

*In the opinion of Co-Bond Counsel, under existing law, the interest on the Series 2015 Bonds is excluded from gross income for Federal income tax purposes; it should be noted, however, that for the purpose of computing the alternative minimum tax imposed on certain corporations, such interest is taken into account in determining adjusted current earnings. Under the Act, the Series 2015 Bonds and the income therefrom are exempt from all taxation in Louisiana for state, parish, municipal or other local purposes. See "TAX EXEMPTION" herein and Appendix "F" attached hereto.*



**\$100,000,000**  
**CITY OF NEW ORLEANS, LOUISIANA**  
**SEWERAGE SERVICE REVENUE BONDS,**  
**SERIES 2015**



**Dated: Date of Delivery**

**Due: June 1, as shown on the inside cover**

The City of New Orleans, Louisiana (the "Issuer" or the "City"), is issuing the Sewerage Service Revenue Bonds, Series 2015 (the "Series 2015 Bonds"), on behalf of the Sewerage and Water Board of New Orleans (the "Board") for the purpose of: (i) paying the costs of extensions, improvements, enlargements, betterments, alterations, renewals and replacements to the sewerage system of the City, including land, equipment and other real or personal properties; (ii) funding a deposit to the debt service reserve fund; and (iii) paying costs of issuance of the Series 2015 Bonds. The Series 2015 Bonds are being sold by the Board of Liquidation, City Debt, a body corporate that serves as the custodian for the Board.

The Series 2015 Bonds are being initially issued as fully registered bonds, in authorized denominations of \$5,000 or any integral multiple thereof, and will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York. DTC will act as securities depository for the Series 2015 Bonds. Purchasers of the Series 2015 Bonds will not receive certificates representing their interest in the Series 2015 Bonds purchased. Purchases of the Series 2015 Bonds will be made only in book-entry form in authorized denominations by credit to participating broker-dealers and other institutions on the books of DTC, as described herein. Principal of and interest on the Series 2015 Bonds is payable by the Paying Agent to DTC, which will remit such payments to the Direct Participants for the Beneficial Owners of the Series 2015 Bonds in accordance with its normal procedures, as described herein.

The Series 2015 Bonds maturing June 1, 2026, and thereafter, are callable for optional redemption by the Board in whole or in part at any time on or after June 1, 2025, and if less than a full maturity, then by lot within such maturity, at a redemption price equal to the principal amount of the Series 2015 Bonds to be redeemed plus accrued interest to the redemption date. The Series 2015 Bonds are also subject to mandatory sinking fund redemption, as more fully set forth in this Official Statement.

Principal of the Series 2015 Bonds is payable at the corporate trust office of Whitney Bank in the City of Baton Rouge, Louisiana, as Paying Agent. Interest on the Series 2015 Bonds (payable June 1, 2016, and semiannually thereafter on each June 1 and December 1) is payable by check mailed to the Beneficial Owners, and, at certain times, at the option of any such Owner of not less than \$1,000,000 in principal amount of Series 2015 Bonds, by wire transfer.

The Series 2015 Bonds are being issued under the General Sewerage Service Revenue Bond Resolution of the Board and the First Supplemental Sewerage Service Revenue Bond Resolution and Second Supplemental Sewerage Service Revenue Bond Resolution thereto, and are secured by and payable solely from Net Revenues of the System on a parity with the City's Sewerage Service Revenue Bonds, Series 2011 (which were issued under a prior lien and were elevated to parity lien status in 2014), and Sewerage Service Revenue and Refunding Bonds, Series 2014, and any other Senior Debt that may be issued in the future. **The Series 2015 Bonds do not constitute a general obligation of the City, and neither the credit nor the taxing power of the City is pledged to the payment thereof, or any part thereof, or to the payment of any interest thereon.**

**The Maturity Schedule for the Series 2015 Bonds appears on the inside cover of this Official Statement.**

The Series 2015 Bonds are offered when, as and if issued by the Issuer and accepted by the Underwriters, subject to prior sale, withdrawal or modification of such offer without notice, and subject to the joint approving opinions of Foley & Judell, L.L.P., McKee Law Firm, L.L.C. and Haley Law Firm, L.L.C., each of New Orleans, Louisiana, Co-Bond Counsel. Certain legal matters will be passed upon for the Underwriters by Squire Patton Boggs (US) LLP, Cleveland, Ohio, and Auzenne & Associates, L.L.C., New Orleans, Louisiana, Co-Underwriters' Counsel. Certain legal matters will be passed upon for the Board by Nolan P. Lambert, New Orleans, Louisiana, special counsel to the Board. It is expected that the Series 2015 Bonds will be delivered in book-entry only form to DTC on or about December 17, 2015, against payment therefor.

Please note that certain information contained herein has been updated to reflect an announcement made by the Mayor of the City and the Federal Emergency Management Agency regarding a final settlement for Hurricane Katrina-related damage to certain infrastructure in the City, including funds for water, sewer and drainage repairs. See "CAPITAL IMPROVEMENT PROGRAM"- Adequacy of Revenues to Finance Proposed Capital Improvements" herein.

**BofA Merrill Lynch**

**Blaylock Beal Van**

**Goldman, Sachs & Co.**

**Morgan Stanley**

**Raymond James**

**RBC Capital Markets**

**Siebert Brandford Shank  
& Co., L.L.C.**

The date of this Official Statement is December 3, 2015. This page and the inside cover page contain information for quick reference only. They are not a summary of this issue. Investors must read the entire Official Statement to obtain information essential to the making of an informed investment decision.

**\$100,000,000**  
**CITY OF NEW ORLEANS, LOUISIANA**  
**SEWERAGE SERVICE REVENUE BONDS,**  
**SERIES 2015**

**MATURITY SCHEDULE**  
**(Base CUSIP No. 647719)**

<b><u>Due June 1</u></b>	<b><u>Amount</u></b>	<b><u>Interest Rate</u></b>	<b><u>Initial Yield</u></b>	<b><u>CUSIPs</u></b>
2021	\$ 2,000,000	5.00%	1.83%	NK5
2022	2,000,000	5.00	2.06	NL3
2023	2,000,000	5.00	2.28	NM1
2024	2,000,000	5.00	2.46	NN9
2025	2,125,000	5.00	2.63	PB3
2026	2,235,000	5.00	2.82*	NP4
2027	2,350,000	5.00	2.93*	NQ2
2028	2,480,000	5.00	3.04*	NR0
2029	2,610,000	5.00	3.14*	NS8
2030	2,735,000	5.00	3.22*	NT6
2031	2,880,000	5.00	3.28*	NU3
2032	3,025,000	5.00	3.33*	NV1
2033	3,695,000	5.00	3.38*	NW9
2034	3,885,000	5.00	3.43*	NX7
2035	4,100,000	5.00	3.48*	NY5

\$23,945,000 5.00% Term Bonds due June 1, 2040, Yield 3.55%\*, CUSIP NZ2  
\$35,935,000 5.00% Term Bonds due June 1, 2045, Yield 3.62%\*, CUSIP PA5

\* Priced to June 1, 2025 par call.

**CUSIP Numbers** © Copyright 2015, American Bankers Association. CUSIP data herein is provided by CUSIP Global Services, which is managed on behalf of the American Bankers Association by S&P Capital IQ., a business line of The McGraw-Hill Companies, Inc. Neither the Issuer nor the Underwriter take any responsibility for the accuracy of the CUSIP numbers, which are included solely for the convenience of the owners of the Series 2015 Bonds. The CUSIP number for a specific maturity is subject to being changed after the issuance of the Series 2015 Bonds as a result of various subsequent actions.

## IMPORTANT NOTICES

This Official Statement is provided in connection with the issuance of the Series 2015 Bonds referred to herein and may not be reproduced or be used, in whole or in part, for any other purpose. The information contained in this Official Statement has been derived from information provided by the Board, the City, the Board of Liquidation and other sources which are believed to be reliable. Additional information, including financial information, concerning the Board, the City, or the Board of Liquidation is available from each entity's respective website. Any such information that is inconsistent with the information set forth in this Official Statement should be disregarded. The information set forth herein concerning the Depository Trust Company ("DTC") has been furnished by DTC, and no representation is made by the Board, the City, the Board of Liquidation or the Underwriters as to the completeness or accuracy of such information.

No dealer, broker, salesperson or other person has been authorized by the Board, the City, the Board of Liquidation or the Underwriters to give any information or to make any representations with respect to this offering, other than as contained in this Official Statement and, if given or made, such other information or representations must not be relied upon as having been authorized by the Board, the City, the Board of Liquidation or the Underwriters. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Series 2015 Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information and expressions of opinion contained herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in such information since the date thereof.

The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their respective responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

THE SERIES 2015 BONDS HAVE NOT BEEN REGISTERED WITH THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION UNDER THE SECURITIES ACT OF 1933, AS AMENDED, IN RELIANCE UPON EXCEPTIONS CONTAINED IN THE ACT. NEITHER THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THE SERIES 2015 BONDS OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS OFFICIAL STATEMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE SERIES 2015 BONDS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

THIS OFFICIAL STATEMENT IS BEING PROVIDED TO PROSPECTIVE PURCHASERS EITHER IN BOUND PRINTED FORM ("ORIGINAL BOUND FORMAT") OR IN ELECTRONIC FORMAT ON THE FOLLOWING WEBSITES: [www.munios.com](http://www.munios.com) and [www.bolcd.com](http://www.bolcd.com). THIS OFFICIAL STATEMENT MAY BE RELIED UPON ONLY IF IT IS IN ITS ORIGINAL BOUND FORMAT OR AS PRINTED IN ITS ENTIRETY DIRECTLY FROM SUCH WEBSITES.

### **Cautionary Statements Regarding Forward-Looking Statements in this Official Statement**

This Official Statement is marked with a dated date and speaks only as of that dated date. Readers are cautioned not to assume that any information has been updated beyond the dated date except as to any portion of the Official Statement that expressly states that it constitutes an update concerning specific recent events occurring after the dated date of the Official Statement. Any information contained in the portion of

the Official Statement indicated to concern recent events speaks only as of its date. The City, the Board of Liquidation and the Board expressly disclaim any duty to provide an update of any information contained in this Official Statement, except as agreed upon by said parties pursuant to the Form of Continuing Disclosure Certificate attached hereto as APPENDIX "G".

The information contained in this Official Statement may include forward-looking statements by using forward-looking words such as "may," "will," "should," "expects," "believes," "anticipates," "estimates," "budgets" or others. The reader is cautioned that forward-looking statements are subject to a variety of uncertainties that could cause actual results to differ from the projected results. Those risks and uncertainties include general economic and business conditions, and various other factors which are beyond the control of the City, the Board of Liquidation and the Board.

This Official Statement contains projections of revenues, expenditures and other matters. Because the City, the Board of Liquidation and the Board cannot predict all factors that may affect future decisions, actions, events or financial circumstances, what actually happens may be different from what is included in forward-looking statements.

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# CITY OF NEW ORLEANS, LOUISIANA

## MAYOR

Mitchell J. Landrieu

## CITY COUNCIL

Jason R. Williams, *Councilmember at Large, President*  
Stacy S. Head, *Councilmember at Large, Vice-President*  
Susan G. Guidry, *Councilmember District "A"*  
LaToya Cantrell, *Councilmember District "B"*  
Nadine Ramsey, *Councilmember District "C"*  
Jared Brossett, *Councilmember District "D"*  
James Austin Gray II, *Councilmember District "E"*

## BOARD OF LIQUIDATION, CITY DEBT

**Mary K. Zervigon**, President  
**Richard P. Wolfe**, Vice President

**Mitchell J. Landrieu**, *ex officio*  
**Jason R. Williams**, *ex officio*  
**Alan C. Arnold**  
**Henry F. O'Connor, Jr.**

**Stacy S. Head**, *ex officio*  
**W. Raymond Manning**  
**Mark M. Moody**

**David W. Gernhauser**, *Secretary*

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

### Board of Directors

Mitchell J. Landrieu, Mayor, President  
Alan C. Arnold  
Robin Barnes  
Marion Bracy  
Tamika Duplessis

Scott Jacobs  
William Raymond Manning, President Pro-Tem  
Kerri Kane  
Joseph Psychaud  
Kimberly Thomas

### Executive Staff

**Cedric S. Grant**, Executive Director  
**Robert K. Miller**, Deputy Director  
**Joseph R. Becker**, General Superintendent

**Madeline F. Goddard**, Deputy General Superintendent  
**Nolan P. Lambert**, Special Counsel

## CONSULTANTS AND ADVISORS

**Co-Bond Counsel**

**Foley & Judell, L.L.P.**  
**Haley Law Firm, L.L.C.**  
**McKee Law Firm, L.L.C.**

**Consulting Engineer**

**Black & Veatch**

**Financial Feasibility Consultant**

**Raftelis Financial Consultants, Inc.**

**Auditors, Sewerage and Water Board**

**Postlethwaite & Netterville, APAC**

**Auditors, Board of Liquidation, City Debt**

**Paciera, Gautreau & Priest, LLC**

**Legal Counsel, Board of Liquidation, City Debt**

**Beirne, Maynard & Parsons, L.L.P.**

**Co-Financial Advisors, Board of Liquidation, City Debt**

**Public Financial Management, Inc.**  
**CLB Porter, LLC**

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# OFFICIAL STATEMENT

**\$100,000,000**

## **CITY OF NEW ORLEANS, LOUISIANA SEWERAGE SERVICE REVENUE BONDS, SERIES 2015**

### INTRODUCTION

#### **General**

This Official Statement, including the cover page and the appendices hereto (the “Official Statement”), of the City of New Orleans, Louisiana (the “Issuer” or the “City”), provides information with respect to the referenced Sewerage Service Revenue Bonds, Series 2015 (the “Series 2015 Bonds”). The Series 2015 Bonds are being issued by the City, for and on behalf of the Sewerage and Water Board of New Orleans (the “Board”) pursuant to the Act (hereinafter defined) and pursuant to the General Sewerage Service Revenue Bond Resolution adopted by the Board on May 21, 2014 (the “General Bond Resolution”), the First Supplemental Sewerage Service Revenue Bond Resolution (the “First Supplemental Resolution”) also adopted by the Board on May 21, 2014 and the Second Supplemental Sewerage Service Revenue Bond Resolution adopted by the Board on October 21, 2015 (the “Second Supplemental Resolution” and, together with the General Bond Resolution and the First Supplemental Resolution, herein defined as the “Bond Resolution”). The General Bond Resolution and First Supplemental Resolution were approved by the Council of the City of New Orleans (the “City Council”) by resolution adopted on June 5, 2014, and by the Board of Liquidation, City Debt (the “Board of Liquidation”) by resolution adopted on May 29, 2014. The Second Supplemental Resolution was approved by the City Council by resolution adopted on November 5, 2015, and by the Board of Liquidation by resolution adopted on November 18, 2015.

Capitalized terms used in this Official Statement and not otherwise defined herein shall have the meanings ascribed thereto in APPENDIX E - “GENERAL BOND RESOLUTION - Definitions” attached hereto. Reference in this Official Statement to owner, holder, registered owner, Series 2015 Bondholder or Series 2015 Bond owner means the registered owner of the Series 2015 Bonds determined in accordance with the Bond Resolution.

The Series 2015 Bonds are being issued in the name of the City, for and on behalf of the Board, an independent board of the City created by state statute and charged with maintaining and operating a public sanitary sewerage system (the “Sewerage System”), a water treatment and distribution system (the “Water System”), and a drainage system (the “Drainage System”) for the City. The Series 2015 Bonds are being issued for the benefit of the Sewerage System.

The Series 2015 Bonds are being sold by the Board of Liquidation, a body corporate created by the Louisiana Legislature in 1880 and which serves as custodian to several agencies of the City, including the Board. Pursuant to State statute, the Board of Liquidation is responsible for fixing the details of the Series 2015 Bonds and is also responsible for holding, investing and distributing bond proceeds, debt service funds and reserve funds and for paying principal of and interest on the Series 2015 Bonds solely from Net Revenues transferred monthly to the Board of Liquidation by the Board.

This Official Statement includes brief descriptions of the Issuer, the Board, the Board of Liquidation, the Series 2015 Bonds, the Bond Resolution, the Act (hereinafter defined), and other proceedings. Such descriptions and the summaries of and references to all documents, statutes, reports and other instruments referred to herein do not purport to be comprehensive or definitive, and each such document, statute, report or instrument is qualified in its entirety by reference to each such document, statute, report or instrument, copies of which are available from the Board. All references to the Series 2015 Bonds are qualified in their entirety by reference to the definitive forms thereof and the information with respect

thereto contained in the General Bond Resolution. Insofar as any statements are made in this Official Statement involving matters of opinion, regardless of whether expressly so stated, they are intended merely as such and not as representations of fact.

Additional information about the Issuer is included in APPENDIX "A" hereto. The Comprehensive Annual Financial Report of the Board for the year ended December 31, 2014, is included in APPENDIX "B". The Engineering Report for the Sewerage System by Black & Veatch Corporation (the "Consulting Engineer's Report") is included in APPENDIX "C". The Financial Feasibility Report for the Sewerage System by Raftelis Financial Consultants, Inc. (the "Financial Feasibility Report") is included in APPENDIX "D". The form of the joint legal opinion of Foley & Judell, L.L.P., McKee Law Firm, L.L.C. and Haley Law Firm, L.L.C., each of New Orleans, Louisiana, Co-Bond Counsel, is included in APPENDIX "F" hereto.

The information in this Official Statement is subject to change without notice, and neither the delivery of this Official Statement, nor any sale made hereunder shall under any circumstances create an implication that there has been no change in the affairs of the Board since the date hereof. This Official Statement is not to be construed as a contract or agreement between the Board, the City or the Underwriters and the purchasers or owners of any of the Series 2015 Bonds.

Inquiries regarding information about the Board and the financial matters contained in this Official Statement may be directed to the Executive Director or Deputy Director of the Board at (504) 585-2202.

### **Water Revenue Bonds**

For an explanation of the bonds to benefit the Water System of the Board being issued concurrently with the issuance of the Series 2015 Bonds, see "DEBT STATEMENT - Revenue Bonds of the Board" herein.

### **Authorization and Purpose of the Series 2015 Bonds**

Pursuant to the Second Supplemental Resolution, the Board authorized the issuance and sale of the Series 2015 Bonds in an aggregate principal amount not to exceed \$100,000,000 for the purpose of: (i) paying the costs of extensions, improvements, enlargements, betterments, alterations, renewals and replacements to the sewerage system of the City, including land, equipment and other real or personal properties; (ii) funding a deposit to the debt service reserve fund and other reserve funds as required; and (iii) paying the costs of issuance of the Series 2015 Bonds. See "CAPITAL IMPROVEMENT PROGRAM - Proposed Capital Improvement Program" herein.

## **SECURITY AND SOURCE OF PAYMENT**

The Series 2015 Bonds are special and limited obligations of the City and are authorized by Section 4121 of Title 33, and Part XIV, Chapter 4 of Title 39, of the Louisiana Revised Statutes of 1950, as amended (the "Act") and other statutory and constitutional authority, and the Bond Resolution. The City issued its Sewerage Service Revenue Bonds, Series 2011 (the "Series 2011 Bonds") on November 22, 2011, as subordinate lien bonds pursuant to a prior bond resolution of the Board. The City issued its Sewerage Service Revenue and Refunding Bonds, Series 2014 (the "Series 2014 Bonds" and together with the Series 2011 Bonds, the "Outstanding Parity Bonds") on July 2, 2014, pursuant to the General Bond Resolution and the First Supplemental Bond Resolution. Upon the issuance of the Series 2014 Bonds, the Series 2011 Bonds were, by their terms, elevated to parity lien status with the Series 2014 Bonds. The Series 2015 Bonds are being issued on a parity with the Outstanding Parity Bonds.

As of December 2, 2015, \$7,755,000 of the Series 2011 Bonds and \$147,765,000 of the Series 2014 Bonds were outstanding.

The General Bond Resolution also permits Other Senior Parity Indebtedness to be secured on a parity with Bonds and the Outstanding Parity Bonds and permits Subordinate Debt to be secured on a basis subordinate to the Bonds and the Outstanding Parity Bonds. The Series 2015 Bonds, the Outstanding Parity Bonds and any Other Senior Parity Indebtedness are collectively referred to herein as the "Bonds."

### **Pledge of Net Revenues**

The Series 2015 Bonds are payable solely from and secured, on a parity with the Outstanding Parity Bonds, by the Net Revenues of the Sewerage System and certain funds and accounts held under the General Bond Resolution. As defined in the General Bond Resolution, "Net Revenues" means, for any period of computation, Revenues less Operating Expenses for that period. For the General Bond Resolution's definitions of "Revenues" and "Operating Expenses," see APPENDIX "E" - GENERAL BOND RESOLUTION - Definitions attached hereto.

The Series 2015 Bonds do not constitute a general obligation of the City, and neither the credit nor the taxing power of the City is pledged to the payment thereof, or any part thereof, or to the payment of any interest thereon. The revenues of the Water System and the Drainage System are not pledged as security for the payment of the Series 2015 Bonds.

### **Special Funds and Application of Revenues**

The General Bond Resolution establishes the following Funds and Accounts to be held by the Board of Liquidation (each such Fund or Account is subject to the lien of the Bond Resolution):

a. Debt Service Fund, in which there shall be established an Interest Account, a Principal Account and a Sinking Fund Account, and a separate subaccount in each Account with respect to (i) all Series of Common Debt Service Reserve Secured Bonds (including the Outstanding Parity Bonds and the Series 2015 Bonds), (ii) each Series of Separately Secured Debt Service Reserve Fund Bonds and (iii) each incurrence of Senior Parity Indebtedness;

b. Debt Service Reserve Fund, in which there shall be established (i) a Series Debt Service Reserve Account for all Series of Common Debt Service Reserve Secured Bonds (including the Outstanding Parity Bonds and the Series 2015 Bonds), and (ii) as applicable, a Series Debt Service Reserve Account for each Series of Bonds that has a Separate Series Debt Service Reserve Requirement;

c. Subordinate Debt Service Fund;

d. Subordinate Debt Service Reserve Fund;

e. Redemption Fund; and

f. Construction Fund.

In addition, the General Bond Resolution establishes the following Funds to be held by the Board (unless otherwise noted, each such Fund is subject to the lien of the Bond Resolution):

- Revenue Fund;
- Operating Fund (not subject to the lien of the Bond Resolution);
- Operating Reserve Fund;
- Rate Stabilization Fund; and
- Sewerage System Fund.

Pursuant to the General Bond Resolution, all Revenues shall be deposited in the Revenue Fund to be held by the Board; provided, however, that upon an Event of Default, the Board will transfer all amounts in all Board-held funds (other than the Operating Fund) to the Board of Liquidation, and the Board of Liquidation shall hold such moneys in trust for the Holders.

No later than the 20th day of each month, the Board shall transfer from the Revenue Fund to the Operating Fund an amount sufficient to pay Operating Expenses incurred during such month. Thereafter, Net Revenues shall be disbursed no later than the 20th day of each month in the following order (except that no distinction or preference shall exist in making the required deposits of Net Revenues in the Interest Account, the Principal Account or the Sinking Fund Account of the Debt Service Fund, such accounts being on a parity with each other as to payment from Net Revenues):

i. To the subaccounts in the Interest Account of the Debt Service Fund for each Series of Bonds or Other Senior Parity Indebtedness (if issued under a Supplemental Resolution), an amount equal to 1/6 of the amount falling due on the next interest payment date for such Series of Bonds or Other Senior Parity Indebtedness (if issued under a Supplemental Resolution).

ii. To the subaccounts of the Principal Account of the Debt Service Fund for each Series of Bonds or Other Senior Parity Indebtedness (if issued under a Supplemental Resolution), an amount equal to 1/12 of the amount falling due on the next principal payment date or sinking fund redemption date, or such other proportionate amount as shall be necessary to ensure monthly deposits for the payment in full of principal when due with respect to each Series of Bonds and Other Senior Parity Indebtedness (if issued under a Supplemental Resolution).

iii. To the applicable Account of the Debt Service Reserve Fund for each Series of Bonds the amounts, if any, necessary to restore the amount of deposit therein to the related Series Debt Service Reserve Requirement or reimburse the provider of any Credit Facility deposited in the Debt Service Reserve Fund.

iv. To the Subordinate Debt Service Fund with respect to each Subordinate Debt issue, the amounts equal to the deposits to such Funds and Accounts therein required by the related Supplemental Resolution or other documents evidencing such debt.

v. To the Subordinate Debt Service Reserve Fund with respect to each Subordinate Debt issue the amounts, if any, necessary to restore the amount on deposit therein to the related Subordinate Debt Debt Service Reserve Requirement.

vi. To the Operating Reserve Fund, the amounts, if any, necessary to restore the amounts on deposit therein to the Operating Reserve Requirement, which requirement shall be funded within 24 months of any withdrawal and replenished by depositing 1/24 of the Operating Reserve Requirement on the last Business Day of each month after such withdrawal, as necessary.

vii. To the Sewerage System Fund, any moneys remaining in the Revenue Fund after the transfers required by (i) through (vi) above have been made. To the extent that moneys in the Debt Service Fund are insufficient to make the required principal and interest payments on Senior Debt, then moneys in the Sewerage System Fund, the Operating Reserve Fund, the Subordinate Debt Service Fund, any Subordinate Debt Service Reserve Fund, and the Debt Service Reserve Fund, in that order, shall be used to cure any such deficiencies. If not needed to cure any deficiencies, moneys in the Sewerage System Fund may be used for any authorized purpose. Notwithstanding the foregoing, moneys on deposit in the Sewerage System Fund shall be used:

- a. on January 15 and July 15 of each year through July 15, 2026, to pay an amount to the Board of Liquidation necessary to make principal and interest payments related to CEA GO Zone Indebtedness; and
- b. to make required DPW Payments, when due.

For more information regarding the General Bond Resolution's treatment of each of the above Funds (and, if applicable, the accounts therein), the required deposits to the Funds, and the required or permitted use of the moneys in the Funds, see APPENDIX "E" - GENERAL BOND RESOLUTION - Revenues and Funds attached hereto.

### **Debt Service Reserve Fund**

The General Bond Resolution establishes a Debt Service Reserve Fund that is held by the Board of Liquidation. The Series 2015 Bonds will constitute Common Debt Service Reserve Secured Bonds under the General Bond Resolution. As a result of that designation, the payment of principal of and interest on the Series 2015 Bonds is further secured, together with any Additional Bonds that are also Common Debt Service Reserve Secured Bonds, by a Series Debt Service Reserve Account in the Debt Service Reserve Fund required to be funded at the Common Debt Service Reserve Requirement, which is the least of (i) 10% of the aggregate original stated Principal Amount of all Common Debt Service Reserve Secured Bonds (provided that if any Common Debt Service Reserve Secured Bonds have more than a *de minimis* (2%) amount of original issue discount or premium, the issue price of such Common Debt Service Reserve Secured Bonds (net of pre-issuance accrued interest) is used to measure the 10% limitation in lieu of its stated Principal Amount), (ii) the maximum amount of aggregate Annual Debt Service on all Common Debt Service Reserve Secured Bonds in any Fiscal Year, or (iii) 125% of average aggregate Annual Debt Service on all Common Debt Service Reserve Secured Bonds.

The Supplemental Resolution for any Series of Additional Bonds may designate those Bonds as either Common Debt Service Reserve Secured Bonds or as Separate Series Debt Service Reserve Secured Bonds with a Separate Series Debt Service Reserve Requirement. The holders of Separate Series Debt Service Reserve Secured Bonds will have no right to or claim on the Series Debt Service Reserve Account for the Common Debt Service Reserve Secured Bonds.

### **Rate Covenant and Financial Forecast**

The General Bond Resolution includes the Board's Rate Covenant, pursuant to which the Board is obligated to fix, charge, collect and revise rates, fees and other charges for the use of, and the services furnished by, the Sewerage System sufficient to cause Rate Covenant Net Revenues (i.e., Net Revenues inclusive of transfers from the Rate Stabilization Fund to the Revenue Fund, but exclusive of transfers to the Rate Stabilization Fund from the Revenue Fund) to meet the following three independent requirements of the General Bond Resolution:

- Rate Covenant Net Revenues shall be sufficient in each Fiscal Year (the "Tested Fiscal Year") to pay (i) the amount required to pay Annual Debt Service on Senior Debt in such Fiscal Year, (ii) any amount necessary to be deposited in any Series Debt Service Reserve Account to restore the amount on deposit therein to the applicable Series Debt Service Reserve Requirement, (iii) the amount required to pay Annual Debt Service on Subordinate Debt in such Fiscal Year (including reserves in connection therewith and the required restoration thereof), (iv) any amount necessary to be deposited in the Operating Reserve Fund to maintain the required balances therein and (v) all other amounts which the Board may by law or contract be obligated to pay.
- Rate Covenant Net Revenues shall be sufficient in each Fiscal Year to be at least equal to each of the following: (i) 125% of the Annual Debt Service with respect to Senior Debt for such Fiscal Year; and (ii) 110% of the aggregate Annual Debt Service with respect to Senior Debt and Subordinate Debt for such Fiscal Year.
- Rate Covenant Net Revenues excluding transfers from the Rate Stabilization Fund to the Revenue Fund (as provided in the General Bond Resolution) and the proceeds of Grants shall at least equal 100% of Annual Debt Service on Senior Debt and Subordinate Debt for such Fiscal Year.

In the event a failure by the Board to meet the Rate Covenant becomes an Event of Default, the Board of Liquidation is empowered by statute to compel the application of such rates and charges by appropriate judicial proceedings. For more detailed description of the Rate Covenant and of the consequences of the Board's failure to meet the Rate Covenant for any fiscal year, see APPENDIX "E" - GENERAL BOND RESOLUTION - Revenues and Funds attached hereto.

Financial information, including projections and projected debt service coverage levels, are included in "FINANCIAL OPERATIONS - Historical Financial Operations; - Projected Financial Operations; - Debt Service Requirements."

### **Additional Bonds and Other Parity Senior Indebtedness**

Additional Bonds may be issued from time to time for the benefit of the Sewerage System. Any Additional Bonds shall be issued pursuant to the terms of the General Bond Resolution, and as authorized by a Supplemental Resolution. Before the issuance and authentication of any such Additional Bonds, the General Bond Resolution requires the Board to deliver various documents to the Board of Liquidation, including a certificate of (i) a Qualified Independent Consultant, stating that based on the Board's financial records for a Test Period, the Board would have been able to meet the Rate Covenant, taking into account (a) the maximum Annual Debt Service on the proposed Series of Additional Bonds in the current or any future Fiscal Year, (b) the Additional Net Revenues from the rates, fees and other charges adjusted to reflect any rate increases that had not been in effect throughout the Test Period but that have been approved by the Board, the Board of Liquidation, and the City at the time of the delivery of the proposed Series of Additional Bonds to go into effect within the following five years; and (c) additional Net Revenues that the Board may realize from the addition to the Sewerage System of the assets it proposes to finance through the issuance of the proposed Series of Additional Bonds or other funding sources within the following five years, or (ii) an Authorized Officer of the Board stating that, based on the Board's financial records for a Test Period, the Board would have been able to meet the Rate Covenant, taking into account the maximum annual Debt Service on the proposed Series of Additional Bonds in the current or any future Fiscal Year. In making such certifications, the Authorized Officer of the Board or the Qualified Independent Consultant shall determine and utilize the Additional Indebtedness Test Net Revenues in place of the Rate Covenant Net Revenues in determining whether the Board would have been able to meet the Rate Covenant.

As part of the Board's Capital Improvement Program, the Board anticipates the issuance of Additional Bonds. For a discussion of the Capital Improvement Program and the sources from which the Board anticipates funding costs of the Capital Improvement Program, see "CAPITAL IMPROVEMENT PROGRAM" herein.

For a more detailed description of the General Bond Resolution's requirements and conditions for the issuance of Additional Bonds and for the issuance or incurrence of Other Senior Parity Indebtedness or Subordinate Debt, see APPENDIX "E" - GENERAL BOND RESOLUTION - Issuance of Bonds - Conditions for Issuing Bonds attached hereto.

### **Security Interest**

The Board in the Bond Resolution pledges the Net Revenues of the Sewerage System and certain funds and accounts held under the General Bond Resolution as security for the Bonds. See "SECURITY AND SOURCE OF PAYMENT - Pledge of Revenues" herein. Pursuant to Section 39:1430.1 of the Louisiana Revised Statutes of 1950, as amended, the Net Revenues of the Sewerage System so pledged and then or thereafter received by the Board, the Board of Liquidation, the Issuer or the Paying Agent (hereinafter defined) shall be subject to the lien of such pledge. The lien of the Bondholders on the Net Revenues of the Sewerage System is a first priority lien, and no filing is required under Chapter 9 of the Uniform Commercial Code as enacted in the State of Louisiana.

## SOURCES AND USES OF FUNDS

The sources and uses of the proceeds of the Series 2015 Bonds are as follows:

<b>SOURCES</b>	
Bond Principal	\$100,000,000.00
Original Issue Premium	<u>12,826,409.80</u>
Total	<u>\$112,826,409.80</u>

<b>USES</b>	
Deposit to Construction Fund	\$104,193,022.30
Deposit to Series Debt Service Reserve Account	7,907,860.00
Costs of Issuance*	<u>725,527.50</u>
Total	<u>\$112,826,409.80</u>

\* Includes legal and required fees, underwriters' discount and other issuance costs.

## THE SERIES 2015 BONDS

### Authority for Issue

The Series 2015 Bonds are authorized under the provisions of the Act, and other constitutional and statutory authority.

### Purchase of Series 2015 Bonds

The Series 2015 Bonds are being purchased by Merrill Lynch, Pierce, Fenner & Smith Incorporated, as senior managing underwriter; Blaylock Beal Van, LLC; Goldman, Sachs & Co.; Morgan Stanley & Co., LLC; Raymond James & Associates, Inc.; RBC Capital Markets, LLC; and Siebert Brandford Shank & Co., L.L.C. as co-managing underwriters (collectively, the "Underwriters"). See "UNDERWRITING" herein.

### Form of Series 2015 Bonds

The Series 2015 Bonds are being issued as fully registered bonds in "book-entry only" form and registered in the name of Cede & Co., as nominee of DTC, in the denomination of \$5,000 or any integral multiple in excess thereof. See "THE SERIES 2015 BONDS - Book-Entry Only System" herein.

### Book-Entry Only System

The Series 2015 Bonds will be issued in fully registered form and, when issued, will be held by DTC or its nominee, as securities depository with respect to the Series 2015 Bonds. Individual purchases of interests in the Series 2015 Bonds will be made in book-entry form only, in the principal amount of \$5,000 or any integral multiple thereof. Individual purchasers will not receive physical delivery of bond certificates. So long as Cede & Co. is the registered owner of the Series 2015 Bonds as nominee of DTC, references herein to the holders or registered owners of the Series 2015 Bonds will mean Cede & Co. and will not mean the beneficial owners of the Series 2015 Bonds. Beneficial interests in the Series 2015 Bonds may be held through DTC directly as a participant or indirectly through organizations that are participants in such system. See APPENDIX "H" - DTC BOOK-ENTRY ONLY SYSTEM attached hereto.

As long as the Series 2015 Bonds are held by DTC or its nominee, interest will be paid to Cede & Co., as nominee of DTC, in same-day funds on each Interest Payment Date. If the book-entry only system is discontinued, bond certificates will be delivered as described in the Indenture, and Beneficial Owners (as defined herein) will become registered owners of the Series 2015 Bonds (the "Bondholders").

If the book-entry only system is discontinued, interest on the Series 2015 Bonds shall be payable on each Interest Payment Date by check or draft mailed to the registered owner at the address as it appears on the 15th day of the month preceding an Interest Payment Date on the registration books kept by the Paying Agent.

Neither the Board, the Board of Liquidation, the City, the Paying Agent nor the Underwriters will have any responsibility or obligation to the Participants, DTC or the persons for whom they act with respect to (i) the accuracy of any records maintained by DTC or by any Direct or Indirect Participant of DTC, (ii) payments or the providing of notice to Direct Participants, the Indirect Participants or the beneficial owners, (iii) the selection by DTC or by any Direct or Indirect Participant of any beneficial owner to receive payment in the event of a partial redemption of the Series 2015 Bonds or (iv) any other action taken by DTC or its partnership nominee as owner of the Series 2015 Bonds. For more information on DTC and the book-entry only system, see APPENDIX “H” - DTC BOOK-ENTRY ONLY SYSTEM attached hereto.

For information relating to the treatment of the Series 2015 Bonds if the book-entry only system is terminated, see APPENDIX “E” - General Bond Resolution - Registration and Transfer of Bonds; Persons Treated as Owners attached hereto.

### **Place of Payment**

Principal of and interest on the Series 2015 Bonds is payable by check or draft or by wire transfer by Whitney Bank, Baton Rouge, Louisiana, or any successor paying agent (the “Paying Agent”), to Cede & Co.

### **Payment of Interest**

Interest on the Series 2015 Bonds is payable on June 1, 2016, and semiannually thereafter on June 1 and December 1 of each year (each an “Interest Payment Date”), with interest falling due on and prior to maturity to be payable by check or by wire transfer by the Paying Agent to DTC in accordance with the terms of the DTC Representation Letter.

During any period after the initial delivery of the Series 2015 Bonds in book-entry only form when such Series 2015 Bonds are delivered in multiple certificate form, upon request of a registered owner of at least \$1,000,000 in principal amount of Series 2015 Bonds outstanding, all payments of principal and interest on such Series 2015 Bonds will be paid by wire transfer in immediately available funds to an account designated by such registered owner; CUSIP number identification with appropriate dollar amounts for each CUSIP number will accompany all payments of principal and interest, whether by check or by wire transfer.

### **Redemption Provisions**

*Optional Redemption.* Those Series 2015 Bonds maturing June 1, 2026, and thereafter, are callable for optional redemption at the option of the Board of Liquidation, at the request of the Board, in full or in part at any time on or after June 1, 2025, at a redemption price equal to 100% of the principal amount of the Series 2015 Bonds to be redeemed, together with accrued interest to the date fixed for redemption. The maturities of the Series 2015 Bonds to be redeemed shall be selected by the Board of Liquidation in its discretion.

In the event of redemption of fewer than all the outstanding Series 2015 Bonds of like maturity, such Series 2015 Bonds shall be redeemed by lot or in such other manner as shall be deemed fair and equitable by the Paying Agent for random selection.

*Mandatory Sinking Fund Redemption.* The Series 2015 Bonds maturing on June 1, 2040 are subject to mandatory redemption prior to maturity in part by lot in such manner as may be designated by the Board of Liquidation at the principal amount of such Series 2015 Bonds to be redeemed, plus accrued interest thereon to the date of redemption, at a redemption price of par, on June 1 of the following years and in the following amounts:

<b><u>Year</u></b> <b><u>(June 1)</u></b>	<b><u>Principal</u></b> <b><u>Amount</u></b>
2036	\$4,315,000
2037	4,540,000
2038	4,775,000
2039	5,025,000
2040*	5,290,000

\* *Final Maturity.*

The Series 2015 Bonds maturing on June 1, 2045 are subject to mandatory redemption prior to maturity in part by lot in such manner as may be designated by the Board of Liquidation at the principal amount of such Series 2015 Bonds to be redeemed, plus accrued interest thereon to the date of redemption, at a redemption price of par, on June 1 of the following years and in the following amounts:

<b><u>Year</u></b> <b><u>(June 1)</u></b>	<b><u>Principal</u></b> <b><u>Amount</u></b>
2041	\$5,565,000
2042	5,855,000
2043	6,165,000
2044	6,485,000
2045*	11,865,000

\* *Final Maturity.*

## **Notice of Redemption**

In the event a Series 2015 Bond to be redeemed is of a denomination larger than \$5,000, a portion of such Series 2015 Bond (or any integral multiple of \$5,000 in excess thereof) may be redeemed. Any Series 2015 Bond which is to be redeemed only in part may be surrendered at the principal corporate trust office of the Paying Agent and there shall be delivered to the Owner of such Series 2015 Bond a new Series 2015 Bond or Series 2015 Bonds of the same maturity and of any authorized denomination or denominations as requested by such Owner in aggregate principal amount equal to and in exchange for the unredeemed portion of the principal of the Series 2015 Bond so surrendered. All notices of redemption shall state (i) the redemption date; (ii) the redemption price; (iii) if fewer than all the Series 2015 Bonds are to be redeemed, the identifying number (and in the case of partial redemption, the respective principal amounts) and CUSIP number of the Series 2015 Bonds to be redeemed; (iv) that on the redemption date the redemption price will become due and payable on each such Series 2015 Bond and interest thereon will cease to accrue thereon from and after said date; and (v) the place where such Series 2015 Bonds are to be surrendered for payment. Official notice of such call of any of the Series 2015 Bonds for redemption shall be given by means of first-class mail, postage prepaid, by notice deposited in the United States mails not fewer than thirty (30) days prior to the redemption date addressed to the registered owner of each Series 2015 Bond to be redeemed at his address as shown on the registration books maintained by the Paying Agent.

In the case of an optional redemption, the notice may state (i) that it is conditioned upon the deposit of moneys, in an amount equal to the amount necessary to effect the redemption, with the Paying Agent no later than the redemption date, or (ii) that the Board of Liquidation retains the right to rescind such notice at any time prior to the scheduled redemption date if the Board of Liquidation delivers a certificate of an Authorized Officer to the Paying Agent instructing the Paying Agent to rescind the redemption notice (in either case, a “Conditional Redemption”), and such notice and optional redemption shall be of no effect

if such moneys are not so deposited or if the notice is rescinded as described herein. The Paying Agent shall give prompt notice of such rescission to the affected Bondholders. Any Bonds subject to Conditional Redemption where redemption has been rescinded shall remain Outstanding, and the rescission shall not constitute an Event of Default. Further, in the case of a Conditional Redemption, the failure of the Board of Liquidation to make funds available in part or in whole on or before the redemption date shall not constitute an Event of Default.

Any notice mailed or provided herein shall conclusively be presumed to have been given whether or not actually received by any Bondholder. Failure to give such notice or any defect therein shall not affect the validity of the redemption proceedings.

### **Purchase of Bonds by the Board or the Board of Liquidation**

The Board or the Board of Liquidation may purchase or cause to be purchased any Bonds of any particular Series or maturity in lieu of redemption of such Bonds (in which event any Bonds so purchased shall be cancelled and shall cease to bear interest as provided in the General Bond Resolution) or for any other purpose pursuant to written instructions given by the Board or Board of Liquidation to the Paying Agent. Such purchases shall be made in such manner as directed by the Board or Board of Liquidation. The Board, the Board of Liquidation or the Paying Agent shall pay the purchase price of such Bonds together with accrued interest thereon from such funds as may be available therefor pursuant to the General Bond Resolution, any Supplemental Resolution, or as otherwise may be made available by the Board or the Board of Liquidation.

### **Provisions for Transfer, Registration and Assignment**

The Series 2015 Bonds may be transferred, registered and assigned only on the registration books of the Paying Agent, and such registration shall be at the expense of the Issuer. A Series 2015 Bond may be assigned by the execution of an assignment form on such Series 2015 Bonds or by other instruments of transfer and assignment acceptable to the Paying Agent. A new Series 2015 Bond or Series 2015 Bonds will be delivered by the Paying Agent to the last assignee (the new registered owner) in exchange for such transferred and assigned Series 2015 Bonds after receipt of such Series 2015 Bonds to be transferred in proper form. Such new Series 2015 Bond or Series 2015 Bonds must be in the denomination of \$5,000 or any integral multiple in excess thereof within a single maturity. Neither the Board of Liquidation nor the Paying Agent shall be required to issue, register the transfer of, or exchange (i) any Series 2015 Bond during a period beginning at the opening of business on the 15th day of the month next preceding an Interest Payment Date and ending at the close of business on the Interest Payment Date, or (ii) any Series 2015 Bond called for redemption prior to maturity during a period beginning at the opening of business fifteen (15) days before the date of the mailing of a notice of redemption of such Series 2015 Bonds and ending on the date of such redemption.

### **Covenants of the Board**

In addition to the Rate Covenant described above under "SECURITY AND SOURCES OF PAYMENT - Rate Covenant and Financial Forecast," the Board makes other covenants in the General Bond Resolution, including the following:

*Payment of Indebtedness; Limited Obligations.* The Board and the Board of Liquidation shall promptly pay or cause to be paid when due the principal of (whether at maturity, by acceleration, call for redemption or otherwise) premium, if any, and interest on the Indebtedness, including the Series 2015 Bonds, at the places, on the dates and in the manner, but only from the sources, provided in the General Bond Resolution.

*Limitations on Indebtedness.* The Board shall not issue any bonds, notes or other obligations that shall be secured by a pledge of Net Revenues (i) senior to the pledge of Net Revenues securing the Senior Debt, (ii) except in compliance with the General Bond Resolution, on a parity with the pledge of Net Revenues securing the Senior Debt, or (iii) except in compliance with the General Bond Resolution, subordinate to the pledge of Net Revenues securing the Senior Debt.

*Operation and Maintenance.* The Board shall maintain and operate the Sewerage System in an efficient and economical manner, shall maintain the same in good repair and sound operating condition and shall make all necessary repairs, replacements and renewals.

*Free Service, Competing Service, Billing and Enforcement Charges:*

i. The Board shall not permit connections to or use of the Sewerage System or provide any services of the Sewerage System without making a charge therefor in accordance with the Board's schedule of rates, fees and charges for the Sewerage System other than those connections, use or services already in existence or as may be required by law.

ii. The Board shall not provide, grant any franchise to provide or give consent for anyone else to provide any services which would compete with the Sewerage System unless the Board determines that such franchise or provision of services would provide services that the Board has determined are not in its best interest to provide and would not materially impair the interests of the holders of Indebtedness.

iii. The Board shall bill customers for the services of the Sewerage System on a regular basis.

iv. If any rates, fees or other charges for the use of or for the services furnished by the Sewerage System shall not be paid after the same shall become due and payable, the Board shall, to the extent permitted by applicable laws and regulations, disconnect the premises from the Sewerage System or otherwise suspend service to such premises until such delinquent rates, fees or other charges and any interest, penalties or charges for reconnection of service to such delinquent customer shall have been paid in accordance with law, the policies of the Board, or a payment plan with respect to such amounts has become effective.

*Capital Budget.* The Board shall annually adopt a multi-year financial plan for capital expenses encompassing at least the forthcoming five fiscal years.

The General Bond Resolution also includes detailed covenants regarding: sale or encumbrance of the Sewerage System; insurance; damage, destruction, condemnation and loss of title; records and accounts; and inspections and reports. For the full text of all the foregoing covenants and other covenants in the General Bond Resolution, see APPENDIX "E" - General Bond Resolution - Particular Covenants attached hereto.

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

The Board was created by Act 6 of the Louisiana Legislature of 1899 as a special board, independent of the City government to construct, maintain and operate the Water System and the Sewerage System for the City. In 1903, the Legislature gave the Board control of and responsibility for the Drainage System. As affirmed by the decision of the Louisiana Supreme Court in *Roberts v. Sewerage and Water Board*, 634 So.2d 341 (La. 1994), the Board is "an autonomous or self-governing legal entity with respect to the management of its business or function of providing water, sewerage and drainage service to customers in Orleans and other parishes." As such, the Board is legally independent of the City of New Orleans, which has no control over the administration of its activities and finances, except the approval of the City Council and the Board of Liquidation in the case of bond issues and certain rate increases.

## **Board of Directors**

In October 2013, Orleans Parish voters approved a City Charter amendment to reform the governance of the board including requiring professional qualifications, reducing its size, shortening term lengths, and imposing term limits. A selection committee representing local universities and civic associations reviewed the qualifications of Orleans Parish residents who applied for appointment.

The Board is composed of eleven members, which includes the Mayor, two members of the Board of Liquidation appointed by the Mayor on the recommendation of the Board of Liquidation, and eight citizens appointed by the Mayor with the advice and consent of the City Council from a list of nominees provided by the Sewerage and Water Board Selection Committee. Among the two members appointed from the Board of Liquidation and the eight citizen members, there is one member from each councilman's district within the City and two will be "community advocates" with experience as a community advocate, in consumer protection, or a related field. In addition, each member has experience in architecture, environmental quality, finance, accounting, business administration, laws, public health, urban planning facilities management, public administration, science, construction, business management, community or consumer advocacy, or other pertinent fields. Members will serve staggered initial terms and will serve no more than two consecutive four-year terms thereafter. All members serve without pay.

The Mayor is the ex-officio President of the Board and one of the citizen members is elected by the Board to serve as president pro tempore in the absence of the Mayor. The members of the board are:

**Mitchell J. Landrieu**, President, Mayor  
**William Raymond Manning**, President Pro-Tem, Managing Principal, Manning Architects  
**Alan C. Arnold**, Retired Financial Services Executive  
**Robin Barnes**, EVP, Greater New Orleans, Inc.  
**Marion Bracy**, VP Facility Planning, Xavier University  
**Tamika Duplessis**, Ph.D, Professor, Delgado Community College  
**Scott Jacobs**, Insurance Executive, Strategic Comp  
**Kerri Kane**, Counsel, Irwin Fritchie Urquhart & Moore LLC  
**Joseph Peychaud**, President, St. Katharine Drexel Prep  
**Kimberly Thomas**, JD, Project Manager, Jacobs/CSRS

## **Organizational Structure**

The Board appoints and fixes the salaries of the Executive Director, Deputy Director, General Superintendent, Deputy General Superintendent, and Special Counsel who hold office at the pleasure of the Board. The Executive Director exercises general administrative functions and managerial authority over the operations and activities of the Board. The Deputy Executive Director assists and advises the Executive Director, and is responsible for the accounting, budgeting, information systems, customer service, personnel, purchasing, risk management, internal audit, administrative services, and support services departments. The General Superintendent is responsible for the engineering, operations, facility maintenance, networks, environmental affairs and plumbing departments. The Deputy General Superintendent assists the General Superintendent.

Brief biographies of the Executive Director, Deputy Director and General Superintendent follow:

**Cedric S. Grant, Executive Director** (2014 to present). Cedric S. Grant is the new Executive Director of the Board. He is also the immediate past Deputy Mayor of Facilities, Infrastructure and Community Development for the City. In that role he oversaw more than \$1,000,000,000 in capital development projects related to the New Orleans recovery. Previously, Mr. Grant served as Chief Administrative Officer of Ascension Parish, Louisiana where he was responsible for management and

oversight of all governmental operations for Ascension Parish. Mr. Grant also served as Deputy Secretary of the Louisiana Department of Transportation and Development, where he was responsible for the daily operations of the department, public-private partnerships and major economic development capital projects and managed a workforce of 5,000 people and a budget that exceeded \$1.4 billion annually. Mr. Grant has worked in several other distinct appointments in local government and public agencies. He has served as Chief Administrative Officer for the City, Director of Capital Projects for the New Orleans Downtown Development District, and Planning Manager for the Port of New Orleans. A New Orleans native, Mr. Grant is a certified City Manager and holds a Master's Degree in Public Administration from the University of New Orleans and a Bachelor's of Arts Degree in Political Science from Xavier University of Louisiana.

**Robert K. Miller, Deputy Director** (2009 to present). Robert Miller joined the Board in 2009 as Deputy Director following 26 years at the Louisville Water Company where he served as Vice President and Treasurer and one year as a management consultant to the water and wastewater utility industry. He has a Bachelor of Commerce degree in finance from the University of Louisville and a Master of Business Administration degree in finance from Indiana University. He is a member of the American Water Works Association, where he was a QualServe peer reviewer, past chair of the Finance, Accounting, and Management Controls committee, and past vice-chair of the Business Practices Standards committee.

**Joseph R. Becker, General Superintendent** (2008 to present). Joseph Becker has been an employee of the Board for 27 years and has served as General Superintendent since September 2008. He is a registered Civil and Environmental Engineer in the State of Louisiana and graduated with a Bachelor of Science degree in Civil Engineering from the University of New Orleans in 1985. Mr. Becker maintains DHH class IV certifications in Wastewater Collection and Water Distribution and is a member of the American Public Works Association, American Water Works Association and the American Society of Civil Engineers.

### **Employees and Labor Relations**

The total number of authorized positions for the Board for Fiscal Year 2014 was 1,282. As of October 28, 2015, the Board had 1,093 full-time employees. The New Orleans Civil Service Commission established the employment policies for classified Board employees.

Several vacancies exist in a variety of the Board's departments, especially in those departments that require highly educated and skilled personnel. Immediately following Hurricane Katrina, the City Council suspended the Domicile Policy (which requires Board employees to be domiciled within the City of New Orleans) to aid the Board's efforts to fill open positions. The City Council, however, reinstated the Domicile Policy effective January 1, 2013. In the aftermath of the City Council's action to reinstate the Domicile Policy, hiring of certain technical-level positions at the Board has slowed. In an effort to curtail the effect of the reinstated Domicile Policy, the Board actively recruits at local college and university campuses, job fairs, and trade schools.

A significant portion of the Board's leadership and employees are currently eligible to retire or will be within the next five years. Recognizing the importance of maintaining appropriate staffing levels and maintaining and promoting institutional knowledge, the 2015 budget includes 133 additional positions to increase staffing levels and allow for succession planning and knowledge transfer. See APPENDIX "C" - Consulting Engineer's Report attached hereto.

### **Retirement/Pension Plan; Other Postemployment Benefits ("OPEB") Liability**

The Pension Trust Fund, established by the Board pursuant to Section 11:3821 of the Louisiana Revised Statutes of 1950, as amended, administers a defined benefit pension plan for all qualifying full-time employees of the Board. The Board maintains exclusive control over the pension plan through the Pension Committee of the Pension Trust Fund. The pension plan provides retirement, death, and disability benefits to recipients. Such benefits vest, at a minimum level, after ten years of service with the Board, and incrementally increase with each year of service beyond ten years. Employees are eligible to retire and begin

receiving benefits at age 62. Annual benefits paid to retirees are adjusted based on a cost-of-living adjustment based on the increase in the Consumer Price Index for all urban wage earners published by the U.S. Department of Labor; provided, however such adjustment may not exceed 2% on the first \$10,000 of initial retirement benefits paid out to a retiree.

In the year 2000, the Board attained full actuarial funding of its computed pension liability but, due to several plan changes (implemented in accordance with a pension reciprocity agreement with the City), the Board had an unfunded pension liability in the amount of \$20,333,835 on June 19, 2002. As of December 31, 2014, the Board's unfunded actuarial accrued pension liability increased to \$68,629,305. The pension funded ratio is 78.4%. As of December 31, 2014, the Board's net OPEB liability totaled \$61,208,745. As part of its efforts to reduce its unfunded pension and OPEB liabilities, the Board has begun to evaluate employee contribution levels and the method by which it computes average compensation. For more information regarding the Board's pension and OPEB obligations as of December 31, 2014, see APPENDIX "B" - Comprehensive Annual Financial Report of the Sewerage and Water Board attached hereto.

The Board has explored changing the Pension Trust Fund to a defined contribution plan but has taken no official action to implement such a change, and it is not likely any such change will be implemented prior to 2018.

### **Risk Management and Insurance**

The Board operates a Risk Management Department with these responsibilities:

- i. Administration and claims handling functions for the Board's self-insured Workers' Compensation Benefit Fund;
- ii. Administration and claims handling function of the Board's self-insured general liability program;
- iii. Safety inspections, accident review, and safety training for the Board employees;
- iv. Administration and claims handling functions under the Board's \$350,000 self-insured retention for their auto liability claims, in conjunction with the Board's designated independent claims service; and
- v. Enterprise Risk Management throughout the Board, including the identification and recommendation of insurance to be purchased or renewed.

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The Board maintains the following insurance coverages:

Coverage	Policy Limits	Deductible/Retention Per Occurrence
Vehicle Physical Damage Comprehensive	\$18,942,139	\$150,000
Commercial Crime	\$1,000,000	\$5,000
Property Building/Contents Including Terrorism	\$100,000,000	\$15,000,000
Mobile Equipment	\$6,568,829	\$15,000,000
Boiler & Machinery	\$25,000,000	\$15,000,000
Gross Earnings/ Extra Expense	\$9,000,000	\$15,000,000
Automobile Liability	\$5,000,000	\$350,000
Flood	84 separate policies for individual properties up to \$500,000 per property	84 separate policies for individual properties \$10,000 per property
Public Officials/Employees Liability Insurance	\$10,000,000	\$250,000
Fiduciary Liability	\$3,000,000	\$50,000

## THE SEWERAGE SYSTEM

### General

The topography of New Orleans presents unique design and operational challenges for the collection, transportation and treatment of wastewater. The Sewerage System is comprised of two distinct systems which are located on the east and west banks of the Mississippi River (the "East Bank System" and the "West Bank System," respectively).

The Sewerage System serves approximately 380,000 people and covers nearly 86 square miles. The System's capacity is approximately 272 million gallons per day ("MGD") and the total sewage flow of the City averages approximately 142 MGD during dry weather. Sewage undergoes secondary treatment and the effluent, pursuant to U.S. Environmental Protection Agency ("EPA") Permit, is thereafter chlorinated and discharged into the Mississippi River. The resulting sludge is thickened, then dewatered with belt presses and disposed of by incineration.

The collection and treatment systems consist of gravity sewers, lift stations, pump stations, force mains and treatment plants.

### Collection System

The collection system comprises (i) approximately 1,300 miles of gravity lines (lines which do not require an additional force or pressure to convey the wastewater) and (ii) approximately 120 miles of force mains, which convey wastewater under pressure from 83 pump and lift stations.

Sewer lines in the gravity system are primarily constructed of vitrified clay. Lines in the force main system are primarily cast iron, cathodically protected steel and prestressed concrete. The gravity collection and trunk sewers range in size from 4 inches to 84 inches. The 83 pump and lift stations consist of both above and below ground type stations with primarily vertical and horizontal type centrifugal pumps. Seventy-nine of the pumping and lift stations are unmanned; however, the Board maintains a Supervisory Control and Data Acquisition ("SCADA") system for the remote monitoring of sewage pumping stations.

## **Treatment Plants**

***East Bank Treatment Plant.*** The East Bank Treatment Plant is a secondary treatment plant with a dry weather flow capacity of 122 MGD, a wet weather flow capacity of 240 MGD, and a peak weather flow of 191 MGD. In 2013, the plant treated an average flow of approximately 98 MGD. The plant performance is normally well below permit limits, with the maximum effluent flow in 2013 at 191 MGD, and there have been no overflows from the plant into adjacent waterways. The facility consists of a pretreatment unit containing three bar screens, six grit basins, four parallel covered oxygen reactor basins with 32 mechanical agitators and mixers, an on-site cryogenic oxygen generation plant, ten clarifier basins and chlorination facilities. Solids processing include four two-meter belt filter presses for waste sludge dewatering and, fluidized bed incineration. The ash is hauled to a landfill for disposal. A new administration building with a laboratory and a new generator building with a 4MW emergency generator was completed in 2013. Construction is ongoing to increasing the height of the berm surrounding the facility for flood protection. Construction of the East Bank Treatment Plant was funded in part with grants from the EPA under the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. (the "Clean Water Act").

***West Bank Treatment Plant.*** The West Bank Treatment Plant has a dry weather flow capacity of 40 MGD, a wet weather flow capacity of 58 MGD, and a peak flow of 33 MGD and provides secondary sewage treatment for that portion of the City located on the west bank of the Mississippi River. During 2013, the plant treated an average flow of approximately 10.1 MGD. The plant performance is normally well below permit limits, with the maximum effluent flow in 2013 at 33 MGD, and there have been no overflows from the plant into adjacent waterways. This plant consists of four parallel bar screens, two aerated grit basins, three primary clarifiers, two single stage trickling filters, four secondary clarifiers and chlorination facilities. Solids are thickened in a gravity thickener and then hauled to the East Bank WWTP for dewatering and incineration.

Since 1991, the Board has contracted with Veolia Water North America (together with its predecessors and affiliates, "Veolia") to operate the East Bank Treatment Plant and the West Bank Treatment Plant (collectively, the "Treatment Plants").

## **The Consent Decree**

On June 22, 1998, the EPA and the Board, the City, and the State of Louisiana entered into a consent decree (the "Original Consent Decree"), under the jurisdiction of the U.S. District Court for the Eastern District of Louisiana (the "Original Consent Decree"). This document was modified by the Modified Court Decree which was entered into on March 23, 2010 (the "First Modified Consent Decree"), the Second Modified Consent Decree entered into on April 24, 2013 (the "Second Modified Consent Decree") and the Third Modified Consent Decree was lodged in March of 2014 (the "Third Modified Consent Decree" and, together with the First Modified Consent Decree and the Second Modified Consent Decree, the "Modified Consent Decrees"). The EPA, the City, and the State entered into the Modified Consent Decrees, in settlement of litigation resulting from alleged violations of 33 U.S.C. § 1251 et seq. (the "Clean Water Act") and 42 U.S.C. § 7401 et seq. (the "Clean Air Act"). Additional parties to the Consent Decree include (1) the League of Women Voters of New Orleans, (2) the Lake Pontchartrain Basin Foundation, (3) the Orleans Audubon Society, and (4) the Louisiana Environmental Action Network. In the Original Consent Decree, the Board agreed to pay a penalty of \$1.5 million over three (3) years (the last installment was paid in 2000) and perform a Supplemental Environmental Project of \$2 million over five (5) years titled, "Lincoln Beach Water Quality Improvement Plan," which was completed in 2003.

In addition, the Consent Decree requires the Board and the City to perform remedial measures to prevent unauthorized discharges, including: (a) continuous operation of a SCADA system at each pump station within the collection system (except for the McCoy-Darby pump station); (b) seal most cross connections between the Sewerage System and the Drainage System and maintain and monitor valved connections; (c) develop an EPA-approved Preventive Maintenance Program; (d) comply with the EPA-approved Sewer Overflow Action Plan, which the Board developed; (e) comply with the EPA-approved Unauthorized Discharge Tracking and Reporting Plan; (f) complete the Board's comprehensive collection system remedial action program, including (1) evaluation of each basin in the collection system for its condition and capacity in accordance with required study due dates ("CSEs"), (2) preparation of remedial measures action plans ("RMAPs") for each basin (i.e. Lakeview, Central Business District, Gentilly, Uptown, Mid City, Ninth Ward, Carrollton, New Orleans East, and South Shore) in accordance with required due dates, and (3) implementation of construction of EPA-approved RMAPs; (g) complete emergency sewer system assessments ("ESSAs") to identify Hurricane Katrina-related damage in each basin; (h) develop and implement a computerized collection system model; (i) establish a Storm Sewer Monitoring Program; (j) complete implementation of an employee training program submitted to EPA in 1997; (k) continue the public education program and report to EPA on the progress of the program; and (l) issue quarterly and annual status reports to EPA containing a summary of compliance with the above-described activities. For additional information, see "THE SEWERAGE SYSTEM-Proposed Capital Improvements" herein.

The Consent Decree sets forth stipulated penalties ranging from \$500 per day to \$10,000 per day and up to \$25,000 per calendar quarter for the Board's failure to submit timely reports and completed documents, meet RMAP and construction milestones, or satisfy certain other requirements of the Consent Decree.

The Board has completed CSEs and RMAPs for all basins. It has also completed remedial action construction on four of the nine basins. See "CAPITAL IMPROVEMENT PROGRAM" herein.

### **Governmental Regulation**

The Clean Water Act requires that every discharger of pollutants into navigable waters acquire a National Pollution Discharge Elimination System ("NPDES") permit from the EPA, or from a state or interstate agency delegated permit program responsibility by the EPA. NPDES permits control the type and quantity of discharge which will be allowed while the discharger is moving toward compliance with the two-step clean up schedule.

Part 2, Title 30 of the Louisiana Revised Statutes, the "Louisiana Environmental Quality Act," created the Department of Environmental Quality (the "DEQ"). The DEQ has jurisdiction over matters affecting the regulation of air quality, water pollution control, solid waste disposal, radiation, the protection and preservation of scenic rivers and streams, and the management of hazardous waters. The Secretary of the DEQ is authorized to establish pollution standards for waters of the State and to control or prohibit the discharge of polluting substances into State waters and to otherwise promulgate rules and regulations for the protection of the environment.

The Secretary of the DEQ has adopted water quality criteria, approved by the EPA under the Clean Water Act, which regulate the temperature, chemical and bacteriological content of waterways in the State. Specific criteria are established for various zones. The regulations provide that the failure of any stream or other waterway to meet the criteria shall not be the result of the discharge of waste to the water body. Violators are subject to prohibiting orders enforceable in the courts and to criminal penalties. Civil damages are recoverable by the Secretary for violations resulting in the killing of fish or other wildlife or the rendering of a water body unfit to support such wildlife.

The Board has obtained all permits required for the points of discharge of sewage into the Mississippi River. Louisiana Pollutant Discharge Elimination System ("LPDES") permit LA0038105 to discharge treated sanitary wastewater into the Mississippi River from the West Bank WWTP was issued on April 30, 2014 and was effective on June 1, 2014, expiring five (5) years from the effective date of the permit. LPDES permit LA0038091 to discharge treated sanitary wastewater into the Mississippi River for the East Bank WWTP was issued on April 17, 2009 and effective June 1, 2009, expiring five (5) years from the effective date of the permit. A renewal of the permit was submitted to LDEQ six (6) months prior to expiration; therefore LDEQ has granted an administrative extension of the existing permit until a new permit has been issued. See "THE SEWERAGE SYSTEM- Consent Decree" herein.

FOR A FURTHER DESCRIPTION OF VARIOUS MATTERS IMPACTING THE OPERATION OF THE SEWERAGE SYSTEM, SEE APPENDIX "C" - CONSULTING ENGINEER'S REPORT ATTACHED HERETO.

