

ACTUARIAL VALUATION REPORT

**CITY OF NEW ORLEANS
EMPLOYEES' RETIREMENT SYSTEM**

Annual Actuarial Valuation
as of January 1, 2018

CONEFRY & COMPANY, LLC

ACTUARIAL AND EMPLOYEE BENEFIT CONSULTING
NEW ORLEANS, LOUISIANA

INTRODUCTION

We present in this report the results of our actuarial valuation of the City of New Orleans Employees' Retirement System as of January 1, 2018. The plan is intended to be actuarially funded, and we have performed this actuarial valuation using conventional and generally accepted actuarial methods, assumptions, and principles as would typically be applied to a qualified defined benefit pension plan subject to the funding standards of the Employee Retirement Income Security Act of 1974 (ERISA), but applied, of course, in the context of governmental plans within the meaning of the Internal Revenue Code and Regulations. We have performed the actuarial valuation using the Entry Age Normal Cost Method. A full description of the funding method is contained beginning on page 4 of the report. There were changes made in the actuarial assumptions involving healthy and disabled mortality, turnover, disability incidence and expected time of retirement as a result of the 2006-2010 Actuarial Experience Study. Full details of the revised assumptions are contained in Exhibit II of the Appendix.

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.

CITY OF NEW ORLEANS
EMPLOYEES' RETIREMENT SYSTEM

SUMMARY

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as of January 1, 2018

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Plan Year Beginning January 1, 2018

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Expected Total Employee Contributions (As % of Payroll)	\$ 7,248,523 (6.000%)	Page 10
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I. FINANCIAL AND ACTUARIAL STATUS as of January 1, 2018

We have conducted this actuarial valuation using employee data and asset information furnished by the plan administrator and the auditors. This section of the report presents a summary of the assets of the plan at Fair Market Value. 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, 2017 is based on information supplied by the auditors through the System administrative staff.

Table 1
Statement of Assets at Fair Market Value
as of December 31, 2017

<u>Assets</u>	<u>Market Value</u>
Bonds and Fixed Income Type Securities	\$ 101,075,840
Stocks and Equity Type Securities	207,380,801
Cash & Equivalents	33,986,190
Alternative Investments	46,630,956
Accrued Interest & Dividends	89,583
Accounts Receivable (Net)	3,387,746
Net of Accounts Payable and Other Liabilities	<u>-723,800</u>
Net Assets Available for Benefits	<u>\$ 391,827,316</u> *

* The actuarial value of assets used in this valuation is Adjusted Market Value as determined in Table 3.

COST OF LIVING RESERVE

Historically, the Board of Trustees had adopted the policy of maintaining a "Cost of Living Account" representing a "reserve" to provide for cost of living payments to retirees and beneficiaries from excess realized investment earnings. In the January 1, 1996 and prior actuarial valuations, this reserve was used as an offset to assets in developing the actuarial value of assets. Beginning with the January 1, 1997 and in subsequent actuarial valuations, this reserve was included with other actuarial liabilities in Table 5, item (1). Effective with the January 1, 2007 actuarial valuation, the Board eliminated the inclusion of this "reserve" in system actuarial liabilities in favor of the direct demonstration of the amount available for cost of living payments as described below.

The "reserve" described above was intended to represent the amount available for such cost of living payments pursuant to Section 114-204 (7) of the New Orleans Code governing System benefits. After analysis of the language of the foregoing section, to wit, that the Board ". . . shall be authorized to retain interest earnings in excess of an average 3.5 percent on investments of the system to be used to provide a cost of living increase in benefits for members who have retired in the past or who may retire in the future, in an amount not to exceed three percent of the original benefit for each year of retirement; . . .", the Board has adopted a revised policy of determining the amount available pursuant to the foregoing section as follows. The Board has made the interpretation that "interest earnings" represents cumulative market-to-market investment performance of the fund and that "in excess of an average 3.5 percent" means cumulative investment performance in excess of 3.5 percent compounded annually. Reference to Exhibit VI in the Appendix indicates that a cumulative investment performance of 3.5 percent compounded annually would have resulted in total system assets of \$2,640,527 as of December 31, 2017 based on the assumption that there had not been any cost of living payments during the year period considered. Actual fund performance during the year period considered resulted in a market value of \$391,827,316 after recognition of the cost of living payments actually made.

By reference to Exhibit V in the Appendix, it will be noted that the cumulative compound annual rate of return based on market values has been 7.27%, compounded annually, for the period January 1, 1989 through December 31, 2017.

ACTUARIAL VALUE OF ASSETS

Beginning with the January 1, 1997 actuarial valuation, the method of determining the actuarial value of assets was changed to adjusted market value from the former adjusted book value basis. This 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 in effect for each year.

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

Table 3
Actuarial Value of Assets
As of December 31, 2017

<u>Plan Year Ending</u>	<u>Beginning Market Value</u>	<u>Net External Cash Flow For Year</u>	<u>Market Value Inv. Income For Year</u>	<u>Ending Market Value</u>	<u>Market Value Performance For Year</u>	<u>Adj. Market Value Component</u>
2011	334,408,848	-12,523,028	-4,276,183	317,609,637	-1.3031%	372,803,107
2012	317,609,637	-14,844,479	35,842,303	338,607,461	11.5550%	390,846,361
2013	338,607,461	-16,283,003	50,131,156	372,455,614	15.1698%	424,680,699
2014	372,455,614	-16,860,619	15,155,075	370,750,070	4.1632%	409,576,540
2015	370,750,070	-17,606,672	-14,044,748	339,098,650	-3.8803%	361,961,682
2016	339,098,650	-14,100,637	28,611,585	353,609,598	8.6167%	365,937,463
2017	353,609,598	-13,688,805	51,906,523	391,827,316	14.9688%	391,827,316

Years Included: 7 -105,907,243 163,325,711 Average Adj. MV: \$388,233,310

II. EMPLOYER AND EMPLOYEE CONTRIBUTIONS
for the Plan Year Beginning January 1, 2018

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 individual basis, spread over the entire working lifetime of each participant. 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 as discussed below. Effective with the January 1, 2012 actuarial valuation, the investment return assumption was changed from 7.75% annually to 7.50% annually.

The basis used to amortize the unfunded actuarial liability can be "open" (that is, a constant number of years) or "closed" (that is, with the remaining period reducing by one each year). The basis may also be either a level dollar amortization method (more conservative) or a method based on increasing valuation payroll (less conservative). Beginning with the January 1, 2011 actuarial valuation, the actuarial cost method was changed from the Frozen Initial Liability Method to the Entry Age Normal Cost Method. The former amortization basis used through the January 1, 2009 actuarial valuations consisted of a level dollar amortization for a ten (10) year "closed" amortization period from January 1, 2008 through December 31, 2010. Effective January 1, 2011, this was replaced by a level dollar amortization for an "open" ten (10) year amortization period effective on each valuation date. Beginning with the January 1, 2012 actuarial valuation the open ten (10) year amortization amount was changed to an open fifteen (15) year amortization and that amount is developed later in this section and presented in Table 5.

Table 4
Entry Age Normal Cost for Plan Year
Beginning January 1, 2018

(1)	Total Entry Age Normal Cost of All Active Participants	\$ 9,447,990
(2)	Current Annual Payroll of Active Participants *	\$ 120,808,711
(3)	Composite Entry Age Normal Cost Percentage: (1) divided by (2)	7.821%

* There are 2,716 active participants: 1,245-fully vested; 0-partially vested; 1,471-not vested.

