to cover only the interest costs are as follows:

Unfunded Actuarial Liability			Adjusted	Adjusted Unfunded Liability			
<u>\$</u>	7.5% Interest	% of Pay	<u>\$</u>	7.5% Interest	<u>% of Pay</u>		
_	\$	%	_	\$	%		
397,938,938	25,2 <u>3</u> 6,685	18.3	411,885,072	26,1 <u>2</u> 1,127	19.0		

Therefore, under the current assumptions, the ongoing City/Parish contribution can be expected to be approximately 10% for Normal Costs and a minimum of 18% for unfunded liability costs.

#### Supplemental Benefit Payments

Ordinance Sec. 1:269.1. "Supplemental benefit payments," enacted November 25, 2003 provides for supplemental benefit payments, to be funded from the following sources:

- (i): Excess investment return on the Actuarial Asset Value, equal to 1/10 of the first 2% plus 1/20 of the excess over 2%, provided that the aggregate experience is an actuarial gain;
- (ii): The difference between the Retirement Benefit Adjustment payments made in July of each calendar year and the payments made in July, 2002.
- (iii): MERS contributions for 2006 and later years.

Exhibit 3, page 2 shows the SBP assets. As a result of unfavorable investment experience in 2013, the SBP assets include no transfer of excess return on the Actuarial Value of Assets. The transfer amount is calculated and compared to the current year's experience in Exhibit 5, page 2.

#### **Governmental Accounting Standards Board**

In November 1994 GASB issued Statement No. 25, <u>Financial Reporting for Defined Benefit</u> <u>Pension Plans</u>. and Statement No. 27, <u>Accounting for Pensions by State and Local</u> <u>Governmental Employers</u>. Statement No. 25 provides parameters for financial reporting and comparison of actual contributions to "actuarially required contributions." Statement No. 27 provides standards for the financial reports of the state and local governmental employers. Statement No. 25 was effective for periods beginning after June 15, 1996; Statement No. 27, for periods beginning after June 15, 1997.

The Statements do not directly impact funding, although they do require calculation of an "actuarially required contribution," or "ARC" and amortization of any deficiency or excess of actual contributions made in relation to the ARC.

The Board has previously adopted GASB25, retroactively to 1995. The amortization method recommended in the 1999-2003 Experience Study and adopted by the Board changed to utilize a level percent of payroll 30-year open amortization with a 2.50% payroll growth assumption. This approach is expected to result in an increasing balance for the first eight years of the amortization period.

Exhibit 10 shows the required disclosures. These disclosures will be modified in future years to comply with replacement Statement Nos. 67 and 68.

### Application of GASB 67 and 68

The Governmental Accounting Standards Board (GASB) has issued Statement No. 67 to replace GASB Statement No. 25 ("Financial Reporting for Pension Plans") and Statement No. 68 to replace Statement No. 27 ("Financial Reporting for Pensions").

Statement No. 67 is effective for the 2014 fiscal year; Statement No. 68 is effective one year later.

In general, the new statements mandate:

- Blended discount rates to determine the actuarial liability;
- Use of the entry age normal cost method;
- Assets at market values;
- Balance sheet recognition of the unfunded liability;
- Immediate recognition of unfunded liability changes due to benefit changes for retirees
- Recognition of benefit changes for active members over average future working lifetime.

Shortly after December 31, 2014, Nyhart will issue a report providing the actuarial information needed to meet the requirements of GASB 67.

As was the case for GASB 25 and GASB 27, the new standards are not meant to be used as a funding basis.

## Enrolled Actuary's Statement

This report has been prepared in accordance with standards established by the American Academy of Actuaries. To the best of our knowledge, it reflects the actuarial condition of the Employees' Retirement System of the City of Baton Rouge and Parish of East Baton Rouge as of January 1, 2014.

All costs and cost components are calculated on the basis of actuarial assumptions which reasonably reflect the experience of the Trust.

To the best of my knowledge, the actuarial valuation is complete and accurate, and in my opinion, the techniques and assumptions used are reasonable.

The Nyhart Company, Inc.

? Harris Pavid I

David D. Harris, ASA, FCA, MAAA, EA Enrolled Actuary No. 14-5609

May 21, 2014

Date

## City Contribution Results as of January 1, 2014 and 2013

١.	De	termination of Unfunded Actuarial Accrued Liability	-\$-	-\$-
	Α.	Entry Age Normal Actuarial Accrued Liability		
		1. Active Members		
		a. Retirement	440,524,585	459,850,095
		b. Disability	15,330,915	7,462,298
		c. Death	4,244,111	5,251,841
		d. Turnover	7,040,242	7,783,991
		e. Total	467,139,853	480,348,225
		2. Retired Members and Beneficiaries		
		a. Service Retirement & Beneficiaries	643,860,225	608,399,833
		b. Disability Retirements	31,648,502	27,884,501
		c. Terminated Vested Members	2,267,254	3,909,968
		d. Leave Balances	4,610,490	4,327,559
		e. DROP (Future Benefits)	140,548,496	137,810,909
		f. DROP (Accounts)	171,456,454	173,682,467
		g. RBA Benefits	10,446,000	10,446,000
		h. Total	1,004,837,421	966,461,237
		3. Total	1,471,977,274	1,446,809,462
	В.	Actuarial Asset Value	1,074,038,336	1,041,229,857
	C.	Unfunded Actuarial Accrued Liability (A)–(B)	397,938,938	405,579,605
	D.	Present Value of Benefits	1,645,496,484	1,612,222,378

## City Contribution Results as of January 1, 2014 and 2013

II.	Det	termination of Contribution Amount	<u>2014</u> -\$-	<u>2013</u> -\$-
	A.	Individual Entry Age Normal Cost		
		<ol> <li>Retirement</li> <li>Disability</li> <li>Death</li> <li>Turnover</li> <li>Subtotal</li> </ol>	19,551,366 2,133,852 471,101 <u>1,023,687</u> 23,180,006	19,140,872 1,133,698 471,675 <u>897,752</u> 21,643,997
	В.	Administrative Expense Load	1,188,598	1,137,201
	C.	Amortization of UAAL	24,340,420	24,807,770
	D.	Interest on A5, B, and C to Reflect Mid-Year Payment	1,793,567	1,752,324
	E.	Total Contribution (A5+B+C+D)	50,502,591	49,341,292
	F.	Expected Member Contributions at 9.50%	<u>11,787,321</u>	<u>11,923,474</u>
	G.	Net Total City/Parish Contribution (E-F)	38,715,270	37,417,818
	Н.	Total Payroll	137,789,518	137,426,654
	I.	City/Parish Contribution Rate (G)/(H)	28.10%	27.23%