## **CAPITAL IMPROVEMENT PROGRAM**

### **Proposed Capital Improvement Program**

The Board's staff annually prepares a Capital Improvement Program (the "CIP") calling for expenditures, exclusive of prorated interest, for a ten-year budgetary period. The program includes additional sewage treatment, capacity, pumping stations, force mains, sewers, and improvements required by the EPA and the Consent Decree. The new or expanded facilities are necessary to provide for future growth and to provide adequate treatment of the sewerage before it is discharged to the Mississippi River. The proposed Capital Improvement Program shown on the following page, reflects current cost estimates and inflationary trends in construction costs for projects over the next six years, as forecasted by the Board's Financial Consultant. See APPENDIX "D" - Financial Consultant's Feasibility Report attached hereto.

The CIP is managed by the General Superintendent's office. In creating the CIP budget, the General Superintendent's office receives capital project requests from each department of the Board. The requested projects are ranked by a committee consisting of the General Superintendent, Deputy General Superintendent, Chief of Engineering, Chief of Networks, and Planning and Budget. Each project is ranked in order of priority on a scale of 1 to 10, with those assigned a score of 10 being the highest priority projects. The reviewing committee evaluates each requested capital project for factors related to customer service; regulatory compliance; system reliability; system repair/enhancement; operational flexibility; and system growth. Regulatory compliance and system repair/enhancement factors are generally given greater weight. Furthermore, projects already under way, or that have designated sources of funding, will generally receive the highest ranking.

The most recent CIP approved by the Board covers fiscal years 2015-2024; however, the Board recently developed the 2016-2025 CIP for approval by the end of calendar year 2015. The proposed CIP forecast calls for the Board to spend approximately \$439 million (in 2016 dollars) on Sewerage System capital projects in fiscal years 2016-2020. The Board anticipates that approximately \$61 million of such amount will come from external sources (e.g., Federal and State funds) and approximately \$378 million will come from internal sources (e.g., proceeds of bond issues, including the Series 2015 Bonds, and revenue funded capital). See "SECURITY AND SOURCE OF PAYMENT - Additional Bonds and Other Parity Indebtedness" herein. The Board currently anticipates deferring approximately \$122 million (in 2016 dollars) of the CIP over the five-year period.

Projects included in the Sewerage System's CIP include the rehabilitation of the gravity sewer system, the extension and replacement of sewer force mains and gravity mains, extensions and replacements of pump stations and mains work related to the Consent Decree, and normal extensions and replacements to the sewerage treatment plants among other Sewerage System facilities. Key projects in the CIP to be pursued in fiscal years 2016-2020 include:

- Manhole-to-manhole sanitary sewer system replacement at various locations throughout Orleans Parish;
- Restoration of gravity sewer mains by point repairs and Cured in Place Pipe lining at various sites throughout Orleans Parish;
- Installation of sewer mains in City Department of Public Works paving projects; and
- Extensions and replacements of large diameter force mains.

Components of these projects are under way, and expected to continue through the term of the current CIP.

### **Adequacy of Revenues to Finance Proposed Capital Improvements**

Future capital improvements for the Sewerage System will be financed with funds from (i) cash on hand, (ii) the proceeds of Additional Bonds, (iii) Federal Emergency Management Agency (“FEMA”) reimbursements, and (iv) other miscellaneous sources. The proposed program of capital improvements to Sewerage System facilities anticipates average total expenditures of \$66,700,000 annually through 2020 (in 2015 dollars). Participation by others and operating transfers are projected to offset some of the capital program costs. Participation by others consists of moneys collected from developers and individuals for the extension of sewerage service to new customers and from governmental agencies for replacement and expansion of Sewerage System facilities.

The Financial Feasibility Report presents a summary of the adequacy of present revenue sources to finance projected operating and capital requirements of the Sewerage System. Total revenue requirements consist of operation and maintenance expenditures, debt service, and capital requirements. See APPENDIX “D” - Financial Consultant's Feasibility Report attached hereto.

Tables 10 and 12 on pages 75 and 79-81 of the Consulting Engineer’s Report summarize the projects the Board anticipates to undertake as part of the 2015-2020 portion of the CIP. To the extent that portions of the CIP are unfunded or external funds do not materialize to complete the CIP, the Board intends to generate internal funding sources as may be necessary to finish the CIP. See APPENDIX “C” - Consulting Engineer’s Report attached hereto.

On December 10, 2015, the Mayor of the City and officials on behalf of FEMA announced a final \$1,200,000,000 settlement to be paid to the City for damage caused by Hurricane Katrina to the City's roadways and subsurface infrastructure, including the Water, Sewerage and Drainage Systems. The Board believes that this settlement will permit the Board to continue moving forward with the existing CIP on an expedited basis. The Board believes that settlement is a positive development and does not adversely affect the Board or its operations. The Consulting Engineer's Report and the Financial Feasibility Report have not been updated to reflect such settlement.

## **SERVICE CHARGES AND CUSTOMER BASE**

### **Sewerage Service Charges**

Sewerage services rates are fixed by the Board but may not become effective, except as hereinafter noted, unless and until approved by the Board of Liquidation and the City Council. Prior to any adjustment in the rates, the Board must hold at least three public meetings for the purpose of discussing the rates. The rates are required by law to be equal and uniform for each grade or class of customers. The rates are designed to recover the operation, maintenance and capital costs of the Sewerage System from each customer class, based upon the cost of providing sewerage service to the class.

So long as any Sewerage Revenue Bonds are outstanding, the Board is required by statute and by the Series Resolution authorizing the issuance of the Bonds to fix sewer rates sufficient to enable the Board to meet the Rate Covenant. See "SECURITY AND SOURCE OF PAYMENT - Rate Covenant and

Financial Forecast" herein. If the Board should ever fail to increase sewer rates to the extent necessary to satisfy the Rate Covenant, the Board of Liquidation may compel it to do so by appropriate judicial proceedings. No such action has ever been required to be taken by the Board of Liquidation.

Sewerage service rates are composed of a "Monthly Ready to Serve Charge" based upon the size of the water meter and Monthly Quantity Charges ("Quantity Charges") based upon water consumption. Quantity Charges for residential customers are applied to only 85% of the metered water consumption, allowing 15% for lawn watering and other uses which contribute no flow to the Sewerage System. All other classes are based on 100% of water consumption. The rules of the Board provide that water from private wells and other non-Board sources which is discharged into the Sewerage System is to be metered and included in computing the Quantity Charges. Any customer who can show that only a portion of the metered water usage is discharged into the Sewerage System is charged only for the quantity discharged into the Sewerage System. A residential customer may have either the 15% allowance or a special exemption, but not both. The City, certain public institutions and the Medical Center of Louisiana, a State institution, are exempt from sewerage service rates.

In late 2012, the Board, the Board of Liquidation, and the City Council adopted a series of annual 10% rate increases over an eight-year period, beginning January 1, 2013. The rate increases are expected to generate approximately \$320 million of additional Sewerage System revenues for the Board through 2020.

The following tables provide a schedule of charges and surcharges for private users (assuming a 5/8" meter) of the Sewerage System commencing January 1, 2014, consisting of (i) a Ready to Serve Charge, (ii) a Volume Charge and (iii) an Excessive Strength Surcharge on customers whose sewage effluent exceeds normal limitations:

Meter Size (Inches)	Total Monthly Service Charge (\$)					
	2015	2016	2017	2018	2019	2020
5/8	15.44	16.98	18.68	20.55	22.61	24.87
3/4	21.97	24.17	26.59	29.25	32.18	35.40
1.0	31.28	34.41	37.85	41.64	45.80	50.38
1½	57.57	63.33	69.66	76.63	84.29	92.72
2.0	84.19	92.61	101.87	112.06	123.27	135.60
3.0	199.65	219.62	241.58	265.74	292.31	321.54
4.0	332.75	366.03	402.63	442.89	487.18	535.90
6.0	665.50	732.05	805.26	885.79	974.37	1,071.81
8.0	998.25	1,098.08	1,207.89	1,328.68	1,461.55	1,607.71
10.0	1,331.00	1,464.10	1,610.51	1,771.56	1,948.72	2,143.59
12.0	1,530.65	1,683.72	1,852.09	2,037.03	2,241.03	2,465.13
16.0	2,063.05	2,269.36	2,496.30	2,745.93	3,020.52	3,322.57

Total Quantity Charge (\$) (billed per 1,000 gallon increments)					
2015	2016	2017	2018	2019	2020
5.37	5.91	6.50	7.15	7.87	8.66

**Excessive Strength Surcharge:**

$$S = VS \times 8.34 \times \{ [BOD \text{ Unit Charge} \times (BOD - 285)] + [SS \text{ Unit Charge} \times (SS - 395)] \}$$

where:

S = Surcharge in dollars

VS = Sewerage volume in million gallons

8.34 = Pounds per gallon of water

BOD Unit Charge = Unit charge for BOD in dollars per pound as follows:

Rates Effective (\$)

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
BOD Unit Charge	0.35	0.39	0.43	0.47	0.52	0.57

BOD =BOD strength index in parts per million (or milligrams per liter) by weight

285 =Allowed BOD strength in parts per million (or milligrams per liter) by weight

SS Unit Charge= Unit charge for suspended solids in dollars per pound as follows:

Rates Effective (\$)

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
SS Unit Charge	0.21	0.23	0.25	0.28	0.31	0.34

SS = Suspended solids strength index in parts per million (or milligrams per liter) by weight

395 =Allowed SS strength in parts per million (or milligrams per liter) by weight.

In the event the effective date of an increase in charges and/or surcharges falls during a customer's billing cycle, then the increases shall be pro-rated and billed only with respect to the number of days in the billing cycle which fall on or after the effective dates set forth above.

**Service Charge Comparison**

The Board's sewerage service charges for a typical residential customer with a 5/8" meter and 5,300 gallon/month water usage are comparable to those of other wastewater utilities in the region. As shown below, the monthly sewerage service charge for a residential customer using 5,300 gallons of water is \$39.63, which amounts to \$475.58 per year. The estimated median income of Orleans Parish is \$39,849, which means a typical residential customer spends approximately 1.19% of median household income on water services, an amount that is well below the 2.00% guideline established by the U.S. EPA that is commonly used in the industry to evaluate the affordability of service rates.

<b>Monthly Wastewater Bill</b>	
<b>City (5,300 gallons/month)</b>	<b>Monthly Bill</b>
Atlanta	\$92.54
Birmingham	67.09
St. Louis	40.72
<b>New Orleans</b>	<b>39.63</b>
Mobile	38.63
Little Rock	35.28
Dallas	32.14
Houston	31.54
Nashville	31.32
Jackson	31.29
Baton Rouge	29.86
Memphis	12.02

*Source: Raftelis Financial Consultants, Inc.*

The sewerage service charges for the average customer will increase from \$39.63/month to \$63.88/month from fiscal year 2015 to fiscal year 2020. During the forecast period, the greatest percentage of median household income on which a typical residential customer will spend on water services is projected to be 1.68% in fiscal year 2020.

The Board's water service charges for a typical residential customer with a 5/8" meter connection and 5,300 gallon/month water usage are comparable to those of other water utilities in the region. As shown below, the monthly water service charge for a residential customer using 5,300 gallons of water is \$30.27, which amounts to \$363.24 per year. The estimated median income of Orleans Parish is \$39,849, which means a typical residential customer spends approximately 0.91% of median household income on water services, an amount that is well below the 2.00% guideline established by the U.S. EPA that is commonly used in the industry to evaluate the affordability of service rates.

<b>Monthly Water Bill</b>	
<b>City (5,300 gallons/month)</b>	<b>Monthly Bill</b>
Birmingham	\$39.84
Atlanta	36.63
New Orleans	30.27
Houston	27.43
Jackson	22.47
Baton Rouge	21.89
St. Louis	20.34
Mobile	19.64
Nashville	18.78
Dallas	17.97
Memphis	16.90
Little Rock	13.90

*Source: Raftelis Financial Consultants, Inc.*

### **Collection of Sanitation Fees by the Board**

The City assesses a sanitation fee upon each customer of the Board for solid waste collection and recycling services provided by the City for each customer. The fee is \$24 per month for residential, business, professional, or service office and institutional uses and \$48 per month for commercial, industrial, and manufacturing uses. The fee is included in each customer's bill from the Board and paid directly to the Board. Pursuant to Codified Ordinances of the City and by agreement with the City (the "Cooperative Endeavor Agreement"), the Board remits moneys collected by the Board that are attributable to the City's sanitation fee (less any fees incurred by the Board in collecting such moneys) to the City. Sanitation fees collected by the Board do not constitute Revenues, and thus are not part of the Net Revenues pledge.

Pursuant to Section 138-57 of the City's Codified Ordinances and a Cooperative Endeavor Agreement, the Board is now obligated to discontinue a customer's water service if that customer fails to pay the City's sanitation fee. To assist customers who may otherwise become delinquent on their sanitation fees, the City maintains a Reduced Sanitation Rate Program through which qualifying customers may become exempt from any sanitation fee rate increase in excess of the applicable rate that was in effect on December 1, 2000. This exemption may apply for up to 12 months for a qualified applicant. The Cooperative Endeavor Agreement provides that other than discontinuing water service, the collection of sanitation fees by the Board

shall not impair or affect, in any way, the Board's ability to collect fees for its water and sewerage services. The newly created requirement that the Board discontinue water service of customers with delinquent sanitation fees is not expected to materially affect the Board's ability to generate anticipated revenues.

### Customer Demand

The charts below provide historical customer and sales figures for fiscal years 2010 through 2014 and projected customer and sales figures for fiscal years 2015 through 2020. Funds for the operation, maintenance, and debt service requirements of the Sewerage System are obtained from sewerage service charges. The balance of revenue remaining after meeting these costs may be used for cash financing of capital improvements as required and other lawful purposes. See "SECURITY AND SOURCE OF PAYMENT- Special Funds and Application of Revenues" herein.

### SEWERAGE SYSTEM HISTORICAL CUSTOMERS, SALES, AND SALES PER CUSTOMER

	Fiscal Year				
	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
<b>Single Family Residential</b>					
Customers	100,108	102,265	104,782	109,036	110,599
Sales (1,000,000 gal)	5,203	5,433	5,374	5,392	5,323
Sales per Customer (1,000 gal)	52	53	51	49	48
<b>Multifamily Residential</b>					
Customers	4,406	4,429	4,455	4,534	4,514
Sales (1,000,000 gal)	693	672	655	621	587
Sales per Customer (1,000 gal)	157	152	147	137	130
<b>Commercial</b>					
Customers	9,841	9,861	9,897	10,101	10,161
Sales (1,000,000 gal)	5,304	5,292	5,312	5,258	5,265
Sales per Customer (1,000 gal)	539	537	537	520	518
<b>Industrial</b>					
Customers	29	27	28	30	29
Sales (1,000,000 gal)	70	57	51	47	48
Sales per Customer (1,000 gal)	2,414	2,111	1,828	1,559	1,644
<b>Totals</b>					
Customers	114,384	116,582	119,162	123,701	125,303
Sales (1,000,000 gal)	11,270	11,454	11,492	11,317	11,223

**SEWERAGE SYSTEM  
PROJECTED CUSTOMERS, SALES, AND SALES PER CUSTOMER**

	Fiscal Year					
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
<b>Single Family Residential</b>						
Customers	112,811	115,067	117,368	119,715	122,109	124,551
Sales (1,000,000 gal)	5,321	5,373	5,426	5,479	5,533	5,587
Sales per Customer (1,000 gal)	47	47	46	46	45	45
<b>Multifamily Residential</b>						
Customers	4,604	4,696	4,790	4,886	4,984	5,084
Sales (1,000,000 gal)	587	593	598	604	610	616
Sales per Customer (1,000 gal)	127	126	125	124	122	121
<b>Commercial</b>						
Customers	10,364	10,571	10,782	10,998	11,218	11,442
Sales (1,000,000 gal)	5,263	5,314	5,367	5,419	5,472	5,526
Sales per Customer (1,000 gal)	508	503	498	493	488	483
<b>Industrial</b>						
Customers	29	29	29	29	29	29
Sales (1,000,000 gal)	47	46	46	45	45	44
Sales per Customer (1,000 gal)	1,611	1,595	1,579	1,563	1,548	1,532
<b>Totals</b>						
Customers	127,808	130,363	132,969	135,628	138,340	141,106
Sales (1,000,000 gal)	11,217	11,326	11,436	11,548	11,660	11,773

**Billing Procedures**

Sewerage service charges are billed and collected by the Board. The residential, multi-residential, commercial, and industrial meters are read and billed monthly. All revenue applications are processed and supported by the Information Systems Department on the Board's computer network.

The Board delivers one monthly bill to each customer detailing the amounts owed by that customer for services provided by the Sewerage System, the Water System, and the City's sanitation services, respectively. In the event of a partial payment of amounts owed by customers under the current billing system, the payment is first applied to delinquent sewer and water balances, then to current sewer and water balances, then to delinquent sanitation balances, and finally to current sanitation balances. The Board will be implementing a new billing system and intends to change the process for applying payment to sewer, water, and sanitation charges on a pro rata basis.

## Collection Procedures

Currently the Board's automated collection enforcement system takes effect after an account is at least 30 days past the due date and has a balance of at least \$75.00. The delinquent action consists of a 10-day notice of termination of service to the service address of the customer of record and also to the mailing address if different. In the case of multi-residential or commercial customers, a notice is posted on the front door of the premises. In the event of any billing dispute, the notice of termination of service also advises the manner in which a customer may request an impartial evidentiary hearing before a Customer Review Officer, who has full authority to order adjustment of the bill if necessary. The Board's average annual collection rate since 2010 is approximately 98%.

The Board administers its Water Help Program for qualifying customers in need of assistance with their water service bills. Importantly, this assistance program is only available to customers in a single-family dwelling. The program is funded in part by voluntary one dollar customer contributions to which the Board provides matching funds. There are approximately 640 participants in the Water Help Program.

It is the policy of the Board to write off unpaid final delinquent accounts after three years.

## Largest Customers of the Sewerage System

The Sewerage System has a diverse customer base and does not depend on one or several high volume customers for a large portion of its revenue. As shown in the chart below, not one of the Sewerage System's ten largest customers accounted for more than 0.90% of the System's total fiscal year 2014 revenue, and all of the top ten, combined, only accounted for approximately 4.88% of the Sewerage System's revenues.

Account Name	Type of Business	No. of Accounts	Gallons Used 2014 (12 Months)	2014 Sewerage Revenues	% of Sewer Revenue
1. Tulane University	University	57	127,348,800	778,274	0.90%
2. University of New Orleans	University	6	108,228,000	589,307	0.68
3. Triangle Real Estate	Housing	8	99,631,200	547,561	0.63
4. Hyatt Regency Hotel	Hotel	2	80,731,200	437,007	0.50
5. LSU Medical	Hospital	17	65,631,600	412,560	0.48
6. Tulane Medical	Hospital	4	68,295,600	338,695	0.39
7. Housing Authority of New Orleans	Housing	159	44,935,200	288,082	0.33
8. Xavier University	University	20	42,829,200	283,057	0.33
9. Ritz Carlton Hotel	Hotel	3	55,504,200	276,327	0.32
10. N.O. Exhibition Authority	Government	4	54,242,400	275,120	0.32

## FINANCIAL OPERATIONS

The Board derives its revenues from sewer service charges and delinquent fees for sewerage services, which account for 98.6% of the Sewerage System's total operating revenues, and fees and other revenues, which account for 1.4% of the Sewerage System's total operating revenues. The Sewerage System's operating revenues have steadily increased over the past five fiscal years, primarily due to population growth and recent rate increases.

Funds for the operation, maintenance, and debt service requirements of the Sewerage System are obtained from sewerage service charges. The balance of revenue remaining after meeting these costs may be used for cash financing of capital improvements as required and other lawful purposes. See "SECURITY AND SOURCE OF PAYMENT - Special Funds and Application of Revenues" herein.

### **Management Discussion of Remaining Effects of Hurricane Katrina**

The devastation from floodwaters following the failure of the federal levee system during Hurricane Katrina had an enormous impact on the economy of the City of New Orleans and the region. Thousands of residents were displaced to other parts of the country and have been slow to return or are not likely to return at all. Businesses suffered damages partly as a result of the loss of their workforce. Many of those businesses that remain or have returned to the City have reduced operations due to the workforce shortage.

More than ten years after the storms, the City is experiencing an economic recovery. The estimated population of the City in 2014 (the most recent estimate available from the U.S. Census) was 384,320, reflecting a 11.78% growth over the 2010 Census. The pre-Katrina population of the City was approximately 455,188. City sales tax revenues in fiscal year 2014 increased over those in fiscal year 2004 by 25.56%, and are expected to increase an additional 4.4% in fiscal year 2015. Tourism continues to show steady growth with over 9.52 million tourists visiting the City in 2014, the fifth consecutive year that the number of visitors has topped 8 million. By contrast, an estimated 10.1 million tourists visited the City in 2004, the last full year prior to the storm. Visitors spent an estimated \$6.81 billion in the City in 2014, the highest total in the City's history. Many economic indicators now exceed pre-Katrina levels, indicating that the City is recovering at a steady pace.

With respect to the Sewerage System, the East Bank Treatment Plant was hit by an eighteen-foot wave from the storm surge as well as high winds from a tornado. Extensive damage to the East Bank Treatment Plant rendered it unusable for several months. The East Bank Treatment Plant has been completely repaired and rebuilt, and the Board is in the final stages of increasing the height of a protective berm that will protect the plant from future storm surges. East Bank sewer pump stations also suffered significant wind and water damage. All of the East Bank sewer pump stations have been repaired and are working at the same or better efficiency than prior to Hurricane Katrina; many have been or are in the process of being elevated to mitigate the risk of future flood damage.

The Water System's power plant at the Carrolton Water Treatment Plant suffered significant damage during the efforts to dewater the city due to damage to the boilers from contamination by polluted saltwater. Emergency repairs were completed immediately after the storm and the Board is in the process of a \$150 million retrofit of the power plant to relocate and increase capacity of raw water intakes; upgrade the turbines, boilers, and all mechanical, instrumentation, and controls; harden the power complex and electrical and mechanical systems within the power complex; and harden the power distribution network and emergency fuel storage tank.

There was also significant damage done to the Board's underground water distribution and sewer collection infrastructure. With funding provided from FEMA, the Board is spending nearly \$50 million repairing the sanitary sewer collection system and approximately \$200 million for the potable water system

for Katrina related damages. The Board has approximately 494 FEMA-approved project worksheets to fund repair and replacement work for Hurricane Katrina-related damages to the Sewerage System, the Water System, and the Drainage System. As project work is assigned to contractors, the Board and the contractors clearly identify which portions of the project work is eligible and non-eligible for reimbursement from FEMA. Contractor invoices are clearly annotated to differentiate eligible and non-eligible costs. Upon completion of work, Board staff performs an extensive pre-closeout review of the documentation related to applicable project worksheets prior to submitting the documentation to the State of Louisiana for review. Approximately 310 projects have been completed and submitted to the State and approximately 292 projects have been closed out by the State. There have been no adverse findings by the State, and Board management anticipates no significant risk of "clawback" of funds by FEMA.

The Drainage System's pump stations incurred significant electrical and mechanical damage and were repaired quickly after the levees were restored. Despite the scope and severity of the damage to the Sewerage System, the Water System, and the Drainage System, each has been restored to full regulatory compliance.

To assist local political subdivisions, including the Board, with current operating expenses and the payment of debt service on various obligations, the State and the federal government put in place borrowing programs designed to provide immediately available revenues to such political subdivisions in the aftermath of Hurricane Katrina. The Board continued to make the required debt service payments on its indebtedness, due in part to loans from the State of Louisiana. For more information on the amounts borrowed by the City and its component entities and independent boards pursuant to these programs, see "DEBT STATEMENT - Hurricane-Related Borrowing of the Board" herein.

### **Operating Revenues**

Sewerage System operating revenue consists of sales revenues based on the schedule of sewerage service charges and delinquent fees shown in a following table. Overall, operating revenues are expected to increase at an average compound rate of 10.7% between fiscal years 2015 and 2020.

Historical operating revenues are also shown in a following table.

### **Non-Operating Revenues**

Sewerage System non-operating revenue includes interest earned on the investment of available funds, and other minor items of revenue. Earned interest comes from investments in the Sewerage System Fund and the capital projects and Construction Fund. Historical non-operating revenues are also shown in a following table. Non-operating revenues of the Board attributable to the Water System are minimal. The Board does not anticipate that such revenues will materially increase from fiscal year 2015 to fiscal year 2020.

### **Operation and Maintenance Expenses**

The Board utilizes a system of accounts designed to group expenses by function for budget purposes. Under the present system of accounts, expenses are categorized under the classifications of operating expenses, non-operating expenses, or other budgeted expenditures and transfers. Management and general expenses include wages, materials and supplies, services, and other costs. Operations expenses encompass the costs of collecting, pumping, treating and distributing water. Other expenses include such items as general insurance, outside services employed, social security, worker's compensation insurance, pension and medical insurance contributions, and miscellaneous expenditures. Historical operation and maintenance expenses are shown in a following table.

The Board anticipates its annual operating budget to increase at an annual rate of 3.2% between fiscal years 2015 and 2020. This is part of the Board's efforts to bring the Sewerage System's operating expenses in line with national standards, and enable it to more efficiently and sustainably operate and maintain the Sewerage System.

**Financial Information Relating to the Sewerage System - Cash and Equivalents**

The Board reported the following cash and cash equivalents balances in its Sewerage System funds as of December 31, 2014 (rounded to the nearest dollar):

Unrestricted and undesignated cash and cash equivalents	\$21,855,071
Designated cash, cash equivalents, and investments	4,881,625
Customer Deposits	17,965
Restricted cash and cash equivalents for capital projects	30,527,953
Health insurance reserve	659,166
Debt service reserve	20,467,806

Source: The Board's 2014 Comprehensive Annual Financial Report.

**Debt Service Requirements**

The Financial Feasibility Report (See APPENDIX "D" attached hereto) calculates the actual debt service requirements on the Series 2015 Bonds. To complete the capital program as presently contemplated, future authorizations for additional Indebtedness are required. The projections assume sewer rate increases as detailed in "Exhibit 4" of APPENDIX "D" attached hereto.

The debt service requirements on the Outstanding Parity Bonds and the Series 2015 Bonds are shown in the following chart:

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Fiscal Year Ending	Existing Debt Service <sup>1,2</sup>	Series 2015 Debt Service			Total System Debt Service
		Principal	Interest	Debt Service	
12/31/15	16,394,603				16,394,603
12/31/16	18,538,060	-	4,777,778	4,777,778	23,315,838
12/31/17	19,806,489	-	5,000,000	5,000,000	24,806,489
12/31/18	18,139,057	-	5,000,000	5,000,000	23,139,057
12/31/19	16,713,962	-	5,000,000	5,000,000	21,713,962
12/31/20	16,730,455	-	5,000,000	5,000,000	21,730,455
12/31/21	13,602,535	2,000,000	4,950,000	6,950,000	20,552,535
12/31/22	11,584,951	2,000,000	4,850,000	6,850,000	18,434,951
12/31/23	7,775,580	2,000,000	4,750,000	6,750,000	14,525,580
12/31/24	7,424,295	2,000,000	4,650,000	6,650,000	14,074,295
12/31/25	5,490,713	2,125,000	4,546,875	6,671,875	12,162,588
12/31/26	5,489,343	2,235,000	4,437,875	6,672,875	12,162,218
12/31/27	5,488,810	2,350,000	4,323,250	6,673,250	12,162,060
12/31/28	5,481,980	2,480,000	4,202,500	6,682,500	12,164,480
12/31/29	5,480,611	2,610,000	4,075,250	6,685,250	12,165,861
12/31/30	5,486,751	2,735,000	3,941,625	6,676,625	12,163,376
12/31/31	5,483,054	2,880,000	3,801,250	6,681,250	12,164,304
12/31/32	5,483,633	3,025,000	3,653,625	6,678,625	12,162,258
12/31/33	4,984,288	3,695,000	3,485,625	7,180,625	12,164,913
12/31/34	4,980,613	3,885,000	3,296,125	7,181,125	12,161,738
12/31/35	4,965,125	4,100,000	3,096,500	7,196,500	12,161,625
12/31/36	4,961,500	4,315,000	2,886,125	7,201,125	12,162,625
12/31/37	4,959,875	4,540,000	2,664,750	7,204,750	12,164,625
12/31/38	4,954,875	4,775,000	2,431,875	7,206,875	12,161,750
12/31/39	4,951,125	5,025,000	2,186,875	7,211,875	12,163,000
12/31/40	4,943,250	5,290,000	1,929,000	7,219,000	12,162,250
12/31/41	4,940,750	5,565,000	1,657,625	7,222,625	12,163,375
12/31/42	4,938,000	5,855,000	1,372,125	7,227,125	12,165,125
12/31/43	4,929,625	6,165,000	1,071,625	7,236,625	12,166,250
12/31/44	4,925,125	6,485,000	755,375	7,240,375	12,165,500
12/31/45	-	11,865,000	296,625	12,161,625	12,161,625
Total	<u>250,029,030</u>	<u>100,000,000</u>	<u>104,090,278</u>	<u>204,090,278</u>	<u>454,119,308</u>

<sup>1</sup> Includes administrative fee for Series 2011 Bonds.

<sup>2</sup> Net of capitalized interest through June 1, 2016.

## **Historical Financial Operations**

NOTE: HISTORICAL DATA INCLUDED HEREIN IS PRESENTED FOR INFORMATION PURPOSES ONLY AND IS NOT A FORECAST OF FUTURE OPERATIONS. ADOPTED AND PROPOSED RATE INCREASES, BOND ISSUES, FEDERAL MATCHING FUNDS, PROPOSED CAPITAL IMPROVEMENTS AND OTHER COSTS MAY SIGNIFICANTLY CHANGE THE REVENUES AND EXPENDITURES OF THE WATER SYSTEM FROM HISTORICAL INFORMATION.

Historical financial operations of the Sewerage System consist of sewerage service charges, fees, and other sources, operation and maintenance expenditures, and debt service charges which are summarized from 2010 through 2014 in the following table:

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**Sewerage and Water Board of New Orleans**  
**Sewerage Revenue Bonds, Series 2015**  
**Historical Statement of Revenues, Expenses, Debt Service, and Debt Service Coverage**

	<i>Fiscal Year</i>					
	2009	2010	2011	2012	2013	2014
<b>Revenues</b>						
<b>Operating Revenues</b>						
Sewer Sales	\$ 66,102,946	\$ 69,534,779	\$ 70,358,076	\$ 71,407,835	\$ 78,535,785	\$ 86,553,262
Plumbing inspection & license fees	242,224	373,213	379,036	343,903	321,518	339,176
Subtotal: Sewer Sales and Fees	\$ 66,345,170	\$ 69,907,992	\$ 70,737,112	\$ 71,751,738	\$ 78,857,303	\$ 86,892,438
Other Revenues	\$ 388,528	\$ 260,785	\$ 3,044,483	\$ 288,943	\$ 766,030	\$ 906,120
Additional Revenue						
<b>Total Operating Revenues</b>	<b>\$ 66,733,698</b>	<b>\$ 70,168,777</b>	<b>\$ 73,781,595</b>	<b>\$ 72,040,681</b>	<b>\$ 79,623,333</b>	<b>\$ 87,798,558</b>
Non-Operating Revenue	\$ 499,506	\$ 14,756,175	\$ 427,166	\$ 350,944	\$ 451,435	\$ 574,919
O&M Expense Reimbursements	2,772,395	2,957,463	(35,272)	7,463	5,367	383,354
<b>Total Non-operating Revenues</b>	<b>\$ 3,271,901</b>	<b>\$ 17,713,638</b>	<b>\$ 391,894</b>	<b>\$ 358,407</b>	<b>\$ 456,802</b>	<b>\$ 958,273</b>
<b>Total Revenues</b>	<b>\$ 70,005,599</b>	<b>\$ 87,882,415</b>	<b>\$ 74,173,489</b>	<b>\$ 72,399,088</b>	<b>\$ 80,080,135</b>	<b>\$ 88,756,831</b>
<b>Expenses</b>						
<b>Operating Expenses</b>						
O&M Expenditures	\$ 49,879,872	\$ 44,361,297	\$ 43,173,641	\$ 44,869,796	\$ 45,378,129	\$ 46,758,426
Depreciation & Amortization	9,669,386	10,112,927	10,042,062	14,504,047	13,389,705	15,005,720
Provision for Bad Debts	(2,550,372)	1,801,499	(801,413)	525,961	824,362	944,199
Provision for Claims						565,222
<b>Total Operating Expenses</b>	<b>\$ 56,998,886</b>	<b>\$ 56,275,723</b>	<b>\$ 52,414,290</b>	<b>\$ 59,899,804</b>	<b>\$ 59,592,196</b>	<b>\$ 63,273,567</b>
<b>Net Revenues</b>	<b>\$ 13,006,713</b>	<b>\$ 31,606,692</b>	<b>\$ 21,759,199</b>	<b>\$ 12,499,284</b>	<b>\$ 20,487,939</b>	<b>\$ 25,483,264</b>
Less: Transfers to Rate Stabilization	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plus: Transfers from Rate Stabilization	-	-	-	-	-	-
Plus: Depreciation & Amortization	9,669,386	10,112,927	10,042,062	14,504,047	13,389,705	15,005,720
<b>Rate Covenant Net Revenues</b>	<b>\$ 22,676,099</b>	<b>\$ 41,719,619</b>	<b>\$ 31,801,261</b>	<b>\$ 27,003,331</b>	<b>\$ 33,877,644</b>	<b>\$ 40,488,984</b>
<b>Total Debt Service</b>						
Senior Debt Payment	\$ 20,313,968	\$ 20,250,057	\$ 20,263,432	\$ 20,713,082	\$ 20,726,719	\$ 18,472,037
Total Debt Service	\$ 20,313,968	\$ 20,250,057	\$ 20,263,432	\$ 20,713,082	\$ 20,726,719	\$ 18,472,037
<b>Senior Debt Service Coverage</b>	<b>1.12</b>	<b>2.06</b>	<b>1.57</b>	<b>1.30</b>	<b>1.63</b>	<b>2.19</b>
<b>Rate Covenant Net Revenue after Debt Service</b>	<b>\$ 2,362,131</b>	<b>\$ 21,469,562</b>	<b>\$ 11,537,829</b>	<b>\$ 6,290,249</b>	<b>\$ 13,150,925</b>	<b>\$ 22,016,947</b>
<b>Ending Balance of Available Funds</b>	<b>\$ (260,693)</b>	<b>\$ (1,682,636)</b>	<b>\$ 2,083,063</b>	<b>\$ 9,548,524</b>	<b>\$ 22,397,304</b>	<b>\$ 25,554,380</b>
<i>Days of Cash on Hand</i>	(2)	(14)	18	78	180	199

## **Projected Financial Operations**

The following table reflects projected financial operations for the Sewerage System based on expected sewerage service charges, delinquent fees, and other sources, operation and maintenance expenditures, and debt service charges for fiscal years 2015 through 2020. For a discussion of the assumptions underlying the projections below, see APPENDIX “D” - Financial Consultant's Feasibility Report attached hereto.

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**Sewerage and Water Board of New Orleans**  
**Sewerage Revenue Bonds, Series 2015**  
**Forecast Statement of Revenues, Expenses, Debt Service, and Debt Service Coverage**

	<i>Fiscal Year</i>					
	2015	2016	2017	2018	2019	2020
<b>Revenues</b>						
<b>Operating Revenues</b>						
Sewer Sales	\$ 94,729,026	\$ 104,824,535	\$ 116,436,997	\$ 129,335,888	\$ 143,663,717	\$ 159,578,784
Plumbing inspection & license fees	299,729	326,081	326,081	326,081	326,081	326,081
Subtotal: Sewer Sales and Fees	\$ 95,028,755	\$ 105,150,616	\$ 116,763,078	\$ 129,661,969	\$ 143,989,799	\$ 159,904,865
Other Revenues	\$ 428,190	\$ 597,321	\$ 597,321	\$ 597,321	\$ 597,321	\$ 597,321
Additional Revenue	-	-	-	-	-	-
<b>Total Operating Revenues</b>	<b>\$ 95,456,945</b>	<b>\$ 105,747,937</b>	<b>\$ 117,360,399</b>	<b>\$ 130,259,290</b>	<b>\$ 144,587,119</b>	<b>\$ 160,502,186</b>
Non-Operating Revenue	\$ 470,944	\$ 462,061	\$ 462,061	\$ 462,061	\$ 462,061	\$ 462,061
FEMA O&M Expense Reimbursements	-	-	-	-	-	-
<b>Total Non-operating Revenues</b>	<b>\$ 470,944</b>	<b>\$ 462,061</b>				
<b>Total Revenues</b>	<b>\$ 95,927,889</b>	<b>\$ 106,209,998</b>	<b>\$ 117,822,460</b>	<b>\$ 130,721,350</b>	<b>\$ 145,049,180</b>	<b>\$ 160,964,247</b>
<b>Expenses</b>						
<b>Operating Expenses</b>						
O&M Expenditures	\$ 55,868,190	\$ 58,767,884	\$ 62,085,412	\$ 65,790,370	\$ 69,614,354	\$ 71,586,452
Depreciation & Amortization	14,299,824	14,299,824	14,299,824	14,299,824	14,299,824	14,299,824
Provision for Bad Debt	947,290	1,048,245	1,164,370	1,293,359	1,436,637	1,595,788
<b>Total Operating Expenses</b>	<b>\$ 71,115,304</b>	<b>\$ 74,115,953</b>	<b>\$ 77,549,606</b>	<b>\$ 81,383,553</b>	<b>\$ 85,350,815</b>	<b>\$ 87,482,064</b>
<b>Net Revenues</b>	<b>\$ 24,812,584</b>	<b>\$ 32,094,044</b>	<b>\$ 40,272,853</b>	<b>\$ 49,337,797</b>	<b>\$ 59,698,365</b>	<b>\$ 73,482,183</b>
Less: Transfers to Rate Stabilization	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plus: Transfers from Rate Stabilization	-	-	-	-	-	-
Plus: Depreciation & Amortization	14,299,824	14,299,824	14,299,824	14,299,824	14,299,824	14,299,824
<b>Rate Covenant Net Revenues</b>	<b>\$ 39,112,408</b>	<b>\$ 46,393,868</b>	<b>\$ 54,572,677</b>	<b>\$ 63,637,621</b>	<b>\$ 73,998,189</b>	<b>\$ 87,782,007</b>
<b>Senior Debt Service - 2015 Issue</b>						
Existing Debt Service	\$ 16,394,603	\$ 18,538,060	\$ 19,806,489	\$ 18,139,057	\$ 16,713,963	\$ 16,730,455
Series 2015	-	4,777,778	5,000,000	5,000,000	5,000,000	5,000,000
Total Senior Debt Service	\$ 16,394,603	\$ 23,315,838	\$ 24,806,489	\$ 23,139,057	\$ 21,713,963	\$ 21,730,455
<b>Senior Debt Service Coverage - 2015 Issue</b>	<b>2.39</b>	<b>1.99</b>	<b>2.20</b>	<b>2.75</b>	<b>3.41</b>	<b>4.04</b>
<b>Senior Debt Service - Programmatic</b>						
Existing & 2015 Debt Service	16,394,603	23,315,838	24,806,489	23,139,057	21,713,963	21,730,455
Projected Future Bonds	-	-	3,027,437	6,054,874	9,839,171	12,866,608
Total Senior Debt Service	\$ 16,394,603	\$ 23,315,838	\$ 27,833,926	\$ 29,193,931	\$ 31,553,133	\$ 34,597,063
<b>Senior Debt Service Coverage - Programmatic</b>	<b>2.39</b>	<b>1.99</b>	<b>1.96</b>	<b>2.18</b>	<b>2.35</b>	<b>2.54</b>
<b>Total Debt Service Requirements</b>	<b>\$ 16,394,603</b>	<b>\$ 23,315,838</b>	<b>\$ 27,833,926</b>	<b>\$ 29,193,931</b>	<b>\$ 31,553,133</b>	<b>\$ 34,597,063</b>
<b>Total Debt Service Coverage</b>	<b>2.39</b>	<b>1.99</b>	<b>1.96</b>	<b>2.18</b>	<b>2.35</b>	<b>2.54</b>
<b>Rate Covenant Net Revenues</b>	<b>\$ 39,112,408</b>	<b>\$ 46,393,868</b>	<b>\$ 54,572,677</b>	<b>\$ 63,637,621</b>	<b>\$ 73,998,189</b>	<b>\$ 87,782,007</b>
Less: Transfers from Rate Stabilization	-	-	-	-	-	-
Less: Grants	-	-	-	-	-	-
<b>Adjusted Rate Covenant Net Revenues</b>	<b>\$ 39,112,408</b>	<b>\$ 46,393,868</b>	<b>\$ 54,572,677</b>	<b>\$ 63,637,621</b>	<b>\$ 73,998,189</b>	<b>\$ 87,782,007</b>
<b>Total Debt Service Coverage on Adjusted Rate Covenant Net Revenues</b>	<b>2.39</b>	<b>1.99</b>	<b>1.96</b>	<b>2.18</b>	<b>2.35</b>	<b>2.54</b>
<b>Revenue after Debt Service</b>	<b>\$ 22,717,805</b>	<b>\$ 23,078,031</b>	<b>\$ 26,738,752</b>	<b>\$ 34,443,690</b>	<b>\$ 42,445,056</b>	<b>\$ 53,184,944</b>
Less: GO Zone Repaymnet	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582
Less: Revenue Funded Capital	14,000,000	8,000,000	13,000,000	15,000,000	20,000,000	25,000,000
Less: Repayments	2,911,000	2,911,000	486,000	-	-	-
<b>Total Income/(Deficit)</b>	<b>\$ (426,777)</b>	<b>\$ 5,933,449</b>	<b>\$ 7,019,170</b>	<b>\$ 13,210,108</b>	<b>\$ 16,211,474</b>	<b>\$ 21,951,362</b>
<b>Ending Balance of Available Funds</b>	<b>\$ 43,500,000</b>	<b>\$ 50,481,694</b>	<b>\$ 58,665,234</b>	<b>\$ 73,168,701</b>	<b>\$ 90,816,812</b>	<b>\$ 114,363,961</b>
<i>Days of Cash on Hand</i>	284	314	345	406	476	583

## **Financial Policies**

The Board intends to acquire, control, report, and disburse financial assets according to these policy statements. The policy statements are intended to provide policy objectives and establish more rigorous standards than those required by General Bond Resolution, and may be amended from time to time. These policies are not a part of the Bond Resolution or the contract with holders of the Series 2015 Bonds.

*Financial Planning.* The Board will annually develop and maintain separate ten-year financial plans that identify the financial resources needed to achieve the objectives of the strategic plan; identify options for creation of resources; identify shortages between what is needed and what may be funded; and, describe the consequences of under-funding. The capital requirements for the financial plan will be based on management's understanding of all facilities that will be needed during the ten-year planning horizon. The financial plan will be reviewed by an outside expert for completeness and reasonableness at least once every five years.

*Financial Budgeting.* The Board of Directors will adopt operating and capital budgets that it projects will enable the Board to maintain coverage at a minimum of 150% of senior debt service and 125% of total debt service.

*Debt Management.* The Board will not issue long-term debt obligations or utilize long-term debt proceeds to finance current operations of the Board. The Board will not issue long-term debt obligations that involve derivative financial instruments. Sewerage System debt obligations may be issued only if: (i) the maximum annual aggregate debt service for senior obligations multiplied by 1.25 will not exceed the annual net revenues of the Sewerage System; and (ii) the maximum annual aggregate debt service for all obligations multiplied by 1.10 will not exceed the annual net revenues of the Sewerage System.

*Reserves Management.* The Board will maintain an Operating Reserve Fund for the Water System, the Sewerage System, and the Drainage System, each with not less than 180 days of projected operating expenses.

*Ratemaking.* A water rate study will be prepared at least every five years based on the American Water Works Association M1 Water Rates Manual. A sewer rate study will be prepared at least every five years based on the Water Environment Federation in the Manual of Practice 27: Financing and Charges for Wastewater Systems. The first rate studies pursuant to this policy were performed in 2012 and led to the rate increases currently being implemented.

The Executive Director will identify to the Board any and all occasions when the Board is not in compliance with this policy and will develop and present a plan to the Board within 60 days to restore full compliance within one year.

## **FINANCIAL CONSULTANT'S FEASIBILITY REPORT**

Raftelis Financial Consultants, Inc.'s projections of operation and maintenance expenses are shown on the Financial Feasibility Report (See APPENDIX "D" attached hereto) and are categorized by the present system of accounts. Estimates of future expenses are based on analysis of past trends in Sewerage System costs recognizing the existing City civil service pay plan and provide an allowance for continuing inflation. Included in the Financial Feasibility Letter is the opinion of the Financial Consultant regarding the adequacy of sewerage service rates to produce revenues required for (i) operations and maintenance of the Sewerage System and (ii) the payment of debt service on the Bonds and future Outstanding Senior Parity Indebtedness. See APPENDIX "D" attached hereto.

## CONSULTING ENGINEER'S REPORT

Black & Veatch Corporation's findings and conclusions relating to the conditions of the Sewerage System and its future operations are shown in the Consulting Engineer's Report attached hereto as APPENDIX "C".

### DEBT STATEMENT

#### Short-Term Debt of the Board

The Board has no outstanding short-term indebtedness other than normal accounts payable or as otherwise stated in this Official Statement.

#### Revenue Bonds of the Board

The City, acting by and through the Board, is authorized to issue Water Revenue Bonds secured by and payable from revenues received from the imposition of water charges, Sewerage Service Revenue Bonds secured by and payable from revenues received from the imposition of sewerage charges, and Drainage System Bonds secured by and payable from an ad valorem property tax levied for the operation and maintenance of the Drainage System. The foregoing bonds are also payable from the amounts held on deposit in the funds and accounts established under the resolutions pursuant to which such bonds were or will be issued.

*Sewerage Service Revenue Bonds.* The Outstanding Parity Bonds are the only bonds of the Board currently outstanding secured by and payable from revenues received from the imposition of sewerage charges. As of December 2, 2015, \$7,755,000 of the Series 2011 Bonds and \$147,765,000 of the Series 2014 Bonds will be outstanding. See "SECURITY AND SOURCE OF PAYMENT" herein.

*Water Revenue Bonds.* Concurrently with the issuance of the Series 2015 Bonds, the City expects to issue a series of City of New Orleans Water Revenue Bonds, Series 2015 (the "Water Revenue Bonds"), for the benefit of the Board, pursuant to the General Water Revenue Bond Resolution and First Supplemental Water Revenue Bond Resolution, both adopted by the Board on May 21, 2014, and the Second Supplemental Water Revenue Bond Resolution adopted by the Board on October 21, 2015 (collectively, the "Water Revenue Bond Resolution"). The Board has also its Water Revenue and Refunding Bonds, Series 2014 (the "Water Revenue and Refunding Bonds"), of which \$103,525,000 will be outstanding as of December 2, 2015.

The Water Revenue Bonds and the Water Revenue and Refunding Bonds will not be issued under or secured by the Bond Resolution or by any pledge of Net Revenues or the Funds created therein.

*Drainage System Bonds.* The Board has also issued its Drainage System Refunding Bonds, Series 2014, of which \$12,750,000 will be outstanding as of December 2, 2015. The Drainage System Refunding Bonds are secured solely by a pledge and dedication of the funds to be derived by the City from the levy and collection of a special ad valorem tax of 7.06 mills and were not issued under or secured by the Bond Resolution or by any pledge of Net Revenues or the Funds created therein.

Any such bonds issued for the benefit of the Water System shall be issued as provided in the General Bond Resolution. See "SECURITY AND SOURCE OF PAYMENT - Additional Bonds and Other Parity Senior Indebtedness" herein.

## **Hurricane-Related Borrowing of the Board**

As part of the recovery efforts following Hurricanes Katrina and Rita (See “INVESTMENT CONSIDERATIONS - Hurricanes Katrina and Rita and other Weather-Related Risks” herein), the Board received special authorization to borrow funds from various sources for various purposes. The State issued \$200,000,000 of General Obligation Gulf Tax Credit Bonds, Series 2006-A and \$200,000,000 of General Obligation Match Bonds, Series 2006-B (the “State Bonds”) and loaned the proceeds to various entities, including the Board, to assist in the payment of debt service coming due on the respective obligations of each entity. In addition, the Federal Government acting through FEMA pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the “Stafford Act”), as amended, loaned the City and its component entities funds for current operations related to essential services, evidenced by one or more notes of such entities.

The Board borrowed \$77,465,247 of proceeds from the State Bonds (the “CEA GO Zone Indebtedness”). Of the CEA GO Zone Indebtedness, \$45,965,247 was used to make debt service payments on Drainage System Special Tax Bonds, Sewerage Service Revenue Bonds, and Water Revenue Bonds that were due on December 1, 2006, June 1, 2007, and June 1, 2008, respectively. The CEA GO Zone Indebtedness attributable to the Water System is payable from surplus moneys held by the Board in the Water System Fund after the payment of all debt service obligations on any outstanding Senior Debt and Subordinate Debt. (See “SECURITY AND SOURCE OF PAYMENT - Special Funds and Application of Revenue” herein.) The CEA GO Zone Indebtedness matures on July 15, 2026, and, as of December 2, 2015, the outstanding principal amount was \$61,653,132.

The Board also borrowed \$61,956,747 as a Special Community Disaster Loan under provisions of the Stafford Act. The proceeds of those loans were used by the Board to pay certain current operating expenses of the Board. Pursuant to Section 4502 of the U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act of 2007, FEMA was given authority to forgive Stafford Act loans relating to Hurricane Katrina under certain circumstances. In 2013, FEMA forgave all remaining principal and accrued interest for the Special Community Disaster Loan.

## **BOARD OF LIQUIDATION, CITY DEBT**

The Board of Liquidation was created by the Louisiana Legislature in 1880 and made a “body corporate,” separate and distinct from the City, in 1890. The Series 2015 Bonds are being sold through the Board of Liquidation, which also approves their issuance.

The Board is required to pay to the Board of Liquidation monthly from revenues of the Water System amounts not less than one-twelfth of the annual payment of principal and interest on the Series 2015 Bonds and any additional bonds payable from the revenues of the Water System, and amounts required to be deposited to the Reserve Fund. The Board of Liquidation is empowered to compel, by appropriate judicial proceedings, the Board to fix water rates which will produce net revenues sufficient to pay such debt service and to fund such reserve fund.

The Board of Liquidation is composed of nine members: the Mayor and the two City Councilmembers-at-large, who serve ex officio, and six members, referred to as the “syndicate” members, appointed in the manner hereinafter described. The syndicate members have traditionally been selected from leaders of the business, financial and professional community of New Orleans. All members of the Board of Liquidation serve without pay. Further information about the Board of Liquidation, its membership and financial data, including certain Board information, may be found on its website at <http://www.bolcd.com>.

The incumbent members of the Board of Liquidation, who serve until their successors are appointed, their terms of office, and their principal occupations are:

**Mitchell J. Landrieu, *ex officio***  
Mayor, City of New Orleans  
(Term: 5/05/2014-5/06/2018)

**Alan C. Arnold**  
Retired, Financial Services Executive  
(Term: 12/18/2008-12/31/2019)

**Jason R. Williams, *ex officio***  
Councilmember-at-large, City of New Orleans  
(Term: 5/05/2014-5/06/2018)

**William Raymond Manning**  
Managing Principal, Manning Architects  
(Term: 1/20/2011-12/31/2021)

**Stacy S. Head, *ex officio***  
Councilmember-at-large, City of New Orleans  
(Term: 5/05/2014-5/06/2018)

**Mark M. Moody**  
Lead Engineer, NASA Stennis Space Center  
(Term: 1/20/2011-12/31/2017)

**Mary K. Zervigon, *President***  
Attorney, Former Chairman of the Louisiana Tax  
Commission  
(Term: 2/20/14-12/31/2025)

**Henry F. O'Connor, Jr.**  
Attorney  
(Term: 11/01/2012-12/31/2023)

**Richard P. Wolfe, *Vice President***  
Attorney  
(Term: 1/20/05-12/31/2015)

## INVESTMENT CONSIDERATIONS

### Hurricanes Katrina and Rita and other Weather-Related Risks

Hurricane Katrina struck the Central Gulf Coast near New Orleans, Louisiana as a Category 3 hurricane on August 29, 2005. Failure of several sections of the federal levee system resulted in flooding that inundated approximately 80% of the City with water up to 20 feet deep in some places. Hurricane Rita struck near the Texas-Louisiana border on September 24, 2005 as a Category 3 hurricane. Storm surge associated with Hurricane Rita reopened some of the levee breaches caused by Hurricane Katrina and reflooded parts of New Orleans.

Although water and sewer treatment plants on the West Bank of New Orleans continued to operate, Hurricane Katrina left the majority of the Board's facilities inoperable, destroyed over 500 vehicles and pieces of equipment, approximately 65% of the fleet, completely disrupted normal communication channels, and put the lives of many employees who were on duty in jeopardy. For a fuller discussion of the effects of Hurricane Katrina on the Board and its operations, see "FINANCIAL OPERATIONS - Management Discussion" herein.

Because of the interruption of water, sewer and drainage service and the limited return of evacuated customers, the Board experienced a substantial reduction in water and sewer service revenues, as well as drainage revenues which are *ad valorem* tax based, following the hurricanes. While sewerage service charges for fiscal year 2014 exceeded those for fiscal year 2004 (immediately before the storms) by approximately 19.8%, the loss of revenues between fiscal years 2005 and 2012 had a significant impact on the financial condition of the Board and the physical condition of its facilities and equipment. For additional information, see APPENDIX "C" attached hereto.

### Levees and Flood Protection

Coastal Louisiana, including the City, is susceptible to hurricanes wherein winds and flooding have from time to time caused significant damage, particularly in the case of Hurricane Katrina. Subsequent to Hurricane Katrina, the U.S. Army Corps of Engineers (the "Corps") undertook a project consisting of the planning, design and construction of a flood protection system to the Metropolitan New

Orleans Area. The improvements to flood protection system, known as the Hurricane and Storm Damage Risk Reduction System (“HSDRRS”), consists of a \$14.5 billion system of levees, floodwalls, and pumps designed to eliminate nearly all flooding from 100-year storm events and significantly reduces flood risks from 500-year storm events. According to data generated by the Corps, a storm more severe than Hurricane Katrina would only cause modest flooding as compared to floods caused by Hurricane Katrina.

A 100-year storm is an event that has a 1% chance of occurring in any given year. The Corps designed the HSDRRS based on computer-generated models of 152 storms of varying paths, speeds, rainfall volumes, intensities, and radius. Based on data derived from these models, the Corps was able to determine the necessary structural specifications to protect Metropolitan New Orleans Area from 100-year storms. The HSDRRS involves a variety of innovative improvements to levees, floodwalls, outfall canals, interim closure structures, and pump stations in and around the Metropolitan New Orleans Area.

The Corps continues to explore further improvements to the HSDRRS in the Metropolitan New Orleans Area, while also working with officials in New Orleans Parish to improve drainage infrastructure as part of the Southeast Louisiana Urban Drainage program, which is critical in protecting the Metropolitan New Orleans Area from flooding caused by rain-only storm events.

No assurance can be given that the proposed flood protection system improvements will prevent wind and flooding resulting from future significant weather events.

#### **Future Financial Performance - Ability to Finance Future Projects; Rate Increases**

All financial and other information presented in this Official Statement has been provided by the Board from its records, except information expressly attributed to other sources. The presentation of information, including tables of receipts from rates, charges, and other sources, is intended to show recent historical information, and is not intended to indicate future or continuing trends in the financial position or the affairs of the Board or the Sewerage System except as otherwise indicated in this Official Statement. No representation is made that past experience, as might be shown by such financial and other information, will necessarily continue or be repeated.

The Board's ability to fulfill its obligations under the Consent Decree and comply with other state and federal legal requirements depends, in part, on its ability to finance future construction either through external borrowing, funds on deposit, or funds raised through future rate increases. No assurance can be given that unforeseen factors may prevent such additional financings from being completed.

The Board's ability to raise rates is limited by the procedural requirement that any increase be approved by the Board of Liquidation and the New Orleans City Council. The Board is currently authorized to increase Water System rates by 10% annually through 2020. There is no assurance that, upon the expiration of the currently authorized rate increases in 2020, any subsequent rate increases will be approved. As a result, the Board, depending on its financial position at the time and several other factors, could find itself unable to generate sufficient revenues to fully operate the Sewerage System and meet the Rate Covenant.

#### **Use of Sewerage System Revenues to Provide Financial Support for the Water System or Drainage System**

In addition to the Sewerage System, the Board also operates a Water System and a Drainage System. Each system has its own source of revenue, and the Board operates each system as a distinct business enterprise; however, certain administrative expenses are allocated among the systems for accounting purposes. The Board may transfer Sewerage System funds to either of the Water System and/or the Drainage System; provided, however, that any such transfer may be made (i) only out of excess funds then held in the Sewerage System Fund described herein (i.e., only after other deposits and transfers required to be made from Net Revenues of the Sewerage System have been made as required in the General Bond Resolution), and (ii) only to the extent such transfer is then permitted by applicable law.

## **Regulatory Matters**

Although the operations of the Sewerage System and the rates established for the Sewerage System are not currently directly regulated by the State of Louisiana or the United States, such operations and rates can be adversely affected at any time by laws enacted by the Louisiana State Legislature or Congress or by rules, regulations, orders, or determinations by state or federal agencies that may have the effect of increasing expenses of the Sewerage System or impairing the Board's ability to generate sufficient revenues to fully operate the Sewerage System and meet the Rate Covenant.

## **Limitations on Remedies Available to Bondholders**

The remedies available to the owners of the Series 2015 Bonds upon an event of default under the Bond Resolution are in many respects dependent upon judicial actions which are often subject to discretion and delay. Under existing constitutional and statutory law and judicial decisions, including specifically in the United States Bankruptcy Code, 11 U.S.C. § 101, et seq. (the "Bankruptcy Code"), the remedies provided in the Bond Resolution may not be readily available or may be limited. The various legal opinions delivered concurrently with the delivery of the Series 2015 Bonds will be qualified as to the enforceability of the various legal instruments by limitations imposed by general principles of equity and by bankruptcy, reorganization, insolvency or other similar laws affecting the rights of creditors generally.

The enforceability of the rights and remedies of the owners of the Series 2015 Bonds, and the obligations incurred by the Issuer in issuing the Series 2015 Bonds, are subject to the Bankruptcy Code and applicable bankruptcy, insolvency, reorganization, moratorium, or similar laws relating to or affecting the enforcement of creditors' rights generally, now or hereafter in effect to the extent constitutionally applicable; equity principles which may limit the specific enforcement under Louisiana law of certain remedies; the exercise by the United States of America of the powers delegated to it by the federal Constitution; and the exercise of the sovereign police powers of the State of Louisiana or its governmental bodies. Consistent with the Contracts Clauses of the Louisiana and United States Constitutions, in a bankruptcy proceeding or due to the exercise of powers by the federal government or the government of the State of Louisiana, bondowners could be subject to judicial discretion and the interpretation of their rights in bankruptcy or otherwise, which consequently may entail risks of delay, limitation, or modification of their rights. Under current Louisiana law, no political subdivision, including the Issuer, may file for protection under Chapter 9 of the Bankruptcy Code unless such filing is approved by the Louisiana State Bond Commission and the Governor and Attorney General of Louisiana. Further, no political subdivision, after filing for bankruptcy protection, may carry out a plan of readjustment of debts approved by the bankruptcy court until such plan is approved by the Louisiana State Bond Commission and the Governor and Attorney General of Louisiana.

The obligations of the Issuer and the Board under the Bond Resolution may be secured on a parity with other obligations of the Issuer and the Board so that any proceeds that might be derived from the exercise of remedies would be required to be shared among the owners of the Series 2015 Bonds and the holders of any additional parity bonds.

For the foregoing reasons, in a bankruptcy context, the pledge of the Net Revenues of the Sewerage System by the Issuer and the Board to secure the obligations with respect to the Bonds may be ineffective as to certain revenues or under certain circumstances.

## **Failure to Provide Ongoing Disclosure**

The failure of the Issuer to comply with the continuing disclosure certificate described herein may adversely affect the transferability and liquidity of the Bonds and their market price. See "CONTINUING DISCLOSURE" herein.

## **Limited Secondary Market**

There can be no guarantee that there will be a secondary market for the Series 2015 Bonds or, if a secondary market exists, that any Series 2015 Bonds can be sold for a particular price. Occasionally, because of general market conditions, lack of current information, adverse history, or economic prospects connected with a particular issue, secondary marketing practices in connection with a particular issue are suspended or terminated. Additionally, prices of issues for which a market is being made will depend upon the then-prevailing circumstances. Such prices could be substantially different from the original purchase price.

INVESTING IN THE SERIES 2015 BONDS INVOLVES CERTAIN RISKS. POTENTIAL INVESTORS IN THE SERIES 2015 BONDS ARE RESPONSIBLE FOR CONDUCTING AN INDEPENDENT INVESTIGATION OF MATTERS RELATING TO THE FINANCIAL ASPECTS OF THE SERIES 2015 BONDS, THE SEWERAGE SYSTEM, THE ISSUER, THE BOARD AND THE SECURITY FOR THE SERIES 2015 BONDS TO DETERMINE IF AN INVESTMENT IN THE SERIES 2015 BONDS, AND THE RISKS ASSOCIATED THEREWITH, IS CONSISTENT WITH THEIR INVESTMENT OBJECTIVES. POTENTIAL INVESTORS SHOULD NOT RELY ON ANY PARTY TO THE TRANSACTION WITH RESPECT TO THE INVESTIGATION OF ANY SUCH MATTERS. PROSPECTIVE PURCHASERS SHOULD CONFER WITH THEIR OWN LEGAL AND FINANCIAL ADVISORS BEFORE CONSIDERING A PURCHASE OF THE SERIES 2015 BONDS.

THIS OFFICIAL STATEMENT HAS BEEN PREPARED IN CONNECTION WITH THE INITIAL OFFERING AND SALE OF THE SERIES 2015 BONDS TO THE PURCHASERS ON THE DATE HEREOF AND IS NOT INTENDED FOR USE IN CONNECTION WITH ANY SUBSEQUENT SALE, REOFFERING OR REMARKETING OF THE BONDS. SUBSEQUENT PURCHASERS MUST THEREFORE RELY ON THEIR OWN EXAMINATION OF THE OFFERING, INCLUDING THE MERITS AND THE RISKS INVOLVED.

## **TAX EXEMPTION**

### **Interest on Series 2015 Bonds**

The delivery of the Series 2015 Bonds is subject to the joint legal opinion of Foley & Judell, L.L.P., McKee Law Firm, L.L.C. and Haley Law Firm, L.L.C., each of New Orleans, Louisiana, Co-Bond Counsel, to the effect that interest on the Series 2015 Bonds is excluded from gross income of the owners for federal income tax purposes under existing law. See APPENDIX "F" - Form of Legal Opinion attached hereto.

### **Louisiana Taxes**

The opinion of Co-Bond Counsel will state that under the Act, the Series 2015 Bonds are exempt from all taxation in Louisiana for state, parish, municipal or other local purposes.

### **Alternative Minimum Tax Consideration**

Interest on the Series 2015 Bonds is not an item of tax preference for purposes of the federal alternative minimum tax imposed on individuals or corporations under the Code. Interest on the Series 2015 Bonds will, however, be included in the adjusted current earnings (for example, the income, including interest on obligations such as the Series 2015 Bonds, used in reports or statements to shareholders or owners or in reports to creditors) of certain corporations, and the alternative minimum taxable income of such corporations must be increased by 75% of the excess of such corporation's adjusted current earnings over its alternative minimum taxable income (determined without regard to such adjustment and prior to reduction for certain net operating losses).

## General

The Code imposes a number of requirements that must be satisfied for interest on state and local obligations to be excluded from gross income for federal income tax purposes. These requirements include limitations on the use of bond proceeds and the source of repayment of bonds, limitations on the investment of bond proceeds prior to expenditure, a requirement that excess arbitrage earned on the investment of certain bond proceeds be paid periodically to the United States, except under certain circumstances, and a requirement that information reports be filed with the Internal Revenue Service.

The joint opinion of Co-Bond Counsel will assume continuing compliance with the covenants in the Bond Resolution pertaining to those sections of the Code which affect the exclusion from gross income of interest on the Series 2015 Bonds for federal income tax purposes and, in addition, will rely on representations by the City with respect to matters solely within the knowledge of the City, which Co-Bond Counsel has not independently verified. If the City should fail to comply with the covenants in the Bond Resolution or if the foregoing representations should be determined to be inaccurate or incomplete, interest on the Series 2015 Bonds could become included in gross income from the date of original delivery of the Series 2015 Bonds, regardless of the date on which the event causing such inclusion occurs.

Owners of the Series 2015 Bonds should be aware that the ownership of tax-exempt obligations may result in collateral federal income tax consequences to corporations with Subchapter C earnings and profits and passive investment income that exceeds 25% of their gross receipts, financial institutions, property and casualty insurance companies, individual recipients of Social Security or Railroad Retirement benefits and taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry tax-exempt obligations. In addition, certain foreign corporations doing business in the United States may be subject to a “branch profits tax” on their effectively connected earnings and profits. These categories of owners should consult their own tax advisors as to the applicability of these consequences.

Except as stated above, Co-Bond Counsel will express no opinion as to any federal, state or local tax consequences resulting from the ownership of, receipt of interest on or disposition of the Series 2015 Bonds.

THE FOREGOING DISCUSSION OF CERTAIN FEDERAL AND STATE INCOME TAX CONSEQUENCES IS PROVIDED FOR GENERAL INFORMATION ONLY. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS AS TO THE TAX CONSEQUENCES TO THEM IN LIGHT OF THEIR OWN PARTICULAR INCOME TAX POSITION, OF ACQUIRING, HOLDING OR DISPOSING OF THE SERIES 2015 BONDS.