Table 5
Entry Age Normal Cost Unfunded Actuarial Liability
as of January 1, 2018

(1)	Actuarial Present Value of Expected Benefits to Plan Participants		
	(a) Total Active	\$ 270,002,472	
	(b) Ordinary & Separation Retirement	300,970,503	
	(c) Beneficiaries	20,713,799	
	(d) Disabled Retirement	15,869,687	
	(e) Terminated Vested	16,199,217	
	(f) D.R.O.P. Account Balances	18,175,398	
	(g) D.R.O.P. Future Benefits	<u>52,612,634</u>	
	Total Inactive	\$ 424,541,238	
	Grand Total		\$ 694,543,710
(2)	Actuarial Present Value of Future Normal Cost Contributions:		64,777,259
(3)	Entry Age Normal Cost Accrued Actuarial Liability		
	(a) Active: (1)(a) - (2)	\$ 205,225,213	
	(b) Inactive: (1)(g)	424,541,238	
	(c) Total: (3)(a) + (3)(b)		629,766,451
(4)	Actuarial Value of Assets (from Table 3)		388,233,310
(5)	Unfunded EAN Actuarial Liability as of January 1, 2018:		
	(3)(c) - (4)		\$ 241,533,141

TOTAL CONTRIBUTION FOR PLAN YEAR BEGINNING January 1, 2018

The contribution for a plan year equals the normal cost, plus the expense assumption cost, plus the amount necessary to amortize the Entry Age Normal Cost (EAN) Unfunded Actuarial Liability. This Unfunded Liability for funding purposes is \$241,533,141, as discussed on page 4. The annual amount required to amortize this EAN Unfunded Liability over the open 15 year period ending December 31, 2032 at 7.50% annual interest is \$25,453,602.

The total plan contribution on this basis is developed in the following Table 6.

Table 6
Total Required Contribution for the
Plan Year Beginning January 1, 2018

(1)	Normal Cost (From Table 4)	\$ 9,447,990	
(2)	Expense Assumption Cost (0.3% of Annual Covered Payroll)	362,426	
(3)	Net Annual charge Required for 15 Year Amortization of EAN Unfunded Liability (See Above)	25,453,602	
(4)	Total Plan Contribution as of January 1, 2018: (1) + (2) + (3)	\$ 35,264,018	(29.190%) *
(5)	Annual Employee Plan Contributions as of January 1, 2018	\$ 7,248,523	(6.000%) *
(6)	Employer Contribution as of January 1, 2018: (4) - (5)	\$ 28,015,495	(23.190%) *
*	Expressed as a percentage of annual participant payroll of \$120,808,711.		

III.

NET ACTUARIAL EXPERIENCE
for the Plan Year Beginning January 1, 2017

Actuarial experience refers to the comparison of actuarial results of each valuation with those expected from the previous valuation according to the actuarial assumptions. Under the Entry Age Normal Cost Method the basis of comparison is the change in the total plan actuarial cost, expressed as a percentage of payroll. A decrease or increase in the total plan actuarial cost percentage is normally 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 percentage of payroll will remain unchanged, except for routine fluctuations.

The method of determination of the actuarial gain or loss over the past plan year is presented in the table below.

Table 7
Net Actuarial Experience
for the Plan Year Ending December 31, 2017

(1)	Total Plan Actuarial Cost Percentage as of January 1, 2018	29.190%
(2)	Total Plan Actuarial Cost Percentage as of January 1, 2017	29.252%
(3)	Net Change in Total Plan Cost Percentage: (1)-(2): Gain (-) or Loss (+)	-0.062%
(4)	Change in Total Plan Cost Percentage Due to Actuarial Experience: Gain (-) or Loss (+)	-0.062%

Table 8
Net Actuarial Experience by Component
for the Plan Year Ending December 31, 2017

<u>Component</u>	<u>Effect on Total Plan Cost</u> <u>Gain (-) or Loss (+)</u>	<u>Effect on</u> <u>Funded Ratio</u>
Interest Assumption	+0.318%	-0.6%
Salary Scale	-0.122%	+0.3%
Net Change From All Other Sources	<u>-0.134%</u>	<u>+0.1%</u>
Grand Total	<u>+0.062%</u>	<u>-0.2%</u>

EXHIBIT I

EMPLOYEES' RETIREMENT SYSTEM
OF THE CITY OF NEW ORLEANS

SUMMARY OF PLAN PROVISIONS

<u>EFFECTIVE DATE:</u>	1947; Restated for Plan Qualification, January 1, 1994; Last major amendment date - January 1, 2013.
<u>CREDITABLE SERVICE:</u>	Prior service plus membership service for which credit is allowable. Also, one month service credit given for every twenty-one days accumulated sick and/or annual leave. Credit for prior military service may be purchased (maximum 4 years) by active contributing member who reaches age 65 or who has at least 10 years of service; lump sum payment required based on 4% of excess over first \$100 monthly average for each month claimed plus 4% compound interest. After March 1, 1980, military service available only to those who will not receive a benefit from another public pension plan. (except Social Security)
<u>EARNABLE COMPENSATION:</u>	Annual compensation paid to an employee; includes tenure pay and excludes overtime pay.
<u>AVERAGE COMPENSATION:</u>	Average annual earned compensation of a member for highest thirty-six successive months (forty-eight effective January 1, 2014 and sixty months effective January 1, 2015) of service as a member, minus \$1,200. Effective June 1, 2002, \$1,200 removed. After April 29, 1979, earned compensation based on pay for regular required work and excludes State supplemental pay.
<u>EMPLOYEE CONTRIBUTIONS:</u>	4% of earnable compensation over \$1,200 per year. Effective June 1, 2002, \$1,200 removed. Effective January 1, 2012 the rate is 5% and effective January 1, 2013 the rate is 6%.
<u>EMPLOYER CONTRIBUTIONS:</u>	Certain percentage of earnable compensation of each member, known as "Normal Contributions," determined on basis of regular interest and mortality tables adopted by the Board, and additional percentage of earnable compensation, known as "Accrued Liability Contributions," determined by actuary on basis of the amortization period adopted by the board from time to time.

EXHIBIT I (Continued)

MEMBERSHIP:

Includes:

- 1) Employees hired on July 1, 1947 and after, who become members as condition of employment, except for those over 65 unless 10 years prior service.
- 2) Employees hired before July 1, 1947 became members, unless they elected not to join.
- 3) For officials elected or appointed for fixed terms, membership is optional.
- 4) All officers and employees of various judicial and parochial offices of the parish, except those covered by another system and those for whom no contributions are made by respective officers, are eligible.
- 5) For employees of French Market Corporation, membership is optional; eligibility is contingent on not having attained age 55.
- 6) Effective November 1, 1993, membership includes the full-time employees of the Coroner's Office.
- 7) Effective April 1, 1997, membership includes the full-time employees of the District Attorney's Office.

RETIREMENT:

Eligibility:

Age 60 and 10 years of service; age 65 and 5 years of service; any age and 30 years of service. Effective January 1, 2002, any member whose age and service total 80 may retire with no age reduction.

Benefits:

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

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

EXHIBIT I (Continued)

2) Effective for members retiring on or after January 1, 2002, an annual pension, which, together with above annuity, provides total retirement allowance equal to 2.5% of average compensation times first 25 years, plus 4% of average compensation times creditable service over 25 years.

3) Effective for members retiring before 2002, but on or after January 1, 1983, 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.

4) Effective January 1, 1983, additional 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. Ceases at 62 or at eligibility for Social Security, whichever comes first. Effective January 1, 2002, the \$1,200 exclusion will not apply.

5) Additional pension for member who reaches age 65 with 20 or more years and the retirement allowance under (1) and (2) above is less than \$1,200 per year; to produce total retirement allowance of \$1,200 per year.

6) Effective January 1, 1982, for service retirement prior to age 62 with less than 30 years of Service, (3) and (4) above are reduced by 3% for each year below 62. However, effective January 1, 1996, this reduction is not made if employee has at least 30 years of service. Effective January 1, 2002, no reduction if age and service total at least 80.

7) Maximum Benefit: Benefit not to be greater than 100% of average compensation, unless member has already accrued a larger benefit as of April 1978.

EXHIBIT I (Continued)

8) Minimum Benefit: Effective June 1, 1999, benefit of \$300 per month for retirees with 10 years of service at retirement.

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

10) Cost-of-Living: Board of Trustees retains excess over average 3 1/2% interest earnings to provide Cost-of-Living increases in benefits to retirees (past or future) not to exceed 3% of original benefit per each year of retirement. Effective January 1, 2001, additional one-time increase of 1% times member's or beneficiary's current monthly benefit times whole calendar years from date benefit commenced.

DISABILITY:

Ordinary Disability Retirement:

Eligibility:

10 years of credited service and totally and permanently incapacitated for performance of duty (certified by physician nominated by Board).