## Contribution Calculation Results as of January 1, 2014 and 2013

			<u>2014</u> -\$-	<u>2013</u> -\$-
III.	Re	conciliation of Unfunded Actuarial Accrued Liability		
	A.	Unfunded Actuarial Accrued Liability as of January 1 of last year	405,579,605	395,264,269
	В.	Individual Entry Age Normal Cost for last year,	21,643,997	21,726,058
	C.	Interest at 7.5% on (A) and (B)	32,041,770	31,274,275
	D.	Net Contributions (net of administrative expenses)	52,092,273	51,390,369
	E.	Interest on (D)	1,953,460	1,927,139
	F.	Expected Unfunded Actuarial Accrued Liability as of December 31 of last year (A)+(B)+(C) - (D) - (E)	405,219,639	394,947,094
	G.	Experience (Gains)/Losses	(7,280,701)	15,939,416
	H.	Unfunded Actuarial Accrued Liability as of January 1	397,938,938	410,886,510
	I.	Valuation Software Change	N/A	(5,306,905)
	J.	Assumptions and Methods	<u> </u>	<u> </u>
	K.	Final Unfunded Actuarial Accrued Liability as of January 1	397,938,938	405,579,605

## Summary of Asset Transactions

		2013*	2012*
A.	Market Value as of January 1	-\$- 961,258,445	-\$- 888,227,279
В.	Book Value as of January 1	831,969,698	855,394,319
C.	Income During Year		
D.	<ol> <li>City Contributions</li> <li>Member Contributions</li> <li>Severance Contributions</li> <li>MERS Contributions</li> <li>Interest</li> <li>Dividends</li> <li>Real Estate Income</li> <li>Net Realized Gains (Losses)</li> <li>Disbursements During Years</li> </ol>	$\begin{array}{r} 37,419,089\\ 13,147,311\\ 1,741,065\\ 973,406\\ 1,732,029\\ 206,276\\ 0\\ \underline{19,043,632}\\ 74,262,808 \end{array}$	36,382,448 13,392,719 1,813,042 939,361 2,427,894 186,715 0 <u>21,184,761</u> 76,326,940
E.	<ol> <li>Benefit Payments</li> <li>Supplemental Benefit Payments</li> <li>Compensated Absence Refunds (1 for 2)</li> <li>Contribution Refunds</li> <li>Investment Expenses</li> <li>Administrative Expenses</li> <li>Book Value as of December 31</li> </ol>	$\begin{array}{r} 87,169,960\\ 1,789,354\\ 478,543\\ 2,940,900\\ 6,251,610\\ \underline{1,188,598}\\ 99,818,965\end{array}$	88,324,663 1,768,193 518,566 2,721,886 5,281,052 <u>1,137,201</u> 99,751,561
⊑.	(B)+(C)-(D)	806,413,541	831,969,698
F.	Net Change in Unrealized Gains (Losses) (G)-(E)-(A)+(B)	125,712,399	96,455,787
G.	Market Value as of December 31 (A)+(C)-(D)+(F)	1,061,414,687	961,258,445

\* Based on unaudited financial statements.

Distribution of Assets
(Market Values)

Description	<u>12/31/2013</u> * -\$-	<u>12/31/2012</u> * -\$-
Bills, Bonds, Notes Corporate Stocks International Stocks U.S. Govt. Bonds, Agency Notes Alternative Investments Real Estate Investments Real Estate & Equipment	215,561,335 378,070,759 305,206,280 41,456,257 46,353,389 53,921,564 578,011	186,197,245 291,647,560 279,496,315 91,873,798 45,659,464 49,812,847 584,297
A: Subtotal	1,041,147,595	945,271,526
B: Cash & Equivalents	15,737,050	20,399,598
Receivables:		
Employer Contributions Employee Contributions Accounts Receivable Accrued Income Securities Proceeds	2,719,476 880,010 211,953 17,835 <u>2,377,806</u>	3,777,439 894,680 172,751 372,232 12,545,806
C: Subtotal	6,207,080	17,762,908
Payables:		
Accrued Benefits and Exper Securities Purchased	nses 1,164,594 512,444	1,075,152 21,100,435
D: Subtotal	1,677,038	22,175,587
E. Prepaid Expenses:	0	0
F. Total Assets	1,061,414,687	961,258,445
G. SBP Account at End of Yea	r <u>1,322,485</u>	1,247,763
H. Net Assets	1,060,092,202	960,010,682
I. Transfer of Excess Investme	ent Return 0	0
J. Net Assets Available for Be	nefits 1,060,092,202	960,010,682

\* Based on unaudited financial statements.

## Supplemental Benefit Payments Account

I. R	RBA Payments in 2002 \$783,45								
II. A	ccumulation of SBP Account								
A	. Year	<u>2013</u>	<u>2012</u>	<u>2011</u>					
В	. Valuation interest rate	7.50%	7.50%	7.50%					
С	. Balance at Beginning of Year	1,247,763	1,197,578	1,572,407					
D	. Interest on Balance	93,582	89,818	117,931					
E	. RBA Payments in Year	548,490	574,050	602,640					
F	Addition to SBP Account (I-II (E))	234,960	209,400	180,810					
G	<ul> <li>MERS Contribution for Previous Year</li> <li>1. Date received</li> <li>2. Amount</li> <li>3. Days</li> </ul>	06/03/2013 939,361 212	07/16/2012 865,096 169	05/26/2011 846,107 220					
Н	. Interest on G(2)	40,920	30,041	38,249					
I.	MERS Contribution for Current Year 1. Date received 2. Amount	//2014 973,406	//2013 939,361	07/16/2012 865,096					
J.	Distributions from SBP Account 1. Date of Distributions 2. Amount 3. Days	09/16/2013 1,240,864 107	09/24/2012 1,194,143 99	09/12/2011 1,541,750 111					
K	. Interest on J(2)	27,282	24,292	35,165					
L	Balance at End of Year (C+D+F+H+I(2)-J(2)-K)	1,322,485	1,247,763	1,197,578					
Ν	. Transfer of Excess Investment Income*	0	0	0					
Ν	. Final Balance at End of Year	1,322,485	1,247,763	1,197,578					