### **Qualified Tax-Exempt Obligations (Non-Bank Deductibility)**

The Tax Reform Act of 1986 revised Section 265 of the Code so as to generally deny financial institutions 100% of the interest deductions that are allocable to tax-exempt obligations acquired after August 7, 1986; however, an exception is permitted under the Tax Reform Act of 1986 and the American Recovery and Reinvestment Tax Act of 2009 for certain qualified tax-exempt obligations which allows financial institutions to continue to treat the interest on such obligations as being subject to the 20% disallowance provision under prior law if the Issuer, together with certain subordinate entities, reasonably expects that it will not issue more than \$30,000,000 of governmental purpose bonds in a calendar year and designates such bonds as “qualified tax-exempt obligations” pursuant to the provisions of Section 265(b)(3)(B) of the Code. The Series 2015 Bonds are not designated as “qualified tax-exempt obligations” pursuant to Section 265(b)(3)(B) of the Code.

## **Changes in Federal and State Tax Law**

Tax legislation, administrative actions taken by tax authorities, and court decisions may cause interest on the Series 2015 Bonds to be subject, directly or indirectly, to federal income taxation or to be subject to State income taxation, or otherwise prevent the beneficial owners of the Series 2015 Bonds from realizing the full current benefit of the tax status of such interest. In addition, such legislation or actions (whether currently proposed, proposed in the future or enacted) could affect the market price or marketability of the Series 2015 Bonds. For example, ongoing negotiations between the Executive and Legislative Branches of the United States Government to resolve federal budget deficits may result in the enactment of tax legislation that could significantly reduce the benefit of, or otherwise affect, the exclusion of gross income for federal income tax of interest on all State and local obligations, including the Series 2015 Bonds. It cannot be predicted whether or in what form any such tax legislation might be enacted or whether, if enacted, it would apply to bonds issued prior to enactment. In addition, regulatory actions are from time to time announced and proposed, and litigation is threatened or commenced which, if implemented or concluded in a particular matter, could adversely affect the market value of the Series 2015 Bonds. It cannot be predicted whether any such regulatory action will be implemented, how any particular litigation or judicial action will be resolved, or whether the Series 2015 Bonds or the market value thereof would be impacted thereby. Prospective purchasers of the Series 2015 Bonds should consult their own tax advisors regarding any pending or proposed federal or State tax legislation, regulations or litigation, and its impact on their individual situations. The opinions expressed by Bond Counsel are based upon existing legislation and regulations as interpreted by relevant judicial and regulatory authorities as of the date of issuance and delivery of the Series 2015 Bonds, and Bond Counsel has expressed no opinion as of any date subsequent thereto or with respect to any pending or proposed federal or State tax legislation, regulations or litigation.

## **Tax Treatment of Original Issue Premium**

The Bonds are offered and sold to the public at a price in excess of their stated principal amounts. Such excess is characterized as a “bond premium” and must be amortized by an investor purchasing a Bond on a constant yield basis over the remaining term of the Bond in a manner that takes into account potential call dates and call prices. An investor cannot deduct amortized bond premium related to a tax-exempt bond for federal income tax purposes. However, as bond premium is amortized, it reduces the investor's basis in the Bond. Investors who purchase a Bond should consult their own tax advisors regarding the amortization of bond premium and its effect on the Bond's basis for purposes of computing gain or loss in connection with the sale, exchange, redemption or early retirement of the Bond.

## **LITIGATION**

There is not now pending, or to the best of the Board's knowledge, threatened any litigation restraining or enjoining the issuance or delivery of the Series 2015 Bonds, the proceedings and authority under which they are being issued, nor is the creation, organization, or existence of the Board being contested. Nor is there any litigation pending or, to the best of the Board's knowledge, threatened which (i) in any manner questions the right of the Board to operate the Sewerage System or its right to conduct its activities in accordance with the provisions of the Act and the General Bond Resolution, or (ii) if determined adversely to the Board, would have a material adverse impact on the financial condition of the Board.

The Board is subject to a variety of suits and proceedings arising out of its ordinary course of operations, some of which may be adjudicated adversely to the Board. Any such litigation currently pending is of a routine nature and does not affect the right of the Board to conduct its business or the validity of its obligations.

## **UNDERWRITING**

The Series 2015 Bonds are being purchased by Merrill Lynch, Pierce, Fenner & Smith Incorporated (the “Representative”) on behalf of itself and as the Representative of the Underwriters, at a purchase price of \$112,706,707.30 (representing the principal amount of the Series 2015 Bonds, plus an original issue premium of \$12,826,409.80 and less Underwriters' discount of \$119,702.50).

The Underwriters and their respective affiliates are full-service financial institutions engaged in various activities, which may include sales and trading, commercial and investment banking, advisory, investment management, investment research, principal investment, hedging, market making, brokerage and other financial and non-financial activities and services.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the issuer (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the issuer. The Underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

Morgan Stanley, parent company of Morgan Stanley & Co. LLC., one of the Underwriters, has entered into a retail distribution arrangement with its affiliate Morgan Stanley Smith Barney LLC. As part of the distribution arrangement, Morgan Stanley & Co. LLC may distribute municipal securities to retail investors through the financial advisor network of Morgan Stanley Smith Barney LLC. As part of this arrangement, Morgan Stanley & Co. LLC may compensate Morgan Stanley Smith Barney LLC for its selling efforts with respect to the Series 2015 Bonds.

Siebert Brandford Shank & Co, L.L.C., one of the Underwriters, has entered into separate agreements with Muriel Siebert & Co., and Credit Suisse Securities (USA) for the retail distribution of certain securities offerings, at the original issue prices. Pursuant to these distribution agreements, if applicable to the Series 2015 Bonds, Muriel Siebert & Co. and/or Credit Suisse Securities (USA), as the case may be, will purchase the Series 2015 Bonds at the original issue price less the selling concession with respect to any Series 2015 Bonds that such entity sells. Siebert Brandford Shank & Co, L.L.C. will share a portion of its underwriting compensation with Muriel Siebert & Co. and/or Credit Suisse Securities (USA).

## **LEGAL MATTERS**

The joint approving opinion of Co-Bond Counsel will be given with respect to the Series 2015 Bonds. The approving opinion of Co-Bond Counsel is limited to the matters set forth therein, and Co-Bond Counsel is not passing upon the accuracy or completeness of this Official Statement. Co-Bond Counsel's opinion is based on existing law, which is subject to change. Such opinion is further based on factual representations made to Co-Bond Counsel as of the date thereof. Co-Bond Counsel assumes no duty to update or supplement its opinion to reflect any facts or circumstances that may thereafter come to Co-Bond Counsel's attention, or to reflect any changes in law that may thereafter occur or become effective. Moreover, Co-Bond Counsel's opinion is not a guarantee of a particular result and is not binding on third parties, the courts or regulatory bodies; rather, such opinion represents Co-Bond Counsel's professional judgment based on a review of existing law and in reliance on the representations and covenants that each deems relevant to such opinion.

A manually executed original of such opinion will be delivered to the Underwriters on the date of payment for and delivery of the Series 2015 Bonds. The form of said legal opinion appears in APPENDIX "F" to this Official Statement. For additional information regarding the opinions of Co-Bond Counsel, see the preceding section titled "TAX EXEMPTION." The compensation of Co-Bond Counsel is contingent upon the sale and delivery of the Series 2015 Bonds.

Certain other legal matters will be passed upon for the Board by its special counsel, Nolan P. Lambert, New Orleans, Louisiana, and for the Underwriters by their co-counsel, Squire Patton Boggs (US) LLP, Cleveland, Ohio, and Auzenne & Associates, L.L.C., New Orleans, Louisiana.

## **FINANCIAL STATEMENTS**

The financial statements included in the Comprehensive Annual Financial Report of the Sewerage and Water Board of New Orleans, for the year ended December 31, 2014, have been examined by Postlethwaite & Netterville, to the extent and for the periods indicated in their report thereon, dated as of May 28, 2015. The audited financial statements included in this Official Statement have been included in reliance upon said report. See APPENDIX "B" - Comprehensive Annual Financial Report of the Sewerage and Water Board attached hereto.

## **CONTINUING DISCLOSURE**

The Board will, pursuant to a Continuing Disclosure Certificate with respect to the Series 2015 Bonds, covenant for the benefit of Series 2015 Bond owners to provide certain financial information and operating data relating to the Board by not later than August 31 in each year, with the first report due not later than August 31, 2016 (the "Annual Report"), and to provide notices of the occurrence of certain enumerated events, which, in some cases, will only be provided if deemed by the Board to be material. The Annual Report will be filed by the Board with the Electronic Municipal Market Access system ("EMMA") of the Municipal Securities Rulemaking Board (and with any future Louisiana officially designated State Information Depository). Any notices of material events will be filed on behalf of the Board and the Issuer by the Dissemination Agent with EMMA (and with any future Louisiana officially designated State Information Depository). The specific nature of the information to be contained in the Annual Report or the notices of material events is set forth herein under the caption APPENDIX "G" - Form of Continuing Disclosure Certificate attached hereto. These covenants have been made in order to assist the Underwriters in complying with S.E.C. Rule 15c2-12 (b)(5) (the "Rule").

The Board's designated Dissemination Agent for the above information is the Secretary of the Board of Liquidation, Room 8E17, City Hall, 1300 Perdido Street, New Orleans, Louisiana 70112 (telephone 504-658-1410).

Except as provided in the Continuing Disclosure Certificate, the Board has not undertaken to provide all information investors may desire to have in making decisions to hold, sell or buy the Series 2015 Bonds. The Issuer and the Board have complied in all material respects with all of their respective prior undertakings under the Rule during the past five years, except for various instances of noncompliance from time to time, including: (i) each failed to file on a timely basis event notices relating to changes to ratings assigned to the insurers of insured bonds or to the underlying ratings, (ii) each filed its Annual Report for fiscal year 2011 four days late at the time of a mandatory hurricane evacuation that made timely filing impossible, (iii) certain data relating to Water System revenues for the years 2005 and 2006 were not included in any Annual Report relating to fiscal years 2008 through 2012 as they were for other years because Hurricanes Katrina and Rita made it impossible for the Issuer to compile and report those data for those years, (iv) certain amounts reported with respect to annual operating revenue for the Water System in the years 2009, 2010, and 2012, and for the Sewerage System in the years 2009, 2010, 2011, and 2012 were inaccurate, and (v) certain Annual Reports filed by each were not properly matched with all required CUSIP numbers. The foregoing description of instances of non-compliance by the Issuer and the Board with continuing disclosure undertakings should not be construed as an acknowledgment that any such instance was material.

The Issuer and the Board have instituted additional policies and procedures designed to ensure future compliance with its continuing disclosure obligations. Furthermore, Act 463 of the 2014 Regular Session of the Louisiana Legislature provides additional procedures designed to ensure compliance with the Rule. Such legislation requires public entities, such as the Board, the Board of Liquidation and the Issuer, to keep certain records demonstrating compliance with the Rule. Additionally, auditors for public entities in Louisiana are required to review the public entities compliance with such record-keeping requirements, review a sampling of the EMMA filings, and report on the auditor's findings in the annual audited financial statements of such entity.

## **FINANCIAL ADVISORS**

This Official Statement has been prepared under the direction of the Board of Liquidation and with the assistance of Public Financial Management, Inc., Memphis, Tennessee, and CLB Porter, L.L.C., New Orleans, Louisiana, employed by the Board of Liquidation to perform professional services in the capacity of co-financial advisors (the "Co-Financial Advisors"). The Co-Financial Advisors have reviewed and commented on certain legal documentation, including the Preliminary Official Statement and the Official Statement. The Co-Financial Advisors have not audited, authenticated or otherwise verified the information set forth in the Official Statement, or any other information available to the Board of Liquidation, with respect to the appropriateness, accuracy or completeness of disclosure of such information or other information, and no guaranty, warranty or other representation is made by the Co-Financial Advisors respecting such accuracy and completeness of information or any other matter related to such information and the Official Statement.

## **BOND RATINGS**

Standard & Poor's Ratings Services and Fitch Ratings, Inc. have assigned their ratings of "A," and "BBB+," respectively, to the Series 2015 Bonds. Such ratings reflect only the views of such organizations and are not a recommendation to buy, sell or hold the Series 2015 Bonds. Any desired explanation of the significance of such ratings should be obtained from the rating agency furnishing the same, at the following addresses: Standard & Poor's Public Finance Ratings, Lincoln Plaza, Suite 3200, 500 N. Akard, Dallas, TX 75201, telephone 214-871-1400; or Fitch Ratings, 111 Congress Avenue, Suite 2010, Austin, TX 78701, telephone 888-262-4820. The Board of Liquidation, the Board and the City may have furnished to such rating agencies information relating to the Series 2015 Bonds and the City, certain of which information and materials have not been included in this Official Statement. Generally, a rating agency bases its rating on the information and materials so furnished and on its own investigations, studies and assumptions. A rating may be changed, suspended or withdrawn as a result of changes in, or unavailability of, information. There is no assurance that a rating will not be changed or withdrawn entirely if, in the judgment of the rating agency issuing the rating, circumstances so warrant. Any such changes or withdrawals of any rating could have an adverse effect on the market price for the Series 2015 Bonds. Neither the Board, or the Board of Liquidation, nor the City, together or individually, sought a rating of the Series 2015 Bonds from any other rating agency.

## **ADDITIONAL INFORMATION**

For any additional information concerning the City, the Board, or the Board of Liquidation, please address Mr. David W. Gernhauser, Secretary, Board of Liquidation, City Debt, Room 8E17, City Hall, 1300 Perdido Street, New Orleans, Louisiana 70112-2197, telephone (504 658-1410). For additional information concerning the Series 2015 Bonds, please address Ms. Lisa Daniel, Public Financial Management, Inc., 530 Oak Court Dr., Suite 160, Memphis, Tennessee 38117, telephone (901-682-8356) and Mr. Shawn Barney, CLB Porter, L.L.C., 650 Poydras St., Suite 1400, New Orleans, Louisiana 70130, telephone (504-299-3411).

## **CERTIFICATION AS TO OFFICIAL STATEMENT**

At the time of payment for and delivery of the Series 2015 Bonds, the City will furnish the Underwriters (1) a certificate signed by the Secretary of the Board of Liquidation to the effect that on the date of the Preliminary Official Statement, on the date of the Official Statement and on the date of the delivery of the Series 2015 Bonds, (a) the descriptions and statements of or pertaining to the Board of Liquidation, and the revenue bonds issued for the Board contained in the Official Statement were and are true and complete in all material respects; (b) insofar as such matters are concerned, the Official Statement did not and does not contain an untrue statement of a material fact or omit to state a material fact necessary to make the statements herein, in light of the circumstances under which they are made, not misleading; (c) insofar as the descriptions and statements, including financial data, or pertaining to governmental and non-governmental entities other than the City, and their activities, contained in the Official Statement are concerned, such descriptions, statements and data have been obtained from sources which the Board of Liquidation believes to be reliable and the Board of Liquidation has no reason to believe that they are untrue or incomplete in any material respect, and (2) a certificate signed by the Director of Finance of the City to the effect that on the date of the Preliminary Official Statement, on the date of the Official Statement and on the date of the delivery of the Series 2015 Bonds, (a) the descriptions and statements, including financial statements, of or pertaining to the City contained in the Official Statement (other than the matters covered by the certificates of the Secretary of the Board of Liquidation and the Executive Director of the Board) were and are true and correct in all material respects, (b) insofar as the City and its affairs, including its financial affairs, are concerned, the Official Statement did not and does not contain an untrue statement of a material fact or omit to state a material fact necessary to make the statements herein, in light of the circumstances under which they were made, not misleading, and (3) a certificate signed by the Executive Director of the Board to the effect that on the date of the Preliminary Official Statement, on the date of the Official Statement and on the date of delivery of the Series 2015 Bonds, (a) the descriptions and statements, including financial statements, of or pertaining to the Board contained in the Official Statement (other than the matters covered by the certificates of the Secretary of the Board of Liquidation and the Director of Finance of the City) were true and correct in all material respects, (b) insofar as the Board and its affairs, including its financial affairs, are concerned, the Official Statement did not and does not contain an untrue statement of a material fact or omit to state a material fact necessary to make the statements herein, in light of the circumstances under which they were made, not misleading, and (c) other than as set forth herein, there has been no material adverse change in the financial condition of the Board since December 31, 2014, the date of the last audited financial statements of the Board appearing in the Official Statement.

## **MISCELLANEOUS**

This Official Statement has been prepared in connection with the initial offering and sale of the Bonds to the Underwriters on the date hereof and is not intended for use in connection with any subsequent sale, reoffering or remarketing of the Bonds. Subsequent purchasers must therefore rely on their own examination of the offering, including the merits and the risks involved.

The Issuer has authorized the delivery of this Official Statement to the Underwriters. The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, its responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

Potential purchasers of the Series 2015 Bonds should consult their own tax advisors as to the consequences of investing in the Series 2015 Bonds. Also, see "TAX EXEMPTION" herein.

**BOARD OF LIQUIDATION, CITY DEBT**

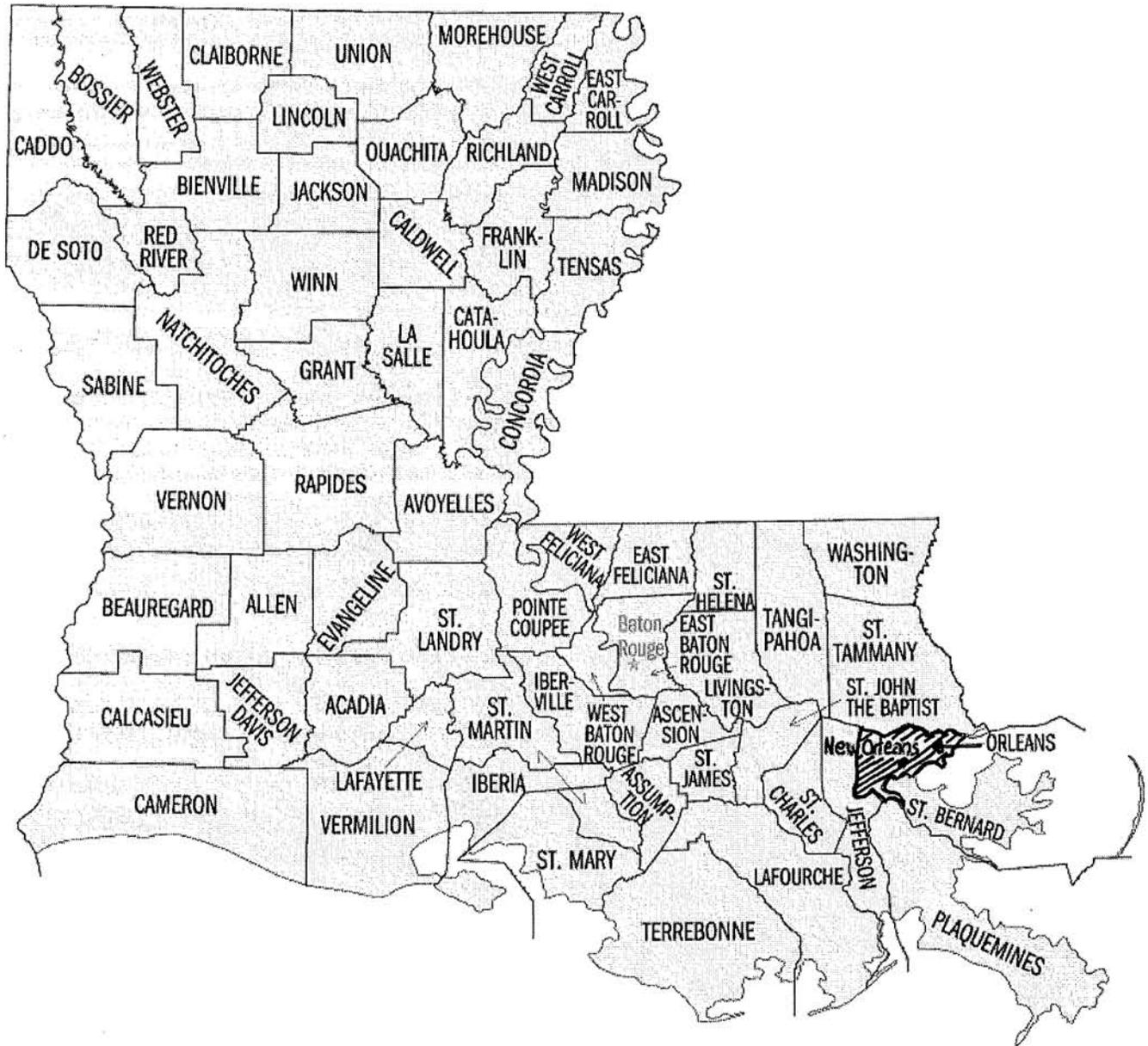
*/s/ David W. Gernhauser*  
\_\_\_\_\_  
David W. Gernhauser  
Secretary

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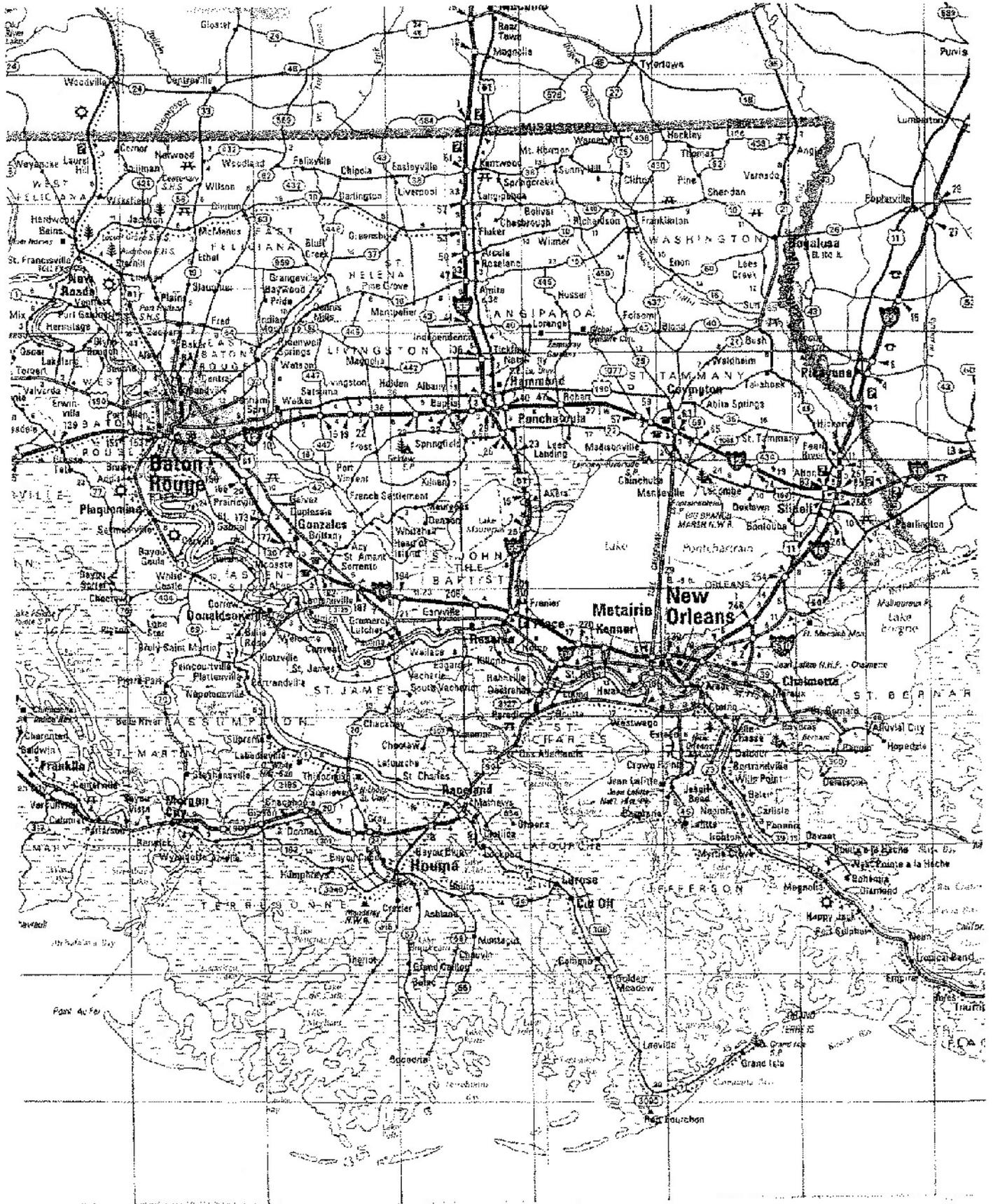
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**MAPS**



**MAP INDICATING THE APPROXIMATE LOCATION  
OF THE PARISH OF ORLEANS  
WITHIN THE STATE OF LOUISIANA**



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**APPENDIX "A"**

**FINANCIAL AND STATISTICAL DATA**

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**FINANCIAL AND STATISTICAL DATA  
RELATIVE TO THE CITY OF NEW ORLEANS  
AND THE PARISH OF ORLEANS, STATE OF LOUISIANA**

The City of New Orleans (the “City”) and the Parish of Orleans (the “Parish”) have the same boundaries and are located in the southeastern portion of the State of Louisiana (the “State”), approximately 110 miles from the mouth of the Mississippi River. The City occupies an area of approximately 363.5 square miles, of which approximately 199.4 square miles are land and approximately 164.1 square miles are water. The developed area of the City consists of approximately 75 square miles; much of the relatively large amount of undeveloped land consists of reclaimed wetlands.

The City is one of the largest seaports in the United States, a major trade and service market, and a world-wide tourist and convention center. The manufacturing base is relatively small. The oil and gas industry plays an important role in the City’s economy. Several major oil companies, financial institutions, law firms, utilities, government agencies, universities, and hospitals have office buildings in the central business district and are among the largest employers within the City.

**Population**

The actual population of the City, from time to time, may be larger than its basic resident population as a result of an influx of commuters, tourists, visitors and convention attendees. The New Orleans Metropolitan Statistical Area (the “MSA”), as now defined by the U.S. Office of Management and Budget, includes Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. John the Baptist and St. Tammany Parishes. A history of the population of the City and the MSA is provided below. The decrease in population between the 2000 Census and the 2010 Census is largely a result of Hurricane Katrina.

**Population of New Orleans and the New Orleans  
Metropolitan Statistical Area**

	<b><u>1950</u></b>	<b><u>1960</u></b>	<b><u>1970</u></b>	<b><u>1980</u></b>	<b><u>1990</u></b>	<b><u>2000</u></b>	<b><u>2010</u></b>	<b><u>2014</u></b>
New Orleans	570,445	627,525	593,471	557,927	496,938	484,674	343,829	384,320
MSA*	754,856	969,326	1,125,058	1,282,717	1,264,391	1,316,510	1,167,764	1,251,849

(\* Restated to reflect inclusion of Plaquemines Parish in 1993.)

Sources: U.S. Census Bureau.

## Assessed Valuations

The following table sets forth the assessed value of taxable property in the City and homestead exemptions for the years 2005-2015.

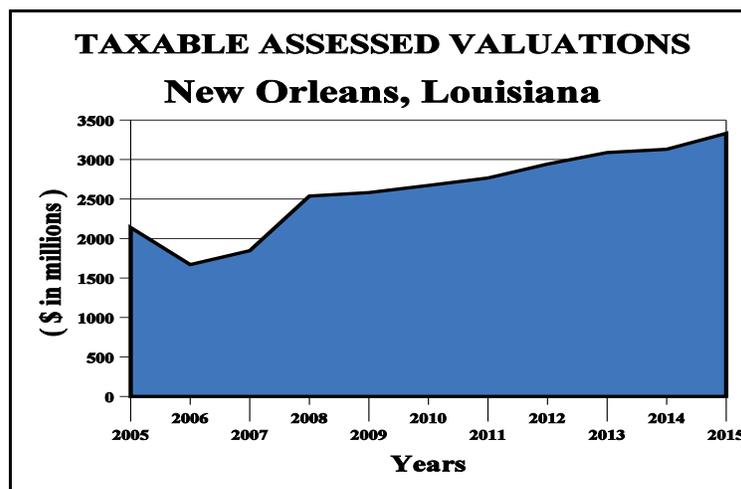
### Assessed Value of Property in the City

<u>Tax Year</u>	<u>Real Property</u>	<u>Personal Property</u>	<u>Public Service Property</u>	<u>Total Assessed Valuation</u>	<u>Less: Homestead Exemptions</u>	<u>Taxable Assessed Valuation</u>
2005	\$1,967,375,676	\$465,782,621	\$171,451,660	\$2,604,609,957	\$465,989,854	\$2,138,620,103
2006	1,432,380,307	394,823,507	170,463,560	1,997,667,374	328,776,640	1,668,890,734
2007	1,650,948,720	344,397,546	139,643,310	2,134,989,576	288,851,693	1,846,137,883
2008	2,295,689,798	393,879,207	145,035,610	2,834,604,615	297,101,026	2,537,503,589
2009	2,353,204,380	405,715,110	152,439,600	2,911,363,090	330,225,920	2,581,137,170
2010	2,489,812,690	387,333,971	163,911,580	3,041,058,241	369,086,386	2,671,971,855
2011	2,586,081,540	385,699,970	167,557,410	3,139,338,920	372,613,310	2,766,725,610
2012	2,760,973,210	390,952,232	183,003,600	3,334,929,042	392,534,175	2,942,394,867
2013	2,920,015,480	413,120,240	193,722,510	3,526,858,230	433,616,519	3,093,241,711
2014	2,992,593,440	405,514,430	181,055,280	3,579,163,150	448,696,881	3,130,466,269
<b>2015</b>	<b>3,188,376,880</b>	<b>431,355,330</b>	<b>170,541,020</b>	<b>3,790,273,230</b>	<b>458,941,272</b>	<b>3,331,331,958</b>

Sources: Louisiana Tax Commission (2005-2013); Department of Finance, City of New Orleans (2014-2015).

(Note: Hurricane Katrina occurred August 29, 2005 and impacted the 2006 tax rolls. Further, the values shown are those certified by the Tax Assessor at the beginning of each respective tax year; however, minor adjustments are often made during the tax year that may change the values shown above. There can be no assurance that such changes will not be made in 2015.)

Unlike other municipalities in Louisiana, homestead exemptions are applicable to most taxes levied in the City, pursuant to the provisions of the Louisiana Constitution. For additional information, see Tax Rates and Tax Rate Adjustments in this Appendix.



## Tax Rates

The following table shows, in summary, the millages levied in the City and Parish for the years 2011 through 2015:

<u>Purpose</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
	(\$ per \$1,000 of Taxable Assessed Value)				
<b>City:</b>					
<b>General Purposes*</b>	13.91	13.91	13.91	13.91	13.91
City Services	1.19	1.19	1.19	1.19	1.19
Debt Service on General					
Obligation Bonds	25.50	25.50	25.50	25.50	25.50
Fire and Police	6.40	6.40	6.40	6.40	6.40
Police (1)	5.26	5.26	5.26	5.26	5.26
Fire (1)	5.21	5.21	5.21	5.21	5.21
Audubon Park Zoo	0.32	0.32	0.32	0.32	0.32
Aquarium	2.99	2.99	2.99	2.99	2.99
Library	3.14	3.14	3.14	3.14	3.14
Capital Improvements &					
Infrastructure Trust Fund	1.82	1.82	1.82	1.82	1.82
Economic Development & Housing	1.82	1.82	1.82	1.82	1.82
Parkway & Recreation	3.00	3.00	3.00	3.00	3.00
Streets (Traffic Control Devices)	1.90	1.90	1.90	1.90	1.90
Sewerage and Water Board:					
Drainage System (Act 617 of 1977)	4.71	4.71	4.71	4.71	4.71
Drainage System (Ord. 6289, M.C.S.)	4.66	4.66	4.66	4.66	4.66
Drainage System (R-81-29)	7.06	7.06	7.06	7.06	7.06
<b>Total City Tax Rates</b>	<b>88.89</b>	<b>88.89</b>	<b>88.89</b>	<b>88.89</b>	<b>88.89</b>
Orleans Law Enforcement District	2.90	2.90	2.90	2.90	2.80
Orleans Parish School Board	44.12	44.12	44.81	45.31	45.31
<b>Total Parishwide Tax Rates</b>	<b>135.91</b>	<b>135.91</b>	<b>136.60</b>	<b>137.10</b>	<b>137.00</b>
Orleans Levee District (Eastbank)	11.67	11.67	11.67	11.67	11.67
Algiers Levee District (Westbank)	12.76	12.76	12.56	12.56	12.56
Downtown Development District (2)	14.76	14.76	14.76	14.76	14.76
New Orleans Regional					
Business Park (3)	20.85	20.85	--	--	--
Garden District Security	16.00	16.00	11.00	11.00	11.00
Touro Bouligny	7.80	7.80	7.80	7.80	7.80

\* Tax securing the proposed bonds.

(1) No homestead exemption. (2) Tax levied only on certain real property in the central business area of the City. (3) Tax levied on certain real property within the District, excluding residential real property.

Neighborhood based special taxing districts have been created by the Louisiana Legislature in portions of Orleans Parish. These special taxing districts have been authorized, upon voter approval, to impose parcel fees on the real property located within the boundaries of the respective district to be used for various purposes solely within such district. Parcel fees are not listed above.

## Property Taxpayers

The following list includes the names, type of business and the 2015 assessed valuations of the ten largest property taxpayers located within the boundaries of the City:

	<u>Name of Taxpayer</u>	<u>Type of Business</u>	<u>2015 Assessed Valuation</u>
1.	Entergy	Public Utility	\$101,230,460
2.	Capital One, National Association	Financial Services	57,187,770
3.	Marriott Hotel	Hotel	41,292,140
4.	BellSouth	Utility	37,998,320
5.	Harrah's New Orleans Casino & Hotel	Tourism	29,003,530
6.	JPMorgan Chase Bank, N.A.	Financial Services	20,119,210
7.	International Rivercenter	Retail Shopping; Hotel	18,886,030
8.	Royal Sonesta Hotel	Hotel	18,445,430
9.	Sheraton Hotel	Hotel	18,041,330
10.	Folgers Coffee Company	Coffee Roasting Plant	17,982,060
	Total		<u>\$360,186,280</u>

Source: Department of Finance, City of New Orleans.

The ten largest property taxpayers accounted for approximately 10.81% of the City's 2015 taxable assessed valuation.

## Property Tax Collections

The following table shows the total property tax levied by the City and all other tax recipient entities in the Parish in each year from 2005 through 2015, along with the amounts collected and the percentage of such levy that has been collected since the date the taxes were imposed (through June 30, 2015), as reported by the City Finance Department, which collects and disburses all *ad valorem* taxes in the Parish:

### Property Tax Levies and Collections (Amounts in Thousands)

<u>Tax Year</u>	<u>Total Levied</u>	<u>Collected through June 30, 2015 (includes cleared receivables)</u>		<u>Balance Due at June 30, 2015</u>		<u>Cleared 1/1-6/30/15 Amount</u>
		<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	
<u>Real Estate Taxes</u>						
2005	\$267,327	\$264,152	98.81%	\$ 3,175	1.19%	\$ 51
2006*	219,991	218,082	99.13	1,909	0.87	59
2007	250,462	247,599	98.86	2,863	1.14	181
2008	269,746	266,769	98.90	2,977	1.10	127
2009	275,869	272,677	98.84	3,192	1.16	239
2010	309,800	305,984	98.77	3,816	1.23	308
2011	339,370	334,548	98.58	4,822	1.42	394
2012	362,262	356,786	98.49	5,476	1.51	1,010
2013	382,902	375,909	98.17	6,993	1.83	1,649
2014	393,304	382,824	97.34	10,480	2.66	7,009
2015	422,306	394,113	93.32	28,193	6.68	394,113

\* Due to Hurricane Katrina related legislation, billing was delayed from mid-December 2005 to mid-May 2006.

<u>Tax Year</u>	<u>Total Levied</u>	<u>Collected through June 30, 2015 (includes cleared receivables)</u>		<u>Balance Due at June 30, 2015</u>		<u>Cleared 1/1-6/30/15</u>
		<u>Amount</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	<u>Amount</u>
<u>Personal Property Taxes</u>						
2005	\$106,354	\$100,809	94.79%	\$ 5,545	5.21%	\$ 0
2006*	99,477	95,157	95.66	4,320	4.34	0
2007	82,046	77,967	95.03	4,079	4.97	0
2008	67,548	64,074	94.86	3,474	5.14	0
2009	69,935	66,562	95.18	3,373	4.82	0
2010	74,530	70,750	94.93	3,780	5.07	0
2011	78,996	75,930	96.12	3,066	3.88	73
2012	81,685	79,897	97.81	1,788	2.19	72
2013	87,058	85,112	97.76	1,946	2.24	337
2014	84,620	82,296	97.25	2,324	2.75	370
2015	86,961	82,385	94.74	4,576	5.26	82,385

*2011 and prior personal property receivables are considered prescribed and no longer legally enforceable during 2015.*

\* Due to Hurricane Katrina related legislation, billing was delayed from mid-December, 2005 to mid-May, 2006.

Source: Department of Finance, City of New Orleans.

## Sales and Other Taxes

The general 2½% sales and use tax is the City’s largest single source of revenue available to pay operating expenses. In addition, the State of Louisiana (the “State”), the Regional Transit Authority, and the Orleans Parish School Board levy general sales and use taxes of 4%, 1% and 1½%, respectively, within the boundaries of the Parish. The total sales tax levied on goods sold or used (excluding hotel and motel rooms) in the Parish is 9%. The various sales taxes are not levied on the same sales of goods and services and have different related exemptions. Any increase in the City’s sales tax rate would require legislative approval and an affirmative vote in a City election.

Six public agencies share in the taxation of hotel/motel rooms in the Parish. The rate of taxation of each of the respective agencies is as follows: (a) the State - 2%, (b) the Louisiana Stadium and Exposition District (the “LSED”) - 4%, (c) the City - 1½%, (d) the School Board - 1½%, (e) the Regional Transit Authority (the “RTA”) - 1% and (f) the Ernest N. Morial-New Orleans Exhibition Hall Authority (the “NOEH”) - 3%, plus the proceeds from the “hotel/motel tax” and “food and beverage tax” authorized by the voters on November 21, 1987, and effective April 1, 1988, and which serves as security for outstanding special tax bonds of the NOEH.

Effective November 1, 1990, the City began collection of a Hotel Occupancy Privilege Tax upon persons occupying hotel rooms in the City for the purpose of funding tourism promotion by the New Orleans Tourism Marketing Corporation, a nonprofit economic development corporation.

The Constitution prohibits political subdivisions of the State from levying a severance tax, income tax or a tax on motor fuel.

Hurricane Katrina had an impact on the collections of the sales and use taxes of the City; however, annual collections since 2011 have exceeded pre-Katrina levels. The following table shows annual revenues of the City’s general purpose sales and use tax deposited in the City’s General Fund:

<u>Calendar Year</u>	<u>Sales Tax Revenues</u> (in thousands)	<u>Calendar Year</u>	<u>Sales Tax Revenues</u> (in thousands)
1990	98,077	2003	148,855
1991	98,483	2004	153,851
1992	101,221	2005	116,339
1993	102,530	2006	124,229
1994	109,167	2007	134,114
1995	120,229	2008	137,581
1996	120,240	2009	133,868
1997	120,652	2010	147,300
1998	126,899	2011	152,840
1999	133,490	2012	163,128
2000	139,770	2013	176,326
2001	139,511	2014	193,183
2002	145,009	2015	201,745*



\* Figure projected as of September 2015.

Sources: Annual Financial Reports, City of New Orleans.

### Default Record

The City has never defaulted in the payment of its outstanding bonds.

### Audit Report

Included in Appendix “B” hereto is a copy of the Comprehensive Annual Financial Report of the Sewerage and Water Board of New Orleans (the “Board”) for the fiscal year ended December 31, 2014, audited by Postlethwaite & Netterville, A Professional Accounting Corporation, whose report dated May 28, 2015, is included therein, The Comprehensive Annual Financial Report pertaining to the Board which is included in this Official Statement have been included in reliance upon said report; however, such Auditors have not consented to inclusion of the financial statements herein and have not performed any additional review procedures related thereto. The Auditors did not perform any procedures relating to any of the information in this Official Statement.

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## Balances

The City reported the following balances in its various funds and accounts as of June 30, 2015:

<u>Name of Fund</u>	<u>Balances</u>		
	<u>Cash</u>	<u>Investments</u>	<u>Total</u>
General Fund	\$66,969,939	\$ 381,696	\$67,351,635
Cap Projects Oper. Fund	11,980,296	--	11,980,296
Neighborhood Housing Impr.	1,729,411	1,899,902	3,629,313
NO Economic Development	2,634,602	1,068,710	3,703,313
Environmental Disaster Litigation	319,519	--	319,519
Environmental Impr. Revlving Fund	30,990	158,995	189,985
Miscellaneous Donations	231,693	--	231,693
Housing & Environment Improvmt	3,565,302	--	3,565,302
Sidewalk Pavement Rev. Fund	--	2,066	2,066
NO Special Events Fd	227	--	227
Adopt-A-Pothole/Streets	283	--	283
Sanitation Recycling Exp.	1,368	--	1,368
NO Film Comm. Trust	62,141	157,803	219,944
National League of Cities	5,851	--	5,851
Music & Entertainment Comm.	63,066	115,974	179,039
Mayor's Off. of Tourism & Arts	361,258	--	361,258
Parking Management Fund	106,430	617,652	724,082
Library Special Revenue Fund	<u>8,002,835</u>	<u>--</u>	<u>8,002,835</u>
Totals	<u>\$96,065,211</u>	<u>\$4,402,797</u>	<u>\$100,468,009</u>

Source: Department of Finance, City of New Orleans. All figures unaudited.

## ECONOMIC INDICATORS

### Per Capita Personal Income

A comprehensive revision of the estimates of Per Capita Personal Income by State were published in November 2015 by the Bureau of Economic Analysis of the U.S. Department of Commerce. The recent trends in *revised* per capita personal income for Orleans Parish, Louisiana, and the nation are indicated in the following table:

	<u>Per Capita Personal Income*</u>				
	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Orleans Parish	\$42,305	\$41,783	\$45,204	\$44,879	\$46,084
Louisiana	37,227	38,506	40,527	40,819	42,030
United States	40,277	42,453	44,266	44,438	46,049

\* *The City has experienced the Nation's fastest Per Capita Personal Income growth since 2005.* Source: Forbes.  
Source: U.S. Department of Commerce, Bureau of Economic Analysis. November 19, 2015.

(The personal income level for the United States is derived as the sum of the county estimates; it differs from the national income and product accounts (NIPA) estimate of personal income because by definition, it omits the earnings of Federal civilian and military personnel stationed abroad and others. It can also differ from the NIPA estimate because of different data sources and revision schedules.)

The Louisiana Workforce Commission has issued *revised* annual average statistics not seasonally adjusted for various employment areas within Louisiana. The annual average figures for Orleans Parish were reported as follows:

<u>Year</u>	<u>Labor Force</u>	<u>Employment</u>	<u>Unemployment</u>	<u>Parish Rate</u>	<u>State Rate</u>
2010	162,592	148,465	14,127	8.7	8.0
2011	165,825	151,388	14,437	8.7	7.8
2012	168,992	155,445	13,547	8.0	7.1
2013	174,107	161,218	12,889	7.4	6.7
2014	178,535	166,019	12,516	7.0	6.4

The preliminary figures for October 2015 for the City were reported as follows:

*(Information updated from the Preliminary Official Statement.)*

<u>Month</u>	<u>Labor Force</u>	<u>Employment</u>	<u>Unemployment</u>	<u>Parish Rate</u>	<u>State Rate</u>
10/15	178,060	165,918	12,142	6.8%	6.4%*

The preliminary figures for the New Orleans MSA for October 2015 were reported as follows: *(Information updated from the Preliminary Official Statement.)*

<u>Month</u>	<u>Labor Force</u>	<u>Employment</u>	<u>Unemployment</u>	<u>Parish Rate</u>	<u>State Rate</u>
10/15	597,148	560,213	36,935	6.2%	6.4%*

\* Seasonally adjusted rate was 6.2.

Source: Louisiana Workforce Commission. December 7, 2015.

The following table shows the composition of the employed work force not seasonally adjusted in the MSA. *(Information updated from the Preliminary Official Statement.)*

**Nonfarm Wage and Salary Employment by Major Industry  
(Employees in Thousands)**

	<u>Preliminary Oct 2015</u>	<u>Revised Sept 2015</u>	<u>Preliminary Oct 2014</u>
Mining & Logging	7.0	7.2	8.1
Construction	29.3	29.1	30.4
Manufacturing	29.4	29.0	30.3
Trade, Transportation, & Utilities	115.9	114.6	115.9
Information	7.7	7.7	7.9
Financial Activities	27.1	27.5	28.2
Professional and Business Services	75.0	73.4	74.2
Education and Health Services	94.8	94.0	92.3
Leisure and Hospitality	85.2	83.4	81.9
Other Services	23.9	23.7	23.1
Government	71.8	71.7	74.2
<b>Total</b>	<b><u>567.1</u></b>	<b><u>561.3</u></b>	<b><u>566.5</u></b>

Source: Louisiana Workforce Commission.

## Largest Employers

The names of several of the largest private employers located in the Greater New Orleans area and their approximate number of local employees for fiscal years 2015 to 2016 are reported as follows:

<u>Employer</u>	<u>Type of Business</u>	<u>Approximate Number of Employees</u>
Ochsner Health System	Health Care	15,520
Tulane University	Higher Education	4,673
Children's Hospital	Health Care	4,540
Acme Truck Line	Transportation	3,200
Pan-American Life Insurance Group	Life Insurance	1,420
Premier Automotive	Automobile Dealership	1,400
Laitram	Manufacturing	1,261
Georges Enterprises	Food, Investments, Real Estate	1,170
Boh Bros. Construction Co.	Construction	1,100
Blessey Marine Services, Inc.	Towing Company	812

Source: New Orleans CityBusiness 2015-2016 Book of Lists.

Note: This list excludes some major employers who declined to supply employment information. The list also excludes State and local governmental employers.

No assurance may be given that any employer listed will either continue to locate in the City or maintain employment at the level stated.

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The following table shows the composition of the employed work force, not seasonally adjusted, in the City for the periods indicated.

**ANNUAL AVERAGE ORLEANS PARISH CONCURRENT ECONOMIC INDICATORS, 2011, 2012, 2013, 2014 AND FIRST QUARTER 2015** *(All data not seasonally adjusted.)*

<b>ORLEANS PARISH</b>					
<b>EMPLOYMENT</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015:1</b>
<b>Total</b>	<b>173,986</b>	<b>177,038</b>	<b>180,299</b>	<b>187,448</b>	<b>188,356</b>
Agriculture, Forestry, Fishing, and Hunting	32	39	66	69	66
Mining	2,867	2,391	2,431	2,542	2,318
Utilities	906	921	920	934	941
Construction	5,419	5,357	5,653	5,787	5,406
Manufacturing	4,536	4,031	4,048	4,082	3,974
Wholesale Trade	3,896	3,750	3,547	3,785	3,672
Retail Trade	12,428	12,926	13,595	14,601	15,110
Transportation and Warehousing	8,259	8,448	8,625	9,059	8,931
Information	3,724	4,700	4,449	3,764	3,975
Finance and Insurance	5,468	5,409	5,100	5,556	5,375
Real Estate and Rental and Leasing	2,460	2,587	2,695	2,911	2,893
Professional and Technical Services	14,709	14,671	16,004	16,003	15,746
Management of Companies and Enterprises	3,396	3,348	3,015	2,605	2,602
Administrative and Waste Services	9,439	9,864	10,026	10,831	10,392
Educational Services	20,997	21,303	22,357	22,427	22,652
Health Care and Social Assistance	21,171	21,239	20,759	22,823	23,646
Arts, Entertainment, and Recreation	4,975	5,056	5,608	6,119	5,936
Accommodation and Food Services	31,410	33,162	33,725	35,927	37,081
Other Services, except Public Administration	5,277	5,509	5,497	5,612	5,496
Public Administration	12,308	12,154	12,053	11,880	12,077
<b>WAGES (\$ in Thousands)</b>	<b>Annual</b>	<b>Annual</b>	<b>Annual</b>	<b>Annual</b>	<b>Quarterly</b>
<b>Total</b>	<b>\$8,695,793</b>	<b>\$8,681,404</b>	<b>\$8,802,627</b>	<b>\$9,314,257</b>	<b>\$2,459,735</b>
Agriculture, Forestry, Fishing, and Hunting	832	925	1,713	1,490	412
Mining	468,700	378,313	379,989	445,487	153,430
Utilities	59,338	60,962	60,529	57,615	15,543
Construction	303,632	280,623	284,275	301,422	67,891
Manufacturing	312,078	246,665	254,395	261,091	66,510
Wholesale Trade	261,481	257,833	255,224	272,338	70,633
Retail Trade	337,523	358,194	375,097	396,236	99,835
Transportation and Warehousing	442,060	460,806	451,095	506,429	131,716
Information	212,131	252,275	208,487	196,590	52,599
Finance and Insurance	447,832	460,077	460,063	545,977	165,176
Real Estate and Rental and Leasing	99,529	105,506	113,603	124,754	29,403
Professional and Technical Services	1,134,831	1,138,698	1,256,395	1,272,501	290,790
Management of Companies and Enterprises	302,939	284,757	277,879	232,600	98,208
Administrative and Waste Services	388,368	374,450	357,693	396,386	111,865
Educational Services	1,110,765	1,134,340	1,148,921	1,146,701	304,994
Health Care and Social Assistance	957,888	969,161	960,783	1,071,626	282,102
Arts, Entertainment, and Recreation	193,151	202,420	221,361	249,655	41,540
Accommodation and Food Services	750,433	809,174	830,527	894,782	235,776
Other Services, except Public Administration	174,815	180,855	188,731	194,237	47,622
Public Administration	725,732	719,794	712,284	741,156	192,740

Source: Louisiana Workforce Commission.

## Construction

The New Orleans CityBusiness Top Construction Projects 2015, published on February 20, 2015, lists the top construction projects taking place within the MSA, including the following construction projects:

PROJECTS	TOTAL COSTS
Orleans Parish Public School Rebuild	\$1.8 Billion
University Medical Center	\$1.2 Billion
Veterans Affairs Hospital	\$995 Million
Dyno Nobel Ammonia Plant	\$850 Million
Armstrong Airport	\$826 Million
New Orleans Sewer and Water Repairs	\$615 Million
Permanent Closures and Pump Stations	\$614 Million
Iberville Redevelopment	\$600 Million
South Market District	\$250 Million
North Rampart / St. Claude Streetcar Line	\$41.5 Million

## Housing

The Real Estate Market Data Center for the Institute for Economic Development & Real Estate of the University of New Orleans periodically publishes its *Real Estate Market Analysis New Orleans and Northshore Regions*, a recent edition being dated April 2015 (the “Analysis”). According to the Analysis, average prices in this sector of the market slowed significantly. Average prices rose in only two of the major submarket sectors.

Single family home prices in the Parish fell between 2013 and 2014 at an average of just under 2% from \$278,096 to \$272,853. This was driven largely due to a 9.3% decrease in the appreciation for homes located in the City’s historic Central Center and was offset by the appreciation in New Orleans East and the West Bank of Orleans Parish. Unit sales in the Parish rose 9.9% from 2,554 in 2013 to 2,808, in 2014, while at the same time, aggregate dollar volume of sales increased 8%, from \$710.2 million to \$766.1 million

In Central Orleans, between 2013 and 2014 unit sales rose from 1,762 to 1,925 (9.2%) and aggregate dollar volume rose from \$606.3 million to \$643.0 million (6.1%). At the same time average prices dropped by 2.9% (from \$344,149 to \$334,057) and average marketing time dropped from 70 days in 2013 to 64 days in 2014 or by just over 8%. Average prices rose in thirteen of seventeen MLS neighborhoods comprising Central Orleans.

In Eastern New Orleans, between 2013 and 2014 unit sales rose from 424 to 442 (4.2%) and aggregate dollar volume rose from \$45.2 million to \$51.3 million (13.5%). At the same time average prices rose by 8.9% (from \$106,810 to \$116,263) and average marketing time dropped from 122 days in 2013 to 110 days in 2014 or by just over 9%. Average prices increased in five of the six MLS neighborhoods that encompass Eastern New Orleans.

Sale volumes on the Westbank of Orleans Parish between 2013 and 2014 rose by 19.8% and 22.4% in units and aggregate dollar volume, respectively. At the same time, the average price of a single family home edged up 2.17% from \$159,182 to \$162,641 as average marketing time shortened from 101 to 86 days. Average prices increased in two of the three MLS neighborhoods that encompass Westbank New Orleans. The development of the Federal City project should help to fuel demand for some of this inventory and bring some stability to this market sector's single family housing prices.

## Education

Elementary and secondary education in the Parish is provided by public, charter, parochial and private schools. The state-run New Orleans Recovery School District, an intermediate educational unit created in 2003 by the State legislature for the purpose of governing public schools in failing school districts, primarily Orleans Parish, has approximately 47,575 public school students in the City, 30,731 students being in the Recovery School District. In addition to the children attending public schools in the City, there are approximately 19,316 students attending private and parochial schools in the City.

Institutions of higher education located in the City include:

	<b>Fall Enrollment</b>					
<u>Institution</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
University of New Orleans	11,724	11,276	10,903	10,071	9,323	9,234
Tulane University	11,799	12,622	13,359	13,401	13,462	13,531
Loyola University New Orleans	4,910	4,982	5,179	5,105	4,864	4,496
Southern University at New Orleans	3,141	3,166	3,245	3,480	3,176	2,734
Xavier University of Louisiana	3,320	3,391	3,399	3,177	3,121	2,926
Dillard University	1,017	1,188	1,249	1,307	1,183	1,200
Our Lady of Holy Cross College	<u>1,305</u>	<u>1,260</u>	<u>1,212</u>	<u>1,171</u>	<u>1,260</u>	<u>1,200</u>
	<u>37,216</u>	<u>37,885</u>	<u>38,643</u>	<u>37,712</u>	<u>36,389</u>	<u>35,323</u>

Sources: *NOLA.Com/The Times-Picayune*; Xavier University; Southern University of New Orleans; Tulane University; The University of New Orleans.

These seven institutions educate students in fields such as engineering, health care, public administration, urban studies, law, business, psychology, social sciences, communications, nursing, music, computer information systems, criminal justice, pharmacy, education, and theology. In addition, Delgado Community College, with a 2014 Fall enrollment of 17,138, the LSU Health Sciences Center-New Orleans, with a 2014 Fall enrollment of 2,828, and other similar facilities educate persons in various trades. Also, the acute care hospitals previously listed under the "Largest Employers" have research and teaching facilities and staff to educate, train and employ physicians and medical personnel who come from numerous foreign and domestic locations.

## Tourism

The City is a major convention and tourist center. In 2004, the City attracted approximately 10.1 million visitors and in 2014, 9.52 million visitors, reaching 94% of the Pre-Katrina figure. Visitor's spent over \$6.81 billion in 2014, the highest spending in the City's history. The City's distinctive music and festivals, including Mardi Gras, all contribute to its attractiveness to tourists.

The City is Number 2 on the list of 2015 top ten cities in the United States and Canada, according to the Travel+Leisure magazine and their annual World's Best Awards. This is the sixth consecutive year that the City has been named to the list. In addition, The City ranked within the top five of America's Favorite Cities for festivals, historical sites, antiques shopping, nightlife, restaurants and weekend escapes to name just a few. The City was also ranked 8<sup>th</sup> on the domestic list of TripAdvisor's 2015 Travelers' Choice Destination List.

The City is home to the Audubon Nature Institute (the "Institute") which welcomes over 2 million visitors each year. The Institute encompasses Audubon Zoo, the Audubon Aquarium of the Americas, the Audubon Butterfly Garden and Insectarium, Audubon Park and Golf Course and Giant Screen theaters, situated in various locations around the City, and explained in more detail below.

The **Aquarium of the Americas** (the "Aquarium") is dedicated to the conservation and exploration of aquatic environments of the western hemisphere and adjacent waters, and is housed in a three story structure of approximately 168,104 gross square feet, holding more than one million gallons of fresh and salt water. Visitors can view 66 separate aquarium displays ranging from 500 gallons to 500,000 gallons. Adjacent to the Aquarium is the Entergy Giant Screen Theatre containing approximately 60,000 square feet of enclosed building space. The Aquarium is located at the foot of Canal Street in the French Quarter area of the City.

Over 10,000 specimens of marine life representing 530 species are presented in exhibits at the Aquarium. The Aquarium is completing a new renovation designed to enhance the experience for visitors of all ages.

The **Audubon Butterfly Garden and Insectarium** (the "Insectarium") is located at the historic U.S. Custom House on Canal Street in downtown New Orleans. At over 23,000 square feet of space, the Insectarium is North America's largest free-standing museum celebrating over 900,000 known species of insects and their relatives. Visitors can experience unique and creative experiences at the Insectarium in one-of-a-kind, highly-interactive exhibits. There are approximately 100 live arthropod species throughout the Insectarium, as well as alligators and a variety of fish. The Insectarium consists of 13 gallery rooms containing more than 70 live animal enclosures, 30 mounted specimen cases and a multisensory immersive theater experience.

The **Audubon Zoo** (the "Zoo") encompasses 58 developed acres housing hundreds of species of animals in naturalistic habitats. Visitors can experience a mix of exotic animals from all around the world, as well as hands-on animal encounters, engaging educational programs, lush gardens, and animal-themed amenities. The Zoo is located on the 6500 block of Magazine Street in historic uptown New Orleans. The Zoo is committed to wildlife conservation and dedicated to highlighting the importance of protecting endangered species and supporting the many conservation efforts under way at Audubon Nature Institute. Over 2,000 of the world's rarest animals are on display, ranging from amphibians to terrestrial invertebrates to mammals to reptiles.

Recently completed projects to the zoo include Cool Zoo, a splash park located next to the Endangered Species Carousel and the Kamba Kourse, 44 feet high rope course which features 3 separate levels and 3 dozen rope elements. New to Cool Zoo in 2015 is the Gator Run, a 750 foot lazy river which is 3 feet deep and includes 2 sand beaches and lounge chairs. Also included in the Cool Zoo are concession areas, shaded outdoor seating, showers and restrooms.

The Zoo was named to TripAdvisor's list of the Top 25 Zoos in the U.S. for 2014, as selected by its members.

The **Mercedes-Benz Superdome** (the "Superdome") is an architecturally unique multi-purpose facility located adjacent to the New Orleans Central Business District. It was completed in August 1975 and was once the largest enclosed stadium arena in the world. It has a seating capacity of approximately 73,208-76,468, depending upon the seating configuration used, and can accommodate athletic events as well as conventions, trade shows, major exhibits, circuses and other large public meetings. Exhibition space on the Superdome floor totals 162,434 square feet and there are also six club rooms with a total of 74,068 square feet, 12 meeting rooms and parking facilities for approximately 5,000 automobiles and 250 buses. The Superdome recently completed \$360 million in enhancements. The Superdome's major tenant is the **New Orleans Saints**, a National Football League professional football team. In 2010, the New Orleans Saints won Super Bowl XLIV with a victory over the Indianapolis Colts. The Saints have played their home games, with the exception of the 2005 season, in the Superdome since its completion in 1975. Since Hurricane Katrina, the Superdome has been substantially renovated inside with improvements adding comfort and luxury to the stadium. The Superdome hosted the 2012 Division I College Football BCS Championship Game, the 2012 NCAA Men's Final Four and the 2013 NFL Super Bowl.

On October 3, 2011, Mercedes-Benz and the New Orleans Saints reached a 10 year naming rights agreement. The name of the Superdome was changed from the Louisiana Superdome to its current name as a result.

**Champions Square** (the "Square") is a one block section of LaSalle Street in what was once part of the New Orleans Centre shopping mall. The Square was officially opened on August 21, 2010 during a New Orleans Saints exhibition game. The square has a capacity of approximately 8,000 comfortably and includes the parking facility, Champions Garage, which can accommodate approximately 2,000 vehicles. The Square features pre-game entertainment and food along with outdoor concerts.

The **Smoothie King Center**, a \$110 million sports and entertainment facility on a 13 acre site south of the Louisiana Superdome, opened on October 30, 1999. The center has a floor area of approximately 24,650 square feet of column-free space, and approximately 18,500 padded armchair seats which are adaptable for specific events, including basketball and concerts. **The Pelicans**, a National Basketball Association professional basketball team, and other basketball games are played in the Arena, along with the **New Orleans Voodoo**, an Arena Football League professional football team, concerts, family shows and other entertainment. As part of a recent lease extension with the Pelicans, \$50 million in improvements were completed in two phases. The completion of phase one was completed in October 2013, and includes 16 new loge boxes in the lower level, upgraded concession stands, new 12,000 square foot Chairmans club, expanded Capital One club, 56 suites upgraded and new locker rooms. Phase two was completed in October 2014 and includes an expanded ticket box office, 2,000 square foot sports lounge, new exterior paint and a glass enclosed front entrance lobby which was expanded by 20,000 square feet.

On February 6, 2014, Smoothie King and the New Orleans Pelicans reached a 10 year naming rights agreement. The name of the Center was changed from the New Orleans Arena to its current name as a result.

The **National World War II Museum**, formally the **D-Day Museum** (the “Museum”), is an attraction with great attendance. Veterans from every military service have attended this world class facility. A \$300 million expansion is currently under way, with several projects already completed, and several more expected to be completed by the end of 2015. This expansion will quadruple the size of the original Museum. For additional information, see <http://www.ddaymuseum.org>.

Tourism in the City not only includes conventions but also major events such as **Mardi Gras**, the **Jazz and Heritage Festival**, **Voodoo Fest**, the **Essence Music Festival**, the **Bayou Classic football game**, the **New Orleans Bowl**, the **Sugar Bowl**, and periodically, the **Super Bowl**, which was last held in the City in 2013. Adults may continue to find entertainment in the river boat and land based **casinos** located in the area. Harrah’s Casino is located in the Heart of the City and includes more than 3,800 slot machines, casino table games and more than 20 poker tables. The Fair Grounds Race Course, owned by Churchill Downs Inc. , primarily a horse racing facility that also includes 606 reel and video games, and is home to the annual Jazz Fest.

## **Conventions**

The City has ranked among the top five cities nationwide as a destination city for conventions and is home to the 6<sup>th</sup> largest convention center in the nation. Convention attendance in the Greater New Orleans area has increased dramatically since 1981. The construction of large facilities such as the Ernest N. Morial Convention Center (the “Convention Center”), the Superdome, and hotels including over 1,000 public meeting rooms, encouraged the growth of the tourism industry in New Orleans.

The Convention Center was planned and operated as part of the 1984 World Exposition and opened for convention activity in January 1985. The Convention Center has accommodated major conventions and trade shows that have brought delegates, spouses and guests to the City. The Convention Center underwent a \$60 million renovation after Katrina that included new flooring and furnishings on all three levels, premium design and architectural finishes, upgraded lighting, high speed wi-fi, a 4,000 seat Conference Auditorium, 12 separate/combinable exhibit halls, and 140 meeting rooms. A \$52 million renovation project on the Convention Center began in December 2011, and was completed in January 2013. The NFL Shop of Super Bowl XLVII opened immediately after a ribbon cutting ceremony that included representatives from the City of New Orleans and the NFL.

## **Airport**

The **Louis Armstrong New Orleans International Airport** (the “Airport”) is the principal source of transportation of the millions of visitors who come to the City annually. The number of domestic passengers (enplaned and deplaned) rose from approximately 6.6 million in 1985 to approximately 9.6 million in 2004. Since then, the number of domestic passengers has surpassed Pre-Katrina figures to approximately 9.7 million as of December 31, 2014. In 2004, approximately 4.9 million passengers were enplaned at the Airport. Enplanements drastically decreased in the final four months of calendar year 2005 following Hurricane Katrina, and only reached 3.9 million. Katrina disrupted normal operations at the Airport until September 13, 2005, when it reopened to commercial flights. In the days after the storm, approximately 5,000 military and civilian personnel were based at the Airport. During this period, activity was restricted to

humanitarian flights and rescue missions, and one Airport concourse was used as a makeshift medical center to treat sick and injured evacuees. In 2005, the total number of passengers equaled approximately 6,218,419, compared to approximately 7,967,997 in 2008, or an increase of approximately 27.8%. The number of passengers has continued to increase since 2008; the number of passengers for the year ended December 31, 2014 was 9,785,394.

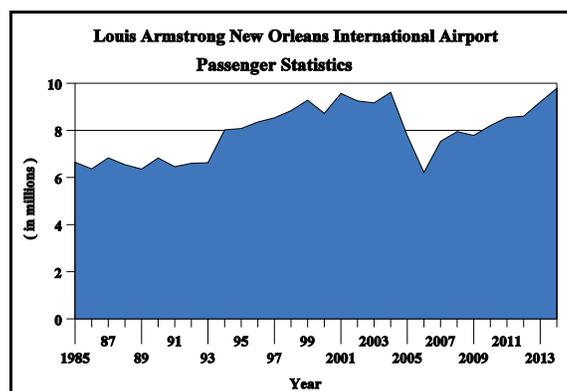
The Airport is currently served by 15 airlines, including but not limited to the following domestic carriers: Alaska Airlines, American Airlines; Delta Air Lines; Frontier; JetBlue; Spirit; Southwest; United Airlines; and US Airways (operating as American Airlines after October 17, 2015). Of these, Southwest accounts for approximately 39% of the Airport’s passenger market and is classified as the largest carrier at the Airport. Prior to Hurricane Katrina, the Airport averaged 166 flights daily to 42 cities with approximately 21,000 seats. In December 2005, the Airport had 56 flights daily to 21 cities. In 2014, the Airport offered 136 daily departures to 44 cities across the United States, with an average daily seat capacity of 17,142.