Benefit:

If eligible, service retirement allowance:

a) An annuity, which is the actuarial equivalent of employee's accumulated contributions; and

b) An annual pension, which, together with a) equals 75% of service allowance that would have been payable at age 65 had member continued in service to age 65, computed on average compensation (minimum benefit - \$300 per year).

Accidental Disability Retirement:

Eligibility:

Accident sustained in service as member and while in performance of duty (and certification by physician nominated by Board of incapacity).

Benefit:

1) If eligible - service retirement allowance.

EXHIBIT I (Continued)

2) If ineligible for retirement allowance, then accidental disability retirement allowance, consisting of:

- a) An annuity which is the actuarial equivalent of employee's accumulated contributions; and
- b) An annual pension, equal to the difference between the annuity and 65% of earnable compensation for year preceding Date of Accident.

Note:

Medical examinations required every three years for those disability retirees under 60. Accidental disability benefits are offset by workmen's compensation payments, if any.

DEATH BENEFITS:

Ordinary Death Benefits:

Eligibility:

Death of member in active service.

Benefits:

Employee's accumulated contributions paid to beneficiary.

Notes:

- 1) If member has three years Creditable Service, additional Lump Sum Benefit equal to 1/4 of earnable compensation for year preceding death, plus 5% of such earnable compensation for each additional year of creditable service (benefit not to exceed compensation made before death).
- 2) If, at date of death, member was eligible for retirement and leaves Surviving Spouse, Surviving Spouse shall be eligible to elect either Option Number 2 or Lump Sum refund of Employee's contributions.
- 3) Offset by Worker's Compensation benefits.
- 4) If, at date of death, member was ineligible for retirement, but was at least 55 years of age and had

EXHIBIT I (Continued)

10 or more years of creditable service, or was under age 55 and had at least 20 years of creditable service, then surviving spouse may elect to receive benefit equal to an actuarially reduced amount based upon the members' age and years of creditable service. Benefit to cease when surviving spouse reaches age of eligibility for Social Security.

SEPARATION BENEFITS:

1) Effective January 1, 2002, a member who separates with 5 years of Creditable Service may allow his accumulated contributions to remain on deposit and service retirement allowance to begin as early as age 65.

Prior to January 1, 2002, withdrawal with 10 years of Creditable Service prior to separation, member may allow accumulated contributions to remain on deposit and service retirement allowance to begin as early as age 60 (subject to reduction if retirement is elected before age 62). If death before retirement, return of accumulated contributions with interest.

2) Upon withdrawal without 5 years Creditable Service, Employee is entitled to return of his accumulated contributions with interest or may allow contributions to remain on deposit for maximum of five years. (In case of employee's death, then accumulated contribution plus interest are paid to beneficiary.)

Note:

If employee re-enters after receipt of refund and continues service thereafter for at least six months, he may repay amount of refund plus the amount of employer contributions, with compound interest, to receive prior creditable service again.

OPTIONAL FORMS OF BENEFIT:

1) If a member dies before receiving, in annuity payments, the value of his annuity at the time of his retirement, then balance is payable to his beneficiary.

2) 100% survivor's benefits - reduced retirement benefit continued to beneficiary at member's death. If the spouse predeceases the retiree, the benefit reverts back to the maximum amount.

EXHIBIT I (Continued)

3) 50% survivor's benefits - 50% of reduced retirement benefit continued to beneficiary at member's death. If the spouse predeceases the retiree, the benefit reverts back to the maximum amount.

4) Other benefits of equal actuarial value, upon approval of Board.

PAYMENT OF BENEFITS:

On monthly basis, except when total retirement allowance is less than \$120 per year; then, quarterly, semi-annually, or annually, as Board decides.

RECIPROCITY:

Effective July 16, 1974, provisions made for reciprocal transfers of service and funds between this System and Employees' Retirement System of the Sewerage and Water Board 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.

EARLY RETIREMENT WINDOW:

From January 1, 1987 through April 30, 1987 an early retirement window was available. Any member who had at least 15 years of service and whose age plus service totalled at least 70, could retire during the window with no reduction for early retirement. Member must have converted all sick leave into service credits.

DROP ACCOUNT:

Effective January 1, 1994, any member who is eligible for a service retirement under Section 114-201(a) may participate in the DROP program:

EXHIBIT I (Continued)

- 1) A member can participate for up to five 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.
- 3) Interest is earned on the DROP account at an annual rate set by the Board. Members of the DROP receive cost-of-living increases, as if they would have received such raises as a retiree.
- 4) Upon termination of employment at the end of the specified period of DROP participation, the DROP account is paid out. After his DROP period ends and upon continued or re-employment, the member may resume contributions and earn a supplemental benefit based on current covered compensation.
- 5) If at the end of a Member's period of DROP participation he does not terminate employment, payments into the DROP shall cease and no further interest shall be earned or credited to the account. Payments shall not be made until employment is terminated.

EXHIBIT I (Continued)

SUMMARY OF PLAN CHANGES IN RECENT YEARS

<u>April 27, 1978</u>	Monthly retirement benefit shall not exceed average monthly compensation of a member.
<u>January 1, 1979</u>	Mandatory retirement age is 70.
<u>April 29, 1979</u>	Defined "Average Compensation" and "Based earned compensation". Allows for purchase of credit for prior military service.
<u>September 17, 1981</u>	"Ordinary Death Benefits" is described.
<u>January 1, 1982</u>	Any member who has 30 years of creditable service may retire regardless of age. Additional pension allotment was outlined.
<u>January 1, 1983</u>	Normal Retirement Benefits amended by the addition of 4% of average compensation times creditable service over 30 years. Also, 4% of \$1,200 times service over 30 years is provided for in the additional pension. For those retiring under age 55, benefit reduced by 2% for each year under 55.
<u>January 1, 1987</u>	Any member with a minimum of 15 years of creditable service and age plus service equal to 70, providing that he converts all sick leave to membership credit, may retire with no reduction in benefits during the period of January 1, 1987 through April 30, 1987 only.
<u>May 21, 1987</u>	"Average Compensation" re-defined for computing benefits from September 30, 1986 through November 30, 1989.

EXHIBIT I (Continued)

SUMMARY OF PLAN CHANGES IN RECENT YEARS (Continued)

May 21, 1987

Offset of plan benefits with Workers' Compensation and Social Security benefits is clarified.

January 19, 1989

"Employee" re-defined to provide for part-time service credit.

Purchase of part-time service credits allowed.

September 23, 1993

Reciprocity agreement with Sewerage and Water Board amended retroactive for transfers on and after October 17, 1988 (see Page 15 of this report for details).

November 1, 1993

Membership extended to Coroner's Office.

January 1, 1994

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

The Deferred Retirement Option Plan was adopted to allow members terminating employment and accepting a service retirement allowance under plan section 55-34(1) to participate in this program.

For members retiring on or after January 1, 1994, and choose either Option 2 or Option 3, if the beneficiary predeceases the retiree, the reduced benefit reverts back to the maximum amount beginning the month following notification of death.

January 1, 1996

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

The DROP period extended from two to five years. The two-year waiting period was removed.

April 1, 1997

Membership extended to District Attorney's Office.

June 1, 1999

Minimum benefit of \$300 per month for retirees with 10 years of service at retirement.

EXHIBIT I (Continued)

SUMMARY OF PLAN CHANGES IN RECENT YEARS (Continued)

<u>January 1, 2001</u>	Additional cost of living increase to members and beneficiaries equal to a 1% increase times the current monthly benefit times whole calendar years since benefit commenced (one-time increase).
<u>January 1, 2002</u>	Rule of 80 adopted. Age plus service equal 80. No reduction in benefit.
<u>January 1, 2002</u>	Normal Retirement Benefit formula amended to 2.5% of average compensation times the first 25 years of creditable service plus 4% times service over 25 years.
<u>January 1, 2002</u>	"Creditable service" redefined.
<u>January 1, 2002</u>	Any member who separates from service before age 65 with 5 years of service and leaves his accumulated contributions on deposit may receive a retirement allowance beginning at or after age 65.
<u>June 1, 2002</u>	\$1,200 exclusion on earnings removed.
<u>January 1, 2012</u>	Period for calculation of average compensation changed to 48 months effective January 1, 2014 and 60 months effective January 1, 2015.
<u>January 1, 2012</u>	Employee contribution percentage changed to 5% of all pension compensation effective January 1, 2012 and to 6% effective January 1, 2013.
<u>January 1, 2018</u>	There were extensive amendments to the benefit formula, retirement age eligibility, DROP provisions and other benefit provisions which are applicable only to new hires on and after January 1, 2018. These changes do not apply to any of the members covered in this valuation and have not been reflected in this valuation.

