



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

## **EMPLOYEES' RETIREMENT SYSTEM OF THE Sewerage & Water Board OF NEW ORLEANS**

*Mitch Landrieu, President*

625 ST. JOSEPH STREET  
NEW ORLEANS, LA 70165 • 504-529-2837 OR 52W-ATER  
[www.swbno.org](http://www.swbno.org)

March 28, 2018

The Board of Trustees met on Wednesday, March 28, 2018 in the Board Room, 625 St. Joseph Street, New Orleans, LA. The meeting convened at approximately 10:30 A.M.

### **Present:**

Ms. Robin Barnes  
Mr. Christopher Bergeron  
Dr. Tamika Duplessis  
Ms. Stacy Horn Koch  
Mr. Ralph Johnson  
Mr. Joseph Peychaud  
Ms. Chante' Powell  
Mr. Lynes Sloss  
Mr. Lewis Sterling, III

Also in attendance: Mr. James Thompson, Office of Special Counsel; Dr. Tim Viezer, Chief Investment Officer.

### **ACTION ITEMS:**

1. Approval of a letter to retirees.

### **EXECUTIVE SESSION:**

2. None.

### **PRESENTATION ITEMS:**

Mr. James Thompson noted that the President of the Board of Trustees was not present and suggested nominating Mr. Joseph Peychaud, the Chairman of the Pension Committee, to chair the meeting. Dr. Tamika Duplessis offered a motion, Mr. Lynes Sloss seconded, and the motion carried.

Mr. Peychaud asked for a motion to approve the December 2017 meeting minutes. Ms. Stacy Horn Koch offered a motion to approve, which was seconded by Mr. Lewis Sterling, III, and the motion carried by vote. Mr. Peychaud then asked for a motion to approve the proposed letter to retirees. Ms. Horn Koch offered a motion to approve, which was seconded by Mr. Sterling, and the motion carried by vote.

### **INFORMATION ITEMS:**

None.

### **ANY OTHER MATTERS:**

None.

**ADJOURNMENT:**

There being no further business to come before the Board of Trustees, Mr. Peychaud called for a motion and Ms. Horn Koch made a motion to adjourn. Mr. Lynes Sloss seconded and the motion carried. The meeting adjourned at approximately 10:32 A.M.

Respectfully submitted,

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Joseph Peychaud, Acting Chair

**RECOMMENDATION TO ASSIGN MONTH-TO-MONTH INVESTMENT CONSULTING TO  
FFC INVESTMENT ADVISORS OF RAYMOND JAMES**

**WHEREAS**, the contract with FFC Capital Management expired on March 3, 2018;

**WHEREAS**, it is the Pension Committee's intention to competitively rebid investment consulting service without prejudice to FFC Capital Management; and

**WHEREAS**, investment consulting services are needed for the period from the expiration of the contract with FFC Capital Management through the successful conclusion of a search for investment consulting services; and

**WHEREAS**, it was also the Chief Investment Officer's recommendation and the Pension Committee's intention to continue the contract with FFC Capital Management on a month-to-month basis through successful conclusion of a search for investment consulting services; and

**WHEREAS**, Octave Francis has announced a new affiliation with Raymond James & Associates and will continue to offer institutional consulting as FFC Investment Advisors of Raymond James; and

**WHEREAS**, the Pension Committee recommends that the Board of Trustees assign the pension investment consultant contract to FFC investment Advisors of Raymond James, on a month-to-month basis.

**NOW, THEREFORE, BE IT RESOLVED** by Board of Trustees of the Employees' Retirement System of Sewerage and Water Board of New Orleans that the Chief Investment Officer be authorized to negotiate and enter into a month-to-month agreement with FFC investment Advisors of Raymond James, with the assistance of the Office of Special Counsel and that the Chief Investment Officer be authorized to certify this resolution.

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I, Timothy W. Viezer, Chief Investment Officer,  
for the Employees' Retirement System of the  
Sewerage and Water Board of New Orleans,  
do hereby

certify that the above and foregoing is a true and  
correct copy of a Resolution adopted at the Meeting of the  
Board of Trustees of the Employees' Retirement System  
of Sewerage and Water Board of New Orleans, duly called and held,  
according to law, on **June 20, 2018**.

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\_\_\_\_\_, Chief Investment Officer  
**FOR EMPLOYEES' RETIREMENT SYSTEM OF  
THE SEWERAGE AND WATER BOARD OF NEW ORLEANS**

# INSTITUTIONAL FIDUCIARY SOLUTIONS

## Objective Guidance for Institutional Investors

### Sewerage and Water Board of New Orleans Employees' Retirement System



FFC INVESTMENT ADVISORS

of

**RAYMOND JAMES®**

Octave J. Francis III, CIMA®

Managing Director

Senior Vice President, Investments

FFC Investment Advisors of Raymond James

400 Poydras Street, Suite 2400

New Orleans, Louisiana 70130

T 504.299.2990 // T 888.769.7050

[octave.francis@raymondjames.com](mailto:octave.francis@raymondjames.com)

[www.ffcinvestmentadvisors.com](http://www.ffcinvestmentadvisors.com)

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**RAYMOND JAMES®**

# UNIQUE CHALLENGES REQUIRE UNIQUE SUPPORT

## Our Mission

At Raymond James, we understand the importance of our clients meeting their investment stewardship obligations. We take an objective, unbiased approach and tailor our guidance and services to each client situation.

The team of investment professionals at Raymond James Institutional Fiduciary Solutions works with us to provide for all aspects of investment consulting – from strategy development and investment research to reporting and periodic reviews. Our proactive advice includes the creation and implementation of a well-defined process for making informed investment decisions based on prudent investment practices. Each investment strategy is developed in consideration of well-established fiduciary standards and is backed by our philosophy of conservative management.

*There is no assurance that any investment strategy will be successful. All investing involves risk and you may incur a profit or loss.*

# THE RAYMOND JAMES ADVANTAGE: GLOBAL RESOURCES, LOCAL ACCOUNTABILITY.

FFC Investment Advisors of Raymond James  
Octave J. Francis III, CIMA®  
Managing Director  
Senior Vice President, Investments

## Institutional Fiduciary Solutions

### INSTITUTIONAL CONSULTING

Bob Burns  
CFA, AIF

Dwight Edwards  
CRPS, CRPC

Dickson Logan  
AIF, CPFA

Susan Schneider  
CIMA, CIMC, AIF

Kevin Kozak  
AIF

Andrew Keil  
AIF

1 CFA  
1 CIMA  
1 CIMC  
5 AIF

1 CRPS  
1 CRPC  
1 CPFA

### CONSULTING SUPPORT

Bo Bohanan  
Director, AIF

Kevin Kuzianik  
CRPS, CPFA

Shelly Hardison  
CRPS, CPFA

Richard Placey  
CRPS

Todd Fullam  
CPFA

David Marsh

Joel Rodriguez

Annemarie Burgess

3 CRPS  
1 AIF

3 CPFA

### MANAGER DUE DILIGENCE

Glenn Hudson

Lawrence Gillum  
CFA, CAIA

Andrew Read\*  
CFA

Johnny Suarez

Jeffrey Gardner  
CFA

Patrick Rassi  
CAIA

Andrew Gillis  
CAIA

Andrew Flinner

William Warner  
CFA

Donovan Celerin

Tyler Martinasek

Xianwei Cheng

James Dowdle

Leon Faust

Lisa Marshall

Truc Bui

Alex Bolton

Carlos Panatex

5 CFA

3 CAIA

### ASSET ALLOCATION

Kevin Pate\*  
CAIA

Michael Meleen

Jeremy Brothers  
CFA

Sandrina Riddell  
CFA

Eric McNew

Mark Arkelian  
CFA

Dusica Tomasevic

Dan Scrutz

2 CFA

1 CAIA

### ALTERNATIVE INVESTMENTS

Ryan Stolz  
CFA, CAIA

Shivam Patel

Charlie Kusche  
CAIA

Carla Johnson

Felipe Manzo

James Hale

Allison Tucker  
CAIA

Nicholas Asselin

Maria Garcia

3 CFA

5 CAIA

Christopher Butler, CFA, CAIA  
SVP, PCG Investment Products

Nicholas Lacy\*, CFA  
Chief Portfolio Strategist, AMS

Thomas Thornton\*, CFA  
VP, Research, AMS

Raymond James information as of 2/8/18. \*Asset Management Services Investment Committee member (AMS IC): The AMS Investment Committee is composed of experienced personnel within AMS Management and Research. The Committee collectively determines the asset allocations for Freedom and Freedom UMA strategies, as well as making hiring and firing decisions for AMS managers.

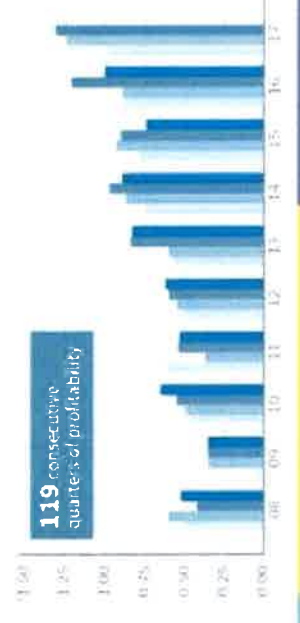
# PROVEN HISTORY. PROVEN EXPERIENCE.

Raymond James has delivered **119 consecutive quarters of profitability**. We credit much of this performance to the firm's client-first perspective and adherence to its founding core values of **professional integrity, advisor independence, and a conservative, long-term approach to investing**.

## BY THE NUMBERS

- Approximately **7,300** financial advisors
- Over **3,000** locations (United States, Canada and abroad)
- Approximately **\$693 billion** in total client assets
- More than **2x** required total capital ratio
- **BBB+**, positive outlook credit rating (S&P)

## STRENGTH AND STABILITY – Diluted quarterly earnings per share



## DID YOU KNOW?

In 2017, Raymond James was named to the FORTUNE 500 list for the second year in a row.

Continuing its tradition of giving back, Raymond James and its associates donated **\$46.37 million** to charitable organizations in 2016, including **\$5.19 million** to the United Way and its partner agencies.

Raymond James was the first in the nation to publish its Client Bill of Rights, setting the standard for the industry.

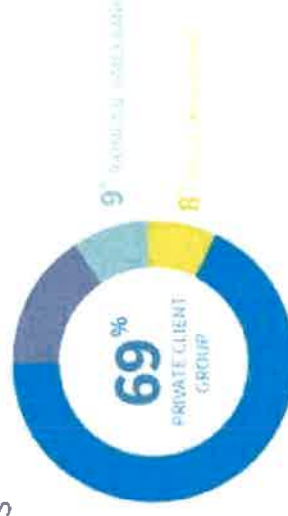
As of 9/30/2017, Past performance is not an indication of future results. The information provided is for informational purposes only and is not a solicitation to buy or sell Raymond James Financial stock. The FORTUNE 500 is an annual list by FORTUNE magazine that ranks 500 of the largest U.S. corporations based on fiscal-year total revenues. FORTUNE and FORTUNE 500 are registered trademarks of Time Inc. and are used under license. From FORTUNE Magazine, June 15, 2016. ©2016 Time Inc. Used under license. FORTUNE and Time Inc. are not affiliated with and do not endorse products and services of Raymond James Financial, Inc. Raymond James Bank is an affiliate of Raymond James & Associates, Inc., and Raymond James Financial Services, Inc. © 2017 Raymond James & Associates, Inc., member New York Stock Exchange/SIPC © 2017 Raymond James Financial Services, Inc., member FINRA/SIPC. Investment products are: not deposits, not FDIC/NCUA insured, not insured by any government agency, not bank guaranteed, subject to risk and may lose value. 17-BDMKT-2845 10/17

## A DIVERSIFIED SET OF BUSINESSES\*

Total \$6.4 billion

Total net revenue shows fiscal year data ending Sept. 30, 2017

16<sup>th</sup> CAPITAL MARKETS





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## OBJECTIVE ADVICE FOR INSTITUTIONAL INVESTORS

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### Who do we serve?

- |                            |                            |                                |
|----------------------------|----------------------------|--------------------------------|
| ▶ Nonprofits               | ▶ Corporations             | ▶ Taft Hartley Plans           |
| ▶ Insurance Pools          | ▶ Native American Entities | ▶ Governments & Municipalities |
| ▶ Foundations & Endowments | ▶ Pension Plans            |                                |



## A FULL BREADTH OF SERVICES. SOPHISTICATED INVESTMENT TOOLS AND STRATEGIES.

- ▶ Investment Policy Review and Development Assistance
- ▶ Asset Allocation Analysis and Guidance
- ▶ Investment Search and Selection Assistance
- ▶ Performance Reporting
- ▶ Research and Due Diligence
- ▶ Services and Education for Fiduciaries

*Disclosure: All investing involves risk and you may incur a profit or a loss. There is no guarantee that this or any investment strategy will be successful. Diversification does not ensure a profit or protect against a loss.*

## GLOBAL FIDUCIARY PRECEPTS®

We understand the importance of our clients meeting their stewardship obligations. As a foundation of our process, Raymond James Institutional Fiduciary Solutions develops guidance and provides other services to help us align client processes with the Global Fiduciary Precepts®<sup>1</sup> ensuring every decision is approached with discipline, transparency and control.