During 2015, the Airport will offer three new direct services to locations including Panama, Las Vegas, the Gulf and Mid-South. On June 24, 2015, Copa Airlines began offering nonstop flights four times a week to Panama. Spirit Airlines will begin offering nonstop flights to McCarran International Airport in Las Vegas, Nevada on November 13, 2015 and GLO, offering non-stop flights to Little Rock, Shreveport and Memphis beginning November, 2015.

The Airport is also currently served by the following international carriers: Air Canada, COPA Airlines and Delta Air Lines.

Domestic freight and mail is handled at the Airport by several airlines including American, Delta, Frontier, Southwest, United, US Airways, Federal Express, and UPS. Air Cargo for 2004 totaled approximately 80,938.35 metric tons, compared to a total of approximately 40,112.37 metric tons handled for the year ended December 31, 2014.

The Airport recently embarked on a major capital improvement project to construct a new 650,000 square foot passenger terminal. The North Terminal Airport Project, is anticipated to be in service by May 2018, that will feature two concourses with 30 gates and a 2,000 space parking garage. The new terminal is expected to generate \$6.3 billion in revenues as well as create an estimated 13,000 new construction jobs.



## Port

The Board of Commissioners of the Port of New Orleans (the “Dock Board”) is authorized and empowered under the Constitution and laws of the State of Louisiana, to administer the public wharves, docks, sheds, and landings of the port of New Orleans which are owned and operated, or which may be purchased, acquired, or operated by the Dock Board; to construct new wharves and other structures when necessary; to erect sheds and other structures on such wharves and landings; to place and keep these wharves and landings, sheds, and other structures in good condition; to provide mechanical facilities for the use of such wharves, landings, sheds, and other structures; to finance, erect, and operate all basins, locks, canals, and warehouse elevators, and to charge for the use of all facilities administered by it, and for all services rendered by it, such fees, rates, tariffs, or other charges as it may establish. The Dock Board may issue revenue bonds for any authorized purpose payable out of the income, revenues, and receipts derived or to be derived from the properties and facilities owned, leased, mortgaged, or pledged to, maintained or operated by the Dock Board or received by the Dock Board from these properties and facilities, or from contracts or agreements relating to these properties and facilities, including but not limited to lease or sublease agreements, sale agreements, loan agreements, pledge agreements, or other financing agreements.

In 2011, the Port added Royal Caribbean Cruise Line to its two distinct cruise terminals, Carnival Cruises and Norwegian Cruise Line. Once a year, the American Canadian Caribbean Line provides two 14 days cruises from the Port, traveling to and from Mid-America and the Gulf. In November 2014, the Norwegian Dawn debuted in New Orleans. The 2,340-passenger began offering cruises starting on November 23, 2014. On April 20, 2014 New Orleans largest cruise ship, the 3,646 passenger Carnival Dream, began offering year-round seven day services to three different itineraries. Beginning April 4, 2016, Carnival Triumph will move from Galveston to New Orleans to replace Carnival Elation offering four and five day cruises to Mexico. Together with the Carnival Dream the ships are expected to receive 450,000 visitors annually. Not only has the City reached Pre-Katrina numbers, but it also set a new passenger record with 1,014,325 passengers in 2014.

In addition to the large cruise lines, inland cruising has returned to the City, with options to cruise various segments of the Mississippi River from New Orleans to St. Paul, Minnesota. American Eagle, a 150 person paddlewheeler began offering eight day cruises from New Orleans in May of 2015. In 2017, Viking River Cruises will launch cruises on the Mississippi River with stops in several Louisiana Parishes, Memphis, Tennessee, and either St. Louis or St. Paul Minnesota.

There have been many expansion and renovation projects in progress in connection with the Port to facilitate cargo operations. The Port recently completed its \$7.7 million expansion and renovation project to the Alabo Street Wharf, as well as its \$17.5 million improvement project of the Julia Street Terminal. Expansion of the Napoleon Avenue Container Terminal Complex has been completed, and construction of the Mississippi River Intermodal Terminal and Yard Improvements, a 12 acre freight rail intermodal terminal and a 4 acre cargo marshalling yard near the Napoleon Terminal Complex, is currently underway. A new \$7 million riverfront cold storage facility at the Henry Clay Avenue Terminal was completed and opened in July 2012. Additional design and construction projects are to begin within the year.

The port handled 8.37 million tons of cargo in 2014, an increase of 28% from 2013, the highest total since 2000. The Ports midstream operations, export grain and private tonnage also increased 27.68% to 31.05 million tons.

Activity at the Port may be limited or decrease as a result of factors outside the control of the City, such as labor relations, tariffs, economic and river conditions and other matters.

### **Recent National Recognition of the City and Region**

The City and the Greater New Orleans region have recently been recognized by multiple publications for various achievements and accomplishments, including but not limited to the following:

#### General

- GNO, Inc. was ranked as the #2 Economic Development Organization in the U.S. [*Business Facilities*]
- Greater New Orleans was ranked #1 for the Decade for Major Economic Development Wins in the South [*Southern Business & Development*]
- Greater New Orleans was named #1 Most Cost-Friendly for Business in the USA [*KPMG*]
- Greater New Orleans is #1 in the USA for Export Growth, over 400% [*US Chamber of Commerce*]
- Greater New Orleans is the #2 Boomtown in America, due to population and GDP growth [*Bloomberg*]
- New Orleans was ranked the #2 “Aspirational” City in the USA based on economy, demographics and quality of life [*Daily Beast*]
- New Orleans was named the #1 (of 475) for Employment, Income and Population [Nerd Wallet]
- Greater New Orleans is the #3 Big City Winning the IT Jobs Battle (after Silicon Valley and S.F.) [*Forbes*]
- Greater New Orleans was the #1 Most Improved Metro in the USA [*Wall Street Journal*]

#### Talent / Workforce

- Greater New Orleans was ranked #1 Brainpower City in the U.S.A. [*Forbes*]
- Greater New Orleans is #1 in the USA for In-Migration of “Workers in their Prime” (35-49 y.o.) [*Forbes*]
- Greater New Orleans ranks #2 in the USA for Women in Technology [*U.S. Census*]
- Greater New Orleans is Top 5 in the USA for increasing share of “Millennial (22-34 Jobs)” [*Career Builder*]
- New Orleans was ranked #1 on the list of “America’s Biggest Brain Magnets” for attracting people under 25 with college degrees [*Forbes*]

## Entrepreneurship

- Greater New Orleans is #2 in the USA for Growth in Knowledge Industries [*EMSI*]
- New Orleans Leads the USA by 56% in number of startups-per-capita [*GNO Community Data Center*]
- Louisiana was rated the #2 State in the USA to Start a Company [*Tax Foundation + KPMG*]

## Quality of Life

- New Orleans was named “Americas Best City for School Reform” [*Thomas B. Fordham Institute*]
- New Orleans was ranked “#1 Food City in America” [*Thrillist*]
- New Orleans is America’s Favorite City, and a Top 10 City in the World [*Travel + Leisure*]
- New Orleans was ranked #3 City in the World [*Rough Guides*]

For further information, see the website of Greater New Orleans, Inc., a regional economic development alliance, at <http://gnoinc.org/news/awards-and-rankings/>.

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**APPENDIX "B"**

**COMPREHENSIVE ANNUAL FINANCIAL REPORT  
OF  
THE SEWERAGE AND WATER BOARD OF NEW ORLEANS**

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# **Sewerage and Water Board**

**OF NEW ORLEANS, LOUISIANA**



## **COMPREHENSIVE ANNUAL FINANCIAL REPORT**

**FOR THE YEARS ENDED  
DECEMBER 31, 2014 and 2013**

### **About The Cover**

The photo shows a blown or failed pump discharge pipe of a 45,000 gpm pump being repaired and fabricated by the Welding Shop. The pipe is from Wastewater Pump Station A that serves the Central Business District for sewage collection from lift stations and pumps to the East Bank Wastewater Treatment Plant. The aged discharge pipe is of a size that is no longer available for purchase; therefore, the Welding and Fabrication Division of Facility Maintenance fabricated an identical replacement to achieve the repair. The facility maintenance team is essential and responds to small and large routine and emergency system repairs twenty-four hours a day, seven days a week.

The procedure involved taking critical dimensions, material selection, angle configuration, material forming and fitting and welding process. The pipe was formed and fitted and tack welded together then transported to the station for a preliminary installment. After identical fit was confirmed it was transported back to the Shop for 100% penetration finish welding and then epoxy coated for extended life. Then it was scheduled for final installation.

**SEWERAGE AND WATER BOARD  
OF NEW ORLEANS**

**Comprehensive Annual Financial Report  
For The Years Ended  
December 31, 2014 and 2013**

**Prepared by:  
Finance Administration  
Rosita P. Thomas  
Interim Finance Administrator**

## **Mission, Vision, and Values**

***Our mission*** is to provide safe drinking water to 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.

***Our vision*** is to have the trust and confidence of our customers for reliable and sustainable water services.

***We believe in these values*** as the foundation for how we will perform our mission and pursue our vision:

- We will focus on our customers and stakeholders.
- We will treat each customer and employee with dignity and respect.
- We will value each employee, their work, and their commitment.
- We will be truthful, trustworthy and transparent.
- We will be knowledgeable and diligent in the performance of our duties.
- We will use financial resources prudently.
- We will be accountable for our performance.
- We will continuously improve our performance.
- We will ensure that the systems that provide our services remain viable for future generations.
- We will remain on the job and will be prepared for storms and other risks.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS

Comprehensive Annual Financial Report  
Years ended December 31, 2014 and 2013

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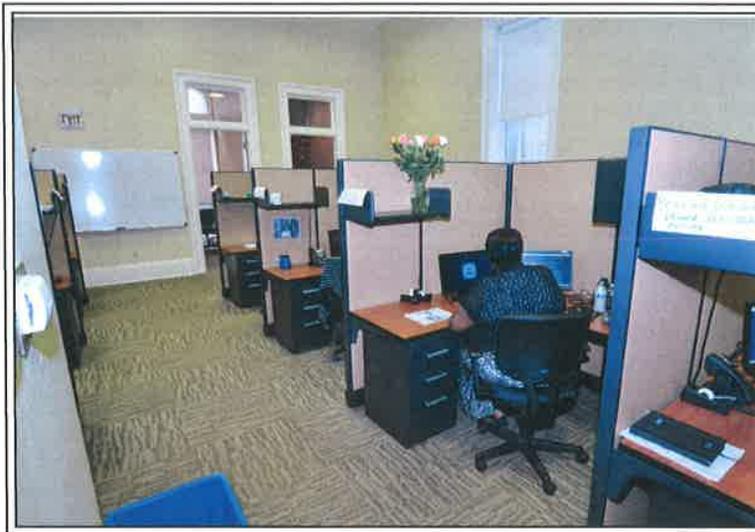
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# INTRODUCTORY SECTION



*Algiers Customer Service Center*



*Julia Street Special Projects Office*



*St. Joseph Street Customer Service Center*

Customer Service is an integral part and the life-blood of the Sewerage and Water Board. The customer is the business, the most vital asset. The goal of the Customer Service Department is to make customers continue to feel important and appreciated.

There have been many improvements to the department during the last few years to provide better customer service.

One example is a new Customer Service Center in Algiers. This office was opened to improve our customers' experience and for the convenience of those who live on the west bank of the city. It offers a larger and brighter customer wait area, with individual offices for the Customer Service reps to offer customers more privacy when sharing personal information.

The office is also conveniently located in a Shopping Center, so customers can pay their bills and do their daily shopping all in one trip. Another improvement is office space dedicated for special training at the new Julia Street Special Projects Center. This location was designed for Customer Information System (CIS) project members to work together in a team environment.

Here a member of the team is working on the new customer information system's billing processes. In the future, this office will be used by other teams working on special projects, such as, the Human Resources software upgrade team. Also shown is One of our Customer Service Representatives helping a customer who has come to the main office at St. Joseph Street seeking assistance.



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

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

**MITCHELL J. LANDRIEU, President**  
**WM. RAYMOND MANNING, President Pro-Tem**

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

May 28, 2015

**TO: THE HONORABLE PRESIDENT AND MEMBERS OF  
SEWERAGE AND WATER BOARD OF NEW ORLEANS**

We are pleased to present the Comprehensive Annual Financial Report of Sewerage and Water Board of New Orleans for the years ended December 31, 2014 and 2013. Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rest 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. All disclosures necessary to enable the reader to gain an understanding of the Board's financial activities have been included.

## **COMPREHENSIVE ANNUAL FINANCIAL REPORT SECTIONS**

The Comprehensive Annual Financial Report is presented in four (4) major sections: Introductory, Financial, Statistical and Supplemental. The Introductory Section includes the transmittal letter and listings of the officers, members and committees of the Board of Directors. This section also includes the Board's organizational chart and a reproduction of the 2013 Certificate of Achievement for Excellence in Financial Reporting awarded by the Government Finance Officers Association. The Financial Section includes the independent auditors' report, along with the basic financial statements, required supplementary information, accompanying notes and other supplementary information. The individual fund statements for the Enterprise and Pension Trust Funds are included. Required supplementary information includes management's discussion and analysis and a schedule of pension funding progress and contributions. The Statistical Section includes selected financial and demographic information, generally in a multi-year presentation. Additional information relative to the Board's operations is included in a Supplemental Section.

The independent audit of the financial statements of the Board was part of a broader, federally mandated "Single Audit" designed to meet the special needs of federal grantor agencies. The standards governing Single Audit engagements require the independent auditor to report not only on the fair presentation of the financial statements, but also on the audited government's internal controls and compliance with legal requirements, with special emphasis on internal controls and legal requirements involving the administration of federal awards. These reports are available in the Board's separately issued Single Audit Report. The Board's internal control over financial reporting is a process designed by, or under the supervision of, the Board's executive director and financial administrator, and effected by the Board of Directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. The Board's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Board; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Board are being made only in

*Members of the Board: ALAN ARNOLD • ROBIN BARNES • MARION BRACY • DR. TAMIKA DUPLESSIS • SCOTT JACOBS • KERRI KANE  
MITCHELL J. LANDRIEU • WM. RAYMOND MANNING • MARK MOODY • JOSEPH PEYCHAUD • KIMBERLY THOMAS*

*"An Equal Opportunity Employer"*

accordance with authorizations of management and Board of Directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Board's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

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.

GAAP require 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**

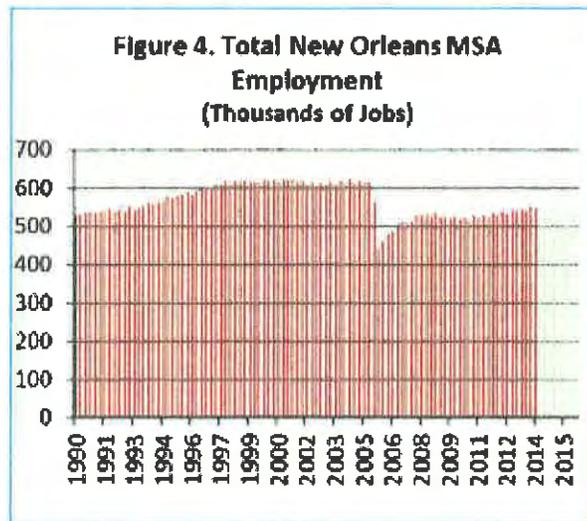
Sewerage and Water Board of New Orleans is a political subdivision created in 1899 by Louisiana State Statutes. The Board is charged with construction, operation, and maintenance of Water, Sewerage and Drainage Systems for the City of New Orleans. By agreement, approximately 2,550 acres of adjoining Jefferson Parish is served by the Board's drainage facilities for which Jefferson Parish pays its pro rata share of expenses. In addition, the Board provides sewerage services to Jefferson Parish businesses the majority of which are restaurants located in the West End neighborhood near the Lakefront. Additionally, the Board provides water and sewerage services to the Plaquemines Parish Industrial Park. The Board was established as a "special board" operating independently of city government. Effective January 1, 2014, 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.

## **ECONOMIC CONDITION AND OUTLOOK**

The Board's service area includes the Civil Parish of Orleans in the state of Louisiana and covers 364 square miles. Based on the 2010 census, the population of Orleans Parish was 369,250. Major industries include tourism, oil and gas, transportation, health and other services, such as legal, education and entertainment. According to the September 2014, the latest issue of the Metropolitan Report, Economic Indicator for the New Orleans Area (University of New Orleans Report), in the most current quarter of 2014. Employment growth increased by 3.6% or by approximately 6,400 jobs.

Employment growth in the New Orleans area for the next two years will continue to be positive displaying a fair amount of seasonality. By the second quarter of 2016, the area is projected to support approximately 559,000 jobs, according to the UNO report (See Figure 4).

In the first six months of 2014, employment in *Leisure and Hospitality* increased by about 3,400 jobs or 4% over 2013 figures. This particular sector has outweighed most other employment sectors in the local metro area. Out of the total number of new jobs added, nearly 2,100 were accounted for in the *Food Services and Drinking Places* subsector.



*Professional and Business Services* represent one of the primary hiring sectors in the New Orleans area. In the first half of 2014, the second biggest gain was recorded in *Professional and Business Services* where about 2,300 (3%) new jobs were added to the local economy.

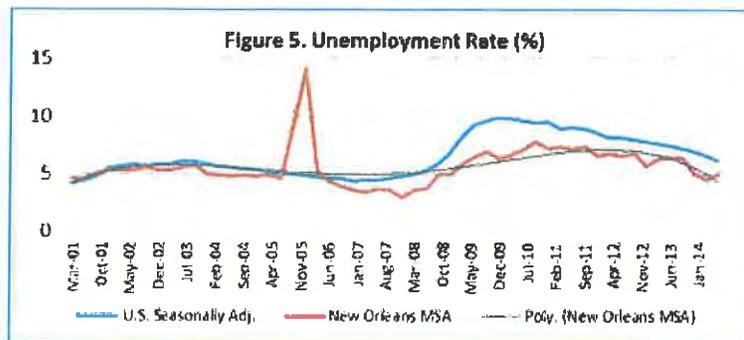
*Educational Services* had the third highest gain, with about 2,100 new positions added over the first half of 2013. *Transportation, Warehousing, and Utilities* was right behind, and saw an increase of about 1,300 jobs over the same time frame in 2013.

Job losses in the New Orleans area were most notable in the following Sectors: *Information and Government (all levels)*. In the first half of 2014, about 2000 jobs were lost in the Information Sector and the Government Sector experienced a loss of 1600 jobs (2%) over 2013. Despite some of these losses, the job market in the New Orleans area remained solid during the first half of 2014. While still displaying a fair amount of volatility on a quarterly basis, the number of jobs in the metro area has been increasing every year since 2012.

### **Unemployment**

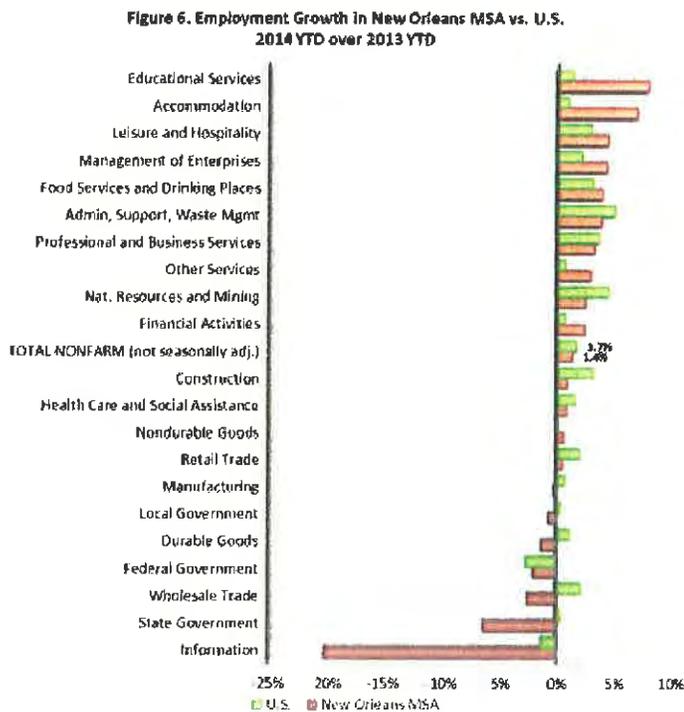
On average, the labor market in the New Orleans area continued to improve throughout 2014. The general downward trend can be spotted fairly easy in the first half of this year (Figure 5). Similarly, the national unemployment rate continued to decrease throughout 2014. The national rate was at 6.2%, down from 7.5% in the second quarter of 2013; the New Orleans MSA rate was 5.1%, thus reaching levels that have not been seen since the recession in 2008.

Other signs of a strong labor market can be seen in the local initial and continued unemployment claims. Initial claims were down 8% over the same quarter in 2013, while continued claims were also down about 11% compared to the same quarter in 2013. Such positive figures suggest a strong local labor market that is likely to continue in the upcoming quarters.



### New Orleans MSA and U.S. Employment

In the first half of 2014, the overall rate of employment growth in the U.S. (1.7%) was marginally higher than the New Orleans metropolitan area (1.4%). Figure 6 illustrates the contrast in employment growth across sectors of employment between the U.S. and the New Orleans MSA.



The most significant decrease for the New Orleans area was observed in *Information* jobs which declined about 20% from 2013. This employment sector remains very volatile in the local area.

The U.S. as a whole lost about 1% in this particular sector. In addition, at the MSA level, the *State Government* incurred another 6% loss and continued to reduce its work force. At the national level, *State Government* employment remained relatively flat. The number of jobs in *Federal Government* continued to decrease as well. While the nation lost about 3% of these jobs, the metro area was down by about 2%.

Employment growth in the New Orleans area outpaced nationwide employment growth in several sectors, such as *Educational Services*, *Leisure and Hospitality*, and *Management of Enterprises*.

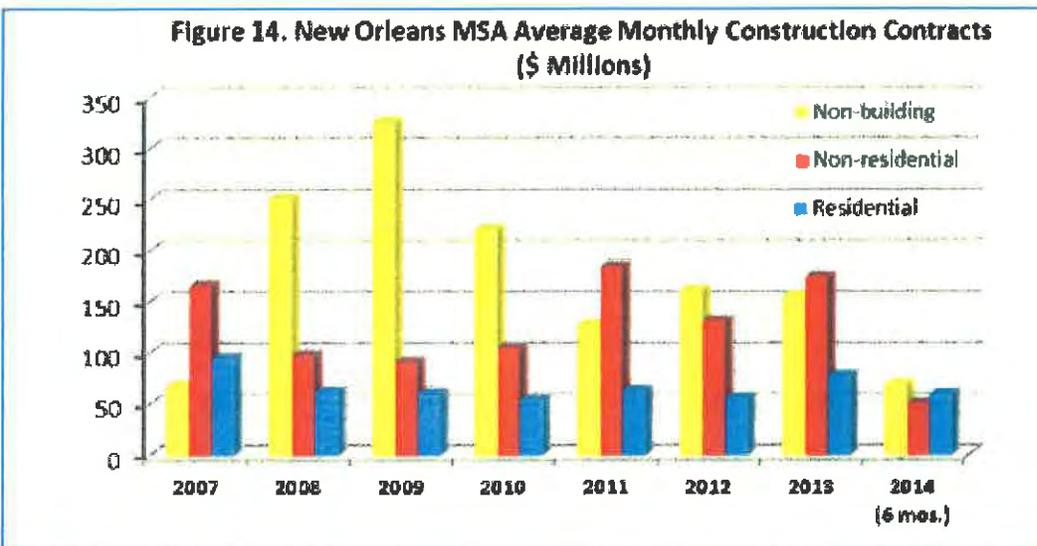
## Oil and Gas Production

In the first six months of 2014, oil production in Louisiana was slightly down (1%) compared to the first half of 2013. Midyear 2014 natural gas production was down 20% from midyear 2013, and 34% from midyear 2012 after reaching a peak at the end of 2011.

## Construction

The New Orleans MSA construction industry reported about 31,000 jobs during the second quarter of 2014. That represents about 6% of the total nonfarm jobs in the metro area, thus remaining an important employment industry for residents.

Construction activity during 2013 looked very similar to 2007 and 2011 when non-residential contracts were predominant. Ongoing projects such as the rebuilding of New Orleans public schools, the University Medical Center, the Veterans Affairs Hospital and the construction of an ammonia plant by Dyno Nobel in Jefferson Parish, continued to drive up non-residential construction. Major non-building construction projects were represented by general repairs of streets in New Orleans which are expected to be completed by late 2017, or early 2018. (Figure 14)



By midyear 2014, non-building construction topped non-residential and residential projects. According to the most recent “*Top Construction Projects 2014*” by New Orleans City Business, 55 repair projects that were started in 2013 will be finished this year, and another 72 projects will begin in 2014. For non-residential construction, many of the projects that were in progress in 2013 will continue throughout 2014.

## Restaurants and Tourism

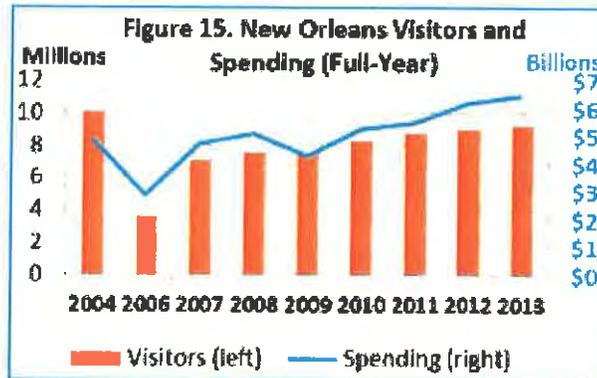
Food plays an important role in the everyday lives of New Orleans area residents; it also represents a very important factor in the decision of visitors who come to New Orleans. If at the beginning of 2007 there were about 750 restaurants, by midyear 2014 that number went up by almost 87%, to about 1,400 available restaurants in the New Orleans area. (Figure 13)

In 2013, the New Orleans tourism industry continued to grow, as the city welcomed more visitors than in the previous year, a trend that has persisted since 2010. About 9.28 million visitors came to the New Orleans area

in 2013, representing a 3% increase over the 9.01 million visitors who came in 2012. Spending estimates, including gambling, were \$6.47 billion.



Such growth in the tourism industry greatly benefits New Orleans locals. Increasing visitor spending in the New Orleans metropolitan area results in additional tourism-related employment opportunities for local residents. Between 2006 and 2013, about 24,000 tourism-related jobs were added. As of June 2014, about 81,000 people were working in the hospitality industry. (Figure 15)



## WATER SYSTEM MAJOR INITIATIVES

### Water Purification Division

- Water Quality Master Plan draft engineering report submitted December 2014.
- Response to DHH Emergency Disinfection Rule successfully implemented. Monitoring and system flushing plan resulted in 100% compliance for 2014.
- Aggressive Operator Certification training program has successfully provided several much needed DHH certified Water Treatment operators for the system. Program will continue to meet system needs.
- Water quality instrumentation with remote monitoring capability added to Algiers Elevated Tank site.

### Carrollton Water Purification Plant

- G4 flocculation/sedimentation work is completed and is on standby ready for service.
- Staff is currently washing L3 basin. Flocculation basin will need a thorough mechanical overhaul in 2015. Facility Maintenance is currently assessing material needs and ordering materials. Also, in the process of developing a schedule to initiate repairs.

- Floating dredge for in-situ basin cleaning purchased and on-site ready for service.

#### **Water Quality Laboratory**

- Lab has been inspected for State certification for Total Organic Carbon analysis and anticipating certification approval in early 2015.
- Corrosion control monitoring program: Data collection continues to gauge the effectiveness of the treatment processes and any process change on corrosivity.
- Lab staff continuing work on establishing a new protocol to analyze haloacetic acids.
- Participated in required sampling for EPA's Unregulated Contaminant Monitoring Rule.
- Participated in Water Research Foundation Project 4491 – Unintended Consequences of Implementing Nitrosamine Control Strategies.

#### **Algiers Water Purification Plant**

- Additional sodium hypochlorite metering pumps were purchased and are in the process of being installed by staff.
- New flow and head loss instrumentation for the Filter Gallery operations was purchased. Half of the instrumentation has been installed by staff and is operational. The second half of the installation is in process.
- Additional SCADA node added to Algiers Chemical Building for process monitoring.

#### **Water Pumping & Power**

- The \$12.8 M Turbine 4 (20 MW) project replaces the steam path, rotor, auxiliaries and condenser. A new modernized governor control system is included in the project which will add stability and better control to the unit. Additionally, the 20 megawatt, 25 cycle generator is being totally rewound and restacked to like new condition making the entire driver generator package whole. The project is scheduled to be completed by mid-2015.
- Turbine 6 (15 MW 60 Hz) is currently in final testing phase. The federally funded project was awarded in November 2009 and will enable the Board to power 60 Hz equipment in the event of commercial power interruption.
- The \$2.8 M project to replace boiler pre-heater at the power complex was awarded in November 2011. The project was completed in 2014.
- The \$12.7 M reconditioning of the DeLaval steam driven portable water distribution pumps and turbines continues. One pump unit is complete with the second unit scheduled for completion in mid-2015. FEMA also funded addition of a 60 HZ motor and pump reconditioning of No. 2 pump unit at Panola St. High Lift Station. This addition coupled with the complete overhaul of the 48 million gallon/day pump is complete and currently in testing period.
- The \$32.6 M FEMA Water Hammer project to repair the pumps at Claiborne and the Panola Pump Stations and add new storage tanks is under design.
- Corps storm proofing projects have been completed at the power plant, the Oak River and New River Intake Stations, and the plant frequency changer building.
- The Retrofit Power Plant Hazard Mitigation Project design is underway for the power plant (boilers, turbines, structural hardening), fuel tank, and power network. Repairs to Generator No. 4 and installation of two 60-HZ feeders are scheduled to be completed in mid-2015.
- Installation of two new transformers and construction of new electrical duct bank was awarded in December 2014.

#### **Water Distribution System**

- A new leak detection contract was awarded in 2014.
- Over 14,563 work activities occurred in the water system in 2014. These included 309 water leaks investigations, 2,260 water valves inspected, and repairs to 10,221 water service lines, 1,647 water mains,

1,190 valves, 1,074 fire hydrants and 39 water manholes. Also, 3,337 water meters were installed, removed or reset.

- Preventative maintenance of fire hydrants is continuing in coordination with the local fire department. The Board has performed preventative maintenance for 3,742 of the 16,500 fire hydrants mapped.
- The Board is continuing to coordinate with Department of Transportation (DOT) and Development and Department of Public Works (DPW) to repair or replace water lines associated with the Submerged Roads Program and other roadway repair projects. FEMA has to date obligated \$185 M for water line replacements.

## **SEWER SYSTEM MAJOR INITIATIVES**

### **East Bank Wastewater Treatment Plant**

- Repairs were made to the fluidized bed incinerator (installation of venturi throat liners, replacement of failed tubers and rehab of the refractory wall and dome).
- Bids for the new sludge dryer were rejected and the project is being reevaluated with input from Veolia, the contracted operator for the facility.
- Influent TSS and BOD concentration are approx. 108 milligrams per liter (mg/L) and 90 mg/L, respectively. Effluent quality has been good with five (5) exceedences: two (2) BOD exceedences in February and April, one (1) TSS exceedence in April, and two (2) daily fecal coliform permit violation occurred in January and December 2015. The East Bank plant has again earned the Silver Award for environmental compliance from the National Association of Clean Water Agencies.
- The Central Wetland Assimilation project is under construction and expected to be completed in 2015.
- The construction of a +17'MSL \$24.4 M earthen/structural berm was awarded March 2012 and is scheduled to be completed by early 2015.
- Contract to rehabilitate the Bio-Reactor Train No. 1 was awarded in December 2014.

### **West Bank Wastewater Treatment Plant**

- Treatment was exceptional with zero permit violations or process overflows in 2014. This treatment plant has earned the Platinum Award from the National Association of Clean Water Agencies or zero permit exceedences during the past five (5) years.
- Repairs were made to the main breaker for the standby power generator to ensure its continued reliability in the event of a power outage.

### **Sewage Pumping and Lift Stations**

- All the sewer pump stations are operational having undergone FEMA funded rehabilitation, i.e., electrical repair, pump and motor repair/replacement, and flood proofing.
- Design funded by hazard mitigation grant is continuing in the elevation and rebuilding of nine sewer pump stations. Eight of the projects are in construction.

### **Sewer Collection System**

- Final sewer rehabilitation construction project for the Ninth Ward basin awarded in 2014.
- Design continuing for multiple point repair and replacement of sanitary sewers in the Carrollton, Mid-City, New Orleans East and South Shore areas.
- Construction projects for replacement of sewer mains from manhole to manhole for various sites throughout Orleans Parish were awarded.
- DOTD and DPW coordination in repair of sewer lines (Submerged Roads Program, SSERP, ESSA) as well as routine reconstruction and maintenance.
- Preventative maintenance of the collection system included inspection of 976,130 ft. of sewer line utilizing closed circuit television and smoke testing, cleaning 1,539,899 ft., inspection of 9,616 sewer

- manholes and repairs to 1,276 sewer breaks, inspection and maintenance of 34 air release valves and 390,196 ft. of the force main.
- Cathodic protection survey is performed annually on the 22 systems in the collection system. Repairs were completed in 2013.

## **DRAINAGE SYSTEM MAJOR INITIATIVES**

### **Pump Stations**

- The Corps (\$23.8 M) project to install two new 300 cfs pumps and a generator at DPS 5 is expected was completed in 2014. The \$15.9 M storm-proofing project for DPS-1, 2, 3, 4 and I-10 was completed by the 2<sup>nd</sup> quarter of 2014.
- Repair work to several of underpasses pumping stations are in progress as part of FEMA funded program.
- The Corps began the design build of three new permanent pump stations at 17<sup>th</sup> Street, Orleans and London Canal at Lake Pontchartrain was awarded.

### **Canals**

- Florida Ave. Canal Phases II and III from Peoples Ave. are in design.
- Napoleon Ave. Canal Phase II (\$55.1 M) 4,300 ft. canal from S. Claiborne Ave. to Carondelet St. and Phase III (\$38.1 M) 2,800 ft. canal to Constance St. are in construction.
- S. Claiborne Ave. Canal Phase I (\$27.1 M) 2,500 ft. canal and Phase II (\$27.8 M) 3,500 ft. canal is from Leonidas St. to Lowerline St. are in construction.
- Jefferson Ave. Canal Phase I (\$59.9 M) 4,400 ft. canal and Phase II (\$46.2) 3,200 ft. canal are in construction.
- Louisiana Ave. Canal from S. Claiborne Ave. to Constance St. (\$2.6) is in construction.
- Reconstruction of the Florida Canal between Spain & Music Streets began in 2014.
- Algiers area drainage improvements Phase I is in design.
- Green infrastructure projects from creation of K-4<sup>th</sup> grade education program, providing professional workshops, and demonstration bioswales, green roofs and rain garden projects were awarded in June 2014.

### **Central Yard**

- Construction of a new Annex Building shall be completed in early 2015.
- Construction of a new \$1.8 M site relocation facility is expected to be completed in early 2015. The facility shall allow for the temporary relocation of staff and equipment from Garages 1 and 2, the machine and mill, body and tire shop while repairs are being made to those facilities.
- Repairs to Garage No. 1 and the Generator Building began in mid-2014.

## **FINANCIAL INFORMATION**

The Enterprise Fund's Water and Sewerage systems are financed by user fees. The unique characteristics of the services provided by the Drainage System of New Orleans require the use of Enterprise Fund accounting in order to obtain a meaningful measure of the cost of providing the services and capital maintenance. 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 2020. This increase was approved by the New Orleans City Council on December 6, 2012. Revenues from the three-(3) mill, six-(6) mill and nine-(9) mill ad valorem taxes, which are restricted exclusively for drainage services, finance the Drainage System. These ad valorem taxes are the operating revenues of the drainage system. Also, there exists a potential for additional financing by additional user service charges.

### **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. Monthly budget reports are provided to department level managers to assist them in their fiscal responsibilities.

### **General Operations:**

The change in net position for the year ended December 31, 2014 was an increase of approximately \$152.7 million, as opposed to approximately \$153.7 million for the year ended December 31, 2013. The Board's total operating revenues increased by 9.7% to approximately \$163.0 million due primarily for rate increases effective January 1, 2014, and total non-operating revenue decreased by 41.5% to approximately \$46.2 million due primarily to the forgiveness of the outstanding principal and interest due on the Special Community Disaster Loan in 2013 totaling \$30.1 million.

### **Debt Administration:**

The Sewerage and Water Board of New Orleans sold bonds on June 17, 2014 for its water and sewer systems to refinance outstanding debt and fund its capital improvement program. The \$103,525,000 water system revenue bonds and \$158,990,000 sewer system revenue were sold by the Board of Liquidation through a negotiated underwriting process. The refinancing of previous debt achieved one-time savings of more than \$2.4 million for the water system and \$9.0 million for the sewer system. The water bonds carried an average interest rate of 4.47% while the higher-rated sewer bonds carried a rate of 3.91%.

The bond sale followed significant increases in water and sewer rates in December 2012. The rate increases were used to increase cash reserves, pay down other liabilities, and improve debt service coverage in advance of the sale, resulting in higher bond ratings announced in May 2014. Sewerage and Water Board and Board of Liquidation staff worked with a financing team composed of financial advisors, bond counsels, underwriters, and underwriters counsels to develop new bond documents for these deals.

The capital improvement program for the water system received \$77.0 million and the sewer system received \$47.3 million. These bond proceeds represent the first occasion when the capital programs have been fully funded for a plan year in more than twenty-five years. Additional bond issues will be needed every one-to-two years for the next several years.

The Board subsequently issued Drainage System Refunding Bonds of \$14,900,000 on November 5, 2014 with savings of \$1.5 million.

### **Other Information**

State Statutes and covenants governing outstanding bond issues require an annual audit of the Board's financial records by independent certified public accountants. The accounting firm of Postlethwaite & Netterville was selected by the Board to perform this audit through a competitive bid process. The independent auditors' report on the basic financial statements is included in the Financial Section of the report. The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to Sewerage and Water Board of New Orleans for its Comprehensive Annual Financial Report for the fiscal year ended December 31, 2013. The Certificate of Achievement is a prestigious national award-recognizing conformance with the highest standards for preparation of state and local government financial reports.

In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report whose contents conform to program standards. Such CAFR must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one (1) year only. The Sewerage and Water Board of New Orleans has received a Certificate of Achievement for thirty-one (31) years. We believe our current report continues to conform to the Certification of Achievement Program requirements and we are submitting it to GFOA.

#### **ACKNOWLEDGMENTS**

The Comprehensive Annual Financial Report was prepared by the dedicated staff of the Director's Office, particularly the Finance Administration and Printing Department. Additionally, we realize that the cooperation of each Department of the Sewerage & Water Board of New Orleans is essential, and we appreciate the willingness to work together toward this endeavor.

We also wish to thank the members of the Board for their interest and support in our efforts to achieve greater fiscal efficiency and accountability.

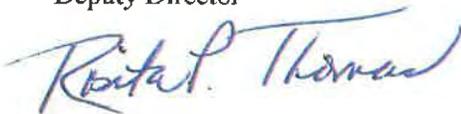
Yours very truly,



Cedric S. Grant  
Executive Director

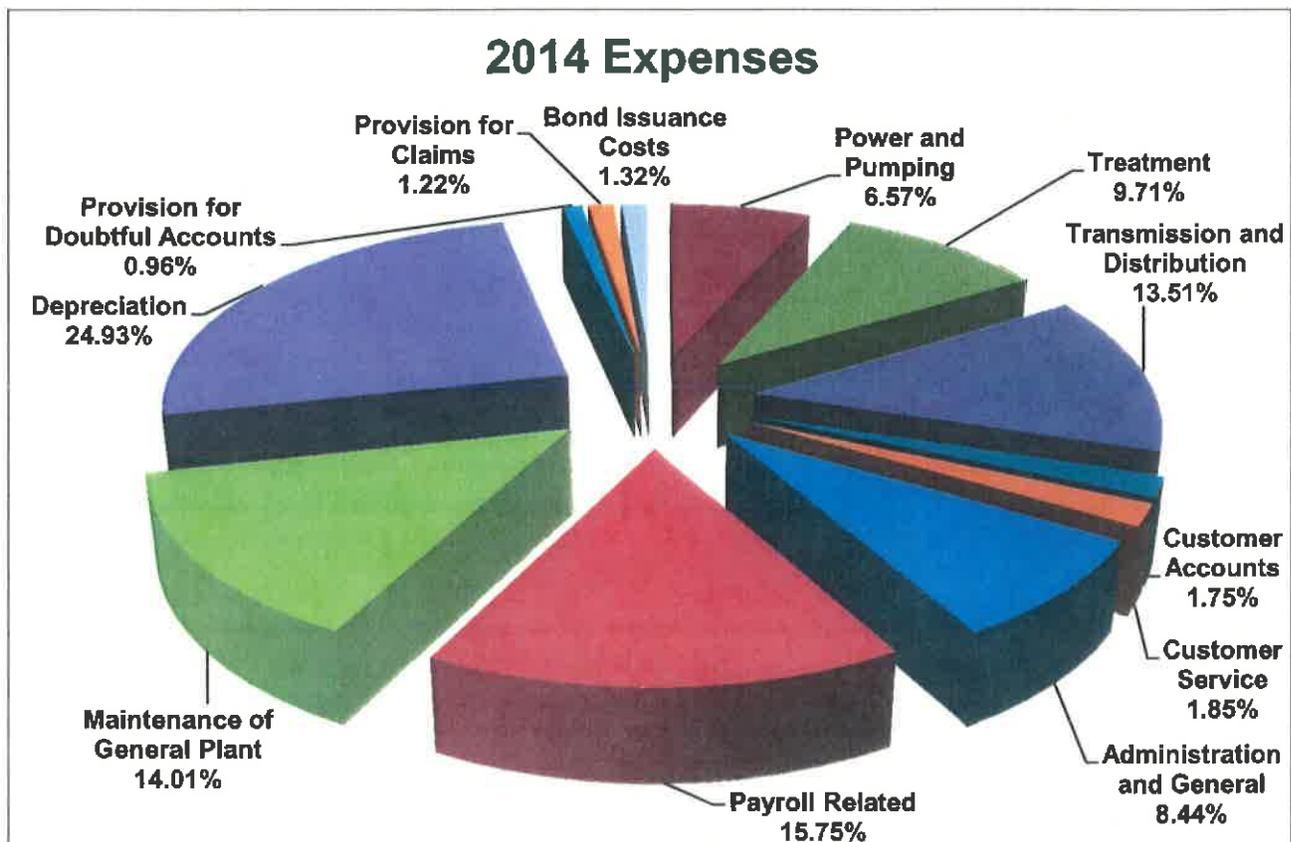
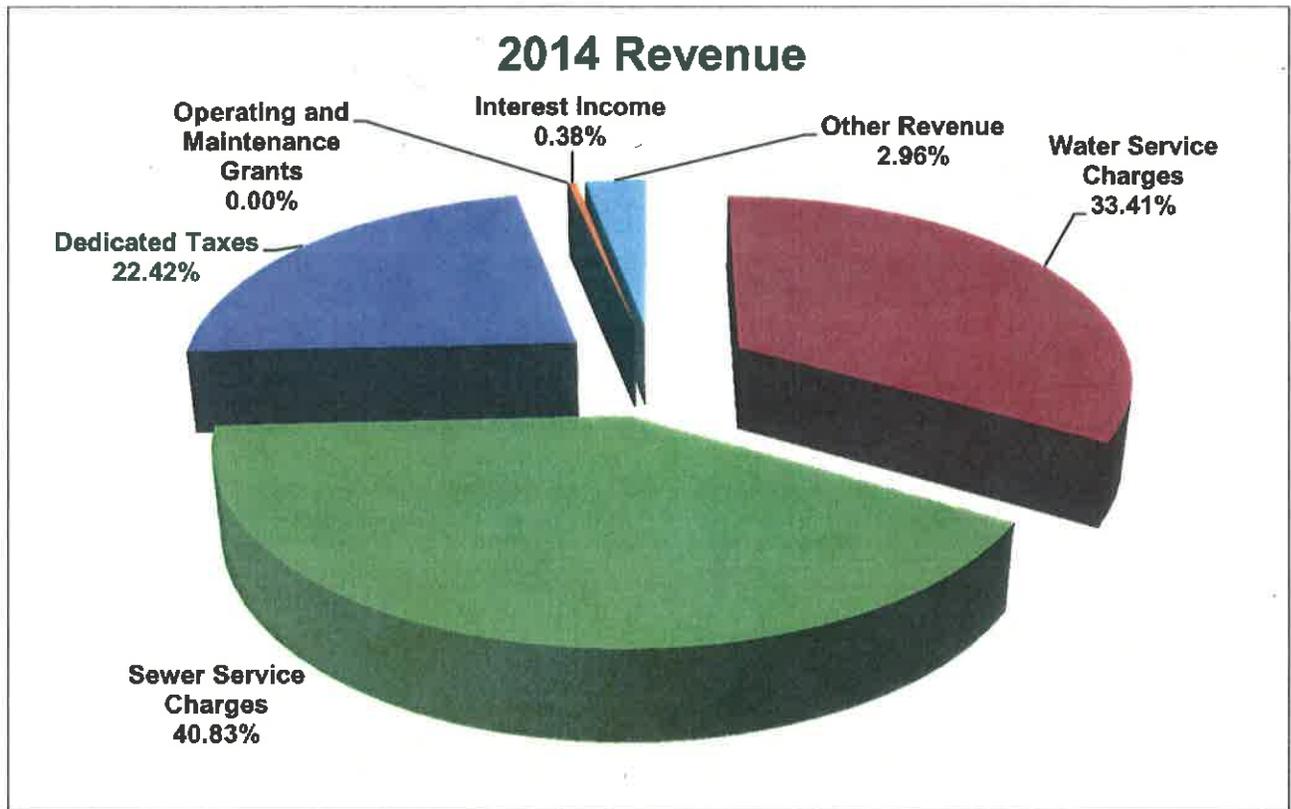


Robert K. Miller  
Deputy Director



Rosita P. Thomas  
Interim Finance Administrator

**Sewerage and Water Board of New Orleans**





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Reporting**

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**Sewerage and Water Board  
of New Orleans**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**December 31, 2013**

Executive Director/CEO

**OFFICERS  
of the  
SEWERAGE AND WATER BOARD  
OF NEW ORLEANS**

December 31, 2014

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MITCHELL J. LANDRIEU.....President  
Mayor, City of New Orleans

WILLIAM RAYMOND MANNING.....President Pro Tem

CEDRIC S. GRANT.....Executive Director

ROBERT K. MILLER.....Deputy Director

JOSEPH R. BECKER.....General Superintendent

MADLINE F. GODDARD.....Deputy General Superintendent

NOLAN LAMBERT.....Special Counsel

**MEMBERS OF  
SEWERAGE AND WATER BOARD OF NEW ORLEANS**

December 31, 2014

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MITCHELL J. LANDRIEU.....Mayor  
ALAN ARNOLD.....Board of Liquidation Appointment  
ROBIN BARNES.....Council District B Appointment  
MARION BRACY.....Council District D Appointment  
TAMIKA DUPLESSIS, Ph.D.....At-Large Appointment  
SCOTT JACOBS.....Council District A Appointment  
KERRI KANE.....Council District C Appointment  
WILLIAM RAYMOND MANNING.....Board of Liquidation Appointment  
MARK M. MOODY.....Council District E Appointment  
JOSEPH PEYCHAUD.....Consumer/Community Advocate  
KIMBERLY THOMAS, JD.....Consumer/Community Advocate

**COMMITTEES OF THE  
SEWERAGE AND WATER BOARD OF NEW ORLEANS**

December 31, 2014

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**EXECUTIVE COMMITTEE**

WILLIAM RAYMOND MANNING – Chairperson

ALAN ARNOLD  
MARION BRACY

KERRI KANE  
MARK MOODY

**FINANCE COMMITTEE**

MARK MOODY– Chairperson

ROBIN BARNES  
SCOTT JACOBS

KERRI KANE  
WILLIAM RAYMOND MANNING

**INFRASTRUCTURE COMMITTEE**

KERRI KANE - Chairperson

ALAN ARNOLD  
TAMIKA DUPLESSIS, Ph.D

JOSEPH PEYCHAUD  
KIMBERLY THOMAS, JD

**OPERATIONS COMMITTEE**

MARION BRACY, Chairperson

TAMIKA DUPLESSIS, Ph.D  
SCOTT JACOBS

MARK MOODY  
KIMBERLY THOMAS, JD

**PENSION COMMITTEE**

WILLIAM RAYMOND MANNING – Chairperson

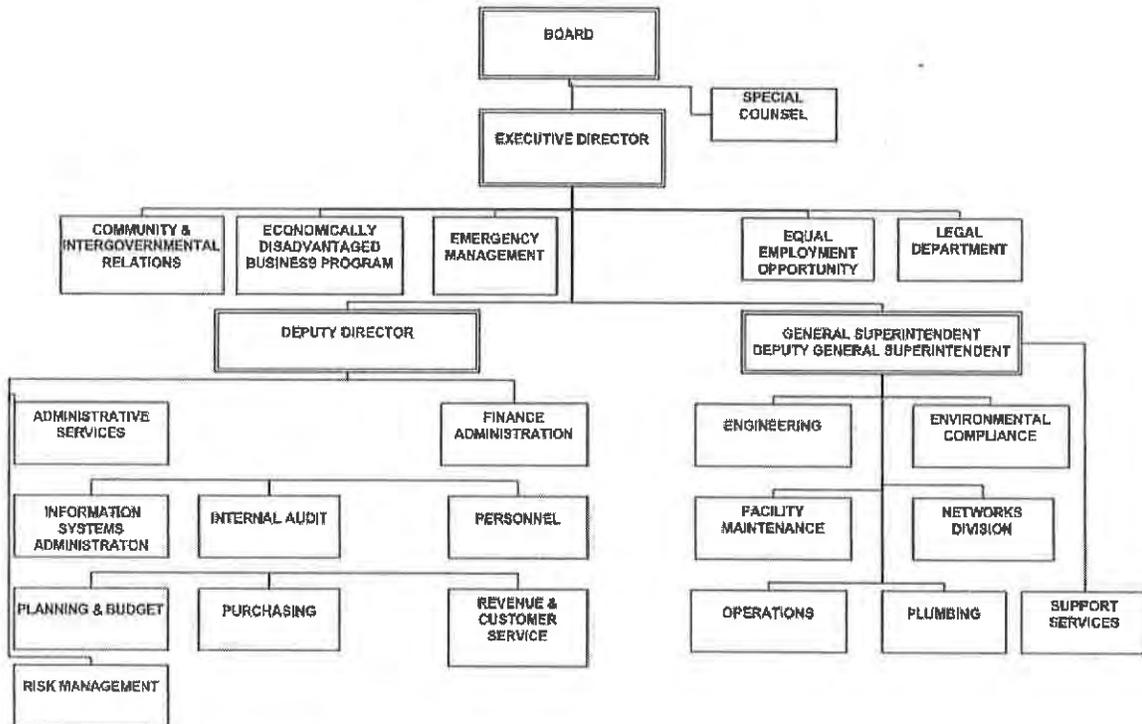
ALAN ARNOLD  
ROBIN BARNES  
MARION BRACY  
HAROLD HELLER

JOSEPH PEYCHAUD  
MARVIN RUSSELL  
GERALD TILTON  
JOHN WILSON

MICHAEL CONEFRY & COMPANY, ACTUARY

**SEWERAGE AND WATER BOARD OF NEW ORLEANS  
ORGANIZATION CHART**

2014



**THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
DIVISION HEADS OF EXECUTIVE DIRECTOR'S OFFICE**

December 31, 2014

**CEDRIC S. GRANT  
EXECUTIVE DIRECTOR**

---

**DEPUTY DIRECTOR  
ROBERT K. MILLER**

**GENERAL SUPERINTENDENT  
JOSEPH BECKER**

**DEPUTY GENERAL SUPERINTENDENT  
MADELINE E. GODDARD**

**COMMUNITY & INTERGOVERNMENTAL RELATIONS  
ROBERT B. JACKSON**

**ECONOMICALLY DISADVANTAGED BUSINESS PROGRAM  
TIFFANY CARTER**

**EMERGENCY MANAGEMENT  
JASON HIGGINBOTHAM**

**EQUAL EMPLOYMENT OPPORTUNITY  
BOBBY NATHAN**

**LEGAL DEPARTMENT  
NOLAN LAMBERT**

**THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
DIVISION HEADS OF DEPUTY DIRECTOR**

December 31, 2014

**ROBERT K. MILLER  
DEPUTY DIRECTOR**

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**ADMINISTRATIVE SERVICES**

LYNN COBETTE

**FINANCE ADMINISTRATION**

ROSITA P. THOMAS

**INFORMATION SYSTEMS ADMINISTRATION**

MELINDA NELSON

**INTERNAL AUDIT**

RAYMOND GABLE

**PERSONNEL ADMINISTRATION**

AUDREY LEE

**PLANNING AND BUDGET**

DEXTER JOSEPH

**PURCHASING ADMINISTRATION**

WILLIE M. MINGO, JR.

**REVENUE AND CUSTOMER SERVICES ADMINISTRATION**

JACQUELINE K. SHINE

**RISK MANAGEMENT**

STEVEN KLEPEIS

**THE SEWERAGE AND WATER BOARD OF NEW ORLEANS  
DIVISION HEADS OF GENERAL SUPERINTENDENT**

December 31, 2014

**JOSEPH BECKER**  
GENERAL SUPERINTENDENT

**MADELINE F. GODDARD**  
DEPUTY GENERAL SUPERINTENDENT

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**ENGINEERING DIVISION**

MELVIN R. SPOONER

**ENVIRONMENTAL COMPLIANCE**

ANN WILSON

**FACILITY MAINTENANCE DIVISION**

GABE SIGNORELLI

**NETWORKS DIVISION**

RUDY AUGUST

**OPERATIONS DIVISION**

BOB MOEINIAN

**PLUMBING DIVISION**

JAMES J. ARNOLD

**SUPPORT SERVICES**

JOHN WILSON



Staffed by chemists, microbiologists and technicians, the Sewerage and Water Board Water Quality Laboratory assures the safety and purity of the city's water by testing for some 150,000 organic, inorganic and microbiological compounds. The 8,500 square foot lab is located within the Carrollton Water Plant and monitors river water and finished water sampled from both the East Bank and Algiers. Pictured here, a Laboratory chemist performs water analysis.



The vehicle and equipment repair and service garages at Central Yard are being repaired and constructed. These facilities are critical to operations. Thus, FEMA funded a facility to serve as an interim location to service light and large vehicles and heavy equipment. This new facility is a temporary location while Garages I and II repairs and construction is completed. It houses personnel and equipment needed to service the vehicle fleet and equipment. It is called a site relocation facility. The FEMA funding for the project was \$1.8 million. Upon completion, the new garage will be the home of the body shop. Besides the garages, Central Yard is the service facility of the board. The site, also, includes support services, networks, meter reading, environmental affairs and the warehouse.

## INDEPENDENT AUDITORS' REPORT

Members of the Board  
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, 2014 and 2013, 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 of 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 Board, as of December 31, 2014 and 2013, and the 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.

## Change in Accounting Principle

As described in Note 1 to the financial statements, the Board implemented GASB Statement No. 67 *Financial Reporting for Pension Plans—an amendment of GASB Statement No. 25* in 2014. The objective of this Statement is to improve financial reporting by state and local government pension plans. Our opinions are 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-16 and the schedules presented on pages II-65 through II-68 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*

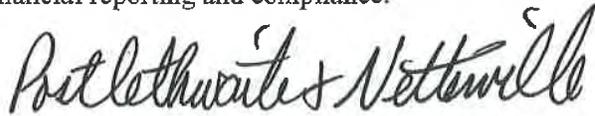
Our audits were conducted for the purpose of forming opinions on the financial statements that collectively comprise the Board's basic financial statements. The Introductory Section, Schedules 1 through 7, the Statistical Information section, and Supplementary Information section are presented for purposes 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 information is fairly stated, in all material respects, in relation to the financial statements as a whole.

The Introductory, Statistical Information, and Supplementary Information 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 May 28, 2015, 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.



New Orleans, Louisiana  
May 28, 2015

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

### **MANAGEMENT'S DISCUSSION AND ANALYSIS YEARS ENDED DECEMBER 31, 2014 AND 2013**

This section of the 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, 2014 and 2013. 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 is anticipated to result in improved debt service coverage, increased liquidity, increased funding for operations and maintenance, and full funding for the capital improvement program.

Recovery from Hurricane Katrina and the resulting flooding continued to be a significant event during 2014. Repairs to water, sewerage, and drainage systems, building repairs, and vehicle and equipment replacements continued throughout 2014. Management anticipates this recovery work to continue through 2025.

#### **Enterprise Fund**

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

##### **2014**

- The Board's additions to its major systems approximated \$262.7 million.
- The Southeast Louisiana (SELA) project which is a major upgrade to the drainage system by the Corps of Engineers resulted in additions of approximately \$104.1 million to work in progress during the year.
- Federal Emergency Management Agency (FEMA) Disaster Public Assistance grants revenues totaled approximately \$35.7 million in Disaster Assistance grants and \$26.6 million in Hazard Mitigation grants for capital contributions.

##### **2013**

- The Board's additions to its major systems approximated \$183.0 million.
- The Southeast Louisiana (SELA) project which is a major upgrade to the drainage system by the Corps of Engineers resulted in additions of approximately \$52.7 million to work in progress during the year.
- Federal Emergency Management Agency (FEMA) Disaster Public Assistance grants expended totaled approximately \$60.7 million, of which approximately \$58.9 million were capital contributions and approximately \$1.8 million were for operating and maintenance expenses.

## **Pension Trust Fund**

### **2014**

The major highlight in the Board's pension trust fund was the financial performance in the stock market. The appreciation of the fair value of investments was \$10.8 million in 2014 compared to \$21.4 million in 2013. The plan net position available for benefits had a net increase of \$2.2 million to \$236.6 million in 2014.

### **2013**

The major highlight in the Board's pension trust fund was the financial performance in the stock market. The appreciation of the fair value of investments was \$21.4 million in 2013 compared to \$20.6 million in 2012. The plan net position available for benefits had a net increase of \$13.7 million to \$234.4 million in 2013.

## **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 drainages 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 assets 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.

## FINANCIAL ANALYSIS OF THE BOARD

### ENTERPRISE FUND

#### 2014 Net Position

The Board's total assets at December 31, 2014 were approximately \$2.6 billion, a 14.1% increase from December 31, 2013 (see Table A-1).

	2014	2013	Increase (Decrease)	Increase (Decrease)
Current unrestricted assets	\$ 142,627,550	\$ 120,398,207	\$ 22,229,343	18.5%
Restricted assets	126,226,933	40,288,338	85,938,595	213.3%
Property, plant and equipment - net	2,319,999,281	2,107,837,751	212,161,530	10.1%
Other assets	10,753,170	10,157,732	595,438	5.9%
<b>Total assets</b>	<b>2,599,606,934</b>	<b>2,278,682,028</b>	<b>320,924,906</b>	<b>14.1%</b>
Deferred outflows of resources	4,307,394	-	4,307,394	0.0%
<b>Total deferred outflows of resources</b>	<b>4,307,394</b>	<b>-</b>	<b>4,307,394</b>	<b>0.0%</b>
<b>Total assets and deferred outflows</b>	<b>\$ 2,603,914,328</b>	<b>\$ 2,278,682,028</b>	<b>\$ 325,232,300</b>	<b>14.3%</b>
Current liabilities	\$ 120,746,138	\$ 114,794,520	\$ 5,951,618	5.2%
Long-term liabilities	514,368,833	347,754,894	166,613,939	47.9%
<b>Total liabilities</b>	<b>635,114,971</b>	<b>462,549,414</b>	<b>172,565,557</b>	<b>37.3%</b>
Net position:				
Net investment in capital assets	2,013,060,377	1,919,436,757	93,623,620	4.9%
Restricted	99,356,835	33,405,265	65,951,570	197.4%
Unrestricted	(143,617,855)	(136,709,408)	(6,908,447)	5.1%
<b>Total net position</b>	<b>1,968,799,357</b>	<b>1,816,132,614</b>	<b>152,666,743</b>	<b>8.4%</b>
<b>Total liabilities and net position</b>	<b>\$ 2,603,914,328</b>	<b>\$ 2,278,682,028</b>	<b>\$ 325,232,300</b>	<b>14.3%</b>

The net increase in total assets of \$320.9 million resulted primarily due to an increase in property, plant, and equipment of \$212.2 million, an increase of \$85.9 million in restricted assets, and an increase in current unrestricted assets of \$22.2 million. The increase in restricted assets was primarily due to unspent 2014 bond proceeds that are restricted for debt service and capital projects. The increase in current unrestricted assets is due primarily to the increase in grants receivable of \$40.0 million as a result of delays in reimbursements from the governments in addition, to an increase in reimbursable expenditures in 2014. Long-term liabilities increased by \$166.6 million primarily due to an increase in long-term portion of bonds payable of \$123.4 million as a result of the issuance of the Series 2014 Water Revenue and Refunding Bonds, Series 2014 Sewerage Revenue and Refunding Bonds, and Series 2014 Drainage Refunding Bonds, in addition to an increase of \$37.3 million in the Southeast Louisiana Project liability.

## 2013 Net Position

The Board's total assets at December 31, 2013 were approximately \$2.3 billion, a 6.2% increase from December 31, 2012 (see Table A-2).

	2013	2012	Increase (Decrease)	Increase (Decrease)
Current unrestricted assets	\$ 120,398,207	\$ 124,587,034	\$ (4,188,827)	-3.4%
Restricted assets	40,288,338	42,198,721	(1,910,383)	-4.5%
Property, plant and equipment - net	2,107,837,751	1,968,531,923	139,305,828	7.1%
Other assets	10,157,732	9,544,303	613,429	6.4%
<b>Total assets</b>	<b>\$ 2,278,682,028</b>	<b>\$ 2,144,861,981</b>	<b>\$ 133,820,047</b>	<b>6.2%</b>
Current liabilities	\$ 114,794,520	\$ 108,721,790	\$ 6,072,730	5.6%
Long-term liabilities	347,754,894	373,728,517	(25,973,623)	-6.9%
<b>Total liabilities</b>	<b>462,549,414</b>	<b>482,450,307</b>	<b>(19,900,893)</b>	<b>-4.1%</b>
Net position:				
Net investment in capital assets	1,919,436,757	1,762,070,381	157,366,376	8.9%
Restricted	33,405,265	35,186,883	(1,781,618)	-5.1%
Unrestricted	(136,709,408)	(134,845,590)	(1,863,818)	1.4%
<b>Total net position</b>	<b>1,816,132,614</b>	<b>1,662,411,674</b>	<b>153,720,940</b>	<b>9.2%</b>
<b>Total liabilities and net position</b>	<b>\$ 2,278,682,028</b>	<b>\$ 2,144,861,981</b>	<b>\$ 133,820,047</b>	<b>6.2%</b>

The net increase in total assets of \$133.8 million resulted primarily due to an increase in property, plant, and equipment of \$139.3 million and a decrease of \$4.2 million in current unrestricted assets. The decrease in current unrestricted assets was primarily due to an increase of \$21.7 million in unrestricted and undesignated cash and cash equivalents as a result of FEMA advancements received for payments of committed project costs, offset by a decrease in grants receivable of \$11.1 million due to more timely collections from the federal government and a decrease in cash designated by the Board for capital projects of \$15.8 million. Current liabilities increased by \$6.1 million primarily due to unspent advances received from the federal government of \$10.9 million received in 2013 and an increase in retainers and estimates payable of \$3.2 million offset by a decrease in the Disaster Reimbursement Revolving Loan of \$11.7 million as a result of loan payments made during 2013. Long-term liabilities decreased by \$26.0 million primarily due primarily to the forgiveness of principal and accrued interest on the Special Community Disaster loan totaling \$30.1 million and a decrease of \$18.8 million in long-term bonds payable offset by an increase of \$6.7 million in other postretirement benefits liability and an increase of \$15.7 million in the Southeast Louisiana Project liability.

## 2014 Changes in Net Position

The change in net position for the year ended December 31, 2014 was an increase of approximately \$152.7 million, as opposed to approximately \$153.7 million for the year ended December 31, 2013. The Board's total operating revenues increased by 9.7% to approximately \$163.1 million due primarily for rate increases effective January 1, 2014, and total non-operating revenue decreased by 41.5% to approximately \$46.3 million primarily due to the forgiveness of the outstanding principal and interest due on the Special Community Disaster Loan in 2013 totaling \$30.1 million, bond issuances costs of \$2.6 million in 2014, and a decrease in operating and maintenance grants of \$2.1 million. Capital contributions from federal grants and construction of Board property was approximately \$141.9 million resulting primarily from capital additions reimbursable under the FEMA Disaster Public Assistance and FEMA Hazard Mitigation grants of approximately \$35.7 million and \$26.6 million, respectively, and approximately \$66.8 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.

