

# ***SEWERAGE & WATER BOARD OF NEW ORLEANS***

## **PENSION COMMITTEE MEETING**

**MONDAY, MAY 16, 2016**

**11:00 AM**

**625 ST. JOSEPH STREET  
2<sup>ND</sup> FLOOR BOARD ROOM**

Joseph Peychaud, Chair • Scott Jacobs, Vice-Chair • Alan Arnold • Eric Blue •

Harold Heller, Jr. • Marvin Russell • Gerald Tilton • John Wilson

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### **FINAL AGENDA**

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#### **ACTION ITEMS**

1. None

#### **PRESENTATION ITEMS**

2. Actuarial Report for Employees' Retirement System as of December 31, 2015

#### **INFORMATION ITEMS**

3. FFC 2016 Quarterly Performance Report
4. Review of Previous Report
5. Any Other Matters



## SEWERAGE AND WATER BOARD OF NEW ORLEANS

May 18, 2016

Finance and Administration Committee  
Sewerage and Water Board of New Orleans  
New Orleans, Louisiana

Dear Directors:

Subject: Actuarial Valuation Report for Employees' Retirement System as of December 31, 2015  
And Recommended Resolution for Employer Contribution Rate for 2016

Please find attached the Actuarial Valuation Report for Employees' Retirement System for the year ending December 31, 2015.

The valuation report shows that the Funded Ratio has increased from 78.4% to 80.7% and the Employer 30 Year Amortization Minimum Contribution has decreased from 22.573% to 20.690%. However, staff recommends that the contribution rate not be reduced below the current employer contribution rate of 22.573%.

Based upon that recommendation, please find attached the recommended resolution to maintain the employer contribution rate for 2016 at 22.573%.

A handwritten signature in blue ink, appearing to read "Robert K. Miller".

Robert K. Miller  
Deputy Director / Chief Financial Officer

## **CONEFRY & COMPANY, L.L.C.**

160 Pleasant Ridge Drive  
Belle Chasse, LA 70037-4502  
Tel. 504.392.8853 ■ Facsimile 504.392.4430

April 25, 2016

Mr. Cedric S. Grant  
Executive Director  
Sewerage and Water Board of New Orleans  
625 St. Joseph Street  
New Orleans, LA 70165

Re: January 1, 2016 Actuarial Valuation

Dear Mr. Grant:

Enclosed is the actuarial valuation report of the Employees' Retirement System of the Sewerage and Water Board of New Orleans as of December 31, 2015.

This actuarial valuation has been performed on a basis consistent with that which was performed as of December 31, 2014.

It should be noted that Exhibit III contains the Schedule of Funding Progress according to the requirements formerly mandated by Statement No. 25 (as modified by Statement No. 50) of the Governmental Accounting Standards Board (GASB #25 and #50). As described in that Exhibit III, these statements have been replaced by GASB Statements #67 and #68 and are addressed in a separate report.

Summarized below are the principal results of the actuarial valuation.

### **Summary of Valuation Results**

	<u>12/31/2014</u>	<u>12/31/2015</u>
1. Number of Active Participants	916	971
2. Total Active Annual Payroll	\$ 31,378,001	\$ 33,672,902
3. Plan 10 Year "Amortization" Contribution as a Percentage of Active Payroll	40.604%	37.073%
4. Expected Employee Contribution as a Percentage of Active Payroll (See p. 12 of report)	5.000%	5.000%
5. Employer 10 Year "Amortization" Contribution as a Percentage of Active Payroll	35.604%	32.073%

Mr. Cedric S. Grant  
April 25, 2016  
Page 2

	<u>12/31/2014</u>	<u>12/31/2015</u>
6. Plan 30 Year Amortization (Minimum) Contribution as a Percentage of Active Payroll	27.573%	25.690%
7. Expected Employee Contribution as a Percentage of Active Payroll (Sec p. 12 of report)	5.000%	5.000%
8. Employer 30 Year Amortization (Minimum) Contribution as a Percentage of Active Payroll	22.573%	20.690%
9. Market Value of Plan Assets	\$ 236,556,671	\$ 222,427,527
10. Actuarial Value of Plan Assets (Adjusted Market Value Basis)	\$ 223,689,847	\$ 233,572,291
11. Valuation Unfunded Actuarial Liability	\$ 68,269,305	\$ 63,996,458
12. Ratio of UAL to Valuation Payroll	217.6%	190.1%
13. Funded Ratio	78.4%	80.7%

There were not any changes to the actuarial assumptions or method since the immediately preceding valuation. The plan amendments adopted on November 19, 2014 involving definition of "average compensation" and employee contributions were first included in last year's valuation and have also, of course, been included in the valuation (see page 12, Exhibit I of the report).

Yours truly,



Michael A. Conefry, FCA, ASA, MAAA\*  
Actuary

\* Member of the American Academy of Actuaries and qualified to render the Statements of Actuarial Opinion contained herein.

MAC:wp  
Enclosures

**ACTUARIAL VALUATION REPORT**

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**EMPLOYEES' RETIREMENT SYSTEM  
OF THE SEWERAGE AND WATER BOARD  
OF NEW ORLEANS**

Annual Actuarial Valuation  
as of January 1, 2016

**CONEFRY & COMPANY, LLC**

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ACTUARIAL AND EMPLOYEE BENEFIT CONSULTING  
NEW ORLEANS, LOUISIANA

## INTRODUCTION

We present in this report the results of our actuarial valuation of the Employees' Retirement System of the Sewerage and Water Board of New Orleans as of January 1, 2016. The plan is an actuarially funded qualified governmental defined benefit pension under the Internal Revenue Code, and we have performed this actuarial valuation using conventional and generally accepted actuarial methods, assumptions, and principles applicable to qualified defined benefit pension plans. We have performed the actuarial valuation using the Entry Age Normal Cost Method. A full description of the funding method is contained in Section II of the report.

The Summary of Plan Provisions presented in the Appendix is intended to describe the principal benefits provided by the plan, particularly from the perspective of their significance in affecting the actuarial liability and cost of the plan. The summary is not, of course, intended to be a comprehensive or complete description of all benefits payable under all circumstances under the pension plan.

EMPLOYEES' RETIREMENT SYSTEM  
OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS

SUMMARY

I. FINANCIAL AND ACTUARIAL STATUS  
As of January 1, 2016

Market Value of Assets	\$ 222,427,527	Page 1
Actuarial Value of Assets	\$ 233,572,291	Page 2

II. EMPLOYER AND EMPLOYEE CONTRIBUTIONS  
For the Plan Year Beginning January 1, 2016

Total "Amortization" Contribution (As % of Payroll)	\$ 12,483,638 (37.073%)	Page 8
Expected Total Employee Contributions (As % of Payroll)	\$ 1,683,645 (5.000%)	Page 8
Employer "Amortization" Contribution (As % of Payroll)	\$ 10,799,993 (32.073%)	Page 8
Total "Minimum" Contribution (As % of Payroll)	\$ 8,650,697 (25.690%)	Page 9
Expected Total Employee Contributions (As % of Payroll)	\$ 1,683,645 (5.000%)	Page 9
Employer "Minimum" Contribution (As % of Payroll)	\$ 6,967,052 (20.690%)	Page 9
Net Actuarial Experience		Page 10

APPENDIX

Summary of Plan Provisions	Exhibit I - P. 12
Statement of Actuarial Basis for Funding Purposes	Exhibit II - P. 20
Statement of Accounting Information for Financial Statements	Exhibit III - P. 24
Active and Inactive Participant Profiles	Exhibit IV - P. 25
Market Value and Actuarial Value Investment Performance	Exhibit V - P. 32

CERTIFICATION

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I. FINANCIAL AND ACTUARIAL STATUS as of January 1, 2016

We have conducted this actuarial valuation using employee data and asset information furnished by the administrative office of the System. This section of the report presents a summary of the assets of the plan at Market Value, as well as the development of the Actuarial Value of Assets used in the funding method. The funding method used to determine the actuarial liabilities is described in Section II and the actuarial assumptions upon which the liabilities are based are summarized in Exhibit II of the report.

ASSETS

The following table showing the composition of the assets as of December 31, 2015 is based on information supplied by the administrative office and the auditors of the System.