### The Center for Fiduciary Studies Global Fiduciary Precepts®:

1. Know standards, laws and/or trust provisions.
2. Diversify assets to the specific risk/return of client.
3. Prepare an investment policy statement.
4. Use prudent experts (professional money managers) and document due diligence.
5. Control and account for investment expenses.
6. Monitor the activities of prudent experts.
7. Avoid conflicts of interest and prohibited transactions.

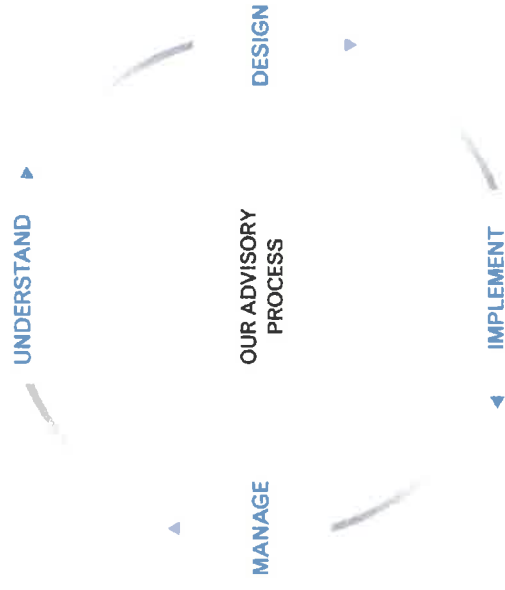
<sup>1</sup>Copyright 2000, The Center for Fiduciary Studies  
Disclosure: Diversification does not ensure a profit or protect against a loss.

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## OUR APPROACH

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In line with Raymond James Institutional Fiduciary Solutions' mission statement, we have developed a clearly defined four-step process designed to provide additional discipline and structure to the consulting services we deliver to each client.



*There is no assurance that any investment strategy will be successful. All investing involves risk.*

## MONITORING AND COMMUNICATION

We work with the professionals of Institutional Fiduciary Solutions during all stages of the relationship.

Once the investment process is established and investments are implemented, our work and communications continue. Each investment solution we help our clients select within the Raymond James Consulting Services and Freedom programs receives our ongoing analysis and review, as detailed in the graphic to the right. In some cases we may also assist you in the development of an alternate monitoring process for other investments within your portfolio.

### ONGOING REVIEW PROCESS

Raymond James accesses major databases



Formal quarterly reviews confirm status.

Sophisticated multi-factor screens refine our list.  
Dedicated analysts perform targeted qualitative reviews.

Chosen investment alternatives receive formal approval.

*Disclosure: All investing involves risk and you may incur a profit or a loss. There is no guarantee that any investment strategy will be successful.*

## MONITORING AND COMMUNICATION

Made up of a team of highly qualified investment professionals from AMS Institutional Research and Due Diligence, the AMS Research team develops optimal, risk-adjusted asset allocations and strives to include top investment managers into the Raymond James Institutional Portfolios, Freedom portfolios and Raymond James Consulting Services program.

**The AMS Research team performs the following analyses on an ongoing basis on each portfolio it selects:**

- Monitors the firm, personnel and portfolio
- Manager contact
- Onsite visits
- Meetings at the home office
- Conference calls
- Systems include Callan, MorningStar, FactSet and Informa PSN
- Develops relationships with managers
- Quarterly quantitative and qualitative reviews
- Issues status updates

### EXTENSIVE EXPERIENCE

- **A combined 300 years of industry experience**
- **Average of 17 years of industry experience per person<sup>1</sup>**
- **Twelve advanced degrees**
- **Nine Chartered Financial Analyst (CFA) charterholders**
- **Five Chartered Alternative Investment Analyst (CAIA) charterholders**

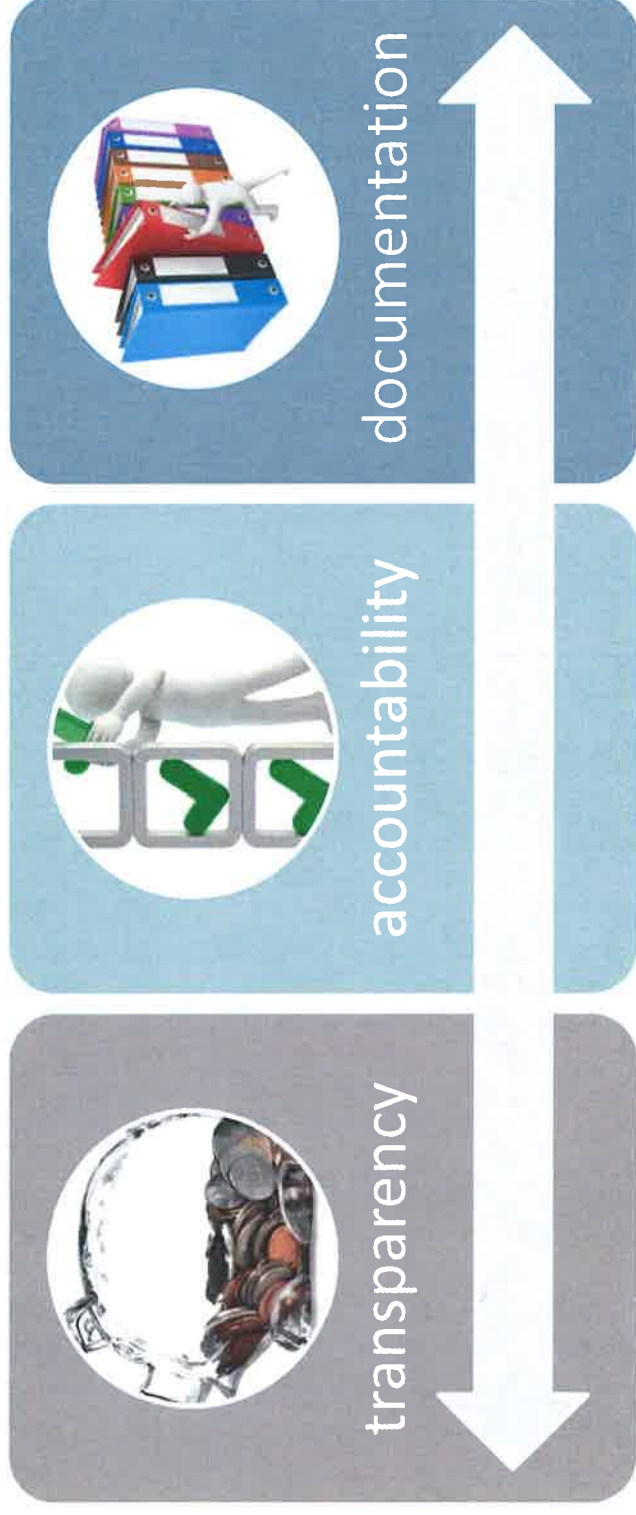
As of 9/30/2017

<sup>1</sup>For senior analysts and above

AMS RESEARCH STATISTICS (Annually)	
Onsite Visits	100+
Home Office Visits	250+
Conference Calls	150+
Traveled Days	100+
Traveled Miles	50,000+

## UNIQUE MONITORING TOOL: CLIENT SERVICE PLAN

We offer a customized *Client Service Plan*, which is a unique monitoring tool that serves to summarize performance report information relative to a defined monitoring criteria. This tool also serves to document a client's stewardship and enables more effective and efficient decision making.





## INSTITUTIONAL FIDUCIARY SOLUTIONS: ADDITIONAL RESOURCES

We take an objective, unbiased approach and tailor our guidance and services to each client situation. We can provide customized solutions based on the needs of our clients. These solutions may include:

- ▶ Quarterly economic analysis and commentary
- ▶ Annual review of overall investment strategy
- ▶ Spending policy review and analysis
- ▶ Socially Responsible Investing
- ▶ Implementation of Liability Driven Investment (LDI) mandates
- ▶ Review and evaluation of past investment performance and asset allocation
- ▶ Comprehensive Performance Reporting with multiple custodians and/or advisors

*Disclosure: All investing involves risk and you may incur a profit or a loss. There is no guarantee that any investment strategy will be successful.*

## OUR INSTITUTIONAL DIFFERENCE

Raymond James provides a broad array of comprehensive resources and the exclusive dedication that is required in servicing some leading companies, financial institutions and foundations. Our commitment and dedication are made evident by:

- ▶ Disciplined approach to investment management
- ▶ Independent due diligence process and research
- ▶ Ongoing monitoring and attribution analysis
- ▶ Access to world-class managers
- ▶ Ability to deliver customized performance reporting
- ▶ Dedicated, full-time team of professionals

*All investing involves risk and you may incur a profit or loss. There is no assurance that any investment strategy will be successful.*

# DISCLOSURE

**Further information on the funds selected for the Raymond James Institutional Portfolios and Freedom portfolios is available by prospectus, which can be obtained through your financial advisor. Investors should carefully consider the investment objectives, risks, charges and expenses of mutual funds and exchange-traded funds before investing. All investments are subject to risk. The prospectus contains this and other information about the funds and should be read carefully before investing.**

The foregoing content reflects the opinions of Raymond James Asset Management Services and is subject to change at any time without notice. Content provided herein is for informational purposes only and should not be used or construed as investment advice or a recommendation regarding the purchase or sale of any security outside of a managed account. This should not be considered forward looking, and are not guarantees of future performance of any investment.

All investing involves risk. Asset allocation and diversification does not ensure a profit or protect against a loss. All investments are subject to risk. There is no assurance that any investment strategy will be successful. It is important to review the investment objectives, risk tolerance, tax objectives and liquidity needs before choosing an investment style or manager. All investments carry a certain degree of risk and no one particular investment style or manager is suitable for all types of investors.

Not FDIC or NCUA Insured · No Bank Guarantee · May Lose Value

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

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

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June 13, 2018

Timothy W. Viezer, PhD, CFA, CAIA, PRM  
Chief Investment Officer  
Sewerage and Water Board of New Orleans  
625 St. Joseph Street  
New Orleans, LA 70165

Re: January 1, 2018 Actuarial Valuation

Dear Dr. Viezer:

Following is a summary of the results of the actuarial valuation report of the Employees' Retirement System of the Sewerage and Water Board of New Orleans as of December 31, 2017.

This actuarial valuation has been performed on a basis consistent with that which was performed as of December 31, 2016, with the exception of the provision of a 15 year amortization contribution instead of 10 year amortization as in the past.

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>12/31/2016</u>	<u>12/31/2017</u>
1. Number of Active Participants	998	1,083
2. Total Active Annual Payroll	\$ 35,363,156	\$ 41,822,648
3a. Plan 10 Year Amortization Contribution as a Percentage of Active Payroll	36.175%	N/A
3b. Plan 15 Year Amortization Contribution as a Percentage of Active Payroll	N/A	30.216%
4. Expected Employee Contribution as a Percentage of Active Payroll (See pp. 8-9 of report)	5.000%	5.000%

	<u>12/31/2016</u>	<u>12/31/2017</u>
5a. Employer 10 Year Amortization Contribution as a Percentage of Active Payroll	31.175%	N/A
5b. Employer 15 Year Amortization Contribution as a Percentage of Active Payroll	N/A	25.216%
6. Plan 30 Year Amortization Contribution as a Percentage of Active Payroll	25.235%	25.170%
7. Expected Employee Contribution as a Percentage of Active Payroll (See pp. 8-9 of report)	5.000%	5.000%
8. Employer 30 Year Amortization (Minimum) Contribution as a Percentage of Active Payroll	20.235%	20.170%
9. Market Value of Plan Assets	\$ 224,356,261	\$ 235,284,317
10. Actuarial Value of Plan Assets (Adjusted Market Value Basis)	\$ 238,175,902	\$ 241,394,869
11. Valuation Unfunded Actuarial Liability	\$ 64,592,033	\$ 74,538,805
12. Ratio of UAL to Valuation Payroll	182.7%	178.2%
13. Funded Ratio	81.3%	79.4%

There have not been plan amendments or 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 are the most recent substantive amendments to the plan's provisions which would have a material effect on the actuarial valuation results (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, 2018

**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, 2018. 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, 2018

Market Value of Assets	\$ 235,284,317	Page 1
Actuarial Value of Assets	\$ 241,394,869	Page 2

II. EMPLOYER AND EMPLOYEE CONTRIBUTIONS

For the Plan Year Beginning January 1, 2018

Total "15 Year Amortization" Contribution (As % of Payroll)	\$ 12,636,999 (30.216%)	Page 8
Expected Total Employee Contributions (As % of Payroll)	\$ 2,091,132 (5.000%)	Page 8
Employer "15 Year Amortization" Contribution (As % of Payroll)	\$ 10,545,867 (25.216%)	Page 8
Total "30 Year Amortization" Contribution (As % of Payroll)	\$ 10,526,730 (25.170%)	Page 9
Expected Total Employee Contributions (As % of Payroll)	\$ 2,091,132 (5.000%)	Page 9
Employer "30 Year Amortization" Contribution (As % of Payroll)	\$ 8,435,598 (20.170%)	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

Page 36

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 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, 2017 is based on information supplied by the administrative office and the auditors of the System.