EXHIBIT II

CITY OF NEW ORLEANS
EMPLOYEES' RETIREMENT SYSTEM

STATEMENT OF ACTUARIAL BASIS FOR FUNDING PURPOSES

Actuarial Funding Method:

Cost Method: Entry Age Normal Cost Method.
Asset Valuation Method: Adjusted Market Value using seven year smoothing.

Actuarial Assumptions

Interest: 7.50% compounded annually (changed from 7.75% effective with January 1, 2012 Actuarial Valuation).

Healthy Mortality: RP-2000 Combined Healthy Mortality Table (Sex Distinct) Without Projection, with ages set forward six years below age 70 for males and four years below age 65 for females.

Disabled Mortality: RP-2000 Disability Mortality Table (Sex Distinct) Without Projection.

Turnover: Table developed from the 2006-2010 Actuarial Experience Study.

Salary Increases: 5.0% compounded annually.
Entry Age Normal Cost Method

Retirement: Based on the results of the 2006-2010 periodic actuarial experience study, it has been assumed that employees retire (or enter D.R.O.P.) one year after the earliest of: first, attainment of 30 years of service; second, the later of age 60 and completion of 10 years of service; third, attainment of age 65 and completion of 20 years of service; fourth, satisfaction of the "Rule of 80" (age plus service equals or exceeds 80). Employees who would have retired (or entered D.R.O.P.) based on the foregoing criteria on or prior to the valuation date are assumed to retire three years after the valuation date.

Disability Incidence: Table developed from the 2006-2010 Actuarial Experience Study.

Note: The full rate set of assumptions for mortality, turnover and disability incidence is contained in the table in the following pages.

CITY OF NEW ORLEANS EMPLOYEES' RETIREMENT SYSTEM
 ACTUARIAL VALUATION ASSUMPTION SET
 ASSUMED RATES OF MORTALITY, WITHDRAWAL AND DISABILITY INCIDENCE BY AGE AND GENDER

AGE	MORTALITY		WITHDRAWAL		DISABILITY MORTALITY		DISABILITY INCIDENCE
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	
15	.000357	.000190	.240400	.176300	.022571	.007450	.001650
16	.000366	.000191	.240400	.176300	.022571	.007450	.001650
17	.000373	.000192	.240400	.176300	.022571	.007450	.001650
18	.000376	.000194	.240400	.176300	.022571	.007450	.001650
19	.000376	.000197	.240400	.176300	.022571	.007450	.001650
20	.000378	.000201	.240400	.176300	.022571	.007450	.001650
21	.000382	.000207	.240400	.176300	.022571	.007450	.001650
22	.000393	.000214	.240400	.176300	.022571	.007450	.001650
23	.000412	.000223	.240400	.176300	.022571	.007450	.001650
24	.000444	.000235	.240400	.176300	.022571	.007450	.001650
25	.000499	.000248	.240400	.176300	.022571	.007450	.001650
26	.000562	.000264	.240400	.176300	.022571	.007450	.001650
27	.000631	.000307	.240400	.176300	.022571	.007450	.001650
28	.000702	.000350	.240400	.176300	.022571	.007450	.001650
29	.000773	.000394	.240400	.176300	.022571	.007450	.001650
30	.000841	.000435	.122500	.128300	.022571	.007450	.001650
31	.000904	.000475	.122500	.128300	.022571	.007450	.001500
32	.000964	.000514	.122500	.128300	.022571	.007450	.001350
33	.001021	.000554	.122500	.128300	.022571	.007450	.001200
34	.001079	.000598	.122500	.128300	.022571	.007450	.001050
35	.001142	.000648	.080000	.083200	.022571	.007450	.000900
36	.001215	.000706	.080000	.083200	.022571	.007450	.001050
37	.001299	.000774	.080000	.083200	.022571	.007450	.001200
38	.001397	.000852	.080000	.083200	.022571	.007450	.001350
39	.001508	.000937	.080000	.083200	.022571	.007450	.001500
40	.001616	.001029	.066800	.060000	.022571	.007450	.001350
41	.001734	.001124	.066800	.060000	.022571	.007450	.001800
42	.001860	.001223	.066800	.060000	.022571	.007450	.002250
43	.001995	.001326	.066800	.060000	.022571	.007450	.002700
44	.002138	.001434	.066800	.060000	.022571	.007450	.003150
45	.002449	.001550	.050000	.051700	.022571	.007450	.003300
46	.002667	.001676	.050000	.051700	.023847	.008184	.003750
47	.002916	.001852	.050000	.051700	.025124	.008959	.004200
48	.003196	.002018	.050000	.051700	.026404	.009775	.004650
49	.003624	.002207	.050000	.051700	.027687	.010634	.005100
50	.004200	.002424	.050000	.040000	.028975	.011535	.005250
51	.004693	.002717	.050000	.040000	.030268	.012477	.005400
52	.005273	.003090	.050000	.040000	.031563	.013456	.005400
53	.005945	.003478	.050000	.040000	.032859	.014465	.005550
54	.006747	.003923	.050000	.040000	.034152	.015497	.005550
55	.007676	.004441	.050000	.040000	.035442	.016544	.006450
56	.008757	.005055	.050000	.040000	.036732	.017598	.007350
57	.010012	.005814	.050000	.040000	.038026	.018654	.008250
58	.011280	.006657	.050000	.040000	.039334	.019710	.009150
59	.012737	.007648	.050000	.040000	.040668	.020768	.009150
60	.014409	.008619	.050000	.040000	.042042	.021839	.009150
61	.016075	.009706	.050000	.040000	.043474	.022936	.009150
62	.017871	.009706	.050000	.040000	.044981	.024080	.009150
63	.019802	.009706	.050000	.040000	.046584	.025293	.009150
64	.022206	.009706	.050000	.040000	.048307	.026600	.009150
65	.022206	.009706	.050000	.040000	.050174	.028026	.009150

CITY OF NEW ORLEANS EMPLOYEES' RETIREMENT SYSTEM
 ACTUARIAL VALUATION ASSUMPTION SET
 ASSUMED RATES OF MORTALITY, WITHDRAWAL AND DISABILITY INCIDENCE BY AGE AND GENDER