Table 1

Statement of Assets  
as of December 31, 2015

<u>Assets</u>	<u>Market Value</u>
Cash	\$ 317,096
Investments	<u>221,077,262</u>
Total Invested Assets	221,394,358
Plus accounts receivable	+1,033,169
Less accounts payable	<u>0</u>
Total Assets	\$ 222,427,527 *

- \* The actuarial value of assets used in this valuation is Adjusted Market Value as determined in Table 2. D.R.O.P. account balances are included in the foregoing Assets and shown as an actuarial liability in Table 4, item (2)f.

### ACTUARIAL VALUE OF ASSETS

Beginning with the January 1, 1998 actuarial valuation, the method of determining the actuarial value of assets was changed to adjusted market value from the former adjusted book value basis. The change had been necessitated because the former method, in our opinion and that of the auditors, was not "market value related" within the meaning of Statement No. 25 of the Government Accounting Standards Board (GASB #25) and its successor GASB Statements.

This revised method reflects actual market value performance over a seven year period ending on the valuation date. The market value performance is averaged over the seven year period by reflecting the actual external cash flow and adjusting each prior year's market value to the current valuation date using the actuarial interest assumption.

The following table develops the Adjusted Market Value of Assets to be used as the Actuarial Value of Assets in the actuarial valuation.

Table 2  
Actuarial Value of Assets  
As of December 31, 2015

Plan Year Ending	Beginning Market Value	Net External Cash Flow For Year	Market Value Inv. Income For Year	Ending Market Value	Market Value Performance For Year	Adj. Market Value Component
2009	166,418,096	-7,306,708	31,912,755	191,024,143	19.6067%	221,263,144
2010	191,024,143	-8,223,289	22,439,431	205,240,285	12.0053%	234,377,968
2011	205,240,285	-8,114,890	8,968,361	206,093,756	4.4578%	227,667,686
2012	206,093,756	-8,472,301	23,082,600	220,704,055	11.4351%	238,628,823
2013	220,704,055	-9,525,020	23,179,014	234,358,049	10.7339%	247,853,817
2014	234,358,049	-9,143,898	11,342,520	236,556,671	4.9361%	242,787,071
2015	236,556,671	-9,985,003	-4,144,141	222,427,527	-1.7891%	222,427,527

Years Included: 7    -60,783,331    116,792,762

Average Adj. MV: \$233,572,291

II.

EMPLOYER AND EMPLOYEE CONTRIBUTIONS  
for the Plan Year Beginning January 1, 2016

DESCRIPTION OF ACTUARIAL COST METHOD

Under the Entry Age Normal Cost Method, the normal cost of the plan is designed to be a level percentage of payroll, calculated on an aggregate basis, spread over the entire working lifetime of the participants. The future working lifetime is determined from each participant's hypothetical entry age into the plan assuming the plan had always been in existence, to his expected retirement date. The actuarial accrued liability is the amount of total liability not covered by future entry age normal costs. This amount is composed of the actuarial value of benefits already funded (assets) and those not yet funded (unfunded actuarial liability).

The plan's funding cost for the year is the sum of the Entry Age Normal Cost and the amount necessary to amortize the remaining unfunded actuarial liability as of the valuation date over the adopted amortization period.

Beginning with the January 1, 2007 actuarial valuation, a new amortization basis was established. The former amortization basis used a level dollar amortization for a ten (10) year "closed" (that is, with the remaining period reducing by one each year) amortization period from January 1, 2003 through December 31, 2012. This has been replaced by a level dollar amortization for an "open" (that is, a constant number of years) ten (10) year amortization period effective on each valuation date. This open ten (10) year amortization amount is developed later in this section and presented in Table 5.

Table 3  
Entry Age Normal Cost for Plan Year  
Beginning January 1, 2016

(1)	Actuarial Present Value at Entry Age of Expected Benefits to Plan Participants	\$ 15,198,565
(2)	Actuarial Present Value at Entry Age of Future Payroll of Active Participants	144,576,197
(3)	Normal Cost as a Percentage of Payroll: (1) divided by (2)	10.512%
(4)	Current Payroll of Active Participants *	33,672,902
(5)	Normal Cost: (3) x (4) (Assumed payable January 1, 2016)	\$ 3,539,695
(6)	Normal Cost, adjusted for monthly payments	\$ 3,651,873

\* There are 971 active participants: 513-fully vested; 0-partially vested; 458-not vested.

Table 4  
Unfunded Actuarial Liability  
as of January 1, 2016

(1)	Actuarial Present Value of Expected Benefits to Active Plan Participants		
	(a) Basic and Supplemental Retirement Benefit	\$ 96,071,392	
	(b) Death and Survivor Benefit	7,615,180	
	(c) Disability Benefit (Inc. suppl & surv.)	6,863,544	
	(d) Vesting Benefit	6,859,908	
	(e) Refund of Employee Contributions	<u>1,654,937</u>	
	Total Active		\$ 119,064,961
(2)	Actuarial Present Value of Expected Benefits to Inactive Plan Participants		
	(a) Regular Retirees	\$ 121,622,019	
	(b) Disability Retirement	7,831,111	
	(c) Survivors	6,506,225	
	(d) Terminated Vested	1,426,894	
	(e) D.R.O.P. Retirees (Future Benefits)	48,344,469	
	(f) D.R.O.P. Retirees (Account Balances)	<u>11,310,510</u>	
	Total Inactive		\$ 197,041,228
(3)	Total Actuarial Present Value of Expected Benefits to All Plan Participants (1) + (2)		316,106,189
(4)	Actuarial Present Value of Future Payroll of Active Participants		176,345,510
(5)	Normal Cost as a Percentage of Payroll: (From Table 3)		10.512%
(6)	Actuarial Present Value of Future Normal Cost Contributions: (4) x (5)		18,537,440
(7)	Actuarial Value of Assets (from Table 2)		233,572,291
(8)	Unfunded Actuarial Liability: (3) - (6) - (7)		63,996,458

TOTAL CONTRIBUTION FOR PLAN YEAR BEGINNING January 1, 2016

CONTRIBUTION TO AMORTIZE UNFUNDED ACTUARIAL LIABILITY

The adopted "amortization" contribution for a plan year equals the normal cost plus the level dollar amount necessary to amortize the Unfunded Actuarial Liability over ten (10) years. The annual amount required to amortize the Unfunded Actuarial Liability of \$63,996,458 over 10 years at 7% annual interest (assuming monthly payments) is \$8,831,765.

Table 5

Total Required "Amortization" Contribution for the  
Plan Year Beginning January 1, 2016

(1)	Normal Cost (From Table 3; assumed payable monthly)	\$ 3,651,873	
(2)	Net Annual charge Required for Amortization of Unfunded Actuarial Liability Over 10 year period beginning January 1, 2016 (See Above; Assumed payable monthly)	8,831,765	
(3)	Total Plan Contribution as of January 1, 2016: (1) + (2)	\$ 12,483,638 (37.073%)	*
(4)	Annual Employee Plan Contributions as of January 1, 2016 (See note below)	\$ 1,683,645 ( 5.000%)	*
(5)	Employer Contribution as of January 1, 2016: (3) - (4) (Assumed payable monthly)	\$ 10,799,993 (32.073%)	*

\* Expressed as a percentage of annual participant payroll of \$33,672,902.

Note: Current actual employee contribution is 6% of payroll effective January 1, 2015. By Board Resolution R-248-2014, as long as the Retirement System is not 100% funded, the Employer Contribution percentage shall be calculated as if the Employee Contribution percentage has remained at 5% of payroll.

### "MINIMUM" CONTRIBUTION

GASB Statements 25 and 27 require that the Unfunded Actuarial Liability be amortized over a period not longer than 30 years. The minimum contribution for a plan year equals the normal cost plus the amount necessary to amortize the Unfunded Actuarial Liability over the thirty (30) year period which begins on the valuation date. Using a level dollar, open period amortization method, the annual amount required to amortize the Unfunded Actuarial Liability of \$63,996,458 over the 30 year period beginning January 1, 2016 at 7% annual interest (assuming monthly payments) is \$4,998,824.