Table 1

Statement of Assets  
as of December 31, 2017

<u>Assets</u>	<u>Market Value</u>
Cash	\$ 230,946
Investments	<u>234,711,857</u>
Total Invested Assets	234,942,803
Plus accounts receivable	+341,514
Less accounts payable	<u>0</u>
Total Assets	\$ 235,284,317 *

- \* 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, 2017

Plan Year Ending	Beginning Market Value	Net External Cash Flow For Year	Market Value Inv. Income For Year	Ending Market Value	Market Value Adj. Performance For Year	Market Value Component
2011	205,240,285	-8,114,890	8,968,361	206,093,756	4.4578%	236,054,430
2012	206,093,756	-8,472,301	23,082,600	220,704,055	11.4351%	248,603,835
2013	220,704,055	-9,525,020	23,179,014	234,358,049	10.7339%	259,165,532
2014	234,358,049	-9,143,898	11,342,520	236,556,671	4.9416%	253,364,613
2015	236,556,671	-9,985,003	-4,144,141	222,427,527	-1.7896%	230,054,972
2016	222,427,527	-10,642,132	12,570,866	224,356,261	5.7902%	227,236,384
2017	224,356,261	-12,398,217	23,326,273	235,284,317	10.6924%	235,284,317

Years Included: 7      -68,292,418      98,336,450

Average Adj. MV: \$241,394,869

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 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 was replaced by level dollar amortization for "open" (that is, a constant number of years) ten (10) year amortization and thirty (30) year amortization periods effective on each valuation date. Effective with this actuarial valuation as of January 1, 2018, we present the amortization on closed periods of fifteen (15) years and thirty (30) years. These amounts are developed later in this section and presented in Tables 5 and 6.

Table 3  
Entry Age Normal Cost for Plan Year  
Beginning January 1, 2018

(1)	Actuarial Present Value at Entry Age of Expected Benefits to Plan Participants	\$ 22,275,003
(2)	Actuarial Present Value at Entry Age of Future Payroll of Active Participants	204,297,107
(3)	Normal Cost as a Percentage of Payroll: (1) divided by (2)	10.903%
(4)	Current Payroll of Active Participants *	41,822,648
(5)	Normal Cost: (3) x (4) (Assumed payable January 1, 2018)	\$ 4,559,923
(6)	Normal Cost, adjusted for monthly payments	\$ 4,704,433

\* There are 1,083 active participants: 479-fully vested; 0-partially vested; 604-not vested.



Table 4  
Unfunded Actuarial Liability  
as of January 1, 2018

(1)	Actuarial Present Value of Expected Benefits to Active Plan Participants		
(a)	Basic and Supplemental Retirement Benefit	\$ 96,656,313	
(b)	Death and Survivor Benefit	6,090,160	
(c)	Disability Benefit (Inc. suppl & surv.)	8,448,295	
(d)	Vesting Benefit	8,481,147	
(e)	Refund of Employee Contributions	<u>2,180,172</u>	
	Total Active		\$ 121,856,087
(2)	Actuarial Present Value of Expected Benefits to Inactive Plan Participants		
(a)	Regular Retirees	\$ 147,432,949	
(b)	Disability Retirement	7,534,188	
(c)	Survivors	7,904,121	
(d)	Terminated Vested	1,856,386	
(e)	D.R.O.P. Retirees (Future Benefits)	44,307,270	
(f)	D.R.O.P. Retirees (Account Balances)	<u>11,610,897</u>	
	Total Inactive		\$ 220,645,811
(3)	Total Actuarial Present Value of Expected Benefits to All Plan Participants		
	(1) + (2)		342,501,898
(4)	Actuarial Present Value of Future Payroll of Active Participants		243,678,107
(5)	Normal Cost as a Percentage of Payroll: (From Table 3)		10.903%
(6)	Actuarial Present Value of Future Normal Cost Contributions:		
	(4) x (5)		26,568,224
(7)	Actuarial Value of Assets (from Table 2)		241,394,869
(8)	Unfunded Actuarial Liability:		
	(3) - (6) - (7)		74,538,805

## TOTAL CONTRIBUTION FOR PLAN YEAR BEGINNING January 1, 2018

### Contribution to Amortize the Unfunded Actuarial Liability over 15 years

The amount of the contribution for a plan year equals the normal cost plus the level dollar amount necessary to amortize the Unfunded Actuarial Liability. The annual amount required to amortize the Unfunded Actuarial Liability of \$74,538,805 over 15 years at 7% annual interest (assuming monthly payments) is \$7,932,566.

Table 5

### Total "15 Year Amortization" Contribution for the Plan Year Beginning January 1, 2018

(1)	Normal Cost (From Table 3; assumed payable monthly)	\$ 4,704,433	
(2)	Net Annual charge Required for Amortization of Unfunded Actuarial Liability Over 10 year period beginning January 1, 2018 (See Above; Assumed payable monthly)	7,932,566	
(3)	Total Plan Contribution as of January 1, 2018: (1) + (2)	\$ 12,636,999 (30.216%)	*
(4)	Annual Employee Plan Contributions as of January 1, 2018 (See note below)	\$ 2,091,132 ( 5.000%)	*
(5)	Employer Contribution as of January 1, 2018: (3) - (4) (Assumed payable monthly)	\$ 10,545,867 (25.216%)	*

\* Expressed as a percentage of annual participant payroll of \$41,822,648.

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.

Contribution to Amortize the Unfunded Actuarial Liability over 30 years

The amount of the contribution for a plan year equals the normal cost plus the level dollar amount necessary to amortize the Unfunded Actuarial Liability. The annual amount required to amortize the Unfunded Actuarial Liability of \$74,538,805 over 30 years at 7% annual interest (assuming monthly payments) is \$5,822,297.

Table 6  
Total "30 Year Amortization" Contribution for the  
Plan Year Beginning January 1, 2018

(1)	Normal Cost (From Table 3; assumed payable monthly)	\$ 4,704,433	
(2)	Net Annual Charge Required for Amortization of Unfunded Actuarial Liability Over 30 year period beginning January 1, 2018 (see above) (Assumed payable monthly)	5,822,297	
(3)	Total Plan Contribution as of January 1, 2018: (1) + (2)	\$ 10,536,730 (25.170%)	*
(4)	Annual Employee Plan Contributions as of January 1, 2018 (See note below)	\$ 2,091,132 ( 5.000%)	*
(5)	Employer Contribution as of January 1, 2018: (3) - (4) (Assumed payable monthly)	\$ 8,435,598 (20.170%)	*

\* Expressed as a percentage of annual participant payroll of \$41,822,648.

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, 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. 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 15 year amortization contribution as a percentage of payroll decreased from 30.406% for the plan year beginning January 1, 2017 to 30.296% for the plan year beginning January 1, 2018. The total 10 year amortization contribution as a percentage of payroll decreased from 25.235% for the plan year beginning January 1, 2017 to 25.170% for the plan year beginning January 1, 2018. These decreases of 0.110% and 0.065% 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, if any.

## APPENDIX

EXHIBIT I

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

SUMMARY OF PLAN PROVISIONS

<u>EFFECTIVE DATE:</u>	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.
<u>MEMBERSHIP:</u>	Employees who become members as a condition of employment.
<u>CREDITABLE SERVICE:</u>	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.
<u>EARNABLE COMPENSATION:</u>	Annual compensation paid to an employee; excluding on-call and stand-by pay or over-time.
<u>AVERAGE COMPENSATION:</u>	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.
<u>EMPLOYEE CONTRIBUTIONS:</u>	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 I (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

June 21, 2000:

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.

January 1, 2001:

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.

February 25, 2001:

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).

June 19, 2002:

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.

January 31, 2011:

Interest on DROP accounts changed from "Credited Interest" to that actually earned on the separately invested DROP accounts, but not below zero.

January 1, 2013:

Employee contribution formula amended from 4% to 5% of earnable compensation.

November 19, 2014:

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, 2018 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, 2018 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, 2017 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, 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 4.

#### SCHEDULE OF FUNDING PROGRESS

	<u>12/31/2016</u>	<u>12/31/2017</u>
Interest Assumption	7.00%	7.00%

#### RATIO OF UAL TO VALUATION PAYROLL:

[1] Unfunded Accrued Liability (UAL)	\$ 64,592,033	\$ 74,538,805
[2] Valuation Annual Payroll	35,363,156	41,822,648
[3] Ratio: [1] divided by [2]	182.7%	178.2%

#### FUNDED RATIO:

[1] Projected Benefit Obligation (PBO)		
Inactive Plan Participants	\$ 203,942,615	\$ 222,814,836
Active Plan Participants	<u>89,744,429</u>	<u>83,252,592</u>
Total PBO	\$ 293,687,044	\$ 306,067,428
[2] Actuarial Value of Assets	238,715,902	241,394,869
[3] Funded Ratio: [2] divided by [1]	81.3%	79.4%

EXHIBIT IV

ACTIVE AND INACTIVE PARTICIPANT PROFILES

EMPLOYEES RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
01/1/2018 ACTIVE PARTICIPANT AGE VS SERVICE GRID  
JANUARY 1, 2018 ACTUARIAL VALUATION

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----- 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+				
0-19	4	0	0	0	0	0	0	0	0	0	4	119,400.02	29,850.01
20-24	49	1	0	0	0	0	0	0	0	0	50	1,363,117.58	27,262.35
25-29	124	19	1	0	0	0	0	0	0	0	144	4,631,681.33	32,164.45
30-34	116	51	6	0	0	0	0	0	0	0	173	6,283,891.82	36,323.07
35-39	87	23	11	3	1	0	0	0	0	0	125	4,754,977.46	38,039.82
40-44	54	14	12	4	13	0	0	0	0	0	97	3,833,657.08	39,522.24
45-49	42	22	10	13	16	10	0	0	0	0	113	4,455,485.91	39,429.08
50-54	62	17	16	8	26	22	11	1	0	0	163	6,704,966.78	41,134.77
55-59	45	20	18	2	13	11	15	4	0	0	128	5,539,107.32	43,274.28
60-64	26	16	8	1	0	7	5	1	0	0	64	2,934,141.19	45,845.96
65-69	10	4	0	1	2	1	1	0	0	0	19	1,041,231.26	54,801.65
70-74	0	1	1	1	0	0	0	0	0	0	3	160,997.71	53,665.90

EMPLOYEES RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
01/1/2018 INACTIVE PARTICIPANT PROFILE  
JANUARY 1, 2018 ACTUARIAL VALUATION

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

AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL	TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT
45-49	2	0	0	0	0	0	0	0	0	2	79,460.88	39,730.44
50-54	5	0	0	0	0	0	0	0	0	5	305,592.48	61,118.50
55-59	11	30	2	0	0	0	0	0	0	43	1,615,684.08	37,574.05
60-64	33	72	39	4	0	0	0	0	0	148	4,363,604.28	29,483.81
65-69	13	61	63	23	0	0	1	0	0	161	4,544,919.00	28,229.31
70-74	5	19	73	26	4	0	0	0	0	127	3,030,762.60	23,864.27
75-79	0	2	16	25	12	1	0	0	1	57	1,223,522.76	21,465.31
80-84	0	0	0	19	18	7	1	0	0	45	787,616.04	17,502.58
85-89	0	0	0	3	7	7	2	0	0	19	352,224.96	18,538.16
90+	0	1	0	1	0	2	5	0	1	10	114,091.92	11,409.19
	69	185	193	101	41	17	9	0	2	617	16,417,479.00	266081566



EMPLOYEES RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
01/1/2018 INACTIVE PARTICIPANT PROFILE  
JANUARY 1, 2018 ACTUARIAL VALUATION

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

AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	TOTAL	TOTAL ANNUAL BENEFIT	AVERAGE ANNUAL BENEFIT
45-49	2	2	1	0	0	0	0	0	0	5	101,165.16	20,233.03
50-54	0	2	2	0	0	0	0	0	0	4	71,301.48	17,825.37
55-59	0	4	5	1	0	0	0	0	0	10	182,077.68	18,207.77
60-64	0	2	5	3	2	1	0	0	0	13	155,211.96	11,939.38
65-69	0	1	3	4	2	0	0	0	0	10	111,333.72	11,133.37
70-74	0	0	2	4	4	0	0	0	0	10	108,336.12	10,833.61
	2	11	18	12	8	1	0	0	0	52	729,426.12	14,027.43

Conefry & Company, LLC



EMPLOYEES RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
01/1/2018 INACTIVE PARTICIPANT PROFILE  
JANUARY 1, 2018 ACTUARIAL VALUATION

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----- SURVIVORS -----												
AGE	YEARS SINCE RETIREMENT										TOTAL	AVERAGE ANNUAL BENEFIT
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+			
20-24	0	1	0	0	0	0	0	0	0	1	13,884.12	13,884.12
45-49	0	1	0	0	0	0	0	0	0	1	2,527.20	2,527.20
50-54	0	1	0	0	0	0	0	0	0	1	3,979.20	3,979.20
55-59	2	2	2	0	0	0	0	0	0	6	27,661.32	4,610.22
60-64	14	13	1	1	0	0	0	0	0	29	235,709.28	8,127.91
65-69	9	3	5	0	0	1	0	0	0	18	166,773.12	9,265.17
70-74	1	9	1	3	0	0	0	0	0	14	87,016.68	6,215.48
75-79	5	4	1	1	0	1	0	0	0	12	151,930.32	12,660.86
80-84	1	4	5	2	0	1	0	0	0	13	71,874.48	5,528.81
85-89	3	1	0	0	1	1	0	0	0	6	80,028.12	13,338.02
90+	0	1	2	1	0	0	0	1	1	6	67,648.32	11,274.72
											-----	-----
35	40	17	8	1	4	0	0	1	1	107	909,032.16	8,495.63