	2014	2013	Increase (Decrease)	Increase (Decrease)
Operating revenues:				
Charges for services	\$ 158,049,869	\$ 143,577,430	\$ 14,472,439	10.1%
Other	5,024,480	5,119,368	(94,888)	-1.9%
<b>Total operating revenues</b>	<b>163,074,349</b>	<b>148,696,798</b>	<b>14,377,551</b>	<b>9.7%</b>
Operating expenses (Table A-4)	198,551,645	188,341,071	10,210,574	5.4%
Operating loss	(35,477,296)	(39,644,273)	4,166,977	10.5%
Non-operating revenues:				
Property taxes	47,534,646	46,455,330	1,079,316	2.3%
Other taxes	572,083	494,106	77,977	15.8%
Operating and maintenance grants	1,502	2,054,492	(2,052,990)	-99.9%
Bond issuance costs	(2,649,339)	-	(2,649,339)	0.0%
Investment income (expense)	811,263	(17,719)	828,982	-4678.5%
Forgiveness of Community Disaster Loan	-	30,061,368	(30,061,368)	0.0%
<b>Total non-operating revenues</b>	<b>46,270,155</b>	<b>79,047,577</b>	<b>(32,777,422)</b>	<b>-41.5%</b>
Income before capital contributions	10,792,859	39,403,304	(28,610,445)	-72.6%
Capital contributions	141,873,884	114,317,636	27,556,248	24.1%
<b>Change in net position</b>	<b>152,666,743</b>	<b>153,720,940</b>	<b>(1,054,197)</b>	<b>-0.7%</b>
Net position, beginning of year	1,816,132,614	1,662,411,674	153,720,940	9.2%
Net position, end of year	<b>\$ 1,968,799,357</b>	<b>\$ 1,816,132,614</b>	<b>\$ 152,666,743</b>	<b>8.4%</b>

<b>Table A-4</b>				
<b>Sewerage &amp; Water Board</b>				
<b>Operating Expenses</b>				
	<b>2014</b>	<b>2013</b>	<b>Increase (Decrease)</b>	<b>Increase (Decrease)</b>
Power and pumping	\$ 13,227,389	\$ 12,572,620	\$ 654,769	5.2%
Treatment	19,527,000	18,143,049	1,383,951	7.6%
Transmission and distribution	27,186,606	23,323,900	3,862,706	16.6%
Customer accounts	3,514,360	3,425,934	88,426	2.6%
Customer service	3,717,925	3,464,197	253,728	7.3%
Administration and general	16,976,430	17,333,945	(357,515)	-2.1%
Payroll related	31,679,813	34,928,822	(3,249,009)	-9.3%
Maintenance of general plant	28,178,593	27,647,127	531,466	1.9%
Depreciation	50,157,869	43,648,267	6,509,602	14.9%
Provision for doubtful accounts	1,940,782	2,052,096	(111,314)	-5.4%
Provision for (benefit of) claims	2,444,878	1,801,114	643,764	35.7%
Total operating expenses	<b>\$ 198,551,645</b>	<b>\$ 188,341,071</b>	<b>\$ 10,210,574</b>	<b>5.4%</b>

Total operating expenses increased by approximately \$10.2 million or 5.4% compared to 2013. In 2014, the Board placed several construction projects in service, which caused an increase of \$6.5 million or 14.9% in depreciation expenses. Provisions for claims increased to \$2.4 million in 2014 as compared to \$1.8 million 2013. Claims expense varies due to the number and severity of the claims during any period. The increase is primarily due to adjustments in overall claims reserve at year-end in addition to claims payments made during 2014. The transmission and distribution expenses increased by \$3.9 million, or 16.6%, due to water and sewer paving and point repairs. Payroll related expenses decreased by \$3.2 million, or 9.3%, due to a decrease in employer contributions by the Board. As the employees paid more in pension contributions, the Board was required to pay less.

## 2013 Changes in Net Position

The change in net position for the year ended December 31, 2013 was an increase of approximately \$153.7 million, as opposed to approximately \$124.4 million for the year ended December 31, 2012. The Board's total operating revenues increased by 8.6% to approximately \$148.7 million due primarily for rate increases effective January 1, 2013, and total non-operating revenue increased by 53.1% to approximately \$79.0 million due primarily to the forgiveness of the outstanding principal and interest due on the Special Community Disaster Loan in 2013 totaling \$30.1 million. The changes in net position are detailed in Table A-5; operating expenses are detailed in Table A-6.

	2013	2012	Increase (Decrease)	Increase (Decrease)
Operating revenues:				
Charges for services	\$ 143,577,430	\$ 132,351,945	\$ 11,225,485	8.5%
Other	5,119,368	4,626,276	493,092	10.7%
<b>Total operating revenues</b>	<b>148,696,798</b>	<b>136,978,221</b>	<b>11,718,577</b>	<b>8.6%</b>
Operating expenses (Table A-4)	188,341,071	178,705,276	9,635,795	5.4%
Operating loss	(39,644,273)	(41,727,055)	2,082,782	5.0%
Non-operating revenues:				
Property taxes	46,455,330	44,061,990	2,393,340	5.4%
Other taxes	494,106	278,394	215,712	77.5%
Operating and maintenance grants	2,054,492	7,624,526	(5,570,034)	-73.1%
Investment expense	(17,719)	(336,506)	318,787	-94.7%
Forgiveness of Community Disaster Loan	30,061,368	-	30,061,368	0.0%
<b>Total non-operating revenues</b>	<b>79,047,577</b>	<b>51,628,404</b>	<b>27,419,173</b>	<b>53.1%</b>
Income before capital contributions	39,403,304	9,901,349	29,501,955	298.0%
Capital contributions	114,317,636	114,530,907	(213,271)	-0.2%
<b>Change in net position</b>	<b>153,720,940</b>	<b>124,432,256</b>	<b>29,288,684</b>	<b>23.5%</b>
Net position, beginning of year	1,662,411,674	1,537,979,418	124,432,256	8.1%
Net position, end of year	<b>\$ 1,816,132,614</b>	<b>\$ 1,662,411,674</b>	<b>\$ 153,720,940</b>	<b>9.2%</b>

Capital contributions from federal grants and construction of Board property was approximately \$114.3 million resulting primarily from capital additions reimbursable under the FEMA Disaster Public Assistance grant of approximately \$60.7 million and approximately \$37.5 million of capital contributions by the Army Corps of Engineers. Operating and maintenance grants decreased in 2013 to \$2.1 million for operation and maintenance expenditures made during 2013 under the FEMA Disaster Public Assistance grant.

	2013	2012	Increase (Decrease)	Increase (Decrease)
Power and pumping	\$ 12,572,620	\$ 11,951,746	\$ 620,874	5.2%
Treatment	18,143,049	18,906,540	(763,491)	-4.0%
Transmission and distribution	23,323,900	26,019,713	(2,695,813)	-10.4%
Customer accounts	3,425,934	3,334,652	91,282	2.7%
Customer service	3,464,197	3,332,300	131,897	4.0%
Administration and general	17,333,945	15,879,736	1,454,209	9.2%
Payroll related	34,928,822	33,980,859	947,963	2.8%
Maintenance of general plant	27,647,127	24,480,560	3,166,567	12.9%
Depreciation	43,648,267	39,011,955	4,636,312	11.9%
Provision for doubtful accounts	2,052,096	1,676,511	375,585	22.4%
Provision for (benefit of) claims	1,801,114	130,704	1,670,410	1278.0%
Total operating expenses	<b>\$ 188,341,071</b>	<b>\$ 178,705,276</b>	<b>\$ 9,635,795</b>	<b>5.4%</b>

Total operating expenses increased by approximately \$9.6 million or 5.4% compared to 2012. In 2013, the Board placed several construction projects in service, which caused an increase of \$4.6 million, or 11.9%, in depreciation expenses. Provisions for claims increased to \$1.8 million in 2013 as compared to 2012. Claims expense varies due to the number and severity of the claims during any period. The increase is primarily due to adjustments in overall claims reserve at year-end in addition to claims payments made during 2013. Maintenance of general plant expenses increased by \$3.1 million, or 12.9%, due to ongoing repairs to plant facility and the intake filter gallery, and labor required to maintain the facility.

### **PENSION TRUST FUND**

#### **2014 Plan Net Position**

The Board's total plan net position of its pension trust fund at December 31, 2014 was approximately \$236.6 million, a 0.9% increase from December 31, 2013 (see table A-7). Total assets increased 0.9% to \$236.6 million.

Plan net position increased by approximately \$2.2 million in 2014 primarily due to unrealized gains on investments of \$10.8 million and contributions of \$9.6 million offset by benefit payments and other deductions totaling \$18.7 million in 2014.

Table A-7				
Sewerage & Water Board of New Orleans				
Plan Net Position				
	2014	2013	Increase (Decrease)	Increase (Decrease)
Cash	\$ 1,950,862	\$ 1,145,702	\$ 805,160	70.3%
Investments	233,026,769	232,097,196	929,573	0.4%
Receivables	146,366	128,169	18,197	14.2%
Other assets	1,432,674	987,498	445,176	45.1%
<b>Total assets</b>	<b>236,556,671</b>	<b>234,358,565</b>	<b>2,198,106</b>	<b>0.9%</b>
<b>Plan net position</b>	<b>\$ 236,556,671</b>	<b>\$ 234,358,565</b>	<b>\$ 2,198,106</b>	<b>0.9%</b>

### 2013 Plan Net Position

The Board's total plan net position of its pension trust fund at December 31, 2013 was approximately \$234.4 million, a 6.2% increase from December 31, 2012 (see table A-8). Total assets increased 6.2% to \$234.4 million.

Plan net position increased by approximately \$13.7 million in 2013 primarily due to unrealized gains on investments of \$21.4 million and contributions of \$8.4 million offset by benefit payments and other deductions totaling \$18.0 million in 2013.

Table A-8				
Sewerage & Water Board of New Orleans				
Plan Net Position				
	2013	2012	Increase (Decrease)	Increase (Decrease)
Cash	\$ 1,145,702	\$ 755,634	\$ 390,068	51.6%
Investments	232,097,196	218,299,235	13,797,961	6.3%
Receivables	128,169	81,122	47,047	58.0%
Other assets	987,498	1,568,064	(580,566)	-37.0%
<b>Total assets</b>	<b>234,358,565</b>	<b>220,704,055</b>	<b>13,654,510</b>	<b>6.2%</b>
<b>Plan net position</b>	<b>\$ 234,358,565</b>	<b>\$ 220,704,055</b>	<b>\$ 13,654,510</b>	<b>6.2%</b>

### 2014 Changes in Plan Net Position

Net income on investments decreased by \$11.4 million or 50.1% during 2014 due to market conditions in 2014 compared to 2013. The decrease in the change in plan net position of \$11.5 million resulted primarily from the decrease noted above in unrealized gains on investments compared to 2013.

	2014	2013	Increase (Decrease)	Increase (Decrease)
<b>Additions:</b>				
Contributions	\$ 9,592,835	\$ 8,477,553	\$ 1,115,282	13.2%
Net income on investments	11,354,226	22,737,697	(11,383,471)	-50.1%
<b>Total additions</b>	<b>20,947,061</b>	<b>31,215,250</b>	<b>(10,268,189)</b>	<b>-32.9%</b>
<b>Deductions:</b>				
Benefits	(13,973,343)	(13,243,522)	(729,821)	5.5%
Employee refunds	(140,938)	(191,867)	50,929	-26.5%
Employee DROP contributions	(4,634,674)	(4,125,351)	(509,323)	12.3%
<b>Total deductions</b>	<b>(18,748,955)</b>	<b>(17,560,740)</b>	<b>(1,188,215)</b>	<b>6.8%</b>
<b>Change in net position</b>	<b>2,198,106</b>	<b>13,654,510</b>	<b>(11,456,404)</b>	<b>-83.9%</b>
Plan net position, beginning of year	234,358,565	220,704,055	13,654,510	6.2%
Plan net position, end of year	<b>\$ 236,556,671</b>	<b>\$ 234,358,565</b>	<b>\$ 2,198,106</b>	<b>0.9%</b>

### 2013 Changes in Plan Net Position

Net income on investments increased by \$1.4 million, or 6.4%, during 2013 due to the positive performance of the investment portfolio in 2013 related to the higher value of investment in 2013 as compared to 2012. The decrease in the change in plan net position of \$956,000 resulted primarily from an increase in unrealized gains on investments compared to 2012 offset by a decrease in contributions of approximately \$456,000, or 5.1%, and an increase of \$1.9 million, or 11.9%, in deductions compared to 2012.

	2013	2012	Increase (Decrease)	Increase (Decrease)
<b>Additions:</b>				
Contributions	\$ 8,477,553	\$ 8,933,937	\$ (456,384)	-5.1%
Net income on investments	22,737,697	21,372,939	1,364,758	6.4%
<b>Total additions</b>	<b>31,215,250</b>	<b>30,306,876</b>	<b>908,374</b>	<b>3.0%</b>
<b>Deductions:</b>				
Benefits	(13,243,522)	(12,568,639)	(674,883)	5.4%
Employee refunds	(191,867)	(111,854)	(80,013)	71.5%
Employee DROP contributions	(4,125,351)	(3,016,084)	(1,109,267)	36.8%
<b>Total deductions</b>	<b>(17,560,740)</b>	<b>(15,696,577)</b>	<b>(1,864,163)</b>	<b>11.9%</b>
<b>Change in net position</b>	<b>13,654,510</b>	<b>14,610,299</b>	<b>(955,789)</b>	<b>-6.5%</b>
Plan net position, beginning of year	220,704,055	206,093,756	14,610,299	7.1%
Plan net position, end of year	<b>\$ 234,358,565</b>	<b>\$ 220,704,055</b>	<b>\$ 13,654,510</b>	<b>6.2%</b>

## **CAPITAL ASSET AND DEBT ADMINISTRATION**

### **2014 Capital Assets**

As of December 31, 2014, the Board had invested approximately \$3.15 billion in capital assets. Net of accumulated depreciation, the Board's net capital assets at December 31, 2014 totaled approximately \$2.32 billion. This amount represents a net increase (including additions and disposals, net of depreciation) of approximately \$212.2 million, or 10.1%, over December 31, 2013.

At December 31, 2014, the Board's budget for its ten year capital improvements program totaled approximately \$2.62 billion including \$1.07 billion for water, \$667.4 million for sewerage and \$885.0 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, 2014, the Board has committed or appropriated \$22.2 million in investments for use in future capital projects and has approximately \$93.4 million remaining for construction. The capital project investments are included in designated assets and restricted assets.

The capital improvements budget for 2015 is \$394.0 million, including \$293.1 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, 2014 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 2014.

### **2013 Capital Assets**

As of December 31, 2013, the Board had invested approximately \$2.89 billion in capital assets. Net of accumulated depreciation, the Board's net capital assets at December 31, 2013 totaled approximately \$2.11 billion. This amount represents a net increase (including additions and disposals, net of depreciation) of approximately \$139.9 million or 7.1% over December 31, 2012.

At December 31, 2013, the Board's budget for its ten year capital improvements program totaled approximately \$2.52 billion including \$836.5 million for water, \$601.0 million for sewerage and \$1.08 billion 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, 2013, the Board has committed or appropriated \$45.5 million in investments for use in future capital projects and has approximately \$190,000 of bond proceeds remaining for construction. The capital project investments are included in designated assets and restricted assets.

## **2014 Debt Administration**

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 \$4,078,925. 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.

The Board continues to make its regularly scheduled payments on its bonds. During 2014, \$14.8 million in principal payments were made.

The Louisiana Department of Health and Hospitals committed to loan the Board up to \$3.4 million to fund the installation of a new sodium hypochlorite storage and feed facility as well as the installation of a new sludge line into the Mississippi River (project). The project has been completed and the loan has been paid in full as of December 31, 2014.

The Louisiana Department of Environmental Quality has committed to loan 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 \$8,174,000 at December 31, 2014.

See Note 6 for detailed long term debt activity during 2014.

## **2013 Debt Administration**

The Board continues to make its regularly scheduled payments on its bonds. During 2013, \$19.4 million in principal payments were made.

The Louisiana Department of Health and Hospitals has committed to loan the Board up to \$3.4 million to fund the installation of a new sodium hypochlorite storage and feed facility as well as the installation of a new sludge line into the Mississippi River (project). The outstanding balance is \$3,865 at December 31, 2013.

The Louisiana Department of Environmental Quality has committed to loan 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 \$8,420,403 at December 31, 2013.

See Note 6 for detailed long term debt activity during 2013.

## **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 2014 bond covenant for the 2014 Water and Sewer Revenue and Refunding Bonds, the cash in days is required to maintain 90 days of cash monthly. The Board has exceeded the goals by 81 days and 114 days in the Water and Sewer system, respectively.

The total number of open accounts continues to increase modestly on an annual basis. The total open accounts in 2014, was 132,091, an increase of 2,084 over 2013 open accounts of 130,007.

## **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.

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## **BASIC FINANCIAL STATEMENTS**

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**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**STATEMENTS OF NET POSITION**  
**December 31, 2014 and 2013**

	<b>2014</b>	<b>2013</b>
<b>ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</b>		
Current assets:		
Unrestricted and undesignated		
Cash and cash equivalents	\$ 38,878,196	\$ 30,326,340
Accounts receivable:		
Customers, net of allowance	16,351,281	13,944,271
Taxes	8,130,947	8,119,202
Grants	44,246,154	11,841,893
Miscellaneous	2,402,226	3,517,548
Inventory of supplies	5,467,101	6,935,599
Prepaid expenses	902,717	976,007
Total unrestricted and undesignated	116,378,622	75,660,860
Designated cash, cash equivalents, and investments:		
Cash and cash equivalents designated for capital projects	22,249,657	41,099,522
Other	3,999,271	3,637,825
Total designated cash, cash equivalents, and investments	26,248,928	44,737,347
Total current assets	142,627,550	120,398,207
Noncurrent assets:		
Restricted cash, cash equivalents, and investments:		
Cash and cash equivalents restricted for capital projects	93,402,475	4,555,573
Debt service reserve	30,846,959	33,405,265
Health insurance reserve	1,977,499	2,327,500
Total restricted cash, cash equivalents, and investments	126,226,933	40,288,338
Property, plant and equipment	3,149,067,389	2,891,420,305
Less: accumulated depreciation	829,068,108	783,582,554
Property, plant and equipment, net	2,319,999,281	2,107,837,751
Other assets:		
Designated cash for customer deposits	10,701,855	10,106,417
Deposits	51,315	51,315
Total other assets	10,753,170	10,157,732
Total noncurrent assets	2,456,979,384	2,158,283,821
Total assets	2,599,606,934	2,278,682,028
Deferred outflows of resources		
Deferred loss on bond refunding	4,307,394	-
Total deferred outflows of resources	4,307,394	-
Total assets and deferred outflows of resources	\$ 2,603,914,328	\$ 2,278,682,028

(Continued)

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**STATEMENTS OF NET POSITION**  
**December 31, 2014 and 2013**  
(Continued)

LIABILITIES AND NET POSITION	2014	2013
Current liabilities (payable from current unrestricted assets):		
Accounts payable	\$ 35,923,044	\$ 37,622,061
Due to City of New Orleans	160,172	160,122
Disaster Reimbursement Revolving Loan (Note 13)	17,895,041	11,693,325
Retainers and estimates payable	7,946,275	6,548,281
Due to pension trust fund	293,670	278,639
Accrued salaries	1,977,169	1,750,469
Accrued vacation and sick pay	9,202,614	9,806,913
Claims payable	10,220,039	11,000,794
Debt Service Assistance Fund loan payable	4,225,892	4,038,502
Advances from federal government	6,157,549	10,887,732
Other liabilities	74,209	28,108
	94,075,674	93,814,946
Total current liabilities (payable from current unrestricted assets):		
Current liabilities (payable from current restricted assets):		
Accounts payable	10,806,104	-
Accrued interest	2,481,678	2,243,581
Bonds payable	13,259,000	18,145,000
Retainers and estimates payable	123,682	590,993
	26,670,464	20,979,574
Total current liabilities (payable from current restricted assets):		
	120,746,138	114,794,520
Total current liabilities		
Long-term liabilities:		
Claims payable	2,594,154	1,913,607
Net pension obligation	17,875,060	15,430,336
Other postretirement benefits liability	61,208,745	54,778,434
Bonds payable, net of current maturities	293,679,904	170,255,994
Southeast Louisiana Project liability	66,655,976	29,391,071
Debt Service Assistance Fund loan payable, net of current maturities	61,653,139	65,879,035
Customer deposits	10,701,855	10,106,417
	514,368,833	347,754,894
Total long-term liabilities		
	635,114,971	462,549,414
Total liabilities		
Net position:		
Net investment in capital assets	2,013,060,377	1,919,436,757
Restricted for debt service	30,846,959	33,405,265
Restricted for capital improvements	68,509,876	-
Unrestricted	(143,617,855)	(136,709,408)
	1,968,799,357	1,816,132,614
Total net position		
	1,968,799,357	1,816,132,614
Total net position and liabilities	\$ 2,603,914,328	\$ 2,278,682,028

See accompanying notes to financial statements.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION**  
For the years ended December 31, 2014 and 2013

	<u>2014</u>	<u>2013</u>
Operating revenues:		
Sales of water and delinquent fees	\$ 70,818,255	\$ 64,398,609
Sewerage service charges	86,553,262	78,535,785
Plumbing inspection and license fees	678,352	643,036
Other revenue	5,024,480	5,119,368
Total operating revenues	<u>163,074,349</u>	<u>148,696,798</u>
Operating expenses:		
Power and pumping	13,227,389	12,572,620
Treatment	19,527,000	18,143,049
Transmission and distribution	27,186,606	23,323,900
Customer accounts	3,514,360	3,425,934
Customer service	3,717,925	3,464,197
Administration and general	16,976,430	17,333,945
Payroll related	31,679,813	34,928,822
Maintenance of general plant	28,178,593	27,647,127
Depreciation	50,157,869	43,648,267
Provision for doubtful accounts	1,940,782	2,052,096
Provision for claims	2,444,878	1,801,114
Total operating expenses	<u>198,551,645</u>	<u>188,341,071</u>
Operating loss	<u>(35,477,296)</u>	<u>(39,644,273)</u>
Non-operating revenues (expenses):		
Three-mill tax	13,481,526	13,175,711
Six-mill tax	13,626,539	13,317,505
Nine-mill tax	20,425,388	19,962,114
Two-mill tax	1,193	-
Other taxes	572,083	494,106
Operating and maintenance grants	1,502	2,054,492
Interest income	811,263	353,630
Bond issuance costs	(2,649,339)	-
Interest expense	-	(371,349)
Forgiveness of Community Disaster Loan (Note 6)	-	30,061,368
Total non-operating revenues	<u>46,270,155</u>	<u>79,047,577</u>
Income before capital contributions	10,792,859	39,403,304
Capital contributions	<u>141,873,884</u>	<u>114,317,636</u>
Change in net position	152,666,743	153,720,940
Net position, beginning of year	<u>1,816,132,614</u>	<u>1,662,411,674</u>
Net position, end of year	<u>\$ 1,968,799,357</u>	<u>\$ 1,816,132,614</u>

See accompanying notes to financial statements.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**STATEMENTS OF CASH FLOWS**  
**ENTERPRISE FUND**

**For the years ended December 31, 2014 and 2013**

	<u>2014</u>	<u>2013</u>
Cash flows from operating activities		
Cash received from customers	\$ 153,619,213	\$ 141,106,556
Cash payments to suppliers for goods and services	(68,821,523)	(68,748,901)
Cash payments to employees for services	(66,688,600)	(64,830,644)
Other revenue	6,818,154	4,882,014
	<u>24,927,244</u>	<u>12,409,025</u>
Cash flows from noncapital financing activities		
Proceeds from property taxes	48,094,984	46,562,686
Proceeds from federal operating and maintenance grants	1,502	4,189,318
	<u>48,096,486</u>	<u>50,752,004</u>
Cash flows from capital and related financing activities		
Acquisition and construction of capital assets	(136,140,125)	(111,163,921)
Principal payments and refundings of bonds payable	(184,846,812)	(19,358,003)
Proceeds from bonds payable	299,773,229	1,432,130
Payments for bond issuance costs	(2,649,339)	-
Principal payments on Debt Service Assistance Fund loan	(4,038,506)	(3,859,430)
Interest paid on bonds payable	(13,931,057)	(12,588,862)
Payments to construction fund (Note 13)	(4,595,235)	(39,175,928)
Proceeds from construction fund (Note 13)	10,796,951	41,965,831
Capital contributed by developers and federal grants	37,920,709	83,907,507
	<u>2,289,815</u>	<u>(58,840,676)</u>
Cash flows from investing activities		
Proceeds from sales of investments	-	115,278
Investment income	1,283,925	221,783
	<u>1,283,925</u>	<u>337,061</u>
Net increase in cash	76,597,470	4,657,414
Cash at the beginning of the year	119,566,718	114,909,304
Cash at the end of the year	<u>\$ 196,164,188</u>	<u>\$ 119,566,718</u>
Reconciliation of cash, designated cash, and restricted cash (Note 2)		
Current assets - cash	\$ 38,878,196	\$ 30,326,340
Designated assets - cash	33,700,783	51,593,764
Restricted assets -cash	123,585,209	37,646,614
Total cash	<u>\$ 196,164,188</u>	<u>\$ 119,566,718</u>

(Continued)

**SEWERAGE AND WATER BOARD OF NEW ORLEANS  
STATEMENTS OF CASH FLOWS  
ENTERPRISE FUND**

**For the years ended December 31, 2014 and 2013**

(Continued)

	2014	2013
Reconciliation of operating loss to net cash provided by operating activities is as follows:		
Operating loss	\$ (35,477,296)	\$ (39,644,273)
Adjustments to reconcile net operating loss to net cash used in operating activities:		
Depreciation	50,157,869	43,648,267
Provision for claims	2,444,878	1,801,114
Provision for doubtful accounts	1,940,782	2,052,096
Change in operating assets and liabilities:		
Increase in customer receivables	(4,347,792)	(2,441,296)
Decrease in inventory	1,468,498	762,728
(Increase) decrease in prepaid expenses and other receivables	1,188,612	(1,105,291)
Increase in net pension obligation	2,444,724	4,306,446
Increase (decrease) in accounts payable	988,824	(2,347,269)
Increase (decrease) in accrued salaries, due to pension and accrued vacation and sick pay	(362,568)	154,711
Increase in customer deposits	595,438	613,429
Increase in net other postretirement benefits liability	6,430,311	6,706,231
Decrease in other liabilities	(2,545,036)	(2,097,868)
	<u>\$ 24,927,244</u>	<u>\$ 12,409,025</u>
Net cash provided by operating activities		
Schedule of non-cash capital and related financing activities		
Contributions of capital assets	\$ 103,953,175	\$ 30,410,129
Purchase of property, plant and equipment on account	\$ 34,899,482	\$ 26,781,219

See accompanying notes to financial statements.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**STATEMENTS OF FIDUCIARY NET POSITION**  
**PENSION TRUST FUND**  
**December 31, 2014 and 2013**

	<b>2014</b>	<b>2013 (Restated)</b>
Assets:		
Cash	\$ 1,950,862	\$ 1,145,702
Receivables:		
Investment income	81,832	73,525
Employee contributions receivable	64,534	54,644
Due from other fund	1,432,674	987,498
Investments:		
Money market	1,197,144	2,383,876
LAMP	13,364,160	13,327,265
Debt securities	77,137,785	72,940,474
Hedge funds	20,978,122	20,511,668
Equities	120,349,558	122,933,913
Total assets	236,556,671	234,358,565
Net position - restricted for pension benefits	\$ 236,556,671	\$ 234,358,565

See accompanying notes to financial statements.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**STATEMENTS OF CHANGES IN FIDUCIARY PLAN NET POSITION**  
**PENSION TRUST FUND**  
**For the years ended December 31, 2014 and 2013**

	<u>2014</u>	<u>2013</u>
Additions:		
Contributions:		
Employee contributions	\$ 1,535,723	\$ 1,465,774
Employer contributions	6,055,890	5,946,614
City annuity and other transfers in	2,001,222	1,065,165
Total contributions	<u>9,592,835</u>	<u>8,477,553</u>
Investment income:		
Interest income	172,220	165,614
Dividend income	1,392,860	2,049,463
Net appreciation	10,808,910	21,386,511
	<u>12,373,990</u>	<u>23,601,588</u>
Less: investment expense	<u>1,019,764</u>	<u>863,891</u>
Net investment income	<u>11,354,226</u>	<u>22,737,697</u>
Total additions	<u>20,947,061</u>	<u>31,215,250</u>
Deductions:		
Benefits	(13,973,343)	(13,243,522)
Employee refunds	(140,938)	(191,867)
Employee contributions to DROP	(4,634,674)	(4,125,351)
Total deductions	<u>(18,748,955)</u>	<u>(17,560,740)</u>
Change in net position	2,198,106	13,654,510
Net position restricted for pension benefits at beginning of year, as restated	<u>234,358,565</u>	<u>220,704,055</u>
Net position restricted for pension benefits at end of year	<u>\$ 236,556,671</u>	<u>\$ 234,358,565</u>

See accompanying notes to financial statements.

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**NOTES TO  
BASIC FINANCIAL STATEMENTS**

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## SEWERAGE AND WATER BOARD OF NEW ORLEANS

### NOTES TO FINANCIAL STATEMENTS

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(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 statement of net position, as "restricted assets," as they are restricted to the purposes as described above.

In 2013, the Board was composed of thirteen members, including the Mayor of the City, three City Council members, at least one an at-large member, selected by the City Council, two members of the Board of Liquidation and seven citizens appointed by the Mayor. The appointed members of the Board served staggered nine year terms. 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 the State statutes. The terms of office are staggered from one year to four years, as designated by State statutes.

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. The following is a summary of the more significant policies.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

### NOTES TO FINANCIAL STATEMENTS

(Continued)

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(1) Summary of Significant Accounting Policies (continued)

(A) Reporting Entity (continued)

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 Louisiana Revised Statutes, 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 Louisiana Revised Statutes 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 the 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. The Board is fiscally independent to operate under its bond covenant and the provisions of Louisiana Revised Statute provisions.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

### NOTES TO FINANCIAL STATEMENTS

(Continued)

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(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 are 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.

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

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.

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

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

### NOTES TO FINANCIAL STATEMENTS

(Continued)

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(1) Summary of Significant Accounting Policies (continued)

(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. All investment income including changes in the fair value of the investments is recognized in the Statements of Revenues, Expenses, and Changes in Net Position.

(E) Inventory of Supplies

Inventory is valued at the lower of cost or market. Cost is determined by 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.

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.

**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)

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 1st through 100th leave day to one day of pay for one day of leave for all days in excess of the 400th leave day. The total liability for unconverted sick leave as of December 31, 2014 and 2013 is approximately \$13,127,000 and \$13,764,000, respectively. The amount included in the statements of net position as of December 31, 2014 and 2013 is \$9,202,614 and \$9,806,913, respectively, which represents the annual leave and the converted sick leave since virtually all employees convert their sick leave to cash. Therefore, the Board books the compensated absences as a current 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	Beginning of Year Liability	Current Year Earned and Changes in Estimate	Payments	End of Year Liability
2014	\$ 9,806,913	\$ 2,403,257	\$ (3,007,556)	\$ 9,202,614
2013	\$ 9,803,436	\$ 3,262,185	\$ (3,258,708)	\$ 9,806,913

(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 estimated fair value at the date of donation.

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.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

### NOTES TO FINANCIAL STATEMENTS

(Continued)

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(1) Summary of Significant Accounting Policies (continued)

(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

In addition to assets, the statements of net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense) until then. The Board did not have any items recognized as deferred outflows of resources as of December 31, 2013, however as of December 31, 2014, the Board has one item that qualifies for reporting in this category. The deferred loss on refunding results from the difference in the 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.

In addition to liabilities, the statements of net position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time. The Board does not have any items recognized as deferred inflows of resources as of December 31, 2014 and 2013.

(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.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**NOTES TO FINANCIAL STATEMENTS**  
**(Continued)**

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(1) Summary of Significant Accounting Policies (continued)

(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 statement 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. It is the Board's policy to consider restricted net position to have been depleted before unrestricted-net position is applied.

(O) 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 component reports those net position with 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.

(P) Cash Flows

For purposes of the statement 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.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**NOTES TO FINANCIAL STATEMENTS**  
**(Continued)**

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(1) Summary of Significant Accounting Policies (continued)

(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. The current economic environment has increased the degree of uncertainty inherent in those estimates and assumptions.

(S) New Accounting Pronouncement

The Board adopted and implemented GASB Statement No. 67, *Financial Reporting for Pension Plans – an Amendment of GASB Statement No. 25* for 2014. The objective of this Statement is to improve financial reporting by state and local government pension plans. This Statement replaces the requirements of Statements No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*, and No. 50, *Pension Disclosures*

Highlights of the changes to these financial statements as a result of implementing GASB No. 67 are as follows:

- The Statements of Plan Net Position and Statements of Changes in Plan Net Position have now been retitled as Statement of Fiduciary Net Position and Statement of Changes in Fiduciary Net Position, respectively.
- New Required Supplementary Information includes a Schedule of New Pension Liability, Schedule of Changes in Net Pension Liability, Schedule of Employer Contributions, and Schedule of Investment Returns. Notes to RSI include significant methods and assumptions used in calculating the actuarially determined contributions.
- GASB No. 67 only affects reporting requirements and does not prescribe funding methods.
- The discount rate used to calculate the present value of future benefit payments for reporting purposes is based on the projected plan net position using actuarial assumptions about contributions, benefit payments, and long-term rate of return.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**NOTES TO FINANCIAL STATEMENTS**  
**(Continued)**

(1) Summary of Significant Accounting Policies (continued)

(S) New Accounting Pronouncement (continued)

The Board implemented this statement effective January 1, 2013. The impact to the pension trust fund is as follows:

Previously reported net position as of January 1, 2013	\$ 209,873,350
Adjustment as a result of the implementation of GASB Statement No. 67	10,830,705
Net position as of January 1, 2013, as restated	<u>\$ 220,704,055</u>
Previously reported change in net position for the year ended December 31, 2013	\$ 13,212,677
Adjustment as a result of the implementation of GASB Statement No. 67	441,833
Change in net position for the year ended December 31, 2013, as restated	<u>\$ 13,654,510</u>

(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, 2014, the Board's interest bearing deposits with banks consisted of cash and money market funds totaling \$210,961,268 and certificates of deposit of \$273,208. At December 31, 2013, the Board's interest bearing deposits with banks consisted of cash and money market funds totaling \$122,650,709 and certificates of deposit of \$273,070. The Board's cash bank balances and all certificates of deposit for 2014 and 2013 were covered by federal depository insurance or collateral held by custodial agents of the financial institutions in the name of the Board.

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.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS**

**(Continued)**

(2) Cash and Investments (continued)

The following are the components of the Board's cash and investments as of December 31 for the Enterprise Fund:

<u>2014</u>	<u>Unrestricted</u>	<u>Restricted</u>	<u>Total</u>
Enterprise Fund:			
Cash and money market funds	\$ 72,305,771	\$ 123,585,209	\$ 195,890,980
Certificates of deposit	273,208	-	273,208
	<u>72,578,979</u>	<u>123,585,209</u>	<u>196,164,188</u>
Investments	3,250,000	2,641,724	5,891,724
Total cash and investments at fair value	<u>\$ 75,828,979</u>	<u>\$ 126,226,933</u>	<u>\$ 202,055,912</u>
<u>2013</u>	<u>Unrestricted</u>	<u>Restricted</u>	<u>Total</u>
Enterprise Fund:			
Cash and money market funds	\$ 81,647,034	\$ 37,646,614	\$ 119,293,648
Certificates of deposit	273,070	-	273,070
	<u>81,920,104</u>	<u>37,646,614</u>	<u>119,566,718</u>
Investments	3,250,000	2,641,724	5,891,724
Total cash and investments at fair value	<u>\$ 85,170,104</u>	<u>\$ 40,288,338</u>	<u>\$ 125,458,442</u>

The composition and carrying value of investments is as follows:

	<u>2014</u>	<u>2013</u>
Enterprise Fund:		
LAMP	\$ 5,891,724	\$ 5,891,724
	<u>2014</u>	<u>2013</u>
Pension Trust Fund:		
Money market	\$ 1,197,144	\$ 2,383,876
LAMP	13,364,160	13,327,265
Debt Securities	77,137,785	72,940,474
Hedge funds	20,978,121	20,511,668
Equities	120,349,558	122,933,913
	<u>\$ 233,026,768</u>	<u>\$ 232,097,196</u>

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.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

### NOTES TO FINANCIAL STATEMENTS

(Continued)

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(2) Cash and Investments (continued)

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.

LAMP is a 2a7-like investment pool. The following facts are relevant for 2a7 like 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 52 as of December 31, 2014.
- Foreign currency risk: Not applicable to 2a7-like pools.

The investments in LAMP are stated at fair value based on quoted market rates. 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.

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 102.28% 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, 2014 and 2013. The value of securities lent at December 31, 2014 and 2013 was \$58,183,456 and \$52,255,686, respectively. The market value of the cash collateral at December 31, 2014 and 2013 was \$59,510,293 and \$53,692,957, respectively.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**NOTES TO FINANCIAL STATEMENTS**  
**(Continued)**

(2) Cash and Investments (continued)

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, 2014:

Rating	Corporate Bonds	Foreign Government Bonds	Government Bonds and U.S. Treasury Notes	Other	Total	Percentage of Total
AAA	\$ -	\$ 6,202,579	\$ 20,154,100	\$ 13,477,575	\$ 39,834,254	51.64%
AA+	276,276	2,002,462	-	46,037	2,324,775	3.01%
AA	72,506	-	-	169,007	241,513	0.31%
AA-	261,035	129,745	356,350	270,099	1,017,229	1.32%
A+	889,230	-	162,522	205,760	1,257,512	1.63%
A	3,882,801	59,244	-	240,185	4,182,230	5.42%
A-	2,561,780	111,425	684,657	1,077,177	4,435,039	5.75%
BBB+	3,498,462	851,613	-	61,969	4,412,044	5.72%
BBB	4,251,352	309,144	-	1,056,591	5,617,087	7.28%
BBB-	3,505,538	140,378	5,826	515,056	4,166,798	5.40%
BB+	656,710	92,346	-	35,683	784,739	1.02%
BB	864,997	15,130	-	222,909	1,103,036	1.43%
BB-	972,691	100,090	-	69,295	1,142,076	1.48%
B+	625,253	52,846	-	40,976	719,075	0.93%
B	674,772	47,342	-	71,639	793,753	1.03%
B-	470,612	64,262	-	23,812	558,686	0.72%
CCC+	451,518	38,763	-	34,677	524,958	0.68%
CCC	124,668	47,957	22,015	148,756	343,396	0.45%
CCC-	-	-	-	-	-	0.00%
CC	70,265	-	-	41,178	111,443	0.14%
C	-	-	-	16,706	16,706	0.02%
D	-	-	-	37,930	37,930	0.05%
Not Rated	71,708	74,508	-	3,367,290	3,513,506	4.55%
<b>Total</b>	<b>\$ 24,182,174</b>	<b>\$ 10,339,834</b>	<b>\$ 21,385,470</b>	<b>\$ 21,230,307</b>	<b>\$ 77,137,785</b>	<b>100%</b>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS**

(Continued)

(2) Cash and Investments (continued)

Following are the credit risk ratings of the pension trust fund's investments in debt securities as of December 31, 2013:

Rating	Corporate Bonds	Foreign Government Bonds	Government Bonds and U.S. Treasury Notes	Other	Total	Percentage of Total
AAA	\$ -	\$ 2,016,564	\$ 6,544,432	\$ 7,578,114	\$ 16,139,110	22.13%
AA+	376,754	6,673,148	28,235,518	-	35,285,420	48.38%
AA	27,365	186,663	-	-	214,028	0.29%
AA-	121,314	44,165	-	-	165,479	0.23%
A+	188,293	263,001	-	-	451,294	0.62%
A	1,162,795	-	-	-	1,162,795	1.59%
A-	3,179,116	17,082	-	-	3,196,198	4.38%
BBB+	2,640,648	221,782	-	-	2,862,430	3.92%
BBB	3,325,379	1,351,594	-	-	4,676,973	6.41%
BBB-	3,866,882	50,065	-	-	3,916,947	5.37%
BB+	803,854	99,569	-	-	903,423	1.24%
BB	780,366	56,752	-	-	837,118	1.15%
BB-	712,208	91,871	-	-	804,079	1.10%
B+	463,792	40,120	-	-	503,912	0.69%
B	445,530	-	-	-	445,530	0.61%
B-	313,821	156,040	-	-	469,861	0.64%
CCC+	405,635	3,987	-	-	409,622	0.56%
CCC	17,026	-	-	-	17,026	0.02%
CCC-	22,981	-	-	-	22,981	0.03%
Not Rated	297,863	158,385	-	-	456,248	0.63%
Total	<u>\$ 19,151,622</u>	<u>\$ 11,430,788</u>	<u>\$ 34,779,950</u>	<u>\$ 7,578,114</u>	<u>\$ 72,940,474</u>	<u>100%</u>

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**

**NOTES TO FINANCIAL STATEMENTS**

**(Continued)**

(2) Cash and Investments (continued)

As of December 31, 2014, the pension trust fund had the following investments in debt securities and maturities:

Investment Type	Duration					Total
	Less than 1 Year	1 - 5 Years	6 - 10 Years	Greater Than 10 Years	Duration Not Available	
Corporate Bonds	\$ 1,468,137	\$ 11,577,681	\$ 9,053,511	\$ 1,963,484	\$ 119,361	\$ 24,182,174
Foreign Government Bonds	89,521	1,834,613	3,550,670	4,865,030	-	10,339,834
Government Bonds and U.S. Treasury Notes	-	11,225,045	5,267,986	4,892,439	-	21,385,470
Other	4,590,668	11,542,936	4,541,676	507,283	47,744	21,230,307
<b>Total</b>	<b>\$ 6,148,326</b>	<b>\$ 36,180,275</b>	<b>\$ 22,413,843</b>	<b>\$ 12,228,236</b>	<b>\$ 167,105</b>	<b>\$ 77,137,785</b>

As of December 31, 2013, the pension trust fund had the following investments in debt securities and maturities:

Investment Type	Duration					Total
	Less than 1 Year	1 - 5 Years	6 - 10 Years	Greater Than 10 Years	Duration Not Available	
Corporate Bonds	\$ 938,373	\$ 8,855,540	\$ 6,107,850	\$ 2,655,538	\$ 594,321	\$ 19,151,622
Foreign Government Bonds	29,615	897,088	3,941,482	6,230,706	331,897	11,430,788
Government Bonds and U.S. Treasury Notes	629,103	17,031,754	10,673,838	2,297,929	4,147,326	34,779,950
Other	1,687,480	4,296,847	487,560	1,106,227	-	7,578,114
<b>Total</b>	<b>\$ 3,284,571</b>	<b>\$ 31,081,229</b>	<b>\$ 21,210,730</b>	<b>\$ 12,290,400</b>	<b>\$ 5,073,544</b>	<b>\$ 72,940,474</b>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS**

(Continued)

(3) Defined Benefit Pension Plan

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, 2014 and 2013 was \$31,378,001 and \$29,706,715, respectively; such amounts exclude overtime and standby payroll. Total payroll, including overtime and standby payroll, was \$48,630,751 and \$47,025,321 for the years ended December 31, 2014 and 2013, respectively. At December 31, the PTF membership consisted of:

	2014	2013
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	837	840
Current employees:		
Vested	523	531
Non-vested	393	340
	916	871
Total	1,753	1,711

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 ten years of service. Employees who retire at or after age sixty-five 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 thirty-six 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 sixty-two without thirty years of service with a reduction in benefits of three percent for each year of age below the age of sixty-two. 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.

The retirement allowance for retirees over age sixty-two 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.

(3) Defined Benefit Pension Plan (continued)

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS**

**(Continued)**

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.

A separate report on the pension trust fund is not issued.

The annual required contribution for the current year was determined as part of the December 31, 2014 actuarial valuation using the entry age normal cost method. Under the entry age normal cost method, the normal cost of the plan is designed to be a level percentage of payroll, calculated on an aggregate basis, spread over the entire working lifetime of the participants. The future working lifetime is determined from each participant's hypothetical entry age into the plan assuming the plan had always been in existence, to his expected retirement date. The actuarial accrued liability is the amount of total liability not covered by future entry age normal costs. This amount is composed of the actuarial value of benefits already funded (assets) and those not yet funded (unfunded actuarial liability). The amortization basis for amortizing the remaining unfunded actuarial liability is a level dollar amortization for an open ten year amortization period effective on each valuation date. At December 31, 2014 and 2013, the actuarially computed pension liability was unfunded by \$68,269,305 and \$62,379,320, respectively. The actuarial assumptions included (a) 7.0% investment rate of return (net of administrative expenses) and (b) projected salary increase of 5.0% per year. Both (a) and (b) included an inflation component of 2.5%. The actuarial value of assets was determined using a seven-year weighted market average.

The Board's net pension activity for the years ended December 31 was as follows:

	<u>2014</u>	<u>2013</u>
Annual required contribution	\$ 11,171,823	\$ 11,086,546
Interest on net pension obligation	1,031,629	778,672
Adjustments to annual required contribution	<u>(3,702,838)</u>	<u>(1,612,158)</u>
Annual pension cost	8,500,614	10,253,060
Employer contributions made	<u>(6,055,890)</u>	<u>(5,946,614)</u>
Increase in net pension liability	2,444,724	4,306,446
Net pension liability, beginning of year	<u>15,430,336</u>	<u>11,123,890</u>
Net pension obligation, end of year	\$ <u>17,875,060</u>	\$ <u>15,430,336</u>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS  
(Continued)**

(3) Defined Benefit Pension Plan (continued)

Trend information for Board and employee contributions is as follows:

	<b>Annual Pension Cost (APC)</b>	<b>Percentage of APC Contributed</b>	<b>Net Pension (Liability) Asset</b>
Fiscal year ending:			
December 31, 2014	\$ 8,500,614	71%	\$ (17,875,060)
December 31, 2013	\$ 10,253,060	58%	\$ (15,430,336)
December 31, 2012	\$ 8,523,216	59%	\$ (11,123,890)

The actuarially determined contribution requirement for the Board was 35.604% and 34.988% for 2014 and 2013. The contribution requirement for employees for the years ended December 31, 2014 and 2013 is 5.0%. The employee contribution rate increased to 6.0% effective January 1, 2015. 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:

	<b>2014</b>	<b>2013</b>
Employer and other transfers	\$ 8,057,112	\$ 7,011,779
Employee	1,535,723	1,465,774
<b>Total contributions</b>	<b>\$ 9,592,835</b>	<b>\$ 8,477,553</b>

Funded Status and Funding Progress

The funded status of the plan as of December 31, 2014 and 2013, respectively, is based on the most recent actuarial valuation as follows:

<u>Valuation Date</u>	<u>Actuarial Valuation of Assets</u>	<u>Actuarial Accrued Liability (AAL)</u>	<u>Unfunded Actuarial Accrued Liability (UAAL)</u>	<u>Funded Ratio</u>	<u>Covered Payroll</u>	<u>UAAL as a Percentage of Covered Payroll</u>
2014	\$223,689,647	\$291,958,952	\$ 68,269,305	76.62%	\$ 31,378,001	217.57%
2013	\$226,423,894	\$288,803,214	\$ 62,379,320	78.40%	\$ 29,706,715	209.98%

The projection of benefits for financial reporting purposes does not explicitly incorporate the potential effects of legal or contractual funding limitations.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS  
(Continued)**

(3) Defined Benefit Pension Plan (continued)

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, 2014 and 2013, 129 and 134 employees, respectively, participated in the plan. The amount of plan assets segregated for these individuals was \$13,364,160 and \$13,327,265 as of December 31, 2014 and 2013, respectively.

GASB Statement No. 67 Disclosures

Net Pension Liability of the Board

The components of the net pension liability of the Board calculated in accordance with GASB Statement No. 67 as of December 31, 2014 and 2013 are as follows:

	2014	2013
Total pension liability	\$ 296,244,723	\$ 290,919,481
PTF fiduciary net position	236,556,671	234,358,565
Net pension liability	\$ 59,688,052	\$ 56,560,916
Pension trust fund fiduciary net position as a percentage of the total pension liability	79.85%	80.56%

The PTF’s fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the total pension liability is equal to the long-term expected rate of return.

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation as of December 31, 2014 and 2013, using the following actuarial assumptions:

	2014	2013
Investment rate of return	7.00%	7.00%
Inflation	2.50%	2.50%
Salary increases including inflation	5.00%	5.00%

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**NOTES TO FINANCIAL STATEMENTS**  
**(Continued)**

(3) Defined Benefit Pension Plan (continued)

GASB Statement No. 67 Disclosures (continued)

Actuarial Assumptions (continued)

The long-term expected rate of return on pension plan investments was determined using a building-block 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, 2014 are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Real Rate of Return</u>
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 2014 and 2013 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 rate 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 long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS**

(Continued)

(3) Defined Benefit Pension Plan (continued)

GASB Statement No. 67 Disclosures (continued)

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 year ended December 31, 2014, the annual money-weighted rates of return on pension plan investments, net of pension plan investment expenses, was 4.87% for 2014.

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, 2014, 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.

	1% Decrease 6%	Current Discount Rate 7%	1% Increase 8%
Total pension liability	\$ 322,684,321	\$ 296,244,723	\$ 271,393,249
Fiduciary net position	236,556,671	236,556,671	236,556,671
Net pension liability	86,127,650	59,688,052	34,836,578

(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**  
**(Continued)**

(4) Property, Plant and Equipment (continued)

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

	2014			
	Beginning Balance	Additions	Deletions/ Reclassifications	Ending Balance
<b>Cost</b>				
Real estate rights, non depreciable	\$ 13,354,233	\$ 221,025	\$ -	\$ 13,575,258
Power and pumping stations - buildings	366,990,744	1,685,888	-	368,676,632
Power and pumping stations - machinery	300,051,510	2,352,463	-	302,403,973
Distribution systems	228,861,614	689,376	(1,727,912)	227,823,078
Sewerage collection	455,438,197	-	(2,579,838)	452,858,359
Canals and subsurface drainage	391,473,632	160,455,144	-	551,928,776
Treatment plants	194,886,446	-	-	194,886,446
Connections and meters	94,299,195	1,001	(161,573)	94,138,623
Power transmission	28,187,555	-	-	28,187,555
General plant	265,264,618	3,202,646	(195,659)	268,271,605
General buildings	7,586,547	-	(364,933)	7,221,614
Total property, plant, and equipment in service	2,346,394,291	168,607,543	(5,029,915)	2,509,971,919
Construction in progress	545,026,014	262,677,000	(168,607,544)	639,095,470
Total property, plant and equipment	2,891,420,305	431,284,543	(173,637,459)	3,149,067,389
<b>Accumulated Depreciation</b>				
Power and pumping stations - buildings	125,713,978	6,531,409	-	132,245,387
Power and pumping stations - machinery	153,632,670	7,558,819	-	161,191,489
Distribution systems	48,725,329	3,030,047	(1,727,912)	50,027,464
Sewerage collection	47,655,402	6,023,016	(2,579,838)	51,098,580
Canals and subsurface drainage	73,829,280	5,824,180	-	79,653,460
Treatment plants	60,713,747	3,897,729	-	64,611,476
Connections and meters	32,925,379	1,882,772	(161,573)	34,646,578
Power transmission	14,486,916	563,751	-	15,050,667
General plant	219,098,926	14,549,948	(195,659)	233,453,215
General buildings	6,800,927	653,798	(364,933)	7,089,792
Total accumulated depreciation	783,582,554	50,515,469	(5,029,915)	829,068,108
Net property, plant and equipment	\$ 2,107,837,751	\$ 380,769,074	\$ (168,607,544)	\$ 2,319,999,281

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS  
(Continued)**

(4) Property, Plant and Equipment (continued)

	2013			
	Beginning Balance	Additions	Deletions/ Reclassifications	Ending Balance
<b>Cost</b>				
Real estate rights, non depreciable	\$ 13,354,233	\$ -	\$ -	\$ 13,354,233
Power and pumping stations - buildings	366,990,744	-	-	366,990,744
Power and pumping stations - machinery	297,641,612	2,409,898	-	300,051,510
Distribution systems	222,536,901	7,540,656	(1,215,943)	228,861,614
Sewerage collection	455,694,460	1,609,364	(1,865,627)	455,438,197
Canals and subsurface drainage	386,968,482	4,505,150	-	391,473,632
Treatment plants	194,704,036	182,410	-	194,886,446
Connections and meters	94,136,184	-	163,011	94,299,195
Power transmission	28,187,555	-	-	28,187,555
General plant	265,334,126	-	(69,508)	265,264,618
General buildings	7,586,547	-	-	7,586,547
Total property, plant, and equipment in service	2,333,134,880	16,247,478	(2,988,067)	2,346,394,291
Construction in progress	378,319,397	182,953,094	(16,246,477)	545,026,014
Total property, plant and equipment	2,711,454,277	199,200,572	(19,234,544)	2,891,420,305
<b>Accumulated Depreciation</b>				
Power and pumping stations - buildings	121,817,090	3,896,888	-	125,713,978
Power and pumping stations - machinery	146,132,663	7,500,007	-	153,632,670
Distribution systems	46,897,413	3,043,859	(1,215,943)	48,725,329
Sewerage collection	43,463,701	6,057,328	(1,865,627)	47,655,402
Canals and subsurface drainage	70,058,917	3,770,363	-	73,829,280
Treatment plants	56,816,018	3,897,729	-	60,713,747
Connections and meters	30,876,384	1,885,984	163,011	32,925,379
Power transmission	13,923,165	563,751	-	14,486,916
General plant	206,439,538	12,728,896	(69,508)	219,098,926
General buildings	6,497,465	303,462	-	6,800,927
Total accumulated depreciation	742,922,354	43,648,267	(2,988,067)	783,582,554
Net property, plant and equipment	\$ 1,968,531,923	\$ 155,552,305	\$ (16,246,477)	\$ 2,107,837,751

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS  
(Continued)**

(4) Property, Plant and Equipment (continued)

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

	<b>2014</b>		<b>2013</b>	
Interest income	\$	684,259	\$	27,354
Interest expense		<u>(13,730,951)</u>		<u>(12,460,047)</u>
Net interest capitalized	\$	<u>(13,046,692)</u>	\$	<u>(12,432,693)</u>

(5) Customer Receivables

Customer receivables as of December 31 consist of the following:

		<b>Customer Accounts</b>	<b>Allowance for Doubtful Accounts</b>	<b>Net</b>
2014	Water	\$ 12,691,550	\$ 4,057,981	\$ 8,633,569
	Sewer	<u>11,060,721</u>	<u>3,343,009</u>	<u>7,717,712</u>
		\$ <u>23,752,271</u>	\$ <u>7,400,990</u>	\$ <u>16,351,281</u>
2013	Water	\$ 11,338,749	\$ 4,015,056	\$ 7,323,693
	Sewer	<u>9,720,593</u>	<u>3,100,015</u>	<u>6,620,578</u>
		\$ <u>21,059,342</u>	\$ <u>7,115,071</u>	\$ <u>13,944,271</u>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**NOTES TO FINANCIAL STATEMENTS**  
**(Continued)**

(6) Changes in Long-term Obligations

(A) Bonds Payable

Bonds payable consisted of the following as of December 31:

	<u>Principal Balances</u>	
	<u>2014</u>	<u>2013</u>
5.00% to 6.25% sewerage revenue bonds, series 1997 (initial average interest cost 5.36%), due in annual principal installments ranging from \$1,100,000 to \$2,425,000; final payment due June 1, 2017 (Refunded in 2014)	\$ -	\$ 8,935,000
4.125% to 6.125% water revenue bonds, series 1998 (initial average interest cost 4.82%), due in annual principal installments ranging from \$625,000 to \$1,220,000; final payment due December 1, 2018 (Refunded in 2014)	-	5,570,000
4.125% to 6.000% sewerage revenue bonds, series 1998 (initial average interest cost 4.82%), due in annual principal installments ranging from \$950,000 to \$1,910,000; final payment due June 1, 2018 (Refunded in 2014)	-	8,705,000
4.10% to 6.10% drainage system bonds, series 1998 (initial average interest cost 4.84%), due in annual principal installments ranging from \$370,000 to \$760,000; final payment due December 1, 2018 (Refunded in 2014)	-	3,445,000
5.25% to 6.50% sewerage revenue bonds, series 2000 (initial average interest cost 5.48%), due in annual principal installments ranging from \$820,000 to \$2,205,000; final payment due June 1, 2020 (Refunded in 2014)	-	13,040,000
5.00% to 7.00% sewer revenue bonds, series 2000B (initial average interest cost 5.43%), due in annual principal installments ranging from \$640,000 to \$1,660,000; final payment due June 1, 2020 (Refunded in 2014)	-	9,875,000
4.40% to 6.70% sewer revenue bonds, series 2001 (initial average interest cost 5.02%), due in annual principal installments ranging from \$1,100,000 to \$2,455,000; final payment due June 1, 2021 (Refunded in 2014)	-	16,685,000
3.00% to 5.00% sewerage service revenue bonds, series 2002 (initial average interest cost 4.36%; due in annual principal installments ranging from \$1,635,000 to \$4,520,000; final payment due June 1, 2022. (Refunded in 2014)	-	33,160,000

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**NOTES TO FINANCIAL STATEMENTS**  
**(Continued)**

(6) Changes in Long-term Obligations (continued)

(A) Bonds Payable (continued)

	<u>Principal Balances</u>	
	<u>2014</u>	<u>2013</u>
3.00% to 5.00% water revenue bonds, series 2002 (initial average interest cost 4.57%, due in annual principal installments ranging from \$945,000 to \$3,658,000. (Refunded in 2014)	\$ -	\$ 22,085,000
3.45% to 6.00% drainage system bonds, series 2002 (initial average interest cost 4.46%), due in annual principal installments ranging from \$510,000 to \$2,155,000. (Refunded in 2014)	-	12,760,000
2.20% to 5.00% sewerage service revenue bonds, series 2003 (initial average interest cost 3.94%); due in annual principal installments ranging from \$140,000 to \$395,000. (Refunded in 2014)	-	3,270,000
3.25% to 6.00% sewerage service revenue bonds, series 2004 (initial average interest cost 4.26%); due in annual principal installments ranging from \$945,000 to \$3,685,000. (Refunded in 2014)	-	21,400,000
3.40% to 6.25% sewerage service revenue refunding bonds, series 2009 (initial average interest cost 6.68%); due in annual principal installments ranging from \$680,000 to \$1,945,000; (Refunded in 2014)	-	20,495,000
2.95% LADHH Loan Revenue bonds, series 2010B; due in certain percentage of total drawdown.	-	3,865
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.	8,174,000	8,420,403
2.00% to 4.00% drainage system 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.	14,365,000	-
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.	158,990,000	-
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.	103,525,000	-
	<u>285,054,000</u>	<u>187,849,268</u>
Less: bond discount	-	(230,636)
Plus: bond premiums	<u>21,884,904</u>	<u>782,362</u>
Total	306,938,904	188,400,994
Less: current maturities	<u>(13,259,000)</u>	<u>(18,145,000)</u>
Bond payable, long-term	<u>\$ 293,679,904</u>	<u>\$ 170,255,994</u>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**NOTES TO FINANCIAL STATEMENTS**  
**(Continued)**

(6) Changes in Long-term Obligations (continued)

(A) Bonds Payable (continued)

The changes in long-term debt were as follows:

	<b>2014</b>	<b>2013</b>
Balance, beginning of year	\$ 187,849,268	\$ 205,775,141
Payments	(14,809,418)	(19,358,003)
Refunded	(165,730,000)	-
Proceeds	277,744,150	1,432,130
Balance, end of year	<u>\$ 285,054,000</u>	<u>\$ 187,849,268</u>

The annual requirements to amortize bonds payable as of December 31, 2014, are as follows:

<u>Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ 13,259,000	\$ 12,855,149	\$ 26,114,149
2016	14,827,000	12,490,114	27,317,114
2017	17,627,000	11,866,115	29,493,115
2018	16,761,000	11,064,118	27,825,118
2019	16,125,000	10,284,379	26,406,379
2020-2024	57,721,000	41,503,721	99,224,721
2025-2029	26,834,000	33,178,029	60,012,029
2030-2034	32,336,403	26,550,666	58,887,069
2035-2039	39,270,000	18,186,000	57,456,000
2040-2044	50,293,597	7,217,750	57,511,347
	<u>\$ 285,054,000</u>	<u>\$ 185,196,041</u>	<u>\$ 470,250,041</u>

The amount of revenue bonds and tax bonds payable as of December 31, 2014, are as follows:

<u>Year</u>	<u>Revenue Bonds</u>	<u>Tax Bonds</u>	<u>Total</u>
2015	\$ 11,644,000	\$ 1,615,000	\$ 13,259,000
2016	13,177,000	1,650,000	14,827,000
2017	15,937,000	1,690,000	17,627,000
2018	15,016,000	1,745,000	16,761,000
2019	14,310,000	1,815,000	16,125,000
2020-2024	51,871,000	5,850,000	57,721,000
2025-2029	26,834,000	-	26,834,000
2030-2034	32,336,403	-	32,336,403
2035-2039	39,270,000	-	39,270,000
2040-2044	50,293,597	-	50,293,597
	<u>\$ 270,689,000</u>	<u>\$ 14,365,000</u>	<u>\$ 285,054,000</u>

SEWERAGE AND WATER BOARD OF NEW ORLEANS

NOTES TO FINANCIAL STATEMENTS

(Continued)

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(6) Changes in 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 \$12,439,178 and \$9,135,509 at December 31, 2014 and 2013, respectively; the accumulated balance at December 31, 2014 and 2013 was \$12,439,178 and \$13,105,720 respectively. Monthly deposits to the debt service funds were temporarily suspended due to debt service payments being paid directly by the State of Louisiana through a Cooperative Endeavor Agreement and resumed as of June 2008. See note (6) (D) for additional information.
2. A debt service reserve is required for an amount equal to but not less than fifty percent of the amount required to be credited in said month to the debt service fund until there shall be accumulated in the debt service reserve account the largest amount required in any future calendar year to pay the principal and interest on outstanding bonds, except for the water and sewer bonds. 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. There is no debt service reserve required for the 1998 and 2002 drainage 9 mill tax 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 and \$15,120,930 at December 31, 2014 and 2013 respectively; the accumulated balance at December 31, 2014 and 2013 was \$18,407,782 and \$20,092,504, respectively.

The Board was in compliance with the requirements of its long-term debt agreements for the Water Department and Sewer Department for the years ended December 31, 2014 and 2013.

(B) Special Community Disaster Loan Payable

During January 2006, the Board entered into a long-term agreement with the Federal Emergency Management Agency under the Community Disaster Loan Act of 2005 as a result of the major disaster declaration of August 29, 2005 for Hurricane Katrina. The interest rate was the latest five-year Treasury rate at the time of the closing date of the loan, plus one percent. Simple interest accrued from the date of each disbursement. Payments of principal and interest were deferred for five years. In 2010, the Board was granted a partial forgiveness of this loan in the amount of \$36,790,000 of principal and \$4,894,621 of accrued interest. In addition, the Board was granted a 5 year extension on the payment date. In 2013, the Board was granted forgiveness of the remaining outstanding balance of \$25,166,747 of principal and \$4,894,621 of accrued interest.

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

### NOTES TO FINANCIAL STATEMENTS

(Continued)

(6) Changes in Long-term Obligations (continued)

(C) LADHH Bonds Series 2010

The Board, in conjunction with the City, entered into an agreement with the Louisiana Department of Health and Hospitals (the Department) whereby the Department has committed to loan the City up to \$3,400,000 to fund the installation of a new sodium hypochlorite storage and feed facility as well as the installation of a new sludge line into the Mississippi River (Project). The loan is to be advanced in incremental amounts as project costs are incurred. The indebtedness to the Department will be evidenced through the LADHH bonds payable and the Board will pay the bonds in 20 principal installments, payable annually beginning no later than 2 years after the Closing Date (February 1, 2010) or 1 year after the completion of the Project. Each annual installment due is based upon a pre-determined percentage of the ultimate amount of the borrowing that is not forgivable (see forgiveness provisions in the following paragraph). Principal payments of the amount repayable began February 1, 2011. Interest on the bonds is incurred at the rate of 2.95% and payment thereof began August 1, 2010 and is due semi-annually thereafter. The Project was completed in 2013, and the amount of advances totaled \$3,346,418. A portion of the LADHH bonds payable was funded with amounts provided under the American Recovery and Reinvestment Act (ARRA) and \$1,000,000 of the ARRA Loan was available to be forgiven. As of December 31, 2014, of the \$3,346,418 of advances, \$1,000,000 has been forgiven, \$800,000 was granted, and the remaining balance of \$1,546,418 was paid in full during 2014.

(D) Sewerage Service Subordinate 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. Annual principal payments are due beginning November 1, 2013 and continuing through November 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, 2014 and 2013, \$8,174,000 and \$8,420,403 is recorded as bonds payable, respectively.

(E) 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. The outstanding balance on defeased Sewerage bonds is \$19,695,000 as of December 31, 2014.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS**

(Continued)

(6) Changes in Long-term Obligations (continued)

(E) Series 2014 Bonds (continued)

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

(F) 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, 2014, debt service requirements relating to the bond are as follows:

<u>Years Ending December 31</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ 4,225,892	\$ 3,150,480	\$ 7,376,372
2016	4,421,973	2,860,705	7,282,678
2017	4,627,153	2,655,526	7,282,679
2018	4,841,852	2,440,826	7,282,678
2019	5,066,514	2,216,164	7,282,678
2020-2024	29,084,760	7,328,632	36,413,392
2025-2026	13,610,887	954,477	14,565,364
	<u>\$ 65,879,031</u>	<u>\$ 21,606,810</u>	<u>\$ 87,485,841</u>

SEWERAGE AND WATER BOARD OF NEW ORLEANS

NOTES TO FINANCIAL STATEMENTS  
(Continued)

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(6) Changes in Long-term Obligations (continued)

(G) 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 as of December 31, 2014 and 2013 is \$66,655,976 and \$29,391,071, respectively.