AGE	MORTALITY		WITHDRAWAL		DISABILITY MORTALITY		DISABILITY INCIDENCE
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	
66	.022206	.010954	.050000	.040000	.052213	.029594	.009150
67	.022206	.012163	.050000	.040000	.054450	.031325	.009150
68	.022206	.013445	.050000	.040000	.056909	.033243	.009150
69	.022206	.014860	.050000	.040000	.059613	.035335	.009150
70	.022206	.016742	.050000	.040000	.062583	.037635	.009150
71	.024570	.018579	0.000000	0.000000	.065841	.040140	.009150
72	.027281	.020665	0.000000	0.000000	.069405	.042851	.009150
73	.030387	.022970	0.000000	0.000000	.073292	.045769	.009150
74	.033900	.025458	0.000000	0.000000	.077512	.048895	.009150
75	.037834	.028106	0.000000	0.000000	.082067	.052230	.009150
76	.042169	.030966	0.000000	0.000000	.086951	.055777	.009150
77	.046906	.034105	0.000000	0.000000	.092149	.059545	.009150
78	.052123	.037595	0.000000	0.000000	.097640	.063545	.009150
79	.057927	.041506	0.000000	0.000000	.103392	.067793	.009150
80	.064368	.045879	0.000000	0.000000	.109372	.072312	.009150
81	.072041	.050780	0.000000	0.000000	.115544	.077135	.009150
82	.080486	.056294	0.000000	0.000000	.121877	.082298	.009150
83	.089718	.062506	0.000000	0.000000	.128343	.087838	.009150
84	.099779	.069517	0.000000	0.000000	.134923	.093794	.009150
85	.110757	.077446	0.000000	0.000000	.141603	.100203	.009150
86	.122797	.086376	0.000000	0.000000	.148374	.107099	.009150
87	.136043	.096337	0.000000	0.000000	.155235	.114512	.009150
88	.150590	.107303	0.000000	0.000000	.162186	.122464	.009150
89	.166420	.119154	0.000000	0.000000	.169233	.130972	.009150
90	.183408	.131682	0.000000	0.000000	.183408	.140049	.009150
91	.199769	.144604	0.000000	0.000000	.199769	.149698	.009150
92	.216605	.157608	0.000000	0.000000	.216605	.159924	.009150
93	.233662	.170433	0.000000	0.000000	.233662	.170433	.009150
94	.250693	.182799	0.000000	0.000000	.250693	.182799	.009150
95	.267491	.194509	0.000000	0.000000	.267491	.194509	.009150
96	.283905	.205379	0.000000	0.000000	.283905	.205379	.009150
97	.299852	.215240	0.000000	0.000000	.299852	.215240	.009150
98	.315296	.223947	0.000000	0.000000	.315296	.223947	.009150
99	.330207	.231387	0.000000	0.000000	.330207	.231387	.009150
100	.344556	.237467	0.000000	0.000000	.344556	.237467	.009150
101	.258628	.244834	0.000000	0.000000	.358628	.244834	.009150
102	.371685	.254498	0.000000	0.000000	.371685	.254498	.009150
103	.383040	.266044	0.000000	0.000000	.383040	.266044	.009150
104	.392003	.279055	0.000000	0.000000	.392003	.279055	.009150
105	.397886	.293116	0.000000	0.000000	.397886	.293116	.009150
106	.400000	.307811	0.000000	0.000000	.400000	.307811	.009150
107	.400000	.322725	0.000000	0.000000	.400000	.322725	.009150
108	.400000	.337441	0.000000	0.000000	.400000	.337441	.009150
109	.400000	.351544	0.000000	0.000000	.400000	.351544	.009150
110	.400000	.364617	0.000000	0.000000	.400000	.364617	.009150

EXHIBIT III

January 1, 2018 ACCOUNTING INFORMATION FOR FINANCIAL STATEMENTS

This section is included to provide information required by the Governmental Accounting Standards Board Statement Number 25 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) was 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 City of New Orleans 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 will be presented in a separate report.

The Projected Benefit Obligation (PBO) as of December 31, 2017 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 5.

SCHEDULE OF FUNDING PROGRESS

	<u>1/01/2017</u>	<u>1/01/2018</u>
Interest Assumption	7.50%	7.50%

RATIO OF ENTRY AGE NORMAL COST UAAL TO VALUATION PAYROLL:

[1] EAN Actuarial Accrued Liability (AAL)	\$ 609,079,637	\$ 629,766,451
[2] Actuarial Value of Assets	377,748,008	388,233,310
[3] Unfunded Actuarial Accrued Liability (UAAL): [1] - [2]	231,331,629	241,533,141
[4] Valuation Annual Payroll	115,504,517	120,808,711
[5] Ratio: [3] divided by [4]	200.3%	199.9%

FUNDED RATIO:

[1] Projected Benefit Obligation (PBO)		
Inactive Plan Participants	\$ 415,980,385	\$ 424,541,238
Active Plan Participants	<u>137,651,152</u>	<u>146,838,009</u>
Total PBO	\$ 553,631,537	\$ 571,379,247
[2] Actuarial Value of Assets [Table 3]	377,748,008	388,233,310
[3] Funded Ratio: [2] divided by [1]	68.2%	68.0%

EXHIBIT IV

ACTIVE AND INACTIVE PARTICIPANT PROFILES

ACTIVE AND INACTIVE PARTICIPANT PROFILES

CITY OF NEW ORLEANS EMPLOYEES RETIREMENT SYSTEM
 1/1/2018 ACTIVE PARTICIPANT AGE VS SERVICE GRID
 JANUARY 1, 2018 ACTUARIAL VALUATION

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

AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL	TOTAL ANNUAL SALARIES	AVERAGE SALARY
0-19	3	0	0	0	0	0	0	0	0	3	52,724.92	17,574.97
20-24	103	0	0	0	0	0	0	0	0	103	2,974,450.21	28,878.16
25-29	282	24	1	0	0	0	0	0	0	307	10,667,000.86	34,745.93
30-34	292	98	18	1	0	0	0	0	0	409	17,879,634.74	43,715.49
35-39	208	87	35	14	3	0	0	0	0	347	17,265,474.40	49,756.41
40-44	142	71	35	30	12	1	0	0	0	291	13,703,109.42	47,089.72
45-49	114	55	33	30	29	14	1	0	0	276	13,207,973.16	47,854.98
50-54	98	68	40	35	38	45	7	0	0	331	16,249,505.33	49,092.16
55-59	102	59	41	22	33	37	17	4	0	315	14,029,905.52	44,539.38
60-64	87	52	22	9	8	14	7	7	0	207	9,156,679.54	44,235.17
65-69	30	27	12	6	3	3	1	1	1	84	3,844,389.99	45,766.55
70-74	14	7	8	2	0	0	0	0	0	31	1,358,703.78	43,829.15
75-79	1	2	1	2	1	1	0	0	0	8	253,268.10	31,658.51
80-84	1	1	1	0	0	0	0	0	0	3	116,566.98	38,855.66
85-89	0	1	0	0	0	0	0	0	0	1	18,896.33	18,896.33
	1,477	552	247	151	127	115	33	12	1	2,716	120,778,283.28	44,469.18

CITY OF NEW ORLEANS EMPLOYEES RETIREMENT SYSTEM
 1/1/2018 INACTIVE PARTICIPANT PROFILE
 JANUARY 1, 2018 ACTUARIAL VALUATION

----- ORDINARY RETIREMENT -----

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	10	1	0	0	0	0	0	0	0	0	11	458,993.52	41,726.68
55-59	23	35	2	0	0	0	0	0	0	0	60	2,330,462.04	38,841.03
60-64	60	90	39	2	0	0	0	0	0	0	191	5,570,992.20	29,167.50
65-69	66	119	131	25	1	0	0	0	0	0	342	9,255,930.00	27,064.12
70-74	35	74	133	55	12	0	2	0	0	0	311	7,189,484.40	23,117.31
75-79	10	21	73	83	20	1	12	0	0	0	220	3,784,761.48	17,203.46
80-84	2	8	19	42	37	4	26	0	0	0	138	2,031,243.48	14,719.16
85-89	1	2	9	8	32	21	12	2	0	0	87	1,295,378.40	14,889.41
90+	0	1	3	2	7	18	26	8	0	0	65	624,277.32	9,604.27
	207	351	409	217	109	44	78	10	0	0	1,425	32,541,522.84	22,836.16

CITY OF NEW ORLEANS EMPLOYEES RETIREMENT SYSTEM
 1/1/2018 INACTIVE PARTICIPANT PROFILE
 JANUARY 1, 2018 ACTUARIAL VALUATION

----- BENEFICIARIES -----

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+				
30-34	0	2	0	1	0	0	0	0	0	0	3	29,100.36	9,700.12
35-39	0	0	0	0	2	2	0	0	0	0	4	15,145.08	3,786.27
40-44	0	0	1	1	1	0	0	0	0	0	3	29,972.40	9,990.80
45-49	0	0	0	0	0	2	1	0	0	0	3	6,393.24	2,131.08
50-54	0	1	0	1	2	1	1	0	0	0	6	20,829.24	3,471.54
55-59	1	1	1	2	1	1	2	0	0	0	9	80,290.68	8,921.19
60-64	1	4	5	2	1	0	1	1	0	0	15	258,518.28	17,234.55
65-69	3	3	12	10	2	2	1	0	0	0	33	536,229.48	16,249.38
70-74	0	0	6	11	1	3	3	1	0	0	25	342,691.56	13,707.66
75-79	0	1	5	6	9	2	4	0	0	0	27	484,137.72	17,931.03
80-84	0	1	3	2	4	3	6	2	0	0	21	225,799.32	10,752.35
85-89	0	0	0	0	1	6	22	3	0	0	32	475,626.24	14,863.32
90+	0	0	0	1	0	5	7	9	5	5	27	368,834.04	13,660.52
	5	13	33	37	24	27	48	16	5	208	2,873,567.64	13,815.23	