Table 6

Total Required "Minimum" Contribution for the  
Plan Year Beginning January 1, 2016

(1)	Normal Cost (From Table 3; assumed payable monthly)	\$ 3,651,873	
(2)	Net Annual Charge Required for Amortization of Unfunded Actuarial Liability Over 30 year period beginning January 1, 2016 (see above) (Assumed payable monthly)	4,998,824	
(3)	Total Plan Contribution as of January 1, 2016: (1) + (2)	\$ 8,650,697 (25.690%)	*
(4)	Annual Employee Plan Contributions as of January 1, 2016 (See note below)	\$ 1,683,645 ( 5.000%)	*
(5)	Employer Contribution as of January 1, 2016: (3) - (4) (Assumed payable monthly)	\$ 6,967,052 (20.690%)	*

\* Expressed as a percentage of annual participant payroll of \$33,672,902.

Note: Current actual employee contribution is 6% of payroll effective January 1, 2015. By Board Resolution R-248-2014, as long as the Retirement System is not 100% funded, the Employer Contribution percentage shall be calculated as if the Employee Contribution percentage has remained at 5% of payroll.

**NET ACTUARIAL EXPERIENCE**  
**for the Plan Year Beginning January 1, 2015**

Actuarial experience refers to the comparison of actuarial results of each valuation with those expected from the previous valuation according to the actuarial assumptions. A decrease or increase in the Total Plan Contribution as a percentage of payroll is indicative of favorable (gains) or unfavorable (losses) experience, respectively. If the overall experience follows the general pattern indicated by the assumptions presented in the Appendix, the Total Plan Contribution (on a given amortization basis) as a percentage of payroll will remain relatively stable, except for routine fluctuations.

The Total "Amortization" Contribution as a percentage of payroll decreased from 40.604% for the plan year beginning January 1, 2015 to 37.073% for the plan year beginning January 1, 2016. The Total "Minimum" Contribution as a percentage of payroll decreased from 27.573% for the plan year beginning January 1, 2015 to 25.690% for the plan year beginning January 1, 2016. These decreases of 3.531% and 1.883% of payroll, respectively, are indicative of an overall actuarial gain for the most recent plan year. This gain represents the net decrease in the total plan contribution as the combined result of actuarial experience and the change in total plan contribution attributable to plan amendments, as shown in the following table.

**Table 7**  
**Effect on Total "Amortization" and "Minimum"**  
**Contributions by Component**  
**for the Plan Year Ending December 31, 2015**

<u>Component</u>	<u>"Amortization"</u> <u>Gain (-) or Loss (+)</u>	<u>"Minimum"</u> <u>Gain (-) or Loss (+)</u>
Interest	-2.386%	-1.351%
Salary Scale	+0.269%	+0.177%
New retirements	+0.340%	+0.192%
Net from All Other Sources	<u>-0.569%</u>	<u>-0.097%</u>
Net change from actuarial experience	-2.346%	-1.079%
Net change from Plan Amendments	<u>-1.185%</u>	<u>-0.804%</u>
Overall Total Gain(-)/Loss(+)	<u>-3.531%</u>	<u>-1.883%</u>

**APPENDIX**

EXHIBIT I

EMPLOYEES' RETIREMENT SYSTEM OF THE  
SEWERAGE AND WATER BOARD OF NEW ORLEANS

SUMMARY OF PLAN PROVISIONS

EFFECTIVE DATE:

Authorized by Act Number 551, effective January 1, 1957; Last Restatement for Plan Qualification, January 27, 2011; Latest Restatement, April 17, 2013; last amendment date as of the date of performance of this valuation, November 19, 2014.

MEMBERSHIP:

Employees who become members as a condition of employment.

CREDITABLE SERVICE:

Prior service plus membership service for which credit is allowable. Also, one year service credit given for every 250 days of unused sick and annual leave. Credit for prior military service may be purchased (maximum 4 years) by active contributing member who is vested; lump sum payment required based on 4% of excess over first \$100 monthly average for each month claimed plus 7% compound interest. Military service available only to those who will not receive a benefit from another retirement system (except Social Security). There are also provisions for restoring service on behalf of certain leaves without pay such as for Katrina Disaster Leave and Workers' Compensation.

EARNABLE COMPENSATION:

Annual compensation paid to an employee; excluding on-call and stand-by pay or over-time.

AVERAGE COMPENSATION:

Average annual earned compensation of a member for highest thirty-six successive months of service as a member, minus \$1,200. For employees hired after December 31, 1995, the \$1,200 reduction was not applicable. Effective June 19, 2002, the \$1,200 reduction was eliminated for all employees. Periods without compensation are not used in determining the average compensation. For employees not yet eligible to retire as of December 31, 2014, the thirty-six month period was changed to forty-eight months effective January 1, 2017 and sixty months effective January 1, 2018.

EMPLOYEE CONTRIBUTIONS:

4% of earnable compensation through December 31, 2012; effective January 1, 2013, 5% of earnable compensation; effective January 1, 2015, 6% of earnable compensation. By Board Resolution R-248-2014, as long as the Retirement System is not 100% funded, the Employer Contribution percentage shall be calculated as if the Employee Contribution percentage has remained at 5% of payroll.

EXHIBIT I (Continued)

EMPLOYER CONTRIBUTIONS:

Certain percentage of earnable compensation of each member, determined on basis of regular interest and mortality tables adopted by the Board, and additional percentage of earnable compensation, determined by actuary.

RETIREMENT BENEFITS:

Eligibility:

Any age with 30 years of Service; age 60 and 10 years of Service; effective January 1, 1996, age 65 and 5 years of Service; age 70 with any Service. Effective June 19, 2002, age 60 and vested (with actuarial reduction) and any member whose age and service total 80 or more years may retire without reduction for age.

Benefits:

Retirement allowance, consisting of (1) and (2) below:

1) An annuity, which is the actuarial equivalent of employee's accumulated contribution; plus

2) An annual pension, which, together with above annuity, provides total retirement allowance equal to 2% of average compensation times first 10 years, plus 2 1/2% of average compensation times next 10 years, plus 3% of average compensation times next 10 years, plus 4% of average compensation times creditable service over 30 years. Effective June 19, 2002, the above percentages were changed to 2.5% for the first 25 years plus 4% for years over 25 years.

3) An additional annual pension equal to 2% of \$1,200 times first 10 years, plus 2 1/2% of \$1,200 times next 10 years, plus 3% of \$1,200 times next 10 years, plus 4% of \$1,200 times service over 30 years; if the employee was hired prior to 1996 and retires prior to age 65 on retirement allowance. Ceases at age 65 or receipt of first Social Security check, whichever comes first. Effective June 19, 2002, this additional benefit no longer applies except to those who retired prior to that date.

4) For service retirement prior to age 62 with less than 30 years of Service, (2) and (3) above are reduced by 3% for each year rounded to nearest day below the age of 62.

5) Effective January 1, 1997, a member may retire after 30 years of service, regardless of age, with no reduction in his benefit.

6) Maximum Benefit: Benefit no greater than 100% of average compensation, unless member has already accrued a larger benefit as of April 13, 1977.

EXHIBIT I (Continued)

7) Form of Benefit: Modified cash refund annuity. If a member dies after retirement and before receiving the amount of his accumulated contributions in annuity and pension payments, then lump sum balance of his contributions is paid to beneficiary.

8) Cost-of-Living: Effective July 1, 1992, for members that retired prior to January 1, 1984, if funds are available, each July 1st a 2% increase times the number of years retired will be given to members over age 65.

For members that retired on or after January 1, 1984, and are over age 65, each January 1st, increases in benefits based on the increase in the CPI, not to exceed 2%.

Spouses receiving a Joint and Survivor Annuity that have reached the age of 65 shall also receive an increase, based on the increase in the CPI, not to exceed 2%.

DISABILITY BENEFITS:

Eligibility:

10 years of credited service. (certified by physician nominated by Board).

Benefits:

1) A retirement allowance equal to the greater of: An annuity, which is the actuarial equivalent of the member's accumulated contributions at retirement; or

2) An annual pension equal to 75% of the accrued benefit based on service credits to the member had he continued in service until age 62.

3) Benefit offset by Workmen's Compensation benefits.

4) Effective 1/1/84, disability allowance is subject to the same COLA after age 65 as regular retirement.

DEATH BENEFITS:

Eligibility:

Death of member in active service.