(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 were \$11,341,072 and \$12,967,655 at December 31, 2014 and 2013, 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 2014 and 2013 was \$3,203,030,659 and \$3,088,964,621, respectively. The combined tax rate dedicated for the Board for the years ended December 31, 2014 and 2013 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)**

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(9) Commitments

(A) Capital Improvements

At December 31, 2014, the Board's budget for its ten year capital improvements program totaled \$2,623,599,000 including \$1,071,251,000 for water, \$667,379,000 for sewerage and \$884,969,000 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, 2014, the Board has committed or appropriated \$22,249,657 in cash and cash equivalents for use in future capital projects and has \$93,402,475 of cash and cash equivalents restricted for future capital projects.

The capital improvements budget for 2014 is \$393,989,000 including \$293,177,000 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, 2014 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

(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 2014 and 2013 amounted to \$839,671 and \$324,326, respectively.

Worker's compensation expense provision for 2014 and 2013 amounted to \$697,183 and \$2,249,578, respectively.

The hospitalization self-insurance benefits are administered by Blue Cross of Louisiana. The Board's expense provision in excess of employee contributions for 2014 and 2013 was \$13,949,825 and \$14,238,353, 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):

Fiscal Year	Beginning of Year	Current Year Claims and Estimate Change	Claim Payments	End of Year
2014	\$ 12,914,401	\$ 14,989,093	\$ (15,089,301)	\$ 12,814,193
2013	\$ 13,211,184	\$ 16,140,604	\$ (16,437,387)	\$ 12,914,401

The composition of claims payable is as follows:

	2014	2013
<b>Short-term:</b>		
Workers' compensation	\$ 1,041,926	\$ 1,709,247
Health insurance	1,977,501	2,327,499
General liability	7,200,612	6,964,048
Total short-term	<u>10,220,039</u>	<u>11,000,794</u>
<b>Long-term:</b>		
Workers' compensation	<u>2,594,154</u>	<u>1,913,607</u>
Total long-term	<u>2,594,154</u>	<u>1,913,607</u>
<b>Total</b>	<u>\$ 12,814,193</u>	<u>\$ 12,914,401</u>

(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 2019.

The Board is also participating in Federal financial award programs which are subject to financial and compliance audits by various agencies. No disallowed costs have been identified. As part of Federal and other governmental agency funding, the Board is required to match a portion of funding received. The Board believes it has sufficient funds to meet its matching requirements.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS**

**(Continued)**

(9) Commitments (continued)

(D) Post-employment Healthcare Benefits

Plan Description – The Board’s postemployment 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 584 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 2014 and 2013, the Board’s portion of health care funding cost for retired employees totaled \$7,067,777 and \$6,643,309 respectively. Effective January 1, 2007, the Board applies this amount toward the Net OPEB Benefit Obligation as shown in the tables on the following page.

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:

	<b>2014</b>	<b>2013</b>
Normal cost	\$ 4,362,501	\$ 4,245,637
30-year UAL amortization amount	10,112,297	9,961,041
Annual required contribution (ARC)	\$ 14,474,798	\$ 14,206,678

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS  
(Continued)**

(9) Commitments (continued)

(D) Post-employment Healthcare Benefits (continued)

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

	<b>2014</b>		<b>2013</b>	
Beginning Net OPEB Obligation	\$	<u>54,778,434</u>	\$	<u>48,072,203</u>
Annual required contribution		14,474,798		14,206,678
Interest on Net OPEB Obligation		2,191,138		1,922,888
ARC Adjustment		<u>(3,167,848)</u>		<u>(2,780,026)</u>
OPEB Cost		13,498,088		13,349,540
Contribution		-		-
Current year retiree premium		<u>(7,067,777)</u>		<u>(6,643,309)</u>
Change in Net OPEB Obligation		<u>6,430,311</u>		<u>6,706,231</u>
Ending Net OPEB Obligation	\$	<u>61,208,745</u>	\$	<u>54,778,434</u>

The following table shows the Board's annual post-employment benefits (PEB) cost, percentage of the cost contributed, and the net unfunded post-employment benefits (PEB) liability:

<u>Fiscal Year Ended</u>	<u>Annual OPEB Cost</u>	<u>Percentage of Annual Cost Contributed</u>	<u>Net OPEB Liability (Asset)</u>
December 31, 2014	\$ 13,398,088	52.75%	\$ 61,208,745
December 31, 2013	\$ 13,349,540	46.80%	\$ 54,778,434
December 31, 2012	\$ 13,702,892	44.95%	\$ 48,072,203

Funded Status and Funding Progress - In 2014 and 2013, the Board made no contributions to its post-employment benefits plan. The plan is not funded, has no assets, and hence has a funded ratio of zero. As of January 1, 2014, the most recent actuarial valuation, the Actuarial Accrued Liability (AAL) was \$174,861,846 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)**

(9) Commitments (continued)

(D) Postemployment 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:

	<u>2014</u>		<u>2013</u>
Actuarial Accrued Liability (AAL)	\$ 174,861,486	\$	172,246,761
Actuarial Value of Plan Assets (AVP)	-		-
Unfunded Act. Accrued Liability (UAAL)	\$ 174,861,486	\$	172,246,761
Funded Ratio (AVP/AAL)	0.00%		0.00%
Covered Payroll (active plan members)	\$ 36,051,903	\$	35,435,285
UAAL as a percentage of covered payroll	485.03%		486.09%

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)

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(9) Commitments (continued)

(D) Postemployment 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 5 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

(Continued)

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(9) Commitments (continued)

(D) Postemployment 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.

(10) 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.

(11) 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.

(12) 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.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**NOTES TO FINANCIAL STATEMENTS**  
**(Continued)**

(12) Segment Information (continued)

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

	<u>Condensed Statements of Net Position</u>			
	<u>Water</u>		<u>Sewer</u>	
	<u>2014</u>	<u>2013</u>	<u>2014</u>	<u>2013</u>
	(amounts in thousands)			
<b>Assets:</b>				
Current unrestricted assets	\$ 44,717	\$ 36,938	\$ 66,911	\$ 35,258
Restricted assets	69,308	8,655	51,655	29,044
Other assets	10,725	10,129	18	18
Property, plant and equipment	396,814	367,104	911,008	864,435
Total assets	<u>521,564</u>	<u>422,826</u>	<u>1,029,592</u>	<u>928,755</u>
Deferred outflows of resources	32	-	3,931	-
Total assets and deferred outflows	<u>\$ 521,596</u>	<u>\$ 422,826</u>	<u>\$ 1,033,523</u>	<u>\$ 928,755</u>
<b>Liabilities:</b>				
Current	\$ 42,942	\$ 38,975	\$ 31,206	\$ 35,564
Current liabilities payable from restricted assets	3,903	3,036	21,041	16,305
Noncurrent liabilities	<u>156,915</u>	<u>67,546</u>	<u>248,709</u>	<u>210,219</u>
Total liabilities	<u>203,760</u>	<u>109,557</u>	<u>300,956</u>	<u>262,088</u>
<b>Net position:</b>				
Net investment in capital assets	\$ 285,590	\$ 339,297	\$ 730,163	\$ 720,049
Restricted	58,690	5,292	40,510	28,023
Unrestricted	<u>(26,444)</u>	<u>(31,320)</u>	<u>(38,106)</u>	<u>(81,405)</u>
Total net position	<u>317,836</u>	<u>313,269</u>	<u>732,567</u>	<u>666,667</u>
Total liabilities and net position	<u>\$ 521,596</u>	<u>\$ 422,826</u>	<u>\$ 1,033,523</u>	<u>\$ 928,755</u>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**NOTES TO FINANCIAL STATEMENTS**

**(Continued)**

(12) Segment Information (continued)

Condensed Statements of Revenues, Expenses and Changes in Net Position

	Water		Sewer	
	2014	2013	2014	2013
	(amounts in thousands)			
Service charges, pledged against bonds	\$ 73,999	\$ 67,974	\$ 87,799	\$ 79,623
Depreciation expense	(18,845)	(16,162)	(15,006)	(13,390)
Other operating expenses	(69,717)	(65,243)	(48,268)	(46,202)
Operating income (loss)	<u>(14,563)</u>	<u>(13,431)</u>	<u>24,525</u>	<u>20,031</u>
Nonoperating revenues (expenses):				
Investment earnings	350	84	257	177
Forgiveness of Community Disaster Loan	-	30,061	-	-
Bond issuance costs	(1,040)	-	(1,345)	-
Other	(128)	1,830	701	280
Total nonoperating revenues (expenses)	<u>(818)</u>	<u>31,975</u>	<u>(387)</u>	<u>457</u>
Capital contributions	<u>19,948</u>	<u>37,805</u>	<u>41,762</u>	<u>34,959</u>
Change in net position	4,567	56,349	65,900	55,447
Beginning net position	<u>313,269</u>	<u>256,920</u>	<u>666,667</u>	<u>611,220</u>
Ending net position	<u>\$ 317,836</u>	<u>\$ 313,269</u>	<u>\$ 732,567</u>	<u>\$ 666,667</u>

Condensed Statements of Cash Flows

	Water		Sewer	
	2014	2013	2014	2013
	(amounts in thousands)			
Net cash provided by (used in):				
Operating activities	\$ 7,235	\$ 6,159	\$ 30,938	\$ 33,614
Noncapital financing activities	255	3,990	701	694
Capital and related financing activities	43,978	2,497	(5,724)	(37,763)
Investing activities	647	61	(26)	68
Net increase (decrease)	<u>52,115</u>	<u>12,707</u>	<u>25,889</u>	<u>(3,387)</u>
Cash and cash equivalents:				
Beginning of year	<u>43,741</u>	<u>31,034</u>	<u>52,446</u>	<u>55,833</u>
End of year	<u>\$ 95,856</u>	<u>\$ 43,741</u>	<u>\$ 78,335</u>	<u>\$ 52,446</u>

## SEWERAGE AND WATER BOARD OF NEW ORLEANS

### NOTES TO FINANCIAL STATEMENTS

(Continued)

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(13) Natural Disaster

During the years ended, December 31, 2014 and 2013, the Board has cumulatively received approximately \$330.0 million and \$317.4 million, respectively, of cash reimbursements from the Federal Emergency Management Agency (FEMA). Included in accounts receivable as of December 31, 2014 and 2013 are \$34,255,390 and \$11,693,325, respectively, of reimbursements due from FEMA under the Disaster Grants program. Eligible FEMA grants totaling in excess of \$665.7 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, 2014 and 2013, the Board had an outstanding obligation under the agreement of \$17,895,041 and \$11,693,325 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.

(14) New Pronouncements

The GASB issued Statement No. 68, *Accounting and Financial Reporting for Pensions* in June 2012. This Statement replaces the requirements of Statement No. 27, *Accounting for Pensions by State and Local Governmental Employers*, as well as the requirements of Statement No. 50, *Pension Disclosures*. Statement No. 67, *Financial Reporting for Pension Plans*, revises existing standards of financial reporting for most pension plans. This Statement and Statement 67 establish a definition of a pension plan that reflects the primary activities associated with the pension arrangement--determining pensions, accumulating and managing assets dedicated for pensions, and paying benefits to plan members as they come due. This Statement is effective for fiscal years beginning after June 15, 2014.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**NOTES TO FINANCIAL STATEMENTS**  
**(Continued)**

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(14) New Pronouncements (continued)

The GASB issued Statement No. 71, *Pension Transition for Contributions Made Subsequent to the Measurement Date*, in November 2013. The objective of this Statement is to address an issue regarding application of the transition provisions of Statement No. 68, *Accounting and Financial Reporting for Pensions*. The issue relates to amounts associated with contributions, if any, made by a state or local government employer or nonemployer contributing entity to a defined benefit pension plan after the measurement date of the government's beginning net pension liability. The provisions of this Statement are required to be applied simultaneously with the provisions of Statement No. 68.

(15) Subsequent Event

Effective January 1, 2015, the required contribution for employees to the defined benefit plan increased from 5% to 6%.

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**REQUIRED SUPPLEMENTARY INFORMATION  
(GASB STATEMENTS NO. 25, NO. 67 AND NO. 45)**

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**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**Required Supplementary Information Under GASB Statement No. 25**  
**SCHEDULE OF FUNDING PROGRESS**  
**Last Ten Years**

Actuarial Valuation Date December 31	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	(Overfunded) Unfunded AAL	Funded Ratio	Covered Payroll (millions)	Unfunded AAL as a Percentage of payroll
2014	\$ 223,689,647	\$ 291,958,952	\$ 68,269,305	76.62%	31.38	217.57%
2013	226,423,894	288,803,214	62,379,320	78.40%	29.71	209.96%
2012	229,633,410	283,599,128	53,965,718	80.97%	29.07	185.64%
2011	229,137,699	285,509,317	56,371,618	80.26%	29.74	189.55%
2010	230,298,898	277,273,632	46,974,734	83.06%	29.67	158.32%
2009	228,999,660	269,506,028	40,506,368	84.97%	29.95	135.25%
2008	222,598,640	260,616,822	38,018,182	85.41%	29.47	129.01%
2007	223,583,589	245,202,189	21,618,600	91.18%	26.54	81.46%
2006	217,274,416	235,664,407	18,389,991	92.20%	25.93	70.92%
2005	209,829,340	225,544,886	15,715,546	93.03%	30.05	52.30%

**SCHEDULE OF EMPLOYER CONTRIBUTIONS**

Year Ended	Annual Required Contribution	Actual Contribution	Percentage Contribution
2014	\$ 11,171,823	\$ 6,055,890	54.21%
2013	11,086,546	5,946,614	53.64%
2012	9,127,733	6,114,997	66.99%
2011	9,815,493	5,436,700	55.39%
2010	8,385,788	5,146,081	61.37%
2009	7,591,507	5,247,031	69.12%
2008	7,146,647	4,915,512	68.78%
2007	4,598,587	3,885,124	84.49%
2006	4,073,502	3,343,713	82.08%
2005	4,702,354	3,716,381	79.03%

See accompanying notes to financial statements.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**Required Supplementary Information Under GASB Statement No. 67**  
**For the years ended December 31, 2014 and 2013**

**SCHEDULE OF NET PENSION LIABILITY**

Actuarial Valuation Date December 31	Total Pension Liability	Plan Fiduciary Net Position	Employer's Net Pension Liability	Plan Fiduciary Net Position as a % of Total Pension Liability	Covered Payroll (millions)	Unfunded AAL as a Percentage of payroll
2014	\$ 296,244,723	\$ 236,556,671	\$ (59,688,052)	79.85%	\$31,378,001	(0.00%)
2013	290,919,481	234,358,565	(56,560,916)	80.56%	29,706,715	(0.00%)

**SCHEDULE OF EMPLOYER CONTRIBUTIONS**

Year Ended	Actuarially Determined Contribution	Contributions in Relation to the Actuarial Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll Contribution	Contributions as a % of Covered Payroll
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%
2007	4,598,587	4,169,892	428,695	26,544,603	15.71%
2006	4,073,593	4,057,774	15,819	25,931,584	15.65%
2005	4,702,354	4,255,498	446,856	30,050,827	14.16%

**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, 2014. The following actuarial methods and assumptions were used to determine contribution rates reported in that schedule.

Actuarial cost method	Entry age normal
Amortization method	Level dollar
Remaining amortization period	10 years
Asset valuation method	7-year weighted market average
Inflation	2.5%
Salary increases	5.0%, average, including inflation
Investment rate of return	7.0%, net of pension plan investment expense, including inflation

**SCHEDULE OF INVESTMENT RETURNS**

Year Ended	Net Money-Weighted Rate of Return
2014	4.87%

(Continued)

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**Required Supplementary Information Under GASB Statement No. 67, Continued**  
**For the year ended December 31, 2014**

**SCHEDULE OF CHANGES IN NET PENSION LIABILITY**

<b>Total Pension Liability</b>	
Service cost	\$ 3,417,599
Interest on total pension liability	20,364,364
Effect of plan changes	-
Effect of economic/demographic gains or (losses)	(1,721,210)
Effect of assumption changes or inputs	-
Benefit payments	(16,735,511)
<b>Net change in total pension liability</b>	<u>5,325,242</u>
<b>Total pension liability, beginning</b>	<u>290,919,481</u>
<b>Total pension liability, ending (a)</b>	<u>\$ 296,244,723</u>
<b>Plan Fiduciary Net Position</b>	
Employer contributions	\$ 6,055,890
Employee contributions	1,535,723
Investment income net of investment expenses	11,342,004
Benefit payments	(16,735,511)
Administrative expenses	-
<b>Net change in plan fiduciary net position</b>	<u>2,198,106</u>
<b>Plan fiduciary net position, beginning</b>	<u>234,358,565</u>
<b>Plan fiduciary net position, ending (b)</b>	<u>\$ 236,556,671</u>
<b>Board's net pension liability, ending = (a) - (b)</b>	<u>\$ 59,688,052</u>
<b>Plan fiduciary net position as a % of total pension liability</b>	79.85%
<b>Covered payroll</b>	\$ 31,378,001
<b>Board's net pension liability as a % of covered payroll</b>	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**  
**Last Seven Years**

Actuarial Valuation Date December 31	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	(Overfunded) Unfunded AAL	Funded Ratio	Covered Payroll (millions)	Unfunded AAL as a Percentage of payroll
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%
2009	-	184,174,734	184,174,734	0.00%	33.88	543.56%
2008	-	177,956,339	177,956,339	0.00%	29.47	603.93%

**SCHEDULE OF EMPLOYER CONTRIBUTIONS**

Year Ended	Annual Required Contribution	Actual Contribution	Percentage Contribution
2014	\$ 14,474,798	\$ 7,067,777	48.83%
2013	14,206,678	6,643,309	46.76%
2012	14,430,043	6,070,360	42.07%
2011	14,659,445	6,057,637	41.32%
2010	14,759,470	5,728,065	38.81%
2009	15,046,112	5,487,971	36.47%
2008	14,304,620	5,673,616	39.66%

See accompanying notes to financial statements.

## SUPPLEMENTARY INFORMATION

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**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**SCHEDULE OF NET POSITION BY DEPARTMENT**  
**ENTERPRISE FUND**  
**As of December 31, 2014 and 2013**

	Water System		Sewerage System		Drainage System		Total	
	2014	2013	2014	2013	2014	2013	2014	2013
<b>ASSETS AND DEFERED OUTFLOWS OF RESOURCES</b>								
<b>Current assets</b>								
Unrestricted and undesignated								
Cash and cash equivalents	\$ 12,203,607	\$ 16,029,725	\$ 21,855,071	\$ 12,124,365	\$ 4,819,518	\$ 2,172,250	\$ 38,878,196	\$ 30,326,340
Accounts receivable:								
Customers, net of allowance	8,633,569	7,349,193	7,717,712	6,595,078	-	-	16,351,281	13,944,271
Taxes	-	-	-	-	8,130,947	8,119,202	8,130,947	8,119,202
Grants	17,754,744	2,395,938	19,543,694	2,168,243	6,947,716	7,277,712	44,246,154	11,841,893
Miscellaneous	673,310	842,377	351,490	606,803	1,377,426	2,068,368	2,402,226	3,517,548
Due from (to) other internal departments	(8,311,670)	(9,614,307)	11,063,924	569,471	(2,752,254)	9,044,836	-	-
Inventory of supplies	3,689,872	4,528,425	1,170,801	1,507,642	606,428	899,532	5,467,101	6,935,599
Prepaid expenses	481,251	505,681	326,669	351,099	94,797	119,227	902,717	976,007
Total unrestricted and undesignated	<u>35,124,683</u>	<u>22,037,032</u>	<u>62,029,361</u>	<u>23,922,701</u>	<u>19,224,578</u>	<u>29,701,127</u>	<u>116,378,622</u>	<u>75,660,860</u>
Designated cash, cash equivalents, and investments								
Cash and cash equivalents designated for capital projects	7,916,252	13,346,275	3,699,309	10,272,939	10,634,096	17,480,308	22,249,657	41,099,522
Other	1,675,760	1,554,688	1,182,316	1,062,128	1,141,195	1,021,009	3,999,271	3,637,825
Total designated cash, cash equivalents, and investments	<u>9,592,012</u>	<u>14,900,963</u>	<u>4,881,625</u>	<u>11,335,067</u>	<u>11,775,291</u>	<u>18,501,317</u>	<u>26,248,928</u>	<u>44,737,347</u>
Total current assets	<u>44,716,695</u>	<u>36,937,995</u>	<u>66,910,986</u>	<u>35,257,768</u>	<u>30,999,869</u>	<u>48,202,444</u>	<u>142,627,550</u>	<u>120,398,207</u>
<b>Noncurrent assets:</b>								
Restricted cash, cash equivalents, and investments								
Cash and cash equivalents restricted for capital projects	58,426,768	2,586,668	30,527,953	244,566	4,447,754	1,724,339	93,402,475	4,555,573
Health insurance reserve	659,167	775,834	659,166	775,833	659,166	775,833	1,977,499	2,327,500
Debt service reserve	10,222,099	5,291,590	20,467,806	28,022,900	157,054	90,775	30,846,959	33,405,265
Total restricted cash, cash equivalents, and investments	<u>69,308,034</u>	<u>8,654,092</u>	<u>51,654,925</u>	<u>29,043,299</u>	<u>5,263,974</u>	<u>2,590,947</u>	<u>126,226,933</u>	<u>40,288,338</u>
Property, plant and equipment	718,045,763	671,440,879	1,137,527,934	1,078,657,752	1,293,493,692	1,141,321,674	3,149,067,389	2,891,420,305
Less: accumulated depreciation	321,231,714	304,336,346	226,520,199	214,222,257	281,316,195	265,023,951	829,068,108	783,582,554
Property, plant, and equipment, net	<u>396,814,049</u>	<u>367,104,533</u>	<u>911,007,735</u>	<u>864,435,495</u>	<u>1,012,177,497</u>	<u>876,297,723</u>	<u>2,319,999,281</u>	<u>2,107,837,751</u>
Other assets								
Designated cash for customer deposits	10,701,855	10,106,417	-	-	-	-	10,701,855	10,106,417
Deposits	22,950	22,950	17,965	17,965	10,400	10,400	51,315	51,315
Total other assets	<u>10,724,805</u>	<u>10,129,367</u>	<u>17,965</u>	<u>17,965</u>	<u>10,400</u>	<u>10,400</u>	<u>10,753,170</u>	<u>10,157,732</u>
Total noncurrent assets	<u>476,846,888</u>	<u>385,887,992</u>	<u>962,680,625</u>	<u>893,496,759</u>	<u>1,017,451,871</u>	<u>878,899,070</u>	<u>2,456,979,384</u>	<u>2,158,283,821</u>
Total assets	<u>521,563,583</u>	<u>422,825,987</u>	<u>1,029,591,611</u>	<u>928,754,527</u>	<u>1,048,451,740</u>	<u>927,101,514</u>	<u>2,599,606,934</u>	<u>2,278,682,028</u>
<b>Deferred outflows of resources</b>								
Deferred loss on bond refunding	32,719	-	3,931,602	-	343,073	-	4,307,394	-
Total deferred outflows of resources	<u>32,719</u>	<u>-</u>	<u>3,931,602</u>	<u>-</u>	<u>343,073</u>	<u>-</u>	<u>4,307,394</u>	<u>-</u>
Total assets and deferred outflows of resources	<u>\$ 521,596,302</u>	<u>\$ 422,825,987</u>	<u>\$ 1,033,523,213</u>	<u>\$ 928,754,527</u>	<u>\$ 1,048,794,813</u>	<u>\$ 927,101,514</u>	<u>\$ 2,603,914,328</u>	<u>\$ 2,278,682,028</u>

(Continued)

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**SCHEDULE OF NET POSITION BY DEPARTMENT, CONTINUED**  
**ENTERPRISE FUND**  
**As of December 31, 2014 and 2013**

	Water System		Sewerage System		Drainage System		Total	
	2014	2013	2014	2013	2014	2013	2014	2013
<b>LIABILITIES AND NET POSITION</b>								
Current liabilities (payable from current assets):								
Accounts payable	\$ 15,545,210	\$ 16,232,169	\$ 14,323,199	\$ 16,725,760	\$ 6,054,635	\$ 4,664,132	\$ 35,923,044	\$ 37,622,061
Due to City of New Orleans	160,172	160,122	-	-	-	-	160,172	160,122
Disaster Reimbursement Revolving Loan	8,342,170	2,395,208	2,569,423	2,020,405	6,983,448	7,277,712	17,895,041	11,693,325
Retainers and estimates payable	2,991,694	2,071,365	4,502,890	4,119,264	451,691	357,652	7,946,275	6,548,281
Due to other fund	143,538	136,173	67,305	63,847	82,827	78,619	293,670	278,639
Accrued salaries	959,086	867,240	545,575	459,426	472,508	423,803	1,977,169	1,750,469
Accrued vacation and sick pay	4,347,626	4,574,360	2,807,187	2,997,773	2,047,801	2,234,780	9,202,614	9,806,913
Claims payable	3,851,003	3,982,894	2,770,772	3,004,311	3,598,264	4,013,589	10,220,039	11,000,794
Debt Service Assistance Fund loan payable	371,338	354,869	3,618,064	3,457,630	236,490	226,003	4,225,892	4,038,502
Advances from federal government	6,157,549	8,182,773	-	2,704,959	-	-	6,157,549	10,887,732
Other liabilities	72,630	17,606	1,553	10,502	-	-	74,209	28,108
Total Current liabilities (payable from current assets):	42,942,016	38,974,779	31,205,968	35,563,877	19,927,690	19,276,290	94,075,674	93,814,946
Current liabilities (payable from restricted assets):								
Accounts payable	3,268,988	-	7,537,116	-	-	-	10,806,104	-
Accrued interest	554,449	248,393	1,815,365	1,850,958	111,864	144,230	2,481,678	2,243,581
Bonds payable	-	2,545,000	11,644,000	14,110,000	1,615,000	1,490,000	13,259,000	18,145,000
Retainers and estimates payable	79,408	242,885	44,274	344,081	-	4,027	123,682	590,993
Total current liabilities (payable from restricted assets):	3,902,845	3,036,278	21,040,755	16,305,039	1,726,864	1,638,257	26,670,464	20,979,574
Total current liabilities	46,844,861	42,011,057	52,246,723	51,868,916	21,654,554	20,914,547	120,746,138	114,794,520
Long-term liabilities:								
Claims payable	864,718	637,869	864,718	637,869	864,718	637,869	2,594,154	1,913,607
Net pension obligation	5,863,196	5,048,288	5,993,142	5,178,234	6,018,722	5,203,814	17,875,060	15,430,336
Other postretirement benefits liability	22,844,081	20,700,644	19,865,733	17,722,296	18,498,931	16,355,494	61,208,745	54,778,434
Bonds payable, net of current maturities	111,224,183	25,264,041	169,200,679	130,276,953	13,255,042	14,715,000	293,679,904	170,255,994
Southeast Louisiana Project liability	-	-	-	-	66,655,976	29,391,071	66,655,976	29,391,071
Debt Service Assistance Fund loan payable, net of current maturities	5,417,603	5,788,945	52,785,300	56,403,364	3,450,236	3,686,726	61,653,139	65,879,035
Customer deposits	10,701,855	10,106,417	-	-	-	-	10,701,855	10,106,417
Total long-term liabilities	156,915,636	67,546,204	248,709,572	210,218,716	108,743,625	69,989,974	514,368,833	347,754,894
Total liabilities	203,760,497	109,557,261	300,956,295	262,087,632	130,398,179	90,904,521	635,114,971	462,549,414
Net position:								
Net investment in capital assets	285,589,866	339,295,492	730,163,056	720,048,542	997,307,455	860,092,723	2,013,060,377	1,919,436,757
Restricted for debt service	10,222,099	5,291,590	20,467,806	28,022,900	157,054	90,775	30,846,959	33,405,265
Restricted for capital improvements	48,467,852	-	20,042,024	-	-	-	68,509,876	-
Unrestricted	(26,444,012)	(31,318,356)	(38,105,968)	(81,404,547)	(79,067,875)	(23,986,505)	(143,617,855)	(136,709,408)
Total net position	317,835,805	313,268,726	732,566,918	666,666,895	918,396,634	836,196,993	1,968,799,357	1,816,132,614
Total net position and liabilities	\$ 521,596,302	\$ 422,825,987	\$ 1,033,523,213	\$ 928,754,527	\$ 1,048,794,813	\$ 927,101,514	\$ 2,603,914,328	\$ 2,278,682,028

See accompanying independent auditors' report.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**SCHEDULE OF REVENUES, EXPENSES AND CHANGES IN NET POSITION BY DEPARTMENT**  
**ENTERPRISE FUND**  
For the years ended December 31, 2014 and 2013

	Water System		Sewerage System		Drainage System		Total	
	2014	2013	2014	2013	2014	2013	2014	2013
<b>Operating revenues:</b>								
Sales of water and delinquent fees	\$ 70,818,255	\$ 64,398,609	\$ -	\$ -	\$ -	\$ -	\$ 70,818,255	\$ 64,398,609
Sewerage service charges	-	-	86,553,262	78,535,785	-	-	86,553,262	78,535,785
Plumbing inspection and license fees	339,176	321,518	339,176	321,518	-	-	678,352	643,036
Other revenues	2,841,110	3,253,430	906,120	766,030	1,277,250	1,099,908	5,024,480	5,119,368
<b>Total operating revenues</b>	<b>73,998,541</b>	<b>67,973,557</b>	<b>87,798,558</b>	<b>79,623,333</b>	<b>1,277,250</b>	<b>1,099,908</b>	<b>163,074,349</b>	<b>148,696,798</b>
<b>Operating Expenses:</b>								
Power and pumping	3,091,250	4,066,208	2,895,785	2,950,685	7,240,354	5,555,727	13,227,389	12,572,620
Treatment	8,259,326	7,827,508	11,157,841	10,315,541	109,833	-	19,527,000	18,143,049
Transmission and distribution	16,813,125	13,607,397	9,629,370	7,795,739	744,111	1,920,764	27,186,606	23,323,900
Customer accounts	1,753,536	1,690,798	1,753,536	1,690,795	7,288	44,341	3,514,360	3,425,934
Customer service	1,794,814	1,732,100	1,815,829	1,732,097	107,282	-	3,717,925	3,464,197
Administration and general	6,434,753	6,067,245	5,555,818	5,558,302	4,985,859	5,708,398	16,976,430	17,333,945
Payroll related	13,801,025	13,890,259	10,104,700	11,513,703	7,774,088	9,524,860	31,679,813	34,928,822
Maintenance of general plant	15,474,580	14,497,091	3,845,547	4,009,348	8,858,466	9,140,688	28,178,593	27,647,127
Depreciation	18,844,752	16,162,085	15,005,720	13,389,705	16,307,397	14,096,477	50,157,869	43,648,267
Provision for doubtful accounts	1,151,767	1,072,550	944,199	824,362	(155,184)	155,184	1,940,782	2,052,096
Provision for (benefit of) claims	1,143,350	791,721	565,222	(188,081)	736,306	1,197,474	2,444,878	1,801,114
<b>Total operating expenses</b>	<b>88,562,278</b>	<b>81,404,962</b>	<b>63,273,567</b>	<b>59,592,196</b>	<b>46,715,800</b>	<b>47,343,913</b>	<b>198,551,645</b>	<b>188,341,071</b>
<b>Operating income (loss)</b>	<b>(14,563,737)</b>	<b>(13,431,405)</b>	<b>24,524,991</b>	<b>20,031,137</b>	<b>(45,438,550)</b>	<b>(46,244,005)</b>	<b>(35,477,296)</b>	<b>(39,644,273)</b>
<b>Non-operating revenues (expenses):</b>								
Three-mill tax	-	-	-	-	13,481,526	13,175,711	13,481,526	13,175,711
Six-mill tax	-	-	-	-	13,626,539	13,317,505	13,626,539	13,317,505
Nine-mill tax	-	-	-	-	20,425,388	19,962,114	20,425,388	19,962,114
Two-mill tax	-	-	-	-	1,193	-	1,193	-
Other taxes	254,577	219,877	317,506	274,229	-	-	572,083	494,106
Operating and maintenance grants	(381,876)	1,981,568	383,354	5,367	24	67,557	1,502	2,054,492
Interest income	350,018	83,842	257,413	177,173	203,832	92,615	811,263	353,630
Bond issuance costs	(1,040,131)	-	(1,345,380)	-	(263,828)	-	(2,649,339)	-
Interest expense	-	(371,382)	-	33	-	-	-	(371,349)
Forgiveness of Community Disaster Loan (Note 6)	-	30,061,368	-	-	-	-	-	30,061,368
<b>Total non-operating revenues</b>	<b>(817,412)</b>	<b>31,975,273</b>	<b>(387,107)</b>	<b>456,802</b>	<b>47,474,674</b>	<b>46,615,502</b>	<b>46,270,155</b>	<b>79,047,577</b>
<b>Income before capital contributions</b>	<b>(15,381,149)</b>	<b>18,543,868</b>	<b>24,137,884</b>	<b>20,487,939</b>	<b>2,036,124</b>	<b>371,497</b>	<b>10,792,859</b>	<b>39,403,304</b>
<b>Capital contributions</b>	<b>19,948,228</b>	<b>37,804,508</b>	<b>41,762,139</b>	<b>34,959,001</b>	<b>80,163,517</b>	<b>41,554,127</b>	<b>141,873,884</b>	<b>114,317,636</b>
<b>Change in net position</b>	<b>4,567,079</b>	<b>56,348,376</b>	<b>65,900,023</b>	<b>55,446,940</b>	<b>82,199,641</b>	<b>41,925,624</b>	<b>152,666,743</b>	<b>153,720,940</b>
<b>Net position, beginning of year</b>	<b>313,268,726</b>	<b>256,920,350</b>	<b>666,666,895</b>	<b>611,219,955</b>	<b>836,196,993</b>	<b>794,271,369</b>	<b>1,816,132,614</b>	<b>1,662,411,674</b>
<b>Net position, end of year</b>	<b>\$ 317,835,805</b>	<b>\$ 313,268,726</b>	<b>\$ 732,566,918</b>	<b>\$ 666,666,895</b>	<b>\$ 918,396,634</b>	<b>\$ 836,196,993</b>	<b>\$ 1,968,799,357</b>	<b>\$ 1,816,132,614</b>

See accompanying independent auditors' report.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**SCHEDULE OF PROPERTY, PLANT AND EQUIPMENT BY DEPARTMENT**  
**As of December 31, 2014 and 2013**

	2014			Total
	Water	Sewer	Drainage	
Real estate rights, non depreciable	2,898,138	1,929,243	8,747,877	\$ 13,575,258
Power and pumping stations - buildings	63,585,216	44,931,883	260,159,533	368,676,632
Power and pumping stations - machinery	134,739,687	44,850,479	122,812,807	302,402,973
Distribution systems	227,823,078	-	-	227,823,078
Sewerage collection	-	452,858,359	-	452,858,359
Canals and subsurface drainage	-	-	551,928,776	551,928,776
Treatment plants	-	194,886,446	-	194,886,446
Connections and meters	65,157,524	28,981,099	-	94,138,623
Power transmission	9,297,848	5,736,005	13,153,702	28,187,555
General plant	120,583,870	82,873,870	64,814,865	268,272,605
General buildings	2,160,615	1,093,325	3,967,674	7,221,614
<b>Total property, plant and equipment in service</b>	<b>626,245,976</b>	<b>858,140,709</b>	<b>1,025,585,234</b>	<b>2,509,971,919</b>
Construction in progress	91,799,787	279,387,225	267,908,458	639,095,470
<b>Total property, plant and equipment</b>	<b>718,045,763</b>	<b>1,137,527,934</b>	<b>1,293,493,692</b>	<b>3,149,067,389</b>
Accumulated depreciation	321,231,714	226,520,199	281,316,195	829,068,108
<b>Net property, plant and equipment</b>	<b>\$ 396,814,049</b>	<b>\$ 911,007,735</b>	<b>\$ 1,012,177,497</b>	<b>\$ 2,319,999,281</b>

	2013			Total
	Water	Sewer	Drainage	
Real estate rights, non depreciable	\$ 2,898,138	\$ 1,929,243	\$ 8,526,852	\$ 13,354,233
Power and pumping stations - buildings	63,131,396	44,931,883	258,927,465	366,990,744
Power and pumping stations - machinery	134,560,447	44,793,404	120,697,659	300,051,510
Distribution systems	228,861,614	-	-	228,861,614
Sewerage collection	-	455,438,197	-	455,438,197
Canals and subsurface drainage	-	-	391,473,632	391,473,632
Treatment plants	-	194,886,446	-	194,886,446
Connections and meters	65,268,811	29,030,384	-	94,299,195
Power transmission	9,297,848	5,736,005	13,153,702	28,187,555
General plant	119,411,456	82,043,071	63,810,091	265,264,618
General buildings	2,525,548	1,093,325	3,967,674	7,586,547
<b>Total property, plant and equipment in service</b>	<b>625,955,258</b>	<b>859,881,958</b>	<b>860,557,075</b>	<b>2,346,394,291</b>
Construction in progress	45,485,621	218,775,794	280,764,599	545,026,014
<b>Total property, plant and equipment</b>	<b>671,440,879</b>	<b>1,078,657,752</b>	<b>1,141,321,674</b>	<b>2,891,420,305</b>
Accumulated depreciation	304,336,346	214,222,257	265,023,951	783,582,554
<b>Net property, plant and equipment</b>	<b>\$ 367,104,533</b>	<b>\$ 864,435,495</b>	<b>\$ 876,297,723</b>	<b>\$ 2,107,837,751</b>

See accompanying independent auditors' report.

SEWERAGE AND WATER BOARD OF NEW ORLEANS  
SCHEDULE OF BONDS PAYABLE  
For the year ended December 31, 2014

	Annual Interest Rates	Interest Payment Dates	Issue Date	Final Maturity Date	Outstanding as of 12/31/2013	New Debt in 2014	Payments in 2014	Bond Refunded in 2014	Outstanding as of 12/31/2014
Drainage System Bonds, 1998 (9-Mills)	4.84%	(6/1;12/1)	12/01/98	12/01/18	\$ 3,445,000	\$ -	\$ -	\$ 3,445,000	\$ -
Drainage System Bonds, 2002 (9-Mills)	4.46%	(6/1;12/1)	10/01/02	12/01/22	12,760,000	-	-	12,760,000	-
Drainage System Bonds, 2014 (9-Mills)	4.53%	(6/1;12/1)	12/01/14	06/01/22	-	14,900,000	535,000	-	14,365,000
					<u>16,205,000</u>	<u>14,900,000</u>	<u>535,000</u>	<u>16,205,000</u>	<u>14,365,000</u>
Sewer Revenue Bonds, 1997	5.36%	(6/1;12/1)	06/01/97	06/01/17	8,935,000	-	2,050,000	6,885,000	-
Sewer Revenue Bonds, 1998	4.82%	(6/1;12/1)	12/01/98	06/01/18	8,705,000	-	1,585,000	7,120,000	-
Sewer Revenue Bonds, 2000	5.48%	(6/1;12/1)	05/01/00	06/01/20	13,040,000	-	1,555,000	11,485,000	-
Sewer Revenue Bonds, 2000-B	5.43%	(6/1;12/1)	11/01/00	06/01/20	9,875,000	-	1,185,000	8,690,000	-
Sewer Revenue Bonds, 2001	5.02%	(6/1;12/1)	12/01/01	06/01/21	16,685,000	-	1,760,000	14,925,000	-
Sewer Revenue Bonds, 2002	4.36%	(6/1;12/1)	12/01/02	06/01/22	33,160,000	-	2,945,000	30,215,000	-
Sewer Revenue Bonds, 2003	3.94%	(6/1;12/1)	12/03/03	06/01/23	3,270,000	-	270,000	3,000,000	-
Sewer Revenue Bonds, 2004	4.26%	(6/1;12/1)	12/01/04	06/01/24	21,400,000	-	1,545,000	19,855,000	-
Sewer Revenue Bonds, 2009	6.68%	(6/1;12/1)	12/01/09	06/01/29	20,495,000	-	800,000	19,695,000	-
Sewer Revenue Bonds, 2011	0.95%	(1/1-12/1)	12/01/11	12/01/32	8,420,403	168,597	415,000	-	8,174,000
Sewer Revenue Bonds, 2014	4.87%	(6/1;12/1)	12/01/14	06/01/44	-	158,990,000	-	-	158,990,000
					<u>143,985,403</u>	<u>159,158,597</u>	<u>14,110,000</u>	<u>121,870,000</u>	<u>167,164,000</u>
Water Revenue Bonds, 1998	4.82%	(6/1;12/1)	12/01/98	12/01/18	5,570,000	-	-	5,570,000	-
Water Revenue Bonds, 2002	4.57%	(6/1;12/1)	10/01/02	12/01/22	22,085,000	-	-	22,085,000	-
LADHH Loan Revenue Bonds, 2010B	2.95%	(2/1)	02/11/10	02/01/30	3,865	160,553	164,418	-	-
Water Revenue Bonds, 2014	5.00%	(6/1;12/1)	02/11/10	02/01/30	-	103,525,000	-	-	103,525,000
					<u>27,658,865</u>	<u>103,685,553</u>	<u>164,418</u>	<u>27,655,000</u>	<u>103,525,000</u>
TOTAL					<u>\$ 187,849,268</u>	<u>\$ 277,744,150</u>	<u>\$ 14,809,418</u>	<u>\$ 165,730,000</u>	<u>\$ 285,054,000</u>

See accompanying independent auditors' report

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**SCHEDULE OF CASH RECEIPTS AND DISBURSEMENTS**  
**DEBT SERVICE AND DEBT SERVICE RESERVE**  
**REQUIRED BY BOND RESOLUTION**  
**For the year ended December 31, 2014**

	Debt Service Account					Debt Service Reserve Accounts		
	Water Revenue Bonds	Sewer Revenue Bonds	Drainage Revenue Bonds	LADHH Loan Revenue Bonds	Total	Water Revenue Bonds	Sewer Revenue Bonds	Total
Cash and investments at beginning of year	\$ 1,267,565	\$ 11,858,776	\$ 90,775	\$ 95,645	\$ 13,312,761	\$ 3,928,380	\$ 16,164,124	\$ 20,092,504
Cash receipts:								
Bond proceeds and accrued interest	110,711,984	172,035,747	15,473,649	-	298,221,380	-	-	-
Transfers from operating cash and debt service reserve	1,083,147	32,353,954	2,622,345	69,434	36,128,880	3,771,620	(5,456,342)	(1,684,722)
Excess debt service reserve fund applied to BANS 2006 Maturity	40,076	79,029	-	68	119,173	-	-	-
<b>Total cash and investments</b>	<u>113,102,772</u>	<u>216,327,506</u>	<u>18,186,769</u>	<u>165,147</u>	<u>347,782,194</u>	<u>7,700,000</u>	<u>10,707,782</u>	<u>18,407,782</u>
Cash disbursements:								
Principal and interest payments, cost of issuance and transfers	110,580,673	206,567,482	18,029,715	165,147	335,343,017	-	-	-
<b>Total cash disbursements</b>	<u>110,580,673</u>	<u>206,567,482</u>	<u>18,029,715</u>	<u>165,147</u>	<u>335,343,017</u>	<u>-</u>	<u>-</u>	<u>-</u>
<b>Cash and investments at end of year</b>	<u>\$ 2,522,099</u>	<u>\$ 9,760,024</u>	<u>\$ 157,054</u>	<u>\$ -</u>	<u>\$ 12,439,177</u>	<u>\$ 7,700,000</u>	<u>\$ 10,707,782</u>	<u>\$ 18,407,782</u>

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, 2014

	Beginning of Year	Current Year Claims and Estimate Change	Payments	End of Year
<b>WATER</b>				
Short-term:				
Workers' compensation	\$ 569,751	\$ (91,982)	\$ 130,458	\$ 347,311
Health insurance	775,831	6,385,688	6,502,354	659,165
General liability	2,637,312	590,802	383,586	2,844,528
Total short-term	<u>3,982,894</u>	<u>6,884,508</u>	<u>7,016,398</u>	<u>3,851,004</u>
Long-term:				
Workers' compensation	637,869	226,848	-	864,717
Total long-term	<u>637,869</u>	<u>226,848</u>	<u>-</u>	<u>864,717</u>
Total	<u>\$ 4,620,763</u>	<u>\$ 7,111,356</u>	<u>\$ 7,016,398</u>	<u>\$ 4,715,721</u>
<b>SEWERAGE</b>				
Short-term:				
Workers' compensation	\$ 569,749	\$ 259,708	\$ 482,148	\$ 347,309
Health insurance	775,832	4,198,493	4,315,159	659,166
General liability	1,658,730	324,087	218,519	1,764,298
Total short-term	<u>3,004,311</u>	<u>4,782,288</u>	<u>5,015,826</u>	<u>2,770,773</u>
Long-term:				
Workers' compensation	637,869	226,848	-	864,717
Total long-term	<u>637,869</u>	<u>226,848</u>	<u>-</u>	<u>864,717</u>
Total	<u>\$ 3,642,180</u>	<u>\$ 5,009,136</u>	<u>\$ 5,015,826</u>	<u>\$ 3,635,490</u>
<b>DRAINAGE</b>				
Short-term:				
Workers' compensation	\$ 569,750	\$ (151,090)	\$ 71,350	\$ 347,310
Health insurance	775,832	2,868,061	2,984,727	659,166
General liability	2,668,007	(75,218)	1,000	2,591,789
Total short-term	<u>4,013,589</u>	<u>2,641,753</u>	<u>3,057,077</u>	<u>3,598,265</u>
Long-term:				
Workers' compensation	637,869	226,848	-	864,717
Total long-term	<u>637,869</u>	<u>226,848</u>	<u>-</u>	<u>864,717</u>
Total	<u>\$ 4,651,458</u>	<u>\$ 2,868,601</u>	<u>\$ 3,057,077</u>	<u>\$ 4,462,982</u>
<b>TOTAL</b>				
Short-term:				
Workers' compensation	\$ 1,709,250	\$ 16,636	\$ 683,956	\$ 1,041,930
Health insurance	2,327,495	13,452,242	13,802,240	1,977,497
General liability	6,964,049	839,671	603,105	7,200,615
Total short-term	<u>11,000,794</u>	<u>14,308,549</u>	<u>15,089,301</u>	<u>10,220,042</u>
Long-term:				
Workers' compensation	1,913,607	680,544	-	2,594,151
Total long-term	<u>1,913,607</u>	<u>680,544</u>	<u>-</u>	<u>2,594,151</u>
Total	<u>\$ 12,914,401</u>	<u>\$ 14,989,093</u>	<u>\$ 15,089,301</u>	<u>\$ 12,814,193</u>

See accompanying independent auditors' report.

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

**For the year ended December 31, 2014**

**Cedric S. Grant, Executive Director (5 months of service)**

<u>Purpose</u>	<u>Amount</u>
Salary	\$ 82,788
Benefits-hospitalization	2,007
Benefits-life insurance	93
Benefits-retirement	16,787
Car allowance	240
Reimbursements	1,165
Conference travel	1,109

**Robert K. Miller, Interim Executive Director (6 months of service)**

<u>Purpose</u>	<u>Amount</u>
Salary	\$ 78,058
Benefits-insurance	5,276
Benefits-retirement	14,529
Car allowance	372
Reimbursements	135
Registration fees	125

**Marcia A. St. Martin, Executive Director (1 month of service)**

<u>Purpose</u>	<u>Amount</u>
Salary	\$ 27,739
Benefits-insurance	1,301
Car allowance	243

See accompanying independent auditors' report.

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The board's 25 cycle Power Generation System, located at the Carrollton Water Plant, provides power for portions of the Water Purification Plant, two large vertical sewer units at the main central business district sewage pumping station and powers approximately 60 percent of the system's drainage pumps. The benefit of the board's own power generation is that the feeders to the multiple pump stations are underground and during storms when commercial power lines are down the system is still up and running. Shown is a component of the power plant which is the Turbine 4. Funding from FEMA for repairs to the power house has included the boiler, repairs to Turbine 4, A and B steam pumps, replacement of high lift steam turbine equipment and replacement of the boiler pre-heater. Under FEMA public assistance, the board has a FEMA 404 Hazard Mitigation Grant for the Retrofit and Hardening of the power houses equipment and building. The combined amount of funds received is \$232 million.



After the disastrous flood of May, 1995, the United States Congress authorized the design and construction of the Southeast Louisiana Flood Control Project (SELA) in 1996 in partnership with the U.S. Army Corps of Engineers. SELA consists of canal and pumping station projects that are designed and constructed to reduce flooding. New Orleans could not exist without a modern and strong drainage system. Twenty projects were funded in Orleans Parish, eleven projects are complete and nine projects are under construction. The project shown is Claiborne Avenue Phase II. It will provide increased drainage for the Carrollton area. It includes drainage canal improvements along South Claiborne Avenue between Leonidas and Lowerline Streets. The \$27.8 million project is the construction of 3,500 feet of covered drainage canal. The Corps continues to work closely with its partners at the Louisiana Coastal Protection and Restoration Authority and the Sewerage and Water Board of New Orleans.

**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**  
**Last Ten Fiscal Years**  
**(Unaudited - accrual basis of accounting)**

	Year									
	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
<b>Business-type activities</b>										
Net investment in capital assets	\$ 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	\$ 1,265,078,240	\$ 1,191,197,682	\$ 1,092,139,700
Restricted for debt service	30,846,959	33,405,265	35,186,883	33,137,542	32,774,880	30,040,670	32,075,521	27,986,164	26,803,911	21,768,747
Restricted for capital improvements	68,509,876	-	-	-	-	-	-	-	-	-
Unrestricted	(143,617,855)	(136,709,408)	(135,165,032)	(97,925,662)	(82,369,095)	(81,717,627)	(89,154,640)	(7,414,567)	3,614,224	41,752,104
<b>Total business-type activities net position</b>	<u>\$ 1,968,799,357</u>	<u>\$ 1,816,132,614</u>	<u>\$ 1,662,411,674</u>	<u>\$ 1,537,979,418</u>	<u>\$ 1,431,726,417</u>	<u>\$ 1,315,453,506</u>	<u>\$ 1,249,006,043</u>	<u>\$ 1,285,649,837</u>	<u>\$ 1,221,615,817</u>	<u>\$ 1,155,660,551</u>

Source: Audited Comprehensive Annual Financial Reports

**SEWERAGE AND WATER BOARD OF NEW ORLEANS  
CHANGES IN NET POSITION BY COMPONENT**

**Last Ten Fiscal Years**

**(Unaudited - accrual basis of accounting)**

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
<b>Operating revenues:</b>										
Sales of water and delinquent fees	\$ 70,818,255	\$ 64,398,609	\$ 60,256,304	\$ 59,890,312	\$ 55,079,772	\$ 50,677,054	\$ 43,995,732	\$ 37,795,522	\$ 33,799,760	\$ 38,727,266
Sewerage service charges	86,553,262	78,535,785	71,407,835	70,358,076	69,534,779	66,102,946	61,877,246	68,304,547	62,657,636	57,329,963
Plumbing inspection and license fees	678,352	643,036	687,806	758,072	746,426	484,448	590,604	542,340	590,242	175,260
Other revenue	5,024,480	5,119,368	4,626,276	8,581,123	4,702,753	3,814,564	2,487,983	2,927,070	3,290,683	3,171,703
<b>Total operating revenues</b>	<b>163,074,349</b>	<b>148,696,798</b>	<b>136,978,221</b>	<b>139,587,583</b>	<b>130,063,730</b>	<b>121,079,012</b>	<b>108,951,565</b>	<b>109,569,479</b>	<b>100,338,321</b>	<b>99,404,192</b>
<b>Operating Expenses:</b>										
Power and pumping	13,227,389	12,572,620	11,951,746	11,787,614	12,606,851	12,950,788	14,178,641	13,041,954	11,576,640	11,818,104
Treatment	19,527,000	18,143,049	18,906,540	18,081,523	19,029,752	19,910,557	18,243,782	16,280,975	13,518,870	13,736,515
Transmission and distribution	27,186,606	23,323,900	26,019,713	27,216,035	15,915,361	21,466,523	18,994,209	19,832,226	13,845,793	18,432,531
Customer accounts	3,514,360	3,425,934	3,334,652	3,369,643	3,314,887	3,044,936	2,719,594	2,290,092	1,910,612	2,413,631
Customer service	3,717,925	3,464,197	3,332,300	3,320,100	3,386,338	3,417,239	3,323,696	2,670,145	2,265,250	2,645,604
Administration and general	16,976,430	17,333,945	15,879,736	16,054,154	16,060,032	13,504,125	15,173,190	14,899,028	13,714,644	12,130,773
Payroll related	31,679,813	34,928,822	33,980,859	34,770,439	33,616,025	35,085,953	31,549,622	28,259,815	17,914,694	19,780,248
Maintenance of general plant	28,178,593	27,647,127	24,480,560	25,185,237	30,723,060	24,969,819	33,613,093	27,151,645	23,552,712	28,351,895
Depreciation	50,157,869	43,648,267	39,011,955	34,772,279	35,216,611	34,692,628	31,546,017	25,377,733	28,703,469	39,187,670
Provision for doubtful accounts	1,940,782	2,052,096	1,676,511	867,460	4,855,325	889,811	(12,225,825)	12,613,283	22,355,906	6,582,465
Provision for claims	2,444,878	1,801,114	130,704	(4,680,454)	3,186,714	58,860	587,465	(2,448,965)	2,658,657	7,289,990
<b>Total operating expenses</b>	<b>198,551,645</b>	<b>188,341,071</b>	<b>178,705,276</b>	<b>170,744,030</b>	<b>177,910,956</b>	<b>169,991,239</b>	<b>157,703,484</b>	<b>159,967,931</b>	<b>152,017,247</b>	<b>162,369,426</b>
<b>Operating loss</b>	<b>(35,477,296)</b>	<b>(39,644,273)</b>	<b>(41,727,055)</b>	<b>(31,156,447)</b>	<b>(47,847,226)</b>	<b>(48,912,227)</b>	<b>(48,751,919)</b>	<b>(50,398,452)</b>	<b>(51,678,926)</b>	<b>(62,965,234)</b>
<b>Non-operating revenues (expenses):</b>										
Two-mill tax	1,193	-	-	4,870	1,045	-	-	120	3,699	1,407
Three-mill tax	13,481,526	13,175,711	12,497,723	11,129,376	10,378,060	10,302,545	11,294,822	10,381,155	9,682,028	12,990,040
Six-mill tax	13,626,539	13,317,505	12,630,977	11,242,927	10,498,580	10,410,524	11,406,361	10,513,559	9,803,052	13,152,643
Nine-mill tax	20,425,388	19,962,114	18,933,290	16,855,081	15,672,791	15,485,030	17,001,253	15,773,070	13,686,249	19,707,787
Other taxes	572,083	494,106	278,394	316,079	333,795	371,006	515,735	443,122	634,321	631,818
Operating and maintenance grants	1,502	2,054,492	7,624,526	11,479,664	9,367,940	19,373,185	(3,973)	1,777,188	35,013,143	9,338,528
Interest income	811,263	353,630	401,387	426,870	274,323	885,723	3,545,564	5,826,769	4,115,003	3,291,489
Hurricane gain (loss)	-	-	-	-	-	-	-	205,995	2,303,397	(55,909,262)
Bond issuance costs	(2,649,339)	-	-	-	-	-	-	-	-	-
Interest expense	-	(371,349)	(737,893)	(736,878)	(1,687,603)	(1,766,553)	(1,720,030)	(2,443,612)	(252,435)	(2,992)
Forgiveness of Community Disaster Loan	-	30,061,368	-	-	41,438,410	-	-	-	-	-
<b>Total non-operating revenues (expenses)</b>	<b>46,270,155</b>	<b>79,047,577</b>	<b>51,628,404</b>	<b>50,717,989</b>	<b>86,277,341</b>	<b>55,061,460</b>	<b>42,039,732</b>	<b>42,477,366</b>	<b>74,988,457</b>	<b>3,201,458</b>
<b>Income (loss) before capital contributions</b>	<b>10,792,859</b>	<b>39,403,304</b>	<b>9,901,349</b>	<b>19,561,542</b>	<b>38,430,115</b>	<b>6,149,233</b>	<b>(6,712,187)</b>	<b>(7,921,086)</b>	<b>23,309,531</b>	<b>(59,763,776)</b>
<b>Capital contributions</b>	<b>141,873,884</b>	<b>114,317,636</b>	<b>114,530,907</b>	<b>115,575,107</b>	<b>48,959,148</b>	<b>60,298,230</b>	<b>(29,931,607)</b>	<b>71,955,106</b>	<b>42,645,735</b>	<b>35,351,561</b>
<b>Change in net position</b>	<b>152,666,743</b>	<b>153,720,940</b>	<b>124,432,256</b>	<b>135,136,649</b>	<b>87,389,263</b>	<b>66,447,463</b>	<b>(36,643,794)</b>	<b>64,034,020</b>	<b>65,955,266</b>	<b>(24,412,215)</b>
<b>Net position:</b>										
Beginning of year	1,816,132,614	1,662,411,674	1,537,979,418	1,402,842,769	1,315,453,506	1,249,006,043	1,285,649,837	1,221,615,817	1,155,660,551	1,189,072,766
<b>End of year</b>	<b>\$ 1,968,799,357</b>	<b>\$ 1,816,132,614</b>	<b>\$ 1,662,411,674</b>	<b>\$ 1,537,979,418</b>	<b>\$ 1,402,842,769</b>	<b>\$ 1,315,453,506</b>	<b>\$ 1,249,006,043</b>	<b>\$ 1,285,649,837</b>	<b>\$ 1,221,615,817</b>	<b>\$ 1,155,660,551</b>

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Source: Audited Comprehensive Annual Financial Reports - Information available for nine years

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

Revenues	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Charges for service	\$ 96,232,489	\$ 97,047,638	\$ 106,642,409	\$ 106,463,582	\$ 117,264,448	\$ 125,360,977	\$ 131,006,460	\$ 132,351,945	\$ 143,577,430	\$ 158,049,869
Dedicated taxes	45,850,470	33,171,329	36,567,784	39,702,436	36,198,099	36,549,431	39,227,384	44,061,990	46,455,330	47,533,453
Two-mill tax	1,407	3,699	120	-	-	1,045	4,870	-	-	1,193
Interest on investments	3,291,489	4,115,003	5,826,769	3,545,564	885,723	274,323	426,870	401,387	353,630	811,263
Other taxes and revenue	13,142,049	38,938,147	5,147,380	2,999,745	23,558,755	55,842,898	20,376,866	12,529,196	37,729,334	5,598,065
	<u>\$ 158,517,904</u>	<u>\$ 173,275,816</u>	<u>\$ 154,284,462</u>	<u>\$ 152,711,327</u>	<u>\$ 177,907,025</u>	<u>\$ 218,028,674</u>	<u>\$ 191,042,450</u>	<u>\$ 189,344,518</u>	<u>\$ 228,115,724</u>	<u>\$ 211,993,843</u>
Expenses	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Personnel services	\$ 58,322,684	\$ 49,118,747	\$ 61,421,931	\$ 68,605,280	\$ 74,540,678	\$ 72,725,464	\$ 73,834,142	\$ 74,358,288	\$ 75,998,997	\$ 75,201,085
Services and utilities	45,606,037	43,170,196	52,966,504	56,428,567	50,787,395	47,125,394	42,417,785	40,621,806	44,686,711	46,739,864
Materials and supplies	5,020,134	5,649,827	9,879,426	12,603,961	8,880,950	12,535,610	23,532,818	22,906,012	20,153,886	22,067,167
Depreciation and amortization	39,548,115	29,063,914	25,535,752	31,704,036	34,833,545	35,381,030	34,850,026	39,011,955	43,648,267	50,157,869
Provision for doubtful accounts	6,582,465	22,355,906	12,613,283	(12,225,825)	889,811	4,855,325	867,460	1,676,511	2,052,096	1,940,782
Provision for claims	7,289,990	2,658,657	(2,448,965)	587,465	58,860	3,186,714	(4,680,454)	130,704	1,801,114	2,444,878
Hurricane Loss	55,909,262	(2,303,397)	(205,995)	-	-	-	-	-	-	-
Bond issuance costs	-	-	-	-	-	-	-	-	-	2,649,339
Interest	2,993	252,435	2,443,612	1,720,030	1,766,553	1,687,603	736,878	737,893	371,349	-
	<u>\$ 218,281,680</u>	<u>\$ 149,966,285</u>	<u>\$ 162,205,548</u>	<u>\$ 159,423,514</u>	<u>\$ 171,757,792</u>	<u>\$ 177,497,140</u>	<u>\$ 171,558,655</u>	<u>\$ 179,443,169</u>	<u>\$ 188,712,420</u>	<u>\$ 201,200,984</u>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**ASSESSED AND ESTIMATED ACTUAL VALUE OF TAXABLE PROPERTY**  
**Last Ten Fiscal Years**  
**(Unaudited - amounts in thousands)**

Fiscal Year	Net Assessed Value		Total Net Assessed Value	Total Estimated Actual Value (1)	Ratio of Total Net Assessed to Total Estimated Actual Value
	Real Estate	Personal Property			
2005	1,492,750	620,797	2,113,547	16,774,183	12.6%
2006	1,103,604	565,287	1,668,891	13,245,167	12.6%
2007	1,362,097	483,200	1,845,297	14,645,214	12.6%
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 (2)	15.8%

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  
Last Ten Fiscal Years  
(Unaudited)**

**Number of Mills  
(Per \$1,000 of assessed value)**

<u>Fiscal Year</u>	<u>City of New Orleans</u>	<u>Orleans Levee Board</u>	<u>Orleans Levee District Eastbank</u>	<u>Algiers Levee District</u>	<u>Sewerage &amp; Water Board of New Orleans</u>	<u>Orleans Parish School Board</u>	<u>Audubon Park &amp; Zoo</u>	<u>Total</u>
2005	78.59	12.76	0*	0***	22.59**	52.80	4.55	171.29
2006	89.89	12.76	0*	0***	22.59**	58.55	4.55	188.34
2007	82.39	12.76	0*	0***	22.59**	52.90	4.55	175.19
2008	61.34	0*	9.65	9.28	16.43**	38.47	3.31	129.20
2009	61.34	0*	10.95	12.76	16.03**	38.47	3.31	130.10
2010	64.31	0*	11.67	12.76	16.43**	44.12	3.31	140.93
2011	72.05	0*	11.67	12.76	16.43**	44.12	3.31	148.67
2012	72.05	0*	11.67	12.76	16.43**	43.60	3.31	148.15
2013	72.05	0*	11.67	12.36	16.43**	44.81	3.31	136.60
2014	72.05	0*	11.67	12.76	16.43**	45.31	3.31	147.58

Source: City of New Orleans

\*Special millage beginning in 2008 and no longer City-wide.

\*\*3 mills adopted in 1967 expires in 2017

\*\*6 mills adopted in 1978 expires in 2027

\*\*9 mills adopted in 1982 expires in 2032

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**TEN LARGEST TAXPAYERS**  
**December 31, 2014 and Nine Years Ago**  
**(Unaudited)**

<u>Name of Taxpayer</u>	<u>Type of Business</u>	<u>2014 Assessed Value</u>	<u>Percentage of Total Assessed Value</u>
Entergy	Electric and gas utilities	\$ 101,230,460	3.04%
Capital One Bank	Financial institution	57,187,770	1.72%
Marriott Hotel	Hospitality	41,292,140	1.24%
BellSouth	Telephone utilities	37,998,320	1.14%
Harrah's	Hospitality and gaming	29,003,530	0.87%
J P Morgan Chase Bank	Financial institution	20,119,210	0.60%
International Rivercenter	Real Estate	18,886,030	0.57%
Royal Sonesta Hotel	Hospitality	18,445,430	0.55%
Sheraton Hotel	Hospitality	18,041,330	0.54%
Folger Coffee	Coffee Roasting Plant	17,982,060	0.54%
		<u>\$ 360,186,280</u>	<u>10.81%</u>

<u>Name of Taxpayer</u>	<u>Type of Business</u>	<u>2005 Assessed Value</u>	<u>Percentage of Total Assessed Value</u>
Entergy Service	Utility	\$ 75,766,000	3.58%
BellSouth Telecommunications	Telephone Utility	57,952,000	2.74%
Hibernia National Bank	Bank	44,500,000	2.10%
Bank One	Bank	26,701,000	1.26%
Whitney National Bank	Bank	21,671,000	1.03%
Harrah's Entertainment	Casino	21,043,000	1.00%
Tenet	Health & Hospital	19,197,000	0.91%
International River Center	Shopping Mall; Hotel	19,058,000	0.90%
Marriott Hotel Properties	Hotel	14,219,000	0.67%
C S & M Associates	Commerical Real Estate	11,247,000	0.53%
		<u>\$ 311,354,000</u>	<u>14.72%</u>

Source: City of New Orleans

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

Fiscal Year	Total Levied	Collected Through December 31, 2014		Collections in Subsequent Years Amount	Total Collections to Date	
		Amount	Percent		Amount	Percentage of Levy
Real Estate Taxes:						
2005	\$ 267,327	\$ 248,381	92.91%	\$ 15,720	\$ 264,101	98.79%
2006	219,991	194,337	88.34%	23,686	218,023	99.11%
2007	250,462	225,743	90.13%	21,675	247,418	98.78%
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%	8,642	371,668	97.07%
2014	393,304	375,815	95.55%	-	375,815	95.55%
Personal Property Taxes:						
2005	* \$ 106,354	\$ 99,120	93.20%	\$ 1,689	\$ 100,809	94.79%
2006	99,477	87,878	88.34%	7,279	95,157	95.66%
2007	82,046	74,258	90.51%	3,709	77,967	95.03%
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%

\* 2005 and prior personal property receivables were considered prescribed and no longer legally enforceable during 2012.