\*1/10 of first 2% and 1/20 of additional excess returns

**Investment Results - CPERS** 

## I. Yield on Mean Values for 12-Month Period Ending 12/31/2013

		<u>Return</u> -\$-	<u>Market</u> -%-
	Interest	1,732,029	0.2
	Dividends & Real Estate Income	206,276	0.0
	Realized Gains (Losses)	19,043,632	2.0
	Investment Expense	(6,251,610)	(0.7)
	Increase in Unrealized Gains (Losses)	125,712,399	13.4
II.	History of Investment Yield Rates	140,442,726	14.9
	Year Ending	<u>Market</u> -%-	<u>Actuarial</u> * -%-
	12/31/2013 12/31/2012 12/31/2011 12/31/2010 12/31/2009 12/31/2008	14.9 13.3 (2.1) 15.0 24.3 (28.8)	7.2 5.5 4.0 5.4 3.8 0.6
	12/31/2007 12/31/2006 12/31/2005 12/31/2004 12/31/2003	4.2 14.6 8.7 11.3 23.8	8.1 9.2 7.8 7.6 7.0
	12/31/2002 12/31/2001 12/31/2000 12/31/1999 12/31/1998	(8.1) (1.8) 2.4 12.5 13.4	3.8 6.7 9.4 5.0 17.7
	12/31/1997 12/31/1996 12/31/1995 12/31/1994 12/31/1993	17.5 10.6 24.5 (5.7) 11.8	11.5 7.8
	12/31/1992 12/31/1991 12/31/1990 12/31/1989	5.6 16.4 6.7 14.4	
	Average (25 yrs.) Average (15 yrs.) Average (5 yrs.) Average (3 yrs.)	8.1 6.0 12.7 8.4	6.0 5.2 5.5

\* Based on current method for 2001 and later, prior method for 1996-2000.

I. <u>Det</u> Exp	ermination of Actuarial Value of Assets as of January 1, 2014 vected Value 20% Spread Method	
۸		-\$-
Α.	Actuarial Value of Assets as of 01/01/2013 (including payables and receivables)	1,041,229,857
В.	Interest on (A) for full year	78,092,239
C.	City Contributions (including MERS contribution)	38,392,495
D.	Member Contributions	13,147,311
Ε.	Other Contributions	1,741,065
F.	Interest on (C), (D) and (E) for half year	1,998,033
G.	Benefit Payments and Compensated Absences Refunds	89,437,857
Н.	Contribution Refunds	2,940,900
I.	Administrative Expense	1,188,598
J.	Interest on (G), (H) and (I) for half year	3,508,776
K.	Expected Actuarial Value of Assets as of December 31, 2013 (A+B+C+D+E+F-G-H-I-J)	1,077,524,869
L.	Market Value of Assets as of December 31, 2013	1,060,092,202
М.	20% of (L-K)	(3,486,533)
N.	Preliminary Actuarial Value of Assets as of January 1, 2014 (K+M)	1,074,038,336
О.	Transfer of Excess Investment Return	0
Ρ.	Final Actuarial Value of Assets as of January 1, 2014 (N-0)	1,074,038,336
II. <u>Rat</u>	e of Return on Actuarial Value of Assets	-\$-
Α.	Actuarial Value of Assets at 1/1/2013	1,041,229,857
В.	Contributions 1. Employer 2. Members 3. Other 4. Total	38,392,495 13,147,311 <u>1,741,065</u> 53,280,871
C.	Benefits, Refunds, and Administrative Expense	93,567,355
D.	Transfer of Excess Investment Return	0
Ε.	Actuarial Value of Assets at 1/1/2014	1,074,038,336
F.	Net Return on Investment (E+D+C-B-A)	73,094,963
G.	Rate of Return [2xF/(A+E-F)]	7.16%

#### III. Transfer of Excess Investment Income

<u></u>		-\$-
A.	Actuarial Value of Assets as of 01/01/2013	1,041,229,857
В.	Contributions from Employer, Members, Other	53,280,871
C.	Benefits, Refunds, and Administrative Expense	93,567,355
D.	Theoretical Actuarial Value of Assets without Return at 12/31/2013 (A+B-C)	1,000,943,373
E.	Average Actuarial Value of Assets during 2013 (A+D)/2	1,021,086,615
F.	Expected Return at 7.50% (E X 0.075)	76,581,496
G.	Actual Return from II (F)	73,094,963
H.	Excess Investment Return	0
I.	Excess Investment Return Transfer a. 10% of first 2% 0.10X\$0 = b. 5% of additional return 0.05X \$0 = c. Total Preliminary Excess Return Transfer	0 0 0
J.	Experience Gain for 2013 (Ex. 1, p.3, item III (G))	7,280,701
K.	Final Excess Investment Return Transfer (lesser of I(c) and J, but not less than zero)	0

## Retired and Terminated Members

	1	/1/2014		1/1/2013		
	Number	<u>Benefits</u>	<u>Number</u>	<u>Benefits</u>		
BREC	00	-\$-	47	-\$-		
DROP	23	613,824	17	505,216.20		
Retired & Disabled Survivor & Court Orders	124 26	2,643,611 184,344	112 25	2,373,086.88 180,848.04		
Vested Terminated	20	23,577	23	23,577.48		
Subtotal	175	3,465,356	156	3,082,728.60		
		0,100,000		0,000,000		
REGULAR						
DROP	212	7,540,509	215	7,297,094.76		
Retired & Disabled	1,657	37,602,993	1,604	35,419,840.20		
Survivors & Court Orders	369	3,431,668	374	3,342,991.92		
Vested Terminated	<u>19</u>	208,875	30	354,154.56		
Subtotal	2,257	48,784,045	2,223	46,414,081.44		
FIRE						
DROP	56	3,518,899	58	3,583,742.04		
Retired & Disabled	471	16,548,933	470	15,935,944.68		
Survivors & Court Orders	147	1,680,222	140	1,599,636.84		
Vested Terminated	2	43,058	2	43,058.04		
Subtotal	676	21,791,112	670	21,162,381.60		
POLICE						
DROP	11	594,372	14	762,433.32		
Retired & Disabled	233	6,420,542	232	6,275,658.12		
Survivors & Court Orders	99	1,004,445	101	1,027,444.32		
Vested Terminated	1	24,129	5	81,397.44		
Subtotal	344	8,043,488	352	8,146,933.20		
TOTAL						
TOTAL DROP	302	12,267,604	304	12,148,486.32		
Retired & Disabled	2,485	63,216,079	2,418	60,004,529.88		
Survivors & Court Orders	641	6,300,679	640	6,150,921.12		
Vested Terminated	24	299,639	39	502,187.52		
				<u> </u>		
GRAND TOTAL	3,452	82,084,001	3,401	78,806,124.84		