Benefits:

Employee's accumulated contributions paid to beneficiary.

1) If member has 3 years Creditable Service, but less than 10 years, a lump sum benefit equal to the Member's accumulated contributions and 25% of the member's prior year earned compensation is payable to the designated beneficiary or estate.

EXHIBIT I (Continued)

2) If member dies in active service with less than three years Creditable Service, a Lump Sum Benefit equal to the Member's accumulated contributions is payable to the designated beneficiary or estate.

3) If, at date of death, member was eligible for retirement and leaves Surviving Spouse, Surviving Spouse shall be eligible for a Joint and 100% benefit or a lump sum refund of Employee's contributions.

4) If, at date of death, member was ineligible for retirement, but had at least 10 or more years of creditable service, then surviving spouse shall receive benefit equal to 80% of the former member's accrued benefit at death, payable at the later of the member's death or spouse's attainment of age 62.

5) If, at date of death, member was receiving a disability benefit and dies, his spouse shall receive 80% of the former member's disability retirement allowance payable at the later of the retiree's death or spouse's attainment of age 62. Eligible children shall receive 65% of the disability benefit payable until they reach age 18, age 25 if the child attends school full time or is mentally or physically disabled or until the spouse attains age 62.

6) The spouse's benefit shall be subject to the COLA after attaining age 65 as for a regular retiree.

SEPARATION BENEFITS:

1) A member that withdraws from service before age 60 with 10 years of Creditable Service may allow his accumulated contributions to remain on deposit until he is eligible to receive a separation retirement allowance. Effective June 19, 2002, only 5 years of Creditable Service is required.

2) Upon withdrawal without 10 years Creditable Service (or, after June 19, 2002, 5 years) Employee is entitled to a refund of his accumulated contributions or may allow contributions to remain on deposit for maximum of five years. In case of employee's death, accumulated contribution are paid to designated beneficiary.

Note:

If employee re-enters after receipt of refund and continues service thereafter for 18 months, he may repay amount of refund plus the amount of employee contributions, with interest at a rate of 4% for service prior to 1970 and 7% compounded annually to date of payment for service after January 1, 1970, to receive prior creditable service again.

EXHIBIT I (Continued)

OPTIONAL FORMS OF BENEFIT:

1) A member shall receive a retirement allowance payable for life. If he dies before receiving, in annuity payments, the value of his annuity at the time of his retirement, the balance is payable to his beneficiary.

2) A reduced benefit payable for the life of the member and continued to beneficiary after member's death. A specific percentage is chosen by the member at the time of retirement. Such percentage shall be an integral multiple of 5%, to a maximum of 100%.

3) A reduced benefit payable for the life of the member and 100% of that amount is paid to the spouse after member's death.

RECIPROCITY:

Effective July 16, 1974, provisions made for reciprocal transfers of service and funds between this System and Employees' Retirement System of the City of New Orleans, in the event an employee transfers from one employing agency to the other; service credits were transferred from sending system to receiving system provided all employee contributions plus earned interest and all employer contributions plus agreed-upon interest were transferred; effective September 23, 1993 (retroactive for transfers on and after October 17, 1988), agreement was amended to provide for a transfer from the sending system to the receiving system equal to the GASB #5 liability of the sending system at 7% interest, 5% salary scale, the remaining GASB #5 actuarial assumptions and the salary and benefit structure in effect for the sending system at time of transfer.

DROP ACCOUNT:

Effective January 1, 1996, any member who is eligible for a service retirement under Section 6(1) can participate in the DROP program:

1) A member can only participant once, and only up to three years. Effective June 19, 2002, the allowable period was increased to 5 years.

2) When a member joins the DROP, he stops contributing to and earning benefits in the system. Employer contributions also stop. His retirement benefit begins being paid into his DROP account.

EXHIBIT 1 (Continued)

3) Interest is credited to the separately invested DROP accounts at the actually earned rate at the end of each month (not including the month of withdrawal unless on the last day of the month), but not below zero. Members of the DROP receive no cost-of-living increases.

4) Upon termination of employment at the end of the specified period of DROP participation, the DROP account is paid out in a lump sum.

5) Continued employment after the end of the DROP period is possible only by reapplication to the Board by the employee. If rehired, that employee shall receive a lump sum of his DROP account balance as if he had retired. For DROP participants rehired after April 20, 2005, the retirement allowance that had been paid into the participant's DROP account shall be suspended while re-employed and the participant shall be treated in the same manner as a re-employed retiree.

EXHIBIT I (Continued)

SUMMARY OF SUBSTANTIVE PLAN CHANGES IN RECENT YEARS  
HAVING AN IMPACT ON ACTUARIAL VALUATION RESULTS

September 23, 1993:

Reciprocity agreement with City of New Orleans amended, retroactive for transfers on and after October 17, 1988.

January 8, 1994:

Allows for purchase of credit for prior military service.

December 13, 1995:

Plan amended for qualification under Internal Revenue Code for Governmental Plans.

January 1, 1996:

The Deferred Retirement Option Plan was adopted to allow members terminating employment and accepting a service retirement allowance under plan section 6(1) to participate in this program.

Average Compensation amended to remove the \$1,200 reduction for employees hired after December 31, 1995.

Any member with 5 years of Creditable Service and attainment of age 65 may retire.

January 1, 1997:

For members retiring on or after January 1, 1997 and choose a Joint and Survivor option, if the beneficiary predeceases the retiree, the reduced benefit reverts back to the maximum amount upon the death of the spouse.

A member with 30 years of creditable service may retire, regardless of age, with no reduction in benefits.

Death benefit payable to the spouse of a deceased disabled retiree is now available immediately upon the retiree's death, on an actuarially equivalent basis.

June 21, 2000:

Disability benefit equal to 75% of the member's accrued benefit based on service credits to the member had he continued in service until age 62.

Eligible Dependent amended to add age 25 if the child attends school full-time or if the child is mentally or physically disabled.

EXHIBIT I (Continued)

SUMMARY OF SUBSTANTIVE PLAN CHANGES IN RECENT YEARS  
HAVING AN IMPACT ON ACTUARIAL VALUATION RESULTS

<u>June 21, 2000:</u>	Death benefit payable to designated beneficiary or estate when there is no spouse or eligible dependents equal to the member's accumulated contributions at death plus 25% of the member's prior year's earnable compensation payable from the Trust fund.
<u>January 1, 2001:</u>	Any retiree with less than 30 years of Credited Service and under age 62, the benefit is reduced by 3% for each year of age rounded to the nearest day below age 62.
<u>February 25, 2001:</u>	Plan amended for the Uruguay Round Agreements Act, the Small Business Job Protection Act of 1996, Uniformed Services Employment & Reemployment Rights Act of 1994, the Taxpayer Relief Act of 1997, the Internal Revenue Service Restructuring and Reform Act of 1998 and the Community Renewal Tax Relief Act of 2000, (GUST).
<u>June 19, 2002:</u>	Benefit formula amended to 2.5% of first 25 years of service, plus 4.0% for each year of service in excess of 25 years, up to a maximum of 100% of pay. A Rule of 80 retirement eligibility (age plus years of service greater than or equal to 80) without age reduction was added. Eligibility to leave employee accumulated contributions on deposit for Separation Retirement was changed from 10 years to 5 years; the exclusion of the first \$1,200 of annual pay was eliminated; D.R.O.P. period was extended from 3 to 5 years.
<u>January 31, 2011:</u>	Interest on DROP accounts changed from "Credited Interest" to that actually earned on the separately invested DROP accounts, but not below zero.
<u>January 1, 2013:</u>	Employee contribution formula amended from 4% to 5% of earnable compensation.
<u>November 19, 2014:</u>	Employee contribution formula amended from 5% to 6% of earnable compensation effective January 1, 2015 (but see explanation on page 12). Period used in determining average compensation changed for employees not yet eligible to retire as of December 31, 2014, was changed to forty-eight months effective January 1, 2017 and sixty months effective January 1, 2018.

EXHIBIT II  
EMPLOYEES' RETIREMENT SYSTEM  
OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
STATEMENT OF ACTUARIAL BASIS FOR FUNDING PURPOSES

Actuarial Funding Method:

Cost Method:	Entry Age Normal Cost Method.
Asset Valuation Method:	Adjusted Market Value. Refer to the explanation on page 2 of the report and development in Table 2.