Conefry & Company, LLC

EMPLOYEES RETIREMENT SYSTEM OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
01/1/2018 INACTIVE PARTICIPANT PROFILE  
JANUARY 1, 2018 ACTUARIAL VALUATION

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----- DROP RETIREES -----

AGE	YEARS SINCE RETIREMENT							40+	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	15	0	0	0	0	0	0	0	15	611,800.68	40,786.71
55-59	48	0	0	0	0	0	0	0	48	1,875,907.56	39,081.41
60-64	41	0	0	0	0	0	0	0	41	1,258,275.24	30,689.64
65-69	11	0	0	0	0	0	0	0	11	280,251.72	25,477.43
70-74	1	0	0	0	0	0	0	0	1	83,726.04	83,726.04
	116	0	0	0	0	0	0	0	116	4,109,961.24	35,430.70

SEWERAGE AND WATER BOARD OF NEW ORLEANS RETIREMENT SYSTEM  
12/31/2017 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.
769		M	11/05/59	3/24/2001	1,812.12	1,812.14	36.96	31,447.13
770		M	8/19/71	5/04/2006	0.00	435.87	0.00	7,004.63
771		M	4/14/58	1/11/1994	250.44	250.44	26.25	7,540.24
772		M	2/24/67	11/08/2004	0.00	1,110.29	0.00	21,156.73
773		M	1/06/66	2/24/2016	2,077.08	2,077.08	0.00	35,432.83
774		M	3/29/62	8/08/2007	0.00	2,133.13	0.00	23,833.94
775		M	8/29/62	1/13/1999	337.93	337.93	21.25	7,605.62
776		M	7/12/65	1/05/2017	0.00	1,419.01	0.00	23,994.84
777		M	2/25/58	1/13/2007	0.00	1,306.16	0.00	25,960.64
778		M	2/06/61	3/16/2011	0.00	0.00	0.00	10,376.09
779		F	10/17/76	5/29/2009	0.00	301.10	0.00	4,196.67
780		F	5/22/84	1/09/2016	708.34	708.34	0.00	16,659.45
781		M	7/24/70	3/06/2017	1,454.35	1,454.35	0.00	27,306.67
782		M	6/18/80	6/19/2017	361.98	361.98	0.00	10,642.02
783		M	11/30/55	4/11/2007	0.00	507.35	0.00	7,034.37
784		F	6/25/61	7/08/1995	555.81	555.81	22.50	14,099.34
785		M	11/02/58	10/15/2017	2,325.35	2,325.35	0.00	63,269.20
786		F	11/22/58	10/24/1999	930.15	930.15	28.75	16,496.91
787		M	1/13/69	4/21/2006	0.00	1,550.40	0.00	24,767.31
788		F	9/18/75	7/05/2017	497.68	497.68	0.00	15,029.82
789		M	7/27/61	6/21/1996	1,099.34	1,099.34	23.75	19,182.41
790		F	4/11/83	8/20/2016	715.38	715.38	0.00	17,404.23
791		M	11/22/53	12/04/2000	1,086.60	1,086.61	31.81	32,383.78
792		M	9/24/60	9/07/2000	688.67	688.68	40.37	14,593.58
793		M	12/17/62	3/31/2006	0.00	1,324.56	0.00	21,895.91
794		M	4/03/68	3/06/2017	1,485.88	1,485.88	0.00	28,603.34
795		F	1/01/78	12/23/2016	1,662.04	1,662.04	0.00	30,068.27
796		M	6/05/67	8/31/2016	1,925.22	1,925.22	0.00	31,645.63
TOTALS:					19,974.36	30,062.27	231.64	589,631.60

TOTAL COUNT: 28

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 FOR YEAR	ENDING MARKET VALUE	MARKET VALUE INV. PERFORMANCE FOR YEAR
12/31/91	56,348,353	4,524,382	1,001,436	0	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	0	4,988,329	0	1,105,696	5,789,535	75,594,235	8.3601%
12/31/93	75,594,235	4,873,366	1,092,713	0	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	0	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	0	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	0	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	0	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	0	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	0	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	0	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	0	7,632,745	0	-1,174,211	-1,677,973	175,008,925	-9.465%
12/31/02	175,008,925	2,931,065	1,089,543	0	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	0	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	0	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	3.8524%
12/31/08	231,792,424	4,915,512	1,143,898	956,605	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	4.9416%
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%
12/31/16	222,427,527	6,407,201	2,064,387	1,629,756	20,742,211	0	-10,640,867	12,569,601	224,356,261	5.7896%
12/31/17	224,356,261	7,239,467	2,139,705	2,416,042	24,193,431	0	-12,398,217	23,326,273	235,284,317	10.6924%
Number of Years Included: 27									-113,674,763 292,656,491	



**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	121,423,557	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	173,032,534	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%	203,224,386	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	220,704,055	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%
12/31/2016	224,356,261	5.7896%	217,107,094	228,251,858	238,715,902	6.9154%
12/31/2017	235,284,317	10.6924%	218,157,153	232,516,794	241,394,869	6.4843%

Conefrey & Company, LLC

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

P. 35

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		
					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%
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%
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%
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%
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%
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%
12/31/97	121,423,557	724,737	21,841,187	143,989,481	17.9341%	133.77%	12.90%	4.67%	91.52%	9.73%
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%
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%
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%
12/31/01	177,861,109	-1,174,211	-1,677,973	175,008,925	-9.465%	188.65%	10.12%	10.39%	191.26%	10.21%
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%
12/31/03	155,948,501	-4,695,531	36,142,887	187,395,857	23.5304%	224.75%	9.48%	7.28%	231.24%	9.65%
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%
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%
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%
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%
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%
12/31/09	166,418,096	-7,306,708	31,912,755	191,024,143	19.6067%	291.72%	7.45%	6.26%	350.80%	8.25%
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%
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%
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%
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%
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%
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%
12/31/16	222,427,527	-10,640,867	12,569,601	224,356,261	5.7896%	516.61%	7.25%	6.92%	521.37%	7.28%
12/31/17	224,356,261	-12,398,217	23,326,273	235,284,317	10.6924%	582.54%	7.37%	6.48%	561.66%	7.25%

Number of Years Included: 27

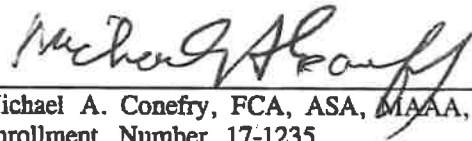
Conefry & Company, LLC

PERFMAS.T.R1

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, 2018 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.

A handwritten signature in dark ink, appearing to read "Michael A. Conefry", is written over a horizontal line.

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

New Orleans, Louisiana  
May, 2018  
V201712



# ***Sewerage & Water Board of New Orleans***



***Chief Investment Officer's Presentation to the  
Pension Committee***

May 8, 2018

# May Meeting Agenda

- Delayed until June:
  - Presentation of Actuarial Valuation
  - Discussion of Draft Funding Policy
  - Discussion of amending Investment Objectives
- Professional Procurement Policy
- Governance Matrix
- Investment Philosophy



# ERS Mission Statement

- *Prudently manage an actuarially sound pension fund*
- *solely in the interest of participants and beneficiaries*
- *in a cost-effective manner.*

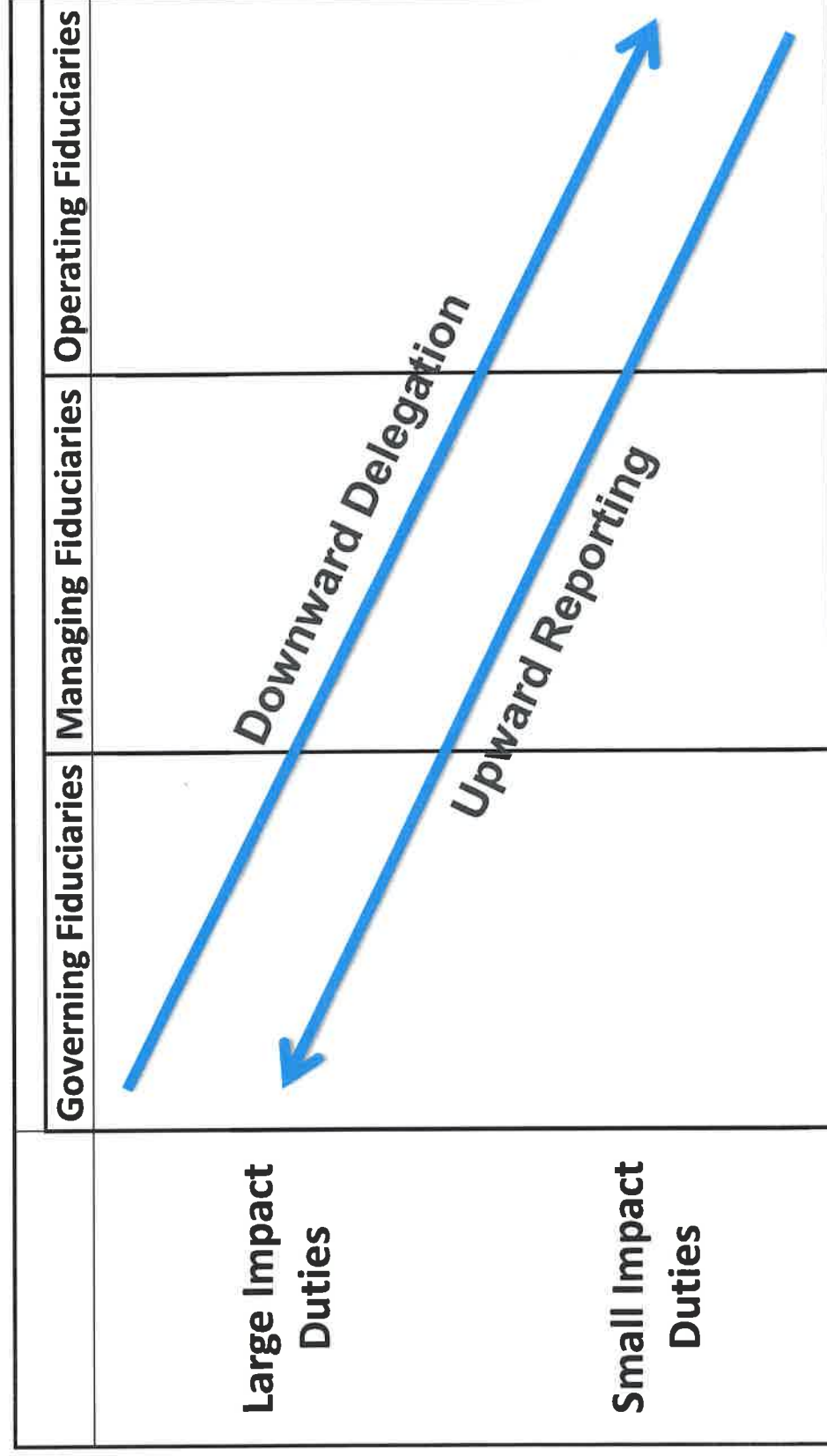




Governance

# CLARIFYING DECISION RIGHTS

# Basic Governance Structure



Adapted from: Keith P. Ambachtsheer and D. Don Ezra, Pension Fund Excellence, (New York: John Wiley & Sons, 1998) and John Ilkiw, Handbook on Asset-Liability Management: A Guide for US Fiduciaries, (Tacoma: Frank Russell Company, 1998).

<http://swbno.org>

# Assigning Roles and Responsibilities

- Three Types of Fiduciaries
  - Governing
  - Managing
  - Operating
- For each duty, three actions are assigned
  - Decide – assigned to one unique party
  - Oversee- assigned to one unique party
  - Input











# Board of Directors

	Delegate	Legislature	Courts	Mayor	Governing Fiduciaries	Operating Fiduciaries	Reporting
ACTIONS							
Set Organizational Values							
Appoint Executive Director	1	D					
Appoint Special Counsel	1	D					
Hire/Fire Auditor	1	D					
Approve CAFR							10

# Board of Trustees

ACTIONS	ACTORS										Reporting ↓													
	Legislature	Courts	Mayor	S&WB Board of Directors	BOD Audit Committee	BOD Governance Committee	BOD Fin. & Admin. Committee	BOD Strategy Committee	ERS Board of Trustees	BOT Pension Committee														
ACTIONS																								
Create Governance Structure of ERS		0	1		1				D	1	1		1		1									
Compose Rules & Regulations of ERS		0	1		1				D	1	1		1		1				1					
Design All Pension Benefits		0	1			1			D	1	1		1		1								10	
Set Employer Contribution Rates		0	1		1				D	1	1		1		1				1				10	
Set Employee Contribution Rates		0	1						D2	1	1		1		1				1				10	
Set Investment Objectives		0	1		1				D	1	1		1		1								10	
Establish Enterprise Risk Management		0	1	0				1	D	1	1		1		1					1			10	
Create ERS Budget		0	1						D				1		1								10	



# Pension Committee

[illegible]









# Notes About Governance Matrix

1. Mayor has vote on the Board of Directors and Board of Trustees
2. Employee contribution rate decided by a majority vote of the Board of Trustees AND 2 of 3 Active Employee Trustees
3. Part of Proposal Selection Committee for pension/investment-related service providers excluding investment managers.
4. May assist Executive Director in an emergency.
5. Board of Directors have oversight on the hiring of DDA and CFO. Board of Trustees have oversight on the hiring of CIO.
6. CIO's due diligence proscribed in ERS Procurement Policy and focused at verifying and understanding consultant's recommendations.
7. Received authorized payee delegation annually from CFO to timely pay Investment Operations Consultant.
8. Investment Operations Consultant received annual authorized payee delegation from CFO, rebalance from CIO or General Investment Consultant.
9. Major benefit changes must be evaluated for impact on funding (actuarial or asset-liability study).
10. Internal audit checks for BoT compliance with procurement policy, ERM, Benefit Administration, and financial record integrity.