## Active Members Age-Service Distribution as of 1/1/2014

## BREC

Completed Years of Service									Earnir	
Age	00-04	05-09	10-14	15-19	20-24	25-29	30+	Total	Total -\$-	Average -\$-
15-24	17	0	0	0	0	0	0	17	-φ- 384,587	-φ- 22,623
25-29	44	14	0	0	0	0	0	58	1,492,580	25,734
30-34	27	20	7	0	0	0	0	54	1,884,400	34,896
35-39	22	14	8	2	0	0	0	46	1,868,828	40,627
40-44	21	8	14	3	2	0	0	48	1,787,940	37,249
45-49	23	11	6	2	3	0	0	45	1,610,806	35,796
50-54	13	12	20	1	3	0	0	49	2,010,147	41,023
55-59	20	19	10	5	1	0	0	55	2,071,696	37,667
60-64	9	9	6	1	0	0	0	25	819,515	32,781
65-69	7	2	4	1	1	0	0	15	527,820	35,188
70 +	1	4	2	0	0	0	0	7	211,308	30,187
Total	204	113	77	15	10	0	0	419	14,669,627	35,011
Average Age: 44.09						Av	verage Serv	vice: 6	.14	

#### Active Members Age-Service Distribution as of 1/1/2014

## REGULAR

Completed Years of Service									Earnings		
Age	00-04	05-09	10-14	15-19	20-24	25-29	30+	Total	Total	Average	
15-24	57	1	0	0	0	0	0	58	-\$- 1,594,522	-\$- 27,492	
25-29	205	40	0	0	0	0	0	245	7,915,238	32,307	
30-34	156	128	15	1	0	0	0	300	10,751,029	35,837	
35-39	116	78	53	20	0	0	0	267	10,673,556	39,976	
40-44	85	82	64	43	15	0	0	289	11,742,938	40,633	
45-49	81	64	50	54	48	12	0	309	13,382,105	43,308	
50-54	72	78	54	55	83	15	0	357	14,559,941	40,784	
55-59	64	69	40	45	57	5	0	280	11,476,720	40,988	
60-64	25	30	18	28	34	2	1	138	6,212,673	45,019	
65-69	13	11	9	11	2	1	1	48	2,209,714	46,036	
70 +	4	3	3	3	2	1	0	16	631,061	39,441	
Total	878	584	306	260	241	36	2	2,307	91,149,497	39,510	
Average Age: 44.52						Ave	erage Serv	/ice: 8.	86		

## Active Members Age-Service Distribution as of 1/1/2014

## FIREFIGHTERS

Completed Years of Service									Earnings	
Age	00-04	05-09	10-14	15-19	20-24	25-29	30+	Total	Total	Average
15-24	44	0	0	0	0	0	0	44	-\$- 1,536,073	-\$- 34,911
25-29	53	44	2	0	0	0	0	99	4,192,556	42,349
30-34	19	52	31	4	0	0	0	106	5,245,470	49,486
35-39	9	21	27	31	0	0	0	88	5,111,057	58,080
40-44	2	10	12	35	19	0	0	78	5,194,493	66,596
45-49	0	0	7	13	26	15	0	61	4,671,180	76,577
50-54	0	1	0	3	26	9	0	39	3,108,380	79,702
55-59	0	0	0	0	5	3	0	8	647,295	80,912
60-64	0	1	1	0	2	0	0	4	304,433	76,108
65-69	0	0	0	0	0	0	0	0	0	0
70 +	0	0	0	0	0	0	0	0	0	0
Total	127	129	80	86	78	27	0	527	30,010,937	56,947
	Average Age: 36.85						erage Sei	rvice: 1	1.46	

## Active Members Age-Service Distribution as of 1/1/2014

## POLICE

Completed Years of Service								Earnings		
Age	00-04	05-09	10-14	15-19	20-24	25-29	30+	Total	Total -\$-	Average -\$-
15-24	0	0	0	0	0	0	0	0	- <del>0</del> - 0	-9-
25-29	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0
35-39	0	0	1	4	0	0	0	5	278,599	55,720
40-44	0	0	1	8	3	0	0	12	807,327	67,277
45-49	0	0	0	2	2	2	0	6	432,872	72,145
50-54	0	0	0	4	0	0	0	4	255,629	63,907
55-59	0	0	0	0	2	0	0	2	124,361	62,180
60-64	0	0	0	0	1	0	0	1	60,669	60,669
65-69	0	0	0	0	0	0	0	0	0	0
70 +	0	0	0	0	0	0	0	0	0	0
Total	0	0	2	18	8	2	0	30	1,959,457	65,315
Average Age			ge Age:	45.4	45	Av	/erage Ser	vice: 1	8.92	

## Active Members Age-Service Distribution as of 1/1/2014

# ALL INCLUDED ACTIVES

_	Completed Years of Service						Earnin	gs		
Age	00-04	05-09	10-14	15-19	20-24	25-29	30+	Total	Total	Average
15-24	118	1	0	0	0	0	0	119	-\$- 3,515,181	-\$- 29,539
25-29	302	98	2	0	0	0	0	402	13,600,373	33,832
30-34	202	200	53	5	0	0	0	460	17,880,899	38,872
35-39	147	113	89	57	0	0	0	406	17,932,040	44,168
40-44	108	100	91	89	39	0	0	427	19,532,699	45,744
45-49	104	75	63	71	79	29	0	421	20,096,964	47,736
50-54	85	91	74	63	112	24	0	449	19,934,097	44,397
55-59	84	88	50	50	65	8	0	345	14,320,072	41,507
60-64	34	40	25	29	37	2	1	168	7,397,290	44,031
65-69	20	13	13	12	3	1	1	63	2,737,534	43,453
70 +	5	7	5	3	2	1	0	23	842,369	36,625
Total	1,209	826	465	379	337	65	2	3,283	137,789,518	41,971
		Average	e Age:	43.2	5	Ave	erage Serv	vice: 9.	02	

# **Reconciliation of Participant Counts**

	<u>Actives</u>	Retirees*, Disableds, _and Beneficiaries_	Vested <u>Terminated</u>
01/01/2013	3,226	3,362	39
Changes due to: Retirement*	-128	+139	-2
Withdrawal	-181	-	-
Disability	-4	+6	-
Death	-7	-101	-
New Beneficiary	-	+38	-
New Hires	+377	-	-
Data Changes, QDRO's	-	-16	-13
01/01/2014	3,283	3,428	24

\* Including DROP entries.