Actuarial Assumptions

Interest:	7% compounded annually.
Mortality:	1971 Group Annuity Mortality Table for males and females. (See chart in the following pages for specific rates by age and sex).
Turnover:	Table developed from the 1977-1980 Actuarial Experience Study, as used by the prior actuary. (See chart in the following pages for specific rates by age).
Salary Increases:	5.0% compounded annually.
Cost of Living Increases:	Actuarial liabilities for future cost of living increases were included for both active and inactive participants as per the appropriate sections of the plan.

## STATEMENT OF ACTUARIAL BASIS FOR FUNDING PURPOSES

### Actuarial Assumptions (Continued)

**Retirement:**

It has been assumed that employees retire at a variation of the earliest age at which they would be eligible to retire (with reduced benefits, if applicable) as follows; if the earliest age of retirement eligibility is less than or equal to age 55, the assumed age at retirement is the earliest age plus one year, but not beyond age 55; if the earliest age of retirement eligibility is greater than age 55, the assumed age at retirement is the earliest age of retirement eligibility.

**Disability Incidence:**

The rates utilized in the 14th actuarial valuation of the U.S. Railroad Retirement System. (See chart in the following pages for specific rates by age).

**Survivor Benefits:**

85% of active participants are assumed to be married to spouses of equal age. Children's survivor benefits and spouse's disability benefits (in the event of the death of a member on disability) were estimated to be 10% of the related benefits giving rise to the secondary benefits being valued.

**Other assumptions:**

20% of participants terminating with a vested right were assumed to withdraw their accumulated contributions upon termination, while 80% were assumed to retain their vested deferred benefits by leaving contributions on deposit.

Accumulated employee contributions are credited with 2% interest compounded annually.

SEWERAGE AND WATER BOARD OF NEW ORLEANS RETIREMENT SYSTEM  
JANUARY 1, 2016 ACTUARIAL VALUATION  
ASSUMED RATES OF MORTALITY, WITHDRAWAL AND DISABILITY INCIDENCE BY AGE AND GENDER

AGE	MORTALITY		WITHDRAWAL	DISABILITY INCIDENCE
	MALE	FEMALE		
15	.000433	.000193	.368600	.001100
16	.000444	.000205	.368600	.001100
17	.000457	.000218	.368600	.001100
18	.000471	.000231	.358700	.001100
19	.000486	.000245	.346600	.001100
20	.000503	.000260	.332900	.001100
21	.000522	.000275	.317800	.001100
22	.000544	.000292	.301800	.001100
23	.000566	.000309	.285100	.001100
24	.000591	.000327	.268000	.001100
25	.000619	.000347	.250700	.001100
26	.000650	.000368	.233600	.001100
27	.000684	.000390	.216700	.001100
28	.000722	.000414	.200200	.001100
29	.000763	.000440	.184300	.001100
30	.000809	.000469	.169100	.001100
31	.000860	.000499	.154700	.001100
32	.000916	.000533	.141200	.001100
33	.000978	.000569	.128500	.001100
34	.001046	.000608	.116800	.001100
35	.001122	.000651	.106100	.001300
36	.001204	.000698	.096300	.001500
37	.001295	.000750	.087600	.001800
38	.001397	.000807	.079800	.002100
39	.001509	.000869	.072800	.002400
40	.001633	.000938	.066800	.003000
41	.001789	.001013	.061600	.003600
42	.002000	.001094	.057200	.004200
43	.002260	.001186	.053500	.004800
44	.002569	.001286	.050400	.005500
45	.002922	.001397	.047800	.006400
46	.003318	.001519	.045800	.007400
47	.003754	.001654	.044200	.008200
48	.004228	.001802	.042900	.009000
49	.004740	.001967	.041900	.009700
50	.005285	.002151	.041200	.011100
51	.005867	.002324	.040500	.012600
52	.006480	.002520	.040000	.014000
53	.007127	.002738	.040000	.015800
54	.007806	.002982	.040000	.017600
55	.008519	.003256	.040000	.019000
56	.009262	.003574	.040000	.020000
57	.010039	.003948	.040000	.021500
58	.010889	.004388	.040000	.025000
59	.011924	.004901	.040000	.029500
60	.013119	.005489	.040000	.034500
61	.014440	.006156	.040000	.039000
62	.015863	.006898	.040000	.051000
63	.017413	.007712	.040000	.051000
64	.019185	.008608	.040000	.051000
65	.021260	.009563	.040000	.051000

SEWERAGE AND WATER BOARD OF NEW ORLEANS RETIREMENT SYSTEM  
JANUARY 1, 2016 ACTUARIAL VALUATION  
ASSUMED RATES OF MORTALITY, WITHDRAWAL AND DISABILITY INCIDENCE BY AGE AND GENDER

AGE	MORTALITY		WITHDRAWAL	DISABILITY INCIDENCE
	MALE	FEMALE		
66	.023643	.010565	.040000	.051000
67	.026316	.011621	.040000	.051000
68	.029188	.012877	.040000	.051000
69	.032435	.014461	.040000	.051000
70	.036106	.016477	.040000	.051000
71	.040008	.019000	0.000000	.051000
72	.043827	.021911	0.000000	.051000
73	.047489	.025112	0.000000	.051000
74	.051221	.028632	0.000000	.051000
75	.055293	.032385	0.000000	.051000
76	.060068	.036408	0.000000	.051000
77	.065924	.040769	0.000000	.051000
78	.072595	.045472	0.000000	.051000
79	.079692	.050616	0.000000	.051000
80	.087431	.056085	0.000000	.051000
81	.095445	.061853	0.000000	.051000
82	.103691	.067936	0.000000	.051000
83	.112303	.074351	0.000000	.051000
84	.121116	.081501	0.000000	.051000
85	.130102	.089179	0.000000	.051000
86	.139315	.097468	0.000000	.051000
87	.148714	.106452	0.000000	.051000
88	.158486	.116226	0.000000	.051000
89	.168709	.126893	0.000000	.051000
90	.179452	.138577	0.000000	.051000
91	.190489	.151192	0.000000	.051000
92	.201681	.165077	0.000000	.051000
93	.212986	.180401	0.000000	.051000
94	.226535	.197349	0.000000	.051000
95	.241164	.216129	0.000000	.051000
96	.256204	.236970	0.000000	.051000
97	.272480	.258059	0.000000	.051000
98	.290163	.280237	0.000000	.051000
99	.309125	.304679	0.000000	.051000
100	.329825	.331630	0.000000	.051000

### EXHIBIT III

#### December 31, 2015 DISCLOSURE INFORMATION ON FUNDING PROGRESS

This section is included to provide information which had been historically required by the Governmental Accounting Standards Board Statements Number 25 and 27 and is provided for historical continuity and consistency. GASB Statements 25 and 27 have been replaced by GASB Statements 67 and 68. These two statements have made extensive and fundamental changes in the nature of the financial disclosure requirements and have effectively removed the actual funding aspects of the plan from any direct involvement. The effective date of GASB 67 (with respect to the plan itself) is the first Plan Year beginning after June 15, 2013 (namely, the Plan Year beginning January 1, 2014). The effective date of GASB 68 (with respect to the Sewerage & Water Board as sponsoring employer) is the first Fiscal Year beginning after June 15, 2014 (namely, the Fiscal Year beginning January 1, 2015). The actuarial information for financial disclosure as required by these GASB Statements is presented in a separate report.

The Projected Benefit Obligation (PBO) as of December 31, 2015 is based on all of the assumptions outlined in Exhibit II including future salary growth. The Unfunded Accrued Liability (UAL) is that used in funding the plan and is developed in Table 4.

