## Sewerage and Water Board

 OF NEW ORLEANS, LOUISIANA

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FOR THE YEARS ENDED
DECEMBER 31, 2017 and 2016


#### Abstract

About The Cover The Water Hammer Hazard Mitigation Program will help protect the Sewerage and Water Board (SEWB) Water distribution system piping from future damage due to water hammer. Water hammer is the transient surge of water pressure caused by intermittent losses in power at the plant. The water tower projects will help to reduce future leaks caused by water hammer and help mitigate the loss of water pressure due to power interruptions. These upgrades will allow plant personnel time to switch the electrical power source from commercial power to the SEWB's own generated power in the event of an interruption. The two new elevated water tanks planned for the Carrollton Plant will be a compliment to those tanks currently in service. The new tanks will have a combined capacity of 4 million gallons and not exceed 200 feet in height. The Claiborne Tower should be operational in November 2018 and the Panola Tower completed in March 2019.


# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

Comprehensive Annual Financial Report<br>For The Year Ended

December 31, 2017 and 2016

Prepared by:
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Chief Financial Officer
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## Our Mission \& Vision

## Our Mission

We serve the people of New Orleans and improve their quality of life by providing safe drinking water; removing waste water for safe return to the environment; and draining storm water to protect our community. Our team of experts do this reliably, continuously, and at a reasonable cost.

## Our Vision

Our vision is to earn and hold the trust and confidence of our customers and community for reliable and sustainable water services; and to be a model utility in the water industry.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

Comprehensive Annual Financial Report
Years ended December 31, 2017 and 2016

## TABLE OF CONTENTS

I. INTRODUCTORY SECTION PAGE(S)
Transmittal Letter ..... I-1
Revenue and Expense Graph ..... I-10
Certificate of Achievement for Excellence in Financial Reporting ..... I-11
Board of Directors of the Sewerage and Water Board of New Orleans ..... I-12
Committees of the Sewerage and Water Board of New Orleans ..... I-13
Executive Staff ..... I-14
Organizational Chart ..... I-15
II. FINANCIAL SECTION
Independent Auditors' Report ..... II-1
Management's Discussion and Analysis ..... II-4
(Required Supplementary Information)
Basic Financial Statements:
Government - Wide Financial Statements - Enterprise Fund:Statements of Net PositionII-21
Statements of Revenues, Expenses and Changes in Net Position ..... II-23
Statements of Cash Flows ..... II-24
Fund Financial Statements - Fiduciary Fund
Statements of Fiduciary Net Position - Pension Trust Fund ..... II-26
Statements of Changes in Fiduciary Net Position - Pension Trust Fund ..... II-27
Notes to Financial Statements ..... II-28
Required Supplementary Information under GASB Statement No. 67, 68, and 71 ..... II-72
GASB Statement No. 67, 68, and 71 ..... II-73
GASB Statement No. 45 ..... II-74
Supplementary Information:Net Position by Department
Enterprise Fund - Schedule 1 ..... II-75
Revenues, Expenses, and Changes in Net Position by Department Enterprise Fund - Schedule 2 ..... II-77
Schedule of Property, Plant, and Equipment in Service by Department Schedule 3 ..... II-78
Schedule of Bonds Payable
Schedule 4 ..... II-79

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

Comprehensive Annual Financial Report
Years ended December 31, 2017 and 2016
TABLE OF CONTENTS

## II. FINANCIAL SECTION (continued)

PAGE(S)
Schedule of Cash Receipts and Disbursements -
Debt Service and Debt Service Reserve Required by Bond Resolution Schedule 5
II-80

Schedule of Changes in Self-Insurance Liabilities by Department
Schedule 6
Schedule of Compensation, Benefits, and Other Payments to the Executive Director Schedule 7

## III. STATISICAL SECTION (UNAUDITED)

This part of the Board's comprehensive annual financial report presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the Board's overall financial health.

Summary of Statistical Information III-0

Financial Trends
These schedules contain trend information to help the reader understand how the Board's financial performance and well-being have changed over time.
Net Position by Component - Last Ten Years III-1

Changes in Net Position by Component - Last Ten Fiscal Years III-2
Revenues and Expenses by Source - Enterprise Fund Last Ten Fiscal Years III-3

Revenue Capacity
These schedules contain information to help the reader assess the Board's most significant local revenue source, the property tax.

> Assessed and Estimated Actual Value of Taxable Property Last Ten Fiscal Years

Property Tax Rates - Direct and Overlapping Governments Number of Mills - Last Ten Years III-5

Ten Largest Taxpayers - December 31, 2017and Ten Years Ago III-6
Property Tax Levies and Collections by the City of New Orleans Last Ten Fiscal Years
Water and Sewer Rates - Last Ten Fiscal Years III-8
Debt Capacity
These schedules present information to help the reader assess the affordability of the Board's current levels of understanding debt and the Board's ability to issue additional debt in the future.
Ratio of Outstanding Debt by Type - Last Ten Fiscal Years III-9
Computation of Direct and Overlapping Debt - December 31, 2017 III-10

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

Comprehensive Annual Financial Report
Years ended December 31, 2017 and 2016

## TABLE OF CONTENTS

## III. STATISICAL SECTION (UNAUDITED) (continued) <br> PAGE(S)

Revenue Bonds Debt Service Coverage:
Water Bonds - Last Ten Fiscal Years
III-11
Sewer Bonds - Last Ten Fiscal Years III-12
Unrestricted Cash and Cash Equivalents Days of Operating and Maintenance
Expense at Year End:
Water System - Last Four Fiscal Years III-13
Sewer System - Last Four Fiscal Years III-14
Demographic and Economic Information
These schedules offer demographic and economic indicators to help the reader understand the environment within which the Board's financial activities take place.
Demographic Statistics - Last Ten Fiscal Years III-15
New Orleans Area Principal Employers (Non-Public) -
Last Ten Fiscal Years
Operating Information
These schedules contain service and infrastructure data to help the reader understand how the information in the Board's financial report relates to the services the Board provides and the activities it performs.
Capital Expenditures by Department - Enterprise Fund
Last Ten Fiscal Years
III-17
Schedule of Future Debt Payments:
Water
Sewer III-19
Drainage III-20
Total III-21
Property Value, New Construction and Bank Deposits
Last Ten Fiscal Years
Capital Asset Statistics by Function - Last Ten Fiscal Years III-23
Number of Active Employees - Last Ten Fiscal Years III-24

## IV. SUPPLEMENTAL SECTION (UNAUDITED)

2017Actual Capital Expenditures - Water Department IV-1
2017 Actual Capital Expenditures - Sewerage Department IV-2
2017 Actual Capital Expenditures - Drainage Department IV-3
2017 Actual Capital Expenditures - Power Projects IV-4
2017 Actual Capital Expenditures - General Budget Items IV-5
Analysis of Pumping and Power Department
Power Purchased and Produced - 2005 through 2017

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

Comprehensive Annual Financial Report
Years ended December 31, 2017 and 2016

## TABLE OF CONTENTS

IV. SUPPLEMENTAL SECTION (UNAUDITED) (continued) PAGE(S)
Pumping and Power Department - 2017 ..... IV-7Gallons Metered - Pay Water Consumption - 2017
Monthly Water and Sewerage Rate Collections - 2017IV-8
Table of Water Purification Operations andTable of Water and Sewerage Distribution SystemIV-10 thru IV-32
Table of Rainfall in New Orleans - Last Ten Years ..... IV-33
Benchmarking ..... IV-34


Located in the Power Plant at the SEWB Carrollton Water Purification Plant is Turbine No．4．In the process of its refurbishment，the turbine has a new electrical switchgear．It is a new $6,600 \mathrm{~V}-25 \mathrm{~Hz}$ electrical medium voltage metal clad switchgear that replaces the existing $6,600 \mathrm{~V}$ switchgear．This is a critical component of the overall Steam Turbine Generator No． 4 assembly． The switchgear is a combination of electrical disconnect switches，fuses or circuit breakers used to control，protect and isolate electrical equipment．
"RE-BUILDING THE CITY'S WATER SYSTEMS FOR THE 21sT CENTURY"

## Sewerage \& Water Board of new orleans

November 30, 2018
The Honorable LaToya Cantrell, President, and
Members of the Sewerage and Water Board of New Orleans
625 St. Joseph Street
New Orleans, LA 70165
Ladies and Gentlemen:

We are pleased to present the Sewerage and Water Board of New Orleans' (hereinafter referred to as "the Board") Comprehensive Annual Financial Report (CAFR) for the years ended December 31, 2017 and 2016. The purpose of this report is to provide the Board of Directors, investors, members of the public, and other interested parties reliable information about the Board. The Board's financial statements were prepared in accordance with U.S. Generally Accepted Accounting Principles (GAAP), as promulgated by the Government Accounting Standards Board (GASB) and audited by a firm of independent certified public accountants retained by the Board. Pursuant to LA Revised State Statute 24:513(A), the Board is required to have its financial position examined and audited each year by licensed certified public accountants.

Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests solely with the Board. It is our belief that the data, as presented, is accurate in all material aspects and is presented in a manner designed to fairly set forth the financial position, results of operations, and cash flows of the Board's Enterprise and Pension Trust Funds. Any disclosure included is necessary to enable the reader to gain an understanding of the Board's financial activities have been included.

## COMPREHENSIVE ANNUAL FINANCIAL REPORT SECTIONS

The CAFR is organized into four sections (1) Introductory, (2) Financial, (3) Statistical, and (4) Supplemental. The Board's management is responsible for and assumes responsibility for completeness and reliability of the information contained in this report, based upon a comprehensive framework of internal control that is established for this purpose. The internal control framework is designed to give reasonable assurance that the cost of internal controls should not exceed the benefits derived from the controls and that the financial statements are free from material misstatements. The internal control over financial reporting is a process designed by, or under the supervision of, the Board's executive director, and the chief financial officer, and the finance administrator, and effected by the Board or Directors, management, and other personnel to provide reasonable assurance regarding the reliability of the financial reporting and the preparation of financial statements for external purposes in accordance with general accepted accounting principles.

Postlethwaite \& Netterville (P\&N), a Professional Accounting Corporation, has been retained by the Board to serve as its independent auditors and has issued an unbiased opinion on the Board's financial statements for the years 2017 and 2016. The independent's auditor's report is located at the front of the Financial Section of this report.

GAAP requires that management provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis (MD\&A). This letter of transmittal is designed to complement MD\&A and should be read in conjunction with it. The Sewerage and Water Board's MD\&A can be found immediately following the report of the independent auditors.

## PROFILE OF SEWERAGE AND WATER BOARD OF NEW ORLEANS

Sewerage and Water Board of New Orleans is a political subdivision created in 1899 by Louisiana State Statutes. The Board is charged with construction, operation, and maintenance of Water, Sewerage, and Drainage Systems for the City of New Orleans. By agreement, approximately 2,550 acres of adjourning Jefferson Parish is served by the Board's drainage facilities for which Jefferson Parish pays its pro rata share of expenses. We also provide some residential sewer service within Plaquemines Parish.

The Board was established as a "special board" operating independently of city government. Effective January 1, 2015, the Board's makeup changed to eleven members, including the Mayor to serve as the President of the Board of Directors, two (2) members of the Board of Liquidation, City Debt, and eight (8) citizens, as designated by the State Statutes. The initial terms of office shall be staggered from one year to four years, as designated by State Statutes, as well.

The Board of Directors is responsible for, among other things, passing resolutions, adopting the budget, appointing committees, and hiring the Board's Executive Director and General Superintendent. The Board's Executive Director is responsible for carrying out the policies and resolutions of the governing board and overseeing the day-to-day operations of the Board.

The Board of Directors is required to adopt an Operating and Maintenance Budget and Capital Budget inclusive of a ten (10) year Capital Program no later than December 31 of the fiscal year for the Enterprise Sewerage, Drainage, and Water system funds. The annual budget serves as the foundation for the Board's financial planning and control.

The Board employs approximately 1,400 individuals, consisting of managers; engineers; operators; machinists; laboratory chemists; technicians; environmental experts; pumping and power professionals; experienced pipe; valve; and fire hydrant repair crews; and administrative support personnel; all working together to maintain a system that strives to be the best in class.

The Sewerage and Water Board of New Orleans' vision is to have the trust and confidence of our customers for reliable and sustainable water services. We value quality and reliable service to our customers at a reasonable cost, support the community, and our employees. The mission of the Sewerage and Water Board of New Orleans is to provide safe drinking water to the everyone in New Orleans, to remove waste water for safe return to the environment, to drain away storm water, to provide water for fire protection, to provide information about products and services, and to do all of this continuously at a reasonable cost to the community.

The Board meets the criteria for classification as an "other stand-alone government" as described in Governmental Accounting Standards Board Statement No. 61. The reporting entity includes the Enterprise Fund and the Pension Trust Fund. The Enterprise Fund is composed of three (3) independent systems: Water, Sewerage, and Drainage.

## ECONOMIC GROWTH AND OUTLOOK

The history of the Sewerage and Water Board of New Orleans shows that its service area includes the Civil Parish of Orleans in the state of Louisiana which covers 364 square miles. The City of New Orleans is the most populous city in the State of Louisiana. According to the US Census Bureau, the 2017 estimated population was 393,292 . A major port, New Orleans is considered an economic and commercial hub for the broader Gulf Coast region of the United States.

The Mississippi River flows generally south for 2,320 miles through New Orleans and pours into the Gulf of Mexico. The river is part of the second-largest drainage system in the United States.

Two interstate highways cross New Orleans: Interstate 10 (I-10), a major east-west transcontinental Interstate Highway in the Southern United States, and Interstate 610 (I-610), an auxiliary route of Interstate 10 that lies almost entirely within the city limits of New Orleans. The railroad network is tied together by the New Orleans Public Belt Railroad, a publiclyowned terminal switching and consolidation entity operating on 27 miles of track along the Mississippi River. New Orleans is a stop on Amtrak's Chicago-New York-Los Angeles routes.

The New Orleans Metropolitan Area or the Greater New Orleans Region includes Jefferson, Plaquemines, St. Bernard, St. Tammany, St. Charles, St. John the Baptist, and St. James Parish. The distributions of New Orleans metro area locals with respect to their parish of residence is that most live in Jefferson (34\%) and Orleans (31\%) parishes. After Hurricane Katrina, it was estimated that the City population was as low as 187,525 . By 2010, the Census Bureau estimated the population to be 343,829 . Recent estimates for the second quarter in 2017 indicate that the population was up $14.4 \%$ since the 2010 census was completed.

The unemployment rate in New Orleans has been declining in recent years. During Quarter 2 of 2017, the New Orleans metro area had an unemployment rate of $5.2 \%$, a decrease from $5.6 \%$ reported in the same quarter last year. During the calendar year, noticeable gains in the number of jobs year to date were for Hospitals (private) (9.6\%), General Merchandising Stores (7.8\%), and Administrative, Support, \& Waste Management (6.5\%). There were noticeable job losses in the areas of Information ( $-11.9 \%$ ), Mining \& Logging ( $-10.5 \%$ ), and State Government ( $-7.0 \%$ ).

Figure 5: Unemployment Rate - New Orleans MSA vs. U.S. Quarterly (\%)


Personal income in the New Orleans area experienced a decrease of $2.4 \%$ in the average weekly wage during Quarter 4 of 2016 from the same quarter last year, and an increase of $0.1 \%$ year to date. Sectors that reported the largest weekly wages (year to date) include mining, management of companies and enterprises, manufacturing, and finance and insurance. The lowest weekly wage was reported for accommodation and food services, retail trade, and other services.

Figure 6: Employment Growth - New Orleans MSA vs. U.S.
2016 YTD to 2017 YTD (\%)


Sources: BLS and DBER

In 2017, some of the major industries in New Orleans that experienced growth were Health Care \& Social Assistance; Leisure \& Hospitality; Professional \& Business Services; General Merchandising; and Administrative; Support \& Waste Management. New Orleans is also a center for higher learning, with over 50,000 students enrolled in the region's eleven two- and four-year degree-granting institutions, providing hundreds of jobs to higher-learning educators.

# THE NEW ORLEANS METROPOLITAN AREA ECONOMY 

Table 3: New Orleans MSA Employment - Quarterly Actuals, 2016:2-2017:2

| Sectors ${ }^{1}$ | 2016:2 | 2016:3 | 2016:4 | 2017:1 | 2017:2 | $\begin{gathered} 2017: 1 \\ \text { to } \\ 2017: 2 \end{gathered}$ | $\begin{gathered} \text { 2016:2 } \\ \text { to } \\ \text { 2017:2 } \end{gathered}$ | $\begin{aligned} & \text { 2016YTD } \\ & \text { to } \\ & \text { 2017YTD } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of Jobs |  |  |  |  | Percent Change ${ }^{2}$ |  |  |
|  |  |  |  |  |  |  |  |  |
| Total Nonfarm Employment | 577,667 | 573,233 | 579,500 | 573,600 | 578,833 | 0.9 | 0.2 | 0.1 |
| Mining and Logging | 5,533 | 5,467 | 5,300 | 5,100 | 5,100 | 0.0 | -7.8 | -10.5 |
| Construction | 29,367 | 29,667 | 30,267 | 30,267 | 30,800 | 1.8 | 4.9 | 3.0 |
| Manufacturing | 30,133 | 29,900 | 30,033 | 30,467 | 30,533 | 0.2 | 1.3 | 1.4 |
| Durable Goods | 11,500 | 11,467 | 11,433 | 11,500 | 11,433 | -0.6 | -0.6 | -0.3 |
| Transportation Equipment | 2,400 | 2,500 | 2,467 | 2,333 | 2,300 | -1.4 | -4.2 | -2.8 |
| Nondurable Goods | 18,633 | 18,433 | 18,600 | 18,967 | 19,100 | 0.7 | 2.5 | 2.4 |
| Chemical Manufacturing | 5,167 | 5,133 | 5,167 | 5,300 | 5,367 | 1.3 | 3.9 | 2.6 |
| Wholesale Trade | 23,167 | 23,233 | 23,567 | 23,233 | 22,700 | -2.3 | -2.0 | -1.0 |
| Retail Trade | 64,200 | 63,900 | 66,067 | 64,933 | 63,967 | -1.5 | -0.4 | 0.7 |
| Grocery Stores | 10,267 | 10,100 | 10,333 | 10,367 | 10,500 | 1.3 | 2.3 | 1.8 |
| General Merchandise Stores | 13,800 | 13,933 | 15,133 | 14,833 | 14,700 | -0.9 | 6.5 | 7.8 |
| Transp., Warehousing, and Utilities | 28,433 | 28,467 | 28,433 | 27,933 | 28,267 | 1.2 | -0.6 | -1.8 |
| Information | 7,400 | 7,367 | 6,867 | 6,833 | 6,933 | 1.5 | -6.3 | -11.9 |
| Financial Activities | 29,800 | 30,100 | 30,600 | 30,267 | 29,733 | -1.8 | -0.2 | 1.2 |
| Depository Credit Inter. (Banking) | 6,067 | 6,067 | 6,000 | 5,967 | 5,900 | -1.1 | -2.7 | -2.2 |
| Professional and Business Services | 75,933 | 74,767 | 75,400 | 74,933 | 77,033 | 2.8 | 1.4 | 1.4 |
| Professional, Scientific, Technical | 31,867 | 31,667 | 31,200 | 30,833 | 31,233 | 1.3 | -2.0 | -3.2 |
| Management of Companies | 8,000 | 7,867 | 7,733 | 7,800 | 7,800 | 0.0 | -2.5 | -2.5 |
| Admin, Support, Waste Mgmt. | 36,067 | 35,233 | 36,467 | 36,300 | 38,000 | 4.7 | 5.4 | 6.5 |
| Educational Services | 30,033 | 29,933 | 31,300 | 30,567 | 31,000 | 1.4 | 3.2 | 3.4 |
| Health Care and Social Assistance | 68,467 | 69,633 | 70,133 | 69,933 | 70,300 | 0.5 | 2.7 | 2.8 |
| Ambulatory Health Care | 26,267 | 26,333 | 26,600 | 26,600 | 26,900 | 1.1 | 2.4 | 2.5 |
| Hospitals (Private) | 23,000 | 24,100 | 24,633 | 24,967 | 25,200 | 0.9 | 9.6 | 9.6 |
| Leisure and Hospitality | 88,000 | 86,733 | 87,233 | 85,867 | 88,900 | 3.5 | 1.0 | 0.1 |
| Arts, Entertainment, and Recreation | 11,933 | 11,867 | 11,400 | 11,133 | 11,867 | 6.6 | -0.6 | -3.0 |
| Accommodation | 14,967 | 14,833 | 14,667 | 14,467 | 14,733 | 1.8 | -1.6 | -0.9 |
| Food Services and Drinking Places | 61,100 | 60,033 | 61,167 | 60,267 | 62,300 | 3.4 | 2.0 | 0.9 |
| Other Services | 23,967 | 24,033 | 24,133 | 24,100 | 24,400 | 1.2 | 1.8 | 1.6 |
| Government | 73,233 | 70,033 | 70,167 | 69,167 | 69,167 | 0.0 | -5.6 | -4.8 |
| Federal Government | 12,333 | 12,433 | 12,600 | 12,267 | 12,400 | 1.1 | 0.5 | 0.7 |
| State Government | 12,167 | 11,367 | 12,467 | 11,900 | 11,300 | -5.0 | -7.1 | -7.0 |
| Local Government | 48,733 | 46,233 | 45,100 | 45,000 | 45,467 | 1.0 | -6.7 | -5.7 |
| Unemployment Rate (\%) ${ }^{3}$ | 5.6 | 6.0 | 5.0 | 5.1 | 5.2 | 0.1 | -0.4 | -0.4 |
|  |  |  |  |  |  |  |  |  |

[^0]In 2016, the New Orleans area welcomed 10.4 million visitors, an increase of $7 \%$ over the 9.8 million visitors in 2015. Visitor spending reached $\$ 7.4$ billion, an increase of $5 \%$ from the previous year. The number of passengers traveling through the port of New Orleans by riverboat and oversea cruises increased $10.0 \%$ during the second quarter of 2017 compared to the same period in 2016. Airport traffic and supply have maintained an upward trend over the last five years. Airport capacity, measured by the number of plane seats available, increased $9.6 \%$ over the same quarter last year, and $6.9 \%$ year to date. The City of New Orleans hotel room supply and average daily room rate increased by $2.7 \%$ during 2017 as compared to the 2016 levels.

## FINANCIAL PLANNING

To plan for the future and to ensure financial stability, an increase of the Board's water and sewer rates was approved by the New Orleans City Council which implemented increases on January 1, 2013. The Board is an enterprise fund of the City of New Orleans and like most enterprise funds, it is financed by user fees. These user fees cover water and sewer services only. The approved rate plan covered an eight year period and has been increasing 10 percent every year and will continue until 2020. This has allowed the Board to increase its income to fix its ailing infrastructure and bolster its depleted employee ranks. The original 8 year estimate of $\$ 583$ million to be generated was expected to have an impact on companies such as restaurants and laundromats where water is central to daily operations.

The Board also receives revenues from three- (3) mill. six- (6) mill and nine- (9) mill ad valorem taxes, which are restricted exclusively for drainage services to finance the Drainage System. These ad valorem taxes are the only income for operating revenues of the drainage system.

## General Operations

The changes in net position for the year ended December 31, 2017 was an increase of approximately $\$ 34.8$ million, as opposed to approximately $\$ 145.7$ million increase for the year ended December 31, 2016. The Board's total operating revenues increased by $7 \%$ to approximately $\$ 205.6$ million due primarily to rate increases effective January 1, 2017 and total non-operating revenue decreased by $-22 \%$ to approximately $\$ 47.9$ million.

## Budgetary Control

The Board maintains an internal budgetary control through the preparation and monitoring of an annual operating and capital budget for the Water, Sewerage, and Drainage funds. Statements of revenues, expenses, and changes in net assets, statements of net assets; and statements of cash flow are prepared for each system. Also, monthly budget reports are provided to department level managers to assist them in their fiscal responsibilities. The 2018 approved budget of $\$ 217.3$ million is $15 \%$ greater than the 2017 approved fiscal year budget of $\$ 189.1$ million. The Board has been issued an A \& A- rating from S\&P for sewerage and water respectively and an A- for water and sewer from Fitch rating agency. In addition the S\&P and Fitch ratings for special tax bonds is AA- and A+ respectively.

Additionally, the Board uses a ten-year financial plan that factors in resources and expenses for its Capital Improvement Plan. The financial plan provides the Board with the ability to compare the impact of future financial activity and issues to determine the most appropriate method of maintaining the Board's financial stability. The Fiscal Year 2018-2017 10 year Capital Improvement Plan totals $\$ 3.2$ billion in projected investments ( $\$ 832,002,248$ water system, $\$ 497,656,000$ sewerage system, $\$ 774,847,347$ drainage system, and $\$ 1,058,154,250$ combined projects). This includes capital improvements to infrastructure for the completion of projects from Hurricane Katrina repairs, for ongoing rehabilitation, to handle anticipated growth, to maintain compliance with regulatory requirements, technology changes, and to bring the system into the $21^{\text {st }}$ century. As of November 2017 there were 253 active capital projects with total budgets of $\$ 1.2$ billion. Below is a list of the major initiatives completed thus far and still in progress:

## CAPITAL IMPROVEMENT PROGRAM

For more than 120 years, the Board has provided safe, high quality drinking water, reliable water supply for fire protection, collection and treatment of all wastewater, and drainage services to the citizens of Orleans Parish, Louisiana. On August 5, 2017, a catastrophic rainstorm came through the City of New Orleans, causing street flooding and other damages. The event was declared an emergency by the Mayor's office. During this emergency event the Board experienced a lack of available power due to the unavailability of 3 turbines. After this event, the Board accelerated its maintenance upgrades and repairs to complete work on various power production units and capabilities as well as drainage pumping facilities.

Other ongoing projects under the 10-year capital program include:

## WATER SYSTEM MAJOR INITIATIVES

## Carrollton Water Purification Plant

- Painting of four (4) million gallon concrete ground storage tanks completed.
- Study of water storage tank mixing completed.
- Construction of new instrument air system for Sycamore Filter Gallery completed.
- Construction of new filter backwash pump for Sycamore Filter Gallery in progress.
- Staff design of valves, actuators, and controls at Sycamore Filter Gallery in progress.
- Design of new sludge line to the Mississippi River in progress.
- Design of new chemical bulk storage and feed facility in progress.
- Design of Resiliency Complex including hardening of Engineering Building, rehabilitation of Head House Facility, and new Infill Building in progress.
- Design for the demolition to basins C7 and C8 in progress.
- Design of improvement to Claiborne Ave Pumping, Panola, and High Lift Stations in progress.
- Conceptual study of new electrical substation on the west side of the facility in progress.
- Roof repairs at Hamilton Substation, Sycamore Substation, and Recirculation Pump Facility completed.
- Design of the repairs to the fender system at New River and Oak St Raw Water Intake Structures in progress.
- Construction of emergency temporary backwash pump for Sycamore Filter Gallery in progress.
- Construction of two 2 M gallon water towers and associated piping in progress.


## Algiers Water Purification Plant

- Design of water storage tank mixing in progress.
- Design of improvement to the Algiers Water Plant in progress including replacement of Clarifier 1, improvements to Clarifiers 2, 3, and 4; a new flourosilicic acid storage and feed system; and SCADA improvements.
- Staff design of filter media replacement and repair to valves and actuators in progress.


## Water Quality Laboratory

- Completed Cryptosporidium sampling for EPA's Long Term 2 Enhanced Surface Water Treatment Rule - Round 2.


## Water Distribution System

- Repairs and improvements to the Michoud Water Tank in progress.
- Construction of secondary chlorination station in Venetian Isles in progress.
- Ongoing coordination with the Department of Public Works to rehabilitate water mains in association with the Joint Infrastructure Recovery Roads Program and other roadway rehabilitation.
- Ongoing management of twenty-two engineering consultants designing water main replacement projects for approximately sixty-two neighborhoods with a total value of $\$ 185 \mathrm{M}$.


## Water Pumping and Power

- Refurbishment of Steam Turbine Generator No. 4 in progress.
- Emergency repairs of Steam Turbine Generator No. 3 in progress.
- Emergency repairs of Gas Turbine Generator No. 5 in progress.
- Purchase and Installation of five $2.5 \mathrm{MW}-25 \mathrm{~Hz}$ Electromotive Mechanical Device and associated auxiliary equipment in progress.
- Installation of new 25 Hz generator load bank equipment in progress.
- Replacement of various 25 Hz power distribution cables in progress.
- Construction of emergency fuel storage improvements in progress.
- Refurbishment and repairs of boilers 1-6 in progress.
- Design of new boiler controls, deaerators, piping, and SCADA in progress.
- Structural improvements to the power plant completed.
- Replacement of 25 Hz pumps, motors, electrical components, piping, flow meters, and valves associated with Oak St Raw Water Intake Station in progress.


## SEWER SYSTEM MAJOR INITIATIVES

## Sewerage Pumping Stations

- Design of structural improvements to SPS A and Station D in progress.
- Construction of new Sewer Pumping Station No. 8 in progress.
- Improvements to sewage pumping stations in Algiers completed.
- Design for the replacement of SPS No. 1 in progress.
- Design of catch-all improvements of various sewage pumping stations in progress.


## East Bank Wastewater Treatment Plant

- Construction of Phase 2 Electrical Improvements in progress.
- Construction of Bio-Reactor Train No. 4 Clean-out in progress.
- Construction for the installation of the sludge dryer in progress.
- Construction for the rehabilitation of Clarifier No. 8 in progress.
- Design for a new 1000 HP effluent pump in progress.
- Preliminary design of a new 66 " effluent discharge line to the Mississippi River in progress.


## West Bank Wastewater Treatment Plant

- Replacement of a Vulcan bar screen in progress.


## DRAINAGE SYSTEM MAJOR INITIATIVES

## Drainage Pumping Stations

- Construction of permanent emergency generators at five underpass pumping stations in progress.
- Design of permanent emergency generators at three additional underpass stations in progress.
- Rehabilitation of the Broad St Underpass Station in progress.
- Construction of the three new lakefront pumping stations (17th, Orleans, \& London) completed and managed by SLFPA-E.


## Canals

- Construction of Florida Ave Canal Phases II/III from Peoples Ave is $65 \%$ complete.
- Construction of Florida Ave Canal Phase IV is $36 \%$ complete.
- Construction of Napoleon Ave Canal Phase III is $100 \%$ complete.
- Construction of S. Claiborne Ave Canal Phase I is $100 \%$ complete.
- Construction of S. Claiborne Ave Canal Phase II is $100 \%$ complete.
- Construction of Jefferson Ave Canal Phase I is $90 \%$ complete.
- Construction of Louisiana Ave Canal is $90 \%$ complete.
- Design of General DeGaulle Canal Improvements from Shirley Dr to Holiday Dr is in progress.


## OTHER FINANCIAL INFORMATION

On August 5, 2017, the City of New Orleans experienced a 100-year storm that resulted in extreme flooding and loss of power to major Board facilities. While this storm was extreme, it highlighted the need for additional reinvestment in some of the existing drainage infrastructure. In response to this emergency situation, there was a high turnover in executive level leadership with multiple interim Executive Directors over a 12 month period. However, a permanent Executive Director and a new Chief Financial Officer are firmly in place and a substantial amount of effort and resources were spent on repairing and replacing pumps and EMDs and creating power redundancies to ensure that the full pumping power is available for any future weather events. This one time emergency investment was initiated in the fall of 2017 and completed in the Spring of 2018.

In November 2016, the Board went live with a new $\$ 11$ million billing system to replace its outdated Customer Account Management (CAM) billing system. CAM was a cobalt based system which was unable to interface with modern system functions such as online bill services that would allow customers to pay their bills online and routinely check account activity. In addition, technical support for the system was no longer available and technology staff capable of using this outdated program language was about to retire.

Since implementation, the Board has encountered various technical and process issues with the issuance of customer bills that has caused customers to question the accuracy of their bills. However, the Board has been working diligently to address concerns and build customer confidence in the billing process. In the meantime, the interim leadership at the time implemented a temporary collections moratorium which has resulted in an unusually high customer billing delinquency. That moratorium was ended in mid-2018 and regular collections processes were resumed, with payment plans extended to some customers to allow them to catch up on their delinquencies.

## AWARDS AND ACKNOWLEDGMENTS

The preparation of this report could have not been accomplished without the efficient and dedicated services of the entire staff of the Sewerage and Water Board of New Orleans. Because of the dedication of these employees, the Sewerage and Water Board of New Orleans has received the GFOA Certificate of Achievement for 34 (thirty-four) years.

We wish to thank the Louisiana State Legislative Auditor for this support and dedication during the preparation of this report as well as our external auditors for their invaluable assistance.

Finally a special acknowledgement is extended to all members of the Board of Directors for their unfailing support for maintaining the highest standards of professionalism in the management of the Board's finances and their leadership in enabling the Board to fulfill its mission as it rebuilds from the emergency rain event experienced in 2017.

The Comprehensive Annual Financial Report of the Sewerage and Water Board of New Orleans for the fiscal year ended December 31, 2017 is submitted herewith.

Respectfully submitted,


Yvelte Downs. Chief Financial Officer


Ghassan Korban, Executive Director

Sewerage and Water Board of New Orleans



Government Finance Officers Association

# Certificate of Achievement for Excellence in Financial Reporting 

# Presented to <br> Sewerage and Water Board of New Orleans, Louisiana 

For its Comprehensive Annual
Financial Report for the Fiscal Year Ended

December 31, 2016
Chistophen P. Mowill
Executive Director/CEO

# BOARD OF DIRECTORS <br> SEWERAGE AND WATER BOARD OF NEW ORLEANS 

December 31, 2017
MITCHELL J. LANDRIEU Mayor
SCOTT JACOBS President Pro-TemALAN ARNOLD.........................................................Board of Liquidation Appointment
RALPH JOHNSON Board of Liquidation Appointment
ROBIN BARNES At-Large Appointment
ERIC BLUE .Council District A AppointmentSCOTT JACOBS...........................................................Council District B AppointmentKERRI KANE................................................................................ District C AppointmentMARION BRACY...........................................................Council District D Appointment
Dr. TAMIKA DUPLESSIS. Council District E Appointment
JOSEPH PEYCHAUD

$\qquad$
.Consumer/Community Advocate
KIMBERLY THOMAS, JD Consumer/Community Advocate

# COMMITTEES OF THE SEWERAGE AND WATER BOARD OF NEW ORLEANS 

December 31, 2017


# SEWERAGE AND WATER BOARD OF NEW ORLEANS EXECUTIVE STAFF 

December 31, 2017

INTERIM EXECUTIVE DIRECTOR
PAUL RAINWATER

DEPUTY DIRECTOR/SECURITY RONALD DOUCETTE

DEPUTY DIRECTOR/CONTINUOUS IMPROVEMENT
VACANT

DEPUTY DIRECTOR/ADMINISTRATION
SHARON JUDKINS

DEPUTY DIRECTOR/COMMUNICATIONS
VACANT

## DEPUTY DIRECTOR/CHIEF FINANCIAL OFFICER

MARINA KAHN

DEPUTY DIRECTOR/LOGISTICS
VALERIE RIVERS

INTERIM GENERAL SUPERINTENDENT/CONSTRUCTION/OPERATION
BRUCE ADAMS

SPECIAL COUNSEL
JADE BROWN-RUSSELL



Network crewus work around the clock daily to deliver quality of life services of water, sewver and drainage to the residents of the city. A late night emergency wouter main break is shown being repaired.


Sewverage and Water Board's (SEWB) main office on St.'Joseph Street has a new roof. It is a green or vegetated roof that will catch and hold rainwater to help reduce flooding and improve storn water quality. The roof will also provide additional insullation for the building and lower temperatures in the surrounding area. This project is part of the Green Infrastructure Program.
S\&WB developed and implemented the Green Infrastructure Plan as a formal commitment to address a consent decree from the Envirommental Protection Agency and the Departnent of Justice. This includes green infrastructure demonstration projects, education, outreaqh, tours and science programining. The SEWB works closely zoith various departments, City agencies and many conminnity stakeholders to implentent the new progran.

# INDEPENDENT AUDITORS' REPORT 

Members of the Board of Directors
Sewerage and Water Board of New Orleans

## Report on the Financial Statements

We have audited the accompanying financial statements of the Sewerage and Water Board of New Orleans (the Board) as of and for the years ended December 31, 2017 and 2016, and the related notes to the financial statements, which collectively comprise the Board's basic financial statements as listed in the table of contents.

## Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

## Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

## Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the fiduciary fund of the Board, as of December 31, 2017 and 2016, and the respective changes in financial position, and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## Emphasis of Matters

As discussed in Note 16 to the financial statements, the Board's Drainage System has incurred significant increases in expenditures which has negatively impacted the liquidity of the Drainage System. Management's evaluation of the events and conditions and management's plans to mitigate those matters are also described in Note 16. Our opinion is not modified with respect to this matter.

## Other Matters

## Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages II-4 through II-20 and the schedules presented on pages II-72 through II74 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

## Other Information

Our audits were conducted for the purpose of forming opinions on the financial statements that collectively comprise the Board's basic financial statements. The Introductory section, Schedules 1 through 7, the Statistical Information section, and Supplementary Information section are presented for purposes of additional analysis and are not a required part of the basic financial statements.

Schedules 1 through 7 are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedules 1 through 7 are fairly stated, in all material respects, in relation to the financial statements as a whole.

The Introductory, Statistical, and Supplemental sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

## Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated November 30, 2018, on our consideration of the Board's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Board's internal control over financial reporting and compliance.

## Postlethwaste \& Mettesille

New Orleans, Louisiana
November 30, 2018

# SEWERAGE \& WATER BOARD OF NEW ORLEANS 

## MANAGEMENT'S DISCUSSION AND ANALYSIS YEARS ENDED DECEMBER 31, 2017 AND 2016

This section of Sewerage \& Water Board of New Orleans' (the Board) annual financial report presents a discussion and analysis of the Board's financial performance during the fiscal years that ended December 31, 2017 and 2016. We encourage readers to consider the information presented here in conjunction with the additional information that we have furnished in our letter of transmittal. The Board's financial statements follow this section.

## FINANCIAL HIGHLIGHTS

The Board adopted a financial plan for 2011 through 2020 that resulted in improved debt service coverage, increased liquidity, increased funding for operations and maintenance, and full funding for the capital improvement programs. This financial plan was updated in late 2016 to cover 2017 through 2020.

Recovery from Hurricane Katrina and the resulting flooding continued to be a significant event during 2017. Repairs and replacements to the water, sewerage, and drainage systems, and rehabilitation and replacement of buildings will continue through 2025.

On August 5, 2017, New Orleans experienced a significant storm event resulting in localized flooding. In response, an investment was made in the emergency repair and upgrade to various aspects of the drainage system that continued into the early part of 2018. Substantial resources were utilized to ensure the resiliency and reliability of the drainage operations going forward.

## Enterprise Fund

The major highlights in the Board's enterprise fund were as follows:

## 2017

- The Board's additions to its major systems approximated $\$ 333.9$ million.
- The Southeast Louisiana (SELA) drainage system project, a major upgrade by the Corps of Engineers, resulted in additions of approximately $\$ 98.9$ million to work in progress during the year.
- Federal Emergency Management Agency (FEMA) Disaster Public Assistance grants revenues totaled approximately $\$ 29.4$ million in Disaster Assistance grants and $\$ 19.5$ million in Hazard Mitigation grants for capital contributions.
- Revenues from Water and Sewer services increased by approximately $\$ 13.5$ million to a total of approximately $\$ 202.1$ million for the year ended December 31, 2017.


## 2016

- The Board's additions to its major systems approximated $\$ 270.3$ million.
- The Southeast Louisiana (SELA) drainage system project, a major upgrade by the Corps of Engineers, resulted in additions of approximately $\$ 122.3$ million to work in progress during the year.
- Federal Emergency Management Agency (FEMA) Disaster Public Assistance grants revenues totaled approximately $\$ 21.9$ million in Disaster Assistance grants and $\$ 18.6$ million in Hazard Mitigation grants for capital contributions.


# SEWERAGE \& WATER BOARD OF NEW ORLEANS <br> MANAGEMENT'S DISCUSSION AND ANALYSIS YEARS ENDED DECEMBER 31, 2017 AND 2016 

- Revenues from Water and Sewer services increased by approximately $\$ 14.3$ million to a total of approximately $\$ 188.6$ million for the year ended December 31, 2016.


## Pension Trust Fund

The major highlights in the Board's fiduciary fund were as follows:

## $\underline{2017}$

The net appreciation of the fair value of investments was $\$ 22.5$ million in 2017 compared to a net appreciation of $\$ 11.8$ million in 2016. The net position restricted for pension benefits increased by $\$ 10.9$ million during 2017 to $\$ 235.3$ million at December 31, 2017.

## $\underline{2016}$

The net appreciation of the fair value of investments was $\$ 11.8$ million in 2016 compared to a net depreciation of $\$ 5.0$ million in 2015 . The net position restricted for pension benefits increased by $\$ 1.9$ million during 2016 to $\$ 224.4$ million at December 31, 2016.

# SEWERAGE \& WATER BOARD OF NEW ORLEANS 

## MANAGEMENT'S DISCUSSION AND ANALYSIS

YEARS ENDED DECEMBER 31, 2017 AND 2016

## OVERVIEW OF THE FINANCIAL STATEMENTS

This financial report consists of five parts: management's discussion and analysis (this section), the financial statements, the notes to the financial statements, required supplementary information, and other supplementary information.

## Government-wide Financial Statements - Enterprise Fund

The Board's principal activities of providing water, sewerage, and drainage services are accounted for in a single proprietary fund - the enterprise fund. Enterprise funds are used to report business activities. Since the enterprise fund is the Board's single activity, its financial statements are presented as the Board's government-wide financial statements.

The financial statements provide both long-term and short-term information about the Board's overall financial status. The financial statements also include notes that explain some of the information in the financial statements and provide more detailed data. The statements are followed by a section of required supplementary information and other supplementary information that further explain and support the information in the financial statements.

The Board's financial statements are prepared on an accrual basis in conformity with accounting principles generally accepted in the United States of America (GAAP) as applied to government units. Under this basis of accounting, revenues are recognized in the period in which they are earned, expenses are recognized in the period in which they are incurred, and depreciation of property, plant, and equipment is recognized in the Statements of Revenues, Expenses, and Changes in Net Position. All assets and liabilities associated with the operation of the Board are included in the Statements of Net Position.

The Statement of Net Position presents financial information on all of the Board's assets, liabilities, and deferred inflows/outflows of resources, with the difference reported as net position. Over time, increases and decreases in net position may serve as a useful indicator of whether the financial position of the Board is improving or deteriorating.

## Fund Financial Statements - Pension Trust Fund

The Board's fund financial statements consist of its pension trust fund. As a fiduciary fund, the pension trust fund is held for the benefit of employees and retirees of the Board. The pension trust fund is not reflected in the government-wide financials because the resources are not available to the Board for its activities. The accounting for the pension trust fund is much like that used by the enterprise fund.

# SEWERAGE \& WATER BOARD OF NEW ORLEANS 

## MANAGEMENT'S DISCUSSION AND ANALYSIS

YEARS ENDED DECEMBER 31, 2017 AND 2016

## FINANCIAL ANALYSIS OF THE BOARD

## ENTERPRISE FUND

## 2017 Net Position

The Board's total assets and deferred outflows at December 31, 2017 were approximately $\$ 3.4$ billion, a 4.4\% increase from December 31, 2016 (see Table A-1).