CITY OF NEW ORLEANS EMPLOYEES RETIREMENT SYSTEM
 1/1/2018 INACTIVE PARTICIPANT PROFILE
 JANUARY 1, 2018 ACTUARIAL VALUATION

----- DISABILITY RETIREMENT -----

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+	TOTAL			
40-44	3	0	0	0	0	0	0	0	0	0	3	97,413.48	32,471.16
50-54	1	6	0	1	0	1	0	0	0	0	9	204,219.60	22,691.07
55-59	5	2	3	2	0	0	0	0	0	0	12	296,641.08	24,720.09
60-64	4	3	7	1	1	2	1	0	0	0	19	244,854.72	12,887.09
65-69	1	2	7	12	4	5	6	2	0	0	39	500,746.80	12,839.66
70-74	0	0	3	12	2	5	4	2	0	0	28	345,236.52	12,329.88
75-79	0	0	0	2	5	8	2	1	1	1	19	300,001.56	15,789.56
80-84	0	0	0	0	2	3	2	2	1	1	10	72,096.36	7,209.64
85-89	0	0	0	0	0	0	2	2	0	0	4	39,309.60	9,827.40
90+	0	0	0	0	0	1	1	0	2	2	4	34,210.56	8,552.64
	14	13	20	30	14	25	18	9	4	4	147	2,134,730.28	14,521.97

CITY OF NEW ORLEANS EMPLOYEES RETIREMENT SYSTEM
 1/1/2018 INACTIVE PARTICIPANT PROFILE
 JANUARY 1, 2018 ACTUARIAL VALUATION

----- SEPARATION RETIREMENT -----

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+	TOTAL			
60-64	19	0	0	0	0	0	0	0	0	0	19	236,045.64	12,423.45
65-69	15	21	1	0	0	0	0	0	0	0	37	366,361.92	9,901.67
70-74	4	19	16	0	0	0	0	0	0	0	39	415,292.76	10,648.53
75-79	0	1	3	18	0	0	0	0	0	0	22	219,452.04	9,975.09
80-84	0	0	0	2	6	0	0	0	0	0	8	58,288.80	7,286.10
85-89	0	0	1	0	1	5	0	0	0	0	7	62,897.40	8,985.34
90+	0	0	0	0	0	1	5	2	0	0	8	44,935.44	5,616.93
	38	41	21	20	7	6	5	2	0	0	140	1,403,274.00	10,023.39

CITY OF NEW ORLEANS EMPLOYEES RETIREMENT SYSTEM
 1/1/2018 INACTIVE PARTICIPANT PROFILE
 JANUARY 1, 2018 ACTUARIAL VALUATION

----- D.R.O.P. -----

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			
50-54	7	1	0	0	0	0	0	0	8	307,428.84	38,428.61
55-59	27	6	0	0	0	0	0	0	33	1,445,553.72	43,804.66
60-64	57	16	0	0	0	0	0	0	73	2,174,315.04	29,785.14
65-69	24	8	1	0	0	0	0	0	33	786,402.12	23,830.37
70-74	2	6	0	0	0	0	0	0	8	161,616.00	20,202.00
75-79	1	0	0	0	0	0	0	0	1	4,648.56	4,648.56
80-84	0	1	0	0	0	0	0	0	1	5,836.08	5,836.08
85-89	1	0	0	0	0	0	0	0	1	6,878.76	6,878.76
	119	38	1	0	0	0	0	0	158	4,892,679.12	30,966.32

CITY OF NEW ORLEANS EMPLOYEES RETIREMENT SYSTEM
 1/1/2018 INACTIVE PARTICIPANT PROFILE
 JANUARY 1, 2018 ACTUARIAL VALUATION

----- TERMINATED VESTED -----

AGE	YEARS SINCE TERMINATION								TOTAL	TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT	
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39				40+
25-29	2	0	0	0	0	0	0	0	0	2	6,911.52	3,455.76
30-34	10	0	0	0	0	0	0	0	0	10	56,676.60	5,667.66
35-39	19	3	5	0	0	0	0	0	0	27	192,943.32	7,146.05
40-44	12	5	7	0	0	0	0	0	0	24	208,043.64	8,668.49
45-49	5	9	15	1	0	0	0	0	0	30	200,668.80	6,688.96
50-54	14	7	31	8	1	0	0	0	0	61	518,019.60	8,492.12
55-59	14	9	33	9	1	0	0	0	0	66	678,234.36	10,276.28
60-64	8	13	23	5	3	0	0	0	0	52	491,907.84	9,459.77
65-69	2	7	11	0	0	0	0	0	0	20	224,399.28	11,219.96
70-74	1	0	3	1	0	0	0	0	0	5	34,072.56	6,814.51
75-79	1	0	4	0	0	0	0	0	0	5	26,518.68	5,303.74
85-89	0	0	1	0	0	0	0	0	0	1	1,953.36	1,953.36
	88	53	133	24	5	0	0	0	0	303	2,640,349.56	8,714.02