Summary of Principal System Provisions

(Based on Ordinance Nos. 235 and 276)

Calendar year.

Effective Date: December 31, 1953, as restated effective April 1, 1997 (1:250, 1:258) (Ordinance No. 10779) Amended effective January 1, 1998 (Ordinances No. 11019 and 11020). Amended effective February 23, 2000, August 26, 2000, December 31, 2001 (Ordinance 11827), and July 1, 2012.

Fiscal Year:

Membership: (1:259,1:266)

Contributions:

Creditable Service: (1:260, 1:261)

Final Average Compensation: Any regular employee of the City-Parish, excluding Police employees who elected to transfer into Municipal Police Employees' Retirement System of Louisiana (MPERS) as of February 26, 2000 and Police employees hired after that date. Part-time council members with service prior to January 1, 1997, retroactive to December 31, 1976 (1:266).

Members: 8% of compensation (1:264 A1(a)). Effective January 1, 2002, member contribution is equal to Maximum Employer Contribution, if less than 8% (1:264 A1(c)). If the Maximum Employer Contribution rate is 17% or greater, the member contribution rate will be 50% of the Employer Contribution rate, but not more than 9.5% (1:264 A(b)). The Maximum Employer Contribution rate is the larger of the City rate and the Special Funds rate.

Employer Contribution: Balance, actuarially determined (1:253N). Maximum Employer Contribution: Employer Contribution plus adjusting percentages for pro rata allocation of obligations for transfer of members to plans maintained by the State or a political subdivision thereof (1:251).

MERS payments received for 2006 and later are reserved for future Supplemental Benefit Payments.

Service credited under Retirement System; military service (maximum of three years); additional military service as required under USERRA for which member contributions are received.

Average compensation during the highest 36 consecutive months of Creditable Service.

Summary of Principal System Provisions (Continued)

Service Retirement Eligibility:	(1) Full retirement: 25 years of service, regardless of age.			
(1:265A)	(2) Minimum eligibility: Age 55 with 10 years of service, or 20 years of service, regardless of age.			
Service Retirement Benefits: (1:265A-1, 1:265A-3)	Full Retirement: 3.0% of Final Average Compensation for each year of Creditable Service.			
	Minimum eligibility: 2.5% of Final Average Compensation for each year of Creditable Service.			
	Maximum of 90% of Final Average Compensation.			
Early Service Retirement: (1:265A-2)	If not eligible for full retirement: Benefits are reduced by 3%/year prior to age 55.			
Disability: (1:265D)	<u>Ordinary Disability</u> : After 10 or more years of Creditable Service, 2.5% of Final Average Compensation times Creditable Service, with a minimum benefit of 50% of Final Average Compensation.			
	<u>Service Connected</u> : 50% of Final Average Compensation, plus 1.5% of Final Average Compensation times Creditable Service in excess of 10 years, with a combined maximum benefit of 90% of Final Average Compensation.			
	Benefits are offset by Workers' Compensation (1:264F). Ordinary disability benefits are paid on a life annuity basis; service connected disabilities are paid on a 50% Joint & Survivor basis.			

# Summary of Principal System Provisions

(Continued)

Survivor Benefits: (1:270)

- (1) If Member eligible for retirement, or at least twenty (20) years of Creditable Service, surviving spouse may elect Option 2 benefits (including 100% Joint & Survivor actuarially equivalent to 50% Joint & Survivor, without reduction for early commencement) or a refund of the Member's contributions.
- (2) If not eligible for retirement, surviving spouse may elect a monthly benefit of \$600 payable until remarriage, or a refund of the Member's contributions.
- (3) If eligible children under age 18, monthly benefit of \$150 per child (maximum \$300), payable until age 18. These benefits are in addition to any benefits payable under (1) or (2).
- (4) If member died prior to May 24, 1989, monthly benefit to surviving spouse of \$600.
- (5) If no benefits are payable under (1), (2), (3) or (4), \$150 monthly benefit to unmarried dependent parent until death or remarriage.

If member terminates employment, but does not retire, he/she is entitled to receive accumulated contributions without interest.

After 10 years of Creditable Service, based on Creditable Service and Final Average Compensation at termination date. Benefits deferred to age 55. If Member contributions are withdrawn, benefit is forfeited.

Normal form is joint and 50% contingent survivor. For members entitled to Service Retirement Benefits, actuarially equivalent to regular retirement allowance.

Option 1: Refund of excess of Member's contributions over aggregate benefits paid;

- Option 2: 100% Joint & Survivor to designated contingent annuitant;
- Option 3: Any other form approved by the Board.

Employment Termination: (1:267, 1:268)

Optional Allowances: (1:264C)

EXHIBIT 7 Page 4

## EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF BATON ROUGE AND PARISH OF EAST BATON ROUGE

Summary of Principal System Provisions (Continued)

Retirement Benefit Adjustments: (1:269)	For Members who retired before December 31, 1989, or surviving spouses of such Members, who did not enter DROP, an annual payment of \$600 at July 1, 1992 plus \$30 for each year retired since then (excluding first year).		
Supplemental Benefit Payments (1:269.1)	To be funded from (i) 1/10 of the first 2%, and 1/20 of the remainder, of excess return on the actuarial value of assets, provided the aggregate experience from all sources is an actuarial gain; (ii) decreases in Retirement Benefit Adjustment payments under 1:269 since July, 2002; and (iii) MERS payments received for 2006 and later.		
Deferred Retirement	Prior to July 1, 1991:		
Option Plan (DROP): (1:271)	Eligibility: If eligible to retire with an immediate service retirement allowance and between 25 and 30 years of Creditable Service.		
	Duration: The lesser of 5 years, or 32 years minus Creditable Service at DROP entry.		
	<u>Benefits</u> : Service retirement allowances are paid into the Member's DROP account, and credited with interest at the rate set by the Board of Trustees. No further Member or employer contributions are payable, and no further benefits are accrued.		
	Upon retirement and termination of DROP participation (or death), the Member (or beneficiary) may elect one of the following:		
	<ul> <li>(a) A lump sum of the DROP account balance;</li> <li>(b) A life annuity based on the DROP balance;</li> <li>(c) Any other method of payment approved by the Board of Trustees.</li> </ul>		
	Normal survival benefits payable to survivors of retirees are paid upon death of the Member while a DROP participant.		