# SEWERAGE \& WATER BOARD OF NEW ORLEANS 

## MANAGEMENT'S DISCUSSION AND ANALYSIS YEARS ENDED DECEMBER 31, 2017 AND 2016

The net increase in total assets of $\$ 146.7$ million resulted primarily due to an increase in property, plant, and equipment of $\$ 274.4$ million. There was a decrease in restricted assets of about $\$ 103.2$ million as funds were used for construction projects. Current unrestricted assets decreased by $\$ 25.0$ million in 2017 mainly due to a decrease in unrestricted cash and cash equivalents of $\$ 31.3$ million, offset by an increase in outstanding customers receivable balance, net of related allowance, of $\$ 4.9$ million. Current liabilities increase by $\$ 50.5$ million primarily due to an increase in Accounts Payable of $\$ 44.7$ million as a result of increased capital expenditures during 2017 and timing of payments. Long-term liabilities increased by $\$ 58.1$ million primarily due to an increase in claims payable of $\$ 41.6$ million related to a class-action suit and an increase in the Southeast Louisiana Project liability of $\$ 37.9$ million. Deferred outflows of resources and deferred inflows of resources decreased by $\$ 3.8$ million and $\$ 528,000$, respectively, due to changes in actuary's assumption on investment returns and demographic factors related to the pension plan.

## 2016 Net Position

The Board's total assets and deferred outflows at December 31, 2016 were approximately $\$ 3.2$ billion, a $6.1 \%$ increase from December 31, 2015 (see Table A-2).


# SEWERAGE \& WATER BOARD OF NEW ORLEANS 

## MANAGEMENT'S DISCUSSION AND ANALYSIS YEARS ENDED DECEMBER 31, 2017 AND 2016

The net increase in total assets of $\$ 184.8$ million resulted primarily due to an increase in property, plant, and equipment of $\$ 217.8$ million and an increase in current unrestricted assets of $\$ 32.9$ million. The increase in current unrestricted assets is due primarily to the increase in cash and cash equivalents of $\$ 18.9$ million as a result of an increase in revenue and cash receipts from customer accounts. Restricted assets decreased by $\$ 64.0$ million in 2016 mainly due to a decrease in restricted investments of approximately $\$ 65.5$ million used for capital expenditures. Long-term liabilities increased by $\$ 46.6$ million primarily due to an increase in the Southeast Louisiana Project liability of $\$ 48.2$ million. Deferred outflows of resources and deferred inflows of resources decreased by $\$ 2.5$ million and $\$ 528,000$, respectively, due to changes in actuary's assumption on investment returns and demographic factors related to the pension plan.

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# SEWERAGE \& WATER BOARD OF NEW ORLEANS 

## MANAGEMENT'S DISCUSSION AND ANALYSIS YEARS ENDED DECEMBER 31, 2017 AND 2016

## 2017 Changes in Net Position

The change in net position for the year ended December 31, 2017 was an increase of approximately $\$ 34.8$ million, as opposed to approximately $\$ 145.7$ million for the year ended December 31, 2016. The Board's total operating revenues increased by $6.7 \%$ to approximately $\$ 205.6$ million due primarily to rate increases effective January 1, 2017. Total non-operating revenue decreased by $21.9 \%$ to approximately $\$ 47.8$ million due to a $\$ 8.9$ million provision for grants recorded in the current year. Capital contributions from federal grants and construction of Board property was approximately $\$ 96.3$ million resulting primarily from capital additions reimbursable under the FEMA Disaster Public Assistance and FEMA Hazard Mitigation grants of approximately $\$ 29.4$ million and $\$ 19.5$ million, respectively, and approximately $\$ 61.0$ million of capital contributions by the Army Corps of Engineers. The changes in net position are detailed in Table A-3; operating expenses are detailed in Table A-4.


# SEWERAGE \& WATER BOARD OF NEW ORLEANS 

MANAGEMENT'S DISCUSSION AND ANALYSIS
YEARS ENDED DECEMBER 31, 2017 AND 2016

| Table A-4 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sewerage \& Water Board Operating Expenses |  |  |  |  |  |  |  |  |
|  |  | 2017 |  | 2016 |  | Increase (Decrease) |  | Increase <br> (Decrease) |
| Power and pumping |  | 36,552,523 |  | 13,499,216 |  | \$ 23,053,307 |  | 170.8\% |
| Treatment |  | 25,651,907 |  | 20,300,344 |  | 5,351,563 |  | 26.4\% |
| Transmission and distribution |  | 36,409,559 |  | 37,174,706 |  | $(765,147)$ |  | -2.1\% |
| Customer accounts |  | 4,460,155 |  | 4,151,027 |  | 309,128 |  | 7.4\% |
| Customer service |  | 4,217,543 |  | 4,271,555 |  | $(54,012)$ |  | -1.3\% |
| Administration and general |  | 24,343,704 |  | 18,506,107 |  | 5,837,597 |  | 31.5\% |
| Pay roll related |  | 38,126,322 |  | 43,990,879 |  | $(5,864,557)$ |  | -13.3\% |
| M aintenance of general plant |  | 26,100,182 |  | 23,979,309 |  | 2,120,873 |  | 8.8\% |
| Depreciation |  | 59,450,076 |  | 52,060,674 |  | 7,389,402 |  | 14.2\% |
| Provision for doubtful accounts |  | 14,326,711 |  | 3,413,404 |  | 10,913,307 |  | 319.7\% |
| Provision for claims |  | 45,272,821 |  | 6,450,805 |  | 38,822,016 |  | 601.8\% |
| Total operating expenses |  | 314,911,503 |  | 227,798,026 |  | \$ 87,113,477 |  | 38.2\% |

Total operating expenses increased by approximately $\$ 87.1$ million or $38.2 \%$ compared to 2016. Increase of $\$ 10.9$ million in provision for doubtful accounts was mainly due to customer billing issues in 2017, and increase in claims was mainly attributed to a $\$ 38.8$ million increase in general liabilities claims in 2017. In addition, power and pumping increased by $\$ 23.1$ million due to the August 2017 flood causing an increase in expenditures.

## 2016 Changes in Net Position

The change in net position for the year ended December 31, 2016 was an increase of approximately $\$ 145.7$ million, as opposed to approximately $\$ 153.4$ million for the year ended December 31, 2015. The Board's total operating revenues, excluding other revenue, increased by $8.2 \%$ to approximately $\$ 188.6$ million due primarily to rate increases effective January 1, 2016, and other revenue decreased by $\$ 4.2$ million due to a decrease in legal settlement in 2016. Total non-operating revenue increased by $19.2 \%$ to approximately $\$ 61.3$ million due to a combination of increases in property taxes. Capital contributions from federal grants and construction of Board property was approximately $\$ 119.6$ million resulting primarily from capital additions reimbursable under the FEMA Disaster Public Assistance and FEMA Hazard Mitigation grants of approximately $\$ 21.9$ million and $\$ 18.6$ million, respectively, and approximately $\$ 79.5$ million of capital contributions by the Army Corps of Engineers. The changes in net position are detailed in Table A-5; operating expenses are detailed in Table A-6.

SEWERAGE \& WATER BOARD OF NEW ORLEANS

## MANAGEMENT'S DISCUSSION AND ANALYSIS YEARS ENDED DECEMBER 31, 2017 AND 2016



## SEWERAGE \& WATER BOARD OF NEW ORLEANS

MANAGEMENT'S DISCUSSION AND ANALYSIS YEARS ENDED DECEMBER 31, 2017 AND 2016

| Table A-6 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sewerage \& Water Board Operating Expenses |  |  |  |  |  |  |  |  |  |
|  |  | 2016 |  |  | 2015 |  | Increase (Decrease) |  | Increase (Decrease) |
| Power and pumping |  | 13,499,216 |  |  | 13,139,255 |  | \$ 359,961 |  | 2.7\% |
| Treatment |  | 20,300,344 |  |  | 18,740,637 |  | 1,559,707 |  | 8.3\% |
| Transmission and distribution |  | 37,174,706 |  |  | 35,878,137 |  | 1,296,569 |  | 3.6\% |
| Customer accounts |  | 4,151,027 |  |  | 3,807,405 |  | 343,622 |  | 9.0\% |
| Customer service |  | 4,271,555 |  |  | 3,973,344 |  | 298,211 |  | 7.5\% |
| Administration and general |  | 18,506,107 |  |  | 16,848,253 |  | 1,657,854 |  | 9.8\% |
| Pay roll related |  | 43,990,879 |  |  | 36,349,834 |  | 7,641,045 |  | 21.0\% |
| Maintenance of general plant |  | 23,979,309 |  |  | 27,148,505 |  | $(3.169,196)$ |  | -11.7\% |
| Depreciation |  | 52,060,674 |  |  | 51,661,651 |  | 399,023 |  | 0.8\% |
| Provision for doubtful accounts |  | 3,413,404 |  |  | 2,466,131 |  | 947,273 |  | 38.4\% |
| Provision for claims |  | 6,450,805 |  |  | 2.435,209 |  | 4,015,596 |  | 164.9\% |
| Total operating expenses |  | 227,798,026 |  |  | 212,448,361 |  | \$ 15,349,665 |  | 7.2\% |

Total operating expenses increased by approximately $\$ 15.3$ million or $7.2 \%$ compared to 2015. Increase in provision for claims was mainly attributable to a $\$ 4.2$ million increase in general liabilities claims from 2016. In addition, payroll related costs increased by approximately $\$ 7.6$ million as a result of a $\$ 5.4$ million non-cash expense related to pension benefits and $\$ 2.2$ million increase in personnel costs. Maintenance of general plant decreased $\$ 3.2$ million as a result of a $\$ 1.5$ million decrease in expenditures on the central yard administrative building and a $\$ 1.5$ million decrease in expenditures on overall maintenance.

## SEWERAGE \& WATER BOARD OF NEW ORLEANS

## MANAGEMENT'S DISCUSSION AND ANALYSIS <br> YEARS ENDED DECEMBER 31, 2017 AND 2016

## PENSION TRUST FUND

## 2017 Plan Net Position

The Board's total plan assets and net position of its pension trust fund at December 31, 2017 was approximately $\$ 235.3$ million, a $4.8 \%$ increase from December 31, 2016 (see table A-7).

Plan net position increased by approximately $\$ 10.9$ million in 2017 primarily due to appreciation in fair value of investment by approximately $\$ 22.5$ million and contributions of $\$ 11.8$ million offset by benefit payment and other deductions totaling $\$ 24.2$ million in 2017.


## SEWERAGE \& WATER BOARD OF NEW ORLEANS

## MANAGEMENT'S DISCUSSION AND ANALYSIS YEARS ENDED DECEMBER 31, 2017 AND 2016

## 2016 Plan Net Position

The Board's total plan assets and net position of its pension trust fund at December 31, 2016 was approximately $\$ 224.4$ million, a $0.9 \%$ increase from December 31, 2015 (see table A-8).

Plan net position increased by approximately $\$ 1.9$ million in 2016 primarily due to appreciation in fair market value of investments by approximately $\$ 11.8$ million and contributions of $\$ 10.1$ million offset by benefit payments and other deductions totaling $\$ 20.7$ million in 2016.


# SEWERAGE \& WATER BOARD OF NEW ORLEANS 

## MANAGEMENT'S DISCUSSION AND ANALYSIS <br> YEARS ENDED DECEMBER 31, 2017 AND 2016

## 2017 Changes in Plan Net Position

Change in net position increased by $\$ 9.0$ million mainly attributable to a $\$ 10.8$ million net investment income change. The increase in net investment income is due to overall market conditions resulting appreciation in fair value of the investments and earnings from investments.


# SEWERAGE \& WATER BOARD OF NEW ORLEANS 

## MANAGEMENT'S DISCUSSION AND ANALYSIS

YEARS ENDED DECEMBER 31, 2017 AND 2016

## 2016 Changes in Plan Net Position

Change in net position increased by $\$ 16.1$ million mainly attributable to $\$ 12.6$ million of net investment income compared to a net investment loss of $\$ 4.1$ million in 2015 . The increase in net investment income is due to overall market conditions and earnings from investments.


# SEWERAGE \& WATER BOARD OF NEW ORLEANS 

## MANAGEMENT'S DISCUSSION AND ANALYSIS <br> YEARS ENDED DECEMBER 31, 2017 AND 2016

## CAPITAL ASSET AND DEBT ADMINISTRATION

## 2017 Capital Assets

As of December 31, 2017, the Board had invested approximately $\$ 4.00$ billion in capital assets. Net of accumulated depreciation, the Board's net capital assets at December 31, 2017 totaled approximately $\$ 3.02$ billion. This amount represents a net increase (including additions and disposals, net of depreciation) of approximately $\$ 274.4$ million, or 10.0\%, over December 31, 2016.

At December 31, 2017, the Board's budget for its 10 -year capital improvements program totaled approximately $\$ 3.16$ billion including approximately $\$ 774.8$ million for water, $\$ 497.7$ million for sewerage, $\$ 832.0$ million for drainage, and approximately $\$ 1.10$ billion for a combination of water, sewerage, and drainage. Due to certain regulatory and legislative changes, additional capital improvements will probably be required. Future capital improvement program expenditures may require the issuance of additional debt depending on the amount and timing of expenditures. As of December 31, 2017, the Board has committed or appropriated $\$ 47.7$ million in investments for use in future capital projects and has approximately $\$ 67.8$ million remaining in restricted cash, cash equivalents, and investments for construction.

The capital improvements budget for 2018 is $\$ 346.5$ million, including $\$ 109.9$ million for projects which are expected to be funded by federal grants and programs. Significant projects included in property, plant and equipment in progress as of December 31, 2017 include the following:

Hurricane Katrina-related Repairs and Replacements
Southeast Louisiana Flood Control Program
Sewer System Sanitation Evaluation and Rehabilitation Program
Eastbank Sewer Treatment Plant
Westbank Sewer Treatment Plant
Wetlands Assimilation Project
Hazard Mitigation Grant Program
See Note 4 for detailed capital asset activity during 2017.

## 2016 Capital Assets

As of December 31, 2016, the Board had invested approximately $\$ 3.67$ billion in capital assets. Net of accumulated depreciation, the Board's net capital assets at December 31, 2016 totaled approximately $\$ 2.74$ billion. This amount represents a net increase (including additions and disposals, net of depreciation) of approximately $\$ 214.6$ million, or $8.5 \%$, over December 31, 2015.

# SEWERAGE \& WATER BOARD OF NEW ORLEANS 

## MANAGEMENT'S DISCUSSION AND ANALYSIS YEARS ENDED DECEMBER 31, 2017 AND 2016

At December 31, 2016, the Board's budget for its 10 -year capital improvements program totaled approximately $\$ 2.68$ billion including approximately $\$ 1.00$ billion for water, $\$ 684.3$ million for sewerage and $\$ 935.7$ million for drainage. Due to certain regulatory and legislative changes, additional capital improvements will probably be required. Future capital improvement program expenditures may require the issuance of additional debt depending on the amount and timing of expenditures. As of December 31, 2016 , the Board has committed or appropriated $\$ 65.6$ million in investments for use in future capital projects and has approximately $\$ 170.4$ million remaining in restricted cash, cash equivalents, and investments for construction.

The capital improvements budget for 2017 is $\$ 369.2$ million, including $\$ 111.3$ million for projects which are expected to be funded by federal grants and programs. Significant projects included in property, plant and equipment in progress as of December 31, 2016 include the following:

Hurricane Katrina-related Repairs and Replacements
Southeast Louisiana Flood Control Program
Sewer System Sanitation Evaluation and Rehabilitation Program
Eastbank Sewer Treatment Plant
Westbank Sewer Treatment Plant
Wetlands Assimilation Project
Hazard Mitigation Grant Program
See Note 4 for detailed capital asset activity during 2016.

## 2017 Debt Administration

The Board continues to make its regularly scheduled payments on its bonds. During 2017, $\$ 17.6$ million in principal payments were made.

The Louisiana Department of Environmental Quality has loaned the Board up to $\$ 9.0$ million to fund construction of sewerage treatment works, implementing a management program under Section 1329 of the Water Quality Act of 1987, and developing and implementing a conservation and management plan under Section 1330 of the Federal Act. The outstanding balance is $\$ 6.9$ million at December 31, 2017.

The Costal Protection and Restoration Authority of Louisiana entered into an agreement with the Department of the Army for the Southeast Louisiana Flood Control Program. The United States Government has committed to $65 \%$ of the project costs and The Board is responsible for $35 \%$ of the project costs. At December 31, 2017, the accumulated amount due to the U.S. Government totaled approximately $\$ 201.9$ million. This amount is estimated based on the actual cost of construction incurred to date. Repayment of principal and interest is expected to start in 2019 through 2050. Total payment for the project is estimated to be approximately $\$ 348.0$ million through 2050 . The total cost of the project may increase in the upcoming years as additional construction costs continue to add to the project.

See Note 6 for detailed long term debt activity during 2017.

# SEWERAGE \& WATER BOARD OF NEW ORLEANS <br> MANAGEMENT'S DISCUSSION AND ANALYSIS <br> YEARS ENDED DECEMBER 31, 2017 AND 2016 

## 2016 Debt Administration

The Board continues to make its regularly scheduled payments on its bonds. During 2016, $\$ 14.8$ million in principal payments were made.

The Louisiana Department of Environmental Quality has loaned the Board up to $\$ 9$ million to fund construction of sewerage treatment works, implementing a management program under Section 1329 of the Water Quality Act of 1987, and developing and implementing a conservation and management plan under Section 1330 of the Federal Act. The outstanding balance is $\$ 7.3$ million at December 31, 2016.

See Note 6 for detailed long term debt activity during 2016.

## ECONOMIC FACTORS AND RATES

The Board, the City Council, and the Board of Liquidation City Debt approved a rate increase of ten percent for the Water and Sewer Departments effective January 1, 2013 and annually thereafter through 2020. The Board also authorized a study to identify the long-term revenue requirement for the drainage system and implementation methodologies for potential new revenue streams.

To meet the bond covenant for the 2014 Water and Sewer Revenue and Refunding Bonds and 2015 Water and Sewer Revenue Bonds, the cash in days is required to be maintained 90 days. The Board has exceeded the goals by 50 days and 209 days in the Water and Sewer system respectively.

The total number of open accounts continue to increase modestly on an annual basis. The total open accounts in 2017 were 134,972, a decrease of 55 over 2016 open accounts of $135,027$.

## CONTACTING THE BOARD'S FINANCIAL MANAGEMENT

This financial report is designed to provide our bondholders, patrons, and other interested parties with a general overview of the Board's finances and to demonstrate the Board's accountability for the money it receives. If you have questions about this report or need additional financial information, contact the Sewerage \& Water Board of New Orleans at (504) 585-2356.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS STATEMENTS OF NET POSITION <br> December 31, 2017 and 2016



## Noncurrent assets:

Restricted cash, cash equivalents, and investments:
Cash and cash equivalents restricted for capital projects
Debt service reserve
Health insurance reserve
Total restricted cash, cash equivalents, and investments
Property, plant and equipment
Less: accumulated depreciation
Property, plant and equipment, net

|  | 67,807,354 |  | 170,436,101 |
| :---: | :---: | :---: | :---: |
|  | 46,606,340 |  | 47,217,981 |
|  | 2,197,500 |  | 2,107,501 |
|  | 116,611,194 |  | 219,761,583 |
|  | 3,995,723,910 |  | 3,669,235,817 |
|  | 976,631,113 |  | 924,544,157 |
|  | 3,019,092,797 |  | 2,744,691,660 |
|  | 12,239,765 |  | 11,773,473 |
|  | 51,315 |  | 51,315 |
|  | 12,291,080 |  | 11,824,788 |
|  | 3,147,995,071 |  | 2,976,278,031 |
|  | 3,342,951,033 |  | 3,196,258,141 |
|  | 13,476,663 |  | 16,904,538 |
|  | 3,257,510 |  | 3,602,317 |
|  | 16,734,173 |  | 20,506,855 |
| \$ | 3,359,685,206 | \$ | 3,216,764,996 |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS STATEMENTS OF NET POSITION <br> December 31, 2017 and 2016 (Continued)

LIABILITIES, DEFERRED INFLOWS
OF RESOURCES, AND NET POSITION

| Current liabilities (payable from current unrestricted assets): |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Accounts payable | \$ | 84,674,274 | \$ | 40,019,085 |
| Due to City of New Orleans |  | 556,149 |  | 394,882 |
| Disaster Reimbursement Revolving Loan (Note 14) |  | 13,241,146 |  | 11,098,232 |
| Retainers and estimates payable |  | 11,321,093 |  | 9,593,411 |
| Due to pension trust fund |  | 199,741 |  | 150,212 |
| Accrued salaries |  | 1,121,435 |  | 840,861 |
| Claims payable |  | 4,057,456 |  | 3,658,193 |
| Debt Service Assistance Fund loan payable |  | 4,842,337 |  | 4,627,616 |
| Advances from federal government |  | 5,319,762 |  | 6,369,909 |
| Other liabilities |  | 118,212 |  | 106,388 |
| Total current liabilities (payable from current unrestricted assets): |  | 125,451,605 |  | 76,858,789 |
| Current liabilities (payable from current restricted assets): |  |  |  |  |
| Accrued interest |  | 2,896,884 |  | 2,236,098 |
| Bonds payable |  | 17,461,000 |  | 17,627,000 |
| Retainers and estimates payable |  | 2,228,389 |  | 845,408 |
| Total current liabilities (payable from current restricted assets): |  | 22,586,273 |  | 20,708,506 |
| Total current liabilities |  | 148,037,878 |  | 97,567,295 |
| Long-term liabilities: |  |  |  |  |
| Claims payable |  | 55,102,939 |  | 13,546,578 |
| Accnued vacation and sick pay |  | 8,000,124 |  | 9,822,495 |
| Net pension liability |  | 82,933,718 |  | 80,749,658 |
| Other postretirement benefits liability |  | 76,385,395 |  | 73,580,341 |
| Bonds payable, net of current maturities |  | 462,165,497 |  | 482,308,158 |
| Southeast Louisiana Project liability |  | 201,926,585 |  | 163,995,508 |
| Debt Service Assistance Fund loan payable, net of current maturities |  | 47,760,772 |  | 52,603,109 |
| Customer deposits |  | 12,239,765 |  | 11,773,473 |
| Total long-term liabilities |  | 946,514,795 |  | 888,379,320 |
| Total liabilities |  | 1,094,552,673 |  | 985,946,615 |
| Deferred inflows of resources: |  |  |  |  |
| Deferred amounts related to net pension liability |  | 1,867,968 |  | 2,396,433 |
| Total deferred inflows of resources |  | 1,867,968 |  | 2,396,433 |
| Net position: |  |  |  |  |
| Net investment in capital assets |  | 2,405,347,069 |  | 2,251,197,095 |
| Restricted for debt service |  | 46,606,340 |  | 47,217,981 |
| Unrestricted |  | $(188,688,844)$ |  | $(69,993,128)$ |
| Total net position |  | 2,263,264,565 |  | 2,228,421,948 |
| Total liabilities, deferred inflows of resources, and net position | \$ | 3,359,685,206 | \$ | 3,216,764,996 |

See accompanying notes to financial statements

## SEWERAGE AND WATER BOARD OF NEW ORLEANS STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION <br> For the years ended December 31, 2017 and 2016

|  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: |
| Operating revenues: |  |  |  |  |
| Sales of water and delinquent fees | \$ | 90,464,810 | \$ | 83,158,940 |
| Sewerage service charges |  | 111,063,719 |  | 104,795,184 |
| Plumbing inspection and license fees |  | 588,330 |  | 638,502 |
| Other revenue |  | 3,451,274 |  | 4,078,380 |
| Total operating revenues |  | 205,568,133 |  | 192,671,006 |
| Operating expenses: |  |  |  |  |
| Power and pumping |  | 36,552,523 |  | 13,499,216 |
| Treatment |  | 25,651,907 |  | 20,300,344 |
| Transmission and distribution |  | 36,409,559 |  | 37,174,706 |
| Customer accounts |  | 4,460,155 |  | 4,151,027 |
| Customer service |  | 4,217,543 |  | 4,271,555 |
| Administration and general |  | 24,343,704 |  | 18,506,107 |
| Payroll related expenses |  | 38,126,322 |  | 43,990,879 |
| Maintenance of general plant |  | 26,100,182 |  | 23,979,309 |
| Depreciation |  | 59,450,076 |  | 52,060,674 |
| Provision for doubtful accounts |  | 14,326,711 |  | 3,413,404 |
| Provision for claims |  | 45,272,821 |  | 6,450,805 |
| Total operating expenses |  | 314,911,503 |  | 227,798,026 |
| Operating loss |  | $(109,343,370)$ |  | (35,127,020) |
| Non-operating revenues (expenses): |  |  |  |  |
| Three-mill tax |  | 15,309,309 |  | 16,043,825 |
| Six-mill tax |  | 16,229,098 |  | 16,215,799 |
| Nine-mill tax |  | 23,881,671 |  | 23,762,398 |
| Two-mill tax |  | 2,735 |  | 7,526 |
| Other taxes |  | 593,424 |  | 564,050 |
| Federal noncapital grants |  | 845 |  | 24,738 |
| Interest income |  | 4,277,115 |  | 4,667,470 |
| Interest expense |  | $(3,537,336)$ |  | $(32,471)$ |
| Provision for grants |  | $(8,906,949)$ |  | - |
| Total non-operating revenues |  | 47,849,912 |  | 61,253,335 |
| (Loss) income before capital contributions |  | $(61,493,458)$ |  | 26,126,315 |
| Capital contributions |  | 96,336,075 |  | 119,607,318 |
| Change in net position |  | 34,842,617 |  | 145,733,633 |
| Net position, beginning of year |  | 2,228,421,948 |  | 2,082,688,315 |
| Net position, end of year | \$ | 2,263,264,565 | \$ | 2,228,421,948 |

See accompanying notes to financial statements.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS STATEMENTS OF CASH FLOWS <br> ENTERPRISE FUND

For the years ended December 31, 2017 and 2016

(Continued)

## SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> STATEMENTS OF CASH FLOWS <br> ENTERPRISE FUND <br> For the years ended December 31, 2017 and 2016 <br> (Continued)

|  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: |
| Reconciliation of operating loss to net cash provided by operating activities is as follows: |  |  |  |  |
| Operating loss | \$ | (109,343,370) | \$ | $(35,127,020)$ |
| Adjustments to reconcile net operating loss to net cash provided by operating activities: |  |  |  |  |
| Depreciation |  | 59,450,076 |  | 52,060,674 |
| Provision for claims |  | 45,272,821 |  | 6,450,805 |
| Provision for doubtful accounts |  | 14,326,711 |  | 3,413,404 |
| Change in operating assets and liabilities: |  |  |  |  |
| Increase in customer receivables |  | $(19,198,445)$ |  | $(11,440,708)$ |
| (Increase) decrease in inventory |  | $(223,886)$ |  | 547,550 |
| (Increase) decrease in prepaid expenses and other receivables |  | $(681,613)$ |  | 2,473,773 |
| Decrease in deferred outflows of resources related to net pension liability |  | 3,427,875 |  | 2,175,492 |
| Increase in net pension obligation |  | 2,184,060 |  | 3,782,094 |
| Increase in accounts payable |  | 33,047,738 |  | 4,194,015 |
| (Decrease) increase in accrued salaries, due to pension and accrued vacation and sick pay |  | $(1,492,268)$ |  | 608,612 |
| Increase in customer deposits |  | 466,292 |  | 594,769 |
| Increase in net other postretirement benefits liability |  | 2,805,054 |  | 6,001,325 |
| Decrease in other liabilities |  | $(3,155,930)$ |  | $(2,178,492)$ |
| Decrease in deferred inflows of resources related to net pension liability |  | (528,465) |  | $(528,465)$ |
| Net cash provided by operating activities | \$ | 26,356,650 | \$ | 33,027,828 |
| Schedule of non-cash capital and related financing activities |  |  |  |  |
| Contributions of capital assets | \$ | 71,671,151 | \$ | 91,437,595 |
| Additions of property, plant and equipment in accounts payable | \$ | 30,265,178 | \$ | 18,657,727 |

See accompanying notes to financial statements.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS STATEMENTS OF FIDUCIARY NET POSITION <br> <br> PENSION TRUST FUND 

 <br> <br> PENSION TRUST FUND}

December 31, 2017 and 2016

|  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: |
| Assets: |  |  |  |  |
| Cash | \$ | 230,946 | \$ | 40,495 |
| Receivables: |  |  |  |  |
| Investment income |  | 56,208 |  | 77,982 |
| Employee contributions receivable |  | 45,061 |  | 33,751 |
| Due from other fund |  | 240,245 |  | - |
| Investments: |  |  |  |  |
| Money market |  | 975,593 |  | 1,715,931 |
| LAMP |  | 11,610,897 |  | 13,779,922 |
| Debt securities |  | 81,607,684 |  | 79,742,033 |
| Hedge funds |  | 20,968,656 |  | 20,487,315 |
| Equities |  | 119,549,027 |  | 108,525,255 |
| Total assets |  | 235,284,317 |  | 224,402,684 |
| Liabilities: |  |  |  |  |
| Due to other fund |  | - |  | 46,423 |
| Total Liabilities |  | - |  | 46,423 |
| Net position - restricted for pension benefits | \$ | 235,284,317 | \$ | 224,356,261 |

See accompanying notes to financial statements.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS STATEMENTS OF CHANGES IN FIDUCIARY PLAN NET POSITION <br> PENSION TRUST FUND 

For the years ended December 31, 2017 and 2016

|  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: |
| Additions: |  |  |  |  |
| Contributions: |  |  |  |  |
| Employee contributions | \$ | 2,139,705 | \$ | 2,064,387 |
| Employer contributions |  | 7,239,467 |  | 6,407,201 |
| City annuity and other transfers in |  | 2,416,042 |  | 1,629,756 |
| Total contributions |  | 11,795,214 |  | 10,101,344 |
| Investment income: |  |  |  |  |
| Interest income |  | 234,286 |  | 252,515 |
| Dividend income |  | 1,464,805 |  | 1,321,127 |
| Net appreciation |  | 22,500,911 |  | 11,840,116 |
|  |  | 24,200,002 |  | 13,413,758 |
| Less: investment expense |  | 873,729 |  | 844,154 |
| Net investment income |  | 23,326,273 |  | 12,569,604 |
| Total additions |  | 35,121,487 |  | 22,670,948 |
| Deductions: |  |  |  |  |
| Benefits |  | (16,974,995) |  | (15,757,292) |
| Employee refunds |  | $(438,134)$ |  | $(421,087)$ |
| Employee contributions to DROP |  | $(6,780,302)$ |  | $(4,563,835)$ |
| Total deductions |  | $(24,193,431)$ |  | $(20,742,214)$ |
| Change in net position |  | 10,928,056 |  | 1,928,734 |
| Net position restricted for pension benefits at beginning of year |  | 224,356,261 |  | 222,427,527 |
| Net position restricted for pension benefits at end of year | \$ | 235,284,317 | \$ | 224,356,261 |

See accompanying notes to financial statements.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> NOTES TO FINANCIAL STATEMENTS

(1) Summary of Significant Accounting Policies

## History and Organization

The major operation of the Sewerage and Water Board of New Orleans (the Board) is providing water, sewerage, and drainage services for the City of New Orleans (the City). The Sewerage and Water Board of New Orleans was created by Act 6 of the Louisiana Legislature of 1899 as a special board independent of the City's government to construct, maintain, and operate a water treatment and distribution system and a public sanitary sewerage system for the City. In 1903, the Legislature gave the Board control of and responsibility for the City's major drainage system and relieved the City of the duty of providing in its annual operating budget or otherwise for the maintenance and operations of the water, sewerage, and drainage systems.

In accordance with the Louisiana Revised Statutes (LRS) 33:4096 and 4121, the Board has the authority to establish the water and sewerage rates to charge to its customers. The rates are based on the actual water consumed and on the costs of maintenance and operation of the water and sewerage systems, including the costs of improvements and replacements. The collections of water and sewerage revenues are to be used by the Board for the maintenance and operation of the systems, the cost of improvements, betterments, and replacements and to provide for the payments of interest and principal on the bonds payable. On November 14, 2012, the Board approved both sewer and water rate increases commencing January 1,2013. The sewer and water rates increase approximately $10 \%$ each year until the year of 2020. This increase was approved by the New Orleans City Council on November 14, 2012.

The Board has also been given the authority to levy and collect various tax millages, which are used for the operation and maintenance of the drainage operations. All excess revenues collected are made available for capital development of the system. The proceeds of the rate collections and tax millages are invested in such investments as authorized by the LRS. These investments are reflected in the combined statements of net position, as "restricted assets," as they are restricted to the purposes as described above.

Effective January 1, 2014, the Board's makeup was changed to eleven members, including the Mayor of the City as the President of the Board, two members of the Board of Liquidation, City Debt, and eight citizens, as designated by State statutes. The terms of office are staggered from one year to four years, as designated by State statues.

The Board's accounting policies conform to accounting principles generally accepted in the United States of America as applicable to utilities and to governmental units as set forth through the Government Accounting Standard Board. The following is a summary of the more significant policies.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS (Continued)

(1) Summary of Significant Accounting Policies (continued)

## (A) Reporting Entity

In conformity with the Governmental Accounting Standards Board's definition of a reporting entity, the Board includes an enterprise fund and a pension trust fund for financial reporting purposes. The Board is considered a reporting entity based on the following criteria:
(a) Responsibility for surpluses/deficits. The Board is solely responsible for its surpluses/deficits. In accordance with LRS, no other governmental unit is responsible for the Board's deficits or has a claim to its surpluses. The Board's operations are self-sustaining; revenues are generated through charges to customers and dedicated property taxes. Other than grants, no funding is received from the State of Louisiana or the City of New Orleans.
(b) Budget Approval. The Board is solely responsible for reviewing, approving, and revising its budget.
(c) Responsibility for Debt. The LRS authorize the Board to issue bonds; such bonds must bear on their face a statement that they do not constitute a debt of the City. The Board is solely responsible for payments to bondholders. No other governmental unit is required by statute to make any payments to bondholders nor have any payments to bondholders ever been made by any governmental unit, except the Board.
(d) Designation of Management. The Board controls the hiring of management and employees.
(e) Special Financial Relationship. The Board has no special financial relationships with any other governmental unit.
(f) Statutory Authority. The Board's statutory authority was created by the State of Louisiana as an independent governmental unit. Only an amendment to the state statutes can change or abolish the Board's authority.

The Board is a stand-alone entity as defined by Governmental Accounting Standards Board Statement 61, The Financial Reporting Entity: Omnibus-an amendment of GASB Statements No. 14 and No. 34. The Board is a legally-separate governmental organization that does not have a separately elected governing body and does not meet the definition of a component unit. As a result of a Louisiana Supreme Court decision on March 21, 1994, the Board was declared to be an autonomous or self-governing legal entity, legally independent of the City, State and other governments, created and organized pursuant to Louisiana Revised Statutes 33:4071 as a board, separate and independent of the governing authorities of the City and vested with autonomous or self-governing authority. No other government can mandate actions of the Board nor impose specific financial burdens, except the approval of the City Council and the Board of Liquidation in the case of bond issues and certain rate increases. As such, the City considers the Board to be a component unit of the City and includes the Board, as a discreetly presented component unit, in the City's annual financial statements. However, the Board is fiscally independent to operate under its bond covenant and the provisions of LRS provisions.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

(1) Summary of Significant Accounting Policies (continued)

## (B) Basis of Financial Statement Presentation

The Board's basic financial statements consist of the government-wide statements which include the proprietary fund (the enterprise fund) and the fund financial statements which includes the fiduciary fund (the pension trust fund).

The operations of the Board are accounted for in the following fund types:

## Proprietary Fund Type

The proprietary fund is used to account for the Board's ongoing operations and activities, which are similar to those often found in the private sector. The proprietary fund is accounted for using a flow of economic resources measurement focus. With this measurement focus, all assets and all liabilities associated with the operation of these funds are included on the statement of net position. Net position is segregated into amounts invested in capital assets (net of related debt), restricted for debt service, restricted for capital projects, and unrestricted. The Board's restricted assets are expendable for their purposes. The Board utilizes available unrestricted assets before utilizing restricted assets. The operating statements present increases (revenues) and decreases (expenses) in net position. The Board maintains one proprietary fund type - the enterprise fund. The enterprise fund is used to account for operations (a) that are financed and operated in a manner similar to private business enterprises--where the intent of the governing body is that the cost (expenses, including depreciation) of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges; or (b) where the governing body has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate for capital maintenance.

Operating revenues include all charges for service; other revenues include reconnection fees and other miscellaneous charges. Operating expenses include the costs associated with providing water, sewerage, and drainage services. Interest income, interest expense, and tax revenues are presented as non-operating items.

Under the provisions of GASB Statement 62, Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements, the Board applies all applicable Financial Accounting Standards Board pronouncements issued on or before November 30, 1989 in accounting for its operations unless those pronouncements conflict or contradict GASB pronouncements.

The enterprise fund is presented in the government-wide financial statements.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

(1) Summary of Significant Accounting Policies (continued)

## (B) Basis of Financial Statement Presentation (continued)

## Fiduciary Fund Type

The fiduciary fund is used to account for assets held by the Board in a trustee capacity or as an agent for individuals, private organizations, other governmental units, and/or other funds. The Board maintains one fiduciary fund type - the pension trust fund. The pension trust fund uses the flow of economic resources measurement focus. All assets and liabilities associated with the operation of this fund are included in the statement of plan net assets. The pension trust fund is used to account for the activity of the Board's employee retirement plan, which is a component unit of the Board.

The pension trust fund is presented in the fund financial statements.

## (C) Basis of Accounting

The enterprise fund and the pension trust fund prepare their financial statements on the accrual basis of accounting. Unbilled utility service charges are not recorded as management considers the effect of not recording such unbilled receivables as not material. Property taxes are recorded as revenue in the year for which they are levied. Plan member contributions are recognized in the period in which contributions are due. Employer contributions to the pension plan are recognized when due and the employer has made a commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

## (D) Investments

Investments are reported at fair value, except for short-term investments (maturity of one year or less), which are reported at amortized cost, which approximates fair value. Securities traded in a national or international exchange are valued at the last reported sales price at current exchange rates. Investments that do not have an established market are reported at estimated fair value. Investment income and expenses, including changes in the fair value of the investments, are recognized in the Statements of Revenues, Expenses, and Changes in Net Position.

## (E) Inventory of Supplies

Inventory of supplies is valued at the lower of cost or market. Cost is determined by the weighted average cost method.

## (F) Vacation and Sick Pay

Vacation (annual leave) and sick pay (sick leave) are accrued when earned. Annual leave is accrued at the rate of 6923 of a workday for each bi-weekly accrual period for all employees on the payroll as of December 31, 1978. Employees hired after that date earn leave at a rate of .5 of a workday per bi-weekly pay period.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

(1) Summary of Significant Accounting Policies (continued)

## (F) Vacation and Sick Pay (continued)

All employees on the payroll as of December 31, 1978 receive three bonus days each year; all employees hired after that date receive three bonus days each year for five through nine calendar years of continuous service; six bonus days each year for ten through fourteen years; nine bonus days each year for fifteen through nineteen years; and, twelve days for twenty or more years of continuous service. Civil Service's policy permits employees a limited amount of earned but unused annual leave which will be paid to employees upon separation from the Board. The amount shall not exceed ninety days for employees hired before January 1, 1979, and forty-five days for employees hired after December 31, 1978.

Sick leave is accumulated on a bi-weekly basis by all employees hired prior to December 31, 1978 at an accrual rate of .923 of a workday. For employees hired subsequent to December 31, 1978, the accrual rate is .5 of a workday for each bi-weekly period, plus a two-day bonus each year for employees with six through fifteen calendar years of continuous service, and seven bonus days each year for employees with sixteen or more calendar years of continuous service.

Upon separation from the Board, an employee can elect to convert unused sick leave for retirement credits or cash. The conversion to cash is determined by a rate ranging from one day of pay for five days of leave for the 1 st through 100th leave day to one day of pay for one day of leave for all days in excess of the 400 th leave day. The total liability for unconverted sick leave as of December 31, 2017 and 2016 is approximately $\$ 12,996,493$ and $\$ 13,894,262$, respectively. The amount included in the statements of net position as of December 31, 2017 and 2016 is $\$ 8,000,124$ and $\$ 9,822,495$, respectively, which represents the annual leave and the converted sick leave for cash since virtually all employees convert their sick leave to cash. The Board books the compensated absences as a longterm liability. The amounts for compensated absences include the salary cost as well as certain salary related costs, such as the Board's share of social security expense. The following table summarizes changes in the Board's vacation and sick pay liability.

| Year |  | nning of Liability |  | Year Changes mate |  | ayments | End of Year Liability |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 9,822,495 | \$ | 1,440,948 | \$ | $(3,263,319)$ | \$ | 8,000,124 |
| 2016 | \$ | 9,500,827 | \$ | 3,744,057 | \$ | $(3,422,389)$ | \$ | 9,822,495 |

## (G) Property, Plant, and Equipment

Property, plant, and equipment are carried at historical cost. The Board capitalizes moveable equipment with a value of $\$ 10,000$ or greater, stationary, network, and other equipment with a value of $\$ 5,000$ or greater and all real estate. The cost of additions includes contracted work, direct labor, materials, and allocable cost. Donated capital assets are recorded at their acquisition value at the date of donation.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS <br> (Continued)

## (1) Summary of Significant Accounting Policies (continued)

## (G) Property, Plant, and Equipment (continued)

Interest is capitalized on property, plant, and equipment acquired and/or constructed with tax exempt debt. Depreciation is computed using the straight-line method over the estimated useful life of the asset. When assets are retired or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts and any resulting gain or loss is recognized in revenue for the period. The cost of maintenance and repairs is charged to operations as incurred, and significant renewals and betterments are capitalized. Deductions are made for retirements resulting from renewals or betterments.

## (H) Self-Insurance/Risk Management

The Board is self-insured for general liability, workers' compensation, unemployment compensation, and hospitalization benefits and claims. The accrued liability for the various types of claims represents an estimate by management of the eventual loss on the claims arising prior to year-end, including claims incurred and not yet reported including estimates of both future payments of losses and related claims adjustment and expense. Estimated expenses and recoveries are based on a case by case review.

## (I) Bond Issuance Costs and Refinancing Gains (Losses)

Costs related to issuing bonds are expensed when incurred. Premiums and discounts associated with bond issues are amortized over the interest yield method.

## (J) Deferred Inflows/Outflows of Resources

Deferred outflows of resources represent a consumption of net position that applies to future periods and so will not be recognized as an outflow of resources (expense) until then. The deferred charge on refunding reported on the statements of net position results from the difference in carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt.

Deferred inflows and outflows have been recognized for the net difference between the projected and actual investment earnings, this amount is deferred and amortized over a period of five years. In addition, deferred inflows and outflows have been recognized for the differences between the actuarial expectation and the actual economic experience and changes in proportion and difference between the employer's contributions and the proportionate share of contributions related to the defined benefit pension plan. These amounts are deferred and amortized over the average of the expected service lives of pension plan members. See Note 3 for additional information on deferred inflows and outflows related to the pension plan.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS (Continued)

(1) Summary of Significant Accounting Policies (continued)

## (K) Pension

The Board may fund all or part of the accrued pension cost, depending on the resources that are available at the time of contribution, for its contributory pension plan which covers substantially all employees. Annual costs are actuarially computed using the entry age normal cost method.

## (L) Drainage System

In 1903, the Legislature gave the Board control of and responsibility for the City's drainage system. The Drainage System was established as a department of the enterprise fund to account for the revenues from three-mill, six-mill, and nine-mill ad valorem taxes designated exclusively for drainage services. These revenues have been supplemented by inspection and license fees collected by the Board. There exists a potential for additional financing by additional user service charges. Expenditures from the system are for the debt service of three-mill, six-mill, and nine-mill tax bonds and drainage related operation, maintenance, and construction.