Update

# PROFESSIONAL SERVICES PROCUREMENT POLICY



# Comparison of Existing S&WB Procurement Policy and Proposed ERS Procurement Policy

Entity	Responsibility	Existing S&WB	Proposed ERS
Purchasing	Maintains all contracts. Posts RFPs. POC in RFP.	✓	✓
Proposal Selection Committee	RFP evaluation	✓ 5, may interview	✓ 5, different composition
General Consultant	Recommends investment managers to Committee	Yes – but undocumented in policy	Yes – <u>documented</u> in policy
Board Committee	Approve/Disapprove PSC/Consultant recommendation	Recommends to Board	Interviews, final approval/disapproval
Board	Approvals	Final approval/disapproval	Properly sets policy, ensures compliance, delegates
Executive Director	Handles emergency procurements	✓	✓
Board authorized signer	Executes contract	Board authorized	Board authorized - CIO
EDBP	Sets allocation	✓	Process proactively seeks inclusion but not allocation
Chief Investment Officer	On-site due diligence	None	Yes – CIO; reports back to PSC and Committee
	Disclosure	✓	✓



Investment Policy Statement Discussion

# INVESTMENT PHILOSOPHY



# Investment Philosophy

- The goal of investing is to earn enough to meet your objectives.
- Understand what you can control (in descending order: costs, liquidity, risk, and returns).
  - While you cannot control returns, you can decide to buy low and sell high.
- We have met the enemy, and he is us.
- There are limits to prediction:
  - The future is unknowable, so diversify.
  - Market timing is generally unrewarding.
  - Markets don't just mean revert, they overshoot.
- There are trade-offs in investing:
  - More risk must be assumed to gain higher expected returns.
  - Excess returns and market efficiency are inversely related and often cyclical.
  - Too much capital is the enemy of good returns.
- Performance cannot be guaranteed, but there are some predictions:
  - Philosophy, processes, and organizational resources drive excess returns. Culture and alignment of interest can enhance or detract.
  - IR is a function of skills, breadth, and freedom.



Updates

# OLD BUSINESS



# Follow Up From April Meeting

- Director Peychaud requested that Dr. Viezer follow-up with Mr. Bergeron on the composition of the Proposal Selection Committee in the draft procurement policy.
- Ms. Edwards asked whether there would be a conflict of interest if Pension Committee members served on its Proposal Selection Committee.
- Director Johnson would like worst case scenarios included in Callan's asset-liability study.
- Director Peychaud wants the asset-liability study to consider the impact of all eligible employees retiring.
- Ms. Powell's question about the impact of a natural disaster upon the pension will be addressed by a special analysis by our actuary.
- Director Johnson asked for profiles of public pensions similar to ERS.
- Ms. Edwards asked for information on public pension handling of ESG.
- Dr. Viezer will ask our actuary to model the pension impact of lowering the discount rate.
- S&WB management will develop a workforce forecast for Callan to use in the asset-liability study.
- Mr. Conefry will analyze the impact of lowering the discount rate to 6.00%.
- Director Peychaud asked Dr. Viezer to distribute the reciprocity agreement between ERS and NOMERS.



# NEW BUSINESS?



# June Meeting Agenda

- Vote on
  - Governance Matrix – amend IPS
  - Investment Philosophy – amend IPS
- Presentation of Actuarial Valuation
- Discussion of Draft Funding Policy
- Discussion of amending Investment Objectives





# Appendix A

## CFA Institute's Code of Conduct for Members of a Pension Scheme Governing Body

1. Act in good faith and in the best interest of the scheme participants and beneficiaries.
2. Act with prudence and reasonable care.
3. Act with skill, competence, and diligence.
4. Maintain independence and objectivity by, among other actions, avoiding conflicts of interest, refraining from self-dealing, and refusing any gift that could reasonably be expected to affect their loyalty.
5. Abide by all applicable laws, rules, and regulations, including the terms of the scheme documents.
6. Deal fairly, objectively, and impartially with all participants and beneficiaries.
7. Take actions that are consistent with the established mission of the scheme and the policies that support that mission.
8. Review on a regular basis the efficiency and effectiveness of the scheme's success in meeting its goals, including assessing the performance and actions of scheme service providers, such as investment managers, consultants, and actuaries.
9. Maintain confidentiality of scheme, participant, and beneficiary information.
10. Communicate with participants, beneficiaries, and supervisory authorities in a timely, accurate, and transparent manner.



# Appendix B

## Committee & Board Decisions

### I. FOUNDATIONAL DECISIONS (October 2017 – December 2017)

#### A. Clarify governance focus

- ✓ Amend the current IPS to reflect 2015 decisions.
- ✓ Adopt an ERS Mission Statement
- ✓ Adopt the CFA Code of Conduct for Members of a Pension Governing Body
- ✓ Adopt a resolution to strongly encourage BOT to adhere to LA RS 11:185 Trustee Education requirements starting September 2018.

#### B. Decisions needed to complete Asset-Liability Study By June 2018

##### 5. Amend and prioritize investment objectives

- ✓ Hire Asset-Liability Consultant

#### C. Decisions needed to issue RFP for General Investment Consultant

##### 7. Adopt Investment Philosophy

- 8. Agree upon an investment manager search process (based upon philosophy & policies)

- 9. Agree upon investment consultant duties and governance matrix



# Appendix B

## Committee & Board Decisions

### II. MAJOR DECISIONS (May 2018 – September 2018)\*

#### D. Preparation

##### 10. Governance Matrix:

- a. Who decides (and how) benefits?
- b. Who decides (and how) employer contributions?
- c. Who decides (and how) employee contributions?
- d. Who decides (and how) investment policy?

##### 11. Hire General Investment Consultant

##### 12. Adopt Statement of Risk Capacity and Risk Appetite

#### E. The BIG THREE Decision-Making

##### 13. Benefit Policy

##### 14. Contribution Policy

- a. Employee
- b. Employer

##### 15. Investment Policy – Asset Allocation



# Appendix B

## Committee & Board Decisions

### III. FORMALIZE CUMULATIVE DECISIONS (September 2018 – December 2018)\*

#### F. Update Documents

16. Amend Investment Policy Statement

17. Amend Bylaws

18. Amend Rules and Regulations

### IV. IMPLEMENT ASSET ALLOCATION (September 2018 – March 2019)\*

G. Portfolio Construction

H. Investment Managers

\*Dates are tentative and subject to revision.



## Appendix C

# PRMIA Principles of Good Governance\*

- Key Competencies
- Resources and Processes
- Ongoing Education and Development
- Compensation Architecture
- Independence of Key Parties
- Risk Appetite
- External Validation
- Clear Accountability
- Disclosure and Transparency
- Trust, honesty and fairness of key people



\*Professional Risk Managers' International Association, 2009



# ***Sewerage & Water Board of New Orleans***



*Re-Building the City's Water Systems for the 21<sup>st</sup> Century*

# ***Sewerage & Water Board of New Orleans***



## ***Chief Investment Officer's Presentation to the Pension Committee***

May 8, 2018

# June Meeting Agenda

- Executive Session: disability retirement application
- Presentation of Actuarial Valuation
- Discussion of Draft Funding Policy
- Discussion of amending Investment Objectives





# ERS Mission Statement

- *Prudently manage an actuarially sound pension fund*
- *solely in the interest of participants and beneficiaries*
- *in a cost-effective manner.*



Discussion

# PROPOSED FUNDING POLICY



# Current Versus Proposed Funding Policy

3 Core Elements		Current	Proposed?
Actuarial Cost Method	Entry Age Normal Cost	Entry Age Normal Cost	
Asset Smoothing Method	7-year average	7-year average with 60%/140% corridor?	
Amortization Policy	30-Year Open	15-Year Closed?	
Employee Contribution	6%	6%	
Employer Contribution	Calculated as if employee contribution remained at 5% of payroll	Total plan contribution minus employee contribution of 6%?	
Actuarial Valuation	Annually	Annually	
Experience Study		Every 5 years	
Asset-Liability Study		Every 5 years	



# Consensus on Best Practice for Funding Policy

Table 1: Considerable Consensus on Funding Policy Objectives: How the Three Actuarial Organizations Compare to One Another and to the GFOA Best Practice

Objective	CCA PPC White Paper	AAA Issue Brief	BRP/SOA Report	GFOA Best Practice
Fund the expected cost of all promised benefits (i.e., fund normal cost plus 100% of any unfunded actuarial liabilities).	✓	✓	✓	✓
Match annual contributions to fund the cost of benefits to years of service (i.e., target demographic matching or generational equity).	✓	✓	✓	✓
Have costs emerge stably and predictably (i.e., manage contribution volatility).	✓	✓	✓	✓
Balance competing funding-policy objectives.	✓	✓	✓	✓
Identify risks* that could make it difficult to achieve funding objectives.	✓	✓	✓	
Communicate how the funding-policy objectives will be achieved by the contribution allocation procedure (accountability and transparency).	✓	✓		✓
Establish an enforcement mechanism for making contributions on a consistent, actuarially determined basis: actually fund the "actuarially determined contribution" (ADC).	✓	✓	✓	✓

\* The CCA PPC White Paper talks specifically about a balance between targeting generational equity and managing contribution volatility.

\* The CCA PPC White Paper focuses on agency risk, which refers to the possibility that interested parties (agencies) may try to "influence cost calculations in directions viewed as inconsistent with their particular interests." The AAA Issue Brief also cites agency risk, but adds investment, demographic and "other" risks. The BRP/SOA Report focuses primarily on investment risk and related disclosures.

\* Although the CCA PPC White Paper does not mention an explicit enforcement mechanism, all of its guidance is developed under the presumption that the plan will be funded in accordance with its actuarial funding policy.

Segal Consulting, Public Sector Letter "Actuarial Funding Policy Guidance: Comparison of Recommendations Reveals Considerable Consensus - and a Few Notable Differences," October 2014, p. 2.



# Estimated Costs and Savings\*

- Potential Cost
  - 15-Year Closed: Additional employer contributions for each of 15 years:
    - \$2,110,269 = \$10,545,867-\$8,435,598
  - 30-Year Open: indefinitely into the future, with gradual reductions in the amount annually over time.
    - \$5,822,297
- Potential Savings
  - 15-Year Closed would be fully funded at the end of 15 years.
  - 30-Year Open would have these amounts remaining of unfunded accrued actuarial liability:
    - \$63,536,877 after 15 years
    - \$54,67,350 after 30 years