Summary of Principal System Provisions (Continued)

Deferred Retirement Option Plan (DROP): (1:271) On and after July 1, 1991:

Comparable to pre-July 1, 1991 provisions, except interest is not credited to DROP account until the conditions of DROP participation have been satisfied. If the Member does not terminate employment at the end of the DROP period, potential interest credits are forfeited.

On and after July 1, 2002: If the Member has at least ten (10) years of Creditable Service and has attained at least age 55, with DROP duration not greater than three (3) years.

Compensated Absences:Upon written consent of the Member or his surviving spouse,<br/>the Retirement System will provide the following with respect to<br/>unused, accumulated vacation time and sick leave:

- (a) Cash payment for a portion, with the remainder added to the Member's Creditable Service, on the basis of one (1) hour for each two (2) hours of unused time.
- (b) Conversion of all of the accumulated time to Creditable Service, on the basis of one (1) hour for each hour of unused accumulated time and sick leave.

Any unused time converted to service credit is included in determining eligibility for retirement and benefits. For purposes of determining Final Average Compensation, compensation at the time of retirement or death is assumed to continue for the period of added service.

Changes Since Prior	
Valuation:	None.

Summary of Actuarial Basis

Valuation Date:	January 1, 2014
-----------------	-----------------

Valuation Method: Individual Entry Age Normal Actuarial Cost Method with Unfunded Actuarial Accrued Liability

Asset Valuation Method:

Market Value as of January 1, 1996. Beginning January 1, 1997, adjusted Market Value with 20% of unrealized gains (or losses) recognized each year. Beginning January 1, 2002, Expected Value Method, with 20% of investment gains (or losses) recognized each year.

Actuarial Assumptions:

Investment Return: 7.50% compounded annually.

Salary Increases: 3.50% compounded annually due to inflation, plus longevity/merit in accordance with following schedule:

<u>Age</u>	BREC/Regular	Fire/Police
	<u>%</u>	<u>%</u>
30	+2.50	+4.00
35	+1.50	+2.00
40	+1.25	+2.00
45	+ .75	+1.00
50	+ .50	0
55	0	0

Aggregate Payroll Growth:

2.50% compounded annually.

Non-Disabled Mortality:

1994 Group Annuity Mortality Table, set forward 2 years, producing following specimen rates:

<u>Age</u>	Male	<u>Female</u>
20	.0556%	.0289%
30	.0839%	.0397%
40	.1252%	.0825%
50	.3213%	.1734%
60	1.0147%	.5832%
70	2.8481%	1.6506%

Disabled Mortality:

Same as non-disabled mortality.

## Summary of Actuarial Basis

Turnover and Disability: In accordance with the following specimen rates:

Age	<u>Disability</u>	Turnover
20	.0006	.079
25	.0006	.077
30	.0006	.072
35	.0007	.063
40	.0011	.052
45	.0022	.040
50	.0046	.026
55	.0102	.009
60	.0320	.001
61	.0355	.000
62	.0400	.000
63	.0450	.000
64	.0410	.000
65	.0195	.000

The turnover rates are modified as follows, based on years of employment:

<u>Year</u>	Regular, BREC	Fire, Police
0-1	330%	90%
2	225%	70%
3	180%	35%
4-10	150%	35%
11-15	60%	20%
16+	40%	10%

Probabilities of disability are in accordance with the Eleventh Actuarial Valuation of the Railroad Retirement System. Turnover is based on Table T-5. The disability rates for Fire and Police are increased by 100% and 25% for Regular and BREC.

Assumed Transfers to Retirement System (for accumulated vacation and sick leave, e.g.):

	<u>Total</u>
BREC	1.00 year
Regular	1.00 year
Fire	1.75 years
Police	1.50 years

No provision is included for cash payments by the System under the "one for two" provisions.

Summary of Actuarial Basis

Retirement: Regular, BREC, Police:	Earlier of 25.5 years of service credit or age 61 with 11 years of service credit.		
Fire:	Earlier of 26 years of service or age 61 with 11 years of service credit.		
Type of Disability:	A percentage of disabilities is assumed to be ordinary disabilities, as shown below:		
	BREC, Regular Fire Police	25% service-connected, 75% ordinary 50% service-connected, 50% ordinary 75% service-connected, 25% ordinary	
Recovery:	No probabilities of recovery are used.		
Remarriage:	No probabilities of remarriage are used.		
Spouse's Ages:	Female spouses are assumed to be 3 years younger than males.		
Marital Status:	80% of employees are assumed to be married.		
Amortization Method:	Level percentage of payroll 30-year open amortization.		
Investment Expense:	The rate of return on assets is assumed to be net of investment expense.		
Administrative Expense:	The actual amount of the prior year's expense is added to the normal cost.		
Withdrawal of Employee Contributions:	100% of employees who terminate (other than retirement, death, or disability) are assumed to withdraw their contributions.		
Change in Ordinance Provisions Not Reflected:	None.		
Other:	The liability for Retirement Benefit Adjustments and the funding of the Supplemental Benefit Payments from decreases in the Retirement Benefit Adjustments is combined into a perpetuity.		
Sources of Data:	Membership and asset data as of January 1, 2014 was furnished to Retirement Office staff.		

EXHIBIT 8 Page 4

## EMPLOYEES' RETIREMENT SYSTEM OF THE CITY OF BATON ROUGE AND PARISH OF EAST BATON ROUGE

Summary of Actuarial Basis

Changes Since Prior Valuation:

None.