## (M) Capital Contributions

Contributions from developers and others, and receipts of Federal, State, and City grants for acquisition of property, plant, and equipment are recorded as capital contributions in the statements of revenues, expenses, and changes in net position.

## (N) Net Position Flow Assumption

Sometimes the Board will fund outlays for a particular purpose from both restricted (e.g. restricted bond or grant proceeds) and unrestricted resources. In order to calculate the amounts to report as restricted net position and unrestricted net position, a flow assumption must be made about the order in which the resources are considered to be applied. The Board's policy is to consider restricted net position to have been depleted before unrestricted-net position is applied.

## Net Position

Net investment in capital assets - This component of net position consists of capital assets, net of accumulated depreciation, and reduced by the outstanding debt attributable to the acquisition, construction, or improvement of those assets. If there are significant unspent related debt proceeds at year-end, the portion of the debt attributable to the unspent proceeds is not included in this component of net position. Rather, that portion of debt is included in the same component of net position as the unspent proceeds.

Restricted - This net position component reports externally imposed constraints placed on their use by creditors (such as through debt covenants), grantors, contributors, or laws or regulations of other governments or constraints imposed by law through constitutional provisions or enabling legislation.

Unrestricted - Unrestricted net position is the balance (deficit) of all other elements in a statement of net position remaining after net investment in capital assets and restricted net position.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS

(Continued)
(1) Summary of Significant Accounting Policies (continued)

## (P) Cash Flows

For purposes of the statements of cash flows, only cash on hand and on deposit at financial institutions is considered to be cash equivalents. Certificates of deposits, treasury bills, and other securities are considered investments.

## (Q) Operating and Nonoperating Revenues

Proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and delivering goods in connection with principal ongoing operations. The principal operating revenues of the Board are charges to customers for sales and services. Operating expenses include the cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

## (R) Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenue and expenditures during the period. Actual results could differ from those estimates.

## (S) Reclassifications

Certain accounts in the prior-year financial statements have been reclassified for comparative purposes to conform to the presentation in the current-year financial statements. This reclassification had no effect on previously reported change in net position.
(2) Cash and Investments

The Board's investments and cash consist primarily of investments in direct obligations of the United States or agencies thereof and deposits with financial institutions.

Custodial Credit Risk - Deposits - Custodial credit risk is the risk that in the event of a bank failure, the government's deposits may not be returned to it. Statutes require that the Board's cash and certificates of deposit be covered by federal depository insurance or collateral. At December 31, 2017, the Board's interest bearing deposits with banks consisted of cash and money market funds totaling $\$ 166,677,175$ and certificates of deposit of $\$ 273,708$. At December 31, 2016, the Board's interest bearing deposits with banks consisted of cash and money market funds totaling $\$ 296,814,483$ and certificates of deposit of $\$ 273,485$. The Board's cash bank balances and all certificates of deposit for 2017 and 2016 were covered by federal depository insurance or collateral held by custodial agents of the financial institutions in the name of the Board.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS <br> (Continued)

(2)

## Cash and Investments (continued)

In accordance with GASB 40, unless there is information to the contrary, obligations of the U.S. Government are not considered to have credit risk and do not require disclosure of credit quality.

The following are the components of the Board's cash and investments as of December 31 for the Enterprise Fund:
Enterprise Fund: $\underline{\mathbf{2 0 1 7}}$
Cash and money market funds
Certificates of deposit
Investments - LAMP
Total cash and investments at fair value
Enterprise Fund: $\underline{\mathbf{2 0 1 6}}$
Cash and money market funds
Certificates of deposit
Investments - LAMP
Total cash and investments at fair value

| Unrestricted |  | Restricted |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \$ | 90,727,883 | \$ | 113,695,763 | \$ | 204,423,646 |
|  | 273,708 |  | - |  | 273,708 |
|  | 91,001,591 |  | 113,695,763 |  | 204,697,354 |
|  | 3,250,000 |  | 2,641,723 |  | 5,891,723 |
| \$ | 94,251,591 | \$ | 116,337,486 | \$ | 210,589,077 |
|  | Unrestricted |  | Restricted |  | Total |
| \$ | 121,315,874 | \$ | 217,119,859 | \$ | 338,435,733 |
|  | 273,485 |  | - |  | 273,485 |
|  | 121,589,359 |  | 217,119,859 |  | 338,709,218 |
|  | 3,250,000 |  | 2,641,724 |  | 5,891,724 |
| \$ | 124,839,359 | \$ | 219,761,583 | \$ | 344,600,942 |

## (A) Fair Value Measurement

To the extent available, the Board's investments are recorded at fair value as of December 31, 2017 and 2016. GASB Statement No. 72 - Fair Value Measurement and Application, defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. This statement establishes a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Inputs are used in applying the various valuation techniques and take into account the assumptions that market participants use to make valuation decisions. Inputs may include price information, credit data, interest and yield curve data, and other factors specific to the financial instrument. Observable inputs reflect market data obtained from independent sources. In contrast, unobservable inputs reflect the entity's assumptions about how market participants would value the financial instrument. Valuation techniques should maximize the use of observable inputs to the extent available.

A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used for financial instruments measured at fair value on a recurring basis.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS

## (Continued)

## (2) Cash and Investments (continued)

## (A) Fair Value Measurement (continued)

Investments - Statutes authorize the Board to invest in obligations of the U.S. Treasury, agencies, and instrumentalities, commercial paper rated A-1 by Standard \& Poors Corporation or P-1 by Moody's Commercial Paper Record, repurchase agreements, and the Louisiana Asset Management Pool (LAMP). In addition, the pension trust fund is authorized to invest in corporate bonds rated BBB or better by Standard \& Poors Corporation or Baa or better by Moody's Investors Service and equity securities.

A summary of the Fund's investments along with the Fair value hierarchy levels of each type of investment as of December 31, 2017 and 2016 are as follows:

|  | 12/31/2017 | Fair Value Hierarchy |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Quoted Prices in Active Markets (Level 1 Inputs) |  | Significant Other Observable Inputs (Level 2 Inputs) |  | Significant Unobservable Inputs (Level 3 Inputs) |  |
| Investment by Fair Value Level |  |  |  |  |  |  |  |
| Equities | \$ 119,549,027 | \$ | 119,549,027 | \$ | - | \$ | - |
| Debt Securities | 81,607,684 |  | - |  | 81,607,684 |  | - |
| Hedge Funds | 20,968,656 |  | - |  | 20,968,656 |  | - |
| Total Investments at Fair Value Level | \$ 222,125,367 | \$ | 119,549,027 | \$ | 102,576,340 | \$ | - |
| Investment measured at the net asset value (NAV): |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Money market funds | \$ 165,542,957 |  |  |  |  |  |  |
| LAMP | 17,502,620 |  |  |  |  |  |  |
| Certificate of Deposit | 273,708 |  |  |  |  |  |  |
| Total Investments at NAV | \$ 183,319,285 |  |  |  |  |  |  |
| Total Investments at Fair Value | \$ 405,444,652 |  |  |  |  |  |  |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS

## (Continued)

(2) Cash and Investments (continued)
(B) Fair Value Measurement (continued)

|  |  | Fair Value Hierarchy |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 12/31/2016 | Quoted Prices in Active Markets (Level I Inputs) |  | Significant Other Observable Inputs (Level 2 Inputs) |  | Significant Unobservable Inputs (Level 3 Inputs) |  |
| Investment by Fair Value Level: |  |  |  |  |  |  |  |
| Equities | \$ 108,525,255 | \$ | 108,525,255 | \$ | - | \$ | - |
| Debt Securities | 79,742,033 |  | - |  | 79,742,033 |  | - |
| Hedge Funds | 20,487,315 |  | - |  | 20,487,315 |  | - |
| Total Investments at Fair Value Level | \$ 208,754,603 |  | 108,525,255 | \$ | 100,229,348 | \$ | - |


| Investment measured at the |  |
| :--- | ---: |
| net asset value (NAV): |  |
| Money market funds | $\$ 285,016,120$ |
| LAMP | $19,671,646$ <br> Certificate of Deposit <br> Total Investments at NAV |
|  | $\$ 304,961,251$ |
| Total Investments at Fair Value | $\$ 513,715,854$ |

Money market funds, LAMP, and certificate of deposit are measured using NAV as a practical expedient. These investments have not been classified in the fair value hierarchy table. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the line items presented in the statement of net assets available for benefits.

A reconciliation of the enterprise and pension funds to the total investments at December 31, 2017 and 2016 is as follows:

| $\underline{2017}$ | Enterprise | Pension | Total |
| :---: | :---: | :---: | :---: |
| Money market | \$ 164,567,364 | 975,593 | \$ 165,542,957 |
| LAMP | 5,891,723 | 11,610,897 | 17,502,620 |
| Certificate of Deposit | 273,708 | - | 273,708 |
| Other investments | - | 222,125,367 | 222,125,367 |
|  | \$ 170,732,795 | \$ 234,711,857 | \$ 405,444,652 |
| 2016 | Enterprise | Pension | Total |
| Money market | \$ 283,300,189 | \$ 1,715,931 | \$ 285,016,120 |
| LAMP | 5,891,724 | 13,779,922 | 19,671,646 |
| Certificate of Deposit | 273,485 | - | 273,485 |
| Other investments | - | 208,754,603 | 208,754,603 |
|  | \$ 289,465,398 | \$ 224,250,456 | \$ 513,715,854 |

# SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> <br> NOTES TO FINANCIAL STATEMENTS <br> <br> NOTES TO FINANCIAL STATEMENTS (Continued) 

(2) Cash and Investments (continued)

## (C) Louisiana Asset Management Pool (LAMP)

LAMP is administered by LAMP, Inc., a non-profit corporation organized under the laws of the State of Louisiana. Only local government entities having contracted to participate in LAMP have an investment interest in its pool of assets. The primary objective of LAMP is to provide a safe environment for the placement of public funds in short-term, high quality investments. The LAMP portfolio includes only securities and other obligations in which local governments in Louisiana are authorized to invest in accordance with Louisiana R.S. 33:2955.

GASB Statement No. 40 Deposit and Investment Risk Disclosure, requires disclosure of credit risk, custodial credit risk, concentration of credit risk interest rate risk, and foreign currency risk for all public entity investments.

LAMP is an investment pool that, to the extent practical, invest in a manner consistent with GASB Statement No. 79. The following facts are relevant for investment pools:

- Credit risk: LAMP is rated AAAm by Standard \& Poor's.
- Custodial credit risk: LAMP participants' investments in the pool are evidenced by shares of the pool. Investments in pools should be disclosed but not categorized because they are not evidenced by securities that exist in physical or book-entry form. The public entity's investment is with the pool, not the securities that make up the pool; therefore, no disclosure is required.
- Concentration of credit risk: Pooled investments are excluded from the 5 percent disclosure requirement.
- Interest rate risk: LAMP is designed to be highly liquid to give its participants immediate access to their account balances. LAMP prepares its own interest rate risk disclosure using the weighted average maturity (WAM) method. The WAM of LAMP assets is restricted to not more than 60 days and consists of no securities with a maturity in excess of 397 days. The WAM for LAMP's total investments is 89 as of December 31, 2017.
- Foreign currency risk: Not applicable to 2a7-like pools.

The investments in LAMP are stated at fair value. The fair value is determined on a weekly basis by LAMP and the value of the position in the external investment pool is the same as the net asset value of the pool shares.

LAMP, Inc. is subject to the regulatory oversight of the state treasurer and the board of directors. LAMP is not registered with the SEC as an investment company.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS (Continued)

(2) Cash and Investments (continued)

## (D) Credit and Interest Risk

Credit Risk - State law limits investments in securities issued, or backed by United States Treasury obligations, and U.S. Government instrumentalities, which are federally sponsored. The Board's investment policy does not further limit its investment choices. LAMP is rated AAAm by Standard \& Poor's. The Pension Trust Fund's investment policy requires that fixed income investments be investment grade (BBB or higher as rated by Standard \& Poor's or Baa or higher as rated by Moody's). Bonds rated below BBB/Baa are not to exceed $15 \%$ of the portfolio, and non-rated bonds are not to exceed $1 \%$ of the portfolio.

Following are the credit risk ratings of the Pension Trust Fund's investments in debt securities as of December 31, 2017:

| Rating | Corporate Bonds |  | Foreign <br> Government Bonds |  | Government <br> Bonds and U.S. <br> Treasury Notes |  | Other |  | Total |  | Percentage of Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AAA | \$ | - | \$ | 3,972 | \$ | 42,361,399 | \$ | 4,119,108 | \$ | 46,484,479 | 56.96\% |
| AA+ |  | - |  | - |  | - |  | 2,941,468 |  | 2,941,468 | 3.60\% |
| AA |  | 70,751 |  | 24,515 |  | - |  | 85,784 |  | 181,050 | 0.22\% |
| AA- |  | 271,697 |  | - |  | 268,882 |  | 28,352 |  | 568,931 | 0.70\% |
| A+ |  | 902,153 |  | 102,119 |  | - |  | 60,441 |  | 1,064,713 | 1.30\% |
| A |  | 4,238,695 |  | 39,467 |  | - |  | 189,587 |  | 4,467,749 | 5.47\% |
| A- |  | 3,970,964 |  | 55,935 |  | - |  | 136,085 |  | 4,162,984 | 5.10\% |
| BBB+ |  | 3,274,255 |  | 1,551,202 |  | 93,272 |  | 85,519 |  | 5,004,248 | 6.13\% |
| BBB |  | 3,877,270 |  | 162,662 |  | 764,000 |  | 182,689 |  | 4,986,621 | 6.11\% |
| BBB- |  | 4,154,975 |  | 130,372 |  | - |  | 643,716 |  | 4,929,063 | 6.04\% |
| BB+ |  | 1,293,997 |  | 141,649 |  | - |  | 82,703 |  | 1,518,349 | 1.86\% |
| BB |  | 565,246 |  | 724,579 |  | - |  | 136,414 |  | 1,426,239 | 1.75\% |
| BB- |  | 788,982 |  | 116.821 |  | - |  | 135.962 |  | 1,041,765 | 1.28\% |
| B+ |  | 608,821 |  | 318,374 |  | - |  | 12,534 |  | 939,729 | 1.15\% |
| B |  | 510,817 |  | 197,479 |  | - |  | 141,002 |  | 849,298 | 1.04\% |
| B- |  | 259,496 |  | 294,479 |  | - |  | 110,154 |  | 664,129 | 0.81\% |
| CCC+ |  | 108,203 |  | 3.602 |  | - |  | 26,581 |  | 138,386 | 0.17\% |
| CCC |  | 128.426 |  | 10,203 |  | - |  | 45,857 |  | 184,486 | 0.23\% |
| CCC- |  | - |  | 7,805 |  | - |  | 7,423 |  | 15,228 | 0.02\% |
| CC |  | - |  | 7,120 |  | - |  | 7,330 |  | 14,450 | 0.02\% |
| Not Rated |  | - |  | - |  | - |  | 24,319 |  | 24,319 | 0.03\% |
| Total | \$ | 25,024,748 | \$ | 3,892.355 | \$ | 43.487,553 | \$ | 9,203,028 | \$ | 81,607,684 | 100\% |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS (Continued)

(2) Cash and Investments (continued)
(D) Credit and Interest Risk (continued)

Following are the credit risk ratings of the Pension Trust Fund's investments in debt securities as of December 31, 2016:

| Rating | Corporate Bonds |  | Foreign <br> Government Bonds |  | Government Bonds and U.S. Treasury Notes |  | Other |  | Total | Percentage of Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AAA | \$ | - | \$ | - | \$ | 19,919,181 | \$ 14,311,575 | \$ | 34,230,756 | 42.93\% |
| AA+ |  | 130,821 |  | - |  | - | 69,908 |  | 200,729 | 0.25\% |
| AA |  | 92,738 |  | - |  | - | 369,843 |  | 462,581 | 0.58\% |
| AA- |  | 337.259 |  | - |  | - | 705,390 |  | 1,042,649 | 1.31\% |
| A+ |  | 1,265,653 |  | - |  | - | 195,724 |  | 1,461,377 | 1.83\% |
| A |  | 3,533,573 |  | 19.760 |  | - | 714,178 |  | 4,267,511 | 5.35\% |
| A- |  | 5,764,628 |  | 38,222 |  | - | 188,514 |  | 5,991,364 | 7.51\% |
| BBB+ |  | 3,395,461 |  | - |  | - | 2,565,903 |  | 5,961,364 | 7.48\% |
| BBB |  | 4,771,163 |  | 148,644 |  | - | 100,235 |  | 5,020,042 | 6.30\% |
| BBB- |  | 5,582,274 |  | 295,503 |  | - | 701,179 |  | 6,578,956 | 8.25\% |
| BB+ |  | 1,674,724 |  | 50,710 |  | - | 96,877 |  | 1,822,311 | 2.29\% |
| BB |  | 766,273 |  | 267,656 |  | - | 1,186,890 |  | 2,220,819 | 2.79\% |
| BB- |  | 1,101,823 |  | 173,585 |  | - | 144,094 |  | 1,419,502 | 1.78\% |
| B+ |  | 924,767 |  | 144,147 |  | - | 25,560 |  | 1,094,474 | 1.37\% |
| B |  | 440,465 |  | 208.459 |  | - | 210.459 |  | 859,383 | 1.08\% |
| B- |  | 518,269 |  | 170,795 |  | - | 142,123 |  | 831,187 | 1.04\% |
| CCC+ |  | 194,437 |  | - |  | - | 9,362 |  | 203,799 | 0.26\% |
| CCC- |  | 65,223 |  | 36,914 |  | - | 60,958 |  | 163,095 | 0.20\% |
| CC |  | 11.845 |  | - |  | - | 20,397 |  | 32,242 | 0.04\% |
| C |  | 18,603 |  | - |  | - | 39 |  | 18,642 | 0.02\% |
| Not Rated |  | 141,961 |  | 51,133 |  | 1.612,948 | 4,053,208 |  | 5,859,250 | 7.35\% |
| Total | \$ | 30,731,960 | \$ | 1,605,528 | \$ | 21,532,129 | \$ 25.872.416 | \$ | 79,742,033 | 100\% |

Interest Rate Risk - Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. In general, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The Board has a formal investment policy that states that the investment portfolio shall remain sufficiently liquid to meet all operating and capital requirements that may be reasonably anticipated and that maturities of investments are to be structured concurrent with cash needs to meet anticipated demand.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> <br> NOTES TO FINANCIAL STATEMENTS <br> <br> NOTES TO FINANCIAL STATEMENTS (Continued) 

(2) Cash and Investments (continued)
(E) Pension Trust Fund Investments

As of December 31, 2017, the Pension Trust Fund had the following investments in debt securities and maturities:

| Investment Type | Duration |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Less than 1 Year |  | 1-5 Years | 6-10 Years | Greater Than 10 Years | Duration Not Available |  | Total |
| Corporate Bonds | \$ | 2,315,819 | \$ 11,068, 192 | \$ 9,009,756 | \$ 2,535,874 | \$ | 95,107 | \$ 25,024,748 |
| Foreign Government Bonds |  | 125,426 | 1.502,993 | 992,511 | 1,172,130 |  | 99,295 | 3,892,355 |
| Government Bonds and U.S. Treasury |  |  |  |  |  |  |  |  |
| Notes |  | 884,858 | 28,907,286 | 10,309,032 | 3,386,377 |  | - | 43,487,553 |
| Other |  | 3,992,328 | 2,215,261 | 705,127 | 2,228,621 |  | 61,691 | 9,203,028 |
| Total |  | 7,318,431 | \$ 43,693,732 | \$ 21,016,426 | \$ 9,323,002 | \$ | 256,093 | \$81,607,684 |

As of December 31, 2016, the Pension Trust Fund had the following investments in debt securities and maturities:

| Investment Type | Duration |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \hline \text { Less than I } \\ \text { Year } \\ \hline \end{gathered}$ |  | 1-5 Years |  | 6-10 Years |  | Greater Than 10 Years |  | Duration Not Available |  | Total |  |
| Corporate Bonds | \$ | 3,179,391 | \$ | 13,226,936 | \$ | 11,182,301 | \$ | 3,016,635 | \$ | 126,698 | \$ | 30,731,961 |
| Foreign Government <br> Bonds |  | 127,300 |  | 564,103 |  | 609,634 |  | 304,492 |  | - |  | 1,605,529 |
| Government Bonds and U.S. Treasury |  |  |  |  |  |  |  |  |  |  |  |  |
| Notes |  | - |  | 10,474,838 |  | 6,605,338 |  | 4,350,953 |  | - |  | 21,431,129 |
| Other |  | 3,495,397 |  | 11,454,351 |  | 9,620,717 |  | 1,307,733 |  | 95,216 |  | 25,973,414 |
| Total | \$ | 6,802,088 | \$ | 35,720,228 | \$ | 28,017,990 | \$ | 8,979,813 | \$ | 221,914 |  | 79,742,033 |

## (F) Security Lending

Under the provisions of its benefit plan and state law, the Board's pension benefit trust engages in securities lending to broker dealers and other entities for cash collateral that will be returned for the same securities in the future. The cash collateral cannot be liquidated by the Board unless the borrower defaults. Cash collateral is initially pledged at $102.73 \%$ of the market value of securities lent and additional collateral is provided by the next business day if the value falls to less than $100 \%$ of the market value of the securities lent. No collateral exposure existed at December 31, 2017 and 2016. The value of securities lent at December 31,2017 and 2016 was $\$ 31,264,473$ and $\$ 41,519,835$, respectively. The market value of the cash collateral at December 31, 2017 and 2016 was $\$ 32,001,957$ and $\$ 42,465,707$, respectively.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS

(Continued)
(3) Defined Benefit Pension Plan

## Plan Descriptions

The Board has a single-employer contributory retirement plan covering all full-time employees, the Pension Trust Fund (PTF). The Board's payroll for current employees covered by the PTF for the years ended December 31, 2017 and 2016 was $\$ 41,822,648$ and $\$ 35,363,156$, respectively; such amounts exclude overtime and standby payroll. At December 31, the PTF membership consisted of:

| Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them | 2017 | 2016 |
| :---: | :---: | :---: |
|  | 892 | 861 |
| Current employees: |  |  |
| Vested | 479 | 513 |
| Non-vested | 604 | 485 |
|  | 1,083 | 998 |
| Total | 1,975 | 1,859 |

## Benefits Provided

The benefit provisions were established by action of the Board in 1956 in accordance with Louisiana statutes. The Board retains exclusive control over the plan through the Pension Committee of the PTF. Effective January 1, 1996, the plan became qualified under Internal Revenue Code Section 401(a) and thus is tax exempt.

The plan provides for retirement benefits as well as death and disability benefits. All benefits vest after five years of service. Employees who retire at or after age 65 with ten years of credited service are entitled to an annual retirement benefit, payable biweekly for life, in an amount equal to two percent of their average compensation for each year of credited service up to ten years, increasing by (1) one-half percent per year for service years over ten years, (2) an additional one-half percent per year for service years over twenty years and (3) an additional one percent per year for service years over thirty years, for a maximum of four percent for each year of credited service. Average compensation is the average annual earned compensation (prior to 2002, less $\$ 1,200$ ) for the period of 36 successive months of service during which the employee's compensation was the highest. Employees with thirty years or more of credited service may retire without a reduction in benefits. Employees may retire prior to age 62 without 30 years of service with a reduction in benefits of three percent for each year of age below the age of 62 . If an employee leaves covered employment or dies before three years of credited service, the accumulated employee contributions plus related investment earnings are refunded to the employee or designated beneficiary.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS

## (Continued)

## (3) Defined Benefit Pension Plan (continued)

## Plan Descriptions (continued)

## Benefits Provided (continued)

The retirement allowance for retirees over age 65 is subject to a cost of living adjustment each January 1, provided that the member retired on or after January 1, 1984. The adjustment is based on the increase in the Consumer Price Index for all urban wage earners published by the U.S. Department of Labor but is limited to an annual maximum of two percent on the first $\$ 10,000$ of initial retirement benefits.

Effective September 23, 1993, employers may transfer credit between the Board's plan and the City of New Orleans' retirement system with full credit for vested service. The Board and its employees are obligated under plan provisions to make all required contributions to the plan. The required contributions are actuarially determined. Level percentage of payroll employer contribution rates is determined using the entry age normal actuarial funding method. Employees are required to contribute four percent of their regular salaries or wages.

## Deferred Retirement Option Program (DROP)

Beginning in 1996, the Board offered employees a "Deferred Retirement Option Plan" (DROP), an optional retirement program which allows an employee to elect to freeze his or her retirement benefits but continue to work and draw a salary for a minimum period of one year to a maximum period of five years. While continuing employment, the retirement benefits are segregated from overall plan assets available to other participants. As of December 31, 2017 and 2016, 116 and 119 employees, respectively, participated in the plan. The amount of plan assets segregated for these individuals was $\$ 9,294,547$ and $\$ 11,328,708$ as of December 31,2017 and 2016, respectively.

## Funding Policy

The actuarially determined contribution requirement for the Board was $30.216 \%$ and $36.175 \%$ for 2017 and 2016. The contribution requirement for employees for the years ended December 31, 2017 and 2016 was $6.0 \%$. The actual Board's and employees' contributions (including contributions for transferred employees from other pension plans) for the years ended December 31 were as follows:

```
Employer and other transfers
Employee
Total contributions
```

|  | $\mathbf{2 0 1 7}$ |
| :---: | :---: | :---: |
| $9,655,509$ <br> $2,139,705$ | $\mathbf{2 0 1 6}$ |

$\$ 11,795,214 \$ 10,101,344$

## Net Pension Liability

The Board's Net Pension Liability was measured as of December 31, 2017 and 2016. The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> NOTES TO FINANCIAL STATEMENTS <br> (Continued) 

## (3) Defined Benefit Pension Plan (continued)

## Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of December 31, 2017 and 2016, using the following actuarial assumptions:
Investment rate of return
Inflation
Salary increases including inflation

| 2017 | 2016 |
| ---: | ---: | ---: |
| $7.00 \%$ | $7.00 \%$ |
| $2.00 \%$ | $2.00 \%$ |
| $5.00 \%$ | $5.00 \%$ |

The long-term expected rate of return on pension plan investments was determined using a buildingblock method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by an asset allocation percentage which is based on the nature and mix of current and expected plan investments and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the Pension Trust Fund's current and expected asset allocation as of December 31, 2017 are summarized in the following table:

| Asset Class |  | Long-Term Expected <br> Real Rate of Return |
| :---: | :---: | :---: |
| Equities |  | $8.5 \%$ |
| Fixed Income |  | $6.5 \%$ |
| Alternative |  | $7.0 \%$ |
| Cash and Equivalents | -- |  |

## Discount Rate

The discount rate used to measure the total pension liability was $7 \%$ for the 2017 and 2016 plan years. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and that the plan's contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the PTF's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the longterm expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

## Investment Rate of Return

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. For the years ended December 31, 2017 and 2016, the annual money-weighted rates of return on pension plan investments, net of pension plan investment expenses, were $10.52 \%$ and $5.42 \%$, respectively.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS

(Continued)
(3) Defined Benefit Pension Plan (continued)

## Actuarial Assumptions (continued)

## Sensitivity of the Net Pension Liability to Change in the Discount Rate

The following presents the net pension liability of the Board as of December 31, 2017 and 2016, calculated using the discount rate of $7 \%$, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower ( $6 \%$ ) or 1-percentage-point higher ( $8 \%$ ) than the current rate.

December 31, 2017
Total pension liability
Fiduciary net position
Net pension liability

\$ 347,528,250
235,284,317
112,243,933
Current
Discount Rate
$7 \%$
\$ 318,218,035
235,284,317
82,933,718

$$
\begin{array}{rr}
\$ 333,051,219 & \$ 305,105,919 \\
224,356,261 & 224,356,261 \\
108,694,958 & 80,749,658
\end{array}
$$

\$ 281,298,180 224,356,261 56,941,919

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions
$\left.\begin{array}{lrlrlrl} & \begin{array}{c}\text { Total Pension } \\ \text { Liability } \\ \text { (a) }\end{array} & & & \begin{array}{c}\text { Plan Fiduciary } \\ \text { Net Position } \\ \text { (b) }\end{array} & & \end{array} \begin{array}{c}\text { Net Pension } \\ \text { Liability } \\ \text { (a)-(b) }\end{array}\right)$

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS

(Continued)

## (3) Defined Benefit Pension Plan (continued)

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions (continued)
$\left.\begin{array}{lrrrrrr} & \begin{array}{c}\text { Total Pension } \\ \text { Liability } \\ \text { (a) }\end{array} & & & \begin{array}{c}\text { Plan Fiduciary } \\ \text { Net Position } \\ \text { (b) }\end{array} & & \end{array} \begin{array}{c}\text { Net Pension } \\ \text { Liability } \\ \text { (a)-(b) }\end{array}\right)$

For the years ended December 31, 2017 and 2016, the Board recognizes a Pension Expense of $\$ 9,882,526$ and $\$ 11,836,322$, respectively, in payroll related expense on the statements of revenues, expenses, and changes in net position.

On December 31, 2017 and 2016, the Board reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

|  | Deferred Outflows of Resources |  | Deferred Inflows of Resources |  |
| :---: | :---: | :---: | :---: | :---: |
| December 31, 2017 |  |  |  |  |
| Differences between expected and actual experience | \$ | 9,279,166 | \$ | 1,867,968 |
| Net difference between projected and actual earnings on pension plan investments |  | $4,197,497$ |  | 1,867,968 |
| Total | \$ | 13,476,663 | \$ | 1,867,968 |
| December 31, 2016 |  |  |  |  |
| Differences between expected and actual experience | \$ | - | \$ | 2,396,433 |
| Net difference between projected and actual earnings on pension plan investments |  | 16,904,538 |  | , |
| Total | \$ | 16,904,538 | \$ | 2,396,433 |

# SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> <br> NOTES TO FINANCIAL STATEMENTS <br> <br> NOTES TO FINANCIAL STATEMENTS (Continued) 

 (Continued)}
(3) Defined Benefit Pension Plan (continued)

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions (continued)

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in pension expense as follows:

| 2018 | $\$$ | $4,578,910$ |
| :--- | :---: | :---: |
| 2019 |  | $3,630,411$ |
| 2020 | $(428,221)$ |  |
| 2021 |  | $(707,651)$ |
| 2022 |  | $1,185,981$ |
| 2023 |  | $1,185,981$ |
| 2024 | $1,081,642$ |  |
| 2025 |  | $1,081,642$ |
|  | $\$$ | $11,608,695$ |

## The Board's Pension Plan Fiduciary Net Position

A separate report on the pension trust fund is not issued.
(4) Property, Plant, and Equipment

The useful lives of property, plant, and equipment consisted of the following:

| Power and pumping stations - buildings | 57 years |
| :--- | :--- |
| Power and pumping stations - machinery | 40 years |
| Distribution systems | 75 years |
| Sewerage collection | 75 years |
| Canals and subsurface drains | 75 to 100 years |
| Treatment plants | 50 years |
| Connections and meters | 50 years |
| Power transmission | 50 years |
| General plant | 12 years |
| General buildings | 25 years |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS <br> (Continued)

## (4) Property, Plant and, Equipment (continued)

Property, plant, and equipment consisted of the following as of December 31:


## SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> NOTES TO FINANCIAL STATEMENTS (Continued)

## (4) Property, Plant, and Equipment (continued)



## SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> NOTES TO FINANCIAL STATEMENTS <br> (Continued)

(4) Property, Plant and Equipment (continued)

Interest capitalized was as follows for the years ended December 31:

|  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: |
| Interest income | \$ | 3,487,177 | \$ | 4,097,035 |
| Interest expense |  | (24,951,780) |  | $(26,369,526)$ |
| Net interest capitalized | \$ | (21,464,603) | \$ | $(22,272,491)$ |

(5) Customer Receivables

Customer receivables as of December 31 consist of the following:

| 2017 | Water Sewer | Customer Accounts |  | Allowance for Doubtful Accounts |  | Net |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | \$ | 25,764,357 | \$ | 11,867,730 | \$ | 13,896,627 |
|  |  |  | 26,340,384 |  | 8,970,383 |  | 17,370,001 |
| 2016 | Water Sewer | \$ | 52,104,741 | \$ | 20,838,113 | \$ | 31,266,628 |
|  |  | \$ | 17,554,149 | \$ | 4,883,220 | \$ | 12,670,929 |
|  |  |  | 18,182,832 |  | 4,458,867 |  | 13,723,965 |
|  |  | \$ | 35,736,981 | \$ | 9,342,087 | \$ | 26,394,894 |

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS <br> (Continued)

(6) Long-Term Obligations

## (A) Bonds Payable

Bonds payable consisted of the following as of December 31:
$0.45 \%$ sewerage service subordinate revenue bonds, series 2011 (initial average interest cost $0.95 \%$ ); due in annual principal installments ranging from $\$ 411,000$ to $\$ 491,000$; final payment due December 1, 2032.
$2.00 \%$ to $4.00 \%$ drainage system limited tax bonds, series 2014 (initial average interest cost $1.88 \%$ ); due in annual principal installments ranging from $\$ 535,000$ to $\$ 2,000,000$; final payment due December 1, 2022.
$2.00 \%$ to $5.00 \%$ sewerage service revenue bonds (initial average interest cost $3.86 \%$ ); series 2014, due in annual principal installments ranging from $\$ 1,970,000$ to $\$ 12,970,000$; final payment due June 1 , 2044.
$5.00 \%$ water revenue bonds, series 2014 (initial average interest cost 4.43\%); due in annual principal installments ranging from $\$ 325,000$ to $\$ 6,225,000$; final payment due December 1, 2044.
4.98\% water revenue bonds, series 2015 (initial average interest cost $4.38 \%$ ); due in annual principal installments ranging from $\$ 325,000$ to $\$ 6,225,000$; final payment due December 1,2045 .
$5.00 \%$ sewerage service revenue bonds, series 2015 (initial average interest cost $4.39 \%$ ); due in annual principal installments ranging from $\$ 325,000$ to $\$ 6,225,000$; final payment due December 1, 2045 .

Plus: bond premiums
Total
Less: current maturities
Bond payable, long-term


## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS <br> (Continued)

(6) Long-Term Obligations (continued)
(A) Bonds Payable (continued)

The changes in long-term debt were as follows:
Balance, beginning of year
Payments
Balance, end of year

| 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: |
| \$ | 456,968,000 | \$ | 471,795,000 |
|  | (17,627,000) |  | (14,827,000) |
| \$ | 439,341,000 | \$ | 456,968,000 |

The annual requirements to amortize bonds payable as of December 31, 2017, are as follows:

| Year | Principal |  | Interest |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | \$ | 17,461,000 | \$ | 21,004,668 | \$ | 38,465,668 |
| 2019 |  | 16,900,000 |  | 20,203,929 |  | 37,103,929 |
| 2020 |  | 17,819,000 |  | 19,389,996 |  | 37,208,996 |
| 2021 |  | 17,453,000 |  | 18,581,121 |  | 36,034,121 |
| 2022 |  | 16,087,000 |  | 17,836,752 |  | 33,923,752 |
| 2023-2027 |  | 51,135,000 |  | 81,202,954 |  | 132,337,954 |
| 2028-2032 |  | 59,616,000 |  | 68,519,343 |  | 128,135,343 |
| 2033-2037 |  | 75,590,000 |  | 52,580,525 |  | 128,170,525 |
| 2038-2042 |  | 96,700,000 |  | 31,468,750 |  | 128,168,750 |
| 2043-2045 |  | 70,580,000 |  | 6,326,625 |  | 76,906,625 |
|  | \$ | 439,341,000 | \$ | 337,114,663 | \$ | 776,455,663 |

The annual requirements to amortize revenue bonds and tax bonds payable as of December 31, 2017, are as follows:

| Year | Revenue Bonds |  | Tax Bonds |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2018 | \$ | 15,716,000 | \$ | 1,745,000 | \$ | 17,461,000 |
| 2019 |  | 15,085,000 |  | 1,815,000 |  | 16,900,000 |
| 2020 |  | 15,924,000 |  | 1,895,000 |  | 17,819,000 |
| 2021 |  | 15,498,000 |  | 1,955,000 |  | 17,453,000 |
| 2022 |  | 14,087,000 |  | 2,000,000 |  | 16,087,000 |
| 2023-2027 |  | 51,135,000 |  | - |  | 51,135,000 |
| 2028-2032 |  | 59,616,000 |  | - |  | 59,616,000 |
| 2033-2037 |  | 75,590,000 |  | - |  | 75,590,000 |
| 2038-2042 |  | 96,700,000 |  | - |  | 96,700,000 |
| 2043-2045 |  | 70,580,000 |  | - |  | 70,580,000 |
|  | \$ | 429,931,000 | \$ | 9,410,000 | \$ | 439,341,000 |

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

(6) Long-Term Obligations (continued)
(A) Bonds Payable (continued)

The indentures under which these bonds were issued provide for the establishment of restricted funds for debt service as follows:

1. Debt service funds are required for the payment of interest and principal on the revenue and tax bonds. Monthly deposits on revenue bonds, excluding bond anticipation notes, are required to be made into this fund from operations in an amount equal to $1 / 6$ of the interest falling due on the next interest payment date, and an amount equal to $1 / 12$ of the principal falling due on the next principal payment date. All debt service funds are administered by the Board of Liquidation. The required amount to be accumulated in this fund was $\$ 28,198,557$ and $\$ 28,810,199$ at December 31, 2017 and 2016, respectively; the accumulated balance at December 31, 2017 and 2016 was $\$ 28,198,558$ and $\$ 28,810,199$ respectively.
2. The water bonds require an amount equal to the largest amount required in any future calendar year to pay the principal of and interest on outstanding bonds. The sewer bonds require an amount equal to $125 \%$ of average aggregate debt service. The amounts required to be accumulated in this fund were $\$ 18,407,782$ at December 31, 2017 and 2016; the accumulated balance at December 31,2017 and 2016 was $\$ 18,407,782$.

Operating revenues, net of operating expenses, are pledged as security for all revenue bond issues.

## (B) Sewerage Service Revenue Bonds, Series 2011

The City entered into an agreement with the Louisiana Department of Environmental Quality (LDEQ) whereby the LDEQ has committed to loan the Board $\$ 9,000,000$ to fund sewer main replacements, point repairs, replacement of associated service connections and laterals, sewer line rehabilitation by cured in-place pipe lining and manhole rehabilitation. The loan is to be advanced in incremental amounts as project costs are incurred. The indebtedness to the LDEQ will be evidenced through the Sewerage Service Subordinate Revenue Bonds, Series 2011. Upon issuance of subsequent bonds, the indebtedness was to spring from subordinate to a senior lien status. That conversion took place with the issuance of the Series 2014 bonds. Annual principal payments are due beginning November 1, 2013 continuing through December 1, 2032. Interest on the bonds is incurred at the rate of $0.45 \%$, and the LDEQ administrative fee rate is $0.5 \%$. Interest and administrative fee payments began on May 1, 2012 and are due semi-annually thereafter. As of December 31, 2017 and 2016, $\$ 6,906,000$ and $\$ 7,333,000$ is included as bonds payable, respectively.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

(6) Long-term Obligations (continued)
(C) Series 2014 Bonds

During 2014, the Board refunded the Series 1997, 1998, 2000, 2000B, 2001, 2002, 2003, 2004, and 2009 Sewerage bonds. The Board issued $\$ 158,990,000$ in Series 2014 Sewerage Service Revenue and Refunding Bonds with a final maturity of June 1, 2044. The bond proceeds, less issuance costs, and investments were used to refund the outstanding principle balance of the sewerage bonds in the amount of $\$ 121,870,000$. By refunding these bonds, the Board estimated $\$ 20,696,313$ in future savings related to future interest and principal payments. The Board estimated an economic gain of approximately $\$ 18,397,306$. The cost of issuance of the Series 2014 Sewerage Bonds totaled $\$ 1,345,380$, and the deferred loss on refunding was $\$ 4,708,925$. Bond proceeds of $\$ 47,300,000$ were restricted for capital projects.

During 2014, the Board refunded the Series 1998 and 2002 Water Bonds. The Board issued $\$ 103,525,000$ in Series 2014 Water Revenue and Refunding Bonds with a final maturity of December 1,2044. The bond proceeds, less issuance costs, and investments were used to refund the outstanding principle balance of the Water Bonds in the amount of $\$ 27,655,000$. By refunding these bonds, the Board estimated $\$ 1,359,352$ in future savings related to future interest and principal payments. The Board estimated an economic gain of approximately $\$ 2,738,262$. The cost of issuance of the Series 2014 Water Bonds totaled $\$ 1,040,131$ and the deferred loss on refunding was $\$ 34,901$. Bond proceeds of $\$ 77,000,000$ were restricted for capital projects.

During 2014, the Board refunded the Series 1998 and 2002 Drainage Bonds. The Board issued $\$ 14,900,000$ in Series 2014 Drainage Refunding Bonds with a final maturity of December 1, 2022. The bond proceeds, less issuance costs, and investments were used to refund the outstanding principle balance of the Drainage Bonds in the amount of $\$ 16,205,000$. By refunding these bonds, the Board estimated $\$ 2,968,676$ in future savings related to future interest and principal payments. The Board estimated an economic gain of approximately $\$ 2,846,558$. The cost of issuance of the Series 2014 Drainage Refunding Bonds totaled $\$ 263,828$, and the deferred loss on refunding was \$347,533.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

## (6) Long-term Obligations (continued)

## (D) Series 2015 Bonds

During 2015, the Board issued $\$ 100,000,000$ in Series 2015 Water Revenue Bonds with an original issue premium of $\$ 12,686,122$ and a final maturity of December 1, 2045. In addition, the Board issued $\$ 100,000,000$ in Series 2015 Sewerage Revenue Bonds with an original issue premium of $\$ 12,826,410$ and a final maturity date of December 1, 2045. Proceeds from such bonds were used to finance capital improvements.

## (E) Debt Service Assistance

In July 2006, the Board and the State of Louisiana (the State) entered into a Cooperative Endeavor Agreement whereby the State agreed to lend up to $\$ 77,465,247$ from State funds on deposit in the Debt Service Assistance Fund, authorized by the Gulf Opportunity Zone Act of 2005 and Act 41 of the First Extraordinary Session of the Louisiana Legislature of 2006, to assist in payment of debt service requirements from 2006 through 2008 due to disruption of tax bases and revenue streams caused by Hurricanes Katrina and Rita. Draw downs on the loan will be made as debt service payments become due. No principal or interest shall be payable during the initial five year period of the loan. After the expiration of the initial five year period, the loan shall bear interest at a fixed rate of 4.64 percent. Principal payments on the bonds began in July 2012, and the loan will mature in July 2026. Interest is payable semi-annually on January 15 and July 15 beginning January 2012. The loan may be prepaid without penalty or premium.