#### SCHEDULE OF FUNDING PROGRESS

	<u>12/31/2014</u>	<u>12/31/2015</u>
Interest Assumption	7.00%	7.00%

#### RATIO OF UAL TO VALUATION PAYROLL:

[1] Unfunded Accrued Liability (UAL)	\$ 68,269,305	\$ 63,996,458
[2] Valuation Annual Payroll	31,378,001	33,672,902
[3] Ratio: [1] divided by [2]	217.6%	190.1%

#### FUNDED RATIO:

[1] Projected Benefit Obligation (PBO)		
Inactive Plan Participants	\$ 192,417,999	\$ 197,041,228
Active Plan Participants	<u>92,829,683</u>	<u>92,267,868</u>
Total PBO	\$ 285,247,682	\$ 289,309,096
[2] Actuarial Value of Assets	226,423,894	233,572,291
[3] Funded Ratio: [2] divided by [1]	78.4%	80.7%*

\* By comparison, the average in Louisiana for the four "State" systems was 59.1% and for the four "State" and ten "Statewide" systems combined was 63.2% based on the June 30, 2013 actuarial valuation report issued by the Louisiana Legislative Auditor's Office, the most recent report available.

EXHIBIT IV

ACTIVE AND INACTIVE PARTICIPANT PROFILES

EMPLOYEES RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
01/1/2016 ACTIVE PARTICIPANT AGE VS SERVICE GRID  
JANUARY 1, 2016 ACTUARIAL VALUATION

----- ALL ACTIVE PARTICIPANTS -----

AGE	YEARS OF SERVICE									TOTAL	TOTAL ANNUAL SALARIES	AVERAGE SALARY
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+			
20-24	53	1	0	0	0	0	0	0	0	54	1,293,636.97	23,956.24
25-29	114	22	1	0	0	0	0	0	0	137	4,009,788.64	29,268.53
30-34	76	33	8	0	0	0	0	0	0	117	3,552,202.05	30,360.70
35-39	54	16	15	3	2	0	0	0	0	90	2,770,213.54	30,780.15
40-44	41	27	9	9	13	1	0	0	0	100	3,277,761.08	32,777.61
45-49	33	19	14	14	28	11	1	0	0	120	4,317,898.22	35,982.49
50-54	42	20	8	11	20	24	30	0	0	155	6,268,961.75	40,444.91
55-59	32	23	11	7	19	22	9	3	0	126	4,771,061.76	37,865.57
60-64	20	10	5	4	7	6	2	0	0	54	2,366,846.59	43,830.49
65-69	5	3	1	3	2	0	0	0	1	15	822,701.54	54,846.77
70-74	0	0	3	0	0	0	0	0	0	3	221,832.27	73,944.09
	470	174	75	51	91	64	42	3	1	971	33,672,904.41	34,678.58

EMPLOYEES RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
01/1/2016 INACTIVE PARTICIPANT PROFILE  
JANUARY 1, 2016 ACTUARIAL VALUATION

----- REGULAR RETIREES -----

AGE	YEARS SINCE RETIREMENT										TOTAL	TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+				
50-54	2	1	0	0	0	0	0	0	0	0	3	102,083.16	34,027.72
55-59	16	29	1	0	0	0	0	0	0	0	46	1,393,087.92	30,284.52
60-64	22	87	28	0	0	0	0	0	0	0	137	3,612,516.12	26,368.73
65-69	14	75	46	17	0	1	0	0	0	0	153	3,949,663.44	25,814.79
70-74	1	29	45	21	2	1	0	0	0	1	100	2,322,109.44	23,221.09
75-79	1	2	12	27	11	2	0	0	0	0	55	1,066,802.88	19,396.42
80-84	0	0	1	22	11	5	0	0	0	0	39	616,411.20	15,805.42
85-89	0	1	1	3	4	16	2	0	0	0	27	426,330.00	15,790.00
90+	0	0	0	0	0	2	5	1	0	0	8	123,471.96	15,434.00
	56	224	134	90	28	27	7	1	1	1	568	13,612,476.12	23,965.63

EMPLOYEES RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
01/1/2016 INACTIVE PARTICIPANT PROFILE  
JANUARY 1, 2016 ACTUARIAL VALUATION

----- DISABLED RETIREES -----

AGE	YEARS SINCE RETIREMENT							TOTAL	TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT		
	0-4	5-9	10-14	15-19	20-24	25-29	30-34				35-39	40+
40-44	0	1	0	0	0	0	0	0	0	1	21,581.52	21,581.52
45-49	1	2	0	0	0	0	0	0	0	3	58,004.88	19,334.96
50-54	1	5	0	0	0	0	0	0	0	6	124,521.48	20,753.58
55-59	1	5	3	2	0	0	0	0	0	11	164,911.08	14,991.92
60-64	0	6	5	6	1	1	0	0	0	19	210,002.16	11,052.75
65-69	0	1	4	3	2	0	0	0	0	10	123,747.84	12,374.78
70-74	0	0	2	1	2	0	0	0	0	5	38,761.56	7,752.31
	3	20	14	12	5	1	0	0	0	55	741,530.52	13,482.37

EMPLOYEES RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
01/1/2016 INACTIVE PARTICIPANT PROFILE  
JANUARY 1, 2016 ACTUARIAL VALUATION

AGE	SURVIVORS										TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT
	YEARS SINCE RETIREMENT											
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL		
0-19	1	0	0	1	0	0	0	0	0	2	16,377.84	8,188.92
45-49	2	0	0	0	0	0	0	0	0	2	6,506.40	3,253.20
50-54	2	1	0	0	0	0	0	0	0	3	15,806.04	5,268.68
55-59	6	6	1	0	0	0	0	0	0	13	119,979.60	9,229.20
60-64	7	6	1	0	0	0	0	0	0	14	92,134.32	6,581.02
65-69	5	4	4	1	1	0	0	0	0	15	116,424.00	7,761.60
70-74	3	4	1	2	0	1	0	0	0	11	122,243.40	11,113.04
75-79	1	4	5	0	0	1	0	0	0	11	64,245.48	5,840.50
80-84	4	1	1	0	0	1	0	0	0	7	39,456.96	5,636.71
85-89	2	2	0	0	1	2	0	0	0	7	81,349.80	11,621.40
90+	0	3	4	0	0	0	0	1	1	9	69,079.80	7,675.53
	33	31	17	4	2	5	0	1	1	94	743,603.64	7,910.68

----- SURVIVORS -----

EMPLOYEES RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
01/1/2016 INACTIVE PARTICIPANT PROFILE  
JANUARY 1, 2016 ACTUARIAL VALUATION

AGE	----- DROP RETIREES -----								TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT		
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39			40+	
50-54	19	0	0	0	0	0	0	0	0	19	705,108.72	37,110.99
55-59	44	0	0	0	0	0	0	0	0	44	1,883,615.52	42,809.44
60-64	50	0	0	0	0	0	0	0	0	50	1,597,057.56	31,941.15
65-69	11	0	0	0	0	0	0	0	0	11	322,405.92	29,309.63
124	0	0	0	0	0	0	0	0	0	124	4,508,187.72	36,356.35

SEWERAGE AND WATER BOARD OF NEW ORLEANS RETIREMENT SYSTEM  
12/31/2015 TERMINATED VESTED EMPLOYEES WITH DEFERRED BENEFITS

NAME	EMPLOYEE ID NUMBER	S E X	DATE OF BIRTH	DATE OF TERMINATION	(BASIC) INIT. MO. BENEFIT	(BASIC) CURR. MO. BENEFIT	SUPPL. MONTHLY BENEFIT	ACCUMULATED EMPLOYEE CONTRIBS.
718		M	11/05/59	3/24/2001	1,812.12	1,812.14	36.96	31,447.13
719		M	8/19/71	5/04/2006	0.00	435.87	0.00	7,004.63
720		M	4/14/58	1/11/1994	250.44	250.44	26.25	7,540.24
721		F	8/12/53	4/13/1995	1,174.56	1,174.56	39.37	21,694.69
722		M	6/23/54	3/28/2006	0.00	916.65	0.00	16,296.90
723		M	2/24/67	11/08/2004	0.00	1,110.29	0.00	21,156.73
724		M	3/29/62	8/08/2007	0.00	2,133.13	0.00	23,833.94
725		M	8/29/62	1/13/1999	337.93	337.93	21.25	7,605.62
726		M	12/01/53	11/05/2005	0.00	1,055.82	0.00	16,631.41
727		M	2/25/58	1/13/2007	0.00	1,306.16	0.00	25,960.64
728		M	2/06/61	3/16/2011	0.00	0.00	0.00	10,376.09
729		F	10/17/76	5/29/2009	0.00	301.10	0.00	4,196.67
730		M	11/30/55	4/11/2007	0.00	507.35	0.00	7,034.37
731		F	6/25/61	7/08/1995	555.81	555.81	22.50	14,099.34
732		F	11/22/58	10/24/1999	930.15	930.15	28.75	16,496.91
733		M	1/13/69	4/21/2006	0.00	1,550.40	0.00	24,767.31
734		M	7/27/61	6/21/1996	1,099.34	1,099.34	23.75	19,182.41
735		M	11/22/53	12/04/2000	1,086.60	1,086.61	31.81	32,383.78
736		M	11/14/69	7/10/2012	0.00	1,155.34	0.00	16,568.28
737		M	9/24/60	9/07/2000	688.67	688.68	40.37	14,593.58
738		M	12/17/62	3/31/2006	0.00	1,324.56	0.00	21,895.91
TOTALS:					7,935.62	19,732.33	271.01	360,766.58