## Values of Accrued Benefits

		<u>12/31/2013</u> -\$-	<u>12/31/2012</u> -\$-
I.	Present Value of Vested Accrued Benefits	Ŧ	Ŧ
	A. Retirements, DROPS, COLA, and Beneficiaries	794,854,721	756,656,742
	B. DROP Accounts	171,456,454	173,682,467
	C. Disability Retirements	31,648,502	27,884,501
	D. Leave Balances	4,610,490	4,327,559
	E. Vested Terminated Members	2,267,254	3,909,968
	F. Active Members	300,333,717	305,713,986
	G. Total	1,305,171,138	1,272,175,223
II.	Present Value of Non-Vested Accrued Benefits	68,971,812	57,565,536
III.	Present Value of Accrued Benefits	1,374,142,950	1,329,740,759
IV.	The values of accumulated plan benefits were determined Academy of Actuaries Interpretations and ASC 960 (formerly and Reporting by Defined Benefit Pension Plans).		
V.	Statement of Changes in Accrued Benefits		
	A. Present Value of Accrued Benefits at 12/31/2012		1,329,740,759
	B. Increase (Decrease) During the Year Attributable to:		
	<ol> <li>Benefits Accumulated</li> <li>Benefits Paid and Contributions Refunded</li> <li>Assumption Changes</li> <li>Plan Amendment</li> <li>Other</li> <li>Software Change</li> <li>Increase Due to Decrease in Discount Period</li> <li>Net Increase</li> </ol>		40,514,594 (92,378,757) N/A N/A N/A 96,266,354 44,402,191
	C. Present Value of Accrued Benefits at 12/31/2013		1,374,142,950

## Supplementary Information for GASB 25/27

## I. Schedule of Funding Progress for GASB 25/27

Actuarial Valuation <u>Date</u>	Actuarial Value of Assets (a) -\$-	Actuarial Accrued Liability (AAL) Entry Age (b) -\$-	UAAL <u>(b - a)</u> -\$-	Funded Ratio <u>(a/b)</u> -%-	Covered Payroll <u>(c)</u> -\$-	UAAL as a Percentage of Covered Payroll <u>((b - a)/c)</u> -%-
01/01/05	883,663,240	1,057,269,629	173,606,389	84	109,887,34	9 158
01/01/06	924,904,837	1,111,081,729	186,176,892	83	115,559,70	3 161
01/01/07	979,597,562	1,163,175,147	183,577,585	84	120,067,01	3 153
01/01/08	1,020,575,797	1,206,648,213	186,072,416	85	123,524,59	0 151
01/01/09	997,853,412	1,270,104,552	272,251,140	79	131,041,42	1 208
01/01/10	1,002,378,598	1,350,074,067	347,695,469	74	136,119,40	7 255
01/01/11	1,023,450,890	1,385,722,119	362,271,229	74	136,123,66	0 266
01/01/12	1,027,953,907	1,423,218,176	395,264,269	72	136,781,28	8 289
01/01/13	1,041,229,857	1,446,809,462	405,579,605	72	137,426,65	4 295
01/01/14	1,074,038,336	1,471,977,274	397,938,938	73	137,789,51	8 289

#### Supplementary Information for GASB 25/27

### II. Schedule of Employer Contributions for GASB 25/27

Year Ended	Annual Required	Actual City	Percentage
December 31	<u>Contribution</u>	<u>Contribution</u>	<u>Contribution</u>
	-\$-	-\$-	-%-
2005	20,785,669	21,947,383 <sup>(1)</sup>	106
2006	22,129,069	25,029,841 <sup>(2)</sup>	113
2007	22,431,367	26,812,456 <sup>(3)</sup>	120
2008	22,931,211	27,161,196 <sup>(4)</sup>	118
2009	29,050,693	28,550,151 <sup>(5)</sup>	98
2010	33,890,884	34,240,596 <sup>(6)</sup>	101
2011	35,001,688	37,305,836 <sup>(7)</sup>	107
2012	36,777,168	39,134,851 <sup>(8)</sup>	106
2013	37,417,818	40,133,560 <sup>(9)</sup>	107
2014	38,715,270		

<sup>(1)</sup> Including a MERS contribution of \$614,589, and a DROP Severance Contribution of \$1,310,297.
 <sup>(2)</sup> Including a MERS contribution of \$665,909, and a DROP Severance Contribution of \$1,196,592.
 <sup>(3)</sup> Including a MERS contribution of \$720,280, and a DROP Severance Contribution of \$1,591,009.
 <sup>(4)</sup> Including a MERS contribution of \$799,678, and a DROP Severance Contribution of \$1,043,625.
 <sup>(5)</sup> Including a MERS contribution of \$832,766, and a DROP Severance Contribution of \$1,399,949.
 <sup>(6)</sup> Including a MERS contribution of \$846,107, and a DROP Severance Contribution of \$1,935,967.
 <sup>(7)</sup> Including a MERS contribution of \$865,096, and a DROP Severance Contribution of \$1,512,701.
 <sup>(8)</sup> Including a MERS contribution of \$939,361, and a DROP Severance Contribution of \$1,813,042.
 <sup>(9)</sup> Including a MERS contribution of \$973,406, and a DROP Severance Contribution of \$1,741,065.

## Supplementary Information for GASB 25/27

## III. Calculation of Annual Required Contribution for GASB 25/27

Employer <u>Normal Cost</u> -\$-	Amortization Payment -\$-	Annual Required <u>Contribution</u> -\$-
9,478,552	11,307,117	20,785,669
10,003,225	12,125,844	22,129,069
10,474,818	11,956,549	22,431,367
10,812,172	12,119,039	22,931,211
11,318,767	17,731,926	29,050,693
11,840,564	22,050,320	33,890,884
12,026,996	22,974,692	35,001,688
11,710,108	25,067,060	36,777,168
11,696,575	25,721,243	37,417,818
13,478,585	25,236,685	38,715,270
	Normal Cost -\$- 9,478,552 10,003,225 10,474,818 10,812,172 11,318,767 11,840,564 12,026,996 11,710,108 11,696,575	Normal CostPayment-\$\$-9,478,55211,307,11710,003,22512,125,84410,474,81811,956,54910,812,17212,119,03911,318,76717,731,92611,840,56422,050,32012,026,99622,974,69211,710,10825,067,06011,696,57525,721,243

<sup>(1)</sup> These results reflect the impact of the assumption changes made. <sup>(2)</sup> These results reflect the impact of the changes made in methods and assumptions described in Exhibit 8.