As of December 31, 2017, debt service requirements relating to the bonds are as follows:

| Years Ending December 31 | Principal | Interest | Total |
| :---: | :---: | :---: | :---: |
| 2018 | \$ 4,842,337 | \$ 2,440,826 | \$ 7,283,163 |
| 2019 | 5,066,514 | 2,216,164 | 7,282,678 |
| 2020 | 5,301,601 | 1,981,077 | 7,282,678 |
| 2021 | 5,547,595 | 1,735,083 | 7,282,678 |
| 2022 | 5,805,003 | 1,477,675 | 7,282,678 |
| 2023-2026 | 26,040,059 | 3,089,273 | 29,129,332 |
|  | \$ 52,603,109 | \$ 12,940,098 | \$ 65,543,207 |

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

## (6) Long-term Obligations (continued)

## (F) Southeast Louisiana Project

In 2010, the Coastal Protection and Restoration Authority of Louisiana entered into agreements (SELA PPA and SELA DPA) with the Department of the Army for the Southeast Louisiana, Louisiana Project in Jefferson and Orleans Parishes (the Project). The purpose of the Project is to provide flood damage reduction and interior drainage for Orleans and Jefferson Parishes in southeast Louisiana. The agreements set forth the obligations of the federal government and non-federal sponsors, including the Board, regarding the construction and the operation, maintenance, repair, rehabilitation, and replacement of the Project. For the projects, the federal government is responsible for $65 \%$ of the project costs and the non-federal sponsors are responsible for the remaining $35 \%$. Under the agreement, the Department of the Army, subject to the availability of funds appropriated by the Congress of the United States, shall design and construct specified work at $100 \%$ federal expense. The Board will be allowed to defer payment of its required non-federal contribution of funds of $35 \%$ and to pay said contribution of funds with interest over a period of not more than 30 years from the date of completion of the project or separable element of the project. The interest rate to be used in computing the interest shall be determined by the Secretary of the Treasury, taking into consideration average market yields on outstanding marketable obligations of the United States with remaining periods of maturity comparable to the payment period during the month preceding the Government fiscal year in which the first federal construction contract for such separable element is awarded to the SELA PPA, plus a premium of one-eighth of one percentage point for transaction costs. The amount due, including accrued interest, as of December 31, 2017 and 2016 is $\$ 201,926,585$ and $\$ 163,995,508$, respectively. Total amount due is expected to increase through October 2021, estimated project completion date.

At December 31, 2017, the Board is responsible for $35 \%$ of construction costs incurred for the Project that consists of 16 contracts, grouped in 5 basins. Expected project completion date, payment start date, as well as interest rate for each basin are as follows:

| Basin | Expected Completion Date | Payment Start Date | Interest Rate |
| :---: | :---: | :---: | :---: |
| OP-2 | October 2021 | February 2022 | 3.000\% |
| OP-3 | April 2019 | August 2019 | 4.375\% |
| OP-4 | August 2020 | August 2020 | 4.375\% |
| OP-5 | March 2020 | April 2020 | 3.000\% |
| OP-6 | March 2020 | April 2020 | 3.500\% |

During 2012 through 2017, the Board accrued approximately $\$ 17.6$ million of interest on construction costs incurred to date. Final amount due for each basin will be determined by the Department of Army upon project completion.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS <br> (Continued)

(6) Long-term Obligations (continued)
(F) Southeast Louisiana Project (continued)

As of December 31, 2017, projected debt service requirements relating to the total amount due are as follows:

| Years Ending December 31 | Principal* | Interest | Total |
| :---: | :---: | :---: | :---: |
| 2018 | \$ | \$ | \$ |
| 2019 | $(189,044)$ | 1,178,236 | 989,192 |
| 2020 | $(1,483,327)$ | 6,099,521 | 4,616,194 |
| 2021 | 1,664,751 | 2,951,443 | 4,616,194 |
| 2022 | $(7,189,489)$ | 19,051,438 | 11,861,949 |
| 2023-2027 | 26,206,766 | 33,102,978 | 59,309,744 |
| 2028-2032 | 30,480,933 | 28,828,811 | 59,309,744 |
| 2033-2037 | 35,488,512 | 23,821,232 | 59,309,744 |
| 2038-2042 | 41,357,887 | 17,951,857 | 59,309,744 |
| 2043-2047 | 48,240,469 | 11,069,275 | 59,309,744 |
| 2048-2050 | 27,349,127 | 2,009,909 | 29,359,036 |
|  | \$ 201,926,585 | \$ 146,064,700 | \$ 347,991,285 |

*Note: Future payments are first applied toward interest accrued to-date since inception, resulting negative principal payments in year 2019, 2020, and 2022.
(7) Due to City of New Orleans

The Board bills and collects sanitation charges on behalf of the City of New Orleans (the City). The Board is not liable for any uncollected sanitation charges.

Additionally, amounts included in accounts payable due to the City for works performed by the Department of Public Works on behalf of the Board, were $\$ 706,646$ and $\$ 2,435,653$ at December 31, 2017 and 2016, respectively.
(8) Property Taxes

Property taxes are levied by the City of New Orleans. Taxes on real and personal property attach as an enforceable lien on the property as of January 1. Taxes are levied on January 1, payable on January 1, and delinquent on February 1.

The assessed value of the property is determined by an elected Assessor. The assessed value for 2017 and 2016 was $\$ 3,789,022,670$ and $\$ 3,653,953,630$, respectively. The combined tax rate dedicated for the Board for the years ended December 31, 2017 and 2016 was $\$ 16.43$ per $\$ 1,000$ of assessed valuation. These dedicated funds are available for operations, maintenance, construction, and extension of the drainage system (except for subsurface systems).

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS

(Continued)

## Commitments

## (A) Capital Improvements

At December 31, 2017, the Board's budget for its ten year capital improvements program totaled $\$ 3,162,659,000$ including $\$ 774,847,000$ for water, $\$ 497,656,000$ for sewerage, $\$ 832,002,000$ for drainage, and $\$ 1,058,154,000$ for a combination of water, sewerage, and drainage.

Due to certain regulatory and legislative changes, additional capital improvements will probably be required. Future capital improvement program expenditures may require the issuance of additional debt depending on the amount and timing of expenditures. As of December 31, 2017, the Board has committed or appropriated $\$ 47,702,481$ in investments for use in future capital projects and has $\$ 67,807,354$ of cash and cash equivalents restricted for future capital projects.

The capital improvements budget for 2018 is $\$ 346,480,000$, including $\$ 109,920,000$ for projects, which are expected to be funded by federal grants and programs. Significant projects included in property, plant and equipment in progress as of December 31, 2017 include the following:

Hurricane Katrina related Repairs and Replacements<br>Southeast Louisiana Flood Control Program<br>Sewer System Evaluation and Rehabilitation Program (SSERP)<br>Eastbank Sewer Treatment Plant<br>Westbank Sewer Treatment Plant<br>Supervisory Control and Data Acquisition (SCADA)<br>Hazard Mitigation Grant Program

## (B) Self-insurance

The Board is self-insured for general liability, workers' compensation, and hospitalization benefits and claims. Settled claims have not exceeded excess coverage in any of the past three fiscal years. Hospitalization benefits are charged to payroll related expense.

General liability claims are segregated internally by "claims" and "suits" depending on the scope and type of claim and are handled by the Office of the Special Counsel and Administrative Services. Individual general liability losses have ranged from $\$ 100$ to $\$ 7,500,000$, illustrating the volatility of this exposure. The claims expense provision for 2017 and 2016 amounted to $\$ 41,847,195$ and $\$ 4,417,197$, respectively.

Worker's compensation expense provision for 2017 and 2016 amounted to $\$ 3,111,359$ and $\$ 2,959,527$, respectively.

The medical claims for our self-insured health plan are administered by "The Health Plan," our third party administrator. The Board's expense provision in excess of employee contributions for 2017 and 2016 was $\$ 19,160,641$ and $\$ 22,055,034$, respectively, and is included in payroll related expenses.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS

## (Continued)

## (9) Commitments (continued)

## (B) Self-insurance (continued)

Changes in the claims payable amount are as follows (health payments are reflected net):

|  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: |
| Beginning of Year | \$ | 17,204,771 | \$ | 13,172,580 |
| Current Year Claims and Estimate Change |  | 64,029,192 |  | 29,126,683 |
| Claim Payments |  | $(22,073,568)$ |  | $(25,094,492)$ |
| End of Year | \$ | 59,160,395 | \$ | 17,204,771 |

The composition of claims payable is as follows:

|  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: |
| Short-term: |  |  |  |  |
| Workers' compensation | \$ | 1,859,956 | \$ | 1,550,692 |
| Health insurance |  | 2,197,500 |  | 2,107,501 |
| Total short-term |  | 4,057,456 |  | 3,658,193 |
| Long-term: |  |  |  |  |
| Workers' compensation |  | 1,236,344 |  | 1,465,743 |
| General liability |  | 53,866,595 |  | 12,080,835 |
| Total long-term |  | 55,102,939 |  | 13,546,578 |
| Total | \$ | 59,160,395 | \$ | 17,204,771 |

## (C) Regulatory Matters

The Sewer System Evaluation and Rehabilitation Program (SSERP) was initially estimated to cost the Board $\$ 408.2$ million by the original Consent Decree with an end date of 2015 . However, the Board has negotiated, and continues to negotiate with U.S. Environmental Protection Agency (EPA), extensions beyond the original Consent Decree deadline. Consequently, the original Consent Decree has been modified to currently provide an end date of October 2025.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

## (9) Commitments (continued)

## (C) Regulatory Matters (continued)

The Board participates in a number of federal programs which are governed by various rules and regulations. Costs charged to the respective grant programs are subject to audit and adjustment by the grantor agencies; therefore, to the extent that the Board has not complied with the rules and regulations governing the grants, refunds of any money received and the collectability of any related receivable as of December 31, 2017 might be impaired. In management's opinion, there are no significant contingent liabilities relating to compliance with the rules and regulations governing state and federal grants; therefore, no provision has been recorded in the accompanying financial statements for such contingencies. Audits of prior years have not resulted in any significant disallowed costs or refunds. Any costs that would be disallowed would be recognized in the period agreed upon by the grantor agency and the Board.

## (D) Post-employment Healthcare Benefits

Plan Description - The Board's post-employment benefit plan is a single-employer defined benefit plan. The Board's post-employment medical benefits for retirees are provided through a self-insured medical plan and are made available to employees upon actual retirement.

The retirement eligibility (D.R.O.P. entry) provisions are as follows: 30 years of service at any age; age 62 and 10 years of service; age 65 and 5 years of service; age 70 regardless of service; or, if age plus service equals at least 80 . Complete plan provisions are contained in the official plan documents. Currently, the Board provides post-employment medical benefits to 668 retired employees.

Contribution Rates - Employees do not contribute to their post-employment benefits costs until they become retirees and begin receiving those benefits. The plan provisions and contribution rates are contained in the official plan documents.

Fund Policy - Until 2007, the Board recognized the cost of providing post-employment medical benefits (the Board's portion of the retiree medical benefit premiums) as an expense when the benefit premiums were due and thus financed the cost of the post-employment benefits on a pay-as-you-go basis. In 2017 and 2016, the Board's portion of health care funding cost for retired employees totaled $\$ 6,489,205$ and $\$ 6,301,229$ respectively.

Effective January 1, 2007, the Board implemented Governmental Accounting Standards Board Statement Number 45, Accounting and Financial Reporting by Employers for Post-employment Benefits Other than Pensions (GASB 45). This amount was applied toward the Net OPEB Benefit Obligation as shown in the following tables.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

## (9) Commitments (continued)

## (D) Post-employment Healthcare Benefits (continued)

Annual Required Contribution - The Board's Annual Required Contribution (ARC) is an amount actuarially determined in accordance with GASB 45 . The ARC is the sum of the Normal Cost plus the contribution to amortize the Unfunded Actuarial Accrued Liability (UAAL). A level dollar, open amortization period of 30 years (the maximum amortization period allowed by GASB 43/45) has been used for the post-employment benefits. The actuarially computed ARC is as follows:
Normal cost
30-year UAL amortization amount
Annual required contribution (ARC)

|  | 2017 |  | 2016 |
| :---: | :---: | :---: | :---: |
| \$ | 2,835,737 | \$ | 4,057,594 |
|  | 7,770,475 |  | 9,449,908 |
| \$ | 10,606,212 | \$ | 13,507,502 |

Net Post-employment Benefit Obligation - The table below shows the Board's Net Other Postemployment Benefit (OPEB) Obligation for fiscal years ending December 31:

## Beginning Net OPEB Obligation



Annual required contribution
Interest on net OPEB obligation
ARC adjustment
OPEB cost
Contribution
Current year retiree premium
Change in net OPEB obligation
Ending net OPEB obligation

| 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: |
| \$ | 73,580,341 | \$ | 67,579,016 |
|  | 10,606,212 |  | 13,507,502 |
|  | 2,943,214 |  | 2,703,161 |
|  | $(4,255,167)$ |  | $(3,908,109)$ |
|  | 9,294,259 |  | 12,302,554 |
|  | - |  | - |
|  | $(6,489,205)$ |  | $(6,301,229)$ |
|  | 2,805,054 |  | 6,001,325 |
| \$ | 76,385,395 | \$ | 73,580,341 |

The following table shows the Board's annual other post-employment benefits cost, percentage of the cost contributed, and the net unfunded post-employment benefits liability:
$\left.\begin{array}{cccccc}\text { Fiscal Year Ended } & & \begin{array}{c}\text { Annual OPEB } \\ \text { Cost }\end{array} & & \begin{array}{c}\text { Percentage of } \\ \text { Annual Cost } \\ \text { Contributed }\end{array} & \end{array} \begin{array}{c}\text { Net OPEB } \\ \text { Liability (Asset) }\end{array}\right)$

Funded Status and Funding Progress - In 2017 and 2016, the Board made no contributions to its postemployment benefits plan. The plan is not funded, has no assets, and hence has a funded ratio of zero. Based on the January 1, 2017 actuarial valuation, the most recent actuarial valuation, the Actuarial Accrued Liability (AAL) at the end of the year December 31, 2017 was $\$ 134,367,027$ which is defined as that portion, as determined by a particular actuarial cost method (the Board uses the Unit Credit Cost Method), of the actuarial present value of post-employment plan benefits and expenses which is not provided by normal cost.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS (Continued)

## Commitments (continued)

## (D) Post-employment Healthcare Benefits (continued)

The required schedule of funding progress following the notes to the financial statements presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits. Additional information for the actuarial valuation is as follows:

Actuarial Accrued Liability (AAL)<br>Actuarial Value of Plan Assets (AVP)<br>Unfunded Act. Accrucd Liability (UAAL)<br>Funded Ratio (AVP/AAL)<br>Covered Payroll (active plan members)<br>UAAL as a percentage of covered payroll



Actuarial Methods and Assumptions - Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. The actuarial valuation for post-employment benefits includes estimates and assumptions regarding (1) turnover rate, (2) retirement rate, (3) health care cost trend rate, (4) mortality rate, (5) discount rate (investment return assumption), and (6) the period to which the costs apply (past, current, or future years of service by employees). Actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

The actuarial calculations are based on the types of benefits provided under the terms of the substantive plan (the plan as understood by the Board and its employee plan members) at the time of the valuation and on the pattern of sharing costs between the Board and its plan members to that point. The projection of benefits for financial reporting purposes does not explicitly incorporate the potential effects of legal or contractual funding limitations on the pattern of cost sharing between the Board and plan members in the future. Consistent with the long-term perspective of actuarial calculations, the actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial liabilities and the actuarial value of assets.

Actuarial Cost Method - The ARC is determined using the Projected Unit Credit Cost Method. The employer portion of the cost for retiree medical care in each future year is determined by projecting the current cost levels using the healthcare cost trend rate and discounting this projected amount to the valuation date using the other described pertinent actuarial assumptions, including the investment return assumption (discount rate), mortality, and turnover.

Actuarial Value of Plan Assets - Since the OPEB obligation has not as yet been funded, there are not any plan assets. It is anticipated that in future valuations, should funding take place, plan assets will be valued using a smoothed market value method consistent with Actuarial Standards Board ASOP 6, as provided in paragraph number 125 of GASB Statement 45.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS

## (Continued)

## Commitments (continued)

## (D) Post-employment Healthcare Benefits (continued)

Turnover Rate - An age-related turnover scale based on actual experience has been used. The rates, when applied to the active employee census, produce a composite average annual turnover of approximately $8 \%$. In addition to age related turnover, it has additionally been assumed that $10 \%$ of future eligible retirees will decline coverage upon retirement.

Post-employment Benefit Plan Eligibility Requirements - It is assumed that entitlement to benefits will commence five years after earliest eligibility for retirement (D.R.O.P. entry). The five years is to accommodate the anticipated period of the D.R.O.P. Also, if the initial eligibility for D.R.O.P. entry is prior to age 55, an additional one-year delay has been assumed, and it has been assumed that members eligible for the "Rule of 80 " retirement formula delay three years beyond that earliest retirement date. Medical benefits are provided to employees upon actual retirement. The retirement eligibility (D.R.O.P. entry) provisions are as follows: 30 years of service at any age; age 62 and 10 years of service; age 65 and five years of service; age 70 regardless of service; or, if age plus service equals at least 80 . Entitlement to benefits continues through Medicare to death.

Investment Return Assumption (Discount Rate) - GASB Statement 45 states that the investment return assumption should be the estimated long-term investment yield on the investments that are expected to be used to finance the payment of benefits (that is, for a plan which is funded). Based on the assumption that the ARC will not be funded, a $4 \%$ annual investment return has been used in this valuation.

Health Care Cost Trend Rate - The expected rate of increase in medical cost is based on a graded schedule beginning with $8 \%$ annually, down to an ultimate annual rate of $5.0 \%$ for ten years out and later.

Mortality Rate - The 1994 Group Annuity Reserving (94GAR) table, projected to 2002, based on a fixed blend of $50 \%$ of the unloaded male mortality rate and $50 \%$ of the unloaded female mortality rates, was used. This is a published mortality table which was designed to be used in determining the value of accrued benefits in defined benefit pension plans.

Method of Determining the Value of Benefits - The "value of benefits" has been assumed to be the portion of the premium after retirement date expected to be paid by the employer for each retiree and has been used as the basis for calculating the actuarial present value of OPEB benefits to be paid. The current premium schedules for active and retired are "unblended" rates, as required by GASB 45.

Inflation Rate - Included in both the Investment Return Assumption and the Healthcare Cost Trend rates above is an implicit inflation assumption of $2.50 \%$ annually.

Projected Salary Increases - This assumption is not applicable since neither the benefit structure nor the valuation methodology involves salary.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS <br> (Continued)

## Commitments (continued)

## (D) Post-employment Healthcare Benefits (continued)

Post-retirement Benefit Increases - The plan benefit provisions in effect for retirees as of the valuation date have been used and it has been assumed for valuation purposes that there will not be any changes in the future.

## Deferred Compensation Plan

The Board offers its employees a deferred compensation plan created in accordance with Internal Revenue Code Section 457. This plan, available to all employees, permits them to defer a portion of their salary until future years. The deferred compensation is not available to employees until termination, retirement, death, or unforeseeable emergency. All amounts of compensation deferred under the plan, all property, and rights purchased with those amounts, and all income attributable to those amounts, property or rights are held in trust for the employees, therefore the assets of the plan are not included in these financial statements.

## Budgets

Operating and capital expenditure budgets are adopted by the Board on a basis consistent with accounting principles generally accepted in the United States. While not legally required, this budgetary information is employed as a management control device during the year. Comparison between actual and budgeted expenses is not a required presentation for an Enterprise Fund.

## Tax Abatement Agreement

The local government is subject to certain property tax abatements granted by the Louisiana State Board of Commerce and Industry (the "State Board"), a state entity governed by board members representing major economic groups and gubernatorial appointees. Abatements to which the government may be subject include those issued for property taxes under the Restoration Tax Abatement Program ("RTAP"). For the year ending December 31, 2017, the government participated in the Restoration Tax Abatement Program.

Under the RTAP, as authorized by Article 7, Section $21(\mathrm{H})$ of the Louisiana Constitution and Louisiana Revised Statutes 47:4311, companies that expand, restore, improve or develop an existing structure or structures in a downtown, historic, or economic development district can apply to the State Board and the local governing authority for a property tax exemption. The exemptions are granted for a 5 year term and are renewable for an additional 5 year term upon the approval of the State Board and the local governing authority. The property tax abatements have resulted in reductions of property taxes, which the tax assessor administers as a temporary reduction in the assessed value of the property involved. The abatement agreements stipulate a percentage reduction of property taxes, which can be as much as 100 percent. The local government may recapture abated taxes if a company fails to expand facilities or otherwise fail to fulfill its commitments under the agreement.

During 2017, the City Council of the City of New Orleans approved tax abatement projects with a total investment value of $\$ 8,534,052$ of which $\$ 646,123$ was for the Board.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS <br> (Continued)

(13)

## Segment Information

The Board issued revenue bonds to finance its water and sewerage departments which operate the Board's water and sewerage treatment plants and distribution and collection systems. These bonds are accounted for in a single fund; however, investors in the revenue bonds rely solely on the revenue generated by the individual activities for repayment.

Summary financial information for these departments as of and for the years ended December 31 is as follows:

Condensed Statements of Net Position

Assets:
Current unrestricted assets
Restricted assets
Other assets
Property, plant and equipment
Total assets
Deferred outflows of resources:
Total assets and deferred outflows

| \$ | 63,814 | \$ | 62,996 | \$ | 113,547 | \$ | 114,193 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 72,808 |  | 119,807 |  | 38,431 |  | 92,317 |
|  | 12,263 |  | 11,796 |  | 18 |  | 18 |
|  | 551,884 |  | 470,490 |  | 1,045,224 |  | 980,279 |
|  | 700,769 |  | 665,089 |  | 1,197,220 |  | 1,186,807 |
|  | 4,512 |  | 5,659 |  | 7,548 |  | 8,977 |
| \$ | 705,281 | \$ | 670,748 | \$ | 1,204,768 | \$ | 1,195,784 |

## Liabilities:

Current


Total liabilities, deferred inflows, and net position
$\$ \quad 705,281$ \$ 670,748 $\$ 1,204,768$ \$ 1,195,784

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## NOTES TO FINANCIAL STATEMENTS (Continued)

## (13) Segment Information (continued)

## Condensed Statements of Revenues, Expenses and Changes in Net Position

|  | Water |  |  |  | Sewer |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2017 |  | 2016 |  | 2017 |  | 2016 |  |
|  | (amounts in thousands) |  |  |  |  |  |  |  |
| Service charges, pledged against bonds | \$ | 92,469 | \$ | 85,986 | \$ | 111,883 | \$ | 105,620 |
| Depreciation expense |  | $(12,217)$ |  | $(10,178)$ |  | $(23,620)$ |  | $(20,862)$ |
| Other operating expenses |  | $(88,030)$ |  | $(79,300)$ |  | $(71,440)$ |  | $(61,504)$ |
| Operating income (loss) |  | $(7,778)$ |  | $(3,492)$ |  | 16,823 |  | 23,254 |
| Nonoperating revenues (expenses): |  |  |  |  |  |  |  |  |
| lnvesturnt earnings |  | 1,924 |  | 2,105 |  | 2,109 |  | 2,309 |
| Bond issuance costs |  | - |  | - |  | - |  | - |
| Other |  | $(3,455)$ |  | 275 |  | $(4,857)$ |  | 312 |
| Interest expense |  | $(1,661)$ |  | - |  | $(1,732)$ |  | - |
| Total nonoperating revenues (expenses) |  | $(3,192)$ |  | 2,380 |  | $(4,480)$ |  | 2,621 |
| Capital contributions |  | 24,054 |  | 19,430 |  | 2,412 |  | 3,106 |
| Change in net position |  | 13,084 |  | 18,318 |  | 14,755 |  | 28,981 |
| Beginning net position |  | 337,110 |  | 318,792 |  | 792,101 |  | 763,120 |
| Ending net position | \$ | 350,194 |  | 337,110 \$ |  | 806,856 \$ |  | 792,101 |

## Condensed Statements of Cash Flows

$\frac{\text { Water }}{2017} \frac{2016}{(\text { amounts in thousands) }} \frac{2017}{2016}$

Net cash provided by (used in):

| Operating activities | \$ | 25,093 | \$ | 19,009 | \$ | 26,142 | \$ | 38,310 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Noncapital financing activities |  | 265 |  | 276 |  | 329 |  | 313 |
| Capital and related financing activities |  | $(83,441)$ |  | $(44,284)$ |  | $(92,333)$ |  | $(64,358)$ |
| Investing activities |  | 2,524 |  | 2,957 |  | 2,314 |  | 2,757 |
| Net increase |  | $(55,559)$ |  | $(22,042)$ |  | $(63,548)$ |  | $(22,978)$ |
| Cash and cash equivalents: |  |  |  |  |  |  |  |  |
| Beginning of year |  | 152,333 |  | 174,375 |  | 154,827 |  | 177,805 |
| End of year | \$ | 96,774 | \$ | 152,333 | \$ | 91,279 | \$ | 154,827 |

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

(14)

## Natural Disaster

During the years ended, December 31, 2017 and 2016, the Board has cumulatively received approximately $\$ 367.0$ million and $\$ 361.1$ million, respectively, of cash reimbursements from the Federal Emergency Management Agency (FEMA). Included in accounts receivable as of December 31,2017 and 2016 are $\$ 5,925,340$ and $\$ 11,098,232$, respectively, of reimbursements due from FEMA under the Disaster Grants program. Eligible FEMA grants totaling in excess of $\$ 812.3$ million are in various stages of the approval process and include amounts for system repairs, building repairs, vehicle and equipment repairs, and replacements, temporary power, supplies and other costs.

On June 29, 2007, the Board entered into a Cooperative Endeavor Agreement with the State of Louisiana, City of New Orleans, Louisiana, and the Louisiana Public Facilities Authority (LPFA). The LPFA agreed to issue its bonds to provide the cash capital investment to pay for capital improvements of the City of New Orleans and the Board. The establishment of the construction fund permits the Board and City of New Orleans to publicly bid contracts that are subject to a Project Worksheet that has been obligated by FEMA or for which an award letter has been received and encumber such amounts. The State of Louisiana, City of New Orleans, and Sewerage and Water Board agree that as FEMA pays any reimbursement amounts related to projects for which disbursements have been made, or the City or the Sewerage and Water Board receives monies related to the hazard mitigation grant program for which disbursements have been made from the construction fund; the full amount of such projects shall be deposited in the construction fund and used to fund additional projects until all City of New Orleans and Sewerage and Water Board improvements are completed. The total amount made available to the Board under the agreement was $\$ 100,000,000$. The agreement also permits disbursements from the construction fund for projects with a Project Worksheet that have not been obligated by FEMA, and as a result, will not be reimbursed by FEMA. The Board is not required to reimburse the construction fund for these unobligated projects. At December 31, 2017 and 2016, the Board had an outstanding obligation under the agreement of $\$ 13,241,146$ and $\$ 11,098,232$ included as a liability in due to other governments on the statements of net position, which represent amounts not yet reimbursed by FEMA for obligated projects and deposited back into the construction fund.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

## New Pronouncements

GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions. The primary objective of this statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). It also improves information provided by state and local governmental employers about financial support for OPEB that is provided by other entities. The statements result from a comprehensive review of the effectiveness of existing standards of accounting and financial reporting for all postemployment benefits (pensions and OPEB) with regard to providing decision-useful information, supporting assessments of accountability and inter period equity, and creating additional transparency. Statement number 75 replaces the requirements of Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions, as amended, and Statement No. 57, OPF,R Measurements by Agent Employers and Agent Multiple-Employer Plans, for OPEB. Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions, establishes new accounting and financial reporting requirements for OPEB plans and is explained in more detail in Note 22 of these financial statements. This new guidance is effective for fiscal years beginning after June 15, 2017. Therefore, the Board will adopt this guidance for 2018. The adoption of this statement is expected to require the Board to restate its net position.

GASB Statement No. 84, Fiduciary Activities. This Statement establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities. An activity meeting the criteria should be reported in a fiduciary fund in the basic financial statements. Governments with activities meeting the criteria should present a statement of fiduciary net position and a statement of changes in fiduciary net position. An exception to that requirement is provided for a business-type activity that normally expects to hold custodial assets for three months or less. This Statement describes four fiduciary funds that should be reported, if applicable: (1) pension (and other employee benefit) trust funds, (2) investment trust funds, (3) private-purpose trust funds, and (4) custodial funds. The requirements of this Statement are effective for reporting periods beginning after December 15,2018 . Therefore, if applicable, the Board will implement this guidance in 2019.

GASB Statement No. 85, Omnibus 2017. The objective of this Statement is to address practice issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits [OPEB]). The requirements of this Statement are effective for reporting periods beginning after June 15, 2017. Therefore, as applicable, the Board will implement this guidance in 2018.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

## New Pronouncements (continued)

GASB Statement No. 87, Leases. The objective of this Statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. This Statement requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources. This is a significant change in accounting principles and may impact the net position of the Board. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. Therefore, as applicable, the Board will implement this guidance in 2020.

GASB Statement No. 89, Accounting for Interest Costs Incurred before the End of a Construction Period. The Statement objectives include (1) enhancing the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and (2) simplifying accounting for interest costs incurred before the end of a construction period. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. The Board will implement this guidance in 2020.

## Current Operating Environment

The Board's Drainage System experienced a significant increase in expenditures in 2017 and into 2018 as a result of significant flooding in the New Orleans area in 2017 and the increase in the estimate for general liability claims which has negatively impacted the Drainage System's liquidity. The Sewerage System has made advances to the Drainage System to pay for expenditures of the Drainage System. The Board is considering ways to increase revenues for the Drainage System including additional tax revenues, increased drainage fees, applying for new government grants, and the apportionment of revenues from the Sewerage and Water Systems to the Drainage System. These new sources of revenue are intended to increase revenues to a level that will cover expenditures and begin to allow the repayment of advances from the Sewerage System to the Drainage System. However, if these revenue levels are not achieved, the Board will further deplete its cash and investment levels. The Board's management and Board of Directors are working to review and secure more consistent revenue sources for drainage operations.

## Examination by Federal Agency

During 2017, the Board was notified by the Office for Inspector General (the OIG) of the U.S. Department of Homeland Security that the OIG would be conducting an audit of FEMA Public Assistance Grant Funds awarded to the Board for the period from August 29, 2005 to September 30, 2017. The objective of the audit is to determine whether the Board accounted for and expended FEMA funds according to Federal regulations and FEMA guidelines. As of November 30, 2018, the audit is listed as an on-going project by the OIG, and results of this audit have not being finalized or communicated to the Board.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

## NOTES TO FINANCIAL STATEMENTS (Continued)

## Revenue Bonds Debt Service Coverage (Unaudited)

The General Bond Resolutions governing the Series 2014 Bonds and the Series 2015 Bonds have certain covenant requirements regarding net revenue available for debt service. The net revenue available for debt service in the Board's debt service coverage calculations presented in Section III, Statistical Information (Unaudited) is increased by a portion of the provision for doubtful accounts in the amount of $\$ 7,562,476$ related to its water bonds and $\$ 4,123,972$ related to its sewer bonds. These amounts are opined to be extraordinary, non-recurring and non-continuing expenses by a Qualified Independent Consultant (QIC) as provided for in the General Bond Resolutions. The Board is in compliance with these particular covenants after consideration of the above, as provided for in the General Bond Resolutions. The definition of extraordinary used by the QIC varies from that used in the preparation of financial statements under generally accepted accounting principles. It should be noted that Revenues and Operating Expenses as reported in the schedules in section III are consistent with the terms of the General Bond Resolutions and may differ from the amounts reported in the financial statements.

## (19)

## Subsequent Event

Management has evaluated subsequent events through the date that the financial statements were available to be issued, November 30, 2018, and determined that the following item requiring disclosure. No events occurring after this date have been evaluated for inclusion in these financial statements.

In February 2018, the Board entered into a cooperative endeavor agreement with Southeast Louisiana Flood Protection Authority - East (the Authority) and Coastal Protection and Restoration Flood Protection Authority of Louisiana Board (the Authority Board) to operate, maintain, repair, rehabilitate and replace of the permanent canal closures and pump stations located at the Orleans, London and $17^{\text {th }}$ Street Outfall Canals (PCCPs).

Under the agreement, the Board is to provide $50 \%$ of future costs of operation, maintenance, repair, rehabilitation and replacement of PCCPs. Annual costs are currently estimated to be $\$ 4$ million dollars, which does not include anticipated inflation, emergency operations or other factors that may increase the costs in the future. In March 2018, the Board made an initial payment of $\$ 2,500,000$ to the Authority.

Of the $\$ 2,500,000$ initial payment, the Authority will hold $\$ 500,000$ in a reserve account created and maintained by the Authority to cover any costs incurred as a result of an emergency, storm or other event not anticipated $n$ the annual costs. The remaining balance of $\$ 2,000,000$ will satisfy the Board's share of the anticipated $\$ 4$ million dollars. If actual costs exceed the $\$ 4$ million anticipated costs, the Board will remit payment of its $50 \%$ share of those costs.

REQURIED SUPPLEMENTARY INFORMATION
(GASB STATEMENTS NO. 67, NO. 68, NO 71, AND NO. 45)

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

Required Supplementary Information Under GASB Statement No. 67, 68, and 71 For the years ended December 31, 2017 and 2016

## SCHEDULE OF NET PENSION LIABILITY

| Actuarial <br> Valuation <br> Date <br> December 31 | Total Pension Liability |  | Plan Fiduciary Net Position |  |  | Employer's <br> et Pension <br> Liability | Plan Fiduciary Net Position as a $\%$ of Total Pension Liability |  | Covered Payroll (millions) | Net Pension Liability as a Percentage of Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 318,218,035 | \$ | 235,284,317 | \$ | 82,933,718 | 73.94\% | \$ | 41,822,648 | 198.30\% |
| 2016 |  | 305,105,919 |  | 224,356,261 |  | 80,749,658 | 73.53\% |  | 35,363,156 | 228.34\% |
| 2015 |  | 299,395,091 |  | 222,427,527 |  | 76,967,564 | 74.29\% |  | 33,672,902 | 228.57\% |
| 2014 |  | 296,244,723 |  | 236,556,671 |  | 59,688,052 | 79.85\% |  | 31,378,001 | 190.22\% |
| 2013 |  | 290,919,481 |  | 234,358,565 |  | 56,560,916 | 80.56\% |  | 29,706,715 | 190.40\% |

SCHEDULE OF EMPLOYER CONTRIBUTIONS

| Year <br> Ended | Actuarially Determined Contribution |  | Contributions in Relation to the Actuarial Determined Contribution |  | Contribution Deficiency (Excess) |  | Covered Payroll Contribution |  | Cunllibutionls as a $\%$ of Covered Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 10,545,867 | \$ | 7,239,467 | \$ | 3,306,400 | \$ | 41,822,648 | 17.31\% |
| 2016 |  | 11,024,398 |  | 6,407,201 |  | 4,617,197 |  | 35,363,156 | 18.12\% |
| 2015 |  | 10,799,993 |  | 6,506,652 |  | 4,293,341 |  | 33,672,902 | 19.32\% |
| 2014 |  | 11,171,823 |  | 6,055,890 |  | 5,115,933 |  | 31,378,001 | 19.30\% |
| 2013 |  | 11,086,546 |  | 5,946,614 |  | 5,139,932 |  | 29,706,715 | 20.02\% |
| 2012 |  | 9,127,658 |  | 6,287,658 |  | 2,840,000 |  | 29,074,529 | 21.63\% |
| 2011 |  | 9,815,606 |  | 5,564,936 |  | 4,250,670 |  | 29,774,937 | 18.69\% |
| 2010 |  | 8,358,739 |  | 5,140,096 |  | 3,218,643 |  | 29,670,378 | 17.32\% |
| 2009 |  | 7,591,495 |  | 5,188,175 |  | 2,403,320 |  | 39,947,906 | 12.99\% |
| 2008 |  | 7,146,527 |  | 5,104,789 |  | 2,041,738 |  | 29,466,571 | 17.32\% |

Note to schedule: Method and assumptions used in calculations of actuarially determined contributions. The actuarially determined contribution rates in the schedule of employer contributions are calculated as of December 31, 2017 and 2016 The following actuarial methods and assumptions were used to determine contribution rates reported in that schedule.
Actuarial cost method
Amortization method
Remaining amortization period
Asset valuation method
Inflation
Salary increases
Investment rate of retum

Entry age normal Level dollar
10 years
7-year weighted market average
2.0\% for the years ended December 31, 2017 and 2016
$5.0 \%$, average, including inflation
$7.0 \%$, net of pension plan investment expense, including inflation

## SCHEDULE OF INVESTMENT RETURNS

Net

| Year <br> Ended |  | Money-Weighted <br> Rate of Retum |
| :---: | :---: | :---: |
|  |  |  |
| 2017 |  | $10.52 \%$ |
| 2016 |  | $5.42 \%$ |
| 2015 |  | $-1.79 \%$ |
| 2014 |  | $4.94 \%$ |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## Required Supplementary Information Under GASB Statement No. 67, 68, and 71

For the years ended December 31, 2017 and 2016 (continued)

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY

|  | 2017 |  | 2016 |  | 2015 |  | 2014 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Pension Liability |  |  |  |  |  |  |  |  |
| Service cost | \$ | 3,797,316 | \$ | 3,030,912 | \$ | 2,788,621 | \$ | 3,417,599 |
| Interest on total pension liability |  | 21,357,414 |  | 20,957,657 |  | 20,737,131 |  | 20,364,364 |
| Effect of plan changes |  | - |  | - |  | - |  | . |
| Effect of economic/demographic gains or (losses) |  | 9,734,775 |  | 834,712 |  | $(1,978,038)$ |  | $(1,721,210)$ |
| Effect of assumption changes or inputs |  | - |  | - |  | - |  | (1,21,210) |
| Benefit payments |  | $(21,777,389)$ |  | (19,112,455) |  | (18,397,344) |  | $(16,735,511)$ |
| Net change in total pension liability |  | 13,112,116 |  | 5,710,826 |  | 3,150,370 |  | 5,325,242 |
| Total pension liability, beginning |  | 305,105,919 |  | 299,395,093 |  | 296,244,723 |  | 290,919,481 |
| Total pension liability, ending (a) |  | 318,218,035 |  | 305,105,919 |  | 299,395,093 |  | 296,244,723 |
| Plan Fiduciary Net Position |  |  |  |  |  |  |  |  |
| Employer contributions |  | 7,239,467 |  | 6,407,201 |  | 6,506,652 |  | 6,055,890 |
| Employee contributions |  | 2,139,705 |  | 2,063,122 |  | 1,847,259 |  | 1,535,723 |
| Investment income net of investment expenses |  | 23,326,273 |  | 12,570,866 |  | $(4,085,711)$ |  | 11,342,004 |
| Benefit payments |  | $(21,777,389)$ |  | (19,112,455) |  | $(18,397,344)$ |  | $(16,735,511)$ |
| Administrative expenses |  | - |  | . |  | - |  | - |
| Net change in plan fiduciary net position |  | 10,928,056 |  | 1,928,734 |  | $(14,129,144)$ |  | 2,198,106 |
| Plan fiduciary net position, beginning |  | 224,356,261 |  | 222,427,527 |  | 236,556,671 |  | 234,358,565 |
| Plan fiduciary net position, ending (b) | \$ | 235,284,317 | \$ | 224,356,261 | \$ | 222,427,527 | \$ | 236,556,671 |
| Board's net pension liability, ending = (a) - (b) | \$ | 82,933,718 | \$ | 80.749,658 | \$ | 76,967,566 | \$ | 59,688,052 |
| Plan fiduciary net position as a \% of total pension liability |  | 73.94\% |  | 73.53\% |  | 74.29\% |  | 79.85\% |
| Covered payroll | \$ | 41,822,648 | \$ | 35,363,156 | \$ | 33,672,902 | \$ | 31,378,001 |
| Board's net pension liability as a \% of covered payroll |  | 198.30\% |  | 228.34\% |  | 228.57\% |  | 190.22\% |

Notes to Schedules: The schedules are intended to show information for 10 years. Additional years will be displayed as they become available.

Factors that significantly affect trends in amounts reported. For the periods presented, there were no changes of benefit terms, changes in the size or composition of the population covered by the benefit terms, or changes of assumptions which significantly affect trends in the amounts reported.

See accompanying notes to financial statements.