EXHIBIT V

MARKET VALUE AND ACTUARIAL VALUE ASSET INVESTMENT PERFORMANCE

CITY OF NEW ORLEANS EMPLOYEES' RETIREMENT SYSTEM
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 PAYMENTS FOR YEAR	COLA PAID FOR YEAR *	TRANSFERS OUT FOR YEAR *	NET EXTERNAL CASH FLOW FOR YEAR	MARKET VALUE INV. INCOME FOR YEAR	ENDING MARKET VALUE	MARKET VALUE INV. PERFORMANCE FOR YEAR
12/31/89	133,386,566	9,078,892	2,226,412	6,918	11,546,681	924,842	59,880	-1,219,181	13,892,547	146,059,932	10.4631%
12/31/90	146,059,932	8,947,779	2,456,143	15,663	12,398,801	940,873	0	-1,920,089	5,462,388	149,602,231	3.7646%
12/31/91	149,602,231	8,938,947	2,639,973	138,771	12,106,676	1,762,120	213,613	-2,364,718	26,846,336	174,083,849	18.0881%
12/31/92	174,083,849	9,258,071	2,769,427	135,055	11,896,989	1,503,162	117,862	-1,355,460	17,272,173	190,000,562	9.9605%
12/31/93	190,000,562	9,274,320	2,728,107	62,742	12,573,696	1,326,681	186,607	-2,021,815	24,849,967	212,828,714	13.1489%
12/31/94	212,828,714	9,238,967	2,646,225	60,643	13,254,585	1,338,486	297,357	-2,944,593	-3,197,363	206,686,758	-1.5128%
12/31/95	206,686,758	10,629,702	2,921,784	214,735	13,119,259	1,368,009	863,462	-1,584,509	43,229,352	248,331,601	20.9959%
12/31/96	248,331,601	9,858,968	2,761,098	159,681	13,135,573	1,414,345	1,687,069	-3,457,240	33,571,866	278,446,227	13.6137%
12/31/97	278,446,227	9,063,207	3,036,531	44,423	13,785,309	1,458,386	460,082	-3,559,616	44,255,400	319,142,011	15.9959%
12/31/98	319,142,011	8,739,480	3,481,930	93,077	14,045,949	1,465,548	162,565	-3,359,575	39,783,953	355,566,389	12.5319%
12/31/99	355,566,389	5,532,936	3,717,531	798,061	15,128,484	1,633,925	286,607	-7,000,488	27,236,487	375,802,388	7.7362%
12/31/00	375,802,388	6,044,588	3,237,744	883,698	16,260,880	1,701,048	828,404	-8,624,302	4,751,448	371,909,534	1.2736%
12/31/01	371,909,534	6,369,982	3,289,714	136,633	16,224,519	3,150,264	1,317,841	-10,896,295	-12,222,626	348,790,613	-3.3353%
12/31/02	348,790,613	6,665,119	3,500,753	632,479	18,167,527	3,152,822	1,082,938	-11,604,936	-23,149,025	314,036,652	-6.7492%
12/31/03	314,036,652	6,648,233	3,660,906	782,396	20,628,009	3,276,815	335,010	-13,148,299	65,492,332	366,380,685	21.3009%
12/31/04	366,380,685	7,592,093	4,771,376	144,249	20,252,982	3,432,714	520,140	-11,698,118	35,797,958	390,480,525	9.9292%
12/31/05	390,480,525	6,396,358	3,642,894	591,914	22,590,610	3,553,237	286,029	-15,798,710	17,464,439	392,146,254	4.5649%
12/31/06	392,146,254	4,510,813	2,735,241	1,188,916	32,138,912	3,517,039	2,042,721	-29,263,702	41,708,472	404,591,034	11.0482%
12/31/07	404,591,034	4,894,439	2,986,023	779,955	28,270,387	4,390,096	1,563,418	-25,563,484	33,770,375	412,797,925	8.6191%
12/31/08	412,797,925	4,991,193	3,429,766	632,232	28,375,247	4,379,663	863,952	-24,565,671	-120,890,979	267,341,275	-30.1839%
12/31/09	267,341,275	12,614,236	3,855,051	1,418,335	30,342,718	3,808,797	791,534	-17,055,427	59,869,583	310,155,431	23.1323%
12/31/10	310,155,431	13,031,810	3,781,490	1,792,875	32,158,476	3,269,131	1,411,074	-18,232,506	42,485,923	334,408,848	14.1131%
12/31/11	334,408,848	19,917,899	4,087,034	2,281,255	34,784,101	2,856,770	1,168,345	-12,523,028	-4,276,183	317,609,637	-1.3031%
12/31/12	317,609,637	19,010,841	5,155,380	1,685,729	37,639,270	2,242,059	815,100	-14,844,479	35,842,303	338,607,461	11.5550%
12/31/13	338,607,461	18,544,682	5,953,535	1,483,869	39,009,121	2,480,991	774,977	-16,283,003	50,131,156	372,455,614	15.1698%
12/31/14	372,455,614	20,306,887	6,193,573	1,677,851	41,129,501	2,224,382	1,685,047	-16,860,619	15,155,075	370,750,070	4.1632%
12/31/15	370,750,070	22,447,281	6,490,092	1,622,658	44,857,248	2,053,895	1,255,560	-17,606,672	-14,044,748	339,098,650	-3.8803%
12/31/16	339,098,650	27,304,527	7,444,419	1,106,421	46,720,997	1,800,326	1,434,681	-14,100,637	28,611,585	353,609,598	8.6167%
12/31/17	353,609,598	27,169,921	7,677,009	729,180	46,209,438	1,761,741	1,293,736	-13,688,805	51,906,523	391,827,316	14.9688%

Number of Years Included: 29

581,586,717

-323,145,977

* "TRANSFERS OUT" INCLUDES ADMINISTRATIVE EXPENSES

CITY OF NEW ORLEANS EMPLOYEES' RETIREMENT SYSTEM
 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
12/31/1989	146,059,932	10.4631%	132,776,976	134,474,947	145,400,919	8.5782%
12/31/1990	149,602,231	3.7646%	145,099,888	144,440,875	152,159,905	6.0087%
12/31/1991	174,083,849	18.0881%	148,419,872	150,977,546	158,285,109	5.6233%
12/31/1992	190,000,562	9.9605%	173,406,119	157,607,379	165,981,703	5.7434%
12/31/1993	212,828,714	13.1489%	188,989,655	164,970,796	172,649,085	5.2671%
12/31/1994	206,686,758	-1.5128%	211,356,418	171,176,789	180,625,703	6.3801%
12/31/1995	248,331,601	20.9959%	205,894,504	179,833,449	221,866,292	23.8138%
12/31/1996	278,446,227	13.6137%	246,602,981	220,137,672	242,897,086	11.1240%
12/31/1997	319,142,011	15.9959%	276,666,419	241,117,278	270,561,907	12.9499%
12/31/1998	355,566,389	12.5319%	317,462,224	268,882,120	300,107,935	12.2379%
12/31/1999	375,802,388	7.7362%	352,066,145	296,607,691	328,133,916	11.8090%
12/31/2000	371,909,534	1.2736%	371,490,237	323,821,765	351,735,022	9.9516%
12/31/2001	348,790,613	-3.3353%	366,461,387	346,286,875	374,022,897	9.5829%
12/31/2002	314,036,652	-6.7492%	342,988,145	368,220,429	384,415,399	5.9740%
12/31/2003	366,380,685	21.3009%	307,462,503	370,269,833	402,773,504	10.5539%
12/31/2004	390,480,525	9.9292%	360,531,626	396,924,445	412,486,855	5.3943%
12/31/2005	392,146,254	4.5649%	382,581,170	404,587,500	412,970,222	4.0244%
12/31/2006	404,591,034	11.0482%	377,514,413	398,338,371	403,370,965	4.9366%
12/31/2007	412,797,925	8.6191%	391,809,292	390,589,223	398,490,554	5.2954%
12/31/2008	267,341,275	-30.1839%	400,515,090	386,207,719	381,604,003	1.9883%
12/31/2009	310,155,431	23.1323%	258,813,562	373,076,290	387,146,017	6.0571%
12/31/2010	334,408,848	14.1131%	301,039,178	378,029,764	384,105,611	4.0188%
12/31/2011	317,609,637	-1.3031%	328,147,334	377,844,097	379,526,159	2.1023%
12/31/2012	338,607,461	11.5550%	310,187,398	372,103,920	372,049,545	1.9801%
12/31/2013	372,455,614	15.1698%	330,465,060	363,908,044	365,102,483	2.5655%
12/31/2014	370,750,070	4.1632%	364,025,305	356,672,174	352,915,906	1.3105%
12/31/2015	339,098,650	-3.8803%	361,946,734	344,102,570	367,274,453	9.2924%
12/31/2016	353,609,598	8.6167%	332,048,332	360,224,135	377,748,008	6.8219%
12/31/2017	391,827,316	14.9688%	346,765,196	370,903,606	388,233,310	6.5176%