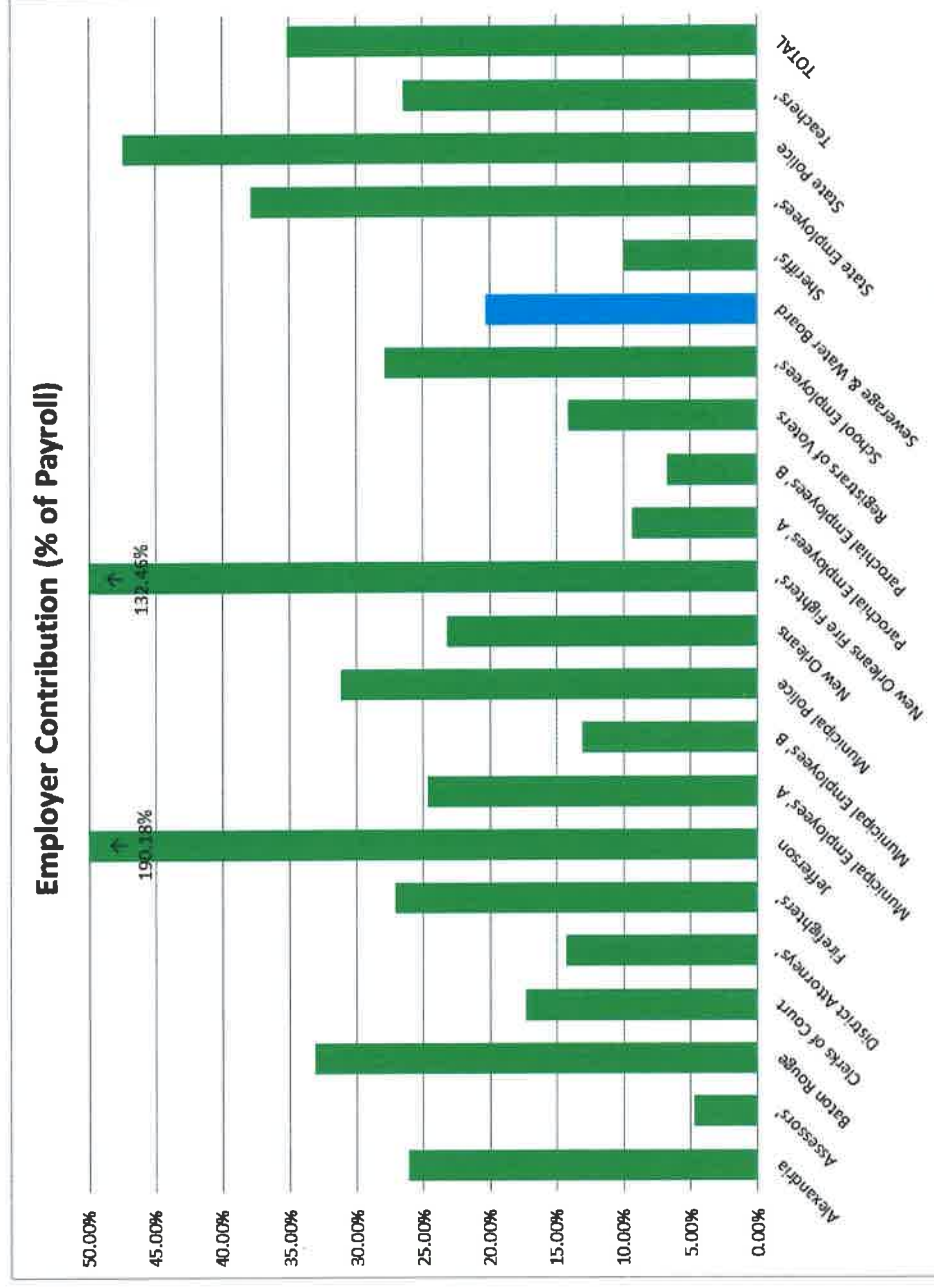
\*Source: Conefry & Company LLC



**Sewerage & Water Board of New Orleans**

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# Comparison of Louisiana Peers' Employer Contribution



**Sewerage & Water Board of New Orleans**

<http://swbno.org>

# S&WB Budget Implications

- Moving to a 15-year closed-end amortization would increase the Actuarially Determined Contribution by \$2,110,269.
- That estimated increase is:
  - 0.7% of the Total Operating Budget Expense of \$302,642,334 (April 25, 2018);
  - 4.2% of the Total Payroll related Expense of \$49,793,162 (April 25, 2018);
  - 41 of the 1,814 budgeted positions as of January 1, 2018 (as of April 25, 2018 there are 1,253 budgeted positions).





# Other Considerations

- The condition of the pension plan and the ability of the plan sponsor to fulfill its projected pension obligations is an important consideration in evaluating the credit quality of bond issuers.
- Defined benefit pensions are highly valued by employees in the public sector. When given the choice between defined benefit (“DB”) or defined contribution plans (“DC”), public employees overwhelmingly choose a DB pension plan.\*\*
- Moving from a DB to a DC plan does nothing to closing any existing funding shortfalls and can increase costs because DC plans do not have the economic efficiencies of DB plan, operating two plans is more costly than just one plan, and the loss of new members makes it more difficult to finance the unfunded obligations of the DB plan.\*\*
- The implications of the proposed funding policy should be evaluated within the context of the Asset-Liability Study presentation in July.

\*\*\*Source: Jennifer Erin Brown and Matt Larrabee, “Decisions, Decisions: An Update on Retirement Plan Choices for Public Employees and Employers,” National Institute on Retirement Security and Milliman, August 2017.



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Governance

# PROPOSED CHANGES TO THE INVESTMENT POLICY STATEMENT



# Proposed Changes

- Reorganized into 3 Parts
- Add Mission Statement
- Revised Duties and Responsibilities
- Revised Investment Objective
- Added Investment Philosophy
- Added Funding Policy



Updates

# OLD BUSINESS



# Follow Up From May Meeting

- Mr. Sloss and Mr. Lewis Stirling requested that Dr. Viezer document how the existing situation would translate into a governance matrix to facilitate comparison.
- Ms. Gleason and Mr. Sloss asked that the role of the General Investment Consultant as an “extension of the Chief Investment Officer” be clarified to indicate a business continuity/back-up role.
- The approval of policies that affect both S&WB and ERS and the provision of in-kind resources should involve both the Board of Directors and Board of Trustees.
- Chairman Peychaud asked S&WB staff to continue to work together and to bring another discussion draft that incorporated the Pension Committee’s desired changes into the S&WB Professional Services Procurement Policy #95.



# NEW BUSINESS?



# New Business

- Review the Reciprocity Agreement with NOMERS.
- Assignment of custody contract.



***Sewerage & Water Board of New Orleans***

<http://swbno.org>

# July Meeting Agenda

- Callan's Presentation of Phase I Asset Liability Study
- Draft Amended Investment Policy Statement will be distributed for review



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6. Deal fairly, objectively, and impartially with all participants and beneficiaries.
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- External Validation
- Clear Accountability
- Disclosure and Transparency
- Trust, honesty and fairness of key people



\*Professional Risk Managers' International Association, 2009

# **Sewerage & Water Board of New Orleans**



*Re-Building the City's Water Systems for the 21<sup>st</sup> Century*



Compare "Old" Versus Proposed Governance Matrix

ACTIONS	Delegate →																						← Reporting			
	ACTORS																									
				Governing Fiduciaries							Managing Fiduciaries					Operating Fiduciaries										
	Legislature	Courts	Mayor	S&WB Board of Directors	BOD Audit Committee	BOD Governance Committee	BOD Fin. & Admin. Committee	BOD Strategy Committee	ERS Board of Trustees	BOT Pension Committee	Executive Director	Special Counsel	Deputy Director Administration	Chief Investment Officer	Chief Financial Officer	General Consultant	Investment Managers	Investment Operations Consultant	Actuary	Custodian	External Auditor	Internal Auditor				
Create Laws	D																									
Interpret & Apply Laws		D																								
Set Organizational Values			1	D																						
Create Governance Structure of ERS			1					D																		
Compose Rules & Regulations of ERS			1					D																		
Design All Pension Benefits			1					D9																		
Set Employer Contribution Rates			1					D																		
Set Employee Contribution Rates			1					D2																		
Set Investment Objectives			1					D																		
Establish Enterprise Risk Management			1					D																		
Create ERS Budget			1					D																		
Set Risk Appetite & Risk Capacity									D																	
Set Strategic Asset Allocation (SAA)								D	D																	
Design Within Asset Allocation Strategies								D	D																	
Appoint Executive Director			1	D																						
Appoint Special Counsel				D																						
Hire/Fire Auditor			1	D																						
Adopt Investment Philosophy								D	D																	
Set Performance Benchmarks								D	D																	
Hire/Fire Actuary								D	D																	
Hire/Fire General Investment Consultant								D	D																	
Hire/Fire Investment Managers								D	D																	
Hire/Fire Custodian								D	D																	
Hire/Fire Special Consultants									D																	
Appoint & Supervise DDA, CIO, CFO									D																	
Create Annual Plan & Objectives									D				D													
Rebalance Fund to SAA, Tactical AA													D													
Conduct Vendor/Manager Due Dilligence																D										
Size Mandates Within Constraints													D			D										
Sign Pension-Committee Approved Contracts										D			D													
Authorize Money Movements Within Fund										D			D													
Authorize Money Movements In/Out of Fund										D				D												
Effect Money Movements																		D8								
Temporary CIO Back-Up & Research Assistance																D										
Report Investment Performance																D										
Measure & Report Risk																D										
Report Investment Compliance																D										
Approve CAFR				D																						
Select Securities																	D									
Vote Proxies																	D									
Prepare Actuarial Valuation																		D								
Custody Assets																			D							
Perform Master Record Keeping																			D							
Audit Financial Records																				D						
Hearing of Appeals									D																	
Communicate with Retirees									D																	
Administer ERS Benefits												D														
Communicate with Employees on Pension												D														

Old  
New

- 1 Mayor has vote on the Board of Directors and Board of Trustees
- 2 Employee contribution rate decided by a majority vote of the Board of Trustees AND 2 of 3 Active Employee Trustees
- 3 Part of Proposal Selection Committee for pension/investment-related service providers excluding investment managers.
- 4 May assist Executive Director in an emergency.
- 5 Board of Directors have oversight on the hiring of DDA and CFO. Board of Trustees have oversight on the hiring of CIO.
- 6 CIO's due diligence proscribed in ERS Procurement Policy and focused at verifying and understanding consultant's recommendations.
- 7 Received authorized payee delegation annually from CFO to timely pay Investment Operations Consultant.
- 8 Investment Operations Consultant received annual authorized payee delegation from CFO, rebalance from CIO or G.I. Consultant.
- 9 Major benefit changes must be evaluated for impact on funding (actuarial or asset-liability study).
- 10 Internal audit checks for BoT compliance with procurement policy, ERM, Benefit Administration, and financial record integrity.



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

## **EMPLOYEES' RETIREMENT SYSTEM OF THE Sewerage & Water Board OF NEW ORLEANS**

625 ST. JOSEPH STREET  
NEW ORLEANS, LA 70165 • 504-529-2837 OR 52W-ATER  
[www.swbno.org](http://www.swbno.org)

April 11, 2018

The Pension Committee met on Wednesday, April 11, 2018 in the Board Room, 625 St. Joseph Street, New Orleans, LA. The meeting convened at 8:30 A.M.

### **Present:**

Director Joseph Peychaud, Chairman  
Mr. Christopher Bergeron  
Director Eileen Gleason  
Director Ralph Johnson  
Ms. Chante' Powell  
Mr. Marvin Russell  
Director Lynes Sloss  
Mr. John Wilson

Also in attendance: Mr. Jesse Evans of the New Orleans Municipal Employees' Retirement System ("NOMERS"), Mr. Cody Chapman, Ms. Karen Harris, and Mr. Weston Lewis of Callan LLC, Mr. Octave Francis III and Mr. Stephen Daste of FFC Investment Advisors of Raymond James; Mr. Mike Conefry of Conefry & Company; Ms. Janice Leaumont of Capital One; and the following Sewerage & Water Board staff - Mr. James Thompson, Office of Special Counsel; and Dr. Tim Viezer, Chief Investment Officer.

### **ACTION ITEMS:**

1. Resolution Assigning Contract to FFC Investment Advisors of Raymond James (R-048-2018)

Mr. John Wilson moved to recommend that the Board of Trustees affirm resolution R-048-2018 and the motion was seconded. The motion carried.

The Resolution listed above will be moved to the Board of Trustees for approval.

### **PRESENTATION ITEMS:**

Director Joseph Peychaud began the meeting by asking Dr. Tim Viezer to read the Employees' Retirement System mission statement into the record: "to prudently manage an actuarially sound pension fund solely in the interest of participants and beneficiaries in a cost-effective manner."

Director Peychaud also noted that Mr. Lewis Sterling III had completed the new trustee training as required by R-140-2017 and was eligible to vote. One more member of the Committee was being scheduled for new trustee orientation.

Dr. Viezer began his presentation by introducing an action item to assign the investment consultant agreement on a month-to-month basis. FFC Capital Management ("FFC") has been the investment consultant to the Pension Committee for almost a decade. The Pension Committee felt it was prudent to rebid the contract and place FFC on a month-to-month contract until a competitive search was completed. However, Mr. Octave

Francis announced on March 26, 2018 that his firm had joined Raymond James & Associates, Inc. and was now doing business as FFC Investment Advisors of Raymond James. As a result, the contract needed to be assigned on a month-to-month basis to the new entity name.

Dr. Viezer's second informational item was a draft policy for discussion by the Pension Committee. There were several reasons for creating a professional services procurement policy for the Employees' Retirement System ("ERS"). Dr. Viezer noted that while the search for the asset-liability study consultant followed the Sewerage & Water Board's ("S&WB") Professional Services Procurement Policy, the Pension Committee had followed a different process for hiring consultants in the past. Moreover, the Pension Committee had followed industry practice in hiring investment managers, (i.e., using recommendations from an investment consultant to bring candidates before the Pension Committee for selection), this process was different in that the S&WB's Policy and the ERS process was not written. At the November Board of Trustees' meeting, Mr. Chris Bergeron had asked counsel whether ERS was required to follow S&WB's Policy. Mr. James Thompson followed up and noted that S&WB and ERS were separate legal entities with different responsibilities. Therefore, it seemed appropriate that ERS have a separate procurement policy.

Dr. Viezer noted that he had met with Mr. Thompson and Mr. Willie Mingo – Director of Procurement – to start a review of the proposed policy. Director Eileen Gleason asked how the two policies compared. Dr. Viezer replied that the draft proposal contained elements that were: (1) the same as S&WB's existing policy, (2) codification of his understanding of ERS's past practice, and (3) new elements that attempted to clarify or streamline. Mr. Bergeron raised a concern about the number of members in the Proposal Selection Committee being reduced to three. Director Lynes Sloss asked Mr. Bergeron whether he had a preferred number of members. Mr. John Wilson recounted that Pension Committee members served on the Proposal Selection Committee in the past. Director Peychaud and Ms. Marcie Edwards had follow-up requested noted below.