SEWERAGE AND WATER BOARD OF NEW ORLEANS

## Required Supplementary Information Under GASB Statement No. 45 SCHEDULE OF FUNDING PROGRESS <br> Last Eight Years

| Actuarial <br> Valuation <br> Date <br> December 31 | Actuarial Value of Assets |  |  | Actuarial <br> Accrued <br> Liability <br> (AAL) |  | verfunded) <br> Unfunded <br> AAL | Funded Ratio | Covered Payroll (millions) | Unfunded <br> AAL as a Percentage of payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | - | \$ | 134,367,027 | \$ | 134,367,027 | 0.00\% | 38.15 | 352.21\% |
| 2016 |  | - |  | 163,407,162 |  | 163,407,162 | 0.00\% | 37.61 | 434.48\% |
| 2015 |  | - |  | 168,111,644 |  | 168,111,644 | 0.00\% | 33.67 | 499.29\% |
| 2014 |  | - |  | 174,861,486 |  | 174,861,486 | 0.00\% | 36.10 | 484.38\% |
| 2013 |  | - |  | 172,246,761 |  | 172,246,761 | 0.00\% | 35.44 | 486.02\% |
| 2012 |  | - |  | 176,321,034 |  | 176,321,034 | 0.00\% | 35.11 | 502.25\% |
| 2011 |  | - |  | 178,681,549 |  | 178,681,549 | 0.00\% | 35.08 | 509.33\% |
| 2010 |  | - |  | 178,904,131 |  | 178,904,131 | 0.00\% | 34.74 | 514.92\% |

## SCHEDULE OF EMPLOYER CONTRIBUTIONS

$\left.\begin{array}{cccccc}\begin{array}{c}\text { Year } \\ \text { Ended }\end{array} & & \begin{array}{c}\text { Annual } \\ \text { Required } \\ \text { Contribution }\end{array} & & \begin{array}{c}\text { Actual } \\ \text { Contribution }\end{array} & \end{array} \begin{array}{c}\text { Percentage } \\ \text { Contribution }\end{array}\right]$

See accompanying notes to financial statements

$\begin{array}{r}11,773,473 \\ 15,315 \\ 11,824.788 \\ \hline\end{array}$ 훙


$\begin{array}{r}\begin{array}{r}12.239 .765 \\ 51,315 \\ \hline 122.291 .080 \\ \hline\end{array} \\ \hline\end{array}$



























SEWERAGE AND WATER BOARD OF NEW ORLEANS
SCHEDULE OF NET POSITION BY DEPARTMENT ENTERPRISE FUND
As of December 31, 2017 and 2016











 $-\frac{1,867,968}{1 ., 867.968} \frac{2,366,433}{2.396 .433}$
















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| 춫 웅 |  |
| :---: | :---: |



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 $\begin{array}{r}388.634 .912 \\ 16,888,027 \\ (55249240) \\ \hline\end{array}$ $\stackrel{\hat{6}}{\stackrel{a}{n}}$ LIABILITIES, DEFERRED OUTFLOWS OF
RESOURCES. AND NET POSITION Current liabililies (payable from current assets): urrent liabilities (payable from current
Accounts pas able
Due to City or New Orleans Disaster Reimbursement Revolving Loan Retainers and estimates pay able

## Accrued salaries <br> Clains payable

Debl Sericice Assistance Fund loan payable
Adi ances from Federal government
Other liabilities
Total Current liabilities (payable from cerrent assels): Aurrent liabilities
Accrued payable
Bonds pars and es
Retainers and estinuates pay able
Tolal current liabililies (payable from restricted assets):
Total curent liabilities Total current liabilities
ong-term liabilities: Long-tem liabuites
Cliins payable
Accrued vacation and sick pay
Net pension liability Net pension liability
Other postretirement benefits liability Bonds payable. nel of current maturiies Debl Service Assistance Fund loan pay able,
net of current maturities Customer deposits
Total long-lerm liabilites
Total liabilities
Deferred inllows of resourees:
Deferred amounts relaled to net pension liability
Total deferred inflows of resources
Net position:
Net investment in capital assets
Restricted for debt service
Unrestricted
Tolal net position
Total liabilities. deferred inflows of resources.
and net position
See accomparying independent auditors' report


|  | $\begin{gathered} n \\ n_{n} \\ n_{1} \\ \vdots \end{gathered}$ |  | $\begin{aligned} & \stackrel{ल}{\aleph} \\ & \underset{\sim}{N} \\ & \underset{\sim}{\sim} \end{aligned}$ | $\left.\begin{aligned} & n \\ & \cdots \\ & \infty \\ & \infty \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & -1 \end{aligned} \right\rvert\,$ |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \stackrel{\rightharpoonup}{0} \\ & \text { N } \\ & \text { W } \\ & \underset{\sim}{\infty} \end{aligned}$ | $\begin{aligned} & \stackrel{\infty}{0} \\ & \underset{y}{2} \\ & \underset{y}{6} \\ & \underset{\sim}{6} \\ & \underset{y}{n} \end{aligned}$ |
|  | $\left.\begin{aligned} & n \\ & 0 \\ & 0 \\ & n \\ & n \\ & 0 \\ & 0 \end{aligned} \right\rvert\,$ |  |  |  |
|  | $\left.\begin{aligned} & \infty \\ & \stackrel{\infty}{\circ} \\ & \underset{\sim}{N} \\ & \tilde{n} \\ & i \end{aligned} \right\rvert\,$ |  |  | $\begin{aligned} & n \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |
|  | $\begin{aligned} & \mathrm{E}_{0} \\ & -\mathrm{S} \\ & \mathrm{ri}_{i} \end{aligned}$ |  |  | $\begin{gathered} \frac{7}{6} \\ \frac{0}{7} \\ 90 \\ 0 \end{gathered}$ |
|  | $\begin{aligned} & \underset{\infty}{\infty} \\ & \underset{\infty}{o} \\ & \underset{j}{c} \end{aligned}$ |  |  | $\begin{aligned} & 6 \\ & 0 \\ & \infty \\ & \frac{8}{8} \\ & 0 \\ & 2 \end{aligned}$ |
|  | $\left.\begin{aligned} & 1 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned} \right\rvert\,$ |  |  | $\begin{gathered} c \\ n \\ n \\ n_{n}^{n} \\ \cdots \\ m \\ m \end{gathered}$ |
|  | $\left.\begin{array}{l\|} r_{0}^{0} \\ 0 \\ a \\ \frac{a}{0} \\ 0 \end{array} \right\rvert\,$ |  |  | $\begin{aligned} & \stackrel{\rightharpoonup}{n} \\ & \stackrel{y}{0} \\ & \underset{\sim}{n} \\ & e \end{aligned}$ |




SEWERAGE AND WATER BOARD OF NEW ORLEANS SCHEDULE OF PROPERTY, PLANT AND EQUIPMENT BY DEPARTMENT As of December 31, 2017 and 2016

|  | 2017 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Water |  | Sewer |  | Drainage |  | Total |  |
| Real estate rights, non depreciable | \$ | 2,934,901 | \$ | 1,925,647 | \$ | 8,772,766 | \$ | 13,633,314 |
| Power and pumping stations - buildings |  | 72,165,740 |  | 52,660,008 |  | 267,802,319 |  | 392,628,067 |
| Power and pumping stations - machinery |  | 157,622,824 |  | 62,827,545 |  | 132,507,236 |  | 352,957,605 |
| Distribution systems |  | 318,178,664 |  | - |  | - |  | 318,178,664 |
| Sewerage collection |  | - |  | 616,199,180 |  | - |  | 616,199,180 |
| Canals and subsurface drainage |  | - |  | - |  | 894,121,872 |  | 894,121,872 |
| Treatment plants |  | - |  | 206,081,699 |  | - |  | 206,081,699 |
| Connections and meters |  | 74,799,449 |  | 30,661,835 |  | - |  | 105,461,284 |
| Power transmission |  | 10,727,059 |  | 12,208,991 |  | 13,555,173 |  | 36,491,223 |
| General plant and buildings |  | 134,114,040 |  | 98,395,924 |  | 79,388,711 |  | 311,898,675 |
| Total property, plant and equipment in service |  | 770,542,677 |  | 1,080,960,829 |  | 1,396,148,077 |  | 3,247,651,583 |
| Constuxtion in progess |  | 127,646,302 |  | 248,730,529 |  | 371,695,496 |  | 748,072,327 |
| Total property, plant and equipment |  | 898,188,979 |  | 1,329,691,358 |  | 1,767,843,573 |  | 3,995,723,910 |
| Accumulated depreciation |  | 346,304,582 |  | 284,467,313 |  | 345,859,218 |  | 976,631,113 |
| Net property, plant and eqiupment | \$ | 551,884,397 | \$ | 1,045,224,045 | \$ | 1,421,984,355 | \$ | 3,019,092,797 |
|  | 2016 |  |  |  |  |  |  |  |
|  |  | Water |  | Sewer |  | Drainage |  | Total |
| Real estate rights, non depreciable | \$ | 2,899,839 | \$ | 1,925,647 | \$ | 8,721,791 | \$ | 13,547,277 |
| Power and pumping stations - buildings |  | 65,815,156 |  | 46,788,994 |  | 266,828,264 |  | 379,432,414 |
| Power and pumping stations - machinery |  | 142,047,245 |  | 52,404,350 |  | 128,197,839 |  | 322,649,434 |
| Distribution systems |  | 270,088,600 |  | - |  | - |  | 270,088,600 |
| Sewerage collection |  | - |  | 519,874,279 |  | - |  | 519,874,279 |
| Canals and subsurface drainage |  | - |  | - |  | 705,506,297 |  | 705,506,297 |
| Treatment plants |  | - |  | 200,711,986 |  | - |  | 200,711,986 |
| Connections and meters |  | 69,626,596 |  | 30,617,082 |  | - |  | 100,243,678 |
| Power transmission |  | 10,727,059 |  | 7,535,716 |  | 13,555,173 |  | 31,817,948 |
| General plant and buildings |  | 125,970,634 |  | 85,904,931 |  | 72,719,901 |  | 284,595,466 |
| Total property, plant and equipment in service |  | 687,175,129 |  | 945,762,985 |  | 1,195,529,265 |  | 2,828,467,379 |
| Construction in progress |  | 121,126,038 |  | 298,861,766 |  | 420,780,634 |  | 840,768,438 |
| Total property, plant and equipinent |  | 808,301,167 |  | 1,244,624,751 |  | 1,616,309,899 |  | 3,669,235,817 |
| Accumulated depreciation |  | 337,811,191 |  | 264,345,441 |  | 322,387,525 |  | 924,544,157 |
| Net property, plant and eqiupment | \$ | 470,489,976 | \$ | 980,279,310 | \$ | 1,293,922,374 | \$ | 2,744,691,660 |

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SEWERAGE AND WATER BOARD OF NEW ORLEANS
SCHEDULE OF BONDS PAYABLE

|  | $\begin{aligned} & 8 \\ & 0 \\ & 0 \\ & 0 \\ & = \\ & \infty \\ & \infty \end{aligned}$ | $\begin{aligned} & 8 \\ & 0 \\ & 0 \\ & 0 \\ & = \end{aligned}$ |  | $\begin{aligned} & \text { oig } \\ & \text { M } \\ & \text { m } \\ & \text { m } \end{aligned}$ | $\begin{aligned} & 8 \\ & 0 . \\ & 0 . \\ & 0 . \\ & 0 \end{aligned}$ |  | © © - - | 8 0.0 0.0 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\underset{\text { Nu}}{\text { N }}$ | $\begin{aligned} & \text { H } \\ & \stackrel{\rightharpoonup}{7} \end{aligned}$ | $\frac{\text { ñ }}{\substack{\mathrm{a}}}$ |  | $\stackrel{\text { U }}{\stackrel{T}{2}}$ | - |
|  | $\begin{aligned} & \text { J } \\ & \stackrel{y}{S} \\ & \hline \end{aligned}$ |  | $\begin{aligned} & \text { ̈ㅗ } \\ & \text { 머 } \end{aligned}$ | $\begin{aligned} & \text { t } \\ & \text { Nㅗ } \\ & \text { İ } \end{aligned}$ | $\begin{aligned} & \text { n } \\ & \stackrel{\text { In}}{太} \end{aligned}$ |  |  | ¢ |



Water Revenue Bonds, 2014
Water Revenue Bonds, 2015
TOTAL
See accompanying independent auditors' report
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|  | Water <br> Revenue <br> Bonds | Revenue Bonds |  | Revenue Bonds |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ | 9,050,155 | \$ | 19,685,740 | \$ | 74,304 | \$ | 28,810,199 |
|  | - |  | - |  | - |  | - |
|  | 13,338,245 |  | 30,378,034 |  | 2,425,597 |  | 46,141,876 |
| 122 |  |  | 127 |  | - |  | 249 |
| $13.338,367$ |  |  | 30,378,161 |  | 2,425,597 |  | 46,142,125 |
| 13,280,495 |  |  | 31,041,668 |  | 2,431,603 |  | 46,753,766 |
| 13,280,495 |  |  | 31,041,668 |  | 2.431 .603 |  | 46,753,766 |
| s | 9,108,027 | S | 19,022,233 | \$ | 68,298 | \$ | 28,198.558 |

Cash and investments at beginning of year

See accompanying independent auditors' report.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS CHANGES IN SELF-INSURANCE LIABILITIES BY DEPARTMENT For the year ended December 31, 2017

|  | $\begin{gathered} \text { Beginning } \\ \text { of } \\ \text { Year } \\ \hline \end{gathered}$ |  | Current Year Claims and Estimatc Change |  | Payments |  | End of Year |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATER |  |  |  |  |  |  |  |  |
| Short-term: |  |  |  |  |  |  |  |  |
| Workers' compensation | \$ | 516,898 | \$ | 1,560,466 | \$ | 1,457,380 | \$ | 619,984 |
| Health insurance |  | 719,890 |  | 8,768,421 |  | 8,727,039 |  | 761,272 |
| Total shor-term |  | 1,236,788 |  | 10,328,887 |  | 10,184,419 |  | 1,381,256 |
| Long-term: |  |  |  |  |  |  |  |  |
| Workers' compensation |  | 488,581 |  | $(76,465)$ |  | - |  | 412,116 |
| General liability |  | 3,711,469 |  | 1,255,240 |  | 2,988 |  | 4,963,721 |
| Total lony-tern |  | 4,200,050 |  | 1,178,775 |  | 2,988 |  | 5,375,837 |
| Total | \$ | 5,436,838 | \$ | 11,507,662 | \$ | $10,187,407$ | \$ | 6,757,093 |
| SEWERAGE |  |  |  |  |  |  |  |  |
| Shor-term: |  |  |  |  |  |  |  |  |
| Workers' compensation | \$ | 516,898 | \$ | 993,871 | \$ | 890,785 | \$ | 619,984 |
| Health insurance |  | 697,842 |  | 5,906,444 |  | 5,878,569 |  | 725,717 |
| Total shor-tem |  | 1,214,740 |  | 6,900,315 |  | 6,769,354 |  | 1,345,701 |
| Long-term: |  |  |  |  |  |  |  |  |
| Workers' compensation |  | 488,581 |  | $(76,465)$ |  | - |  | 412,116 |
| General liability |  | 3,493,989 |  | 296.752 |  | - |  | 3,790,741 |
| Total long-term |  | 3,982,570 |  | 220,287 |  | - |  | 4,202,857 |
| Total | \$ | 5,197,310 | \$ | 7,120,602 | \$ | 6,769,354 | \$ | 5,548,558 |
| DRAINAGE |  |  |  |  |  |  |  |  |
| Short-tenn: |  |  |  |  |  |  |  |  |
| Workers' compensation | \$ | 516,896 | \$ | 786,421 | \$ | 683,329 | \$ | 619,988 |
| Health insurance |  | 689,769 |  | 4,395,773 |  | 4,375,031 |  | 710,511 |
| Total short-term |  | 1,206,665 |  | 5,182,194 |  | 5,058,360 |  | 1,330,499 |
| Long-term: |  |  |  |  |  |  |  |  |
| Workers' compensation |  | 488,581 |  | $(76,469)$ |  | - |  | 412,112 |
| General liability |  | 4,875,377 |  | 40,295,203 |  | 58,447 |  | 45,112,133 |
| Total long-term |  | 5,363,958 |  | 40,218,734 |  | 58,447 |  | 45,524,245 |
| Total | \$ | 6,570,623 | \$ | 45,400,928 | \$ | 5,116,807 | \$ | 46,854,744 |
| TOTAL |  |  |  |  |  |  |  |  |
| Short-term: |  |  |  |  |  |  |  |  |
| Workers' compensation | \$ | 1,550,692 | \$ | 3,340,758 | \$ | 3,031,494 | \$ | 1,859,956 |
| Health insurance |  | 2,107,501 |  | 19,070,638 |  | 18,980,639 |  | 2,197,500 |
| Total short-term |  | 3,658,193 |  | 22.411,396 |  | 22,012,133 |  | 4,057,456 |
| Long-term: |  |  |  |  |  |  |  |  |
| Workers' compensation |  | 1,465,743 |  | $(229,399)$ |  | - |  | 1,236,344 |
| General liability |  | 12,080,835 |  | 41,847,195 |  | 61,435 |  | 53,866,595 |
| Total long-term |  | 13,546,578 |  | 41,617,796 |  | 61,435 |  | 55,102,939 |
| Total | S | 17,204,771 | \$ | 64,029,192 | S | 22,073,568 | \$ | 59,160,395 |

[^2]
## Schedule 7

## SEWERAGE AND WATER BOARD OF NEW ORLEANS SCHEDULE OF COMPENSATION, BENEFITS, AND OTHER PAYMENTS TO THE EXECUTIVE DIRECTOR

For the year ended December 31, 2017

Cedric S. Grant, Executive Director
Robert K. Miller, Interim Exective Director
Bruce Adams, Interim General Superintendent

January 2017 - August 2017
September 2017- October 2017
November 2017 - December 2017

| Purpose | Amount |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Cedric S. Grant |  | Robert K. <br> Miller |  | Bruce <br> Adams |  |
| Salary | \$ | 146,921 | \$ | 24,998 | \$ | 35,539 |
| Benefits-hospitalization |  | 7,475 |  | 1,319 |  | 3,078 |
| Benefits-life insurance |  | 131 |  | 23 |  | 54 |
| Benefits-retirement |  | 29,370 |  | 4,012 |  | 8,623 |
| Reimbursements |  | 3,082 |  | 1,545 |  | 270 |
| Conference travel |  | 795 |  | 3,598 |  | - |
| Total | \$ | 187,774 | \$ | 35,495 | \$ | 47,564 |

See accompanying independent auditors' report.


The Michoud Water Tower is undergoing rehabilitation to remediate severe corrosion and rust．This project includes replacing the top portion of the dome，recoating the entire water tower and tank surfaces（interior and exterior）．Minor interior structural modifications and tank maintenance are included．The tank＇s purpose is to hold potable water for the Venetian Isle community．This tank shall increase water pressure for the homes and businesses and decrease probability of＂boil water＂notices in the community．This rehabilitation project will keep the water tower in service for many years to come．


Generators were put in place at various facility sites to provide an uninterrupted power source to critical operations． They were designed to increase and insure reliability in the event of a commercial power interruption．
Top generator photo：S\＆WB Carrollton Plant．Bottom generator photo：SEWB Central Yard

# SEWERAGE AND WATER BOARD OF NEW ORLEANS SUMMARY OF STATISTICAL INFORMATION (Unaudited) 

This part of the Board's comprehensive annual financial report presents detailed information as a context for understanding what the information in the financial statement, note disclosure, and required supplementary information says about the Board's overall financial health.

## Financial Trends:

These schedules contain trend information to help the reader understand how the Board's financial performance and well-being have changed over time.

## Revenue Capacity:

These schedules contain information to help the reader assess the Board's most significant local revenue source, the property tax.

## Debt Capacity:

These schedules present information to help the reader assess the affordability of the Board's current levels of outstanding debt and the Board's ability to issue additional debt in the future.

Demographic and Economic Information:
These schedules offer demographic and economic indicators to help the reader understand the environment within which the Board's financial activities take place.

Operating Information:
These schedules contain service and infrastructure data to help the reader understand how the information in the Board's financial report relates to the services the Board provides and the activities it performs.
SEWERAGE AND WATER BOARD OF NEW ORLEANS

| NET POSITION BY COMPONENT <br> Last Ten Fiscal Years <br> (Unaudited - accrual basis of accounting) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |
| S 2,405,347,069 | s | 2,251,197,095 | s | 2,009,322,572 |  | 2,013,060,377 | \$ | 1,919,436,757 | \$ | 1,762,389,823 | \$ | 1,602,767,538 | \$ | 1,481,320,632 | \$ | 1,367,130,463 | \$ | 1,306,085,162 |
| 46,606,340 |  | 47,217,981 |  | 46,199,659 |  | 30,846,959 |  | 33,405,265 |  | 35,186,883 |  | 33,137,542 |  | 32,774,880 |  | 30,040,670 |  | 32,075,521 |
| 67,807,354 |  | 170,436,101 |  | 235,720,245 |  | 68,509,876 |  | - |  | - |  | - |  | - |  |  |  |  |
| (256,496, ,98) |  | (240,429,229) |  | (208,554,161) |  | (183,112,163) |  | (175,395,265) |  | (135,165,032) |  | (97,925,662) |  | (82,369,095) |  | (81,717,627) |  | (89,154,640) |
| $\bigcirc$ S 2,263,264,565 | $\stackrel{ }{\text { s }}$ | 2,228,421,948 | $\stackrel{ }{\text { s }}$ | 2,082,688,315 |  | 1,929,305,049 | $\stackrel{ }{\text { S }}$ | 1,777,446,757 | ¢ | 1,662,411,674 | § | 1,537,979,418 | $\bigcirc$ | 1,431,726,417 | $\stackrel{ }{\text { s }}$ | 1,315,453,506 | \$ | 1,249,006,043 |





| 享 |  | 年 |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\infty$ |  |  |  |














SEWERAGE AND WATER BOARD OF NEW ORLEANS REVENUE AND EXPENSES BY SOURCE ENTERPRISE FUND
Last Ten Years
(Unaudited)

| Revenues |  | 2008 |  | 2009 |  | 2010 |  | 2011 |  | 2012 |  | 2013 |  | 2014 |  | 2015 |  | 2016 | 2017 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Charges for service | \$ | 106,463,582 | \$ | 117,264,448 | \$ | 125,360,977 | \$ | 131,006,460 | \$ | 132,351,945 | \$ | 143,577,430 | \$ | 158,049,869 | \$ | 174,255,671 | \$ | 188,592,626 | \$ | 202,116,859 |
| Dedicated taxes |  | 39,702,436 |  | 36,198,099 |  | 36,549,431 |  | 39,227,384 |  | 44,061,990 |  | 46,455,330 |  | 47,533,453 |  | 49,850,962 |  | 56,022,022 |  | 55,420,078 |
| Two-mill tax |  | - |  | - |  | 1,045 |  | 4,870 |  | - |  | - |  | 1,193 |  | 4,960 |  | 7,526 |  | 2,735 |
| Interest on investments |  | 3,545,564 |  | 885,723 |  | 274,323 |  | 426,870 |  | 401,387 |  | 353,630 |  | 811,263 |  | 2,511,046 |  | 4,667,470 |  | 4,273,821 |
| Other taxes and revenue |  | 2,999,745 |  | 23,558,755 |  | 55,842,898 |  | 20,376,866 |  | 12,529,196 |  | 37,729,334 |  | 5,598,065 |  | 7,363,300 |  | 4,667,168 |  | $(3,922,181)$ |
|  | \$ | 152,711,327 | \$ | 177,907,025 | \$ | 218,028,674 | \$ | 191,042,450 | \$ | 189,344,518 | \$ | 228,115,724 | \$ | 211,993,843 | \$ | 233,985,939 | \$ | 253,956,812 | \$ | 257,891,312 |
| Expenses |  | 2008 |  | 2009 |  | 2010 |  | 2011 |  | 2012 |  | 2013 |  | 2014 |  | 2015 |  | 2016 |  | 2017 |
| Personnel services | \$ | 68,605,280 | \$ | 74,540,678 | \$ | 72,725,464 | \$ | 73,834,142 | \$ | 74,358,288 | \$ | 75,998,997 | \$ | 76,009,536 | \$ | 81,094,850 | \$ | 88,422,754 | \$ | 85,643,784 |
| Services and utilities |  | 56,428,567 |  | 50,787,395 |  | 47,125,394 |  | 42,417,785 |  | 40,621,806 |  | 44,686,711 |  | 46,739,864 |  | 46,321,849 |  | 48,095,715 |  | 56,047,431 |
| Materials and supplies |  | 12,603,961 |  | 8,880,950 |  | 12,535,610 |  | 23,532,818 |  | 22,906,012 |  | 20,153,886 |  | 22,067,167 |  | 28,468,671 |  | 29,354,674 |  | 54,170,680 |
| Depreciation and amortization |  | 31,704,036 |  | 34,833,545 |  | 35,381,030 |  | 34,850,026 |  | 39,011,955 |  | 43,648,267 |  | 50,157,869 |  | 51,661,651 |  | 52,060,674 |  | 59,450,076 |
| Provision for doubtful accounts |  | $(12,225,825)$ |  | 889,811 |  | 4,855,325 |  | 867,460 |  | 1,676,511 |  | 2,052,096 |  | 1,940,782 |  | 2,466,131 |  | 3,413,404 |  | 14,326,711 |
| Provision for claims |  | 587,465 |  | 58,860 |  | 3,186,714 |  | $(4,680,454)$ |  | 130,704 |  | 1,801,114 |  | 2,444,878 |  | 2,435,209 |  | 6,450,805 |  | 45,272,821 |
| Hurricane Loss |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | 8,906,949 |
| Bond issuance costs |  | - |  | - |  | - |  | - |  | - |  | - |  | 2,649,339 |  | 1,510,657 |  | - |  | - |
| Interest |  | 1,720,030 |  | 1,766,553 |  | 1,687,603 |  | 736,878 |  | 737,893 |  | 371,349 |  | - |  | 53,518 |  | 32,471 |  | 3,537,336 |
|  | \$ | 159,423,514 | \$ | 171,757,792 | \$ | 177,497,140 | \$ | $\xrightarrow{171,558,655}$ | \$ | 179,443,169 | \$ | 188,712,420 | \$ | $\underline{\text { 202,009,435 }}$ | \$ | $\underline{214,012,536}$ | \$ | $\underline{227,830,497}$ | \$ | 327,355,788 |

SEWERAGE AND WATER BOARD OF NEW ORLEANS ASSESSED AND ESTIMATED ACTUAL VALUE OF TAXABLE PROPERTY

Last Ten Fiscal Years
(Unaudited - amounts in thousands)

| Fiscal <br> Year | Net Assessed Value |  | Total Net Assessed Value | Total Estimated Actual Value (1) | Ratio of Total <br> Net Assessed to Total Estimated Actual Value |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Real Estate | $\underline{\text { Personal Property }}$ |  |  |  |
| 2008 | 2,004,624 | 539,492 | 2,544,116 | 20,698,664 | 12.3\% |
| 2009 | 2,042,426 | 557,039 | 2,599,465 | 21,974,841 | 11.8\% |
| 2010 | 2,489,813 | 387,334 | 2,877,147 | 21,974,841 | 13.1\% |
| 2011 | 2,584,334 | 385,700 | 2,970,034 | 21,974,841 | 13.5\% |
| 2012 | 2,760,973 | 390,952 | 3,151,925 | 21,974,841 | 14.3\% |
| 2013 | 2,920,015 | 413,120 | 3,333,135 | 21,974,841 | 15.2\% |
| 2014 | 3,065,164 | 405,514 | 3,470,678 | 21,974,841 | 15.8\% |
| 2015 | 3,202,063 | 431,355 | 3,633,418 | 21,974,841 (2) | 16.5\% |
| 2016 | 3,376,001 | 456,454 | 3,832,455 | 30,873,272 | 12.4\% |
| 2017 | 3,481,746 | 471,986 | 3,953,732 | 35,475,355 | 11.1\% |

Source: City of New Orleans
(1) Amounts are net of the homestead exemption.
(2) Latest date available for total estimated actual value is 2009.
SEWERAGE AND WATER BOARD OF NEW ORLEANS
PROPERTY TAX RATES - DIRECT AND OVERLAPPING GOVERNMENTS






Source: City of New Orleans
*Special millage beginning in 2008 and no longer City-wide.

[^3]
## SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> TEN LARGEST TAXPAYERS <br> December 31, 2017 and Ten Years Ago <br> (Amounts in thousands) <br> (Unaudited)

| Name of Taxpayer | Type of Business | 2017 <br> Assessed Value |  | Percentage of Total <br> Assessed Value |
| :---: | :---: | :---: | :---: | :---: |
| Entergy Service | Electric \& Gas Utilities | \$ | 110,910 | 3.04\% |
| Capital One Bank | Financial Institutio $n$ |  | 45,919 | 1.26\% |
| Marriott Hotel | Hospitality |  | 36,113 | 0.99\% |
| Bellsouth | Telephone Utilities |  | 35,178 | 0.96\% |
| Harrah's Entertainment | Hospitality \& Gaming |  | 28,363 | 0.78\% |
| WhitneyBk/Hancock Bk | Financial Institution |  | 25,224 | 0.69\% |
| Folgers Coffee | Coffee Roasting Plant |  | 19,637 | 0.54\% |
| J P Morgan Chase Bank | Financial Institution |  | 18,352 | 0.50\% |
| International Rivercenter | Real Estate |  | 18,105 | 0.50\% |
| Sheraton Hotel | Hospitality |  | 16,639 | 0.46\% |
|  |  | \$ | 354,440 | 9.72\% |
|  |  |  | 07 | Percentage of Total |
| Name of Taxpayer | Type of Business |  |  | Assessed Value |
| Entergy Service | Electric \& Gas Utilities | \$ | 60,220 | 3.65\% |
| Bellsouth Telecommunications | Telephone Utilities |  | 58,436 | 3.55\% |
| Hibernia Bank | Financial Institution |  | 49,568 | 3.01\% |
| Harrah"s Entertainment | Hospitality \& Gaming |  | 21,178 | 1.65\% |
| Whitney National Bank | Financial Institution |  | 23,583 | 1.43\% |
| CS\&M Association (Sheraton) | Real Estate |  | 20,725 | 1.26\% |
| International Rivercenter | Real Estate |  | 19,058 | 1.16\% |
| Marriott Hotel Properties | Hospitality |  | 15,271 | 0.93\% |
| J P Morgan Chase Bank | Financial Institution |  | 13,385 | 0.81\% |
| SHC New Orleans (Hyatt) | Hospitality |  | 11,247 | 0.68\% |
|  |  | \$ | 292,671 | 18.13\% |

Source: City of New Orleans

# SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> PROPERTY TAX <br> LEVIES AND COLLECTIONS BY THE CITY OF NEW ORLEANS <br> Last Ten Fiscal Years (Unaudited - Amounts in Thousands) 

| FiscalYear | Total Levied | Collected within <br> Fiscal year of the Levy |  | Collections in Subsequent Years | Total Collections to Date |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Percentage |
|  |  | Amount | Percent |  | Amount | Amount | of Levy |

Real Estate Taxes:

| 2008 | 269,746 | 243,204 | $90.16 \%$ | 23,438 | 266,642 | $98.85 \%$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| 2009 | 275,869 | 257,219 | $93.24 \%$ | 15,219 | 272,438 | $98.76 \%$ |
| 2010 | 309,800 | 291,078 | $93.96 \%$ | 14,598 | 305,676 | $98.67 \%$ |
| 2011 | 339,370 | 320,437 | $94.42 \%$ | 13,717 | 334,154 | $98.46 \%$ |
| 2012 | 362,262 | 342,248 | $94.48 \%$ | 13,528 | 355,776 | $98.21 \%$ |
| 2013 | 382,902 | 363,026 | $94.81 \%$ | 11,234 | 374,260 | $97.74 \%$ |
| 2014 | 393,304 | 375,815 | $95.55 \%$ | - | 375,815 | $95.55 \%$ |
| 2015 | 422,306 | 397,843 | $94.21 \%$ | 11,168 | 409,011 | $96.85 \%$ |
| 2016 | 457,800 | 442,153 | $96.58 \%$ | 13,137 | 455,290 | $99.45 \%$ |
| 2017 | 480,924 | 458,767 | $95.39 \%$ | 7,711 | 466,478 | $97.00 \%$ |

Personal Property Taxes:

| 2008 | 67,548 | 59,645 | $88.30 \%$ | 4,429 | 64,074 | $94.86 \%$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| 2009 | 69,935 | 63,118 | $90.25 \%$ | 3,444 | 66,562 | $95.18 \%$ |
| 2010 | 74,530 | 68,508 | $91.92 \%$ | 2,242 | 70,750 | $94.93 \%$ |
| 2011 | 78,996 | 74,204 | $93.93 \%$ | 1,653 | 75,857 | $96.03 \%$ |
| 2012 | 81,685 | 78,275 | $95.83 \%$ | 1,550 | 79,825 | $97.72 \%$ |
| 2013 | 87,058 | 84,410 | $96.96 \%$ | 365 | 84,775 | $97.38 \%$ |
| 2014 | 84,620 | 81,926 | $96.82 \%$ | - | 81,926 | $96.82 \%$ |
| 2015 | 86,961 | 81,773 | $94.03 \%$ | 1,002 | 82,775 | $95.19 \%$ |
| 2016 | 92,428 | 88,797 | $96.07 \%$ | 744 | 89,541 | $96.88 \%$ |
| 2017 | 96,441 | 92,123 | $95.52 \%$ | 827 | 92,950 | $96.38 \%$ |

Source: City of New Orleans

## SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> WATER AND SEWER RATES

Last Ten Fiscal Years
(Unaudited)


[^4]
# SEWERAGE AND WATER BOARD OF NEW ORLEANS COMPUTATION OF DIRECT AND OVERLAPPING DEBT <br> December 31, 2017 <br> (Unaudited) 

| Net <br> Outstanding <br> Debt | Percentage <br> Overlapping | Overlapping <br> Debt |
| :---: | :---: | :---: |

Direct debt:

| Sewerage and Water Board, | \$ | 9,410,000 | 100\% | \$ | 9,410,000 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Overlapping debt: |  |  |  |  |  |
| City of New Orleans |  | 565,688,666 | 100\% |  | 565,688,666 |
| Audubon Park Commission |  | 13,590 | 100\% |  | 13,590 |
| Orleans Parish School Board (1) |  | 120,295 | 100\% |  | 120,295 |
| Total overlapping debt |  | 565,822,551 | 100\% |  | 565,822,551 |
| Total direct and overlapping debt | \$ | 575,232,551 | 100\% | \$ | 575,232,551 |

(1) The fiscal year of the Orleans Parish School Board ends on June 30th; overlapping debt is based on June 30, 2017 financial information.
SEWERAGE AND WATER BOARD OF NEW ORLEANS REVENUE BONDS DEBT SERVICE COVERAGE WATER BONDS
Last Ten Fiscal Years
(Unaudited)

| Direct <br> Operating <br> Expenses | Net Revenue <br> Available for <br> Debt Services |  | Debt Service Requirement |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |

[^5]
See footnote 18 to the financial statements

| $\begin{array}{c}\text { Fiscal } \\ \text { Year }\end{array}$ |  |
| :---: | :---: |
| 2008 |  |
| 2009 |  |
| 2010 |  |
| 2011 |  |
| 2012 |  |
| 2013 |  |
| 2014 |  |
| 2015 | $(1)$ |
| 2016 | $(1)$ |
| 2017 | $(2)$ |

SEWERAGE AND WATER BOARD OF NEW ORLEANS REVENUE BONDS DEBT SERVICE COVERAGE Last Ten Fiscal Years
(Unaudited)
(Unaudited)

| Fiscal Year |  | Operating <br> Revenue | Direct Operating Expenses | Net Revenue Available for Debt Services | Debt Service Requirements |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Principal | Interest | Total |
| 2008 |  | 70,836,988 | 42,135,587 | 28,701,401 | 15,035,000 | 3,326,538 | 18,361,538 |
| 2009 |  | 69,501,438 | 49,879,875 | 19,621,563 | 11,255,000 | 9,058,968 | 20,313,968 |
| 2010 |  | 87,569,727 | 44,361,297 | 43,208,430 | 11,815,000 | 8,435,057 | 20,250,057 |
| 2011 |  | 74,173,489 | 43,173,641 | 30,999,848 | 12,400,000 | 7,863,432 | 20,263,432 |
| 2012 |  | 72,399,088 | 44,869,796 | 27,529,292 | 13,431,000 | 7,282,082 | 20,713,082 |
| 2013 |  | 80,080,102 | 45,378,129 | 34,701,973 | 14,110,000 | 6,616,719 | 20,726,719 |
| 2014 |  | 88,756,831 | 45,943,518 | 42,813,313 | 13,695,000 | 5,445,799 | 19,140,799 |
| 2015 | (1) | 98,166,699 | 50,196,374 | 47,970,325 | 11,644,000 | 4,750,603 | 16,394,603 |
| 2016 | (1) | 108,244,171 | 57,142,277 | 51,101,894 | 12,852,000 | 10,463,838 | 23,315,838 |
| 2017 | (2) | 114,318,485 | 64,686,410 | 49,632,075 | 13,392,000 | 11,413,498 | 24,805,498 |

(1) The 2015 and 2016 Debt Service Coverage Ratios have been recast based upon the opinion of the Qualified

(2) See footnote 18 to the financial statements

SEWERAGE AND WATER BOARD OF NEW ORLEANS WATER SYSTEM UNRESTRICTED CASH AND CASH EQUIVALENTS DAYS OF OPERATING AND MAINTENANCE EXPENSE AT YEAR END Last Four Fiscal Years (unaudited)

| Fiscal <br> Year | Cash <br> Balance |  | One Day <br> O\&M |  |
| :---: | :---: | :---: | :---: | :---: | | Measurement |
| :---: |

# SEWERAGE AND WATER BOARD OF NEW ORLEANS SEWERAGE SYSTEM UNRESTRICTED CASH AND CASH EQUIVALENTS DAYS OF OPERATING AND MAINTENANCE EXPENSE AT YEAR END Last Four Fiscal Years (unaudited) 

| Fiscal <br> Year | Cash <br> Balance |  | One Day <br> O\&M |  |
| :---: | :---: | :---: | :---: | :---: | | Measurement |
| :---: |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS DEMOGRAPHIC STATISTICS

## Last Ten Fiscal Years

(Unaudited)

| Fiscal Year | Population (1) |  | Personal <br> come (2) <br> thousands) | Per Capita Personal Income |  | $\begin{aligned} & \text { Unemployment } \\ & \text { Rate (3) } \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2008 | 336,644 | \$ | 15,802,534 | \$ | 46,941 | 4.40\% |
| 2009 | 354,850 | \$ | 15,260,613 | \$ | 35,507 | 6.80\% |
| 2010 | 347,907 | \$ | 15,260,613 | \$ | 35,507 | 8.50\% |
| 2011 | 360,740 | \$ | 15,260,613 | \$ | 38,578 | 7.30\% |
| 2012 | 369,250 | \$ | 15,346,678 | \$ | 41,562 | 5.50\% |
| 2013 | 378,715 | \$ | 15,888,893 | \$ | 41,955 | 4.20\% |
| 2014 | 378,715 | \$ | 16,437,492 | \$ | 43,403 | 7.50\% |
| 2015 | 389,617 | \$ | 18,032,254 | \$ | 46,282 | 6.00\% |
| 2016 | 391,495 | \$ | 14,094,612 | \$ | 36,792 | 5.40\% |
| 2017 | 393,292 | \$ | 14,094,612 | \$ | 35,838 | 5.41\% |

(1) Source: www.census.gov/popest/
(2) Source: Estimates- Bureau of Economic Analysis.
(3) Source: U.S. Bureau of Labor Statistics.
(4) Most recent available is 2016

| © | $\begin{aligned} & \stackrel{8}{2} \\ & \frac{1}{0} \end{aligned}$ | $\begin{aligned} & 8 \\ & 8 \\ & i \\ & i \end{aligned}$ | - |  | $\begin{aligned} & \text { O} \\ & 0 \\ & 0 \\ & \text { on } \\ & = \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| © | $\frac{8}{6}$ | $\begin{aligned} & 8 \\ & \stackrel{8}{n} \\ & \text { in } \end{aligned}$ | 8 8 0 0 |  |  |  |

[^6]
# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

CAPITAL EXPENDITURES BY DEPARTMENT
ENTERPRISE FUND
Last Ten Fiscal Years
(Unaudited)

| Year | Water (1) |  | Sewer (1) |  | Drainage (1) |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2008 | \$ | 19,938,659 | \$ | 25,608,236 | \$ | 28,592,805 | \$ | 74,139,700 |
| 2009 |  | 22,465,931 |  | 56,010,946 |  | 47,185,424 |  | 125,662,301 |
| 2010 |  | 32,248,119 |  | 58,682,400 |  | 51,465,065 |  | 142,395,584 |
| 2011 |  | 20,374,785 |  | 53,662,611 |  | 66,821,905 |  | 140,859,301 |
| 2012 |  | 33,888,620 |  | 60,658,231 |  | 90,435,159 |  | 184,982,010 |
| 2013 |  | 37,552,122 |  | 63,172,589 |  | 79,811,759 |  | 180,536,470 |
| 2014 |  | 46,604,884 |  | 58,870,182 |  | 152,172,018 |  | 257,647,084 |
| 2015 |  | 42,638,486 |  | 56,387,080 |  | 155,764,692 |  | 254,790,258 |
| 2016 |  | 46,106,462 |  | 48,975,578 |  | 167,051,515 |  | 262,133,555 |
| 2017 |  | 89,887,813 |  | 85,066,607 |  | 151,533,673 |  | 326,488,093 |

(1) Includes contributed assets

SEWERAGE AND WATER BOARD OF NEW ORLEANS
SCHEDULE OF FUTURE DEBT PAYMENTS
December 31, 2017
(Unaudited)

|  |  | Water Revenue Bonds |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Series $2014$ | $\begin{gathered} \text { Water } \\ 2015 \end{gathered}$ | $\begin{gathered} \hline \text { All Bond } \\ \text { Issues } \end{gathered}$ |
| 2018 | Principal | 2,660,000 | 700,000 | 3,360,000 |
|  | Interest | 5,033,000 | 4,940,550 | 9,973,550 |
| 2019 | Principal | 2,800,000 | 775,000 | 3,575,000 |
|  | Interest | 4,900,000 | 4,919,550 | 9,819,550 |
| 2020 | Principal | 2,930,000 | 895,000 | 3,825,000 |
|  | Interest | 4,760,000 | 4,888,550 | 9,648,550 |
| 2021 | Principal | 3,070,000 | 935,000 | 4,005,000 |
|  | Interest | 4,613,500 | 4,852,750 | 9,466,250 |
| 2022 | Principal | 3,225,000 | 970,000 | 4,195,000 |
|  | Interest | 4,460,000 | 4,815,350 | 9,275,350 |
| 2023 | Principal | 2,230,000 | 2,155,000 | 4,385,000 |
|  | Interest | 4,298,750 | 4,786,250 | 9,085,000 |
| 2024 | Principal | 2,345,000 | 2,260,000 | 4,605,000 |
|  | Interest | 4,187,250 | 4,678,500 | 8,865,750 |
| 2025 | Principal | 2,460,000 | 2,375,000 | 4,835,000 |
|  | Interest | 4,070,000 | 4,565,500 | 8,635,500 |
| 2026 | Principal | 2,585,000 | 2,490,000 | 5,075,000 |
|  | Interest | 3,947,000 | 4,446,750 | 8,393,750 |
| 2027 | Principal | 2,715,000 | 2,615,000 | 5,330,000 |
|  | Interest | 3,817,750 | 4,322,250 | 8,140,000 |
| 2028 | Principal | 2,850,000 | 2,750,000 | 5,600,000 |
|  | Interest | 3,682,000 | 4,191,500 | 7,873,500 |
| 2029 | Principal | 2,990,000 | 2,885,000 | 5,875,000 |
|  | Interest | 3,539,500 | 4,054,000 | 7,593,500 |
| 2030 | Principal | 3,140,000 | 3,030,000 | 6,170,000 |
|  | Interest | 3,390,000 | 3,909,750 | 7,299,750 |
| 2031 | Principal | 3,300,000 | 3,180,000 | 6,480,000 |
|  | Interest | 3,233,000 | 3,758,250 | 6,991,250 |
| 2032 | Principal | 3,460,000 | 3,345,000 | 6,805,000 |
|  | Interest | 3,068,000 | 3,599,250 | 6,667,250 |
| 2033 | Principal | 3,635,000 | 3,510,000 | 7,145,000 |
|  | Interest | 2,895,000 | 3,432,000 | 6,327,000 |
| 2034 | Principal | 3,820,000 | 3,680,000 | 7,500,000 |
|  | Interest | 2,713,250 | 3,256,500 | 5,969,750 |
| 2035 | Principal | 4,010,000 | 3,865,000 | 7,875,000 |
|  | Interest | 2,522,250 | 3,072,500 | 5,594,750 |
| 2036 | Principal | 4,210,000 | 4,060,000 | 8,270,000 |
|  | Interest | 2,321,750 | 2,879,250 | 5,201,000 |
| 2037 | Principal | 4,420,000 | 4,265,000 | 8,685,000 |
|  | Interest | 2,111,250 | 2,676,250 | 4,787,500 |
| 2038 | Principal | 4,645,000 | 4,475,000 | 9,120,000 |
|  | Interest | 1,890,250 | 2,463,000 | 4,353,250 |
| 2039 | Principal | 4,875,000 | 4,700,000 | 9,575,000 |
|  | Interest | 1,658,000 | 2,239,250 | 3,897,250 |
| 2040 | Principal | 5,120,000 | 4,930,000 | 10,050,000 |
|  | Interest | 1,414,250 | 2,004,250 | 3,418,500 |
| 2041 | Principal | 5,370,000 | 5,185,000 | 10,555,000 |
|  | Interest | 1,158,250 | 1,757,750 | 2,916,000 |
| 2042 | Principal | 5,645,000 | 5,435,000 | 11,080,000 |
|  | Interest | 889,750 | 1,498,500 | 2,388,250 |
| 2043 | Principal | 5,925,000 | 5,710,000 | 11,635,000 |
|  | Interest | 607,500 | 1,226,750 | 1,834,250 |
| 2044 | Principal | 6,225,000 | 5,995,000 | 12,220,000 |
|  | Interest | 311,250 | 941,250 | 1,252,500 |
| 2045 | Principal | - | 12,830,000 | 12,830,000 |
|  | Interest | - | 641,500 | 641,500 |
| Total Principal |  | 100,660,000 | 100,000,000 | 200,660,000 |
| Total Interest |  | 81,492,500 | 94,817,500 | 176,310,000 |
| Total Future Debt Payments |  | \$ 182,152,500 | \$ 194,817,500 | \$ 376,970,000 |