Source: City of New Orleans

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**WATER AND SEWER RATES**  
**Last Nine Fiscal Years**  
**(Unaudited)**

Year	Water					Sewer	
	Monthly Base Rate	Rate per 1,000 Gallons				Monthly Base Rate	Rate per 1,000 Gallons
		First 3,000 Gallons	Next 17,000 Gallons	Next 980,000 Gallons	All Gallons Over 1,000,000		
2006	\$ 3.50	\$ 2.31	\$ 2.31	\$ 2.07	\$ 1.59	\$ 11.60	\$ 4.04
2007	\$ 3.50	\$ 1.94	\$ 3.31	\$ 2.60	\$ 2.19	\$ 11.60	\$ 4.04
2008	\$ 3.50	\$ 2.35	\$ 4.01	\$ 3.15	\$ 2.65	\$ 11.60	\$ 4.04
2009	\$ 3.70	\$ 2.47	\$ 4.21	\$ 3.31	\$ 2.78	\$ 11.60	\$ 4.04
2010	\$ 3.90	\$ 2.59	\$ 4.42	\$ 3.48	\$ 2.92	\$ 11.60	\$ 4.04
2011	\$ 4.05	\$ 2.69	\$ 4.60	\$ 3.62	\$ 3.04	\$ 11.60	\$ 4.04
2012	\$ 4.05	\$ 2.69	\$ 4.60	\$ 3.62	\$ 3.04	\$ 11.60	\$ 4.04
2013	\$ 4.91	\$ 2.96	\$ 5.06	\$ 3.98	\$ 3.34	\$ 14.04	\$ 4.44
2014	\$ 4.91	\$ 3.26	\$ 5.57	\$ 4.38	\$ 3.67	\$ 14.04	\$ 4.88

Note: Rates are based on 5/8" meter, which is the standard household meter size.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**RATIOS OF OUTSTANDING DEBT BY TYPE**  
**Last Nine Fiscal Years**  
**(Unaudited)**

Fiscal Year	Personal Income (1) (in thousands)	Population (2)	Revenue Bonds	Special Tax Bonds	LDHH Bonds	Special Community Disaster Loan Payable	Debt Service Assistance Fund Loan	Capital Leases Payable	Total Debt	Percentage of Personal Income	Debt per Capita
2006	\$ 12,739,309	208,548	\$ 258,047,868	\$ 24,905,000	\$ -	\$ 46,011,566	\$ 40,494,073	\$ 2,760,672	\$ 372,219,179	3.42%	\$ 1,785
2007	\$ 14,831,565	288,113	\$ 246,907,968	\$ 23,835,000	\$ -	\$ 61,956,747	\$ 64,655,122	\$ 104,445	\$ 397,459,282	3.73%	\$ 1,380
2008	\$ 15,802,534	336,644	\$ 235,216,902	\$ 22,710,000	\$ -	\$ 61,956,747	\$ 77,460,393	\$ -	\$ 397,344,042	3.98%	\$ 1,180
2009	\$ 15,260,613	354,850	\$ 221,958,520	\$ 21,525,000	\$ -	\$ 61,956,747	\$ 77,460,393	\$ -	\$ 382,900,660	3.99%	\$ 1,079
2010	\$ 15,260,613	347,907	\$ 208,422,155	\$ 20,290,000	\$ 632,842	\$ 25,166,747	\$ 77,460,393	\$ -	\$ 331,972,137	4.60%	\$ 954
2011	\$ 15,260,613	360,740	\$ 194,330,103	\$ 18,990,000	\$ 1,503,834	\$ 25,166,747	\$ 77,465,247	\$ -	\$ 317,455,931	4.81%	\$ 880
2012	\$ 15,346,678	369,250	\$ 186,832,906	\$ 17,630,000	\$ 1,998,636	\$ 25,166,747	\$ 73,776,967	\$ -	\$ 305,405,256	5.03%	\$ 827
2013	\$ 15,888,893	378,715	\$ 172,192,129	\$ 16,205,000	\$ 3,865	\$ -	\$ 69,917,529	\$ -	\$ 258,318,523	6.15%	\$ 682
2014	\$ 16,437,492 (3)	378,715 (4)	\$ 292,068,863	\$ 14,870,042	\$ 3,865	\$ -	\$ 65,879,031	\$ -	\$ 372,821,801	4.41%	\$ 984

(1) Source: Bureau of Economic Analysis.

(2) Source: [www.census.gov/popest](http://www.census.gov/popest).

(3) Most recent available is as of March 2014.

(4) Most recent population estimate is as of 2013.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS  
COMPUTATION OF DIRECT AND OVERLAPPING DEBT  
December 31, 2014  
(Unaudited)**

	<u>Net Outstanding Debt</u>	<u>Percentage Overlapping</u>	<u>Overlapping Debt</u>
Direct debt:			
Sewerage and Water Board, net of debt service funds (tax bonds only)	<u>\$ 14,365,000</u>	<u>100%</u>	<u>\$ 14,365,000</u>
Overlapping debt:			
City of New Orleans	524,591,267	100%	524,591,267
Audubon Park Commission	23,005,000	100%	23,005,000
Orleans Parish School Board (1)	<u>153,803,877</u>	<u>100%</u>	<u>153,803,877</u>
Total overlapping debt	<u>701,400,144</u>	<u>100%</u>	<u>701,400,144</u>
Total direct and overlapping debt	<u>\$ 715,765,144</u>	<u>100%</u>	<u>\$ 715,765,144</u>

(1) The fiscal year of the Orleans Parish School Board ends on June 30th; overlapping debt is based on June 30, 2014 financial information.

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

Fiscal Year	Operating Revenue	Direct Operating Expenses	Net Revenue Available for Debt Services	Debt Service Requirement*			Coverage
				Principal	Interest	Total	
2005	40,716,893	53,450,918	(12,734,025)	1,655,000	2,110,155	3,765,155	(3.38)
2006	36,378,265	41,970,320	(5,592,055)	1,735,000	2,032,524	3,767,524	(1.48)
2007	35,098,826	58,708,774	(23,609,948)	1,820,000	1,980,068	3,800,068	(6.21)
2008	47,435,375	66,989,084	(19,553,709)	1,920,000	1,917,131	3,837,131	(5.10)
2009	70,211,761	51,983,869	18,227,892	2,115,000	1,771,268	3,886,268	4.69
2010	77,837,538	58,180,206	19,657,332	2,220,000	1,685,618	3,905,618	5.03
2011	76,400,717	64,677,227	11,723,490	2,325,000	1,592,393	3,917,393	2.99
2012	73,802,442	61,988,096	11,814,346	2,435,000	1,493,380	3,928,380	3.01
2013	100,320,212	64,170,029	36,150,183	2,545,000	1,374,043	3,919,043	9.22
2014	74,221,260	66,607,501	7,613,759	-	2,829,414	2,829,414	2.69

\* Payments are based on future payments subsequent to the year of calculation.

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

Fiscal Year	Operating Revenue	Direct Operating Expenses	Net Revenue Available for Debt Services	Debt Service Requirements*			Coverage
				Principal	Interest	Total	
2005	58,494,963	33,072,494	25,422,469	8,265,000	9,873,999	18,138,999	1.40
2006	63,907,388	33,435,068	30,472,320	8,685,000	9,453,651	18,138,651	1.68
2007	64,750,010	38,899,024	25,850,986	9,130,000	10,211,257	19,341,257	1.34
2008	70,836,988	42,135,587	28,701,401	15,035,000	3,326,538	18,361,538	1.56
2009	69,501,438	49,879,875	19,621,563	11,255,000	9,058,968	20,313,968	0.97
2010	87,569,727	44,361,297	43,208,430	11,815,000	8,435,057	20,250,057	2.13
2011	74,173,489	43,173,641	30,999,848	12,400,000	7,863,432	20,263,432	1.53
2012	72,399,088	44,869,796	27,529,292	13,431,000	7,282,082	20,713,082	1.33
2013	80,080,102	45,378,129	34,701,973	14,110,000	6,616,719	20,726,719	1.67
2014	88,756,831	45,943,518	42,813,313	13,695,000	5,445,799	19,140,799	2.24

\* Payments are based on future payments subsequent to the year of calculation.

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

<u>Fiscal Year</u>	<u>Cash Balance</u>	<u>One Day O&amp;M</u>	<u>Measurement</u>
2012	26,040,630	176,867	147.23
2013	40,314,163	169,210	238.25
2014	32,497,474	188,711	172.21

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

<u>Fiscal Year</u>	<u>Cash Balance</u>	<u>One Day O&amp;M</u>	<u>Measurement</u>
2012	27,306,436	123,693	220.76
2013	23,010,471	121,350	189.62
2014	26,736,696	130,990	204.11

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**DEMOGRAPHIC STATISTICS**  
**Last Nine Fiscal Years**  
**(Unaudited)**

Fiscal Year	Population (1)	Personal Income (2) (in thousands)	Per Capita Personal Income	Unemployment Rate (3)
2006	208,548	\$ 12,739,309	\$ 61,086	4.30%
2007	288,113	\$ 14,831,565	\$ 51,478	3.50%
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 (5)	\$ 16,437,492 (4)	\$ 43,403	7.50%

(1) Source: [www.census.gov/popest/](http://www.census.gov/popest/)

(2) Source: Estimates- Bureau of Economic Analysis.

(3) Source: U.S. Bureau of Labor Statistics.

(4) Most recent available is as of March 2014.

(5) Most recent population estimate is as of 2013.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS  
NEW ORLEANS AREA PRINCIPAL EMPLOYERS  
Last Ten Fiscal Years  
(Unaudited)**

	Rank / Number of Employees									
	2005 *	2006	2007	2008	2009	2010	2011	2012	2013	2014 <sup>(1)</sup>
Acme Truck Line Inc.			8 / 250				8 / 2,500			10 / 3,100
Al Copeland Investments				10 / 2,000	7 / 2,000	7 / 2,000	9 / 2,200	9 / 2,000		
Boh Bros. Construction					9 / 1,500	9 / 1,500				
Boomtown Casino Westbank		9 / 790	6 / 781							
Capital One Bank N.A.				9 / 2,150	6 / 2,150	6 / 2,150		8 / 2,150		
City of New Orleans				5 / 3,500						
Dow Chemical Company					8 / 2,000	8 / 2,000		10 / 2,000		
East Jefferson General Hospital				6 / 3,150				5 / 3,150		
Harrah's New Orleans Casino		3 / 4,500		8 / 2,200	5 / 2,200	5 / 2,200	7 / 2,700	7 / 2,200	7 / 2,700	
Hilton New Orleans					10 / 1,400	10 / 1,400				4 / 5,000
Hope Haven Center			10 / 150							
Houma Industries			9 / 160							
Ingalls Shipbuilding										3 / 6,000
JCC Holding Co. LLC		4 / 4,000								
Lockheed Martin Manned Space Systems		5 / 2,000	2 / 2,832	7 / 2,832	4 / 2,832	4 / 2,832		7 / 2,800		
Louisiana Children's Medical Center										7 / 4,500
LSU Health Sciences Center New Orleans				3 / 5,000			2 / 7,000	3 / 5,000	2 / 7,000	2 / 7,000
LSU Public Hospital										5 / 5,000
NASA Michoud							10 / 2,000		9 / 2,000	
North Oaks Health System									7 / 2,700	
Northrup Grumman Avondale		1 / 6,000	1 / 5,400	2 / 5,400	2 / 5,400	2 / 5,400	3 / 6,000	2 / 5,400	3 / 6,000	
Ochsner Medical Institutions / Health System		6 / 2,000		1 / 9,107	1 / 9,107	1 / 9,107	1 / 9,800	1 / 9,100	1 / 9,100	1 / 9,800
Superior Energy Services, Inc.		10 / 750	7 / 750							
Textron Marine & Land Systems			5 / 1,165							
Tulane University		2 / 5,000		4 / 4,410	3 / 4,410	3 / 4,410	4 / 5,000	4 / 4,400	4 / 5,000	6 / 4,700
University of New Orleans							6 / 3,114		6 / 3,114	9 / 3,100
US Post Office							5 / 4,000	6 / 2,900	5 / 4,000	8 / 4,000
USDA, National Finance Center		8 / 1250	4 / 1,300							
West Jefferson Medical Center		7 / 1,904	3 / 1,654						10 / 1,904	

(1) Source: Greater New Orleans Inc. and New Orleans City Business

\* This year is unavailable.

**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
2005	\$ 10,380,889	\$ 46,550,580	\$ 23,709,553	\$ 80,641,022
2006	\$ 36,481,683	\$ 49,891,752	\$ 19,515,232	\$ 105,888,667
2007	\$ 19,053,142	\$ 56,093,058	\$ 16,250,996	\$ 91,397,196
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	\$ 79,241,317	\$ 179,966,028
2014	\$ 46,604,884	\$ 58,870,182	\$ 152,172,018	\$ 257,647,084

(1) Includes contributed assets

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**SCHEDULE OF FUTURE DEBT PAYMENTS**  
**December 31, 2014**  
**(Unaudited)**

		<b>Water Revenue Bonds</b>	
		<b>Series</b>	<b>All Bond</b>
		<b>2014</b>	<b>Issues</b>
2015	Principal	-	-
	Interest	5,146,250	5,146,250
2016	Principal	325,000	325,000
	Interest	5,176,250	5,176,250
2017	Principal	2,540,000	2,540,000
	Interest	5,160,000	5,160,000
2018	Principal	2,660,000	2,660,000
	Interest	5,033,000	5,033,000
2019	Principal	2,800,000	2,800,000
	Interest	4,900,000	4,900,000
2020	Principal	2,930,000	2,930,000
	Interest	4,760,000	4,760,000
2021	Principal	3,070,000	3,070,000
	Interest	4,613,500	4,613,500
2022	Principal	3,225,000	3,225,000
	Interest	4,460,000	4,460,000
2023	Principal	2,230,000	2,230,000
	Interest	4,298,750	4,298,750
2024	Principal	2,345,000	2,345,000
	Interest	4,187,250	4,187,250
2025	Principal	2,460,000	2,460,000
	Interest	4,070,000	4,070,000
2026	Principal	2,585,000	2,585,000
	Interest	3,947,000	3,947,000
2027	Principal	2,715,000	2,715,000
	Interest	3,817,750	3,817,750
2028	Principal	2,850,000	2,850,000
	Interest	3,682,000	3,682,000
2029	Principal	2,990,000	2,990,000
	Interest	3,539,500	3,539,500
2030	Principal	3,140,000	3,140,000
	Interest	3,390,000	3,390,000
2031	Principal	3,300,000	3,300,000
	Interest	3,233,000	3,233,000
2032	Principal	3,460,000	3,460,000
	Interest	3,068,000	3,068,000
2033	Principal	3,635,000	3,635,000
	Interest	2,895,000	2,895,000
2034	Principal	3,820,000	3,820,000
	Interest	2,713,250	2,713,250
2035	Principal	4,010,000	4,010,000
	Interest	2,522,250	2,522,250
2036	Principal	4,210,000	4,210,000
	Interest	2,321,750	2,321,750
2037	Principal	4,420,000	4,420,000
	Interest	2,111,250	2,111,250
2038	Principal	4,645,000	4,645,000
	Interest	1,890,250	1,890,250
2039	Principal	4,875,000	4,875,000
	Interest	1,658,000	1,658,000
2040	Principal	5,120,000	5,120,000
	Interest	1,414,250	1,414,250
2041	Principal	5,370,000	5,370,000
	Interest	1,158,250	1,158,250
2042	Principal	5,645,000	5,645,000
	Interest	889,750	889,750
2043	Principal	5,925,000	5,925,000
	Interest	607,500	607,500
2044	Principal	6,225,000	6,225,000
	Interest	311,250	311,250
Total Principal		103,525,000	103,525,000
Total Interest		96,975,000	96,975,000
Total Future Debt Payments		<u>\$ 200,500,000</u>	<u>\$ 200,500,000</u>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**SCHEDULE OF FUTURE DEBT PAYMENTS**  
December 31, 2014  
(Unaudited)

		Sewer Revenue Bonds		
		Series 2011	Series 2014	All Bond Issues
2015	Principal	419,000	11,225,000	11,644,000
	Interest	36,024	7,273,525	7,309,549
2016	Principal	422,000	12,430,000	12,852,000
	Interest	34,139	6,912,675	6,946,814
2017	Principal	427,000	12,970,000	13,397,000
	Interest	32,240	6,339,825	6,372,065
2018	Principal	431,000	11,925,000	12,356,000
	Interest	30,318	5,717,450	5,747,768
2019	Principal	435,000	11,075,000	11,510,000
	Interest	28,379	5,142,450	5,170,829
2020	Principal	439,000	11,660,000	12,099,000
	Interest	26,421	4,574,075	4,600,496
2021	Principal	443,000	9,050,000	9,493,000
	Interest	24,446	4,056,325	4,080,771
2022	Principal	447,000	7,445,000	7,892,000
	Interest	22,452	3,643,950	3,666,402
2023	Principal	451,000	3,920,000	4,371,000
	Interest	20,440	3,359,825	3,380,265
2024	Principal	456,000	3,760,000	4,216,000
	Interest	18,412	3,167,825	3,186,237
2025	Principal	460,000	1,970,000	2,430,000
	Interest	16,360	3,024,575	3,040,935
2026	Principal	464,000	2,070,000	2,534,000
	Interest	14,290	2,923,575	2,937,865
2027	Principal	469,000	2,175,000	2,644,000
	Interest	12,202	2,817,450	2,829,652
2028	Principal	473,000	2,280,000	2,753,000
	Interest	10,090	2,706,075	2,716,165
2029	Principal	478,000	2,395,000	2,873,000
	Interest	7,962	2,589,200	2,597,162
2030	Principal	482,000	2,515,000	2,997,000
	Interest	5,812	2,475,881	2,481,693
2031	Principal	487,000	2,620,000	3,107,000
	Interest	3,642	2,366,762	2,370,404
2032	Principal	322,403	2,735,000	3,057,403
	Interest	1,450	2,252,969	2,254,419
2033	Principal	-	2,850,000	2,850,000
	Interest	-	2,134,287	2,134,287
2034	Principal	-	2,970,000	2,970,000
	Interest	-	2,010,613	2,010,613
2035	Principal	-	3,095,000	3,095,000
	Interest	-	1,870,125	1,870,125
2036	Principal	-	3,250,000	3,250,000
	Interest	-	1,711,500	1,711,500
2037	Principal	-	3,415,000	3,415,000
	Interest	-	1,544,875	1,544,875
2038	Principal	-	3,585,000	3,585,000
	Interest	-	1,369,875	1,369,875
2039	Principal	-	3,765,000	3,765,000
	Interest	-	1,186,125	1,186,125
2040	Principal	-	3,950,000	3,950,000
	Interest	-	993,250	993,250
2041	Principal	-	4,150,000	4,150,000
	Interest	-	790,750	790,750
2042	Principal	-	4,360,000	4,360,000
	Interest	-	578,000	578,000
2043	Principal	-	4,575,000	4,575,000
	Interest	-	354,625	354,625
2044	Principal	-	4,973,597	4,973,597
	Interest	-	120,125	120,125
Total Principal		8,005,403	159,158,597	167,164,000
Total Interest		345,079	86,008,562	86,353,641
Total Future Debt Payments		<u>\$ 8,350,482</u>	<u>\$ 245,167,159</u>	<u>\$ 253,517,641</u>

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

**December 31, 2014**

**(Unaudited)**

		<b>Drainage Special Tax Bonds</b>	
		<b>Series</b>	<b>All Bond</b>
		<b>2014</b>	<b>Issues</b>
2015	Principal	1,615,000	1,615,000
	Interest	399,350	399,350
2016	Principal	1,650,000	1,650,000
	Interest	367,050	367,050
2017	Principal	1,690,000	1,690,000
	Interest	334,050	334,050
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
Total Principal		14,365,000	14,365,000
Total Interest		1,867,400	1,867,400
Total Future Debt Payments		<u>\$ 16,232,400</u>	<u>\$ 16,232,400</u>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**SCHEDULE OF FUTURE DEBT PAYMENTS**  
December 31, 2014  
(Unaudited)

		All Departments			
		Water	Sewer	Drainage	Total
2015	Principal	\$ -	\$ 11,644,000	\$ 1,615,000	\$ 13,259,000
	Interest	5,146,250	7,309,549	399,350	12,855,149
2016	Principal	325,000	12,852,000	1,650,000	14,827,000
	Interest	5,176,250	6,946,814	367,050	12,490,114
2017	Principal	2,540,000	13,397,000	1,690,000	17,627,000
	Interest	5,160,000	6,372,065	334,050	11,866,115
2018	Principal	2,660,000	12,356,000	1,745,000	16,761,000
	Interest	5,033,000	5,747,768	283,350	11,064,118
2019	Principal	2,800,000	11,510,000	1,815,000	16,125,000
	Interest	4,900,000	5,170,829	213,550	10,284,379
2020	Principal	2,930,000	12,099,000	1,895,000	16,924,000
	Interest	4,760,000	4,600,496	140,950	9,501,446
2021	Principal	3,070,000	9,493,000	1,955,000	14,518,000
	Interest	4,613,500	4,080,771	84,100	8,778,371
2022	Principal	3,225,000	7,892,000	2,000,000	13,117,000
	Interest	4,460,000	3,666,402	45,000	8,171,402
2023	Principal	2,230,000	4,371,000	-	6,601,000
	Interest	4,298,750	3,380,265	-	7,679,015
2024	Principal	2,345,000	4,216,000	-	6,561,000
	Interest	4,187,250	3,186,237	-	7,373,487
2025	Principal	2,460,000	2,430,000	-	4,890,000
	Interest	4,070,000	3,040,935	-	7,110,935
2026	Principal	2,585,000	2,534,000	-	5,119,000
	Interest	3,947,000	2,937,865	-	6,884,865
2027	Principal	2,715,000	2,644,000	-	5,359,000
	Interest	3,817,750	2,829,652	-	6,647,402
2028	Principal	2,850,000	2,753,000	-	5,603,000
	Interest	3,682,000	2,716,165	-	6,398,165
2029	Principal	2,990,000	2,873,000	-	5,863,000
	Interest	3,539,500	2,597,162	-	6,136,662
2030	Principal	3,140,000	2,997,000	-	6,137,000
	Interest	3,390,000	2,481,693	-	5,871,693
2031	Principal	3,300,000	3,107,000	-	6,407,000
	Interest	3,233,000	2,370,404	-	5,603,404
2032	Principal	3,460,000	3,057,403	-	6,517,403
	Interest	3,068,000	2,254,419	-	5,322,419
2033	Principal	3,635,000	2,850,000	-	6,485,000
	Interest	2,895,000	2,134,287	-	5,029,287
2034	Principal	3,820,000	2,970,000	-	6,790,000
	Interest	2,713,250	2,010,613	-	4,723,863
2035	Principal	4,010,000	3,095,000	-	7,105,000
	Interest	2,522,250	1,870,125	-	4,392,375
2036	Principal	4,210,000	3,250,000	-	7,460,000
	Interest	2,321,750	1,711,500	-	4,033,250
2037	Principal	4,420,000	3,415,000	-	7,835,000
	Interest	2,111,250	1,544,875	-	3,656,125
2038	Principal	4,645,000	3,585,000	-	8,230,000
	Interest	1,890,250	1,369,875	-	3,260,125
2039	Principal	4,875,000	3,765,000	-	8,640,000
	Interest	1,658,000	1,186,125	-	2,844,125
2040	Principal	5,120,000	3,950,000	-	9,070,000
	Interest	1,414,250	993,250	-	2,407,500
2041	Principal	5,370,000	4,150,000	-	9,520,000
	Interest	1,158,250	790,750	-	1,949,000
2042	Principal	5,645,000	4,360,000	-	10,005,000
	Interest	889,750	578,000	-	1,467,750
2043	Principal	5,925,000	4,575,000	-	10,500,000
	Interest	607,500	354,625	-	962,125
2044	Principal	6,225,000	4,973,597	-	11,198,597
	Interest	311,250	120,125	-	431,375
Total Principal		103,525,000	167,164,000	14,365,000	285,054,000
Total Interest		96,975,000	86,353,641	1,867,400	185,196,041
Total Future Debt Payments		<u>\$ 200,500,000</u>	<u>\$ 253,517,641</u>	<u>\$ 16,232,400</u>	<u>\$ 470,250,041</u>

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

Fiscal Year	New Commercial Construction (1)		New Residential Construction (1)		Bank deposits (2) (in thousands)	Estimated actual property value (3) (in thousands)
	Number of units	Value (in thousands)	Number of units	Value (in thousands)		
2005	176	329,401	555	76,400	8,951,961	16774183
2006	473	139,866	667	95,552	11,252,684	13,245,167
2007	2,044	506,281	1,427	182,729	10,062,454	14,645,214
2008	1,929	550,895	1,215	160,387	10,553,556	20,698,664
2009	364	220,748	1,862	227,714	10,480,561	21,974,841
2010	349	549,906	1,102	160,331	12,175,831	
2011	365	266,981	1,047	161,875	10,024,118	
2012					10,862,390	
2013					15,738,913	
2014					16,043,233	

(1) City of New Orleans (2011 latest year for which information is available).

(2) Summary of Deposits (as of June 30, 2014) - bank branches located in New Orleans, Federal Depository Insurance Corporation.

(3) Source: City of New Orleans - Latest date available 2009

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**CAPITAL ASSET STATISTICS BY FUNCTION**  
**Last Nine Fiscal Years**  
**(Unaudited)**

	Year								
	2006	2007	2008	2009	2010	2011	2012	2013	2014
<b>Water:</b>									
Water lines (miles)	1,582	1,583	1,586	1,587	1,590	1,597	1,599	1,805	1,812
Water manholes	29,576	29,632	29,673	29,741	29,957	30,150	30,194	30,297	30,402
Water valves	29,219	29,246	29,255	29,277	29,366	29,611	29,521	29,629	29,730
Fire hydrants	22,771	22,780	22,785	22,894	22,989	23,045	23,078	23,099	23,117
<b>Sewer:</b>									
Sewers lines (miles)	1,486	1,503	1,507	1,512	1,518	1,519	1,520	1,536	1,547
Sewer manholes	22,829	22,922	22,974	22,998	23,047	22,977	22,983	22,987	23,042

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**NUMBER OF ACTIVE EMPLOYEES**  
**Last Eight Fiscal Years**  
**(Unaudited)**

<u>Year</u>	<u>Number of Active Employees</u>
2014	1060
2013	1025
2012	991
2011	994
2010	974
2009	964
2008	940
2007	899

Source: Sewerage and Water Board of New Orleans.

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Because of Hurricane Katrina's storm surge the East Bank Wastewater Treatment Plant was almost destroyed. As result of the impact of the storm to this critical facility that provides waste treatment services to the entire East Bank of the city, FEMA funded through its Hazard Mitigation Grant Program a Berm/Floodwall of +17 feet. The berm/floodwall is designed to reduce the risk of future flood damage by providing protection to the wastewater treatment plant. It replaces a 7 foot high earthen levee that previously surrounded the plant. The berm/floodwall was designed to enhance reliability and resiliency for the future. The new T-Wall berm which includes closure gates that are closed and sealed during flooding events began construction in March 2012 and was recently completed. It is designed to protect 26.4 acres of land. FEMA funding for the project was \$33M.



This photo shows crews replacing a water line in the Lower Ninth Ward neighborhood, an area of the city severely impacted by Hurricane Katrina. This is a part of the larger city-wide multi-year infrastructure repair/recovery effort funded by FEMA. This program is designed to restore the city's water distribution system. To ensure that the city is maximizing available funding, various agencies are involved in the co-ordination efforts of the program. The program is managed on a neighborhood by neighborhood basis. The Sewerage and Water Board co-ordinates with the Department of Transportation and Development (DOTD) and the Department of Public Works (DPW) to repair or replace water lines with roadway repair projects. FEMA has obligated to date \$185 million.

# SEWERAGE AND WATER BOARD OF NEW ORLEANS

December 31, 2014

## 2014 ACTUAL CAPITAL EXPENDITURES

### WATER DEPARTMENT

#### C.P.#      WATERWORKS

110	Normal Extension & Replacement	\$	2,321,770.42
122	Sycamore and Claiborne filter Rehabilitation		10,150.00
135	Improvement of Chemical System		32,506.76
160	SELA Water Relocation Costs		6,718,170.90
175	Water Hurricane Recovery Bonds		13,391,997.80
180	FEMA Review of Change Orders - Water		10,228,007.55
	<b>TOTAL WATERWORKS</b>	<b>\$</b>	<b>32,702,603.43</b>

#### WATER DISTRIBUTION

214	Normal Extension & Replacement	\$	1,475,493.90
216	Water System Replacement Program		125,159.56
239	Mains DPW Contracts		915,557.00
	<b>TOTAL WATER DISTRIBUTION</b>	<b>\$</b>	<b>2,516,210.46</b>

#### GENERAL BUDGET

600	Water Share of Power Projects	\$	1,543,634.23
700	Water Reserve for Emergencies	\$	461,081.88
800	Water Share of General Budget Items		7,895,110.09
	<b>GENERAL BUDGET</b>	<b>\$</b>	<b>9,899,826.20</b>
	<b>TOTAL WATER DEPARTMENT</b>	<b>\$</b>	<b>45,118,640.09</b>

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

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
 December 31, 2014  
**2014 ACTUAL CAPITAL EXPENDITURES**

**SEWERAGE DEPARTMENT**

<u>C.P.#</u>	<u>SEWERAGE SYSTEM</u>		
317	Normal Extensions & Replacement of Gravity Mains	\$	1,693,411.34
318	Rehabilitation Gravity Sewer System		1,942,478.81
339	Main in Streets Dept. Contracts		231,983.78
340	Sewerage Hurricane Recovery Bonds (FEMA)		1,644,079.67
348	Normal Extensions & Replacements		2,703,684.65
360	SELA Sewerage Relocation Costs		8,898,652.50
368	Wetlands Assimilation Project		414,892.48
375	Sewerage Hurricane Recovery Bonds		15,044,952.69
380	FEMA Review of Change Orders-Sewer		11,767,351.16
	<b>TOTAL SEWERAGE SYSTEM</b>	<b>\$</b>	<b>44,341,487.08</b>
<b><u>POWER PROJECTS AND GENERAL BUDGET</u></b>			
600	Sewerage Share of Power Projects	\$	590,213.09
700	Sewer Reserve for Emergencies		736,183.77
800	Sewerage Share of General Budget Items		6,176,388.47
	<b>TOTAL GENERAL BUDGET</b>	<b>\$</b>	<b>7,502,785.33</b>
	<b>TOTAL SEWERAGE DEPARTMENT</b>	<b>\$</b>	<b>51,844,272.41</b>

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

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
December 31, 2014  
**2014 ACTUAL CAPITAL EXPENDITURES**

**DRAINAGE DEPARTMENT**

<u>C.P.#</u>	<u>CANALS</u>	
418	Normal Extension & Replacements	\$ 160,347.44
439	Major Drainage Participation in DPW Projects	3,844.48
466	Louisiana Avenue Canal (SELA)	548,180.25
471	SELA Program Management	2,107,472.19
478	S. Claiborne-Lowerline to Monticello Street	2,121,031.84
480	FEMA Review of Change Orders-Drainage	12,494,056.16
486	Napoleon Avenue Canal Improvements (SELA-B)	1,698,525.23
497	Florida Ave. Canal - DPS#19 to Peoples Ave. (SELA-B)	12,379,021.30
498	Dwyer Intake Canal (St. Charles to Dwyer (DPS)(SELA-A)	901,604.26
499	Jefferson Avenue Canal	<u>6,122,637.96</u>
	TOTAL DRAINAGE CANALS	\$ 38,536,721.11
	 <b><u>PUMPING STATIONS</u></b>	
511	Normal Extension & Rep./Stations	\$ 7,794.92
574	Emergency Electrical Repairs for DPS #3	\$ (604.69)
575	Drainage Hurricane Recovery Bonds	467,934.83
	TOTAL DRAINAGE PUMPING STATIONS	<u>\$ 475,125.06</u>
	 <b><u>GENERAL BUDGET</u></b>	
600	Drainage Share of Power Projects	\$ 2,491,420.37
700	Drainage Reserve for Emergencies	2,884,370.87
800	Drainage Share of General Budget Items	3,568,601.72
	TOTAL GENERAL BUDGET	<u>\$ 8,944,392.96</u>
	TOTAL DRAINAGE DEPARTMENT	<u>\$ 47,956,239.13</u>

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

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**December 31, 2014**  
**2014 ACTUAL CAPITAL EXPENDITURES**

**POWER PROJECTS**

<u>C.P.#</u>	<u>POWER PROJECTS</u>	<u>Water</u>	<u>Sewerage</u>	<u>Drainage</u>	<u>Total</u>
676	Modification to Power Generating System (HMGP)	1,543,634.23	590,213.09	2,491,420.37	4,625,267.69
701	Water Reserve for Emergencies	461,081.88	28,623.74	27,781.88	517,487.50
702	Sewer Reserve for Emergencies		707,560.03		707,560.03
703	Drainage Reserve for Emergencies			2,856,588.99	2,856,588.99
<b>TOTAL POWER PROJECTS</b>		<u><u>\$ 2,004,716.11</u></u>	<u><u>\$ 1,326,396.86</u></u>	<u><u>\$ 5,375,791.24</u></u>	<u><u>\$ 8,706,904.21</u></u>

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

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

December 31, 2014

**2014 ACTUAL CAPITAL EXPENDITURES**

<u>GENERAL BUDGET ITEMS</u>					
<u>C.P.#</u>	<u>General Budget Items</u>	<u>Water</u>	<u>Sewerage</u>	<u>Drainage</u>	<u>Total</u>
803	Property Acquisition	\$ 4,311.66	\$ 32,665.68	\$ 43,411.66	\$ 80,389.00
808	Improvements to Customer Service Satellite	59,571.76	59,571.64		119,143.40
810	Major Equipment Purchases	618,759.00			618,759.00
812	Computer Systems Development	844,664.54	844,664.18	157,644.40	1,846,973.12
820	Overhead Charged to Capital	4,241,712.25	4,063,649.09	3,067,477.52	11,372,838.86
823	Purchase of Water Meters	951,043.51	951,043.51		1,902,087.02
824	Meter Boxes and Meter Parts	42,338.76	42,338.74		84,677.50
843	Minor Equipment Purchases	166,943.43	182,455.63	190,015.68	539,414.74
862	Fire Hydrants and Related Parts	178,983.00	-	-	178,983.00
864	Meter Boxes	786,782.18	-	-	786,782.18
879	Green Infrastructure			110,052.46	110,052.46
	<b>TOTAL GENERAL BUDGET ITEMS</b>	<u>\$ 7,895,110.09</u>	<u>\$6,176,388.47</u>	<u>\$ 3,568,601.72</u>	<u>\$ 17,640,100.28</u>

9-A

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

**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 2005 THROUGH 2014**

YEAR	ELECTRIC POWER PURCHASED		ELECTRIC & STEAM POWER GENERATED BY THE S&WB		NATURAL GAS & FUEL OIL USED TO GENERATE ELECTRIC & STEAM POWER			
	KW-HRS	\$ AMOUNT	KW-HRS	\$ AMOUNT	NATURAL GAS		FUEL OIL	
					MCF	\$ AMOUNT	GALLONS	\$ AMOUNT
2005	56,511,639	\$5,038,729	32,232,480	\$15,857,910	1,442,440	\$15,834,817	27,168	\$23,093
2006	67,474,620	\$7,371,029	37,464,720	\$14,587,880	1,285,200	\$14,587,701	211	\$179
2007	68,574,205	\$7,278,339	39,421,440	\$15,138,653	1,464,900	\$15,131,635	1,464	\$7,018
2008	62,579,355	\$7,051,655	40,407,984	\$19,125,397	1,535,660	\$18,895,716	85,222	\$229,681
2009	67,889,778	\$6,422,589	37,716,720	\$10,651,094	1,449,540	\$10,651,094	0	\$0
2010	70,609,461	\$6,653,752	39,090,720	\$9,719,013	1,332,770	\$9,669,414	12,883	\$49,600
2011	70,049,094	\$6,180,373	27,351,600	\$10,721,624	1,552,330	\$10,721,356	315	\$268
2012	63,873,900	\$5,941,992	44,819,460	\$9,180,160	1,605,720	\$9,174,678	1,459	\$5,482
2013	67,980,940	\$6,725,811	35,005,422	\$11,648,150	1,830,890	\$11,648,148	9	\$34
2014	68,632,618	\$7,052,078	32,407,296	\$12,442,213	1,643,347	\$12,442,282	9	\$69
<b>TOTALS</b>	<b>664,175,610</b>	<b>\$65,716,348</b>	<b>365,917,842</b>	<b>\$129,072,093</b>	<b>15,142,797</b>	<b>\$128,756,840</b>	<b>128,740</b>	<b>\$315,423</b>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**POWER PURCHASED AND PRODUCED  
NATURAL GAS AND FUEL OIL CONSUMED - 2014**

	KW-HOURS	COST
ELECTRIC POWER PURCHASED	68,632,618	\$7,052,078.41
ELECTRIC AND STEAM POWER GENERATED BY THE S.& W.B.*	32,407,296	\$12,442,213.21
TOTAL	101,039,914	\$19,494,291.62

NOTE: \*NATURAL GAS CONSUMED IN OPERATION WAS 1,643,347 MCF  
AT A COST OF \$12,442,282.06. FUEL OIL CONSUMED WAS 9 GALLONS  
AT A COST OF \$69

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**GALLONS METERED - PAY WATER CONSUMPTION - 2014**

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<u>Month</u>	<u>Consumption</u>
January	1,046,687,900
February	1,140,486,800
March	1,058,260,400
April	868,646,800
May	1,066,659,400
June	1,148,704,700
July	1,199,422,400
August	1,219,333,500
September	1,237,506,200
October	1,126,013,300
November	1,039,002,800
December	<u>1,202,259,000</u>
Gross Total	<u><u>13,352,983,200</u></u>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**MONTHLY WATER CHARGES COLLECTED - 2014**

<u>Months</u>	<u>Water Service Charges &amp; Fees</u>	<u>Delinquent Fees</u>	<u>Total</u>
January	\$ 5,652,782.51	\$ 88,425.18	\$ 5,741,207.69
February	5,744,059.74	96,406.44	5,840,466.18
March	5,831,390.11	89,488.75	5,920,878.86
April	5,751,112.33	96,554.86	5,847,667.19
May	5,488,204.26	93,070.30	5,581,274.56
June	5,896,979.69	82,232.89	5,979,212.58
July	6,623,092.73	96,930.26	6,720,022.99
August	6,299,615.69	90,221.89	6,389,837.58
September	6,775,491.57	101,633.01	6,877,124.58
October	6,432,236.44	103,444.29	6,535,680.73
November	4,821,918.22	93,263.74	4,915,181.96
December	6,414,535.36	70,291.04	6,484,826.40
	<u>\$ 71,731,418.65</u>	<u>\$ 1,101,962.65</u>	<u>\$ 72,833,381.30</u>

**MONTHLY SEWERAGE CHARGES COLLECTED - 2014**

<u>Months</u>	<u>Sewerage Service Charges</u>	<u>Delinquent Fees</u>	<u>Total</u>
January	\$ 6,586,065.08	\$ 59,072.44	\$ 6,645,137.52
February	6,833,478.50	64,392.56	6,897,871.06
March	6,811,978.31	59,778.27	6,871,756.58
April	7,327,124.10	64,491.39	7,391,615.49
May	6,661,474.76	62,166.92	6,723,641.68
June	7,475,422.21	54,938.28	7,530,360.49
July	7,632,072.47	64,748.37	7,696,820.84
August	6,894,535.86	60,265.22	6,954,801.08
September	8,004,881.17	67,884.75	8,072,765.92
October	7,344,858.86	69,088.53	7,413,947.39
November	5,744,086.13	62,282.75	5,806,368.88
December	8,158,085.18	86,042.68	8,244,127.86
	<u>\$ 85,474,062.63</u>	<u>\$ 775,152.16</u>	<u>\$ 86,249,214.79</u>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**YEAR ENDED DECEMBER 31, 2014**

**TABLE I**

**CARROLLTON TURBIDITIES**

	River (NTU)					Effluent Settling Reservoirs (NTU)					Filters (NTU)				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
Maximum	274	282	159	281	277	8.3	10	7.3	9.3	12	0.26	0.22	0.35	0.25	0.24
Minimum	5	11	5	5	8	1.1	1.0	0.5	0.8	0.9	0.07	0.08	0.08	0.07	0.05
Average	71	51	34	70	75	3.2	2.9	2.0	2.8	2.7	0.13	0.13	0.12	0.11	0.11

**TABLE II**

**CARROLLTON ALKALINITIES  
PARTS PER MILLION**

	River					Effluent Settling Reservoirs					Filters				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
Maximum	212	163	154	139	146	202	165	146	127	140	225	195	168	144	157
Minimum	93	83	81	72	75	76	66	53	53	54	98	88	99	74	78
Average	143	125	122	101	109	135	115	110	89	93	155	135	135	115	120

**TABLE II A**

**CARROLLTON HARDNESS  
PARTS PER MILLION**

	NON-CARBONATE HARDNESS										TOTAL HARDNESS									
	RIVER					FILTERS					RIVER					FILTERS				
	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014	2010	2011	2012	2013	2014
Maximum	84	105	104	86	74	91	83	109	93	101	238	220	214	188	211	278	238	242	206	225
Minimum	0	17	19	18	14	0	26	1	23	25	116	115	115	101	91	140	132	143	115	132
Average	36	47	43	40	46	41	55	55	49	57	178	172	164	141	155	195	191	190	164	177

**TABLE III**

**CARROLLTON BACTERIAL CHARACTERISTICS  
TOTAL COLIFORM ANALYSIS**

2014	River	Plant Tap	Distribution System
Maximum (Colonies / 100 ml)	2,900	13	2
Minimum (Colonies / 100 ml)	57	0	0
Average (colonies / 100 ml)	510	0	0
Number of Samples	362	365	2,008
Number of Samples Negative	0	364	2,005
Number of Samples Positive	362	1	3*

\* None of these 3 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

TABLE IV-A

PRINCIPLE RESULTS OF OPERATION OF THE G3 CONVENTIONAL UNIT AT THE CARROLLTON WATER PURIFICATION PLANT FOR THE YEAR ENDING:  
December 31, 2014

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 Pounds of Polymer used at Intake	Polymer at Intake Parts Per Million	Total 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 Alkalinity of River Water	NTU Turbidity of Unit Effluent
January	Max.		71.25				5.70		6.59	281	109	8.4
	Min.	1,240.30	20.21	0		55,481	4.62	64,095	5.31	80	72	2.0
	Avg.		40.01				4.69		5.42	149	86	4.3
February	Max.		91.63				5.24		6.02	221	89	7.4
	Min.	1,701.92	40.00	0		69,087	4.43	79,503	5.09	76	73	2.0
	Avg.		60.78				4.82		5.55	127	79	3.6
March	Max.		96.46				5.24		6.05	275	108	7.5
	Min.	1,036.38	11.08	0		42,926	4.76	49,420	5.47	41	73	1.9
	Avg.		33.43				2.25		2.59	100	89	4.0
April	Max.											
	Min.											
	Avg.											
May	Max.											
	Min.											
	Avg.											
June	Max.											
	Min.											
	Avg.											
July	Max.											
	Min.											
	Avg.											
August	Max.		82.79				5.23		6.32	50	146	2.7
	Min.	1,518.21	46.79	0		50,197	3.32	60,453	3.95	8	114	1.0
	Avg.		48.97				2.59		3.09	21	138	1.9
September	Max.		77.29				4.23		4.89	185	130	3.9
	Min.	2,244.79	73.00	0		68,895	3.40	81,549	4.04	11	105	1.1
	Avg.		74.83				3.68		4.36	59	120	2.2
October	Max.		78.25				4.42		7.15	22	137	11.0
	Min.	2,261.88	68.33	0		77,402	3.94	93,243	4.69	27	105	1.1
	Avg.		72.96				4.10		4.94	93	120	2.8
November	Max.		74.33				4.09		4.92	244	144	6.2
	Min.	2,112.21	65.17	0		70,082	3.77	83,938	4.47	13	111	1.0
	Avg.		70.41				3.98		4.76	48	129	2.4
December	Max.		74.83				4.63		5.55	96	137	3.6
	Min.	2,182.83	68.17	0		75,357	3.73	89,729	4.42	11	105	0.9
	Avg.		70.41				4.14		4.93	36	125	2.1
Total		14,298.51				509,427		601,931				
General	Max.		96.46				5.70		7.15	277	146	11.0
	Min.	2,261.88	11.08			42,926	2.25	49,420	2.59	8	75	0.9
	Avg.	1,787.31	140.18			63,678	4.21	75,241	5.02	75	109	2.3

Note: G3 Basin in service from 1/5/14 through 4/17/14 and 8/12/14 through 12/31/14

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE IV-B**

**PRINCIPLE RESULTS OF OPERATION OF THE G4 CONVENTIONAL UNIT AT THE CARROLLTON WATER PURIFICATION PLANT FOR THE YEAR ENDING: December 31, 2014**

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 Pounds of Polymer used at Intake	Polymer at Intake Parts Per Million	Total 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 Alkalinity of River Water	NTU Turbidity of Unit Effluent
January	Max. Min. Avg.											
February	Max. Min. Avg.											
March	Max. Min. Avg.											
April	Max. Min. Avg.											
May	Max. Min. Avg.											
June	Max. Min. Avg.											
July	Max. Min. Avg.											
August	Max. Min. Avg.											
September	Max. Min. Avg.											
October	Max. Min. Avg.											
November	Max. Min. Avg.											
December	Max. Min. Avg.											
Total												
General	Max. Min. Avg.											

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Note: G4 Basin was not in service in 2014.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE IV-C**

**PRINCIPLE RESULTS OF OPERATION OF THE L3 CONVENTIONAL UNIT AT THE CARROLLTON WATER PURIFICATION PLANT FOR THE YEAR ENDING: December 31, 2014**

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 Pounds of Polymer used at Intake	Polymer at Intake Parts Per Million	Total 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 Alkalinity of River Water	NTU Turbidity of Unit Effluent
January	Max.	1,635.75	72.33	0		74,003	5.95	83,703	6.91	281	109	4.5
	Min.		36.13				4.49		5.16	80	72	1.9
	Avg.		52.77				5.41		6.13	149	86	3.2
February	Max.	1,450.39	61.79	0		59,444	5.73	68,952	6.69	221	89	4.8
	Min.		43.29				4.23		4.89	76	73	1.4
	Avg.		49.76				4.59		5.31	127	79	2.9
March	Max.	1,775.67	74.21	0		84,084	6.53	98,787	6.98	275	108	4.4
	Min.		67.71				5.37		6.35	41	73	1.3
	Avg.		71.53				5.65		6.67	100	89	2.9
April	Max.	2,037.38	74.00	0		94,935	5.89	111,836	6.92	187	106	4.8
	Min.		62.42				4.97		5.89	51	81	1.4
	Avg.		67.91				5.59		6.59	103	95	3.0
May	Max.	2,026.21	68.54	0		95,102	5.99	111,637	6.90	103	113	3.2
	Min.		62.42				5.35		6.30	41	90	1.2
	Avg.		65.36				5.63		6.61	70	98	2.1
June	Max.	1,924.20	73.29	0		85,617	5.83	100,645	6.87	277	109	6.5
	Min.		62.58				5.03		5.94	39	93	1.4
	Avg.		66.03				5.61		6.59	103	99	2.3
July	Max.	1,870.61	63.74	0		79,485	6.02	89,775	6.17	181	127	6.6
	Min.		57.54				5.32		5.20	57	98	1.5
	Avg.		60.34				5.60		5.76	112	112	2.6
August	Max.	1,783.08	67.46	0		67,931	5.14	76,616	5.83	50	146	3.8
	Min.		46.88				3.88		4.38	8	114	1.0
	Avg.		57.52				4.55		5.14	21	138	2.5
September	Max.	533.21	59.08	0		17,903	4.88	20,161	5.58	185	130	4.4
	Min.		19.71				3.82		4.31	11	105	2.0
	Avg.		53.32				4.08		4.61	59	120	2.8
October	Max.											
	Min.											
	Avg.											
November	Max.											
	Min.											
	Avg.											
December	Max.											
	Min.											
	Avg.											
Total		15,036.49				658,503		762,113				
General	Max.	2,037.38	74.21			95,102	6.53	111,836	6.98	277	146	6.6
	Min.	533.21	19.71			17,903	3.82	20,161	4.31	8	75	1.0
	Avg.	1,670.72	59.67			73,167	5.23	84,679	5.95	75	109	2.7

Note: L3 Basin in service from 1/1/14 through 9/10/14

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE IV-D**

**PRINCIPLE RESULTS OF OPERATION OF THE L4 CONVENTIONAL UNIT AT THE CARROLLTON WATER PURIFICATION PLANT FOR  
THE YEAR ENDING: December 31, 2014**

1	2	3	4	5	6	7	8	9	10	13	14	15
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	Total 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 Alkalinity of River Water	NTU Turbidity of Unit Effluent
January	Max.	1,497.18	65.33	0		78,037	7.20	87,606	8.08	281	109	12.0
	Min.		37.21				5.09		5.69		80	2.4
	Avg.		48.30				6.26		7.03		149	5.3
February	Max.	824.79	50.00	0		36,288	7.46	40,845	8.64	221	89	7.2
	Min.		12.42				4.78		5.34		76	2.3
	Avg.		33.50				5.89		6.73		127	4.5
March	Max.	1,430.83	66.71	0		60,821	5.39	68,200	6.06	275	108	3.9
	Min.		13.13				4.62		5.16		41	0.9
	Avg.		46.16				4.09		4.58		100	2.3
April	Max.	1,964.25	67.88	0		83,154	5.64	93,327	6.20	187	106	5.1
	Min.		64.71				4.89		5.46		51	1.3
	Avg.		66.32				5.04		5.67		103	2.6
May	Max.	2,019.92	70.17	0		92,692	5.78	103,810	6.47	103	113	5.3
	Min.		63.04				4.81		5.38		41	1.3
	Avg.		65.16				5.51		6.17		70	3.2
June	Max.	1,890.50	65.88	0		84,590	6.16	94,737	6.91	277	109	5.3
	Min.		59.00				4.90		5.48		39	2.1
	Avg.		63.02				5.35		6.01		103	3.6
July	Max.	2,115.37	73.58	0		98,685	6.02	110,746	6.77	181	127	4.6
	Min.		62.75				5.32		5.96		57	2.4
	Avg.		68.24				5.60		6.28		112	3.3
August	Max.	744.50	70.75	0		32,591	5.75	36,501	6.44	50	146	3.8
	Min.		21.71				4.56		5.12		8	1.7
	Avg.		62.04				5.24		5.89		21	2.9
September	Max.	1,187.92	60.58	0		39,990	4.21	44,855	4.73	185	130	6.7
	Min.		38.00				3.53		3.98		11	1.0
	Avg.		56.57				4.03		4.52		59	1.8
October	Max.	1,794.79	64.04	0		61,114	4.41	68,546	4.90	22	137	4.0
	Min.		55.08				3.89		4.49		27	1.0
	Avg.		56.99				4.11		4.61		93	2.1
November	Max.	1,719.08	61.88	0		58,118	4.29	65,381	4.82	244	144	3.3
	Min.		53.96				3.90		4.39		13	1.0
	Avg.		57.30				4.05		4.56		48	1.9
December	Max.	1,813.83	62.25	0		62,415	7.89	67,924	4.72	96	137	3.8
	Min.		55.13				3.64		4.09		11	1.3
	Avg.		58.51				4.13		4.49		36	2.2
Total		19,002.97				788,494		882,480				
General	Max.	2,115.37	73.58			98,685	7.89	110,746	8.64	277	146	12.0
	Min.	744.50	12.42			32,591	3.53	36,501	3.98	8	75	0.9
	Avg.	1,583.58	59.38			65,708	5.10	73,540	5.61	75	109	3.0

IV-14

Note: L4 Basin in service from 1/1/14 through 2/20/14, 3/7/14 through 8/12/14, and 9/10/14 through 12/31/14

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE IV-E**

**MONTHLY SUMMARY OF COMBINED OPERATION OF CONVENTIONAL UNITS AT THE CARROLLTON WATER PURIFICATION PLANT FOR THE YEAR ENDING: December 31, 2014**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19									
																		Total M.G.	M.G.D.								
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	Total Pounds of Polymer used in Plant	Total Pounds of Fluoride (100%) used During Month	Fluoride Parts Per Million	Total Pounds of Pure Iron (Fe) used During Month	Total Pounds of Lime Used During Month	Lime Parts per Million	Total Pounds of Chlorine Used During Month	Chlorine Parts Per Million	Total Pounds of Anhydrous Ammonia Used During Month	Ammonia Parts Per Million	Total Pounds of Polyphosphate Used During Month	Polyphosphate Parts Per Million	Alkalinity of Filtered Water Parts Per Million (OFE)	Total M.G.	M.G.D.								
January	Max.	4,373.23	154.96	0	207,521	11,943	0.36	235,405	657,944	19.73	180,279	5.26	37,846	1.10	22,623	0.78	116	4,336.00	150.67								
	Min.		129.29				0.29			15.06		4.45					0.92		0.37	85	132.50						
	Avg.		141.07				0.33			18.04		4.94					1.04		0.62	99	139.87						
February	Max.	3,977.14	157.30	0	164,819	12,429	0.52	189,301	643,064	21.73	170,193	5.56	35,689	1.17	20,198	0.80	130	3,924.33	146.75								
	Min.		137.46				0.28			17.22		4.71					1.00		0.48	88	133.25						
	Avg.		142.04				0.38			19.40		5.13					1.08		0.61	110	140.15						
March	Max.	4,290.10	144.38	0	187,831	18,259	0.54	216,407	717,748	29.17	177,741	5.20	36,970	1.11	21,973	0.70	127	4,238.83	140.79								
	Min.		131.79				0.49			15.60		3.00					0.98		0.52	78	133.08						
	Avg.		138.39				0.51			20.10		4.89					1.03		0.61	99	136.74						
April	Max.	4,001.64	139.33	0	178,089	17,139	0.57	205,163	841,637	28.52	175,090	5.49	36,456	1.13	20,850	0.78	127	4,043.13	141.75								
	Min.		128.63				0.47			22.36		4.97					1.04		0.52	100	122.00						
	Avg.		133.39				0.51			25.22		5.25					1.09		0.62	111	134.77						
May	Max.	4,046.15	136.29	0	187,794	17,361	0.54	215,447	797,035	28.74	188,467	5.84	38,745	1.19	21,408	0.77	135	4,015.79	136.75								
	Min.		126.50				0.49			16.56		5.26					1.10		0.55	101	123.38						
	Avg.		130.52				0.52			23.65		5.59					1.15		0.63	113	129.54						
June	Max.	3,816.16	135.67	0	170,207	17,084	0.56	195,382	857,347	37.53	185,362	6.18	38,348	1.28	22,378	0.79	125	3,818.04	132.46								
	Min.		122.50				0.50			22.71		5.49					1.13		0.55	102	122.38						
	Avg.		127.21				0.54			26.91		5.84					1.21		0.70	112	127.27						
July	Max.	3,986.02	135.25	0	178,169	15,470	0.54	200,521	958,176	37.61	208,514	6.63	43,354	1.37	23,712	0.79	142	4,003.71	136.50								
	Min.		122.08				0.41			19.00		5.93					1.24		0.58	111	120.21						
	Avg.		128.58				0.46			28.53		6.27					1.30		0.71	128	129.15						
August	Max.	4,045.82	135.00	0	150,718	16,597	0.52	173,570	1,197,776	44.46	216,538	6.77	44,888	1.41	22,277	0.79	154	4,102.75	136.21								
	Min.		125.96				0.00			24.83		6.10					1.27		0.61	128	125.79						
	Avg.		130.51				0.47			35.54		6.42					1.33		0.70	142	132.35						
September	Max.	3,965.91	134.83	0	126,788	15,889	0.51	146,565	990,483	42.09	207,536	6.58	42,956	1.38	22,700	0.83	145	3,954.63	137.04								
	Min.		128.38				0.45			18.80		6.09					1.14		0.62	108	122.83						
	Avg.		132.20				0.48			29.96		6.28					1.30		0.69	129	131.82						
October	Max.	4,056.70	142.29	0	138,516	15,774	0.53	161,790	1,167,935	40.12	211,003	6.52	43,915	1.34	22,505	0.74	148	4,010.08	139.92								
	Min.		127.25				0.39			21.63		5.80					1.23		0.61	111	121.38						
	Avg.		130.86				0.47			34.50		6.24					1.30		0.67	133	129.36						
November	Max.	3,831.32	130.29	0	128,199	13,266	0.46	149,320	504,638	23.78	182,581	6.13	38,002	1.28	22,902	1.04	157	3,881.63	135.29								
	Min.		124.13				0.36			9.51		5.37					1.12		0.63	115	118.42						
	Avg.		127.71				0.41			15.79		5.71					1.19		0.72	135	129.39						
December	Max.	3,996.69	131.50	0	137,772	13,736	0.61	157,653	546,495	20.79	174,987	5.99	35,993	1.18	24,134	0.84	146	4,018.25	136.83								
	Min.		126.54				0.38			12.26		4.83					0.95		0.64	115	122.29						
	Avg.		128.93				0.41			16.40		5.25					1.08		0.72	132	129.62						
Total		48,386.88		0	1,956,424	184,945		2,246,524	9,880,278		2,278,291		473,162		267,661			48,347.2									
General	Max.	4,373.23	157.30	0	207,521	18,259	0.61	235,405	1,197,776	44.46	216,538	6.77	44,888	1.41	24,134	1.04	157	4,336.00	150.67								
	Min.		122.08				0.00			146,565		504,638					9.51		170,193	3.00	35,689	0.92	20,198	0.37	78	3,818.04	118.42
	Avg.		4,032.24				132.57			0		163,035					15,412		0.46	187,210	823,357	24.48	189,858	5.65	39,430	1.17	22,305

SEWERAGE AND WATER BOARD OF NEW ORLEANS

TABLE V

PRINCIPLE RESULTS OF OPERATION OF THE ALGIERS WATER PURIFICATION PLANT FOR THE YEAR ENDING: December 31, 2014

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
																				Total M.G.D.	M.G.D.
Month		Total Million Gallons of Water Treated During Month	Amount of Water Treated Million Gallons Per 24 Hours	Pounds of Polyelectrolyte Used During Month	Polyelectrolyte Parts Per Million	Total Pounds of Fluoride (100%) Used During Month	Fluoride Parts Per Million	Total Pounds of Pure Iron (Fe) used During Month	Pure Iron (Fe) Parts Per Million	Total Pounds of Lime Used During Month	Lime Parts Per Million	Total Pounds of Anhydrous Ammonia Used During Month	Anhydrous Ammonia Parts Per Million	Total Pounds Chlorine Used During Month	Chlorine Parts Per Million	Total Pounds Polyphosphate Used During Month	Polyphosphate Parts Per Million	NTU Turbidity of Clarifier Effluent	PPM Clear Well Alkalinity of Filter Effluent	High Lift Pumpage	
January	Max. Min. Avg.	12.00 332.60 10.73	12.00 10.00 10.73	11,855 4.28	4.31 4.24 4.28	1,284 0.44 0.46	0.48 13,337 4.82	6.60 3.68 98,041	43.47 24.93 24.93	43.47 35.46	2,026 0.70 0.73	0.77 13,975 5.04	5.40 4.80 5.04	2,067 0.66 0.75	0.80 0.6 4.1	18.0 0.6 4.1	80 58 67	295.57 8.14 9.53	8.14 9.53	10.86 8.14 9.53	
February	Max. Min. Avg.	14.00 301.49 10.77	14.00 10.00 10.77	10,752 4.28	4.31 4.26 4.28	1,164 0.49 0.47	0.49 13,503 4.47	7.66 4.31 5.43	42.53 22.39 30.66	42.53 22.39 30.66	1,682 0.65 0.67	0.71 12,567 4.99	5.55 4.62 4.99	1,600 0.43 0.64	0.80 0.43 0.64	8.5 0.3 2.1	89 50 67	285.60 9.45 10.20	9.45 10.20	11.67 9.45 10.20	
March	Max. Min. Avg.	12.00 315.34 10.17	12.00 10.00 10.17	11,235 4.26	4.32 4.26 4.27	1,204 0.47 0.46	0.47 14,080 4.46	7.36 4.40 5.36	60.14 30.14 41.79	60.14 30.14 41.79	1,887 0.70 0.72	0.74 13,369 5.08	5.44 4.34 5.08	2,000 0.50 0.76	0.80 0.2 1.5	7.4 0.2 1.5	88 52 64	291.49 8.30 9.40	8.30 9.40	10.45 8.30 9.40	
April	Max. Min. Avg.	12.00 304.42 10.15	12.00 10.00 10.15	10,843 4.29	4.27 4.27 4.27	1,162 0.50 0.44	0.44 13,860 4.46	6.60 5.28 5.45	65.04 29.93 38.10	65.04 29.93 38.10	1,944 0.72 0.77	0.80 13,565 5.38	6.41 4.89 5.38	2,000 0.60 0.79	1.20 0.60 0.79	15.0 0.2 1.8	88 56 68	296.93 9.24 9.90	9.24 9.90	11.08 9.24 9.90	
May	Max. Min. Avg.	13.92 326.99 10.55	13.92 10.00 10.55	11,681 4.52	4.26 4.28 4.28	1,413 0.48 0.52	0.48 14,740 5.40	7.54 4.52 5.40	65.04 35.11 50.94	65.04 35.11 50.94	2,468 0.82 0.91	1.01 13,199 4.82	7.02 4.11 4.82	1,867 0.50 0.69	0.80 0.50 1.3	4.2 0.3 1.3	69 48 56	310.82 9.10 10.03	9.10 10.03	12.22 9.10 10.03	
June	Max. Min. Avg.	12.00 312.33 10.41	12.00 10.00 10.41	11,143 4.31	4.27 4.14	1,380 0.51 0.53	0.51 14,080 5.41	6.59 4.40 5.41	65.04 40.00 51.91	65.04 40.00 51.91	2,936 0.98 1.13	1.38 15,574 5.99	7.48 4.96 5.99	2,000 0.56 0.77	1.13 0.56 1.0	6.5 0.2 1.0	67 44 54	304.63 9.20 10.15	9.20 10.15	10.89 9.20 10.15	
July	Max. Min. Avg.	12.00 316.05 10.20	12.00 9.63 10.20	11,268 4.27	4.31 4.27 4.28	1,392 0.51 0.53	0.51 14,520 5.49	7.91 5.26 5.49	129.18 58.81 74.06	129.18 58.81 74.06	3,091 1.10 1.17	1.24 16,869 6.40	6.75 6.06 6.40	2,267 0.68 0.86	1.20 0.68 0.86	23.0 0.3 1.8	70 34 54	312.22 9.08 10.07	9.08 10.07	11.03 9.08 10.07	
August	Max. Min. Avg.	15.04 317.10 10.23	15.04 9.00 10.23	11,124 3.54	4.41 4.21 4.21	1,413 0.53 0.53	0.53 14,695 5.61	6.83 4.40 5.61	89.93 50.52 73.30	89.93 50.52 73.30	2,939 1.01 1.11	1.17 16,102 6.09	6.40 5.34 6.09	1,999 0.50 0.77	1.33 0.50 0.77	21.0 0.8 5.9	81 35 56	314.05 9.30 10.13	9.30 10.13	12.19 9.30 10.13	
September	Max. Min. Avg.	12.00 299.54 9.98	12.00 9.00 9.98	8,959 3.54	3.64 3.59 3.59	1,272 0.44 0.51	0.44 13,466 5.44	6.83 4.40 5.44	75.14 50.04 63.61	75.14 50.04 63.61	2,745 0.99 1.10	1.26 15,311 6.13	7.15 5.40 6.13	2,034 0.53 0.82	1.33 0.53 0.82	15.0 0.8 3.7	67 44 52	294.12 8.89 9.80	8.89 9.80	10.99 8.89 9.80	
October	Max. Min. Avg.	12.00 303.41 9.79	12.00 9.00 9.79	10,018 4.08	3.58 3.96	1,312 0.47 0.52	0.47 14,336 5.71	8.30 3.68 5.71	69.64 28.36 49.36	69.64 28.36 49.36	2,609 0.95 1.03	1.17 14,917 5.90	6.72 5.38 5.90	1,900 0.53 0.76	1.25 0.53 0.76	26.0 1.7 5.3	108 58 83	283.98 8.22 9.16	8.22 9.16	10.09 8.22 9.16	
November	Max. Min. Avg.	12.00 324.64 10.82	12.00 9.71 10.82	10,903 4.00	4.08 4.03	1,298 0.46 0.48	0.46 14,160 5.25	6.59 4.17 5.25	54.96 24.73 40.86	54.96 24.73 40.86	2,492 0.78 0.92	1.14 17,353 6.43	8.55 5.65 6.43	1,650 0.62 0.62	1.20 0.50 0.62	6.4 0.7 2.5	115 72 91	291.64 8.14 9.72	8.14 9.72	10.66 8.14 9.72	
December	Max. Min. Avg.	15.58 354.08 11.42	15.58 10.00 11.42	11,878 3.99	4.06 4.02	1,408 0.43 0.48	0.43 15,125 5.17	6.59 3.67 5.17	61.94 19.03 39.84	61.94 19.03 39.84	2,402 0.74 0.81	0.88 16,121 5.47	5.88 5.06 5.47	2,017 0.50 0.69	1.07 0.50 0.69	5.0 1.0 2.2	115 82 96	308.68 8.99 9.96	8.99 9.96	12.18 8.99 9.96	
Total		3,807.99		131,659		15,702		169,902		1,557,093		29,221		178,922		23,401				3,589.73	
General	Max. Min. Avg.	354.08 299.54 317.33	15.58 9.00 10.43	11,878 8,959 10,972	4.52 3.54 4.15	1,413 1,162 1,309	0.58 0.43 0.49	15,125 13,337 14,159	8.30 3.67 5.35	196,576 76,874 129,758	129.18 19.03 49.03	3,091 1,682 2,435	1.38 0.65 0.92	17,353 12,567 14,910	8.55 4.11 5.63	2,267 1,600 1,950	1.33 0.43 0.74	26.0 0.2 2.8	115 34 67	314.05 283.98 299.14	12.22 8.14 9.83