The Callan team of Cody Chapman, Karen Harris, and Weston Lewis began by thanking the Pension Committee for the opportunity to work with them on the asset-liability study. Mr. Chapman noted that public defined benefit pensions are a big segment of Callan's business and that defined benefit pensions are something Callan feels strongly about and a defined benefit pension is a strong recruitment and retention tool that provides an effective, safe, and secure retirement. Mr. Chapman introduced asset-liability studies as an important tool that should be conducted every three to five years. An asset-liability study considers the interaction of three of the Board of Trustees' policies: (1) pension benefit policy, (2) funding policy, and (3) investment policy. Dr. Viezer interjected that ERS had a funding practice and needed an explicit, written funding policy.

Ms. Harris noted that the asset-liability study will help determine which funding and investment policies complement each other. She explained how pension benefits plus expenses must be paid by investment returns and contributions. She also noted that more risk must be undertaken to achieve higher expected investment returns but that higher risk may result in lower actual investment returns. The investment policy of the pension is primarily focused on determining the broad asset allocation. Ms. Harris explained the "deterministic" modeling of investments and pension obligations ("liabilities"). In modeling the pension plan liabilities, Callan will work with our actuary to understand how to handle DROP. Director Sloss asked whether ERS would receive Callan's model to investigate "what if" scenarios. The answer was "no," but Dr. Viezer added that Phase II of the study would allow addition scenarios to be considered. Mr. Bergeron asked if employee turnover would be considered in the model and was told it was based on the actuary's analysis. Ms. Harris suggested that ERS should conduct an independent "experience study" every three to five years to examine S&WB's actual demographic experience versus the actuary's assumptions.

Ms. Harris continued by discussing the liquidity needs of the pension would be examined and that the cash flows of a pension might be forecasted over one hundred years because of the demographics of the workforce over time. She noted that about two-thirds of the liabilities were to inactive. Ms. Harris discussed the "stochastic" forecasts and simulations that are used to calculate probabilities. Turning to ERS's 7% discount rate, Ms. Harris noted it was a "healthy place to start" as it was at the low end of the range of public pension discount rates. Director Gleason and Director Sloss asked clarifying questions. Ms. Harris said there is a balancing act: lowering the discount rate might make achieving that return more likely, but it would increase liabilities, lower the funded ratio, and increase contributions.

The Pension Committee asked several questions about the simulations/scenario analyses. Director Johnson indicated he wanted worst case scenarios included. Director Peychaud inquired about a worst case scenario



concerning maximum number of retirements. Ms. Chante Powell inquired whether Callan could consider the impact of a local natural disaster upon the fund. Callan did not include natural disasters but Dr. Viezer noted that a scenario stopped employer and employee contributions would be modeled by the actuary.

Ms. Harris then discussed capital market projections of risk, return, and correlations that would be used in the asset-liability study. Using Callan's capital market projections and ERS's current asset allocation, the expected ten-year expected return for the fund would be only 5.64% compared to the actuarially required rate of return (discount rate) of 7.00%. Reducing the allocation to fixed income by almost half to 20% would only raise the expected return to 6.30%. Conversely, ERS could keep a conservative portfolio but would have to increase contributions.

Ms. Harris mentioned that many public pensions have attempted to meet their required returns by seeking an "illiquidity risk premium." She reviewed asset allocations at other similarly sized pensions and noted that relative to peers, ERS had a low allocation to Non-U.S. equity and a high allocation to fixed income. Director Johnson and Director Gleason inquired about the make-up of peer pensions. Ms. Marcie Edwards asked if there was information about how peer funds handled environmental, social, and governance ("ESG") issues. Mr. Weston Lewis said Callan had recently investigated the issue of gun stocks. He noted that every public pension was different and had different risk tolerances. Ms. Harris noted that Callan was targeting to return in July to present Phase I of the asset-liability study. Director Psychaud stated that he wanted the asset-liability study to be a collaborative process.

#### **INFORMATION ITEMS:**

Information item(s) 5 through 7 were received.

#### **ANY OTHER MATTERS:**

The following questions and requests were raised for follow-up:

1. Director Psychaud requested that Dr. Viezer follow-up with Mr. Bergeron on the composition of the Proposal Selection Committee in the draft procurement policy.
2. Ms. Edwards asked whether there would be a conflict of interest if Pension Committee members served on its Proposal Selection Committee.
3. Director Johnson would like worst case scenarios included in Callan's asset-liability study.
4. Director Psychaud wants the asset-liability study to consider the impact of all eligible employees retiring.
5. Ms. Powell's question about the impact of a natural disaster upon the pension will be addressed by a special analysis by our actuary.
6. Director Johnson asked for profiles of public pensions similar to ERS.
7. Ms. Edwards asked for information on public pension handling of ESG.
8. Dr. Viezer will ask our actuary to model the pension impact of lowering the discount rate.
9. S&WB management will develop a workforce forecast for Callan to use in the asset-liability study.
10. Mr. Conefry will analyze the impact of lowering the discount rate to 6.00%.
11. Director Psychaud asked Dr. Viezer to distribute the reciprocity agreement between ERS and NOMERS.

#### **ADJOURNMENT:**

There being no further business to come before the Pension Committee, the meeting adjourned at approximately 10:00 A.M.

Respectfully submitted,

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Joseph Psychaud, Pension Committee Chair



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

## **EMPLOYEES' RETIREMENT SYSTEM OF THE Sewerage & Water Board OF NEW ORLEANS**

**LaToya Cantrell, President**

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

May 8, 2018

The Pension Committee met on Tuesday, May 8, 2018 in the Board Room, 625 St. Joseph Street, New Orleans, LA. The meeting convened at 8:30 A.M.

### **Present:**

Mr. Joseph Peychaud, Chairman  
Mr. Christopher Bergeron  
Ms. Eileen Gleason  
Mr. Ralph Johnson  
Ms. Chante' Powell  
Mr. Lynes Sloss  
Mr. Lewis Stirling III  
Mr. John Wilson

Also in attendance: Mr. Octave Francis III and Mr. Stephen Daste of FFC Investment Advisors of Raymond James; Ms. Marcie Edwards, interim Executive Director of the Employees' Retirement System (ERS) and Sewerage and Water Board (S&WB); and the following S&WB staff –Ms. Marina Kahn, interim Chief Financial Officer, Ms. Valerie Rivers, Deputy Director of Logistics, Mr. Willie Mingo, Director of Procurement, Ms. Irma Plummer, EDBP Manager; Mr. James Thompson, Office of Special Counsel; Dr. Tim Viezer, Chief Investment Officer; and Ms. Candice Newell, Board Relations Manager.

### **ACTION ITEMS:**

1. None

### **PRESENTATION ITEMS:**

Chairman Joseph Peychaud began the meeting by introducing Ms. Candice Newell, Board Relations Manager to the Committee. Chairman Peychaud then asked Mr. Lynes Sloss to read the Employees' Retirement System mission statement into the record: "to prudently manage an actuarially sound pension fund solely in the interest of participants and beneficiaries in a cost-effective manner." Chairman Peychaud also noted that Mr. Sloss had completed the new trustee training as required by R-140-2017 and was eligible to vote.

Dr. Viezer began his presentation by reintroducing a tool called the "governance matrix," which explicitly assigns decision rights and ensures checks and balances through oversight. The topic was first introduced in June and July 2017. An accountable reporting structure is achieved by efficient downward delegation of decision-making and informative and timely reporting. Efficiency is achieved by delegating smaller impact tasks further down. Governing fiduciaries decide the most impactful topics. Ms. Eileen Gleason asked whether this implied that the Board of Trustees don't worry about small impact duties. Dr. Viezer answered that the

oversight is delegated downward as well but that the Board focuses on the big picture and holds accountable those to whom authority and responsibility have been delegated.

Dr. Viezer summarized briefly his recommendations decision-making authority of a number of entities in the detailed governance matrix. These recommendations were based upon a mix of best practice, preferences communicated to him, and his observations of circumstances of the relevant parties here. The Board of Directors appoints the Executive Director and Special Counsel, who both serve the same roles in both the water utility (S&WB) and retirement system (ERS). He noted that the Mayor was the “first among equals” and was one vote on each Board. The Board of Trustees set broad policies (e.g., investment objectives, funding policy, and benefits), delegated implementation, ensured compliance with policy, and held accountable. As an aside, Dr. Viezer recommended that any change to the employee contribution rate be made by a majority vote of the entire Board of Trustees (because it is a policy) and required the support of two of the three employee Trustees. This would build trust. Ms. Gleason asked how this was handled in the past.

Dr. Viezer continued by suggesting that the Board of Trustees delegate certain decisions to the Pension Committee (e.g., asset allocation and manager selection). Requiring approval by the Board of Trustees was not efficient as it required the Pension Committee to ensure sitting through the same presentations twice and give decision-making to fellow Board members who were not as versed on these topics. The Executive Director would handle emergency procurements and oversee on a day-to-day basis, those who handled pension implementation (e.g., the Chief Investment Officer, Chief Financial Officer, and benefits administration). The Chief Investment Officer would provide advice, an annual work plan, and implement Board and Committee decisions. The Chief Financial Officer would oversee flows into and out of the pension. The General Investment Consultant would provide investment manager due diligence and recommendation as well as prepare reports on performance, risk, and compliance. The Operating Investment Consultant would facilitate rebalancing and cash flow movements at the direction of the CIO (internal movements) and CFO (external movements). The Operating Fiduciaries included investment managers, actuary, and custodian.

Ms. Gleason and Mr. Sloss asked that the role of the General Investment Consultant as an “extension of the Chief Investment Officer” be clarified to indicate a business continuity/back-up role. Mr. Sloss and Mr. Lewis Stirling requested that Dr. Viezer document how the existing situation would translate into a governance matrix to facilitate comparison. Dr. Viezer complimented the suggestion and agreed to do so. Dr. Viezer noted that he would incorporate the governance matrix into a revised draft Investment Policy Statement for the Pension Committee’s and Board of Trustees’ consideration.

Dr. Viezer moved on to the revised discussion draft of a professional services procurement policy for the Employees’ Retirement System and presented a chart comparing the existing S&WB policy with the proposed changes in the discussion draft. Dr. Viezer noted that the genesis of the policy was a question raised by Mr. Chris Bergeron at the November Board of Trustees’ meeting Mr. Chris Bergeron as to whether ERS was required to follow S&WB’s Policy. Dr. Viezer wrote the discussion draft to document both the preferences and past practices of the Pension Committee and had begun to circulate the draft to S&WB staff for comment. Dr. Viezer stated he had always envisioned a role for S&WB Procurement staff and wanted to present a clear articulation of the Pension Committee’s desires to S&WB Procurement so that department could determine an efficient and agreeable way to implement these changes. Chairman Peychaud said he believed that a central issue was whether the proposal would be a separate policy or changes incorporated into the existing S&WB Policy #95. Mr. John Wilson stated that he believed that the effort was in the “right direction” and saw the draft as documenting past processes that were not codified but conformed to pension industry practice.

Mr. Peychaud asked Ms. Valerie Rivers – Deputy Director of Logistics – to comment. Ms. Rivers noted that Procurement was the repository for all contracts and that the department needed the authority to ensure that all procurements were conducted according to the rules and regulations of the Board. She said that she understood that different industries (e.g., construction) had different procurement standards and practices. Ms. Rivers asked that the CIO produce a list of “nuances” to be incorporated into one policy.

Mr. James Thompson – attorney in the Office of Special Counsel – noted that there was never a suggestion to create a separate policy that would not use S&WB Procurement. He noted that historically two different processes were used by the Pension Committee and these processes were not codified. Ms. Gleason asked who had the right to modify the procurement policy. Mr. Thompson answered that although the organization had a unique legal structure, the Board of Trustees would have that decision right, but as a practical matter the

decision should be made working with S&WB Procurement, who had the knowledge, experience, and staff. Ms. Gleason asked further if the Board of Trustees passed a procurement policy, would S&WB Procurement answer to the Trustees or the Board of Directors. Dr. Viezer answered that the directions to staff would proceed from the Board through the Executive Director (of both the ERS and S&WB) to S&WB staff. Mr. Sloss asked whether the ERS Board of Trustees would need the permission of the S&WB Board of Directors to use S&WB resources. Dr. Viezer acknowledged that it was a fair question about the cost of in-kind services provided to ERS. Dr. Viezer noted he was looking for a “win-win” scenario for his colleagues in Procurement. Mr. Thompson added that Louisiana state law requires S&WB to maintain a pension fund but it also stipulates that ERS cannot have paid employees. ERS must therefore rely upon S&WB resources. Thus, the S&WB Board of Directors must approve the in-kind resources provided to ERS. Ms. Gleason asked whether it would then be prudent to have both Boards approve any procurement policy. Mr. Thompson answered “yes” and recommended that approach. Mr. Stirling asked whether the Board of Trustees set the procurement policy and that Procurement administers that policy. Mr. Sloss later asked for a summary and clarification of the procurement policy. Mr. Stirling asked whether the discussion draft was mirroring best practice in the pension industry. Dr. Viezer answered in the affirmative and Mr. Thompson noted that he was not aware of any public pension that had adopted a water utility’s procurement process. Ms. Chante Powell suggested that the existing S&WB procurement policy could be amended to include the desired changes. Ms. Marina Kahn – interim CFO and trustee for NOMERS – noted that the City’s retirement system used a hybrid procurement process. Chairman Peychaud asked S&WB staff to continue to work together and to bring another discussion draft that incorporated the Pension Committee’s desired changes into the S&WB Professional Services Procurement Policy #95.