# SEWERAGE AND WATER BOARD OF NEW ORLEANS SCHEDULE OF FUTURE DEBT PAYMENTS <br> December 31, 2017 <br> (Unaudited) 

|  |  | Sewer Revenue Bonds |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{gathered} \hline \text { Series } \\ 2011 \\ \hline \end{gathered}$ | $\begin{aligned} & \hline \text { Series } \\ & 2014 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \text { Series } \\ & 2015 \\ & \hline \end{aligned}$ | All Bond Issues |
| 2018 | Principal | 431,000 | 11,925,000 | - | 12,356,000 |
|  | Interest | 30,318 | 5,717,450 | 5,000,000 | 10,747,768 |
| 2019 | Principal | 435,000 | 11,075,000 | - | 11,510,000 |
|  | Interest | 28,379 | 5,142,450 | 5,000,000 | 10,170,829 |
| 2020 | Principal | 439,000 | 11,660,000 | - | 12,099,000 |
|  | Interest | 26,421 | 4,574,075 | 5,000,000 | 9,600,496 |
| 2021 | Principal | 443,000 | 9,050,000 | 2,000,000 | 11,493,000 |
|  | Interest | 24,446 | 4,056,325 | 4,950,000 | 9,030,771 |
| 2022 | Principal | 447,000 | 7,445,000 | 2,000,000 | 9,892,000 |
|  | Interest | 22,452 | 3,643,950 | 4,850,000 | 8,516,402 |
| 2023 | Principal | 451,000 | 3,920,000 | 2,000,000 | 6,371,000 |
|  | Interest | 20,440 | 3,359,825 | 4,750,000 | 8,130,265 |
| 2024 | Principal | 456,000 | 3,760,000 | 2,000,000 | 6,216,000 |
|  | Interest | 18,412 | 3,167,825 | 4,650,000 | 7,836,237 |
| 2025 | Principal | 460,000 | 1,970,000 | 2,125,000 | 4,555,000 |
|  | Interest | 16,360 | 3,024,575 | 4,546,875 | 7,587,810 |
| 2026 | Principal | 464,000 | 2,070,000 | 2,235,000 | 4,769,000 |
|  | Interest | 14,290 | 2,923,575 | 4,437,875 | 7,375,740 |
| 2027 | Principal | 469,000 | 2,175,000 | 2,350,000 | 4,994,000 |
|  | Interest | 12,202 | 2,817,450 | 4,323,250 | 7,152,902 |
| 2028 | Principal | 473,000 | 2,280,000 | 2,480,000 | 5,233,000 |
|  | Interest | 10,090 | 2,706,075 | 4,202,500 | 6,918,665 |
| 2029 | Principal | 478,000 | 2,395,000 | 2,610,000 | 5,483,000 |
|  | Interest | 7,962 | 2,589,200 | 4,075,250 | 6,672,412 |
| 2030 | Principal | 482,000 | 2,515,000 | 2,735,000 | 5,732,000 |
|  | Interest | 5,812 | 2,475,881 | 3,941,625 | 6,423,318 |
| 2031 | Principal | 487,000 | 2,620,000 | 2,880,000 | 5,987,000 |
|  | Interest | 3,642 | 2,366,762 | 3,801,250 | 6,171,654 |
| 2032 | Principal | 491,000 | 2,735,000 | 3,025,000 | 6,251,000 |
|  | Interest | 1,450 | 2,252,969 | 3,653,625 | 5,908,044 |
| 2033 | Principal | - | 2,850,000 | 3,695,000 | 6,545,000 |
|  | Interest | - | 2,134,287 | 3,485,625 | 5,619,912 |
| 2034 | Principal | - | 2,970,000 | 3,885,000 | 6,855,000 |
|  | Interest | - | 2,010,613 | 3,296,125 | 5,306,738 |
| 2035 | Principal | - | 3,095,000 | 4,100,000 | 7,195,000 |
|  | Interest | - | 1,870,125 | 3,096,500 | 4,966,625 |
| 2036 | Principal | - | 3,250,000 | 4,315,000 | 7,565,000 |
|  | Interest | - | 1,711,500 | 2,886,125 | 4,597,625 |
| 2037 | Principal | - | 3,415,000 | 4,540,000 | 7,955,000 |
|  | Interest | - | 1,544,875 | 2,664,750 | 4,209,625 |
| 2038 | Principal | - | 3,585,000 | 4,775,000 | 8,360,000 |
|  | Interest | - | 1,369,875 | 2,431,875 | 3,801,750 |
| 2039 | Principal | - | 3,765,000 | 5,025,000 | 8,790,000 |
|  | Interest | - | 1,186,125 | 2,186,875 | 3,373,000 |
| 2040 | Principal | - | 3,950,000 | 5,290,000 | 9,240,000 |
|  | Interest | - | 993,250 | 1,929,000 | 2,922,250 |
| 2041 | Principal | - | 4,150,000 | 5,565,000 | 9,715,000 |
|  | Interest | - | 790,750 | 1,657,625 | 2,448,375 |
| 2042 | Principal | - | 4,360,000 | 5,855,000 | 10,215,000 |
|  | Interest | - | 578,000 | 1,372,125 | 1,950,125 |
| 2043 | Principal | - | 4,575,000 | 6,165,000 | 10,740,000 |
|  | Interest | - | 354,625 | 1,071,625 | 1,426,250 |
| 2044 | Principal | - | 4,805,000 | 6,485,000 | 11,290,000 |
|  | Interest | - | 120,125 | 755,375 | 875,500 |
| 2045 | Principal | - | - | 11,865,000 | 11,865,000 |
|  | Interest | - | - | 296,625 | 296,625 |
| Total Principal |  | 6,906,000 | 122,365,000 | 100,000,000 | 229,271,000 |
| Total Interest |  | 242,676 | 65,482,537 | 94,312,500 | 160,037,713 |
| Total Future Debt Payments |  | \$ 7,148,676 | \$ 187,847,537 | \$ 194,312,500 | \$ 389,308,713 |

# SEWERAGE AND WATER BOARD OF NEW ORLEANS SCHEDULE OF FUTURE DEBT PAYMENTS 

## December 31, 2017

## (Unaudited)

|  |  | Drainage Special Tax Bonds |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{gathered} \hline \text { Series } \\ 2014 \end{gathered}$ |  | All Bond Issues |  |
| 2018 | Principal |  | 1,745,000 |  | 1,745,000 |
|  | Interest |  | 283,350 |  | 283,350 |
| 2019 | Principal |  | 1,815,000 |  | 1,815,000 |
|  | Interest |  | 213,550 |  | 213,550 |
| 2020 | Principal |  | 1,895,000 |  | 1,895,000 |
|  | Interest |  | 140,950 |  | 140,950 |
| 2021 | Principal |  | 1,955,000 |  | 1,955,000 |
|  | Interest |  | 84,100 |  | 84,100 |
| 2022 | Principal |  | 2,000,000 |  | 2,000,000 |
|  | Interest |  | 45,000 |  | 45,000 |
| 2023 | Principal |  | - |  | - |
|  | Interest |  | - |  | - |
| otal Principal |  |  | 9,410,000 |  | 9,410,000 |
| otal Interest |  |  | 766,950 |  | 766,950 |
| otal Future Debt Payments |  | \$ | 10,176,950 | \$ | 10,176,950 |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

 SCHEDULE OF FUTURE DEBT PAYMENTSDecember 31, 2017
(Unaudited)

SEWERAGE AND WATER BOARD OF NEW ORLEANS
PROPERTY VALUE, NEW CONSTRUCTION AND BANK DEPOSITS
Last Ten Fiscal Years
(Unaudited)
(Unaudited)




(1) City of New Orleans (2011 latest year for which information is available).
SEWERAGE AND WATER BOARD OF NEW ORLEANS CAPITAL ASSET STATISTICS BY FUNCTION
Last Ten Fiscal Years


# SEWERAGE AND WATER BOARD OF NEW ORLEANS NUMBER OF ACTIVE EMPLOYEES <br> <br> Last Ten Fiscal Years <br> <br> Last Ten Fiscal Years <br> (Unaudited) 

| Year | Number of Active <br> Employees |  |
| :---: | :---: | :---: |
| 2017 | 1495 |  |
| 2016 | 1108 |  |
| 2015 | 1183 |  |
| 2014 | 1060 |  |
| 2013 |  | 1025 |
| 2012 | 991 |  |
| 2011 | 994 |  |
| 2010 | 974 |  |
| 2009 | 940 |  |

Source: Sewerage and Water Board of New Orleans.


The SEWB Oak Street Pumping Station Rehabilitation is part of the Hazard Mitigation Grant Program. The existing station has 4 pumps that pump water from the river to the SEWB Carrollton Water Plant to be treated. This construction will remove three pumps and replace them with brand new motors and pumps, along with new piping and auxiliaries. Completion is expected in 2019. However, high river levels can cause a delay in the construction outside the


This construction project of Sewer Pump Station 8 is the final station rehabilitation in a set of 9 stations that were completely upgraded and rebuilt. The Sewer Pump Station upgrade is financed through a $\$ 8$ million Hazard Mitigation Grant. This final rehabilitation is set for completion in November of 2018.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> December 31, 2017 <br> ACTUAL CAPITAL EXPENDITURES 

## WATER DEPARTMENT

## C.P.\# WATERWORKS

110
156
175
180

214

Normal Extension \& Replacement
Advanced Water Treatment (Carrollton)
Water Hurricane Recovery Bonds
FEMA Review of Change Orders - Water
TOTAL WATERWORKS

## WATER DISTRIBUTION

Normal Extension \& Replacement
Water System Replacement Program
Mains DPW Contracts

TOTAL WATER DISTRIBUTION

## POWER PROJECTS AND GENERAL BUDGET

Water Share of Power Projects.:
Water Reserve for Emergencies
Water Share of General Budget Items
GENERAL BUDGET
TOTAL WATER DEPARTMENT
\$ 7,489,396.59
648,925.47
10,350,421.87
23,902,425.07
\$ 42,391,169.00
\$ 4,351,364.66
253,874.75
$2,570,548.80$
$\$ \quad 7,175,788.21$
\$ 17,273,344.74
5,074,498.66
12,177,338.29
$\$ 34,525,181.69$
$\$ \quad 84,092,138.90$

NOTE: These figures do not include proration of interest expense.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> December 31, 2017 

ACTUAL CAPITAL EXPENDITURES

## SEWERAGE DEPARTMENT

| C.P.\# | SEWERAGE SYSTEM |  |  |
| :--- | :--- | ---: | ---: |
| 313 | Ext. \& Replace - Sewer ForceMains EPA Consent \& Decree | $\$$ | $123,664.26$ |
| 317 | Nonnal Extensions \& Replacement of Gravity Mains | $\$ 4,121,231.13$ |  |
| 318 | Rehabilitation Gravity Sewer System |  | $6,279,805.84$ |
| 326 | Ext. Rep to plumbing Stations EPA Consent Deree | $623,695.85$ |  |
| 339 | Main in Streets Dept. Contracts | $959,123.90$ |  |
| 348 | Nonnal Extensions \& Replacements | $4,546,135.77$ |  |
| 360 | SELA Sewerage Relocation Costs | $2,858,250.00$ |  |
| 368 | Wetlands Assimilation Project | $177,511.23$ |  |
| 375 | Sewerage Hurricane Recovery Bonds | $684,395.34$ |  |
| 380 | FEMA Review of Change Orders-Sewer |  | $10,203,715.09$ |
|  |  |  |  |
|  |  | $\$ 0,577,528.41$ |  |

## POWER PROJECTS AND GENERAL BUDGET

| 600 | Sewerage Share of Power Projects | $\$$ | $13,593,257.29$ |
| :--- | :--- | :--- | :--- |
| 800 | Sewerage Share of General Budget Items |  | $11,878,162.89$ |
|  | TOTAL GENERAL BUDGET | $\$$ | $25,471,420.18$ |
|  | TOTAL SEWERAGE DEPARTMENT | $\$$ | $76,048,948.59$ |

NOTE: These figures do not include proration of interest expense.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS 

December 31, 2017
ACTUAL CAPITAL EXPENDITURES

## DRAINAGE DEPARTMENT

C.P.\#

418
439
466
471
478
480
486
497
498

511
535
575

600
700
800

CANALS

Normal Extension \& Replacements
Major Drainage Participation in DPW Projects
Louisiana Avenue Canal (SELA)
SELA Program Management
S. Claiborne-Lowerline to Monticello Street

FEMA Review of Change Orders-Drainage
Napoleon Avenue Canal Improvements (SELA-B)
Florida Ave. Canal - DPS\#19 to Peoples Ave. (SELA-B)
Dwyer Intake Canal (St. Charles to Dwyer (DPS)(SELA-A)
Jefferson Avenue Canal

TOTAL DRAINAGE CANALS

PUMPING STATIONS
Normal Extension \& Rep./Stations
DPS \#6 Improvements
Drainage Hurricane Recovery Bonds
TOTAL DRAINAGE PUMPING STATIONS

POWER PROJECTS AND GENERAL BUDGET
Drainage Share of Power Projects
Drainage Reserve for Emergencies
Drainage Share of General Budget Items
TOTAL GENERAL BUDGET

TOTAL DRAINAGE DEPARTMENT
\$ $53,314.53$
602,735.88
9,571,511.18
1,838,486.82
144,721.00
7,129,226.57
13,414.82
1,477,023.57
49,722.44
139,974.68
\$ 21,020,131.49
\$ 361,274.58
5,262,700.86
$(326,001.45)$
$\$ 5,297,973.99$
\$ 15,673,355.30
113,762.00 $10,279,755.90$
\$ 26,066,873.20
$\$ 52,384,978.68$

NOTE: These figures do not include proration of interest expense.
SEWERAGE AND WATER BOARD OF NEW ORLEANS December 31, 2017
ACTUAL CAPTIAL EXPENDITURES

| POWER PROJECTS |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C.P.\# | POWER PROJECTS | Water |  | Sewerage |  | Drainage |  | Total |  |
| 612 | Furnish Generators for Drainage Facilities | \$ | - | \$ | - | \$ | 556,004.00 | \$ | 556,004.00 |
| 613 | Modification of Steam System |  | 84,537.71 |  | 50,722.63 |  | 33,815.08 |  |  |
| 624 | Extension and Replacements to Electrical System |  | 2,365,394.88 |  | 1,797,187.92 |  | 1,987,657.31 |  | 6,150,240.11 |
| 676 | Modification to Power Generating System (HMGP) |  | 14,823,412.15 |  | 1,745,346.74 |  | 3,095,878.91 |  | 39,664,637.80 |
| 701 | Water Reserve for Emergencies |  | 5,074,498.66 |  |  |  |  |  | 5,074,498.66 |
| 703 | Drainage Reserve for Emergencies |  |  |  |  |  | 113,762.00 |  | 113,762.00 |
|  | TOTAL POWER PROJECTS |  | 22,347,843.40 |  | 13,542,534.66 |  | 15,197,298.22 | \$ | 51,559,142.57 |

NOTE: These figures do not include proration of interest expense.
SEWERAGE AND WATER BOARD OF NEW ORLEANS December 31, 2017
ACTUAL CAPITAL EXPENDITURES

| GENERAL BUDGET ITEMS |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C.P.\# | General Budget Items |  | Water |  | Sewerage |  | Drainage |  | Total |
| 807 | Improvements to Central Yard and St. Joseph St. | \$ | 424,232.11 | \$ | 424,232.09 | \$ | 295,988.81 | \$ | 1,144,453.01 |
| 810 | Major Equipment Purchases |  | 3,804,340,87 |  | 3,804,341.04 |  | 3,804,340.87 |  | 11,413,022.78 |
| 812 | Computer Systems Development |  | 1,372,933.66 |  | 1,372,933.63 |  | 920,792.78 |  | 3,666,660.07 |
| 820 | Overhead Charged to Capital |  | 5,425,378.29 |  | 5,241,659.79 |  | 4,276,652.09 |  | 14,943,690.17 |
| 823 | Purchase of Water Meters |  | 95,950.31 |  | 95,950.27 |  |  |  | 191,900.58 |
| 824 | Meter Boxes and Meter Parts |  | 406,563.81 |  | 406,563.69 |  |  |  | 813,127.50 |
| 843 | Minor Equipment Purchases |  | 398,450.78 |  | 396,322.60 |  | 390,719.78 |  | 1,185,493.16 |
| 862 | Fire Hydrants and Related Parts |  | 133,544.00 |  | 27,610.00 |  |  |  | 161,154.00 |
| 875 | Project Delivery Unit Expenses |  | 115,944.46 |  | 108,549.78 |  | 108,549.76 |  | 333,044.00 |
| 879 | Green Infrastructure |  |  |  |  |  | 482,711.81 |  | 482,711.81 |
|  | TOTAL GENERAL BUDGET ITEMS |  | \$12,177,338.29 |  | 11,878,162.89 |  | \$10,279,755.90 | \$ | 34,335,257.08 |

SEWERAGE AND WATER BOARD OF NEW ORLEANS
ANALYSIS OF PUMPING AND POWER DEPARTMENT POWER PURCHASED AND PRODUCED
NATURAL GAS AND FUEL OIL CONSUMED
TEN YEARS 2008 THROUGH 2017


## SEWERAGE AND WATER BOARD OF NEW ORLEANS POWER PURCHASED AND PRODUCED NATURAL GAS AND FUEL OIL CONSUMED - 2017

|  | KW-HOURS | COST |
| :--- | ---: | ---: |
| ELECTRIC POWER PURCHASED | $70,728,827$ | $\$ 7,969,494.10$ |
| ELECTRIC AND STEAM POWER | $32,540,663$ | $\$ 10,183,626.50$ |
| GENERATED BY THE S.\& W.B.* | $103,269,490$ | $\$ 18,153,120.60$ |
| TOTAL |  |  |

NOTE: *NATURAL GAS CONSUMED IN OPERATION WAS 18,176,718 CCF AT A COST OF $\$ 10,183,626.50$. FUEL OIL CONSUMED WAS 84,040 GALLONS AT A COST OF $\$ 252,120$

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

GALLONS METERED - WATER CONSUMPTION
December 31, 2017

| Month | Consumption* |
| :---: | :---: |
| January | 1,685,161,800 |
| February | 1,622,348,500 |
| March | 2,024,864,900 |
| April | 1,695,420,000 |
| May | 1,568,652,100 |
| June | 1,399,833,500 |
| July | 1,465,742,200 |
| August | 1,612,176,300 |
| September | 1,456,210,300 |
| October | 1,411,143,300 |
| November | 2,097,913,300 |
| December | 1,210,915,200 |
|  | 19,250,381,400 |

[^7]
# SEWERAGE AND WATER BOARD OF NEW ORLEANS MONTHLY WATER CHARGES COLLECTED - 2017 

| Months | Water Service Charges \& Fees | Delinquent Fees | Total |
| :---: | :---: | :---: | :---: |
| January | \$5,647,757.03 | - | \$5,647,757.03 |
| February | 6,279,744.04 | - | 6,279,744.04 |
| March | 7,548,554.32 | 264,099.81 | 7,812,654.13 |
| April | 7,049,582.44 | 242,989.97 | 7,292,572.41 |
| May | 7,152,699.06 | 256,303.36 | 7,409,002.42 |
| June | 5,852,693.45 | 200,888.29 | 6,053,581.74 |
| July | 7,595,428.49 | 194,169.37 | 7,789,597.86 |
| August | 7,543,021.66 | 196,710.33 | 7,739,731.99 |
| September | 7,319,129.38 | 236,968.88 | 7,556,098.26 |
| October | 5,703,932.85 | - | 5,703,932.85 |
| November | 8,627,570.96 | - | 8,627,570.96 |
| December | 7,775,044.76 | - | 7,775,044.76 |
|  | \$84,095,158.44 | \$1,592,130.01 | \$85,687,288.45 |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> MONTHLY SEWERAGE CHARGES COLLECTED - 2017

| Months | Sewerage Service Charges |
| :---: | :---: |
| January | \$6,560,093.60 |
| February | 8,580,158.16 |
| March | 8,768,632.45 |
| April | 8,524,375.05 |
| May | 8,497,361.81 |
| June | 9,037,545.34 |
| July | 8,524,375.05 |
| August | 9,041,910.98 |
| September | 8,710,598.74 |
| October | 6,759,305.10 |
| November | 8,459,313.18 |
| December | 9,880,232.19 |
|  | \$101,343,901.65 |


| Delinquent <br> Fees |  |
| :---: | ---: |
|  | Total |
| - | $\$ 6,560,093.60$ |
| $319,815.00$ | $8,580,158.16$ |
| $274,557.46$ | $9,088,447.45$ |
| $311,279.46$ | $8,798,932.51$ |
| $232,600.99$ | $8,808,641.27$ |
| $232,872.13$ | $8,757,146.33$ |
| $235,174.46$ | $9,277,085.18$ |
| $272,443.61$ | $8,983,042.35$ |
| - | $8,759,305.10$ |
| - | $9,889,313.18$ |
| - |  |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

December 31, 2017

## TABLE I

## CARROLLTON TURBIDITIES



## TABLE II

## CARROLLTON ALKALINITIES <br> PARTS PER MILLION

|  | River |  |  |  | Effluent Settling Reservoirs |  |  |  | Filters |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Maximum | 139 | 146 | 160 | 201 | 161 | 127 | 140 | 160 | 205 | 152 | 144 | 157 | 190 | 230 | 188 |
| Minimum | 72 | 75 | 75 | 81 | 95 | 53 | 54 | 56 | 60 | 74 | 74 | 78 | 82 | 87 | 104 |
| Average | 101 | 109 | 116 | 130 | 124 | 89 | 93 | 105 | 118 | 113 | 115 | 120 | 128 | 146 | 139 |

TABLE II A

## CARROLLTON HARDNESS

PARTS PER MILLION

|  | NON-CARBONATE HARDNESS |  |  |  |  |  |  |  |  |  | TOTAL HÁRDNESS |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | RIVER |  |  |  |  | FILTERS |  |  |  |  | RIVER |  |  |  |  | FILTERS |  |  |  |  |
|  | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Maximum | 86 | 74 | 90 | 86 | 79 | 93 | 101 | 81 | 102 | 132 | 188 | 211 | 233 | 272 | 211 | 206 | 225 | 245 | 304 | 245 |
| Minimum | 18 | 14 | 14 | 12 | 21 | 23 | 25 | 12 | 11 | 20 | 101 | 91 | 106 | $10 \overline{8}$ | 127 | 115 | 132 | 115 | 127 | 142 |
| Average | 40 | 46 | 43 | 40 | 42 | 49 | 57 | 51 | 48 | 49 | 141 | 155 | 159 | 169 | 166 | 164 | 177 | 178 | 197 | 189 |

TABLE III
CARROLLTON BACTERIAL CHARACTERISTICS
TOTAL COLIFORM ANALYSIS

| 2016 | River | Plant Tap | Distribution <br> System |
| :--- | ---: | ---: | ---: |
| Maximum (Colonies $/ 100 \mathrm{ml})$ | 1,600 | 2 | 110 |
| Minimum (Colonies $/ 100 \mathrm{ml}$ ) | 28 | 0 | 0 |
| Average (colonies $/ 100 \mathrm{ml}$ ) | 600 | 0 | 0 |
| Number of Samples | 225 | 365 | 1.920 |
| Number of Samples Negative | 0 | 363 | 1.912 |
| Number of Samples Positive | 225 | 2 | $8^{*}$ |

* None of these eight total coliform positive samples was E. coli positive, and none resulted in a violation of the Total Coliform Rule.
SEWERAGE AND WATER BOARD OF NEW ORLEANS
TABLEIV-A
PRINGIPLE RESULTS OF OPERATION OF THE G3 CONVENTIONAL UNIT AT THE CARROLLTON WATER

PRINCIPLE RESULTS OF OPERATION OF THE G4 CONVENTIONAL UNIT AT THE CARROLLTON WATER

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline 1 \& 2 \& 3 \& 4 \& 5 \& 6 \& 7 \& 8 \& 9 \& 10 \& 11 \& 12 \& 13 \\
\hline Month \& \& Total Million Gallons of Water Treated During Month \& Amount of Water Treated Million Gallons Per 24 Hours \& Total Pounds of Polymer used at Intake \& Polymer at Intake Parts Per Million \& \begin{tabular}{l}
Total \\
Pounds of Polymer used in Plant
\end{tabular} \& Polymer in Plant Parts Per Million \& Total Pounds of Pure Iron (Fe) used During Month \& Pure Iron (Fe) Parts Per Million \& \begin{tabular}{l}
NTU \\
Turbidity of River Water
\end{tabular} \& \begin{tabular}{l}
PPM \\
Alkalinity of River Water
\end{tabular} \& NTU Turbidity of Unit Effluent \\
\hline January \& Max. Min. Avg. \& 2,165.82 \& \[
\begin{aligned}
\& \hline 76.00 \\
\& 24.00 \\
\& 69.87
\end{aligned}
\] \& \& \& 80,600 \& \[
\begin{aligned}
\& \hline 4.83 \\
\& 3.97 \\
\& 4.37 \\
\& \hline
\end{aligned}
\] \& 93,867 \& \[
\begin{aligned}
\& 5.64 \\
\& 4.61 \\
\& 5.09 \\
\& \hline
\end{aligned}
\] \& \[
\begin{array}{r}
237 \\
65 \\
141 \\
\hline
\end{array}
\] \& \[
\begin{aligned}
\& 161 \\
\& 105 \\
\& 124 \\
\& \hline
\end{aligned}
\] \& \begin{tabular}{l}
8.6 \\
3.3 \\
5.0 \\
\hline
\end{tabular} \\
\hline February \& Max. Min. Avg. \& 2,149.86 \& \[
\begin{aligned}
\& 83.92 \\
\& 71.54 \\
\& 76.78
\end{aligned}
\] \& \& \& 81,661 \& \[
\begin{array}{|l|}
\hline 4.87 \\
3.93 \\
4.57 \\
\hline
\end{array}
\] \& 95,803 \& \[
\begin{aligned}
\& \hline 5.71 \\
\& 4.64 \\
\& 5.35 \\
\& \hline
\end{aligned}
\] \& 230
31
93 \& \[
\begin{aligned}
\& 135 \\
\& 108 \\
\& 120 \\
\& \hline
\end{aligned}
\] \& \begin{tabular}{l}
8.2 \\
1.8 \\
4.0 \\
\hline
\end{tabular} \\
\hline March \& Max. Min. Avg. \& 2,388,67 \& 84.38
73.50
78.12 \& \& \& 82,630 \& \[
\begin{aligned}
\& \hline 4.84 \\
\& 3.45 \\
\& 4.05 \\
\& \hline
\end{aligned}
\] \& 98,141 \& 7.69
4.04
4.74 \& \[
\begin{array}{r}
151 \\
29 \\
76 \\
\hline
\end{array}
\] \& \[
\begin{aligned}
\& \hline 147 \\
\& 102 \\
\& 124
\end{aligned}
\] \& \(\begin{array}{r}10.0 \\ 1.8 \\ 3.7 \\ \hline\end{array}\) \\
\hline April \& \begin{tabular}{l}
Max. \\
Min. \\
Avg.
\end{tabular} \& 2,495.04 \& \[
\begin{aligned}
\& 88.50 \\
\& 75.17 \\
\& 83.17
\end{aligned}
\] \& \& \& 94,561 \& 4.79
4.26
4.55 \& 110,880 \& 5.63
4.91
5.33 \& \[
\begin{array}{r}
273 \\
50 \\
130 \\
\hline
\end{array}
\] \& \[
\begin{aligned}
\& 134 \\
\& 109 \\
\& 122 \\
\& \hline
\end{aligned}
\] \& \begin{tabular}{l}
3.5 \\
1.0 \\
2.5 \\
\hline
\end{tabular} \\
\hline May \& \begin{tabular}{l}
Max. \\
Min. \\
Avg.
\end{tabular} \& 2,576.46 \& \[
\begin{aligned}
\& \hline 87.17 \\
\& 83.88 \\
\& 85.83 \\
\& \hline
\end{aligned}
\] \& \& \& 98,007 \& 4.94
4.57
4.68 \& 115,264 \& 5.70
5.40
5.53 \& 345
43
194 \& 135
95
111 \& \begin{tabular}{l}
4.9 \\
1.0 \\
2.6 \\
\hline
\end{tabular} \\
\hline June \& \begin{tabular}{l}
Max. \\
Min. \\
Avg.
\end{tabular} \& 2,314.42 \& 79.50
74.42
76.89 \& \& \& 78,763 \& 4.35
3.91
4.09 \& 91,889 \& 5.08
4.55
4.78 \& 63

30
39 \& 135

105
117 \& $\begin{array}{r}3.9 \\ \\ 1.4 \\ 2.6 \\ \hline\end{array}$ <br>

\hline July \& | Max. |
| :--- |
| Min. |
| Avg. | \& 2,424.50 \& \[

$$
\begin{aligned}
& 82.92 \\
& 72.71 \\
& 78.21 \\
& \hline
\end{aligned}
$$

\] \& \& \& 81,791 \& \[

$$
\begin{aligned}
& 4.33 \\
& 3.69 \\
& 4.05 \\
& \hline
\end{aligned}
$$

\] \& 95,968 \& | 5.07 |
| :--- |
| 4.31 |
| 4.75 |
| 5.14 | \& 231

43

97 \& \[
$$
\begin{aligned}
& 136 \\
& 110 \\
& 122 \\
& \hline
\end{aligned}
$$

\] \& | 5.9 |
| :--- |
| 1.2 |
| 2.6 | <br>


\hline August \& | Max. |
| :--- |
| Min. |
| Avg. | \& 2,410.71 \& \[

$$
\begin{aligned}
& 81.50 \\
& 77.46 \\
& 78.75 \\
& \hline
\end{aligned}
$$

\] \& \& \& 70,984 \& \[

$$
\begin{aligned}
& 4.38 \\
& 3.71 \\
& 4.05 \\
& \hline
\end{aligned}
$$

\] \& 83,056 \& | 5.14 |
| :--- |
| 4.35 |
| 4.75 |
| 3 | \& 69

20

38 \& \[
$$
\begin{aligned}
& \hline 140 \\
& 114 \\
& 124 \\
& \hline
\end{aligned}
$$

\] \& | 4.0 |
| :--- |
| 1.8 |
| 2.8 | <br>


\hline September \& | Max. |
| :--- |
| Min. |
| Avg. | \& 2,383.82 \& \[

$$
\begin{aligned}
& 82.75 \\
& 73.08 \\
& 79.46 \\
& \hline
\end{aligned}
$$

\] \& \& \& 60,653 \& \[

$$
\begin{aligned}
& 3.25 \\
& 2.92 \\
& 3.05 \\
& \hline 271
\end{aligned}
$$

\] \& 70,581 \& | 3.78 |
| :--- |
| 3.39 |
| 3.55 | \& 146

11

48 \& \[
$$
\begin{aligned}
& 138 \\
& 105 \\
& 119 \\
& \hline 156
\end{aligned}
$$

\] \& | 5.5 |
| :--- |
| 1.2 |
| 2.7 | <br>


\hline October \& | Max |
| :--- |
| Min. |
| Avg. | \& 2,522.50 \& \[

$$
\begin{aligned}
& 84.38 \\
& 78.17 \\
& 81.37 \\
& \hline
\end{aligned}
$$
\] \& \& \& 66,756 \& 3.71

2.88
3.17 \& 77,683 \& 4.35
3.35
3.69 \& 114
6

19 \& \[
$$
\begin{aligned}
& 155 \\
& 104 \\
& 139 \\
& \hline
\end{aligned}
$$

\] \& | 4.1 |
| :--- |
| 1.0 |
| 2.2 |
| 1.4 | <br>


\hline November \& | Max. |
| :--- |
| Min. |
| Avg. | \& 2,473.88 \& \[

$$
\begin{aligned}
& 85.13 \\
& 79.96 \\
& 82.46 \\
& \hline
\end{aligned}
$$

\] \& \& \& 74,535 \& \[

$$
\begin{aligned}
& \hline 3.84 \\
& 3.36 \\
& 3.61
\end{aligned}
$$
\] \& 87,624 \& 4.51

4.03
4.25 \& 283
35

102 \& \[
$$
\begin{aligned}
& 141 \\
& 120 \\
& 132
\end{aligned}
$$

\] \& | 4.4 |
| :--- |
| 1.4 |
| 2.8 | <br>

\hline December \&  \& 2,554.07 \& 86.75
77.46

82.39 \& \& \& 76,076 \& | 3.84 |
| :--- |
| 3.30 |
| 3.57 | \& 88,354 \& \[

$$
\begin{aligned}
& 4.46 \\
& 3.81 \\
& 4.15 \\
& \hline
\end{aligned}
$$
\] \& 180

13

60 \& $$
\begin{aligned}
& 152 \\
& 122 \\
& 139 \\
& \hline
\end{aligned}
$$ \& 4.9

1.4
3.1 <br>
\hline Total \& \& 28,859.7.5 \& \& \& \& 947,016 \& \& 1,109,109 \& \& \& \& <br>

\hline General \&  \& $$
\begin{aligned}
& 2,576.46 \\
& 2,149.86 \\
& 2,404.98 \\
& \hline
\end{aligned}
$$ \& \[

$$
\begin{aligned}
& 88.50 \\
& 24.00 \\
& 79.07
\end{aligned}
$$

\] \& \& \& \[

$$
\begin{aligned}
& \hline 98,007 \\
& 60,653 \\
& 78,918 \\
& \hline
\end{aligned}
$$

\] \& \[

$$
\begin{aligned}
& 4.94 \\
& 2.88 \\
& 3.99 \\
& \hline
\end{aligned}
$$

\] \& \[

$$
\begin{array}{r}
115,264 \\
70,581 \\
92,426 \\
\hline
\end{array}
$$
\] \& 7.69

3.35

4.73 \& $$
\begin{array}{r}
\hline 345 \\
6 \\
86
\end{array}
$$ \& 161

95
124 \& $\begin{array}{r}10.0 \\ 1.0 \\ 3.0 \\ \hline\end{array}$ <br>
\hline
\end{tabular} December 31, 2017

PRINCIPLE RESULTS OF OPERATION OF THE L3 CONVENTIONAL UNIT AT THE CARROLLTON WATER

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Month |  | Total Million Gallons of Water Treated During Month | Amount of Water Treated Million Gallons Per 24 Hours | Total <br> Pounds of Polymer used at Intake | Polymer at Intake Parts Per Million | Total <br> Pounds of Polymer used in Plant | Polymer in Plant Parts Per Million | Total Pounds of Pure Iron (Fe) used During Month | Pure Iron (Fe) Parts Per Million | NTU Turbidity of River Water | PPM <br> Alkalinity of River Water | NTU Turbidity of Unit Effluent |
| January | Max. <br> Min. <br> Avg. |  |  |  |  |  |  |  |  |  |  |  |
| February | Max. <br> Min. <br> Avg. |  |  |  |  |  |  |  |  |  |  |  |
| March | Max. Min. Avg. |  |  |  |  |  |  |  |  |  |  |  |
| April | Max. <br> Min. <br> Avg. |  |  |  |  |  |  |  |  |  |  |  |
| May | Max. <br> Min. <br> Avg. |  |  |  |  |  |  |  |  |  |  |  |
| June | Max. <br> Min. <br> Avg. |  |  |  |  |  |  |  |  |  |  |  |
| July | Max. <br> Min. <br> Avg. |  |  |  |  |  |  |  |  |  |  |  |
| August | Max. <br> Min. <br> Avg. |  |  |  |  |  |  |  |  |  |  |  |
| September | Max. <br> Min. <br> Avg. |  |  |  |  |  |  |  |  |  |  |  |
| October | Max. <br> Min. <br> Avg. |  |  |  |  |  |  |  |  |  |  |  |
| November |  | 960.50 | $\begin{aligned} & 61.75 \\ & 57.29 \\ & 60.03 \\ & \hline \end{aligned}$ |  |  | 23,836 | $\begin{aligned} & \hline 3.12 \\ & 2.84 \\ & 2.98 \\ & \hline \end{aligned}$ | 27,085 | 3.55 3.23 3.38 | $\begin{array}{r} 283 \\ 35 \\ 102 \\ \hline \end{array}$ | 141 120 132 | 3.6 <br> 1.2 <br> 2.4 |
| December | $\begin{aligned} & \text { Max. } \\ & \text { Min. } \\ & \text { Avg. } \end{aligned}$ | 1,914.47 | $\begin{aligned} & 66.67 \\ & 56.67 \\ & 61.76 \end{aligned}$ |  |  | 47,856 | $\begin{aligned} & 3.51 \\ & 2.26 \\ & 3.00 \end{aligned}$ | 54,408 | $\begin{aligned} & 3.98 \\ & 3.24 \\ & 3.41 \\ & \hline \end{aligned}$ | 180 13 60 | 152 122 139 | 4.3 <br> 1.5 <br> 2.6 |
| Total |  | 2,874.97 |  |  |  | 71,692 |  | 81,493 |  |  |  |  |
| General |  | $\begin{array}{r} 1,914.47 \\ 960.50 \\ 1,437.48 \\ \hline \end{array}$ | $\begin{aligned} & \hline 66.67 \\ & 56.67 \\ & 61.17 \\ & \hline \end{aligned}$ |  |  | $\begin{aligned} & 47,856 \\ & 23,836 \\ & 35,846 \end{aligned}$ | $\begin{aligned} & 3.51 \\ & 2.26 \\ & 2.95 \end{aligned}$ | $\begin{aligned} & 54,408 \\ & 27,085 \end{aligned}$ $40,746$ | $\begin{aligned} & 3.98 \\ & 3.23 \\ & 3.46 \end{aligned}$ | 283 13 81 | 152 <br> 120 <br> 136 | 4.3 <br> 1.2 <br> 2.5 |

Note: L3 Basin in service from 11/15/17 through 12/31/17
SEWERAGE AND WATER BOARD OF NEW ORLEANS
PRINCIPLE RESULTS OF OPERATION OF THE L4 CONVENTIONAL UNIT AT THE CARROLLTON WATER

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline 1 \& 2 \& 3 \& 4 \& 5 \& 6 \& 7 \& 8 \& 9 \& 10 \& 13 \& 14 \& 15 \\
\hline Month \& \& Total Million Gallons of Water Treated During Month \& Amount of Water Treated Million Gallons Per 24 Hours \& Total pounds of Polymer used at Intake \& Polymer at Intake Parts Per Million \& \begin{tabular}{l}
Total \\
Pounds of Polymer used in Plant
\end{tabular} \& Polymer in Plant Parts Per Million \& Total Pounds of Pure Iron (Fe) used During Month \& Pure Iron (Fe) Parts Per Million \& \begin{tabular}{l}
NTU \\
Turbidity of River Water
\end{tabular} \& \begin{tabular}{l}
PPM \\
Alkalinity of River Water
\end{tabular} \& \begin{tabular}{l}
NTU \\
Turbidity of Unit Effluent
\end{tabular} \\
\hline January \& \begin{tabular}{l}
Max. \\
Min. \\
Avg.
\end{tabular} \& 2,066.22 \& \[
\begin{aligned}
\& 73.88 \\
\& 56.50 \\
\& 66.65
\end{aligned}
\] \& \& \& 67.935 \& \[
\begin{aligned}
\& 4.38 \\
\& 3.50 \\
\& 3.95
\end{aligned}
\] \& 75,133 \& \[
\begin{aligned}
\& 4.92 \\
\& 3.64 \\
\& 4.37
\end{aligned}
\] \& 237
65
141 \& \[
\begin{aligned}
\& 161 \\
\& 105 \\
\& 124
\end{aligned}
\] \& \begin{tabular}{l}
8.6 \\
3.3 \\
5.0 \\
\hline 8
\end{tabular} \\
\hline February \& \begin{tabular}{l}
Max. \\
Min. \\
Avg.
\end{tabular} \& 1,713.42 \& \[
\begin{aligned}
\& 71.54 \\
\& 55.92 \\
\& 63.25
\end{aligned}
\] \& \& \& 57,540 \& 4.61
3.75
4.00 \& 64,533 \& \[
\begin{aligned}
\& 5.17 \\
\& 4.21 \\
\& 4.49
\end{aligned}
\] \& 230
31
93 \& 135
108
120 \& 8.2
1.8
4.0 \\
\hline March \& \begin{tabular}{l}
Max. \\
Min. \\
Avg.
\end{tabular} \& 2,028.52 \& \[
\begin{aligned}
\& 72.19 \\
\& 53.58 \\
\& 65.44
\end{aligned}
\] \& \& \& 66,705 \& \[
\begin{aligned}
\& 4.56 \\
\& 3.14 \\
\& 3.93
\end{aligned}
\] \& 74,969 \& \[
\begin{aligned}
\& 5.18 \\
\& 3.53 \\
\& 4.41
\end{aligned}
\] \& 151
29
76 \& \[
\begin{aligned}
\& 147 \\
\& 102 \\
\& 124
\end{aligned}
\] \& 10.0
1.8
3.7 \\
\hline April \& \begin{tabular}{l}
Max. \\
Min. \\
Avg.
\end{tabular} \& 1,645.92 \& \[
\begin{aligned}
\& \hline 66.21 \\
\& 49.04 \\
\& 55.63
\end{aligned}
\] \& \& \& 65,042 \& \[
\begin{aligned}
\& 5.30 \\
\& 4.38 \\
\& 4.68 \\
\& \hline
\end{aligned}
\] \& 73,258 \& \[
\begin{aligned}
\& 6.10 \\
\& 4.92 \\
\& 5.25
\end{aligned}
\] \& \[
\begin{array}{r}
273 \\
50 \\
130
\end{array}
\] \& \[
\begin{aligned}
\& 134 \\
\& 109 \\
\& 122
\end{aligned}
\] \& \begin{tabular}{l}
3.5 \\
1.0 \\
2.5 \\
\hline 1.9
\end{tabular} \\
\hline May \& \begin{tabular}{l}
Max. \\
Min. \\
Avg.
\end{tabular} \& 1,561.96 \& 57.38
42.29
50.39 \& \& \& 61,082 \& \[
\begin{aligned}
\& 5.31 \\
\& 4.18 \\
\& 4.70
\end{aligned}
\] \& 69,156 \& \[
\begin{aligned}
\& 5.97 \\
\& 4.77 \\
\& 5.32
\end{aligned}
\] \& \[
\begin{array}{r}
345 \\
43 \\
194
\end{array}
\] \& 135
95
111 \& \begin{tabular}{l}
4.9 \\
1.0 \\
2.6 \\
\hline
\end{tabular} \\
\hline June \& \begin{tabular}{l}
Max. \\
Min. \\
Avg.
\end{tabular} \& 1,721.63 \& 63.88
52.33
57.39 \& \& * \& 54,936 \& \[
\begin{aligned}
\& 5.31 \\
\& 3.34 \\
\& \\
\& 3.88 \\
\& \hline
\end{aligned}
\] \& 63,013 \& \[
\begin{aligned}
\& 5.22 \\
\& 3.84 \\
\& \\
\& 4.39 \\
\& \hline
\end{aligned}
\] \& 63
30
39 \& 135
105