CITY OF NEW ORLEANS EMPLOYEES' RETIREMENT SYSTEM
ESTIMATED INVESTMENT PERFORMANCE
BY CALENDAR YEAR

PLAN YEAR ENDING	NET EXTERNAL CASH FLOW FOR YEAR	MARKET VALUE BEGINNING MARKET VALUE	MARKET VALUE INV. INCOME FOR YEAR	ENDING MARKET VALUE	MARKET VALUE INVESTMENT PERFORMANCE			ACTUARIAL ASSET VALUE INVESTMENT PERFORMANCE			
					FOR YEAR	CUMULATIVE	AVERAGE	FOR YEAR	CUMULATIVE	AVERAGE	
12/31/1989	-1,219,181	133,386,566	13,892,547	146,059,932	10.4631%	10.46%	10.46%	8.58%	8.58%	8.58%	1
12/31/1990	-1,920,089	146,059,932	5,462,388	149,602,231	3.7646%	14.62%	7.06%	6.01%	15.10%	7.29%	2
12/31/1991	-2,364,718	149,602,231	26,846,336	174,083,849	18.0881%	35.35%	10.62%	5.62%	21.57%	6.73%	3
12/31/1992	-1,355,460	174,083,849	17,272,173	190,000,562	9.9605%	48.84%	10.45%	5.74%	28.56%	6.48%	4
12/31/1993	-2,021,815	190,000,562	24,849,967	212,828,714	13.1489%	68.41%	10.99%	5.27%	35.33%	6.24%	5
12/31/1994	-2,944,593	212,828,714	-3,197,363	206,686,758	-1.5128%	65.86%	8.80%	6.38%	43.96%	6.26%	6
12/31/1995	-1,584,509	206,686,758	43,229,352	248,331,601	20.9959%	100.68%	10.46%	23.81%	78.25%	8.61%	7
12/31/1996	-3,457,240	248,331,601	33,571,866	278,446,227	13.6137%	128.00%	10.85%	11.12%	98.07%	8.92%	8
12/31/1997	-3,559,616	278,446,227	44,255,400	319,142,011	15.9959%	164.47%	11.41%	12.95%	123.72%	9.36%	9
12/31/1998	-3,359,575	319,142,011	39,783,953	355,566,389	12.5319%	197.62%	11.52%	12.24%	151.10%	9.64%	10
12/31/1999	-7,000,488	355,566,389	27,236,487	375,802,388	7.7362%	220.64%	11.17%	11.81%	180.76%	9.84%	11
12/31/2000	-8,624,302	375,802,388	4,731,448	371,909,534	1.2736%	224.73%	10.31%	9.95%	208.70%	9.85%	12
12/31/2001	-10,896,295	371,909,534	-12,222,626	348,790,613	-3.3353%	213.90%	9.20%	9.58%	238.28%	9.83%	13
12/31/2002	-11,604,936	348,790,613	-23,149,025	314,036,652	-6.7492%	192.71%	7.97%	5.97%	258.49%	9.55%	14
12/31/2003	-13,148,299	314,036,652	65,492,332	366,380,685	21.3009%	255.06%	8.81%	10.55%	296.32%	9.61%	15
12/31/2004	-11,698,118	366,380,685	35,797,958	390,480,525	9.9292%	290.31%	8.88%	5.39%	317.70%	9.35%	16
12/31/2005	-15,798,710	390,480,525	5,17,464,439	392,146,254	4.5649%	308.13%	8.62%	4.02%	334.51%	9.03%	17
12/31/2006	-29,263,702	392,146,254	41,708,472	404,591,034	11.0482%	353.22%	8.76%	4.94%	355.96%	8.79%	18
12/31/2007	-25,563,484	404,591,034	33,770,375	412,797,925	8.6191%	392.29%	8.75%	5.30%	380.10%	8.61%	19
12/31/2008	-24,565,671	412,797,925	-120,890,979	267,341,275	-30.1839%	243.70%	6.37%	1.99%	389.65%	8.27%	20
12/31/2009	-17,055,427	267,341,275	59,869,583	310,155,431	23.1323%	323.20%	7.11%	6.06%	419.31%	8.16%	21
12/31/2010	-18,232,506	310,155,431	42,485,923	334,408,848	14.1131%	382.93%	7.42%	4.02%	440.18%	7.97%	22
12/31/2011	-12,523,028	334,408,848	-4,276,183	317,609,637	-1.3031%	376.63%	7.03%	2.10%	451.53%	7.71%	23
12/31/2012	-14,844,479	317,609,637	35,842,303	338,607,461	11.5550%	431.71%	7.21%	1.98%	462.46%	7.46%	24
12/31/2013	-16,283,003	338,607,461	50,131,156	372,455,614	15.1698%	512.37%	7.52%	2.57%	476.89%	7.26%	25
12/31/2014	-16,860,619	372,455,614	15,155,075	370,750,070	4.1632%	537.86%	7.39%	1.31%	484.44%	7.03%	26
12/31/2015	-17,606,672	370,750,070	-14,044,748	339,098,650	-3.8803%	513.11%	6.95%	9.29%	538.75%	7.11%	27
12/31/2016	-14,100,637	339,098,650	28,611,585	353,609,598	8.6167%	565.94%	7.01%	6.82%	582.33%	7.10%	28
12/31/2017	-13,688,805	353,609,598	51,906,523	391,827,316	14.9688%	665.62%	7.27%	6.52%	626.80%	7.08%	29

Number of Years Included: 29

EXHIBIT VI

DEMONSTRATION OF AVAILABLE "RESERVE" FOR COST OF LIVING PAYMENTS
PURSUANT TO ORDINANCE SECTION 114-204 (7)

CITY OF NEW ORLEANS EMPLOYEES' RETIREMENT SYSTEM
 DEMONSTRATION OF AVAILABLE COLA "RESERVE" PURSUANT TO ORDINANCE SECTION 114-204 (7)
 BY CALENDAR YEAR

PLAN YEAR ENDING	BEGINNING MARKET VALUE	ACTUAL COLA PAID DURING YEAR	ACTUAL NET EXTERNAL CASH FLOW DURING YEAR	ACTUAL ENDING MARKET VALUE	HYPOTHETICAL MARKET VALUE AT END OF YEAR ASSUMING NO COLA PAYMENTS AND 3.5% ANNUAL RETURN SINCE 1/1/1989	ACTUARIAL PRESENT VALUE OF "PERMANENT" COLA INCREASES
12/31/1989	133,386,566	924,842	-1,219,181	146,059,932	137,739,421	0
12/31/1990	146,059,932	940,873	-1,920,089	149,602,231	141,547,483	0
12/31/1991	149,602,231	1,762,120	-2,364,718	174,083,849	145,857,665	0
12/31/1992	174,083,849	1,503,162	-1,355,460	190,000,562	151,086,664	0
12/31/1993	190,000,562	1,326,681	-2,021,815	212,828,714	155,644,182	0
12/31/1994	212,828,714	1,338,486	-2,944,593	206,686,758	159,434,091	0
12/31/1995	206,686,758	1,368,009	-1,584,509	248,331,601	164,770,055	0
12/31/1996	248,331,601	1,414,345	-3,457,240	278,446,227	168,433,610	0
12/31/1997	278,446,227	1,458,386	-3,559,616	319,142,011	172,165,263	0
12/31/1998	319,142,011	1,465,548	-3,359,575	355,566,389	176,238,228	0
12/31/1999	355,566,389	1,633,925	-7,000,488	375,802,388	176,917,495	0
12/31/2000	375,802,388	1,701,048	-8,624,302	371,909,534	176,035,428	0
12/31/2001	371,909,534	3,150,264	-10,896,295	348,790,613	174,259,951	9,942,496
12/31/2002	348,790,613	3,152,822	-11,604,936	314,036,652	171,703,849	553,302
12/31/2003	314,036,652	3,276,815	-13,148,299	366,380,685	167,611,905	1,240,046
12/31/2004	366,380,685	3,432,714	-11,698,118	390,480,525	165,008,200	1,831,186
12/31/2005	390,480,525	3,553,237	-15,798,710	392,146,254	158,261,537	1,643,499
12/31/2006	392,146,264	3,517,039	-29,263,702	404,591,034	137,541,913	1,816,172
12/31/2007	404,591,034	4,390,096	-25,563,484	412,797,925	120,735,131	4,366,253
12/31/2008	412,797,925	4,379,663	-24,565,671	267,341,275	104,344,953	0
12/31/2009	267,341,275	3,808,797	-17,055,427	310,155,431	94,451,927	0
12/31/2010	310,155,431	3,269,131	-18,232,506	334,408,848	82,475,300	0
12/31/2011	334,408,848	2,856,770	-12,523,028	317,609,637	75,476,525	0
12/31/2012	317,609,637	2,242,059	-14,844,479	338,607,461	65,256,005	0
12/31/2013	338,607,461	2,480,991	-16,283,003	372,455,614	53,433,000	0
12/31/2014	372,455,614	2,224,382	-16,860,619	370,750,070	40,392,558	0
12/31/2015	370,750,070	2,053,895	-17,606,672	339,098,650	25,945,403	0
12/31/2016	339,098,650	1,800,326	-14,100,637	353,609,598	14,306,420	0
12/31/2017	353,609,598	1,761,741	-13,688,805	391,827,316	2,640,527	0
TOTALS:						21,392,954

Number of Years Included: 29

CERTIFICATION

The foregoing report presents fairly the actuarial position of the City of New Orleans Employees' Retirement System as of January 1, 2018 in accordance with generally accepted actuarial principles, applied on a basis consistent with that of the preceding valuation, except where noted. In our opinion, each actuarial assumption used in preparing the liabilities and estimated costs is reasonably related to the historical experience of the plan and to reasonable future expectations and represents our best estimate of anticipated experience under the plan.

CONEFRY & COMPANY, L.L.C.



Michael A. Conefry, FCA, ASA, MAAA, MSPA
Enrollment Number 17-1235

New Orleans, Louisiana
June, 2018

V1712.CNO