Dr. Viezer noted that little time remained for a detailed discussion of the proposed investment policy. Every point had been discussed in Pension Committee presentations in August, September November, and December of 2017 and in January and March presentation of 2018. He encouraged Committee members to read the philosophy and contact him with questions.

Finally, under “Old Business” Dr. Viezer followed up on 11 items from the April Pension Committee meeting. He noted that Mr. Bergeron’s requested changes to the composition of the recommended Proposal Selection Committee was incorporated in the revised draft. Mr. Thompson stated there was no conflict for Pension Committee members to serve on the Proposal Selection Committee. Dr. Viezer had instructed Callan to incorporate data and scenarios requested by Mr. Johnson (2) and Chairman Peychaud (2) into their analysis. Dr. Viezer had instructed the actuary to run an analysis requested by Ms. Powell (impact of a natural disaster that closed the City on the pension) and another lowering the discount rate to 6.00%. Dr. Viezer noted 3 information items on ESG in response to a request by Ms. Edwards. Finally, Dr. Viezer had distributed the reciprocity agreement between ERS and NOMERS as requested by Chairman Peychaud.

### **INFORMATION ITEMS:**

Information item(s) 4 through 9 were received.

### **ANY OTHER MATTERS:**

The following questions and requests were raised for follow-up:

1. Mr. Sloss and Mr. Lewis Stirling requested that Dr. Viezer document how the existing situation would translate into a governance matrix to facilitate comparison.
2. Ms. Gleason and Mr. Sloss asked that the role of the General Investment Consultant as an “extension of the Chief Investment Officer” be clarified to indicate a business continuity/back-up role.
3. The approval of policies that affect both S&WB and ERS and the provision of in-kind resources should involve both the Board of Directors and Board of Trustees.
4. Chairman Peychaud asked S&WB staff to continue to work together and to bring another discussion draft that incorporated the Pension Committee’s desired changes into the S&WB Professional Services Procurement Policy #95.

**ADJOURNMENT:**

There being no further business to come before the Pension Committee, the meeting adjourned at approximately 9:34 A.M.

Respectfully submitted,

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Joseph Peychaud, Pension Committee Chair



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

## **EMPLOYEES' RETIREMENT SYSTEM OF THE Sewerage & Water Board OF NEW ORLEANS**

**LaToya Cantrell, President**

**625 ST. JOSEPH STREET  
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www.swbno.org**

June 13, 2018

The Pension Committee met on Wednesday, June 13, 2018 in the Board Room, 625 St. Joseph Street, New Orleans, LA. The meeting convened at 8:30 A.M.

### **Present:**

Mr. Joseph Peychaud, Chairman  
Mr. Christopher Bergeron  
Ms. Eileen Gleason  
Mr. Ralph Johnson  
Ms. Chante' Powell  
Mr. Marvin Russell  
Mr. Lynes Sloss  
Mr. John Wilson

Also in attendance: Mr. Octave Francis III and Mr. Stephen Daste of FFC Investment Advisors of Raymond James; Ms. Jade Brown-Russell, Acting Executive Director of the Employees' Retirement System (ERS) and Sewerage and Water Board (S&WB); and the following S&WB staff –Mr. James Thompson, Office of Special Counsel; Ms. Sharon Judkins, Deputy Director of Administration; Ms. Veronica Washington, Employee Relations; Ms. Sonji Skipper, Personnel; Dr. Tim Viezer, Chief Investment Officer; and Ms. Candice Newell, Board Relations Manager.

### **ACTION ITEMS:**

1. None

### **EXECUTIVE SESSION:**

2. Pursuant to LA R.S. 42:17.A.1., to consider an employee disability application.

### **PRESENTATION ITEMS:**

3. Chief Investment Officer's Presentation

Chairman Joseph Peychaud began the meeting by asking Ms. Eileen Gleason to read the Employees' Retirement System mission statement into the record: "to prudently manage an actuarially sound pension fund solely in the interest of participants and beneficiaries in a cost-effective manner."

Chairman Peychaud then asked for a motion to move into executive session to consider a disability retirement application. Mr. John Wilson moved to enter into executive session and Mr. Lynes Sloss seconded the motion. The motion carried and the Committee entered executive session. The Committee re-entered regular session by a motion by Ms. Gleason, this was seconded by Mr. Sloss, and carried by vote. Chairman Peychaud called for a motion and Mr. Sloss made a motion to approve the matter discussed in executive session. Ms. Chante Powell seconded and the motion carried.

Dr. Tim Viezer began his presentation on a proposed funding policy by noting the purpose of an actuarial valuation is to determine the total contribution payment. The topic of a funding policy was first introduced in March 2018. The essential change from current practice was to draft a written policy, use a 15-year closed amortization rather than a 30-year open amortization, and to explicitly require an experience study every five years to precede an asset-liability study every five years. Dr. Viezer summarized the rationale for the proposal: (1) it followed industry best practice, (2) in the best case could save at least \$109 million dollars with a net present value of \$7 million today, (3) the proposed employer contribution would be lower than the average Louisiana public pension employer contribution, and (4) the extra employer contribution amounted to less than 0.7% of the total operating budget. Moreover, Dr. Viezer presented a study of studies that documented that converting the plan to a defined contribution plan would not save the Sewerage & Water Board (S&WB) money; it would not eliminate the unfunded liability, that running two plans is more expensive, and that public employees prefer defined contribution plans.

The Pension Committee was very engaged and asked many questions. Ms. Powell asked why a 7-year asset smoothing was proposed; (to reduce the volatility of employer contributions). Mr. Sloss and Mr. Bergeron clarified how a 15-year closed amortization would work. Mr. Ralph Johnson clarified that the funded ratio would be 100% at the end of the 15-year amortization (in the expected case). Ms. Powell asked whether we would use a level dollar or level percentage of payroll amortization; (Mr. Conefry later answered that it was level dollar). Mr. Chris Bergeron asked for clarification on whether the cost savings analysis assumed a 5% or 6% employee contribution; (it used 5%). Mr. Bergeron noted that if the 6% employee contribution was used rather than the 5%, the extra employer contribution fell to \$1.6 million. Mr. Johnson and Mr. Sloss noted that to be able to save money over 30 years required having an extra \$1.6 million to \$2.1 million today. Dr. Viezer noted that, if approved, the proposal would go into effect on January 1, 2019. Mr. Sloss asked what the average employer contribution was among LAPERS; (35.1%). Mr. Sloss noted that \$15 million had been cut from the budget figure cited in the presentation. Dr. Viezer answered Ms. Gleason by noting Human Resources did not have a forecast of projected hiring. Chairman Peychaud asked Ms. Jade Brown-Russell for insights on the budgeted number of positions. Ms. Brown-Russell said the Chief Investment Officer “was spot on” and some of the 1,814 positions were not 100% funded but budgeted at 1% to hold a position for succession planning.

Finally, under “Old Business” Dr. Viezer followed up on 4 items from the May Pension Committee meeting. Dr. Viezer noted that Ms. Valerie Rivers, Deputy Director of Logistics, would update the Pension Committee on her review of the draft Employees’ Retirement System (ERS) professional services procurement policy. Mr. Peychaud confirmed that was the plan. Looking ahead, Dr. Viezer said that Callan’s asset-liability study would require two hours in July and a revised draft Investment Policy Statement would be issued and discussed in August. Ms. Brown-Russell said that Board Relations would work with the Committee to set a convenient date/time for the July meeting.

#### 4. Conefry & Company LLC, Actuarial Valuation Report, May 21, 2018

Mr. Mike Conefry began his presentation by complimenting Mr. Bergeron on his insights. Mr. Conefry provided some historical background to the amortization methods used for ERS. He noted in the 1990s ERS used a ten-year closed amortization. Around the year 2000, ERS was fully funded. However, the next three years were difficult; benefits were raised and the dot-com stock market crash hurt returns. Eventually, a 10-year closed amortization of the unfunded liability became very costly and ERS moved to the 30-year open amortization. Mr. Conefry continued with a summary of the valuation report. The number of active participants rose from 998 to 1,083; total active payroll rose from \$35.4 million to \$41.8 million and the actuarial value of plan assets rose from \$238.2 million to \$241.4 million. However, the unfunded actuarial liability also rose from \$64.6 million to \$74.5 million. As a result, the funded ratio fell from 81.3% to 79.4%. Mr. Conefry noted that a funded ratio of 80% was “not uncomfortable,” but 100% funding meant that the amount of assets would take care of all inactive and that proportion of active accrued to date liabilities. He noted very few pensions were 100% or even 80% funded. Dr. Viezer noted that the informational article showed that nationally public pension funding fell to 71.4% and pointed out the comparison of Louisiana Association of Public Employees’ Retirement Systems statistics.

Mr. Conefry also presented the potential employer contributions under three amortizations periods based upon R-248-2014 which set the employee contribution at 6% but calculated the employer contribution as if the employee contribution remained at 5% of payroll. The employer contribution using 10 years last year would



have been 31.175%; using 15 years this year would be 25.216%, and using 30 years this year would be 20.170%.

Mr. Conefry then began a more detailed discussion of the valuation report focusing on: (a) the calculation of the unfunded liability, (b) calculation of the contribution rates, (c) ratio of unfunded accrued liability to payroll and funded ratio, and (d) net external cash flows. Mr. Johnson asked for a clarification on the Projected Benefit Obligation on page 24 of the report and actuarial present value of expected benefits on page 7. Mr. Bergeron asked for the reason that large increase total benefit payments in 2017. Mr. Conefry said he would give a precise answer next month. Mr. Peychaud asked that Human Resources also investigate the increase.

There was a request for public comment by an active participant (employee), Mr. Dexter Joseph. Mr. Joseph first asked to clarify what was the employee contribution rate. He then noted that S&WB has increased its hiring of higher-paid unclassified employees and questioned what was the impact upon the pension. Mr. Joseph also questioned the fairness that a high-paid employee working enough years to vest could earn a larger pension than a lower-paid employee who works 30 years.

The public question and comment generated a discussion among the Pension Committee members. Mr. Peychaud asked whether the impact of higher paid employees could be analyzed. Ms. Brown Russell mentioned that an experience study might discern whether S&WB's actual demographics were different from the actuarial assumptions. Ms. Powell wondered whether a ten-year vesting period would address the fairness issue. Mr. Sloss responded that a ten-year vesting would make recruitment more difficult. Mr. Bergeron suggested that vesting could increase over time. Mr. Marvin Russell noted that whether an employee was classified or unclassified, both are "full participants" in the pension plan and there is no difference between classified and unclassified employees from the viewpoint of the pension plan.

Mr. Conefry responded to Mr. Joseph's question by first noting that a pension benefit accrued and vested after five years is not necessarily payable after five years; there are age restrictions. Mr. Conefry did not have information on the number of unclassified employees but did note that there were 62 employees whose salary was \$75,000/year or more. 40 of those employees have less than five years of service, 22 have less than one year of service, and they range in age from early 30's to late 60's. Mr. Conefry then mentioned the concept of the "benefit value curve" in defined benefit pension plans. The accumulated value of employee contributions exceeds the actuarial value of the deferred benefit until a member reaches about 15-17 years of retirement age. Although everyone accrues the same proportion, younger workers do not accrue much between the ages of 25-45. Mr. Conefry noted these were general comments but committed to doing a more thorough analysis of the question raised by Mr. Joseph.

### **INFORMATION ITEMS:**

Information item(s) 5 through 9 were received.

### **ANY OTHER MATTERS:**

The following questions and requests were raised for follow-up:

1. Ms. Powell asked whether we would use a level dollar or level percentage of payroll amortization; (Mr. Conefry later answered that it was level dollar).
2. Dr. Viezer suggested that the reciprocity agreement between ERS and NOMERS be reviewed after the asset-liability study is complete.
3. Ms. Brown-Russell said that Board Relations would work with the Committee to set a convenient date/time for the July meeting which will be two hours long.
4. Chairman Peychaud reaffirmed that Ms. Valerie Rivers, Deputy Director of Logistics, would review the discussion draft that incorporated the Pension Committee's desired changes into the S&WB Professional Services Procurement Policy #95 and report back to the Pension Committee with her thoughts and suggestions.
5. Mr. Bergeron asked for the reason that large increase total benefit payments in 2017. Mr. Peychaud asked that Human Resources also investigate the increase.



6. Ms. Brown-Russell supports an experience study to investigate changes in S&WB's actual demographic experience relative to actuarial assumptions.
7. Mr. Conefry will conduct a more thorough analysis of the impact upon the pension plan of a larger percentage of the workforce being higher paid. Mr. Peychaud asked that Mr. Joseph collaborate with Mr. Conefry on the study.

**ADJOURNMENT:**

There being no further business to come before the Pension Committee, Chairman Peychaud called for a motion and Mr. Sloss made a motion to adjourn. Ms. Gleason seconded and the motion carried. The meeting adjourned at approximately 10:00 A.M.

Respectfully submitted,

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Joseph Peychaud, Pension Committee Chair