117 \& | 3.9 |
| :--- |
| 1.4 |
|  |
| 2.6 | <br>

\hline July \& | Max. |
| :--- |
| Min. |
| Avg. | \& 1,848.42 \& \[

$$
\begin{aligned}
& 69.88 \\
& 50.17 \\
& 59.63 \\
& \hline
\end{aligned}
$$

\] \& \& \& 54,695 \& \[

$$
\begin{aligned}
& 4.26 \\
& 3.34 \\
& 3.55 \\
& \hline
\end{aligned}
$$

\] \& 63,047 \& \[

$$
\begin{aligned}
& 4.89 \\
& 3.70 \\
& 4.10 \\
& \hline
\end{aligned}
$$

\] \& $\begin{array}{r}231 \\ 43 \\ 97 \\ \hline\end{array}$ \& \[

$$
\begin{aligned}
& 136 \\
& 110 \\
& 122 \\
& \hline
\end{aligned}
$$

\] \& | 5.9 |
| :--- |
| 1.2 |
| 2.6 | <br>


\hline August \& | Max. |
| :--- |
| Min. |
| Avg. | \& 1,803.87 \& 69.79

52.13

58.83 \& \& \& 43,029 \& $$
\begin{aligned}
& 3.56 \\
& 2.77 \\
& 3.01
\end{aligned}
$$ \& 49,684 \& \[

$$
\begin{aligned}
& 4.10 \\
& 3.20 \\
& 3.47
\end{aligned}
$$

\] \& \[

$$
\begin{aligned}
& 69 \\
& 20 \\
& 38
\end{aligned}
$$

\] \& \[

$$
\begin{aligned}
& 140 \\
& 114 \\
& 124
\end{aligned}
$$

\] \& | 4.0 |
| :--- |
| 1.8 |
| 2.8 | <br>


\hline September \& | Max. |
| :--- |
| Min. |
| Avg. | \& 1,814,88 \& \[

$$
\begin{aligned}
& 63.46 \\
& 57.83 \\
& 61.42 \\
& \hline
\end{aligned}
$$

\] \& \& \& 37.701 \& \[

$$
\begin{aligned}
& 2.70 \\
& 2.31 \\
& 2.49 \\
& \hline
\end{aligned}
$$

\] \& 43,477 \& \[

$$
\begin{aligned}
& 3.11 \\
& 2.66 \\
& 2.87 \\
& \hline
\end{aligned}
$$

\] \& \[

$$
\begin{array}{r}
\hline 146 \\
11 \\
48 \\
\hline 111
\end{array}
$$
\] \& 138

105

119 \& | 5.5 |
| :--- |
| 1.2 |
| 2.7 | <br>

\hline October \& | Max. |
| :--- |
| Min. |
| Avg. | \& 1,873.08 \& \[

$$
\begin{aligned}
& \hline 65.04 \\
& 51.54 \\
& 60.36
\end{aligned}
$$

\] \& \& \& 39,880 \& \[

$$
\begin{aligned}
& 3.07 \\
& 2.26 \\
& 2.49
\end{aligned}
$$
\] \& 46,281 \& 3.73

2.61
2.87 \& 114
6

19 \& $$
\begin{aligned}
& 155 \\
& 104 \\
& 139
\end{aligned}
$$ \& 4.1

1.0
2.2 <br>

\hline November \& | Max. |
| :--- |
| Min. |
| Avg. | \& 835.38 \& 61.67

58.29
59.67 \& \& \& 20,929 \& 3.09
2.90

3.00 \& 23,806 \& $$
\begin{aligned}
& 3.52 \\
& 3.30 \\
& 3.42
\end{aligned}
$$ \& \[

$$
\begin{array}{r}
283 \\
35 \\
102 \\
\hline
\end{array}
$$

\] \& \[

$$
\begin{aligned}
& 141 \\
& 120 \\
& 132 \\
& \hline
\end{aligned}
$$

\] \& | 4.4 |
| :--- |
| 1.4 |
| 2.8 | <br>


\hline December \& | Max. |
| :--- |
| Min. |
| Avg. | \& \& \& \& \& \& \& \& \& \& \& <br>

\hline Total \& \& 18,913,29 \& \& \& \& 569,476 \& \& 646,356 \& \& \& \& <br>

\hline General \& | Max. |
| :--- |
| Min. |
| Avg. | \& \[

$$
\begin{array}{r}
2,066.22 \\
835.38 \\
1,719.39 \\
\hline
\end{array}
$$
\] \& 73.88

42.29

59.92 \& \& \& $$
\begin{aligned}
& 67,935 \\
& 20,929 \\
& 51,771 \\
& \hline
\end{aligned}
$$ \& 5.31

2.26

3.69 \& $$
\begin{aligned}
& 75,133 \\
& 23,806 \\
& 58,760
\end{aligned}
$$ \& 6.10

2.61
4.16 \& 345
6
89 \& 161
95
123 \& 10.0
1.0
3.0 <br>
\hline
\end{tabular}

## TABLE IV－E



|  |  |  |  |  | $0$ |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \％ |  | 产 | $\begin{aligned} & \text { No } \\ & \stackrel{0}{0} \\ & \stackrel{\omega}{\infty} \end{aligned}$ | $\begin{aligned} & \stackrel{\rightharpoonup}{\underset{\sim}{\sim}} \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline \stackrel{y}{\bar{W}} \\ & \stackrel{\rightharpoonup}{j} \end{aligned}$ |  |  |  | $\begin{aligned} & \stackrel{\rightharpoonup}{\sim} \\ & \underset{\sim}{\text { Nan }} \end{aligned}$ | $\begin{aligned} & \stackrel{\circ}{\circ} \\ & \stackrel{\rightharpoonup}{6} \end{aligned}$ | $\begin{aligned} & \overline{\bar{\circ}} \\ & \text { बले } \end{aligned}$ |  |  | $\begin{aligned} & \text { on } \\ & \text { ow } \\ & \text { N } \end{aligned}$ |  |  |
|  |  | © | 岛只员 | 둥․․ | 筞へ | O | 䍗 | ल |  | － | \％ | 令 | 可 | \％ |  |  |
| F |  | $\begin{array}{lll} \text { PN N } \\ 0 & N & 0 \\ \hline \end{array}$ | N0． | 900 | 品式N | 50． | － | N | 8\％ |  |  | PANF | Fog | OM， |  |  |
| $\because$ |  | $\begin{aligned} & \overline{\underset{\sim}{*}} \\ & \stackrel{\sim}{\infty} \end{aligned}$ | $\begin{aligned} & \overline{\bar{\sim}} \\ & \stackrel{y}{\sim} \end{aligned}$ | $\begin{aligned} & \text { 郤 } \\ & \stackrel{N}{N} \end{aligned}$ | $\begin{aligned} & \stackrel{\circ}{\circ} \\ & \stackrel{\circ}{\circ} \\ & \hline \end{aligned}$ | $\begin{aligned} & \frac{J}{\omega} \\ & \stackrel{\rightharpoonup}{\omega} \end{aligned}$ |  |  | $\begin{aligned} & \text { ion } \\ & \stackrel{\sim}{N} \end{aligned}$ | $\begin{aligned} & \text { N్ल } \\ & \stackrel{N}{\sim} \end{aligned}$ | $\begin{aligned} & \text { O} \\ & \stackrel{0}{0} \\ & \stackrel{\sim}{0} \end{aligned}$ | $\underset{\sim}{N}$ | $\stackrel{\overline{\mathrm{N}}}{\stackrel{N}{\mathrm{~N}}}$ | $\begin{aligned} & \ddot{\otimes} \\ & \stackrel{\otimes}{\sim} \\ & \hline \underset{\sim}{2} \end{aligned}$ |  | D |
|  |  | ㄷ． | T | స $\sim_{0}^{0}$ | ¢ ${ }_{\text {N }}$ | ハ00 | Nown | $\stackrel{\sim}{\sim}$ | Wor | Oom | － |  | 8＝ | ¢ ¢ ¢ \％ |  | 乐咢： |
|  |  | $\begin{aligned} & \tilde{\widetilde{W}} \\ & \text { ס } \end{aligned}$ | $\begin{aligned} & \text { W్W } \\ & \text { Wem } \\ & \text { mem } \end{aligned}$ |  |  | $\begin{aligned} & \overline{\widetilde{y}} \\ & \text { ָ́v } \end{aligned}$ | $\stackrel{\text { ¢\％}}{\text { \％}}$ |  |  |  |  |  |  | $\begin{aligned} & \bar{F} \\ & \stackrel{F}{0} \\ & 0 \end{aligned}$ |  |  |
|  |  |  | Firor | －¢ ¢ ¢ | तan |  | $0.5 \begin{gathered} n \\ 0 \\ 0 \end{gathered}$ | $\stackrel{0}{0}$ | \％ |  |  | Sim |  | ¢ \％m |  |  |
| $9$ |  |  |  |  | $\begin{aligned} & \text { OO} \\ & \stackrel{\text { W}}{N} \end{aligned}$ |  |  |  |  | $\begin{aligned} & \text { 人⿹勹凶匕 } \\ & \text { O} \end{aligned}$ | $\begin{aligned} & \text { 厄̈ס } \\ & \stackrel{\rightharpoonup}{\circ} \\ & \hline \end{aligned}$ | $\begin{aligned} & \stackrel{\rightharpoonup}{\stackrel{\rightharpoonup}{\circ}} \\ & \stackrel{\rightharpoonup}{\mathbf{D}} \end{aligned}$ | $\begin{aligned} & \text { N/ } \\ & \stackrel{0}{0} \\ & \text { N } \end{aligned}$ | $\begin{aligned} & \overline{\bar{\circ}} \\ & \text {. } \\ & \stackrel{\omega}{0} \end{aligned}$ |  |  |
|  |  |  | N No | Am |  |  |  |  |  |  |  |  |  | $0$ |  |  |
|  |  | $\begin{aligned} & \text { 。्థ్ల } \\ & \stackrel{\rightharpoonup}{0} \end{aligned}$ |  |  | $\begin{aligned} & \hline \text { ö } \\ & \stackrel{\rightharpoonup}{6} \\ & \stackrel{8}{8} \end{aligned}$ | $\begin{aligned} & \overline{⿹_{0}^{8}} \\ & \stackrel{8}{8} \end{aligned}$ | $\begin{aligned} & \text { O} \\ & \text { N్ర } \end{aligned}$ |  | $\begin{aligned} & \stackrel{y}{\omega} \\ & \stackrel{y}{6} \\ & \stackrel{y}{c} \end{aligned}$ |  | $\begin{aligned} & \ddot{\circ} . \\ & \stackrel{0}{0} \\ & \stackrel{\varphi}{\sim} \end{aligned}$ | $\begin{aligned} & \text { N} \\ & \stackrel{\sim}{m} \\ & \stackrel{N}{n} \end{aligned}$ |  | 品 <br> $\stackrel{\circ}{\sigma}$ |  |  |
| $\left\|{ }^{\circ}\right\|$ |  |  | $\begin{aligned} & \hline \stackrel{\text { N }}{0} \\ & 0 . \\ & \hline .0 \end{aligned}$ | $\begin{aligned} & \text { 읃 } \\ & \stackrel{N}{N} \end{aligned}$ |  |  |  |  | $\begin{aligned} & \stackrel{\circ}{\circ} \\ & \stackrel{0}{\circ} \\ & \stackrel{\circ}{\circ} \end{aligned}$ | $\begin{aligned} & \text { Oid } \\ & \substack{\text { N }} \end{aligned}$ |  | $\begin{aligned} & \overline{\overleftarrow{W}_{1}^{\prime}} \\ & \underset{\sim}{n} \end{aligned}$ |  | $\begin{aligned} & \text { O} \\ & \text { N } \\ & \text { N } \end{aligned}$ |  |  |
|  |  |  |  | 9\％${ }^{\text {\％}}$ |  | 度悊枵 | 詈咇 | 9 | 8） | 或号皆 |  | 㔛寺令 |  | \％ |  | 员号豆 |
| $\mathrm{N}^{N}$ |  | $\begin{aligned} & \stackrel{\circ}{\circ} \\ & \stackrel{\rightharpoonup}{5} \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { ্ָন্ত } \\ & \underset{\sim}{c} \end{aligned}$ |  |  | $\begin{aligned} & \ddot{\%} \\ & \stackrel{0}{8} \\ & \stackrel{y}{\circ} \end{aligned}$ | $\begin{aligned} & \stackrel{\sim}{\dddot{N}} \\ & \stackrel{0}{6} \\ & \stackrel{y}{0} \end{aligned}$ |  | $\begin{aligned} & \stackrel{\oplus}{\circ} \\ & \stackrel{y}{\circ} \\ & \stackrel{\circ}{\circ} \end{aligned}$ |  | $\begin{aligned} & \overline{\mathrm{g}} \\ & \stackrel{\rightharpoonup}{\mathrm{o}} \\ & \stackrel{y}{0} \end{aligned}$ | $\begin{aligned} & \text { N} \\ & \stackrel{N}{\omega} \\ & \stackrel{0}{\circ} \end{aligned}$ |  | $\begin{aligned} & \text { 荡 } \\ & \stackrel{y}{6} \end{aligned}$ |  |  |
| $\bullet$ |  | $\begin{aligned} & \hline \stackrel{\circ}{\circ} \\ & \text { 渖 } \end{aligned}$ |  |  | $\begin{aligned} & \hline \stackrel{\rightharpoonup}{\mathrm{o}} \\ & \stackrel{\circ}{\mathrm{o}} \end{aligned}$ |  |  |  | $\begin{aligned} & \hat{\mathscr{\omega}} \\ & \stackrel{\rightharpoonup}{6} \end{aligned}$ | $\begin{aligned} & \hline \stackrel{\rightharpoonup}{\circ} \\ & \stackrel{\rightharpoonup}{\dot{T}} \\ & \stackrel{\rightharpoonup}{\square} \end{aligned}$ | $\begin{aligned} & \overline{\ddot{\omega}} \\ & \stackrel{\omega}{\omega} \\ & \stackrel{\omega}{\circ} \end{aligned}$ | $\begin{aligned} & \text { 勝 } \\ & \stackrel{\circ}{0} \end{aligned}$ | $\bar{\circ}$ $\stackrel{0}{0}$ $\stackrel{\rightharpoonup}{\square}$ | $\begin{aligned} & \text { ल్ల } \\ & \stackrel{\sim}{N} \end{aligned}$ |  |  |
| 4 |  | 亏 | － | 亏 | $\bar{\sigma}$ | － | \％ |  | $\overline{0}$ | － | \％ | － | － | － |  | O |
|  |  |  |  |  |  |  | 荷㐫 |  |  |  | an ex |  |  |  |  |  |
| $\mid m$ |  | $\begin{aligned} & \overline{8} \\ & \text { N } \\ & \text { N } \end{aligned}$ | $\begin{aligned} & \overline{ल ్} \\ & \text { ⿷匚⿳⿻コ一⿰㐅㐅} \end{aligned}$ | $\begin{aligned} & \overline{\widetilde{n}} \\ & \underset{\sim}{7} \end{aligned}$ | $\begin{aligned} & \bar{\circ} \\ & \text { 首 } \end{aligned}$ | $\begin{aligned} & \tilde{\tilde{y}} \\ & \stackrel{\rightharpoonup}{w} \\ & \stackrel{\rightharpoonup}{\sim} \end{aligned}$ |  |  | $\stackrel{\circ}{N}$ <br> $\stackrel{\sim}{\tilde{j}}$ |  |  |  |  |  |  |  |
|  |  | 受它蝊 | c | $\frac{c}{2}$ | 家 |  |  | d | 交交家家 | 成 | 動辰家 | 免它它定 |  | 完家 |  | 受 ${ }^{\text {c }}$ |
|  | $\begin{aligned} & \frac{5}{5} \\ & \frac{5}{2} \end{aligned}$ | $\begin{aligned} & \text { civ } \\ & \stackrel{0}{0} \\ & \stackrel{0}{2} \end{aligned}$ | $\begin{aligned} & \text { 吂 } \\ & \text { 己⿱⿰㇒一乂心灬 } \end{aligned}$ | $\begin{aligned} & \text { 長 } \\ & \hline \mathbf{L} \\ & \hline \end{aligned}$ | 京 |  | $\stackrel{\text { ¹ }}{5}$ |  | 立 | $\begin{array}{r} \text { 旁 } \\ \frac{3}{x} \\ \hline \end{array}$ |  | $\begin{array}{r} \text { 䯩 } \\ \text { 믕 } \\ \hline \end{array}$ |  |  | 旁 | 鮞 |


31,2017
TABLE VI-A


MONTHLY SUMMARY OF ALGIERS FILTER OPERATIONS FOR THE YEAR ENDING：December 31， 2017

| 앙 |  |  |  | $0$ |  |  |  |  |  | ob | $\underset{\sim}{\circ}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| － |  | $\stackrel{\square}{\square}$ | 응 | $\stackrel{\sim}{\sim}$ | $\stackrel{\infty}{\stackrel{\circ}{0}}$ | $\stackrel{\text { No }}{\square}$ |  | $\begin{aligned} & \stackrel{\infty}{\Gamma} \\ & \hline- \end{aligned}$ | $\stackrel{\circ}{\square}$ | $\stackrel{\sim}{\square}$ | $\stackrel{N}{\square}$ | $\stackrel{\oplus}{\square}$ | $\stackrel{1}{\square}$ |  |  | $\stackrel{-}{0}$ |
| $\infty$ |  | $\begin{aligned} & \infty \\ & \stackrel{\infty}{\circ} \end{aligned}$ | $\stackrel{\rightharpoonup}{i}$ | $\underset{\substack{N}}{\substack{0}}$ | $\begin{aligned} & \text { ti } \\ & \text { in } \end{aligned}$ | $\begin{aligned} & \mathscr{\infty} \\ & \stackrel{\circ}{\infty} \end{aligned}$ |  |  | $$ | $\begin{aligned} & \hline \stackrel{\circ}{\circ} \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { O} \\ & \text { in } \end{aligned}$ | $\begin{aligned} & \text { O-O } \\ & \stackrel{\circ}{0} \end{aligned}$ | $\stackrel{\varrho}{¢}$ | \％ |  | $\stackrel{5}{6}$ |
|  |  | $\stackrel{\circ}{\circ}$ | $\begin{aligned} & \text { No } \\ & \text { No } \end{aligned}$ | $\begin{aligned} & \text { ल. } \\ & \stackrel{\circ}{\circ} \end{aligned}$ | $\begin{aligned} & \text { ®o } \\ & \stackrel{\circ}{\circ} \end{aligned}$ | $\stackrel{\bar{\circ}}{\circ}$ |  | $\begin{aligned} & \hline \stackrel{\otimes}{\circ} \\ & \hline 0 \end{aligned}$ | $\begin{aligned} & \hat{\infty} \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & \hat{\infty} \\ & \hat{\infty} \end{aligned}$ | N | $\stackrel{\circ}{\circ}$ | ¢\％ | $\stackrel{\square}{+}$ |  | $\stackrel{-}{\circ}$ |
| ${ }^{\circ}$ |  |  |  | $\begin{array}{ccc} D_{0}^{\infty} & \sim \\ \\ \sim \end{array}$ |  |  | $\begin{array}{l\|l} \substack{0 \\ \hline \\ 0 \\ 0 \\ 0 \\ \hline} \end{array}$ |  |  | $\mathfrak{c}$ |  |  |  |  |  |  |
|  |  | ¢ั® $\stackrel{\sim}{\circ}$ | ¢0．0． | ¢o．¢o． | ¢o－¢ | 은․․․․ |  | $\oint$ | © |  | $\frac{\infty 0}{N} \stackrel{0}{N} \stackrel{N}{\sim}$ | ¢0 ¢0．0． | ¢o－¢o．¢o． |  |  | or |
| ＊ |  | 岕 | \％ | ＋ | $\stackrel{\circ}{\text { \％}}$ | ก |  | $\bar{\sim}$ | $\bar{\square}$ | is | $\stackrel{\circ}{\square}$ | ¢ | 呙 | $\stackrel{\circ}{+}$ | Or | －8 |
| $\cdots$ |  | $\begin{aligned} & \stackrel{\circ}{n} \\ & \stackrel{\text { Nom }}{0} \end{aligned}$ | $\begin{aligned} & \otimes_{0}^{0} \\ & \otimes ్ ల \\ & \hline 0.0 \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { N } \end{aligned}$ |  | $\begin{aligned} & \text { M } \\ & \stackrel{0}{0} \\ & 0 \\ & \hline \end{aligned}$ |  | $\begin{aligned} & \mathscr{0}_{0}^{0} \\ & \stackrel{e}{0} \end{aligned}$ | $\begin{aligned} & \stackrel{\circ}{\circ} \\ & \stackrel{\circ}{\circ} \end{aligned}$ | $\begin{aligned} & \stackrel{\circ}{\circ} \\ & \stackrel{\text { N }}{2} \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { N్ల } \end{aligned}$ | $\begin{aligned} & \infty \\ & \stackrel{\infty}{N} \\ & \text { Neలn } \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { N } \end{aligned}$ | $\begin{aligned} & \hat{\infty} \\ & \stackrel{0}{0} \\ & \text { nem } \end{aligned}$ |  |  |
| $\sim$ |  |  |  |  |  | 希容家 | 䓓 | 穴妥 |  | 䓂它家 |  | $\stackrel{\times}{x} \frac{1}{\sum} \frac{0}{\sum}$ |  | $\stackrel{\times}{\times}$ |  |  |
|  | $\begin{aligned} & \frac{5}{5} \\ & \frac{5}{\Sigma} \end{aligned}$ | $\begin{aligned} & \text { 眇 } \\ & \text { en } \end{aligned}$ | $\begin{aligned} & \text { 즈 } \\ & \stackrel{\rightharpoonup}{2} \\ & \stackrel{\rightharpoonup}{4} \end{aligned}$ |  | 든 |  |  | $\stackrel{0}{5}$ | 令 | 营 |  | $\begin{aligned} & \text { ò } \\ & \text { 을 } \\ & \hline 0 . \end{aligned}$ | $\begin{aligned} & \text { ò } \\ & \stackrel{0}{E} \\ & 0 . \\ & 00 \\ & \mathbf{0} \end{aligned}$ |  | $\left\|\begin{array}{\|l\|} \hline \mathbf{9} \\ \stackrel{\rightharpoonup}{\circ} \end{array}\right\|$ | 彦 |

## SEWERASGE AND WATER BOARD OF NEW ORLEANS

## December 31, 2017

TABLE VII
FIVE YEAR ANALYSIS COMPOSITE DATA (2013-2017) FOR NEW ORLEANS DRINKING WATER PURIFICATION SYSTEM

| PARAMETER | MISSISSIPPI RIVER <br> (Before Purification) |  |  | FINISHED WATER (After Purification) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | MAX | MIN | AVG | MAX | MIN | AVG |
| Total Alkalininty (ppm as $\mathrm{CaCO}_{3}$ ) | 201 | 72 | 116 | 210 | 78 | 128 |
| Total Hardness (ppm as $\mathrm{CaCO}_{3}$ ) | 272 | 91 | 158 | 300 | 116 | 179 |
| Noncarbonate Hardiness (ppm as $\mathrm{CaCO}_{3}$ ) | 90 | 12 | 42 | 104 | 14 | 51 |
| Calcium Hardness (ppm as $\mathrm{CaCO}_{3}$ ) | 167 | 40 | 102. | 200 | 88 | 124 |
| Magnesium Hardness (ppm as $\mathrm{CaCO}_{3}$ ) | 118 | 17 | 56 | 151 | 5 | 55 |
| Nephelometric Turbidity (NTU) | 345 | 5.1 | 73 | 0.28 | 0.06 | 0.11 |
| pH | 8.26 | 7.00 | 7.66 | 9.42 | 7.76 | 8.87 |
| Chloride (ppm) | 50 | 14 | 29 | 54 | 19 | 32 |
| Fluoride (ppm) | 0.46 | 0.13 | 0.23 | 0.92 | 0.26 | 0.71 |
| Total Dissolved Solids (ppm) | 330 | 146 | 239 | 378 | 137 | 283 |
| Total Suspended Solids (ppm) | 396 | 7 | 105 | ...... | ...... | ..... |
| Free Chiorine Residual ( ppm as $\mathrm{Cl}_{2}$ ) | +.... | $\cdots$ | $\cdots$ | 0.6 | 0.0 | 0.2 |
| Totai Chiorine Residual ( ppm as $\mathrm{Cl}_{2}$ ) | - | - | - | 5.0 | 0.3 | 3.3 |
| Ammonia (ppm as N) | $\cdots$ | .....- | ..... | 0.57 | 0.01 | 0.15 |
| Nitrate + Nitrite (ppmas N ) * | +-7. | ..... | $\cdots$ | 3.0 | 1.0 | 1.6 |
| Sulfate (ppm) * | $\cdots$ | --- | ...-- | 58 | 34.6 | 46 |
| Conductivity ( $\mu \mathrm{S} / \mathrm{cm}$ ) | 682 | 230 | 418 | 700 | 244 | 473 |
| Temperature ( ${ }^{\circ} \mathrm{F}$ ) | 87 | 37 | 66 | 91 | 44 | 74 |
| Aluminum (ppm) * | ....- | ... | .- | 0.01 | 0.00 | 0.01 |
| Antimony (ppm) * | ...-- | - | $\cdots$ | 0.000 | 0.000 | 0.000 |
| Arsenic (ppm) * | +-7. | - | $\cdots$ | 0.000 | 0.000 | 0.000 |
| Barium (ppm)* | +.... | +.... | -...- | 0.050 | 0.042 | 0.028 |
| Beryllium (ppm) * | +...- | $\cdots$ | $\cdots$ | 0.000 | 0.000 | 0.000 |
| Cadmium (ppm)* | ...... | - | -...- | 0.000 | 0.000 | 0.000 |
| Chromium (ppm) * | ...... | $\cdots$ | ...... | 0.000 | 0.000 | 0.000 |
| Copper (ppm)* | ....- | $\cdots$ | ... | 0.2 | 0.0 | 0.1 |
| Iron (ppm) * | ...-- | -.... | - | 0.05 | 0.02 | 0.01 |
| Lead (ppm) * | .-.... | $\ldots$ | ...... | 0.021 | 0.000 | 0.003 |
| Manganese (ppm)* | ...... | ...... | - | 0.00 | 0.00 | 0.00 |
| Mercury (ppm)* | ...-. | $\ldots$ | - | 0.000 | 0.000 | 0.000 |
| Nickel (ppm)* | $\cdots$ | $\ldots$ | $\cdots$ | 0.0 | 0.0 | 0.0 |
| Seienium (ppm) * | +.-. | --..- | …- | 0.001 | 0.000 | 0.000 |
| Silver (ppm) * | - | ...... | ....- | 0.00 | 0.00 | 0.00 |
| Thallium (ppm)* | -...- | --.-... | -..... | 0.000 | 0.000 | 0.000 |
| Zinc (ppm) * | ...-. | - | $\cdots$ | 0.00 | 0.00 | 0.00 |
| Potassium (ppm) * | +..... | ...... | ...... | 3.6 | 2.8 | 3.2 |
| Sodium (ppm) * | ..... | ...... | $\ldots$ | 34.0 | 17.5 | 25.1 |
| Cyanide (ppm) * | ----- | ----- | --.--- | 0.00 | 0.00 | 0.00 |
| Haloacetic Acids (HAA5) (ppb) | ...... | -...- | -...- | 43.4 | 5.4 | 17.9 |
| Total Organic Carbon (ppm) | 4.5 | 2.9 | 3.7 | 3.7 | 2.0 | 2.8 |
| Total Trihalomethanes (ppb) | 25.7 | 0.0 | 0.0 | 85.1 | 9.0 | 22.6 |
| 1,2-Dichloroethane (ppb) | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 |
| Chloroform (ppb) | 25.7 | 0.0 | 0.0 | 62.1 | 5.2 | 14.6 |
| Carbon Tetrachloride (ppb) | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bromodichloromethane (ppb) | 0.0 | 0.0 | 0.0 | 19.1 | 0.0 | 5.5 |
| Tetrachloroethene (ppb) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| BTX (Benzene, Toluene \& Xylenes) (ppb) | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Coliforms (CFUs/100 ml) | 6800 | 28 | 600 | 110 | 0 | 0 |
| E. coli (CFUs/100 ml) | -- | --.. | --. | 0 | 0 | 0 |

The results for constituents indicated with asterisks are from the Louisiana Department of Health and Hospitals. Total Organic Carbon and Haloacetic Acid results are from a DHH certified contract laboratory. All other results are from testing by the S\&WB Water Quality Laboratory.
Lead and Copper results are from 2016 Lead and Copper Rule compliance testing.
Concerning the chemical results, the S\&WB Laboratory does not meet the higher criteria required by DHH to be classified as a "DHH-OPH Certified Chemical Laboratory/Drinking Water;" therefore, any results reported by this laboratory for chemical drinking water parameters which are required to be analyzed in a certified laboratory are officially deemed invalid.
The S\&WB Laboratory is certified by DHH for Total Coliform and E. coll testing.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

December 31, 2017
TABLE VIII

## CARROLLTON OPERATION

| CHEMICAL | CHEMICAL COST | CHEMICAL COST PER MILLION GALLONS |
| :---: | :---: | :---: |
| Lime | \$631,742.54 | \$12.46 |
| Ferric Coagulant | \$1,179,327.01 | \$23.25 |
| Chlorine \& Sodium Hypochlorite | \$953,011.56 | \$18.79 |
| Sodium Polyphosphate | \$115,670.22 | \$2.28 |
| Polyelectrolyte | \$351,405.70 | \$6.93 |
| Fluoride | \$196,993.02 | \$3.88 |
| Ammonia | \$293,094.16 | \$5.78 |
| Carbon | \$0.00 | \$0.00 |
| TOTAL CHEMICALS | \$3,721,244.20 | \$73.38 |

Purification Plant Operating Cost:
Total Water Treated in 2017:
50,714,680,000 Gallons

TOTAL COST
PER MILLION GALLONS

| YEAR | TOTAL WATER TREATED <br> IN MILLION GALLONS | OPERATING COST | TOTAL COST PER <br> MILLION GALLONS |
| ---: | ---: | ---: | ---: |
| 2017 | $50,714.68$ | $\$ 8,208,239$ | $\$ 161.85$ |
| 2016 | $48,042.56$ | $\$ 7,974,759$ | $\$ 165.99$ |
| 2015 | $47,616.37$ | $\$ 8,238,282$ | $\$ 173.01$ |
| 2014 | $48,386.88$ | $\$ 8,585,082$ | $\$ 177.43$ |
| 2013 | $50,240.70$ | $\$ 8,119,447$ | $\$ 169.71$ |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> December 31, 2017 <br> TABLE IX

ALGIERS OPERATION

| CHEMICAL | CHEMICAL COST PER <br> MiLLION GALLONS |  |
| :--- | ---: | ---: |
| Cime | $\$ 125,511.19$ | $\$ 33.41$ |
| Ferric Coagulant | $\$ 129,119.47$ | $\$ 34.37$ |
| Sodium Hypochlorite | $\$ 79,217.01$ | $\$ 21.09$ |
| Sodium Polyphosphate | $\$ 36,204.00$ | $\$ 9.64$ |
| Polyelectrolyte | $\$ 29,440.58$ | $\$ 7.84$ |
| Fluoride $(100 \%)$ | $\$ 19,838.14$ | $\$ 5.28$ |
| Ammonia | $\$ 23,851.74$ | $\$ 6.35$ |
| Carbon |  | $\$ 0.00$ |
| TOTAL CHEMICALS | $\$ 443,182.12$ | $\$ 117.97$ |

Purification Plant Operating Cost: Total Water Treated in 2017:
$3,756,670,000$ Gallons

TOTAL COST
PER MILLION GALLONS

| YEAR | TOTAL WATER TREATED <br> IN MILLION GALLONS | OPERATING COST | TOTȦL COST PER <br> MILLION GALLONS |
| :---: | ---: | ---: | ---: |
| 2017 | $3,756.67$ | $\$ 1,646,337.91$ | $\$ 438.24$ |
| 2016 | $3,684.57$ | $\$ 1,952,339.00$ | $\$ 529.87$ |
| 2015 | $3,807.99$ | $\$ 1,835,436.00$ | $\$ 482.00$ |
| 2014 | $4,115.36$ | $\$ 1,967,690.00$ | $\$ 478.13$ |
| 2013 | $4,227.86$ | $\$ 2,061,032.00$ | $\$ 487.49$ |
| 2012 | $4,280.60$ | $\$ 1,834,511.00$ | $\$ 428.56$ |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## December 31, 2017

TABLE X

## SLUDGE REMOVED FROM THE "G" BASINS PRIMARY TREATMENT UNITS DOOR MONORAKE CONVENTIONAL SYSTEM 2017

| Total Million Gallons Water Treated | $28,859.75$ |
| :--- | ---: |
| Total Tons Dry Sludge Deposited in Basins Including suspended and Dissolved |  |
| Solids Removed and Reacting Chemicals | 14,025 |
| Total Million Gallons Wet Sludge Withdrawn from Basins | 695.13 |
| Average Percent solids in Wet Sludge | 0.48 |
| Total Million Gallons Water Used in withdrawing Sludge | 693.73 |
| Percent of Total Water Treated Used in Withdrawing Wet Sludge | 2.41 |

## TABLE X-A

## SLUDGE REMOVED FROM THE "L" BASINS PRIMARY TREATMENT UNITS DOOR MONORAKE CONVENTIONAL SYSTEM 2017

| Total Million Gallons Water Treated | $21,788.26$ |
| :--- | ---: |
| Total Tons Dry Sludge Deposited in Basins Including suspended and Dissolved |  |
| Solids Removed and Reacting Chemicals | 9,841 |
| Total Million Gallons Wet Sludge Withdrawn from Basins | 276.80 |
| Average Percent solids in Wet Sludge | 0.85 |
| Total Million Gallons Water Used in withdrawing Sludge | 275.82 |
| Percent of Total Water Treated Used in Withdrawing Wet Sludge | 1.27 |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

## December 31, 2017

TABLE XI

## 2017 ANALYSIS DATA FOR NEW ORLEANS CARROLLTON DRINKING WATER PURIFICATION SYSTEM

| PARAMETER | MISSISSIPPI RIVER (Before Purification) |  |  | FINISHED WATER (After Purification) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | MAX | MIN | AVG | MAX | MIN | AVG |
| Total Alkalininty (ppm as $\mathrm{CaCO}_{3}$ ) | 161 | 95 | 124 | 183 | 104 | 138 |
| Total Hardness (ppm as $\mathrm{CaCO}_{3}$ ) | 211 | 127 | 166 | 232 | 135 | 188 |
| Noncarbonate Hardness (ppm as $\mathrm{CaCO}_{3}$ ) | 79 | 21 | 42 | 85 | 22 | 49 |
| Caicium Hardness (ppm as $\mathrm{CaCO}_{3}$ ) | 138 | 73 | 106 | 190 | 93 | 128 |
| Magnesium Hardness (ppm as $\mathrm{CaCO}_{3}$ ) | 98 | 22 | 61 | 98 | 21 | 59 |
| Nephelometric Turbidity (NTU) | 345 | 6.2 | 86 | 0.17 | 0.07 | 0.11 |
| pH | 8.13 | 7.12 | 7.66 | 9.34 | 8.33 | 8.94 |
| Chloride (ppm) | 48 | 15 | 31 | 45 | 21 | 34 |
| Fluoride (ppm) | 0.30 | 0.15 | 0.21 | 0.89 | 0.58 | 0.74 |
| Free Chiorine Residual ( ppm as $\mathrm{Cl}_{2}$ ) | - | - | $\cdots$ | 0.4 | 0.1 | 0.1 |
| Totai Chiorine Residuai (ppm as $\mathrm{Cl}_{2}$ ) | +-7. | ---- | ---- | 4.8 | 0.5 | 3.4 |
| Ammonia (ppm as N) | ---7- | ----- | ---7- | 0.37 | 0.04 | 0.14 |
| Nitrate + Nitrite (ppm as N) * | ---.. | ----. | - | 2.3 | 2.3 | 2.3 |
| Conductivity ( $\mu \mathrm{S} / \mathrm{cm}$ ) | 636 | 306 | 478 | 663 | 313 | 535 |
| Temperature ( ${ }^{\circ} \mathrm{F}$ ) | 87 | 44 | 67 | 88 | 59 | 74 |
| Antimony (ppm) * | - | ----- | - ---- | 0.000 | 0.000 | 0.000 |
| Arsenic (ppm) * | $\cdots$ | ----- | -- | 0.000 | 0.000 | 0.000 |
| Barium (ppm) * | $\cdots$ | ---- | ---- | 0.05 | 0.05 | 0.05 |
| Beryllium (ppm)* | $\cdots$ | - | $\cdots$ | 0.000 | 0.000 | 0.000 |
| Cadmium (ppm)* | --- | ----- | ---- | 0.000 | 0.000 | 0.000 |
| Chromium (ppm) * | $\cdots$ | - | - | 0.000 | 0.000 | 0.000 |
| Copper (ppm) * | +.-. | --7. | - | 0.2 | 0.0 | 0.1 |
| Iron (ppm) * | --- | - | $\cdots$ | 0.00 | 0.00 | 0.00 |
| Lead (ppm)* | -...- | - | - | 0.021 | 0.000 | 0.003 |
| Manganese (ppm) * | --- | - | - | 0.00 | 0.000 | 0.00 |
| Mercury (ppm) ${ }^{\text {* }}$ | +.... | +.... | ....... | 0.000 | 0.000 | 0.000 |
| Nickel (ppm) * | --7. | ----- | - | 0.000 | 0.000 | 0.000 |
| Selenium (ppm) * | $\cdots$ | - | - | 0.001 | 0.000 | 0.000 |
| Silver (ppm) ${ }^{\text {* }}$ | -- | $\cdots$ | +.-土 | 0.00 | 0.00 | 0.00 |
| Thallium (ppmi) * | $\cdots$ | - | --7. | 0.000 | 0.000 | 0.000 |
| Zinc (ppm) * | --- | - | --- | 0.00 | 0.00 | 0.00 |
| Sodium (ppm) * | $\cdots$ | - | --... | 25.8 | 25.2 | 25.6 |
| Cyanide (ppm) * | ----- | --.-- | ---- | 0.00 | 0.00 | 0.00 |
| Haloacetic Acids (HAA5) (ppb) | ---- | --7- | ----- | 20.3 | 5.4 | 14.6 |
| Total Organic Carbon (ppm) | 4.5 | 3.4 | 3.9 | 3.7 | 2.8 | 3.0 |
| Total Trihalomethanes (ppb) | 0.0 | 0.0 | 0.0 | 49.6 | 11.9 | 24.1 |
| 1,2-Dichloroethane (ppb) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Chloroform (ppb) | 0.0 | 0.0 | 0.0 | 37.6 | 7.5 | 16.5 |
| Carbon Tetrachloride (ppb) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Bromodichloromethane (ppb) | 0.0 | 0.0 | 0.0 | 19.1 | 1.6 | 6.4 |
| Tetrachloroethene (ppb) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| BTX (Benzene, Toluene \& Xylenes) (ppb) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Coliforms (CFUs/100 ml) | 1600 | 28 | 600 | 110 | 0 | 0 |
| E. coli (CFUs/100 ml) | --- | -...- | -...- | 0 | 0 | 0 |

The results for constituents indicated with asterisks are from the Louisiana Department of Health and Hospitals. Total Organic Carbon and Haloacetic Acid results are from a DHH certified contract laboratory.
All other results are from testing by the S\&WB Water Quality Laboratory.
Lead and Copper results are from 2016 Lead and Copper Rule compliance testing.
Concerning the chemical results, the S\&WB Laboratory does not meet the higher criteria required by DHH to be classified as a "DHH-OPH Certified Chemical Laboratory/Drinking Water;" therefore, any results reported by this laboratory for chemical drinking water parameters which are required to be analyzed in a certified laboratory are officially deemed invalid.
The S\&WB Laboratory is certified by DHH for Total Coliform and E. coli testing.