## Analysis of Financial Experience

## Gains and Losses in Unfunded Actuarial Liability During Years Ended 2008 - 2013 <u>Resulting From Differences between Assumed Experience and Actual Experience</u>

		\$ 0	کہ (Loss) For	Year		
Elements of Experience	<u>2008</u>	<u>2009</u>	2010	<u>2011</u>	<u>2012</u>	<u>2013</u>
Investment Return	\$(71,465,958)	\$(38,437,581)	\$(20,396,885)	\$(35,231,052)	\$(20,304,794)	\$(3,486,533)
Salary Increases	(12,291,095)	2,882,364	7,087,550	(623,723)	3,017,967	12,896,696
Retirements	(5,254,485)	3,839,301	26,986,427	15,933,989	3,351,339	(398,081)
Mortality	8,050,198	(6,198,778)	(9,830,807)	(14,988,684)	(3,643,276)	1,047,985
Disability	(70,536)	163,987	(570,786)	(10,597)	148,348	(698,808)
Turnover	(494,934)	(9,883,007)	(10,119,063)	1,878,566	571,654	(1,710,221)
New Members	(2,418,464)	(2,143,500)	(1,461,549)	(1,671,178)	(2,204,660)	(1,417,682)
Contribution Differences	N/A	2,279,010	3,620,538	5,303,016	N/A	N/A
Leaves, Transfers, Etc.	(5,695,744)	1,630,981	(3,055,745)	702,493	3,124,006	0
Gain or (Loss) from Experience	(84,338,002)	(48,146,233)	(11,360,858)	(34,010,186)	(15,939,416)	6,233,356
Non Recurring Elements: Plan Amendment-Minimum						
Benefits						
Assumption Change		(24,625,616)				
Actuarial Method Change						
Data (Optional Forms)						(12,509,006)
Valuation Software					5,306,905	13,556,351
Composite Gain/(Loss)						
During Year	<u>\$(84,338,002)</u>	<u>\$(72,771,849)</u>	<u>\$(11,360,858)</u>	<u>\$(34,010,186)</u>	<u>\$(10,632,511)</u>	<u>\$7,280,701</u>

# Summary of Actuarial Accrued Liabilities and Percentage Covered by Net Assets Available for Benefits Ten Years Ended December 31, 2013

	(1)	(2)	(3)	(4)					
	Active	Retirees	Terminated	Active Members	Net Assets	Perc	entage of Actu	arial Liabilitie	s
Valuation	Members	and	Vested	Employer	Available		Covered by	/ Assets	
Date	Contributions*	Survivors**	Members	Provided	for Benefits	(1)	(2)	(3)	(4)
	-\$-	-\$-	-\$-	-\$-	-\$-	-%-	-%-	-%-	-%-
01/01/05	166,648,034	559,595,787	2,810,515	328,215,293	878,148,169	100.0	100.0	100.0	45.4
01/01/06	185,590,714	592,961,470	2,777,542	329,752,003	926,869,870	100.0	100.0	100.0	44.1
01/01/07	196,143,559	629,048,416	3,398,410	334,584,762	1,031,031,076	100.0	100.0	100.0	60.5
01/01/08	212,407,644	660,297,629	3,229,816	330,713,124	1,035,391,227	100.0	100.0	100.0	48.2
01/01/09	235,554,734	689,274,354	3,719,456	341,556,008	711,989,579	100.0	69.1	0.0	0.0
01/01/10	256,663,672	720,761,899	4,156,485	368,492,011	848,628,273	100.0	82.1	0.0	0.0
01/01/11	267,075,592	742,436,557	4,396,791	371,813,179	941,863,350	100.0	90.9	0.0	0.0
01/01/12	270,043,946	762,106,926	4,255,920	386,811,384	887,029,701	100.0	81.0	0.0	0.0
01/01/13	270,204,544	788,868,802	3,909,968	383,826,148	960,010,682	100.0	87.4	0.0	0.0
01/01/14	271,758,390	831,113,713	2,267,254	366,837,917	1,060,092,202	100.0	94.9	0.0	0.0

\*

Including DROP accounts. Including DROP participants' future benefits. \*\*

## Active Membership Data <u>Ten Years Ended December 31, 2013</u>

Valuation Date	Total Active <u>Members</u>	Percentage <u>Change</u> -%-	Annual Payroll -\$-	Average <u>Annual Pay</u> -\$-	% Increase in <u>Average Pay</u> -%-
01/01/05	3,314	(0.0)	109,887,349	33,159	3.6
01/01/06	3,229	(2.6)	115,559,704	35,788	7.9
01/01/07	3,309	2.5	120,067,016	36,285	1.4
01/01/08	3,313	0.1	123,524,590	37,285	2.8
01/01/09	3,357	1.3	131,041,421	39,035	4.7
01/01/10	3,419	1.8	136,119,407	39,813	2.0
01/01/11	3,379	(1.2)	136,123,660	40,285	1.2
01/01/12	3,245	(4.0)	136,781,288	42,151	4.6
01/01/13	3,226	(0.6)	137,426,654	42,600	1.1
01/01/14	3,283	1.8	137,789,518	41,971	(1.5)

## Schedule of Retirees and Beneficiaries Added <u>Ten Years Ended December 31, 2013</u>

Valuation Date	Number of <u>Annuities*</u>	Additions	<u>Deletions</u>	Percentage Change in <u>Membership</u> -%-	Annual <u>Annuities</u> -\$-	Percentage Change in <u>Annuities</u> -%-
01/01/05	2,733	210	60	5.8	54,689,449	6.6
01/01/06	2,851	207	89	4.3	58,160,300	6.3
01/01/07	2,980	195	66	4.5	61,639,818	6.0
01/01/08	3,074	189	95	3.2	65,094,105	5.6
01/01/09	3,155	175	94	2.6	68,381,184	5.0
01/01/10	3,208	151	98	1.7	70,713,569	3.4
01/01/11	3,259	151	100	1.6	73,233,555	3.6
01/01/12	3,317	146	88	1.8	75,641,184	3.3
01/01/13	3,401	194	110	2.5	78,806,125	4.2
01/01/14	3,452	181	130	1.5	82,084,001	4.2

\*Including DROP participants

## Membership Data

### I. Actives

Actives	<b>2013</b> Count <u>Average Salary</u> -\$-		<u>Count</u>	2012 Average Salary -\$-
BREC	419	35,011	407	35,325
Regular	2,307	39,510	2,276	39,820
Fire	527	56,947	511	59,350
Police	<u>30</u>	65,315	<u>32</u>	65,332
Total	3,283	41,971	3,226	42,600

#### II. Annuitants

Annuitants	<u>Count</u>	<b>2013</b> <u>Average Annuity</u> -\$-	<u>Count</u>	2012 Average Annuity -\$-	
Retirees					
& Survivors	2,924	22,717	2,869	22,102	
Disabilities	202	15,309	189	14,524	
DROP	302	40,621	304	39,962	
Total	3,428	23,858	3,362	23,291	

#### III. Inactive Members

		2013		2012		
		Average		Average		
	<u>Count</u>	Deferred Annuity	<u>Count</u>	Deferred Annuity		
		-\$-		-\$-		
Deferred Vested	24	12,485	39	12,877		