TOTAL COUNT: 21

EXHIBIT V

MARKET VALUE AND ACTUARIAL VALUE ASSET INVESTMENT PERFORMANCE

EMPLOYEES' RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
ESTIMATED MARKET VALUE INVESTMENT PERFORMANCE  
BY CALENDAR YEAR

PLAN YEAR ENDING	BEGINNING MARKET VALUE	EMPLOYER CONTRIBUTIONS FOR YEAR	EMPLOYEE CONTRIBUTIONS FOR YEAR	TRANSFERS IN FOR YEAR	TOTAL BENEFIT PAYMENTS FOR YEAR	TRANSFERS OUT FOR YEAR	NET EXTERNAL CASH FLOW FOR YEAR	MARKET VALUE INV. INCOME	ENDING MARKET VALUE	MARKET VALUE INV. PERFORMANCE FOR YEAR
12/31/91	56,348,353	4,524,382	1,001,436		4,460,555	0	1,065,263	11,331,152	68,744,768	19.9208%
12/31/92	68,699,004	4,980,959	1,113,066		4,988,329	0	1,105,696	5,789,535	75,594,235	8.3501%
12/31/93	75,594,235	4,873,366	1,092,713		4,678,593	0	1,287,486	8,471,584	85,353,305	11.1120%
12/31/94	85,353,305	5,102,920	1,298,780		5,220,801	0	1,180,899	-2,682,882	83,851,322	-3.1217%
12/31/95	83,851,322	5,188,055	1,395,149		5,733,411	0	849,793	22,390,520	107,091,635	26.5680%
12/31/96	107,091,635	5,678,507	1,463,218		5,704,458	0	1,437,267	12,894,655	121,423,557	11.9605%
12/31/97	121,423,557	5,933,289	1,202,021		6,410,573	0	724,737	21,841,187	143,989,481	17.9341%
12/31/98	143,989,481	5,448,823	1,138,063		6,573,992	0	12,894	13,756,662	157,759,037	9.5535%
12/31/99	157,759,037	5,151,389	1,028,094		6,928,999	0	-749,516	16,013,013	173,022,534	10.1745%
12/31/00	173,022,534	5,444,048	1,053,495		7,317,215	0	-819,672	5,658,247	177,861,109	3.2780%
12/31/01	177,861,109	5,417,854	1,040,680		7,632,745	0	-1,174,211	-1,677,973	175,008,925	-9.665%
12/31/02	175,008,925	2,931,065	1,089,543		7,625,705	0	-3,605,097	-15,455,327	155,948,501	-8.9231%
12/31/03	155,948,501	3,391,535	1,097,183		9,184,249	0	-4,695,531	36,142,887	187,395,857	23.5304%
12/31/04	187,395,857	3,721,034	1,120,776		8,884,614	0	-4,042,804	19,502,120	202,855,173	10.5204%
12/31/05	202,855,173	3,716,381	1,176,637	714,343	10,177,467	0	-4,570,106	7,713,678	205,998,745	3.8459%
12/31/06	205,998,745	3,343,713	982,418	2,357,005	12,231,855	0	-5,548,719	28,734,146	229,184,172	14.1391%
12/31/07	229,184,172	3,885,124	1,014,461	1,854,239	12,812,727	0	-6,058,903	8,667,155	231,792,424	3.8324%
12/31/08	231,792,424	4,915,512	1,143,858	958,605	13,269,799	0	-6,251,824	-59,122,504	166,418,096	-25.8553%
12/31/09	166,418,096	5,247,031	1,161,744	516,393	14,231,876	0	-7,306,708	31,912,755	191,024,143	19.6067%
12/31/10	191,024,143	5,146,081	1,190,714	849,540	15,409,624	0	-8,223,289	22,439,431	205,240,285	12.0053%
12/31/11	205,240,285	5,436,700	1,161,996	1,233,504	15,947,090	0	-8,114,890	8,968,361	206,093,756	4.4578%
12/31/12	206,093,756	6,114,997	1,128,257	1,690,683	17,406,238	0	-8,472,301	23,082,600	220,704,055	11.4351%
12/31/13	220,704,055	5,946,614	1,465,774	1,065,165	18,002,573	0	-9,525,020	23,179,014	234,358,049	10.7339%
12/31/14	234,358,049	6,055,890	1,535,723	2,001,222	18,748,955	0	-9,156,120	11,354,742	236,556,671	4.9616%
12/31/15	236,556,671	6,506,652	1,905,689	1,847,259	20,244,603	0	-9,985,003	-4,144,141	222,427,527	-1.7896%
Number of Years Included: 25										
								-90,635,679	256,760,617	

EMPLOYEES' RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
ESTIMATED INVESTMENT PERFORMANCE BY MARKET VALUE AND ACTUARIAL VALUE OF ASSETS  
BY CALENDAR YEAR

YEAR ENDING	ENDING MARKET VALUE	MARKET VALUE INV. PERF. FOR YEAR	MARKET VALUE MEAN FUND	ACTUARIAL VALUE MEAN FUND	ENDING ACTUARIAL VALUE OF ASSETS	ACTUARIAL ASSETS INV. PERF. FOR YR
12/31/1991	68,744,768	19.9208%	56,880,985	58,063,594	64,921,832	10.8943%
12/31/1992	75,594,235	8.3601%	69,251,852	65,474,680	72,541,969	9.9496%
12/31/1993	85,353,305	11.1120%	76,237,978	73,185,712	81,932,422	11.0718%
12/31/1994	83,851,322	-3.1217%	85,943,755	82,522,872	87,957,901	5.8706%
12/31/1995	107,091,635	26.5680%	84,276,219	88,382,798	100,059,569	12.7308%
12/31/1996	121,623,557	11.9605%	107,810,269	100,778,203	114,805,212	13.2056%
12/31/1997	143,989,481	17.9341%	121,785,926	115,167,581	120,911,255	4.6726%
12/31/1998	157,759,037	9.5535%	143,995,928	120,917,702	134,901,231	11.5592%
12/31/1999	173,022,534	10.1745%	157,384,279	134,526,473	149,976,441	11.7633%
12/31/2000	177,861,109	3.2780%	172,612,698	149,566,605	164,845,672	10.4896%
12/31/2001	175,008,925	-9.465%	177,274,004	164,258,567	180,737,128	10.3895%
12/31/2002	155,948,501	-8.9231%	173,206,377	178,934,580	187,892,718	6.0138%
12/31/2003	187,395,857	23.5304%	153,600,736	185,544,953	196,697,432	7.2760%
12/31/2004	202,855,173	10.5204%	185,374,455	194,676,030	204,706,452	6.1907%
12/31/2005	205,998,745	3.8459%	200,570,120	202,421,399	209,829,340	4.7885%
12/31/2006	229,184,172	14.1391%	203,224,366	207,054,981	217,143,723	6.2124%
12/31/2007	231,792,424	3.8324%	226,154,721	214,114,272	223,583,589	5.8374%
12/31/2008	166,418,096	-25.8553%	228,666,512	220,457,677	222,598,640	2.3891%
12/31/2009	191,024,143	19.6067%	162,764,742	218,945,286	228,999,660	6.2608%
12/31/2010	205,240,285	12.0053%	186,912,499	224,888,016	230,298,898	4.2343%
12/31/2011	206,093,756	4.4578%	201,182,840	226,241,453	229,137,699	3.0736%
12/31/2012	220,704,035	11.4351%	201,857,606	224,901,549	229,633,410	3.9875%
12/31/2013	234,358,049	10.7339%	215,941,545	224,870,900	226,423,894	2.8085%
12/31/2014	236,556,671	4.9416%	229,779,989	221,845,834	223,689,647	2.8947%
12/31/2015	222,427,527	-1.7896%	231,564,170	218,697,146	233,572,291	9.0845%