SEWERAGE AND WATER BOARD OF NEW ORLEANS December 31, 2017

TABLE XII

## EXTRACTS FROM TABLES IV-E AND V

## 20 Year Period, 1998 to 2017 Inclusive Maximum, Minimum, and Average Amount of Water Treated Per Day <br> (M.G. per 24 Hours)

| YEAR | CARROLLTON |  |  | ALGIERS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | MAX. | MIN. | AVG. | MAX. | MIN. | AVG. |
| 1998 | 152.96 | 98.48 | 126.86 | 22.96 | 12.00 | 12.36 |
| 1999 | 168.25 | 122.55 | 140.26 | 22.00 | 8.90 | 15.19 |
| 2000 | 152.50 | 126.71 | 128.10 | 18.83 | 7.58 | 12.13 |
| 2001 | 153.93 | 107.75 | 126.70 | 15.76 | 6.00 | 10.90 |
| 2002 | 128.67 | 87.00 | 106.63 | 14.00 | 6.66 | 9.80 |
| 2003 | 144.26 | 90.75 | 115.35 | 13.16 | 8.00 | 10.06 |
| 2004 | 145.83 | 102.92 | 122.57 | 13.16 | 8.00 | 10.15 |
| 2005 | 144.00 | 0.00 | 115.47 | 22.67 | 7.00 | 10.20 |
| 2006 | 165.63 | 115.33 | 139.73 | 18.34 | 8.00 | 11.67 |
| 2007 | 144.75 | 124.00 | 134.06 | 16.00 | 10.00 | 12.13 |
| 2008 | 143.50 | 114.08 | 133.88 | 13.58 | 6.92 | 10.38 |
| 2009 | 147.92 | 129.83 | 138.17 | 14.00 | 8.00 | 10.78 |
| 2010 | 156.50 | 125.33 | 137.10 | 15.67 | 8.00 | 11.25 |
| 2011 | 150.83 | 127.17 | 139.37 | 16.83 | 10.00 | 11.73 |
| 2012 | 163.29 | 117.96 | 137.65 | 15.50 | 10.00 | 11.58 |
| 2013 | 141.83 | 120.00 | 131.08 | 15.25 | 10.00 | 11.27 |
| 2014 | 157.30 | 122.08 | 132.57 | 15.58 | 9.00 | 10.43 |
| 2015 | 144.71 | 118.33 | 130.47 | 13.92 | 8.83 | 10.09 |
| 2016 | 213.83 | 120.46 | 131.62 | 17.25 | 8.00 | 9.66 |
| 2017 | 149.19 | 125.13 | 138.94 | 14.00 | 8.00 | 10.29 |

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

December 31, 2017
TABLE XIII
Monthly Temperature (Degrees Farenheit) of the Mississippi River Water at the Carrollton Plant

|  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| January | 50 | 50 | 41 | 43 | 48 | 47 | 42 | 43 | 47 | 47 |
| February | 53 | 46 | 41 | 43 | 48 | 47 | 40 | 45 | 46 | 49 |
| March | 55 | 51 | 48 | 51 | 57 | 49 | 46 | 45 | 54 | 55 |
| April | 63 | 58 | 62 | 61 | 69 | 57 | 59 | 61 | 62 | 63 |
| May | 68 | 69 | 71 | 68 | 74 | 66 | 69 | 70 | 70 | 69 |
| June | 77 | 79 | 81 | 80 | 81 | 76 | 79 | 79 | 79 | 77 |
| July | 80 | 85 | 85 | 84 | 85 | 81 | 83 | 84 | 86 | 83 |
| August | 82 | 84 | 86 | 87 | 87 | 83 | 84 | 85 | 85 | 85 |
| September | 78 | 81 | 83 | 80 | 82 | 83 | 83 | 83 | 84 | 80 |
| October | 71 | 70 | 72 | 72 | 72 | 76 | 72 | 74 | 75 | 77 |
| November | 63 | 59 | 61 | 62 | 60 | 62 | 59 | 65 | 66 | 61 |
| December | 55 | 49 | 50 | 50 | 55 | 48 | 49 | 54 | 53 | 52 |
| Maximum | 85 | 86 | 89 | 90 | 89 | 86 | 86 | 87 | 87 | 87 |
| Minimum | 42 | 42 | 37 | 40 | 46 | 45 | 37 | 39 | 42 | 44 |
| Average | 66 | 65 | 65 | 65 | 68 | 65 | 64 | 66 | 67 | 67 |

Ten Year Period
Maximum: 90
Minimum: 37
Average: 66

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

 December 31, 2017TABLE XIV

Monthly Temperature (Degrees Farenheit) of the
Tap Water at the Carrollton Plant

|  | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | ---: | ---: | ---: | ---: | ---: |
| January | 65 | 62 | 62 | 57 | 64 |
| February | 66 | 61 | 62 | 59 | 64 |
| March | 66 | 66 | 66 | 66 | 67 |
| April | 69 | 72 | 73 | 72 | 72 |
| May | 73 | 77 | 76 | 77 | 76 |
| June | 81 | 80 | 80 | 83 | 80 |
| July | 81 | 83 | 83 | 88 | 82 |
| August | 81 | 84 | 82 | 87 | 84 |
| September | 84 | 84 | 80 | 86 | 83 |
| October | 78 | 79 | 76 | 81 | 81 |
| November | 72 | 69 | 70 | 74 | 72 |
| December | 64 | 65 | 64 | 66 | 65 |
| Maxiumum | 91 | 89 | 86 | 91 | 88 |
| Minimum | 49 | 44 | 55 | 52 | 59 |
| Average | 73 | 74 | 73 | 75 | 74 |

Five Year Period

Maximum: 91
Minimum: 44
Average: 74
SEWERAGE AND WATER BOARD OF NEW ORLEANS
New Orleans East Bank Sewerage Treatment Plant
2017 Yearly Summary

|  | Jan | Whacmb | Mar | Apr | May | Jun | Jut | Aug | Sep | Oct | Nov | Dac |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average Maximum | $\begin{gathered} 111.516 \\ 2127 \\ \hline \end{gathered}$ | $\begin{array}{r} 859 \\ 1182 \\ \hline \end{array}$ | $\begin{array}{r} 85.6 \\ 1737 \\ \hline \end{array}$ | $\begin{gathered} 89.093 \\ 1839 \\ \hline \end{gathered}$ | $\begin{gathered} 104855 \\ 172.5 \\ \hline \end{gathered}$ | $\begin{gathered} 126,657 \\ 172.1 \\ \hline \end{gathered}$ | $\begin{gathered} 109 \\ 146.8 \end{gathered}$ | $\begin{gathered} 130.461 \\ 198.1 \\ \hline \end{gathered}$ | $\begin{aligned} & 94,563 \\ & 1298 \\ & \hline \end{aligned}$ | $\begin{gathered} 106.016 \\ 175 \end{gathered}$ | $\begin{aligned} & 78,9 \\ & 89.9 \end{aligned}$ | $\begin{gathered} 103.942 \\ 179.9 \\ \hline \end{gathered}$ |
| INFLUENT BOD (mg/L) <br> $\begin{array}{l}\text { Average } \\ \text { Maximum }\end{array}$ | $\begin{aligned} & 85.7 \\ & 141 \\ & \hline \end{aligned}$ | $\begin{aligned} & 983 \\ & 179 . \\ & \hline \end{aligned}$ | $\begin{array}{r} 95 \\ 117 \\ \hline \end{array}$ | 87.6 119 | 69.9 113 | $\begin{aligned} & 56,2 \\ & 102 \end{aligned}$ | $\begin{gathered} 58.5 \\ 83 \end{gathered}$ | $\begin{aligned} & 82.9 .9 \\ & 141 \end{aligned}$ | $\begin{aligned} & 134 \\ & 206 \end{aligned}$ | $\begin{gathered} 113.6 \\ 195 \end{gathered}$ | $\begin{aligned} & 1582 \\ & 240 \\ & \hline \end{aligned}$ | $\begin{gathered} 135,4 \\ 236 \end{gathered}$ |
| $\begin{aligned} & \text { INFLUENT TSS (mg/L) } \\ & \text { Average } \\ & \text { Maximum } \\ & \hline \end{aligned}$ | $\begin{aligned} & 154.1 \\ & 288 \\ & \hline \end{aligned}$ | $\begin{aligned} & 131.8 \\ & 202 \\ & \hline \end{aligned}$ | $\begin{gathered} 29.9 \\ 173 \\ \hline \end{gathered}$ | $\begin{aligned} & 121.6 \\ & 165 \\ & \hline \end{aligned}$ | $\begin{aligned} & 113 \\ & 178 \\ & \hline \end{aligned}$ | $\begin{aligned} & 155 \\ & 297 \\ & \hline \end{aligned}$ | $\begin{aligned} & 99,3 \\ & 137 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2019 \\ & 383 \\ & \hline \end{aligned}$ | $\begin{array}{r} 53.2 \\ 513 \\ \hline \end{array}$ | $\begin{gathered} 240.4 \\ 396 \\ \hline \end{gathered}$ | $\begin{gathered} 2871 \\ 546 \\ \hline \end{gathered}$ | $\begin{array}{r} 279.3 \\ 550 \\ \hline \end{array}$ |
| INFLUENT BOD (Ibs/day) Average Maximum | $\begin{gathered} 72,554 \\ 118,539 \\ \hline \end{gathered}$ | $\begin{gathered} 67,462 \\ 137,492 \\ \hline \end{gathered}$ | $\begin{gathered} 64 \\ 108.019 \\ \hline \end{gathered}$ | $\begin{aligned} & 63,109 \\ & 98,992 \end{aligned}$ | $\begin{aligned} & 58,257 \\ & 78,976 \end{aligned}$ | $\begin{aligned} & 57,311 \\ & 95,531 \end{aligned}$ | $\begin{array}{r} 54,100 \\ 79,328 \\ \hline \end{array}$ | $\begin{aligned} & 87,081 \\ & 144,961 \end{aligned}$ | $\begin{gathered} 96,275 \\ 146,549 \\ \hline \end{gathered}$ | $\begin{array}{r} 99,588 \\ 174,957 \end{array}$ | $\begin{aligned} & 106,554 \\ & 172,738 \\ & \hline \end{aligned}$ | $\begin{aligned} & 105,376 \\ & 192,551 \end{aligned}$ |
| $\begin{aligned} & \text { INFLUENT TSS (Ibs/day) } \\ & \text { Average } \\ & \text { Maximum } \end{aligned}$ | $\begin{array}{r} 135,213 \\ 314,328 \\ \hline \end{array}$ | $\begin{gathered} 91,534 \\ 173,790 \\ \hline \end{gathered}$ | $\begin{gathered} 89,657 \\ 164,929 \end{gathered}$ | $\begin{gathered} 90,566 \\ 188,621 \end{gathered}$ | $\begin{gathered} 96,190 \\ 160378 \end{gathered}$ | $\begin{aligned} & 110,438 \\ & 278,165 \end{aligned}$ | $\begin{gathered} 93,357 \\ \text { 928,997 } \end{gathered}$ | $\begin{aligned} & 224,233 \\ & 516,825 \end{aligned}$ | $\begin{aligned} & 182,285 \\ & 364,949 \end{aligned}$ | $\begin{aligned} & 214,123 \\ & 469.628 \end{aligned}$ | $\begin{aligned} & 193,237 \\ & 364,747 \end{aligned}$ | $\begin{array}{r} 223,647 \\ 560,035 \end{array}$ |
| EFFLUENT BOD (mg/L) Average Weekly MaxImum | $\begin{gathered} 12.8 \\ 21 \\ \hline \end{gathered}$ | $\begin{aligned} & 15.5 \\ & 27 \\ & \hline \end{aligned}$ | $\begin{array}{r} 14 \\ 37 \\ \hline \end{array}$ | $\begin{gathered} 12,2 \\ 26 \\ \hline \end{gathered}$ | $\begin{gathered} 12.5 \\ 29 \\ \hline \end{gathered}$ | $\begin{array}{r} 15 \\ 24 \\ \hline \end{array}$ | $\begin{gathered} 15,3 \\ 20 \\ \hline \end{gathered}$ | $\begin{aligned} & 15 \\ & 22 \\ & \hline \end{aligned}$ | $\begin{gathered} 10.1 \\ 16 \\ \hline \end{gathered}$ | $\begin{gathered} 12.5 \\ 20 \end{gathered}$ | $\underset{26}{12.5}$ | $\begin{gathered} 12.9 \\ 29 \end{gathered}$ |
| EFFLUENT TSS (mg/L) Average Weekly Maximum | $\begin{gathered} 13.5 \\ 39 \\ \hline \end{gathered}$ | $\begin{aligned} & 9.9 \\ & 24 \\ & \hline \end{aligned}$ | $\begin{aligned} & 9.8 \\ & 60 \\ & \hline \end{aligned}$ | $\begin{gathered} 8.6 \\ 4 \\ \hline \end{gathered}$ | $\begin{aligned} & 9.2 \\ & 31 \\ & \hline \end{aligned}$ | $\begin{aligned} & 13.5 \\ & 40 \\ & \hline \end{aligned}$ | $\begin{aligned} & 7.6 \\ & 12 \\ & \hline \end{aligned}$ | $\begin{gathered} 11.3 \\ 22 \\ \hline \end{gathered}$ | $\begin{aligned} & 8.5 \\ & 18 \\ & \hline \end{aligned}$ | $\begin{gathered} 12.5 \\ 31 \\ \hline \end{gathered}$ | $\begin{aligned} & 8.3 \\ & 13 \\ & \hline \end{aligned}$ | $\begin{aligned} & 9.7 \\ & 32 \\ & \hline \end{aligned}$ |
| EFFLUENT BOD (Ibs/day) Average Weekly MaxImum | $\begin{array}{r} 11,962 \\ 25.833 \\ \hline \end{array}$ | $\begin{aligned} & \begin{array}{l} 1,206 \\ 21,457 \end{array} \end{aligned}$ | $\begin{aligned} & 10,519 \\ & 53,600 \\ & \hline \end{aligned}$ | $\begin{array}{r} 9,010 \\ 24,540 \\ \hline \end{array}$ | $\begin{aligned} & 11,004 \\ & 32,071 \\ & \hline \end{aligned}$ | 15,999 31,926 | 13,905 23,262 | 16,499 35,889 | $\begin{gathered} 8,012 \\ 14,280 \\ \hline \end{gathered}$ | $\begin{array}{r} 10,872 \\ 21,872 \\ \hline \end{array}$ | $\begin{gathered} 8,285 \\ 18,974 \\ \hline \end{gathered}$ | $\begin{aligned} & 11,098 \\ & 31,508 \\ & \hline \end{aligned}$ |
| EFFLUENT TSS (Ibs/day) Average Weakly Maximum | $\begin{aligned} & 14,238 \\ & 69,193 \\ & \hline \end{aligned}$ | $\begin{array}{r} 7,342 \\ 23.659 \\ \hline \end{array}$ | $\begin{gathered} 8,263 \\ 86,919 \\ \hline \end{gathered}$ | $\begin{array}{r} 6,730 \\ 26,073 \\ \hline \end{array}$ | $\begin{array}{r} 8,473 \\ 34,288 \\ \hline \end{array}$ | $\begin{aligned} & 15,186 \\ & 53,209 \\ & \hline \end{aligned}$ | $\begin{array}{r} 6,989 \\ 13,361 \\ \hline \end{array}$ | $\begin{array}{r} 12,941 \\ 35,889 \\ \hline \end{array}$ | $\begin{aligned} & 6,770 \\ & 12,990 \\ & \hline \end{aligned}$ | $\begin{array}{r} 11,481 \\ 38,212 \\ \hline \end{array}$ | $\begin{array}{r} 5,529 \\ 9,140 \\ \hline \end{array}$ | $\begin{array}{r} 8,990 \\ 48,012 \\ \hline \end{array}$ |
| EFFLUENT CL2 (mg/L) <br> Average <br> Maximum | $\begin{aligned} & 0.5 \\ & 0.5 \end{aligned}$ | $\begin{aligned} & 0.49 \\ & 0.5 \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.49 \\ & 0.5 \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.5 \\ & 0.5 \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.49 \\ & 0.5 \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.49 \\ & 0.5 \\ & \hline \end{aligned}$ | $\begin{array}{r} 0.49 \\ 0.5 \\ \hline \end{array}$ | $\begin{aligned} & 0.49 \\ & 0.5 \\ & \hline \end{aligned}$ | $\begin{array}{r} 0.48 \\ 0.5 \\ \hline \end{array}$ | $\begin{array}{r} 0.49 \\ 0.5 \\ \hline \end{array}$ | $\begin{aligned} & 0.48 \\ & 0.5 \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.49 \\ & 0.5 \\ & \hline \end{aligned}$ |
| EFFLUENT COLIFORM (col/100-mI) Average (Geo) Weekly MaxImum (Geo) | $\begin{aligned} & 2.77 \\ & 3.48 \end{aligned}$ | $\begin{array}{r} 2.91 \\ 3.67 \\ \hline \end{array}$ | $\begin{aligned} & 2.25 \\ & 2.25 \\ & \hline \end{aligned}$ | $\begin{array}{r} 2,94 \\ 3,29 \\ \hline \end{array}$ | $\begin{array}{r} 2,93 \\ 3.74 \\ \hline \end{array}$ | $\begin{array}{r} 5.75 \\ 9.89 \\ \hline \end{array}$ | $\begin{aligned} & 2.43 \\ & 2.67 \\ & \hline \end{aligned}$ | $\begin{array}{r} 3.44 \\ 4.93 \\ \hline \end{array}$ | $\begin{aligned} & 3.54 \\ & 4.38 \\ & \hline \end{aligned}$ | $\begin{array}{r} 3,55 \\ 6,09 \\ \hline \end{array}$ | $\begin{array}{r} 2.61 \\ 3.99 \\ \hline \end{array}$ | $\begin{aligned} & 2.52 \\ & 2.71 \\ & \hline \end{aligned}$ |
| EFFLUENT PH (su) Minimum MaxImum | $\begin{array}{r} 6.75 \\ 6.91 \\ \hline \end{array}$ | $\begin{aligned} & 6.79 \\ & 7.02 \\ & \hline \end{aligned}$ | $\begin{array}{r} 6.85 \\ 7.09 \\ \hline \end{array}$ | $\begin{array}{r} 6.75 \\ 6.91 \\ \hline \end{array}$ | $\begin{array}{r} 6.7 \\ 6.88 \\ \hline \end{array}$ | $\begin{array}{r} 6.74 \\ 6.98 \\ \hline \end{array}$ | $\begin{aligned} & 6.81 \\ & 6.86 \\ & \hline 6.86 \end{aligned}$ | $\begin{aligned} & 6.82 \\ & 6.94 \end{aligned}$ | $\begin{array}{r} 8 \text { 日3 } \\ 6.94 \\ \hline \end{array}$ | $\begin{array}{r} 6.83 \\ 6.99 \end{array}$ | $\begin{aligned} & 6.78 \\ & 6.95 \\ & \hline \end{aligned}$ | $\begin{aligned} & 6.81 \\ & 6.95 \\ & \hline \end{aligned}$ |
| DISPOSED SLUDGE (dry tons) Average per day Total | $\begin{array}{r} 33.7 \\ 606.82 \\ \hline \end{array}$ | $\begin{array}{r} 31.27 \\ 531.55 \\ \hline \end{array}$ | $\begin{array}{r} 3218 \\ 768.59 \\ \hline \end{array}$ | $\begin{aligned} & 27.21 \\ & 625.82 \\ & \hline \end{aligned}$ | $\begin{aligned} & 28.47 \\ & 654.92 \\ & \hline \end{aligned}$ | $\begin{array}{r} 28.69 \\ 516.45 \\ \hline \end{array}$ | $\begin{gathered} 33,13 \\ 728.89 \\ \hline \end{gathered}$ | $\begin{array}{r} 29.18 \\ 437.65 \\ \hline \end{array}$ | $\begin{array}{r} 21.87 \\ 393.67 \\ \hline \end{array}$ | $\begin{array}{r} 30.33 \\ 515.59 \\ \hline \end{array}$ | $\begin{gathered} 25.29 \\ 598.68 \\ \hline \end{gathered}$ | $\begin{array}{r} 25.38 \\ 740.33 \\ \hline \end{array}$ |
| ELECTRICITY (kwhr) Average per day Total (kwhr) | $\begin{array}{r} 72,439 \\ 2,245,607 \\ \hline \end{array}$ | $\begin{array}{r} 73,500 \\ 2,058,001 \\ \hline \end{array}$ | $\begin{gathered} 74,516 \\ 2,310,001 \\ \hline \end{gathered}$ | $\begin{array}{r} 75,329 \\ 2,335,201 \\ \hline \end{array}$ | $\begin{gathered} 79,755 \\ 2,472,401 \\ \hline \end{gathered}$ | $\begin{array}{r} 83,187 \\ 2,578,801 \\ \hline \end{array}$ | $\begin{gathered} 80,206 \\ 2,486,401 \\ \hline \end{gathered}$ | $\begin{gathered} 82,013 \\ 2,542,400 \\ \hline \end{gathered}$ | $\begin{gathered} 71,244 \\ 1,923,600 \\ \hline \end{gathered}$ | $\begin{gathered} 76,955 \\ 2,385,602 \\ \hline \end{gathered}$ | $\begin{array}{r} 71,313 \\ 2.282,009 \\ \hline \end{array}$ | $\begin{array}{r} 76,865 \\ 2,305,944 \\ \hline \end{array}$ |
| RAINFALL (Inches) East Bank TOTAL | 5.48 | 274 | 3.48 | 55 | 9.93 | 15.48 | 8.47 | 15.26 | 1.97 | 7.82 | 0.12 | 5.16 |

SEWERAGE AND WATER BOARD OF NEW ORLEANS
New Orleans West Bank Sewerage Treatment Plant


|  | $\stackrel{\leftrightarrow}{\circ}$ | \＃\＃ |  |  | $\underset{\infty}{\underset{\sim}{\sim}} \underset{\sim}{0}$ | －${ }_{\text {－}}$ | $\stackrel{\infty}{\stackrel{\infty}{\dot{-}} \text { ¢ }}$ | $\stackrel{\otimes}{\sim}$ | $\stackrel{\text { Nㅜㄷ웅 }}{\sim}$ | $\stackrel{\circ}{\square}$ | ¢ ¢ | ¢ | ¢ \％\％ |  | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\stackrel{\stackrel{8}{0}}{\stackrel{8}{\infty}} \stackrel{8}{\square}$ | ¢مㅜㅜㄲ | ¢ ${ }_{\text {¢ }}$ |  |  | $\bar{\circ}$ | $\stackrel{\sim}{\infty}$ | \％${ }_{0} \stackrel{4}{\circ}$ | \％ | $\stackrel{\text { Nu }}{\text { N }}$ | $\stackrel{N}{\sim}$ | ¢ ¢ \％ | $8$ |  | 8 |
|  | $\begin{gathered} \underset{\sim}{N} \stackrel{\leftrightarrow}{n} \\ \underset{\sim}{n} \\ \hline \end{gathered}$ | ¢ | $\stackrel{\oplus}{\circ} \stackrel{\circ}{\circ}$ |  | $\underset{\Phi}{\underset{\sim}{\infty}} \underset{\sim}{N}$ | $\bigcirc$ | $\stackrel{\sim}{\sim}$ | N | ¢ | $\underset{\sim}{\text { O．}}$ | 咢 | $\stackrel{N}{\text { N }}$ | $\frac{8}{8} \frac{9}{7}$ |  | $\stackrel{\circ}{0}$ |
|  |  | No | $\overline{\text { ¢ \％}}$ |  | 㩊筑 | $\stackrel{\infty}{\infty}$ | $\stackrel{\infty}{\sim}$ | 辰 ： | \％ | $\because$ | ¢\％ | $\stackrel{\square}{\circ}$ | $\stackrel{9}{9}$ | N | 8 |
|  | $\begin{aligned} & \circ \\ & \stackrel{\circ}{\circ} \\ & \stackrel{\circ}{c} \\ & \stackrel{i}{c} \end{aligned}$ | \％${ }_{\text {o }}$ | 정읃 | $\stackrel{\text { 웅 }}{\substack{0 \\ \sim}}$ |  | $\stackrel{\%}{\circ}$ | $\bar{\circ} \bar{\sim}$ | \％ | － | ¢ ${ }_{\text {¢ }}^{\text {¢ }}$ | 产突 | $\stackrel{N}{\stackrel{\circ}{\text { ¢ }} \text { ¢ }}$ | $\stackrel{8}{\circ}$ | No | $\stackrel{\circ}{\square}$ |
|  |  | \％ | $\stackrel{\infty}{N}$ |  |  | $\cdots$ | $\stackrel{\text { No }}{\text { N }}$ | \％ | \％ | － | $\stackrel{9}{\text { ¢ }}$ | $\stackrel{\text { ® }}{\sim}$ | $\stackrel{\circ}{7}$ |  | $\stackrel{\square}{6}$ |
|  | $\begin{aligned} & \stackrel{8}{8} \stackrel{\leftrightarrow}{0} \\ & \stackrel{\otimes}{\mathrm{o}} \end{aligned}$ | \％ | N¢ | 梁令: | $\underset{\infty}{\underset{\sim}{\infty}} \underset{\sim}{\underset{\sim}{2}}$ | $\stackrel{\circ}{\circ} \times$ | $\stackrel{\sim}{\circ} \stackrel{\sim}{\circ}$ | \＄80 \％ |  | \％ | 号 |  | $8 \frac{40}{7}$ |  | 뭉 |
|  | $\stackrel{8}{\mathbf{8}} \underset{\sim}{\sim}$ | $\stackrel{\text { ¢ }}{\text { ¢ }}$ | に |  |  | $\stackrel{\text { V }}{\sim}$ | －${ }_{\text {¢ }}$ | \％NNN | $\stackrel{\leftrightarrow}{6} \stackrel{\sim}{6}$ | $\stackrel{\circ}{\circ}$ | से¢ | $\stackrel{8}{\circ}$ | $\frac{\pi}{4}$ |  | $\stackrel{8}{8}$ |
| $\left\|\begin{array}{ll} \stackrel{a}{4} & \underset{\sim}{\infty} \\ \underset{\sim}{N} \end{array}\right\|$ |  | \％\％ | $\stackrel{\sim}{\infty}$ | 密品 |  | $\overline{\mathrm{m}} \mathfrak{N}$ | $\stackrel{\infty}{\infty}$ | $\stackrel{8}{7}$ |  | $\stackrel{\square}{\square+}$ | $\overline{S i}_{6}^{-} \underset{\sim}{c}$ | ～0¢ | － |  | \％ |
|  |  | \％ | $\stackrel{\text { ¢ }}{\text { ¢ }}$ | $\stackrel{\circ}{\circ} \stackrel{\rightharpoonup}{=} \stackrel{\rightharpoonup}{\sim}$ |  | ¢ \％ | $\stackrel{\sim}{\sim}$ |  | $\stackrel{\text { ©i }}{\stackrel{\circ}{c}}$ | $\stackrel{\circ}{\circ}$ |  | $\stackrel{\square}{\text { ¢ }}$ | 86 | \％ | ก |
|  |  | \％\％\％ |  |  |  | $\stackrel{\square}{\mathrm{m}}$ | F |  | N | $\stackrel{\text { ¢ }}{+}$ | $\stackrel{\text { ¢ }}{\text { ¢ }}$ | 윤 |  |  | च |
|  |  | － | 天禺 | 紫 |  | กิ¢ | $\stackrel{\infty}{\text { ¢iv }}$ | \％\％\％ |  | $\stackrel{\square}{\square}$ | ¢ֹ\％ | $\underset{\sim}{\text { N }}$ |  |  | $\stackrel{\circ}{\circ}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

SEWERAGE AND WATER BOARD OF NEW ORLEANS ANNUAL REPORT 2017 - FOR THE CALENDAR YEAR ENDING DECEMBER 31, 2017 SEWER TABULATION NUMBER 1 SEWER LINES AND MANHOLES IN THE SYSTEM AS OF DECEMBER 31, 2017

SEWER LINES DISCARDED AND INSTALLED IN 2017

|  | DESTROYED OR |  | REMAINING IN | REMAINING IN |
| :---: | :---: | :---: | :---: | :---: |
| ORIGINAL | ABANDONED | BUILT | THE SYSTEM | THE SYSTEM |
| CONSTRUCTION | IN 2017 | IN 2017 | AS OF 12/31/2017 | AS OF 12/31/2017 |
| (FEET) | (FEET) | (FEET) | (FEET) | (MULES) |
| $8,281,658.5$ | $35,022.1$ | $122,145.7$ | $8,368,782.1$ | $1,584.997$ |

SEWER MANHOLES REMOVED AND INSTALLED IN 2017

| ORIGINAL | REMOVED | BUILT | REMAINING IN THE SYSTEM |
| :---: | :---: | :---: | :---: |
| CONSTRUCTION | IN 2017 | IN 2017 | AS OF 12/31/2017 |
| 23,115 | 15 | 58 | 23,158 |

DETALLS OF SEWER LINES AND SEWER MANHOLES INSTALLED (CONSTRUCTED) IN 2017

| ITEMS | BOARD FUNDED | BY OTHERS | TOTAL FEET | TOTAL MILES |
| :---: | :---: | :---: | :---: | :---: |
| 6" P.V.C. | 572.0 | 55,442.8 | 56,014.8 | 10.609 |
| 8" P.V.C. | 583.0 | 57,299.4 | 57,882.4 | 10.963 |
| 10" P.V.C. | 0.0 | 4,340.7 | 4,340.7 | 0.822 |
| 12" P.V.C. | 21.0 | 2,014.3 | 2,035.3 | 0.385 |
| 15" P.V.C. | 0.0 | 773.5 | 773.5 | 0.146 |
| 18" P.V.C. | 0.0 | 804.0 | 804.0 | 0.152 |
| 21" P.V.C. | 0.0 | 295.0 | 295.0 | 0.056 |
|  |  |  |  |  |
| TOTAL SEWER LINES CONSTRUCTED IN 2017 | 1,176.0 | 120,969.7 | 122,145.7 | 23.1 |
|  |  |  |  |  |
| SEWER MANHOLES | BOARD FUNDED | BY OTHERS | TOTAL MANHOLES BUILT IN 2017 |  |
| CONSTRUCTED IN 2017 | 40 | 18 | 58 |  |

SEWERAGE AND WATER BOARD OF NEW ORLEANS
ANNUAL REPORT 2017 －FOR THE CALENDAR YEAR ENDING DECEMBER 31， 2017
LENGTH OF SEWER LINES OF EACH SIZE AND MATERIAL DISCARDED，BUILT，and NOW REMAINING IN THE SYSTEM

|  |  |  |  | － |  |  | （1ay |  |  |  |  |  |  | － |  |  |  |  |  | （ 0 | ${ }_{6}^{9}$ | （1） | － |  | $\overbrace{\text { a }}^{\substack{\text { a }}}$ |  | $\stackrel{\circ}{\text { a }}$ | － | （1） | 7 | － | A |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | － |  | － |  |  | $\cdots$ |  |  | n |  |  | a | 年 |  |  |  |  |  |  |  |  |  |  | － | \％ |  |  |  |  | ¢ |
|  |  |  |  | $\stackrel{\circ}{\mathbf{~}}$ |  |  |  |  |  |  | 宮 | $\cdots$ |  | $\begin{array}{\|c\|c\|} \hline 0 \\ 0 \\ 9 \end{array}$ |  |  | come | ज |  | $0$ |  | $9$ | $\underset{\infty}{n}$ |  |  |  |  |  | $\cdots$ |  |  |  | － |
|  |  | ond |  |  |  |  |  | $\stackrel{-}{\bar{m}}$ |  |  |  |  | $2$ |  |  | $\dot{h}$ | － | 㔛 |  | $\square$ |  |  | － | $\underset{\sim}{2}$ |  | ${ }_{\text {\％}}^{\text {¢ }}$ | Co |  | $\begin{aligned} & n \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | N |  |  | （200 |
|  |  |  |  |  |  |  |  |  |  |  |  | $\begin{array}{\|c\|c}  \\ \hline \end{array}$ |  |  |  | Co | gn |  |  |  |  |  |  |  |  | 穻 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | O |  |  |  |  |  | N |  |  |  | bic | $\mid$ | $\stackrel{\stackrel{\rightharpoonup}{\mathrm{N}}}{\substack{0}}$ |  | $0$ |  | $\left\lvert\, \begin{gathered} n \\ \\ \end{gathered}\right.$ | $\left\|\begin{array}{c} 0 \\ 0 \\ 0 \end{array}\right\|$ |  | \|㙜 |  |  |  | $0$ |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | $\stackrel{\rightharpoonup}{\hat{n}}$ | $\underset{\sim}{\infty}$ |  | $\stackrel{\rightharpoonup}{0}$ | $\begin{aligned} & 0 . \\ & \dot{m} \end{aligned}$ | $\mathfrak{c}$ |  |  |  | N | $0$ |  | $\stackrel{\rightharpoonup}{\infty} \dot{0}$ | ${ }^{\circ}$ | $\begin{aligned} & 0 \\ & \substack{0 \\ =1} \end{aligned}$ | Co |  | $\stackrel{\sim}{6}$ | － |  |  | N | $\stackrel{\circ}{\square}$ |  |  | ত্টু |  | $\begin{gathered} 0 \\ 0 \\ 6 \\ 0 \end{gathered}$ |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | － | （1） |  | （1） | \％ |  |  | ， |  | 33＂Reinforced Concrete |  |  | （1） | 咆 |  |  |  |  |  |  |  |

SEWERAGE AND WATER BOARD OF NEW ORLEANS
ANNUAL REPORT 2017 - FOR THE CALENDAR YEAR ENDING DECEMBER 31, 2017
WATER TABULATION NUMBER 1 WATER LINES, MANHOLES, VALVES, AND FIRE HYDRANTS IN THE SYSTEM AS OF DECEMBER 31, 2017

WATER LINES DISCARDED AND INSTALLED IN 2017

|  | WATER LINES DISCARDED AND INSTALLED IN 2017 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| ORIGINAL | DESTROYED OR |  | REMAINING IN | REMAINING IN |
| CONSTRUCTION | ABANDONED | BUILT | THE SYSTEM | THE SYSTEM |
| (FEET) | IN 2017 | IN 2017 | AS OF 12/31/2017 | AS OF 12/31/2017 |
| $9,623,631.0$ | (FEET) | (FEET) | (FEET) | (MILES) |
|  | $11,442.2$ | $31,397.4$ | $9,643,586.2$ | $1,826.437$ |

WATER MANHOLES REMOVED AND INSTALLED IN 2017

| WATER MANHOLES REMOVED AND INSTALLED IN 2017 |  |  |  |
| :---: | :---: | :---: | :---: |
| ORIGINAL | REMOVED | BUILT | REMAINING IN THE SYSTEM |
| CONSTRUCTION | IN 2017 | IN 2017 | AS OF 12/31/2017 |
| 30,508 | 64 | 142 | $\mathbf{3 0 , 5 8 6}$ |

WATER VALVES REMOVED AND INSTALLED IN 2017

| ORIGINAL | REMOVED | INSTALLED | REMAINING IN THE SYSTEM |
| :---: | :---: | :---: | :---: |
| CONSTRUCTION | IN 2017 | IN 2017 | AS OF 12/31/2017 |
| 29,831 | 33 | 142 | 29,940 |

FIRE HYDRANTS REMOVED AND INSTALLED IN 2017

| ORIGINAL | REMOVED | INSTALLED | REMAINING IN THE SYSTEM |
| :---: | :---: | :---: | :---: |
| CONSTRUCTION | IN 2017 | IN 2017 | AS OF 12/31/2017 |
| 23,146 | 12 | 80 | 23,214 |

DETALLS OF WATER LINES, MANHOLES, VALVES, AND FIRE HYDRANTS INSTALLED (CONSTRUCTED) IN 2017


| WATER VALVES | BOARD FUNDED | BY OTHERS | TOTAL WATER VALVES INSTALLED IN 2017 |  |
| :---: | :---: | :---: | :---: | :---: |
| INSTALLED IN 2017 | 110 | 32 | 142 |  |
|  |  |  |  |  |
| FIRE HYDRANTS | BOARD FUNDED | BY OTHERS | TOTAL FIRE HYDRANTS INSTALLED IN 2017 |  |
|  |  |  |  |  |
| INSTALLED IN 2017 | 75 | 5 | 80 |  |

WATER TABULATION NUMBER 2
LENGTH OF WATER LINES OF EACH SIZE AND MATERLAL, NUMBER OF VALVES OF EACH SIZE, BOTH GATE AND CHECK, ORIGINALLY INSTALLED, TEE QUANTITIES DISCARDED OR BUILT, AND THE QUANTTTIES NOW REMAINING IN THE DISTRIBUTION SYSTEM

| WATER LINES |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| SIzE | MATERIAL | TOTAL LENGTE $\mathbb{N}$ SYSTEM AS OF 1231/2016 | $\begin{array}{\|c} \hline \text { DESTROYED } \\ \text { OR } \\ \text { ABANDONED } \\ \text { IN } 2017 \end{array}$ | $\begin{gathered} \text { BUILT IN } \\ 2017 \end{gathered}$ | Now REMAINING IN THE SYSTEM AS OF 12/31/2017 |
| $4^{+}$ | Concrete Pipe | 7,5351 |  |  | 7.535.1 |
| $50^{*}$ | Steel Pipe | 88.3740 |  |  | 88,374.0 |
| $48^{-}$ | Cas Iron Pipe | 12,759, |  |  | 12.7593 |
| $48^{-}$ | Sicel Pipe | 36.637 .1 |  |  | 36,637.1 |
| $48^{-8}$ | Conctac Pipe | 4.982 .9 |  |  | 4.982 .9 |
| $43^{\circ}$ | Cas Iron Pipe | 11.1701 |  |  | 11,170.1 |
| $42^{-}$ | Cast Iron Pipe | +,3496 |  |  | 43496 |
| $42^{\circ}$ | Concrete Pipe | 9,3619 |  |  | 9,3619 |
| $36^{\circ}$ | Cas Iron Pipe | 4.523 .3 |  |  | 4.523 .3 |
| $36^{-}$ | Sleel Pipe | 16.922.0 |  |  | 16.9220 |
| $36^{-}$ | Conerete Pipe | 37,374.7 |  |  | 37,374.7 |
| $36^{\circ}$ | Prestressed Concrete | 6750 |  |  | 675.0 |
| $30^{-1}$ | Cast iron Pipe | 59,740.1 |  |  | 59,740.1 |
| $30^{-}$ | Ductile Lron Pipe | 296.0 |  |  | 2960 |
| $30^{\circ}$ | Sleed Pipe | 198631 |  |  | 19,863.1 |
| $30^{\circ}$ | Conate Pipe | 21,216 A |  |  | 71,216.4 |
| $30^{\circ}$ | PTestressod Concrete | 36.654 A |  |  | 36,654.4 |
| $30^{\circ}$ | Reinforcel Concreas | 3.919.6 |  |  | 3.919 .6 |
| 30- | P. V.C. Pipe | 3,716.1 |  |  | 3.7161 |
| $24^{-}$ | Cast lron Pipe | 30,090.0 |  |  | 30,090.0 |
| $24^{-}$ | PV.C. Pipe | 1.372.0 |  |  | 1.372 .0 |
| 24- | Ductile Iron Pipe | 140.0 |  |  | 140,0 |
| $24^{-}$ | Concrate Pipe | 4.062 .5 |  |  | 4,0625 |
| $20^{\circ}$ | P. V.C. Pipe | 10,370.5 |  | 1.950.01 | 12,320.5 |
| $20^{\circ}$ | Cast Iron Pipe | 87,685.9 | 1.9180 |  | 85.767 .9 |
| $20^{\circ}$ | Ductile Iron Pipe | 10,405 4 |  | 3601 | 10.4414 |
| $20^{\circ}$ | Conctet Pipe | 18,755. |  |  | 18,755.8 |
| $20^{\circ}$ | Prestressod Concrete | 2125 |  |  | 212.5 |
| $20^{-}$ | Astestos Cemena | 12,6880 |  |  | 12.688 .0 |
| $18^{-}$ | Reinforeed Concrete | 970.5 |  |  | 970.5 |
| $16^{\circ}$ | Cast Iron Pipe | 112.4967 |  |  | 112,4967 |
| $16^{\circ}$ | Ducaile Fron Pipe | 6,6927 |  |  | 6,692.7 |
| $16^{\prime \prime}$ | Concrete Pipe | 5,681.6 |  |  | 5.6816 |
| $16^{\circ}$ | Astestos Cemeas | 63,2456 |  |  | 63,245.6 |
| $16^{-}$ | PV.C. Pipe | 14.604 .0 |  |  | 14.604 .0 |
| $15^{\circ}$ | Reinforoed Concrete | 1.0693 |  |  | 1.0693 |
| 12* | Cast Iron Pipe | 840,099.2 | 3,5835 |  | 836.515.7 |
| $12^{-}$ | Ducaile Iron Pipe | 17,6635 |  | 4.5216 | 22,185.1 |
| 12" | Stuel Pipe | 1.272.51 |  |  | 1.2729 |
| $12^{-}$ | Asbostos Cement | 358.289,2. | 685.6 |  | 357,603.6 |
| 12- | P.Y.C. Pipe | 237.508. 4 |  | 2.951 .8 | 240.460 .2 |
| $10^{*}$ | Cast Iron Pipe | $10.271 .7^{\prime}$ |  |  | 10,271.7 |
| $10^{\circ}$ | Ductile Lron Pipe | 670.0 |  |  | 670.0 |
| $10^{*}$ | Astestos Cement | 12,763.61 |  |  | 12.763 .6 |
| $10^{-}$ | P.v.C. Pipe | 7.896 .0 |  |  | 7.896.0 |
| $8-$ | Cas Iran Pipe | 114.517.6. | 182.9 |  | 114.334 .7 |
| $8 \cdot$ | bustile Lron Pipe | 41,175a |  | 1.9850 | 43,160.0 |
| $8^{-}$ | Astestos Cement | 697.824.4 |  |  | 697.82-4 |
| $8{ }^{\circ}$ | P. V.C. Pipe | 876.700 .1 |  | 8.954 .7 | 885,654.8 |
| $8{ }^{-1}$ | Plastic Pipe | 318,036,59 |  |  | 318.0365 |
| $6{ }^{\text {² }}$ | Casd Iron Pipe | 2.466.332.01 | 2,921. |  | 2,463,410.9 |
| $6^{\prime \prime}$ | Ductile Iron Pipe | 21.812.9 |  | 808.7 | 22.621 .6 |
| 6 - | Asbestos Cement | 1,038,850.01 | 48.5 |  | 1.038.801.5 |
| $6^{-}$ | P.V.C. Pipe | 303,330.4 | 2.003.6 | 3,087.8. | 304,414.6 |
| 6 - | Plasic Pipe | 121,3855 |  |  | 121,385.5 |
| $4 \cdot$ | Cast Iron Pipe | 1.166.4415 | 990 |  | 1.166.342.5 |
| $4{ }^{-}$ | Ductile Iron Pipe | 3,539.8 |  | 2.277 .5 | 5.817 .3 |
| $4{ }^{-}$ | Astostos Cement | 22,2508 |  |  | 22.250 .8 |
| $4{ }^{\text {- }}$ | P. V.C. Pipe | 24,2697 |  | 2,047,7 | 26,317.4 |
| $4^{*}$ | Plastic Pripe | 3.833 .1 |  |  | 3,833,1 |
| $3^{\circ}$ | Galvanizd Steel | 3,361.7 |  |  | 3,361.7 |
| $2 \cdot$ | Cas fron Pipe | 7,909.9 |  |  | 7,909.9 |
| $2{ }^{\text {* }}$ | Galvanized Steel | 9.620 .0 |  |  | 9,6200 |
| $2^{-}$ | P V.C. Pipe | $80,045.3$ |  | 2.7766 | 82.821 .9 |
| $1-$ | Galvanizod Steel | 5.346 .6 |  |  | 53.36 .6 |
| Total Li | near Feet | 9,623,631.0 | 11,442.2 | 31.397 .4 | 9,643,586.2 |
| Toun M |  | 1.822657 | 2167 | 5.946 | 1826.437 |


| valves |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| SI2E | EXISTING IN SYSTEMAS OF 12/31/2016 | REMOVED | INSTALLE <br> D IN 2017 | REMAINING IN SYSTEM AS OF 12/31/2017 |
| $48^{-}$ | 16 |  |  | 16 |
| $42^{\prime \prime}$ | 4 |  |  | 4 |
| 36* | 18 |  |  | 18 |
| 30* | 66 |  |  | 66 |
| $24^{-}$ | 39 |  |  | 39 |
| $20^{\circ}$ | 133 | 3 | 3 | 133 |
| $16^{-}$ | 193 |  |  | 193 |
| $14^{*}$ | 3 |  |  | 3 |
| 12" | 2,309 | 8 | 25 | 2.326 |
| $10^{\prime \prime}$ | 72 | 0 | 0 | 72 |
| $8{ }^{-}$ | 6.755 | 6 | 22 | 6.771 |
| $6^{\circ}$ | 13.007 | 10 | 54 | 13,051 |
| $4{ }^{\text {n }}$ | 7.216 | 6 | 38 | 7,248 |
| Total | 29,831 | 33 | 142 | 29.940 |

SEWERAGE AND WATER BOARD OF NEW ORLEANS Table of Rainfall in New Orleans


# SEWERAGE AND WATER BOARD OF NEW ORLEANS <br> December 31, 2017 

## COST OF OPERATIONS IDENTIFICATION PROGRAM

BENCHMARKING 2017
ADMINISTRATIVE SERVICES DEPARTMENTInsurance Cost per Employee:

| Workers' Compensation | $\$$ | $1,942,236.00$ |
| :--- | :--- | ---: |
| Auto Liability | $\$$ | $241,859.00$ |
| General Liability | $\$$ | $138,389.00$ |

ENGINEERING DEPARTMENT
Total Capital Program Design and ..... 9.50\%Construction Contracts Cost Growth
ENVIRONMENTAL DEPARTMENT
Cost of Typical Industry Sampling Event ..... \$ ..... 2,463.06
FACILITY MAINTENANCE DEPARTMENT
Cost to set $5 / 8^{\prime \prime}$ water meter ..... \$ ..... 104.04
MANAGEMENT SERVICES DEPARTMENT FINANCE:
Cost to Process a Miscellaneous Invoice ..... 12.62
Cost to Process a Vendor Invoice ..... 12.92
Cost to Process a Paycheck ..... 6.24
PERSONNEL:
Cost to Hire an Employee ..... 267.35
Cost to complete a Voluntary - Employee Termination ..... 24.09
Employee Turnover Rate ..... 20.65\%
Cost to Train an Employee ..... 0.52\%
PURCHASING:
Cost to Process a Sundry Purchase Order ..... 62.50
REVENUE:
Cost to Read a Meter ..... 2.46
Cost to Render a Bill (Less Meter Reading) ..... 0.84
Cost to Manage a Customer by Phone ..... 2.60
Cost to Manage a Customer by Mail ..... 12.45
Cost to Manage a Walk-in Customer ..... 7.08
Cost to Process a Mail-in Payment ..... 1.40
Cost to Process a Walk-in Payment ..... 2.37
SUPPORT SERVICES DEPARTMENT
Average Annual Maintenance Cost ..... \$Per Piece of Equipment20-25\%


[^0]:    1 - Some industries are volatile or subject to seasonality, including information and educational services.
    2 - Percent changes may not be exact due to rounding.
    3 - Percent changes represent percentage points.
    Sources: BLS and DBER

[^1]:    See accompanying independent auditors' report.

[^2]:    See accompanying independent auditors' report.

[^3]:    **3 mills adopted in 1967 expires in 2017
    ** 6 mills adopted in 1978 expires in 2027

[^4]:    Note: Rates are based on $5 / 8^{\prime \prime}$ meter, which is the standard household meter size.

[^5]:    The 2015 and 2016 Debt Service Coverage Ratios have been recast based upon the opinion of the Qualified

[^6]:    (1) Source: Greater New Orleans Inc. and New Orleans City Business
    (2) Most recent available is as of March 2014 .

[^7]:    *Represents accounted for metered water consumption