EMPLOYEES' RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
ESTIMATED INVESTMENT PERFORMANCE  
BY CALENDAR YEAR

PLAN YEAR ENDING	BEGINNING MARKET VALUE	NET EXTERNAL CASH FLOW FOR YEAR	MARKET VALUE INV. INCOME FOR YEAR	ENDING MARKET VALUE	MARKET VALUE INVESTMENT PERFORMANCE			ACTUARIAL ASSET VALUE INVESTMENT PERFORMANCE			YEAR
					FOR YEAR	CUMULATIVE	AVERAGE	FOR YEAR	CUMULATIVE	AVERAGE	
12/31/91	56,348,353	1,065,263	11,331,152	68,744,768	19.9208%	19.92%	19.92%	10.89%	10.89%	10.89%	1
12/31/92	68,699,004	1,105,696	5,789,535	75,594,235	8.3601%	29.95%	13.99%	9.95%	21.93%	10.42%	2
12/31/93	75,594,235	1,287,486	8,471,584	85,353,305	11.1120%	44.39%	13.03%	11.07%	35.43%	10.64%	3
12/31/94	85,353,305	1,180,899	-2,682,882	83,851,322	-3.1217%	39.88%	8.75%	5.87%	43.38%	9.43%	4
12/31/95	83,851,322	849,793	22,390,520	107,091,635	26.5680%	77.04%	12.10%	12.73%	61.63%	10.08%	5
12/31/96	107,091,635	1,437,267	12,894,655	121,423,557	11.9605%	98.22%	12.08%	13.21%	82.98%	10.59%	6
12/31/97	121,423,557	724,737	21,841,187	143,989,481	17.9541%	133.77%	12.90%	4.67%	91.52%	9.73%	7
12/31/98	143,989,481	12,894	13,756,662	157,759,037	9.5535%	156.10%	12.47%	11.56%	113.66%	9.96%	8
12/31/99	157,759,037	-749,516	16,013,013	173,022,534	10.1745%	182.15%	12.22%	11.76%	138.80%	10.15%	9
12/31/00	173,022,534	-819,672	5,658,247	177,861,109	3.2780%	191.40%	11.29%	10.49%	163.85%	10.19%	10
12/31/01	177,861,109	-1,174,211	-1,677,973	175,008,925	-0.9465%	188.65%	10.12%	10.39%	191.26%	10.21%	11
12/31/02	175,008,925	-3,605,097	-15,455,327	155,948,501	-8.9231%	162.89%	8.39%	6.01%	208.77%	9.85%	12
12/31/03	155,948,501	-4,695,531	36,142,887	187,395,857	23.5304%	224.75%	9.48%	7.28%	231.24%	9.65%	13
12/31/04	187,395,857	-4,042,804	19,502,120	202,855,173	10.5204%	258.91%	9.56%	6.19%	251.75%	9.40%	14
12/31/05	202,855,173	-4,570,106	7,713,678	205,998,745	3.8459%	272.72%	9.17%	4.79%	268.59%	9.09%	15
12/31/06	205,998,745	-5,548,719	28,734,146	229,184,172	14.1391%	325.42%	9.47%	6.21%	291.49%	8.90%	16
12/31/07	229,184,172	-6,058,903	8,667,155	231,792,424	3.8324%	341.72%	9.13%	5.84%	314.34%	8.72%	17
12/31/08	231,792,424	-6,251,824	-59,122,504	166,418,096	-25.8553%	227.51%	6.81%	2.39%	324.24%	8.36%	18
12/31/09	166,418,096	-7,304,708	31,912,755	191,024,143	19.6067%	291.72%	7.45%	6.26%	350.80%	8.25%	19
12/31/10	191,024,143	-8,223,289	22,439,431	205,240,285	12.0053%	338.75%	7.67%	4.23%	369.89%	8.04%	20
12/31/11	205,240,285	-8,114,890	8,968,361	206,093,756	4.4578%	358.31%	7.52%	3.07%	384.33%	7.80%	21
12/31/12	206,093,756	-8,472,301	23,082,600	220,704,055	11.4351%	410.72%	7.69%	3.99%	403.64%	7.63%	22
12/31/13	220,704,055	-9,525,020	23,179,014	234,358,049	10.7339%	465.54%	7.82%	2.81%	417.79%	7.41%	23
12/31/14	234,358,049	-9,156,120	11,354,742	236,556,671	4.9416%	493.49%	7.70%	2.89%	432.78%	7.22%	24
12/31/15	236,556,671	-9,985,003	-4,144,141	222,427,527	-1.7896%	482.87%	7.31%	9.08%	481.18%	7.29%	25

Number of Years Included: 25

**CERTIFICATION**

The foregoing report presents fairly the actuarial position of the Employees' Retirement System of the Sewerage and Water Board of New Orleans as of January 1, 2016 in accordance with generally accepted actuarial principles applied on a basis consistent with the preceding valuation, except where noted. In our opinion, the assumptions used in preparing the liabilities and estimated costs are reasonably related to the experience of the plan and to reasonable expectations and represent our best estimate of anticipated experience under the plan.

CONEFRY & COMPANY, L.L.C.



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Michael A. Conefry, FCA, ASA, MAAA, MSPA  
Enrollment Number 14-1235

New Orleans, Louisiana  
April, 2016  
V201512



**"RE-BUILDING THE CITY'S WATER SYSTEMS FOR THE 21<sup>ST</sup> CENTURY"**

## **Sewerage & Water Board OF NEW ORLEANS**

**MITCHELL J. LANDRIEU, President**  
**SCOTT JACOBS, President Pro-Tem**

**625 ST. JOSEPH STREET**  
**NEW ORLEANS, LA 70165 • 504-529-2837 OR 52W-ATER**  
**www.swbno.org**

March 14, 2016

The Pension Committee met on Monday, March 14, 2016 in the 2nd Floor Board Room, 625 St. Joseph Street, New Orleans, LA. The meeting convened at 2:05 p.m.

### **PRESENT:**

Joseph Psychaud, Chair  
Scott Jacobs, Vice Chair  
Alan Arnold  
Harold Heller, Jr.  
Marvin R. Russell, Jr.  
Gerald Tilton  
John H. Wilson III

### **ABSENT:**

Eric Blue

### **OTHER COMMITTEE/BOARD MEMBERS PRESENT:**

None

### **ACTION ITEMS:**

#### **1. Appointment of Securities Litigation Monitor**

Harold Marchand, Deputy Special Counsel, discussed the appointment of the Securities Litigation Monitor for the Sewerage and Water Board of New Orleans. He stated that the Board should retain a law firm to monitor and review all current and prior asset holdings of the Employees' Pension Fund and that staff recommends the firm of Robbins Geller Rudman and Dawd, LLP be awarded the contract to perform securities litigation monitoring for the Board's Employees' Pension Fund.

Alan Arnold moved to accept the appointment of Securities Litigation Monitor with the caveat that staff could only proceed with the Pension Committee's approval as described in resolution (R-029-2016). Marvin Russell seconded the motion. The motion carried.

**PRESENTATION ITEMS:**

There were no presentation items to come before the Pension Committee

**INFORMATION ITEMS:**

**2. FFC January 2016 Flash Performance Report - Received**

There being no further business to come before the Pension Committee, the meeting adjourned at 2:25 p.m.

Also in attendance were Cedric S. Grant, Executive Director; Robert Miller, Deputy Director, CFO; Nolan Lambert, Special Counsel; Harold Marchand, Deputy Special Counsel; Kathleen LaFrance, Board Relations/Records Management Administrator; Sharon Judkins, Deputy Director of Administration; Robert Jackson, Community & Intergovernmental Relations Administrator; Octave Francis, Melanie Parent of FFC Capital Management; Janice Leaumont of Capital One.

Respectfully submitted,

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Mr. Joseph Peychaud  
Chair