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**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE VI-A**

**MONTHLY SUMMARY OF CARROLLTON WATER PURIFICATION PLANT FILTER OPERATIONS  
FOR THE YEAR ENDING: December 31, 2014**

1	2	3		4		5		6		7		8		9		10		11	
		Total Million Gallons Water Filtered During Month		Total Number of Runs		Length of Runs in Hours		Million Gallons of Water Filtered Per Run		Million Gallons Per Day Per Filter		Total Amount in Million Gallons of Wash Water Used		Million Gallons of Wash Water Used Per Run		Percentage of Wash Water Used Per Run		Million Gallons Filtered Per Acre Per Day	
Month		Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New
January	Max.					212	209	26.875	51.049							3.38	3.83		
	Min.	1,858.447	2,471.855	98	72	90	115	8.875	22.339	2.824	5.590	29.400	61.560	0.300	0.855	1.12	1.67	85.969	87.786
	Avg.					161	156	18.964	34.331							1.58	2.49		
February	Max.					219	236	27.375	61.297							3.90	14.19		
	Min.	1,560.573	2,628.572	81	58	115	23	6.617	5.271	2.746	6.168	19.500	43.390	0.241	0.748	0.88	1.22	83.597	102.343
	Avg.					168	176	19.266	45.317							1.25	1.65		
March	Max.					172	214	21.750	51.813							2.30	8.85		
	Min.	1,610.838	2,624.443	81	76	139	42	13.500	7.779	2.737	5.252	25.200	52.300	0.311	0.688	1.43	1.33	83.320	87.144
	Avg.					174	158	19.887	34.532							1.56	1.99		
April	Max.					169	191	21.500	43.542							2.25	4.21		
	Min.	1,740.086	2,322.598	91	74	161	135	13.334	22.780	2.752	4.931	27.300	47.700	0.300	0.959	1.40	2.20	83.761	81.828
	Avg.					167	153	19.122	31.386							1.57	3.06		
May	Max.					191	184	23.500	42.167							2.60	3.31		
	Min.	1,697.840	2,345.563	88	80	146	111	13.917	20.734	2.772	4.857	31.800	54.590	0.361	0.687	1.54	1.63	84.368	80.598
	Avg.					167	145	19.294	29.320							1.87	2.34		
June	Max.					172	182	25.200	41.708							2.17	3.97		
	Min.	1,574.548	2,212.878	84	76	167	136	21.500	17.676	2.567	4.589	25.200	53.300	0.300	0.701	1.40	1.68	78.140	76.144
	Avg.					175	152	18.745	29.117							1.60	2.41		
July	Max.					189	235	23.625	49.375							2.27	3.44		
	Min.	1,707.756	2,164.384	89	72	161	121	13.500	17.115	2.746	4.511	27.300	42.400	0.307	0.589	1.30	1.19	83.598	74.851
	Avg.					168	160	19.188	30.061							1.60	1.96		
August	Max.					168	191	21.000	42.002							2.17	4.58		
	Min.	1,602.703	2,050.139	84	76	121	139	13.834	23.098	2.753	4.054	25.200	45.300	0.300	0.596	1.43	2.66	83.807	67.123
	Avg.					166	160	19.080	26.976							1.57	4.12		
September	Max.					172	199	21.709	42.002							2.24	2.10		
	Min.	1,606.467	2,311.021	83	70	162	139	13.834	23.098	2.787	4.882	25.200	33.900	0.304	0.484	1.40	1.15	84.842	81.005
	Avg.					167	162	19.355	33.015							1.57	1.47		
October	Max.					173	203	26.400	47.350							2.16	3.86		
	Min.	1,715.014	2,276.144	88	70	162	140	21.961	43.870	2.800	4.725	26.400	47.350	0.300	0.658	1.37	1.50	85.233	78.402
	Avg.					167	161	19.489	31.613							1.54	2.08		
November	Max.					171	192	20.875	42.728							2.29	2.65		
	Min.	1,545.170	2,387.081	78	72	143	135	13.583	22.934	2.930	4.911	24.300	43.700	0.312	0.607	1.49	1.42	89.180	81.491
	Avg.					162	162	19.810	33.154							1.57	1.83		
December	Max.					193	261	24.000	56.226							2.33	3.20		
	Min.	1,688.006	2,390.212	88	72	118	121	13.334	20.243	2.763	4.856	27.300	46.600	0.310	0.647	1.29	1.15	84.091	80.575
	Avg.					167	164	19.182	33.197							1.62	1.95		
Total		19,907.448	28,184.890	1,033	868	5,895	5,763	682.980	1,210.215	33.177	59.326	314.100	572.090	3.646	8.219	65.01	104.34	1,009.906	979.290
General	Max.	1,858.447	2,628.572	98	80	219	261	27.375	61.297	2.930	6.168	31.800	61.560	0.361	0.959	3.90	14.19	89.180	102.343
	Min.	1,545.170	2,050.139	78	58	90	23	6.617	5.271	2.567	4.054	19.500	33.900	0.241	0.484	0.88	1.15	78.140	67.123
	Avg.	1,658.954	2,348.741	86	72	167	159	19.271	32.471	2.765	4.944	26.175	47.674	0.304	0.685	1.58	2.03	84.159	81.608

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE VI-B**

**MONTHLY SUMMARY OF ALGIERS FILTER OPERATIONS FOR THE YEAR ENDING: December 31, 2014**

1	2	3	4	5	6	7	8	9	10
Month		Total Million Gallons Water Filtered During Month of Runs	Total Number of Runs	Length of Runs in Hours	Million Gallons of Water Filtered Per Run	Million Gallons Per Day Per Filter	Total Amount in Million Gallons of Wash Water Used	Million Gallons of Wash Water Used Per Run	Percentage of Wash Water Used Per Run
January	Max.	323.68	72	168	7.000	0.88	6.91	0.096	7.41
	Min.			59	1.292				1.34
	Avg.			122	4.496				2.13
February	Max.	303.64	58	168	6.959	0.91	6.34	0.109	14.97
	Min.			35	0.730				1.57
	Avg.			138	5.235				2.09
March	Max.	304.88	53	170	7.083	0.93	6.12	0.115	12.04
	Min.			23	0.958				1.63
	Avg.			148	5.752				2.01
April	Max.	310.37	58	171	7.083	0.86	6.75	0.116	22.34
	Min.			25	0.521				1.64
	Avg.			149	5.351				2.17
May	Max.	317.47	51	171	7.084	0.89	6.13	0.120	3.19
	Min.			163	3.771				1.70
	Avg.			167	6.224				1.93
June	Max.	307.81	52	169	7.042	0.87	6.00	0.115	5.53
	Min.			77	2.083				1.64
	Avg.			164	5.919				1.95
July	Max.	335.83	57	169	7.042	0.85	6.61	0.116	3.33
	Min.			164	3.479				1.65
	Avg.			167	5.891				1.97
August	Max.	293.47	51	193	8.104	0.86	6.13	0.120	41.16
	Min.			7	0.292				1.48
	Avg.			161	5.754				2.09
September	Max.	305.76	54	169	7.042	0.83	5.93	0.110	2.55
	Min.			141	4.312				1.56
	Avg.			163	5.662				1.94
October	Max.	305.72	55	171	7.125	0.81	6.27	0.114	27.38
	Min.			10	0.416				1.60
	Avg.			164	5.556				2.05
November	Max.	315.16	49	169	10.188	0.95	6.18	0.126	7.96
	Min.			45	1.584				1.24
	Avg.			163	6.432				1.96
December	Max.	376.62	65	219	10.480	0.94	8.23	0.127	31.97
	Min.			19	0.396				1.12
	Avg.			148	5.794				2.19
Total		3800.40	675	4.729	180.132	10.58	77.59	1.3843	222.48
General	Max.	376.62	72	219	10.480	0.95	8.23	0.1270	41.16
	Min.	293.47	49	7	0.292	0.81	5.93	0.0958	1.12
	Avg.	316.70	56	151	5.611	0.88	6.47	0.1154	2.05

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE VII**

**FIVE YEAR ANALYSIS COMPOSITE DATA (2010 - 2014) FOR NEW ORLEANS  
DRINKING WATER PURIFICATION SYSTEM**

PARAMETER	MISSISSIPPI RIVER (Before Purification)			FINISHED WATER (After Purification)		
	MAX	MIN	AVG	MAX	MIN	AVG
Total Alkalinity (ppm as CaCO <sub>3</sub> )	212	72	120	227	78	131
Total Hardness (ppm as CaCO <sub>3</sub> )	238	91	162	270	122	183
Noncarbonate Hardness (ppm as CaCO <sub>3</sub> )	105	0	42	120	2	52
Calcium Hardness (ppm as CaCO <sub>3</sub> )	187	69	110	204	75	131
Magnesium Hardness (ppm as CaCO <sub>3</sub> )	104	1	52	118	2	52
Nephelometric Turbidity (NTU)	282	4.6	60	0.25	0.06	0.12
pH	8.47	7.00	7.76	9.53	7.70	8.86
Chloride (ppm)	63	10	31	65	14	35
Fluoride (ppm)	0.65	0.08	0.29	1.19	0.44	0.78
Total Dissolved Solids (ppm)	490	146	255	526	130	286
Total Suspended Solids (ppm)	396	7	95	-----	-----	-----
Free Chlorine Residual (ppm as Cl <sub>2</sub> )	-----	-----	-----	0.6	0.0	0.2
Total Chlorine Residual (ppm as Cl <sub>2</sub> )	-----	-----	-----	5.5	0.0	3.1
Ammonia (ppm as N)	-----	-----	-----	0.73	0.00	0.15
Nitrate + Nitrite (ppm as N) *	-----	-----	-----	3	1	2
Sulfate (ppm) *	-----	-----	-----	69	0	45
Conductivity (µS/cm)	610	179	417	650	185	469
Temperature (°F)	90	37	65	91	41	73
Aluminum (ppm) *	-----	-----	-----	0.08	0.00	0.02
Antimony (ppm) *	-----	-----	-----	0.002	0.000	0.000
Arsenic (ppm) *	-----	-----	-----	0.001	0.000	0.000
Barium (ppm) *	-----	-----	-----	0	0	0
Beryllium (ppm) *	-----	-----	-----	0.000	0.000	0.000
Cadmium (ppm) *	-----	-----	-----	0.000	0.000	0.000
Chromium (ppm) *	-----	-----	-----	0.00	0.00	0.00
Copper (ppm) *	-----	-----	-----	0.3	0.0	0.1
Iron (ppm) *	-----	-----	-----	0.05	0.00	0.01
Lead (ppm) *	-----	-----	-----	0.033	0.000	0.004
Manganese (ppm) *	-----	-----	-----	0.00	0.00	0.00
Mercury (ppm) *	-----	-----	-----	0.000	0.000	0.000
Nickel (ppm) *	-----	-----	-----	0.0	0.0	0.0
Selenium (ppm) *	-----	-----	-----	0.00	0.00	0.00
Silver (ppm) *	-----	-----	-----	0.00	0.00	0.00
Thallium (ppm) *	-----	-----	-----	0.000	0.000	0.000
Zinc (ppm) *	-----	-----	-----	0	0	0
Potassium (ppm) *	-----	-----	-----	8.8	2.8	5.0
Sodium (ppm) *	-----	-----	-----	41.8	23.3	28.4
Cyanide (ppb) *	-----	-----	-----	0.0	0.0	0.0
Haloacetic Acids (HAA5) (ppb)	-----	-----	-----	33.9	8.6	17.2
Total Organic Carbon (ppm)	4.7	2.9	3.8	4.1	1.9	2.8
Total Trihalomethanes (ppb)	25.7	0.0	0.0	85.1	6.8	23.7
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	14.8
Carbon Tetrachloride (ppb)	3.1	0.0	0.0	0.0	0.0	0.0
Bromodichloromethane (ppb)	0.0	0.0	0.0	13.2	0.0	6.0
Tetrachloroethene (ppb)	0.0	0.0	0.0	0.0	0.0	0.0
BTX (Benzene, Toluene & Xylenes) (ppb)	0.6	0.0	0.0	0.0	0.0	0.0
Total Coliforms (CFUs/100 ml)	4500	44	700	36	0	0
Fecal Coliforms (CFUs/100 ml)	660	7	47	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 2010 and 2013; testing is only required triennially.

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 Fecal Coliform testing.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE VIII  
YEAR ENDED DECEMBER 31, 2014**

**CARROLLTON OPERATION**

CHEMICAL	CHEMICAL COST	CHEMICAL COST PER MILLION GALLONS
Lime	\$793,040.51	\$16.39
Ferric Coagulant	\$1,450,805.17	\$29.98
Chlorine & Sodium Hypochlorite	\$1,022,917.51	\$21.14
Sodium Polyphosphate	\$109,740.95	\$2.27
Polyelectrolyte	\$555,624.38	\$11.48
Fluoride	\$233,214.14	\$4.82
Ammonia	\$293,360.29	\$6.06
Carbon	\$0.00	\$0.00
<b>TOTAL CHEMICALS</b>	<b>\$4,458,702.95</b>	<b>\$92.15</b>

Purification Plant Operating Cost:

Total Water Treated in 2014: 48,386,880 Gallons

**TOTAL COST  
PER MILLION GALLONS**

YEAR	TOTAL WATER TREATED IN MILLION GALLONS	OPERATING COST	TOTAL COST PER MILLION GALLONS
2014	48,386.88	\$8,585,082	\$177.43
2013	47,842.43	\$8,119,447	\$169.71
2012	50,240.70	\$8,294,045	\$165.09
2011	50,870.78	\$7,342,571	\$144.34
2010	50,040.84	\$7,868,284	\$157.24

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE IX  
YEAR ENDED DECEMBER 31, 2014**

**ALGIERS OPERATION**

CHEMICAL	CHEMICAL COST	CHEMICAL COST PER MILLION GALLONS
Lime	\$157,518.54	\$41.37
Ferric Coagulant	\$109,722.71	\$28.81
Sodium Hypochlorite	\$81,315.16	\$21.35
Sodium Polyphosphate	\$24,076.04	\$6.32
Polyelectrolyte	\$37,391.16	\$9.82
Fluoride (100%)	\$19,800.05	\$5.20
Ammonia	\$21,915.75	\$5.76
Carbon	\$0.00	\$0.00
<b>TOTAL CHEMICALS</b>	<b>\$451,739.40</b>	<b>\$118.63</b>

Purification Plant Operating Cost:

Total Water Treated in 2014: 3,807,990,000 Gallons

**TOTAL COST  
PER MILLION GALLONS**

YEAR	TOTAL WATER TREATED IN MILLION GALLONS	OPERATING COST	TOTAL COST PER MILLION GALLONS
2014	3,807.99	\$1,835,436.00	\$482.00
2013	4,115.36	\$1,967,690.00	\$478.13
2012	4,227.86	\$2,061,032.00	\$487.49
2011	4,280.60	\$1,834,511.00	\$428.56
2010	4,105.81	\$1,995,926.00	\$486.12
2009	3,935.84	\$1,894,092.00	\$481.24

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE X  
YEAR ENDED DECEMBER 31, 2014**

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

Total Million Gallons Water Treated	14,298.51
Total Tons Dry Sludge Deposited in Basins Including suspended and Dissolved Solids Removed and Reacting Chemicals	7,003
Total Million Gallons Wet Sludge Withdrawn from Basins	566.25
Average Percent solids in Wet Sludge	0.30
Total Million Gallons Water Used in withdrawing Sludge	565.55
Percent of Total Water Treated Used in Withdrawing Wet Sludge	3.96

**TABLE X-A  
YEAR ENDED DECEMBER 31, 2014**

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

Total Million Gallons Water Treated	34,039.46
Total Tons Dry Sludge Deposited in Basins Including suspended and Dissolved Solids Removed and Reacting Chemicals	15,902
Total Million Gallons Wet Sludge Withdrawn from Basins	422.44
Average Percent solids in Wet Sludge	0.89
Total Million Gallons Water Used in withdrawing Sludge	420.85
Percent of Total Water Treated Used in Withdrawing Wet Sludge	1.24

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE XI**

**2014 ANALYSIS DATA FOR NEW ORLEANS CARROLLTON  
DRINKING WATER PURIFICATION SYSTEM - 2014**

PARAMETER	MISSISSIPPI RIVER (Before Purification)			FINISHED WATER (After Purification)		
	MAX	MIN	AVG	MAX	MIN	AVG
Total Alkalinity (ppm as CaCO <sub>3</sub> )	146	75	109	152	84	119
Total Hardness (ppm as CaCO <sub>3</sub> )	211	91	155	235	130	176
Noncarbonate Hardness (ppm as CaCO <sub>3</sub> )	74	14	46	91	14	58
Calcium Hardness (ppm as CaCO <sub>3</sub> )	136	74	101	154	98	124
Magnesium Hardness (ppm as CaCO <sub>3</sub> )	89	17	54	84	5	53
Nephelometric Turbidity (NTU)	277	7.9	75	0.25	0.06	0.11
pH	8.22	7.00	7.58	9.26	8.13	8.82
Chloride (ppm)	48	19	29	51	22	33
Fluoride (ppm)	0.36	0.13	0.23	0.91	0.46	0.72
Total Dissolved Solids (ppm)	291	161	225	339	244	289
Total Suspended Solids (ppm)	234	41	131	-----	-----	-----
Free Chlorine Residual (ppm as Cl <sub>2</sub> )	-----	-----	-----	0.4	0.1	0.2
Total Chlorine Residual (ppm as Cl <sub>2</sub> )	-----	-----	-----	4.9	0.5	3.1
Ammonia (ppm as N)	-----	-----	-----	0.57	0.03	0.15
Nitrate (ppm as N)	2.93	1.00	1.60	3.10	0.82	1.64
Nitrite (ppm as N)	0.09	0.00	0.02	0.49	0.00	0.04
Sulfate (ppm) *	-----	-----	-----	45	45	45
Conductivity (µS/cm)	554	230	381	568	318	435
Temperature (°F)	86	37	64	89	44	74
Aluminum (ppm) *	-----	-----	-----	0.01	0.01	0.01
Antimony (ppm) *	-----	-----	-----	0.000	0.000	0.000
Arsenic (ppm) *	-----	-----	-----	0.000	0.000	0.000
Barium (ppm) *	-----	-----	-----	0	0	0
Beryllium (ppm) *	-----	-----	-----	0.000	0.000	0.000
Cadmium (ppm) *	-----	-----	-----	0.000	0.000	0.000
Chromium (ppm) *	-----	-----	-----	0.00	0.00	0.00
Copper (ppm) *	-----	-----	-----	0.2	0.0	0.1
Iron (ppm) *	-----	-----	-----	0.00	0.00	0.00
Lead (ppm) *	-----	-----	-----	0.016	0.000	0.003
Manganese (ppm) *	-----	-----	-----	0.00	0.00	0.00
Mercury (ppm) *	-----	-----	-----	0.000	0.000	0.000
Nickel (ppm) *	-----	-----	-----	0.0	0.0	0.0
Selenium (ppm) *	-----	-----	-----	0.00	0.00	0.00
Silver (ppm) *	-----	-----	-----	0.00	0.00	0.00
Thallium (ppm) *	-----	-----	-----	0.000	0.000	0.000
Zinc (ppm) *	-----	-----	-----	0	0	0
Potassium (ppm) *	-----	-----	-----	3.6	3.5	3.6
Sodium (ppm) *	-----	-----	-----	24.0	23.3	23.7
Cyanide (ppb) *	-----	-----	-----	0.0	0.0	0.0
Haloacetic Acids (HAA5) (ppb)	-----	-----	-----	30.1	9.5	15.6
Total Organic Carbon (ppm)	4.1	3.0	3.6	2.9	2.1	2.6
Total Trihalomethanes (ppb)	0.0	0.0	0.0	36.9	9.4	21.6
1, 2-Dichloroethane (ppb)	0.0	0.0	0.0	0.0	0.0	0.0
Chloroform (ppb)	0.0	0.0	0.0	22.6	5.2	13.0
Carbon Tetrachloride (ppb)	0.0	0.0	0.0	0.0	0.0	0.0
Bromodichloromethane (ppb)	0.0	0.0	0.0	12.7	3.1	6.8
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)	2900	57	510	2	0	0
Fecal Coliforms (CFUs/100 ml)	71	7	26	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 testing is performed triennially. The results in this table are from 2013. 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 Fecal Coliform testing.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE XII**

**EXTRACTS FROM TABLES IV-E AND V**

**20 Year Period, 1995 to 2014 Inclusive  
Maximum, Minimum, and Average Amount of  
Water Treated Per Day  
(M.G. per 24 Hours)**

YEAR	CARROLLTON			ALGIERS		
	MAX.	MIN.	AVG.	MAX.	MIN.	AVG.
1995	142.83	104.67	121.40	18.14	9.00	11.55
1996	198.42	91.59	128.97	18.27	9.00	11.47
1997	156.53	112.70	128.73	18.83	9.58	12.06
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

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE XIII  
YEAR ENDED DECEMBER 31, 2014**

**Monthly Temperature (Degrees Farenheit) of the  
Mississippi River Water at the Carrollton Plant**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
January	49	50	52	50	50	41	43	48	47	42
February	48	51	47	53	46	41	43	48	47	40
March	51	55	56	55	51	48	51	57	49	46
April	62	63	63	63	58	62	61	69	57	59
May	71	74	71	68	69	71	68	74	66	69
June	81	83	79	77	79	81	80	81	76	79
July	85	86	82	80	85	85	84	85	81	83
August	88	88	85	82	84	86	87	87	83	84
September	*	86	82	78	81	83	80	82	83	83
October	76	78	75	71	70	72	72	72	76	72
November	66	63	63	63	59	61	62	60	62	59
December	51	54	58	55	49	50	50	55	48	49
Maximum	90	90	89	85	86	89	90	89	86	86
Minimum	42	46	40	42	42	37	40	46	45	37
Average	66	69	68	66	65	65	65	68	65	64

Ten Year Period

Maximum: 90  
Minimum: 37  
Average: 66

\* Data not available for  
September 2005 due  
to hurricane Katrina.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**TABLE XIV  
December 31, 2014  
Monthly Temperature (Degrees Farenheit) of the  
Tap Water at the Carrollton Plant**

	2010	2011	2012	2013	2014
January	61	61	64	65	62
February	61	60	65	66	61
March	66	67	69	66	66
April	70	71	74	69	72
May	76	73	77	73	77
June	80	79	82	81	80
July	82	82	84	81	83
August	84	85	79	81	84
September	80	80	78	84	84
October	75	76	73	78	79
November	66	69	69	72	69
December	60	63	68	64	65
Maxiumum	88	90	89	91	89
Minimum	41	44	51	49	44
Average	72	72	73	73	74

<u>Five Year Period</u>	
Maximum:	91
Minimum:	41
Average:	73

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**New Orleans West Bank Sewerage Treatment Plant  
2014 Yearly Summary**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2014
<b>Plant Eff Flow (MGD)</b>													
Average	10.813	12.258	11.564	9.419	9.815	10.431	10.392	7.690	8.448	6.453	6.28	7.22	9.23
Maximum	23.166	30.333	29.529	20.718	28.873	24.098	18.911	16.423	14.54	10.397	8.17	13.92	30.33
<b>INFLUENT BOD (mg/L)</b>													
Average	77.1	70.1	63.6	76.4	89.1	64.3	60.4	73.3	73.9	88.9	107	105.8	79.16
Maximum	148	110	134	126	161	93	94	100	124	116	167	144	167
<b>INFLUENT TSS (mg/L)</b>													
Average	94.8	89.4	76.4	98.3	110	82.5	73	70.7	66.3	67.8	110.4	98.8	86.53
Maximum	221	162	172	310	304	144	161	108	117	121	234	280	310
<b>INFLUENT BOD (lbs/day)</b>													
Average	6,049	6,422	5,004	5,426	5,963	5,239	4,298	4,191	4,753	4,560	5,306	5,866	5,256
Maximum	11,873	10,565	7,927	8,399	17,608	9,932	7,036	6,846	7,623	5,580	7,811	9,369	17,608
<b>INFLUENT TSS (lbs/day)</b>													
Average	7,400	8,458	6,083	7,380	8,858	6,923	5,090	4,114	4,446	3,528	5,765	5,618	6,139
Maximum	16,143	17,488	14,724	23,506	60,807	16,269	8,582	8,874	7,318	6,565	14,594	13,425	60,807
<b>EFFLUENT BOD (mg/L)</b>													
Average	9.6	12.1	12	12	10.6	7.3	5.2	6.2	5.5	9.5	5.6	8.6	8.68
Weekly Maximum	13	21	17	23	17	11	8	10	14	22	8	18	23
<b>EFFLUENT TSS (mg/L)</b>													
Average	10.8	16.7	12.6	15.2	13.4	12.5	8.3	8.6	7.7	10	7	7.2	10.83
Weekly Maximum	24	42	23	27	19	20	12	12	10	23	10	20	42
<b>EFFLUENT BOD (lbs/day)</b>													
Average	889	1,384	1,039	1,013	731	655	451	374	375	503	291	523	685.65
Weekly Maximum	1,739	4,190	1,948	3,754	1,775	1,809	1,213	648	748	1,180	477	2,090	4,190
<b>EFFLUENT TSS (lbs/day)</b>													
Average	1,019	2,174	1,163	1,318	948	1,087	720	527	523	536	370	458	903.69
Weekly Maximum	2,372	7,980	3,366	4,407	2,662	2,613	1,819	985	962	1,214	649	2,323	7,980
<b>EFFLUENT CL2 (mg/L)</b>													
Average	1.21	1.27	1.29	1.28	1.27	1.2	1.1	1.15	1.19	1.26	1.34	1.19	1.23
Maximum	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.40
<b>EFFLUENT COLIFORM (col/100-ml)</b>													
Average (Geo)	2.4	2.92	2.11	3.36	5.09	21.12	2.58	2.68	2.36	2.29	2.11	2.12	4.26
Weekly Maximum (Geo)	3.52	2.99	2	8.11	6.8	71.06	3.42	3.83	2	3.74	2	2.71	71.06
<b>EFFLUENT pH (su)</b>													
Minimum	7.26	7.57	7.46	7.31	6.99	7.30	7.26	7.08	7.09	7.11	7.29	7.37	6.99
Maximum	7.78	7.87	7.71	7.63	7.59	7.60	7.6	7.4	7.38	7.5	7.5	7.38	7.87
<b>DISPOSED SLUDGE (dry tons)</b>													
Average per day	2.48	3.99	9.81	9.2	7.78	6.75	6.98	6.51	5.51	4.18	4.08	9.28	6
Total	47.05	75.78	225.59	230.11	155.57	128.18	125.56	143.18	99.24	108.7	122.29	80.3	1,542
<b>ELECTRICITY (kwhr)</b>													
Average per day	10,478	10,400	9,883	9,334	9,142	9,200	9,520	8,146	5,310	5,950	6,865	6,800	8,419
Total (kwhr)	324,817	291,210	336,015	252,011	310,815	257,612	285,614	268,819	154,000	190,400	212,819	238,013	3,122,145
<b>RAINFALL (inches) West Bank</b>													
TOTAL	2.63	7.50	7.79	3.61	8.04	1.79	4.85	2.51	1.96	1.41	0.64	2.09	44.83

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**New Orleans East Bank Sewerage Treatment Plant  
2014 Yearly Summary**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2014
<b>Plant EF Flow (MGD)</b>													
Average	95.132	108.2	104.4	92.327	90.274	100.687	102.803	83.623	102.02	80.671	75.1	86.374	93
Maximum	167.7	170.3	189.7	159	167	152.1	167	163.7	158.3	116.7	91.9	149.2	190
<b>INFLUENT BOD (mg/L)</b>													
Average	71	90.4	94.3	83.3	94.6	67.7	58.5	96.5	76.3	91.9	132.4	120.9	90
Maximum	120	360	163	155	304	161	102	685	301	259	322	362	685
<b>INFLUENT TSS (mg/L)</b>													
Average	74	120.5	107.6	104.6	125.4	86.8	68.8	137.4	91.4	107.3	147.8	128.2	108
Maximum	166	746	291	195	224	207	120	1398	264	257	414	371	1,398
<b>INFLUENT BOD (lbs/day)</b>													
Average	56,169	77,948	81,517	60,715	72,915	58,958	49,637	41,545	59,231	67,495	81,476	85,016	66,052
Maximum	91,746	413,776	141,259	109,131	177,781	122,726	81,824	426,137	95,393	166,535	221,371	155,438	426,137
<b>INFLUENT TSS (lbs/day)</b>													
Average	58,601	110,292	96,242	75,073	231,858	75,975	60,843	103,164	78,190	73,802	96,593	91,036	95,972
Maximum	153,128	856,926	259,072	175,466	101,203	151,921	112,732	869,606	180,718	179,310	282,157	179,500	869,606
<b>EFFLUENT BOD (mg/L)</b>													
Average	24	32.2	28.4	31.5	22.5	17.9	19.5	15.7	20.8	22.7	19.2	23.6	23.2
Weekly Maximum	42.2	45.2	52.2	64.9	39	41	29	22	35	37	38	38	64.9
<b>EFFLUENT TSS (mg/L)</b>													
Average	20	26.6	17.9	30.2	17.5	13	10.2	8.8	12.4	9.5	11.1	12.5	15.8
Weekly Maximum	30	81	48	145	50	65	26	14	26	20	23	40	145.0
<b>EFFLUENT BOD (lbs/day)</b>													
Average	18,384	29,282	25,279	24,599	16,647	15,130	16,426	10,959	17,684	15,424	12,097	17,424	18,320
Weekly Maximum	32,586	57,238	58,379	58,744	37,605	40,964	29,814	18,465	32,439	32,118	22,438	42,753	58,744
<b>EFFLUENT TSS (lbs/day)</b>													
Average	15,972	25,539	16,511	25,120	13,875	11,830	9,096	6,364	11,153	6,579	7,010	9,712	13,234
Weekly Maximum	32,168	115,044	57,446	121,998	52,042	64,944	33,090	16,383	330,006	19,466	17,072	45,003	330,006
<b>EFFLUENT CL2 (mg/L)</b>													
Average	0.49	0.49	0.49	0.49	0.48	0.48	0.49	0.46	0.49	0.48	0.48	0.48	0.48
Maximum	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.50
<b>EFFLUENT COLIFORM (col/100-ml)</b>													
Average (Geo)	3.33	2.54	3.37	3.62	4.01	2.33	2.84	5.09	2.66	2.77	2.75	3.28	3
Weekly Maximum (Geo)	13.17	2.94	7.51	6.8	5.4	2.58	3.04	14.5	6.46	2.93	4.22	3.28	15
<b>EFFLUENT pH (su)</b>													
Minimum	6.69	6.84	6.81	6.76	6.44	6.88	6.87	6.78	6.68	6.70	6.81	6.75	6.44
Maximum	7.42	7.02	6.99	6.88	7.09	7.06	6.99	6.94	6.92	6.92	7.81	6.76	7.81
<b>DISPOSED SLUDGE (dry tons)</b>													
Average per day	27.49	12.93	27.26	18	17.76	18.99	31.32	29.67	26.37	20.84	28.6	29.1	24.03
Total	824.73	362.1	599.64	341.91	372.99	455.82	469.9	890.0	580.03	568.63	858.31	785.75	7,110
<b>ELECTRICITY (kw/hr)</b>													
Average per day	64,400	72,258	71,587	71,587	80,026	83,440	82,826	78,852	79,800	75,040	72,240	76,774	75,736
Total (kw/hr)	1,996,400	2,240,000	2,147,600	2,147,600	2,480,800	2,503,200	2,567,600	2,444,400	2,394,000	2,251,200	2,167,200	2,380,000	27,720,000
<b>RAINFALL (inches) East Bank</b>													
TOTAL	2.76	6	7.63	3.13	7.41	7.97	5.9	6.35	4.92	1.64	1.47	4	59.16

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**SEWER TABULATION NUMBER 1  
SEWER LINES AND MANHOLES IN THE SYSTEM AS OF DECEMBER 31, 2014**

**SEWER LINES DISCARDED AND INSTALLED IN 2014**

<b>ORIGINAL CONSTRUCTION (FEET)</b>	<b>DESTROYED OR ABANDONED IN 2014 (FEET)</b>	<b>BUILT IN 2014 (FEET)</b>	<b>REMAINING IN THE SYSTEM AS OF 12/31/2014 (FEET)</b>	<b>REMAINING IN THE SYSTEM AS OF 12/31/2014 (MILES)</b>
8,113,385.2	112,796.7	168,743.8	8,169,332.3	1,547.222

**SEWER MANHOLES REMOVED AND INSTALLED IN 2014**

<b>ORIGINAL CONSTRUCTION</b>	<b>REMOVED IN 2014</b>	<b>BUILT IN 2014</b>	<b>REMAINING IN THE SYSTEM AS OF 12/31/2014</b>
22,987	0	55	23,042

**DETAILS OF SEWER LINES AND SEWER MANHOLES INSTALLED (CONSTRUCTED) IN 2014**

<b>ITEMS</b>	<b>BOARD FUNDED</b>	<b>BY OTHERS</b>	<b>TOTAL FEET</b>	<b>TOTAL MILES</b>
6" P.V.C.	30,673.5	6,033.8	36,707.3	6.952
8" P.V.C.	109,728.6	17,917.6	127,646.2	24.175
10" P.V.C.	3,496.5	0.0	3,496.5	0.662
12" P.V.C.	0.0	0.0	0.0	0.000
15" P.V.C.	0.0	28.0	28.0	0.005
18" P.V.C.	748.0	0.0	748.0	0.142
21" P.V.C.	117.8	0.0	117.8	0.022
<b>TOTAL SEWER LINES CONSTRUCTED IN 2014</b>	<b>144,764.4</b>	<b>23,979.4</b>	<b>168,743.8</b>	<b>32.0</b>
<b>SEWER MANHOLES CONSTRUCTED IN 2014</b>	<b>BOARD FUNDED</b>	<b>BY OTHERS</b>	<b>TOTAL MANHOLES BUILT IN 2014</b>	
	6	49	55	

SEWERAGE AND WATER BOARD OF NEW ORLEANS

SEWER TABULATION NUMBER 2  
 LENGTH OF SEWER LINES OF EACH SIZE AND MATERIAL DISCARDED, BUILT, AND NOW REMAINING IN THE SYSTEM  
 ANNUAL REPORT 2014 - FOR THE CALENDAR YEAR ENDING DECEMBER 31, 2014

SIZE & MATERIAL OF SEWER	TOTAL LENGTH IN SYSTEM AS OF 12/31/2013	DESTROYED OR ABANDONED IN 2014	BUILT IN 2014	NOW REMAINING IN THE SYSTEM AS OF 12/31/2014
72" Steel	29,182.4			29,182.4
68" Steel	9,061.9			9,061.9
66" Steel	28,979.7			28,979.7
66" Concrete	13,740.7			13,740.7
60" Steel	2,577.7			2,577.7
60" Concrete	722.8			722.8
57" Concrete	1,766.8			1,766.8
54" Steel	44,014.5			44,014.5
54" Concrete	7,030.4			7,030.4
51" Concrete	755.9			755.9
50" Steel	135.0			135.0
48" Steel	21,147.2			21,147.2
48" Concrete	10,127.6			10,127.6
48" Fiberglass Reinforced	10,900.2			10,900.2
48" P.V.C.	3,663.4			3,663.4
45" Concrete	3,048.4			3,048.4
42" Steel	3,580.2			3,580.2
42" Concrete	19,121.2			19,121.2
39" Brick	832.8			832.8
39" Concrete	3,871.8			3,871.8
36" Vitrified Clay	1,894.9			1,894.9
36" Cast Iron	431.0			431.0
36" Steel	332.6			332.6
36" Prestressed Concrete	11,273.0			11,273.0
36" Reinforced Concrete	9,312.7			9,312.7
36" P.V.C.	10,604.0			10,604.0
33" Brick	3,080.9			3,080.9
33" Vitrified Clay	562.3			562.3
33" Reinforced Concrete	1,381.4			1,381.4
30" Brick	2,763.0			2,763.0
30" Vitrified Clay	7,538.5			7,538.5
30" Cast Iron	4,305.9			4,305.9
30" Steel	3,535.2			3,535.2
30" Prestressed Concrete	484.0			484.0
30" Reinforced Concrete	33,920.5			33,920.5
30" Fiberglass Reinforced	16,400.0			16,400.0
30" P.V.C.	996.0			996.0
27" Vitrified Clay	24,440.4			24,440.4
27" Reinforced Concrete	13,336.4			13,336.4
27" P.V.C.	4,622.0			4,622.0
24" Vitrified Clay	31,572.2			31,572.2
24" Cast Iron	16,269.2			16,269.2
24" Ductile Iron	619.0			619.0

SIZE & MATERIAL OF SEWER	TOTAL LENGTH IN SYSTEM AS OF 12/31/2013	DESTROYED OR ABANDONED IN 2014	BUILT IN 2014	NOW REMAINING IN THE SYSTEM AS OF 12/31/2014
24" Steel	87.0			87.0
24" Reinforced Concrete	26,537.0			26,537.0
24" Asbestos Cement	4,924.2			4,924.2
24" P.V.C.	5,949.6			5,949.6
21" Reinforced Concrete	11,238.1			11,238.1
21" P.V.C.	4,746.4		117.8	4,864.2
20" Ductile Iron Pipe	1,991.4			1,991.4
18" P.V.C.	17,960.0		748.0	18,708.0
16" Steel	120.0			120.0
16" Asbestos Cement	28,460.9			28,460.9
16" Plastic	1,913.1			1,913.1
15" Vitrified Clay	99,743.6			99,743.6
15" P.V.C.	13,046.9		28.0	13,074.9
15" Plastic Truss	1,766.8			1,766.8
12" Vitrified Clay	109,268.1			109,268.1
12" P.V.C.	65,590.9			65,590.9
10" Vitrified Clay	157,926.9	2,245.8		155,681.1
10" Steel	130.0			130.0
10" Concrete	50,586.1	1,250.7		49,335.4
10" Asbestos Cement	4,356.2			4,356.2
10" P.V.C.	127,827.8		3,496.5	131,324.3
10" Plastic Truss	4,983.5			4,983.5
8" Terra Cotta	322,377.9	3,514.2		318,863.7
8" Vitrified Clay	4,156,768.2	100,310.7		4,056,457.5
8" Cast Iron	32,210.2			32,210.2
8" Ductile Iron	2,233.0			2,233.0
8" Concrete	275,113.1	3,495.3		271,617.8
8" Asbestos Cement	3,887.9	12.0		3,875.9
8" P.V.C.	658,328.6		127,646.2	785,974.8
8" Plastic Truss	63,412.1			63,412.1
8" Plastic	693,119.6	1,968.0		691,151.6
6" Terra Cotta	9,194.7			9,194.7
6" Vitrified Clay	76,522.4			76,522.4
6" Cast Iron	4,204.4			4,204.4
6" Asbestos Cement	4,493.9			4,493.9
6" P.V.C.	285,083.1		36,707.3	321,790.4
6" Plastic Truss	1,763.3			1,763.3
6" Plastic	364,876.3			364,876.3
4" Cast Iron	874.2			874.2
4" Ductile Iron	180.4			180.4
4" P.V.C.	5,525.7			5,525.7
4" Plastic	126.0			126.0
<b>Total Linear Feet</b>	<b>8,113,385.2</b>	<b>112,796.7</b>	<b>168,743.8</b>	<b>8,169,332.3</b>
<b>Total Miles</b>	<b>1,536.626</b>	<b>21.363</b>	<b>31.959</b>	<b>1,547.222</b>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

**WATER TABULATION NUMBER 1**

**WATER LINES, MANHOLES, VALVES, AND FIRE HYDRANTS IN THE SYSTEM AS OF DECEMBER 31, 2014**

**WATER LINES DISCARDED AND INSTALLED IN 2014**

<b>ORIGINAL CONSTRUCTION (FEET)</b>	<b>DESTROYED OR ABANDONED IN 2014 (FEET)</b>	<b>BUILT IN 2014 (FEET)</b>	<b>REMAINING IN THE SYSTEM AS OF 12/31/2014 (FEET)</b>	<b>REMAINING IN THE SYSTEM AS OF 12/31/2014 (MILES)</b>
9,534,838.9	4,268.0	39,035.8	9,569,606.7	1,812.426

**WATER MANHOLES REMOVED AND INSTALLED IN 2014**

<b>ORIGINAL CONSTRUCTION</b>	<b>REMOVED IN 2014</b>	<b>BUILT IN 2014</b>	<b>REMAINING IN THE SYSTEM AS OF 12/31/2014</b>
30,297	25	130	30,402

**WATER VALVES REMOVED AND INSTALLED IN 2013**

<b>ORIGINAL CONSTRUCTION</b>	<b>REMOVED IN 2014</b>	<b>INSTALLED IN 2014</b>	<b>REMAINING IN THE SYSTEM AS OF 12/31/2014</b>
29,629	29	130	29,730

**FIRE HYDRANTS REMOVED AND INSTALLED IN 2013**

<b>ORIGINAL CONSTRUCTION</b>	<b>REMOVED IN 2014</b>	<b>INSTALLED IN 2014</b>	<b>REMAINING IN THE SYSTEM AS OF 12/31/2014</b>
23,099	10	28	23,117

**DETAILS OF WATER LINES, MANHOLES, VALVES, AND FIRE HYDRANTS INSTALLED (CONSTRUCTED) IN 2014**

<b>ITEMS</b>	<b>BOARD FUNDED</b>	<b>BY OTHERS</b>	<b>TOTAL FEET</b>	<b>TOTAL MILES</b>
2" P.V.C.	0.0	381.0	381.0	0.072
4" P.V.C.	0.0	343.0	343.0	0.065
4" P.V.C.	0.0	266.0	266.0	0.050
6" DUCTILE IRON	0.0	770.9	770.9	0.146
6" P.V.C.	0.0	1,333.9	1,333.9	0.253
8" DUCTILE IRON	166.0	531.0	697.0	0.132
8" P.V.C.	2,464.0	22,044.0	24,508.0	4.642
12" DUCTILE IRON	270.0	0.0	270	0.051
12" P.V.C.	3,150.0	6,287.0	9,437.0	1.787
16" P.V.C.	0.0	102.0	102.0	0.019
30" DUCTILE IRON	57.0	0.0	57.0	0.011
30" P.V.C.	870.0	0.0	870.0	0.165
<b>TOTAL WATER LINES CONSTRUCTED IN 2014</b>	<b>6,977.0</b>	<b>32,058.8</b>	<b>39,035.8</b>	<b>7.4</b>
<b>WATER MANHOLES CONSTRUCTED IN 2014</b>	<b>BOARD FUNDED</b>	<b>BY OTHERS</b>	<b>TOTAL MANHOLES BUILT IN 2014</b>	
	36	94	130	
<b>WATER VALVES INSTALLED IN 2014</b>	<b>BOARD FUNDED</b>	<b>BY OTHERS</b>	<b>TOTAL WATER VALVES INSTALLED IN 2014</b>	
	40	90	130	
<b>FIRE HYDRANTS INSTALLED IN 2014</b>	<b>BOARD FUNDED</b>	<b>BY OTHERS</b>	<b>TOTAL FIRE HYDRANTS INSTALLED IN 2014</b>	
	10	18	28	

SEWERAGE AND WATER BOARD OF NEW ORLEANS

WATER TABULATION NUMBER 2

LENGTH OF WATER LINES OF EACH SIZE AND MATERIAL, NUMBER OF VALVES OF EACH SIZE, BOTH GATE AND CHECK, ORIGINALLY INSTALLED, THE QUANTITIES DISCARDED OR BUILT, AND THE QUANTITIES NOW REMAINING IN THE DISTRIBUTION SYSTEM ANNUAL REPORT 2014 - FOR THE CALENDAR YEAR ENDING DECEMBER 31, 2014

WATER LINES					
SIZE	MATERIAL	TOTAL LENGTH IN SYSTEM AS OF 12/31/2013	DESTROYED OR ABANDONED IN 2014	BUILT IN 2014	NOW REMAINING IN THE SYSTEM AS OF 12/31/2014
54"	Concrete Pipe	7,535.1			7,535.1
50"	Steel Pipe	88,374.0			88,374.0
48"	Cast Iron Pipe	12,759.3			12,759.3
48"	Steel Pipe	36,637.1			36,637.1
48"	Concrete Pipe	4,982.9			4,982.9
43"	Cast Iron Pipe	11,170.1			11,170.1
42"	Cast Iron Pipe	4,349.6			4,349.6
42"	Concrete Pipe	9,361.9			9,361.9
36"	Cast Iron Pipe	4,523.3			4,523.3
36"	Steel Pipe	16,922.0			16,922.0
36"	Concrete Pipe	37,374.7			37,374.7
36"	Prestressed Concrete	675.0			675.0
30"	Cast Iron Pipe	59,740.1			59,740.1
30"	Ductile Iron Pipe	35.0		57.0	92.0
30"	Steel Pipe	19,863.1			19,863.1
30"	Concrete Pipe	72,143.4	927.0		71,216.4
30"	Prestressed Concrete	36,654.4			36,654.4
30"	Reinforced Concrete	3,919.6			3,919.6
30"	P.V.C. Pipe	2,602.1		870.0	3,472.1
24"	Cast Iron Pipe	30,450.0			30,450.0
24"	Concrete Pipe	4,062.5			4,062.5
21"	P.V.C. Pipe	10,270.5			10,270.5
20"	Cast Iron Pipe	87,785.9			87,785.9
20"	Ductile Iron Pipe	10,405.4			10,405.4
20"	Concrete Pipe	18,755.8			18,755.8
20"	Prestressed Concrete	212.5			212.5
20"	Asbestos Cement	12,688.0			12,688.0
18"	Reinforced Concrete	970.5			970.5
16"	Cast Iron Pipe	112,496.7			112,496.7
16"	Ductile Iron Pipe	6,692.7			6,692.7
16"	Concrete Pipe	5,681.6			5,681.6
16"	Asbestos Cement	65,284.2			65,284.2
16"	P.V.C. Pipe	12,154.4		102.0	12,256.4
15"	Reinforced Concrete	1,069.3			1,069.3
12"	Cast Iron Pipe	840,745.1			840,745.1
12"	Ductile Iron Pipe	16,756.5		270.0	17,026.5
12"	Steel Pipe	1,272.9			1,272.9
12"	Asbestos Cement	360,060.2	1,771.0		358,289.2
12"	P.V.C. Pipe	221,490.5		9,437.0	230,927.5
10"	Cast Iron Pipe	10,271.7			10,271.7
10"	Ductile Iron Pipe	670.0			670.0
10"	Asbestos Cement	12,763.6			12,763.6
10"	P.V.C. Pipe	7,896.0			7,896.0
8"	Cast Iron Pipe	115,284.2			115,284.2
8"	Ductile Iron Pipe	37,555.0		697.0	38,252.0
8"	Asbestos Cement	697,824.4			697,824.4
8"	P.V.C. Pipe	808,742.1		24,508.0	833,250.1
8"	Plastic Pipe	318,036.5			318,036.5
6"	Cast Iron Pipe	2,472,577.0	23.0		2,472,554.0
6"	Ductile Iron Pipe	20,765.0		770.9	21,535.9
6"	Asbestos Cement	1,038,898.5			1,038,898.5
6"	P.V.C. Pipe	298,479.8		1,333.9	299,813.7
6"	Plastic Pipe	121,385.5			121,385.5
4"	Cast Iron Pipe	1,168,079.5	1,547.0		1,166,532.5
4"	Ductile Iron Pipe	2,845.8		266.0	3,111.8
4"	Asbestos Cement	22,250.8			22,250.8
4"	P.V.C. Pipe	23,127.9		343.0	23,470.9
4"	Plastic Pipe	3,833.1			3,833.1
3"	Galvanized Steel	3,361.7			3,361.7
2"	Cast Iron Pipe	7,909.9			7,909.9
2"	Galvanized Steel	9,620.0			9,620.0
2"	P.V.C. Pipe	78,386.0		381.0	78,767.0
1"	Galvanized Steel	5,346.6			5,346.6
<b>Total Linear Feet</b>		<b>9,534,838.9</b>	<b>4,268.0</b>	<b>39,035.8</b>	<b>9,569,606.3</b>
<b>Total Miles</b>		<b>1,805,841</b>	<b>0.808</b>	<b>7,393</b>	<b>1,812,425</b>

VALVES				
SIZE	EXISTING IN SYSTEM AS OF 12/31/2013	REMOVED IN 2014	INSTALLED IN 2014	REMAINING IN SYSTEM AS OF 12/31/2014
48"	16			16
42"	4			4
36"	18			18
30"	66	1	1	66
24"	39			39
20"	133			133
16"	193			193
14"	3			3
12"	2,309	12	12	2,309
10"	65		7	72
8"	6,667	16	63	6,714
6"	12,964		37	13,001
4"	7,152		10	7,162
<b>Total</b>	<b>29,629</b>	<b>29</b>	<b>130</b>	<b>29,730</b>

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**Table of Rainfall in New Orleans**  
**As of December 2014**

**Last Ten Years**

YEAR	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		ANNUAL MONTHLY AVERAGE	EXCESS OR DEFICIT	
	AMOUNT	DATE	AMOUNT	DATE	AMOUNT	DATE	AMOUNT	DATE	AMOUNT	DATE	AMOUNT	DATE	AMOUNT	DATE	AMOUNT	DATE	AMOUNT	DATE	AMOUNT	DATE	AMOUNT	DATE	AMOUNT	DATE			
2005	3.65	9.03	12.68	3.86	16.54	6.48	23.02	4.01	27.03	4.29	31.32	11.62	42.94	14.55	57.49	0.86	58.35	0.06	58.41	1.23	59.64	2.96	62.60	5.22	3.19		
<b>total</b>	<b>515.41</b>	<b>519.77</b>	<b>1037.45</b>	<b>576.48</b>	<b>1613.93</b>	<b>544.79</b>	<b>2165.68</b>	<b>537.63</b>	<b>2703.35</b>	<b>632.40</b>	<b>3343.79</b>	<b>728.46</b>	<b>4072.25</b>	<b>662.31</b>	<b>4734.56</b>	<b>630.85</b>	<b>5365.39</b>	<b>354.31</b>	<b>5719.70</b>	<b>415.79</b>	<b>6138.55</b>	<b>517.91</b>	<b>6653.81</b>				
<b>avg.</b>	<b>4.60</b>	<b>4.64</b>	<b>9.26</b>	<b>5.15</b>	<b>14.41</b>	<b>4.86</b>	<b>19.34</b>	<b>4.80</b>	<b>24.14</b>	<b>5.65</b>	<b>29.86</b>	<b>6.50</b>	<b>36.36</b>	<b>5.91</b>	<b>42.27</b>	<b>5.63</b>	<b>47.91</b>	<b>3.16</b>	<b>51.07</b>	<b>3.71</b>	<b>54.81</b>	<b>4.62</b>	<b>59.41</b>				
2006	2.60	2.72	5.32	0.25	5.57	3.16	8.73	0.76	9.49	2.16	11.65	8.40	20.05	6.40	26.45	2.89	29.34	3.03	32.37	2.94	35.31	10.55	45.86	3.82	-13.43		
<b>total</b>	<b>518.01</b>	<b>522.49</b>	<b>1042.77</b>	<b>576.73</b>	<b>1619.50</b>	<b>547.95</b>	<b>2174.41</b>	<b>538.39</b>	<b>2712.84</b>	<b>634.56</b>	<b>3355.44</b>	<b>736.86</b>	<b>4092.30</b>	<b>668.71</b>	<b>4761.01</b>	<b>633.74</b>	<b>5394.73</b>	<b>357.34</b>	<b>5752.07</b>	<b>418.73</b>	<b>6173.86</b>	<b>528.46</b>	<b>6699.67</b>				
<b>avg.</b>	<b>4.58</b>	<b>4.62</b>	<b>9.23</b>	<b>5.10</b>	<b>14.33</b>	<b>4.85</b>	<b>19.24</b>	<b>4.76</b>	<b>24.01</b>	<b>5.62</b>	<b>29.69</b>	<b>6.52</b>	<b>36.22</b>	<b>5.92</b>	<b>42.13</b>	<b>5.61</b>	<b>47.74</b>	<b>3.16</b>	<b>50.90</b>	<b>3.71</b>	<b>54.64</b>	<b>4.68</b>	<b>59.29</b>				
2007	4.12	1.81	5.93	1.38	7.31	1.81	9.12	8.51	17.63	4.43	22.06	7.66	29.72	1.64	31.36	4.42	35.78	11.62	47.40	1.21	48.61	4.52	53.13	4.43	-6.11		
<b>total</b>	<b>522.13</b>	<b>524.30</b>	<b>1048.70</b>	<b>578.11</b>	<b>1626.81</b>	<b>549.76</b>	<b>2183.53</b>	<b>546.90</b>	<b>2730.47</b>	<b>638.99</b>	<b>3377.50</b>	<b>744.52</b>	<b>4122.02</b>	<b>670.35</b>	<b>4792.37</b>	<b>638.16</b>	<b>5430.51</b>	<b>368.96</b>	<b>5799.47</b>	<b>419.94</b>	<b>6222.47</b>	<b>532.98</b>	<b>6752.80</b>				
<b>avg.</b>	<b>4.58</b>	<b>4.60</b>	<b>9.20</b>	<b>5.07</b>	<b>14.27</b>	<b>4.82</b>	<b>19.15</b>	<b>4.80</b>	<b>23.95</b>	<b>5.61</b>	<b>29.63</b>	<b>6.53</b>	<b>36.16</b>	<b>5.88</b>	<b>42.04</b>	<b>5.60</b>	<b>47.64</b>	<b>3.24</b>	<b>50.87</b>	<b>3.68</b>	<b>54.58</b>	<b>4.68</b>	<b>59.24</b>				
2008	6.32	5.64	11.96	2.57	14.53	7.88	22.41	7.76	30.17	6.52	36.69	3.91	40.60	7.77	48.37	7.87	56.24	1.36	57.60	2.06	59.66	1.86	61.52	5.13	2.27		
<b>total</b>	<b>528.45</b>	<b>529.94</b>	<b>1060.66</b>	<b>580.68</b>	<b>1641.34</b>	<b>557.64</b>	<b>2205.94</b>	<b>554.66</b>	<b>2760.64</b>	<b>645.51</b>	<b>3414.19</b>	<b>748.43</b>	<b>4162.62</b>	<b>678.12</b>	<b>4840.74</b>	<b>646.03</b>	<b>5486.75</b>	<b>370.32</b>	<b>5857.07</b>	<b>422.00</b>	<b>6282.13</b>	<b>534.84</b>	<b>6814.32</b>				
<b>avg.</b>	<b>4.60</b>	<b>4.61</b>	<b>9.22</b>	<b>5.05</b>	<b>14.27</b>	<b>4.85</b>	<b>19.18</b>	<b>4.82</b>	<b>24.01</b>	<b>5.61</b>	<b>29.69</b>	<b>6.51</b>	<b>36.20</b>	<b>5.90</b>	<b>42.09</b>	<b>5.62</b>	<b>47.71</b>	<b>3.22</b>	<b>50.93</b>	<b>3.67</b>	<b>54.63</b>	<b>4.65</b>	<b>59.25</b>				
2009	5.16	2.97	8.13	6.17	14.30	1.21	15.51	2.46	17.96	2.40	20.36	3.82	24.18	4.62	28.80	7.45	36.25	7.57	43.82	0.78	44.60	19.81	64.41	5.37	5.11		
<b>total</b>	<b>533.61</b>	<b>532.91</b>	<b>1068.79</b>	<b>586.85</b>	<b>1655.64</b>	<b>558.85</b>	<b>2221.45</b>	<b>557.12</b>	<b>2778.60</b>	<b>647.91</b>	<b>3434.55</b>	<b>752.25</b>	<b>4186.80</b>	<b>682.74</b>	<b>4869.54</b>	<b>653.48</b>	<b>5523.00</b>	<b>377.89</b>	<b>5900.89</b>	<b>422.78</b>	<b>6326.73</b>	<b>554.65</b>	<b>6878.73</b>				
<b>avg.</b>	<b>4.60</b>	<b>4.59</b>	<b>9.21</b>	<b>5.06</b>	<b>14.27</b>	<b>4.82</b>	<b>19.15</b>	<b>4.80</b>	<b>23.95</b>	<b>5.59</b>	<b>29.61</b>	<b>6.48</b>	<b>36.09</b>	<b>5.89</b>	<b>41.98</b>	<b>5.63</b>	<b>47.61</b>	<b>3.26</b>	<b>50.87</b>	<b>3.64</b>	<b>54.54</b>	<b>4.78</b>	<b>59.30</b>				
2010	1.75	5.91	7.66	2.74	10.40	2.97	13.37	6.12	19.49	7.24	26.73	5.62	32.35	9.58	41.93	2.26	44.19	0.39	44.58	2.32	46.90	1.58	48.49	4.04	-10.72		
<b>total</b>	<b>535.36</b>	<b>538.82</b>	<b>1076.45</b>	<b>589.59</b>	<b>1666.04</b>	<b>561.82</b>	<b>2234.81</b>	<b>563.24</b>	<b>2798.09</b>	<b>655.15</b>	<b>3461.28</b>	<b>757.87</b>	<b>4219.15</b>	<b>692.32</b>	<b>4911.47</b>	<b>655.74</b>	<b>5567.19</b>	<b>378.29</b>	<b>5945.47</b>	<b>425.10</b>	<b>6373.64</b>	<b>556.23</b>	<b>6927.21</b>				
<b>avg.</b>	<b>4.58</b>	<b>4.61</b>	<b>9.20</b>	<b>5.04</b>	<b>14.24</b>	<b>4.80</b>	<b>19.10</b>	<b>4.81</b>	<b>23.92</b>	<b>5.60</b>	<b>29.58</b>	<b>6.48</b>	<b>36.06</b>	<b>5.92</b>	<b>41.98</b>	<b>5.60</b>	<b>47.58</b>	<b>3.23</b>	<b>50.82</b>	<b>3.63</b>	<b>54.48</b>	<b>4.75</b>	<b>59.21</b>				
2011	2.99	1.59	4.59	6.49	11.08	0.27	11.35	0.90	12.25	4.18	16.42	11.48	27.91	1.57	29.48	9.99	39.47	0.14	39.61	1.66	41.27	0.78	42.04	3.50	-17.02		
<b>total</b>	<b>538.35</b>	<b>540.42</b>	<b>1081.04</b>	<b>596.08</b>	<b>1677.12</b>	<b>562.09</b>	<b>2246.17</b>	<b>564.13</b>	<b>2810.34</b>	<b>659.33</b>	<b>3477.71</b>	<b>769.35</b>	<b>4247.06</b>	<b>693.89</b>	<b>4940.95</b>	<b>665.73</b>	<b>5606.66</b>	<b>378.43</b>	<b>5985.08</b>	<b>426.76</b>	<b>6414.91</b>	<b>557.00</b>	<b>6969.26</b>				
<b>avg.</b>	<b>4.56</b>	<b>4.58</b>	<b>9.16</b>	<b>5.05</b>	<b>14.21</b>	<b>4.76</b>	<b>19.04</b>	<b>4.78</b>	<b>23.82</b>	<b>5.59</b>	<b>29.47</b>	<b>6.52</b>	<b>35.99</b>	<b>5.88</b>	<b>41.87</b>	<b>5.64</b>	<b>47.51</b>	<b>3.21</b>	<b>50.72</b>	<b>3.62</b>	<b>54.36</b>	<b>4.72</b>	<b>59.06</b>				
2012	1.74	3.38	5.12	6.16	11.28	8.14	19.42	2.45	21.87	4.84	26.71	12.89	39.60	17.79	57.39	3.83	61.22	0.15	61.36	2.13	63.50	2.30	65.80	5.48	6.68		
<b>total</b>	<b>540.09</b>	<b>543.79</b>	<b>1086.16</b>	<b>602.24</b>	<b>1688.39</b>	<b>570.23</b>	<b>2265.58</b>	<b>566.58</b>	<b>2832.21</b>	<b>664.17</b>	<b>3504.42</b>	<b>782.25</b>	<b>4286.66</b>	<b>711.68</b>	<b>4998.34</b>	<b>669.55</b>	<b>5667.88</b>	<b>378.57</b>	<b>6046.45</b>	<b>428.90</b>	<b>6478.40</b>	<b>559.30</b>	<b>7035.06</b>				
<b>avg.</b>	<b>4.54</b>	<b>4.57</b>	<b>9.13</b>	<b>5.06</b>	<b>14.19</b>	<b>4.79</b>	<b>19.04</b>	<b>4.76</b>	<b>23.80</b>	<b>5.58</b>	<b>29.45</b>	<b>6.57</b>	<b>36.02</b>	<b>5.98</b>	<b>42.00</b>	<b>5.63</b>	<b>47.63</b>	<b>3.18</b>	<b>50.81</b>	<b>3.60</b>	<b>54.44</b>	<b>4.70</b>	<b>59.12</b>				
2013	5.14	6.82	11.96	0.55	12.51	12.51	25.01	4.51	29.52	4.55	34.08	4.43	38.51	4.58	43.09	5.44	48.53	2.19	50.72	2.81	53.53	4.48	58.01	4.83	-1.10		
<b>total</b>	<b>545.24</b>	<b>550.61</b>	<b>1098.12</b>	<b>602.78</b>	<b>1700.90</b>	<b>582.74</b>	<b>2290.60</b>	<b>571.09</b>	<b>2861.73</b>	<b>668.72</b>	<b>3538.49</b>	<b>786.68</b>	<b>4325.17</b>	<b>716.26</b>	<b>5041.43</b>	<b>674.99</b>	<b>5716.41</b>	<b>380.76</b>	<b>6097.17</b>	<b>431.71</b>	<b>6531.94</b>	<b>563.78</b>	<b>7093.07</b>				
<b>avg.</b>	<b>4.54</b>	<b>4.59</b>	<b>9.15</b>	<b>5.02</b>	<b>14.17</b>	<b>4.86</b>	<b>19.09</b>	<b>4.76</b>	<b>23.85</b>	<b>5.57</b>	<b>29.49</b>	<b>6.56</b>	<b>36.04</b>	<b>5.97</b>	<b>42.01</b>	<b>5.62</b>	<b>47.64</b>	<b>3.17</b>	<b>50.81</b>	<b>3.60</b>	<b>54.43</b>	<b>4.70</b>	<b>59.11</b>				
2014	2.72	6.54	9.26	6.44	15.70	2.19	17.89	7.58	25.57	6.41	31.98	6.49	38.47	4.74	43.21	4.20	47.41	1.94	49.35	1.47	50.82	3.70	54.52	4.54	-4.55		
<b>total</b>	<b>547.96</b>	<b>557.15</b>	<b>1107.37</b>	<b>609.22</b>	<b>1716.60</b>	<b>584.93</b>	<b>2308.48</b>	<b>578.78</b>	<b>2887.30</b>	<b>675.13</b>	<b>3570.47</b>	<b>793.17</b>	<b>4363.64</b>	<b>721.00</b>	<b>5084.64</b>	<b>679.19</b>	<b>5763.82</b>	<b>382.71</b>	<b>6146.52</b>	<b>433.17</b>	<b>6582.76</b>	<b>567.49</b>	<b>7147.60</b>				
<b>avg.</b>	<b>4.53</b>	<b>4.60</b>	<b>9.15</b>	<b>5.03</b>	<b>14.19</b>	<b>4.83</b>	<b>19.08</b>	<b>4.78</b>	<b>23.86</b>	<b>5.58</b>	<b>29.51</b>	<b>6.56</b>	<b>36.06</b>	<b>5.96</b>	<b>42.02</b>	<b>5.61</b>	<b>47.63</b>	<b>3.16</b>	<b>50.80</b>	<b>3.58</b>	<b>54.40</b>	<b>4.69</b>	<b>59.07</b>	<b>4.92</b>	<b>-4.55</b>		

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**  
**December 31, 2014**  
**COST OF OPERATIONS IDENTIFICATION PROGRAM**  
**BENCHMARKING**

**ADMINISTRATIVE SERVICES DEPARTMENT**

**Insurance Cost per Employee:**

Workers' Compensation	\$ 1,326.00
Auto Liability	\$ 2,062.00
General Liability	\$ 150.00

**ENGINEERING DEPARTMENT**

Total Capital Program Design and Construction Contracts Cost Growth	7.2%
--	------

**ENVIRONMENTAL DEPARTMENT**

Cost of Typical Industry Sampling Event	\$ 1,270.47
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**FACILITY MAINTENANCE DEPARTMENT**

Cost to set 5/8" water meter	\$ 94.59
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**MANAGEMENT SERVICES DEPARTMENT**

**FINANCE:**

Cost to Process a Miscellaneous Invoice	\$ 35.99
Cost to Process a Vendor Invoice	\$ 18.04
Cost to Process a Paycheck	\$ 5.54

**INFORMATION SYSTEM:**

Cost to Image a Document	\$ 0.33
Cost to Retrieve a Document	\$ 1.94

**PERSONNEL:**

Cost to Hire an Employee	\$ 157.06
Cost to complete a Voluntary - Employee Termination	\$ 16.68
Employee Turnover Rate	12.46%
Cost to Train an Employee	

**PURCHASING:**

Cost to Process a Sundry Purchase Order	\$ 52.15
---	----------

**REVENUE:**

Cost to Read a Meter	\$ 1.33
Cost to Render a Bill (Less Meter Reading)	\$ 0.85
Cost to Manage a Customer by Phone	\$ 2.99
Cost to Manage a Customer by Mail	\$ 8.24
Cost to Manage a Walk-in Customer	\$ 5.11
Cost to Process a Mail-in Payment	\$ 0.53
Cost to Process a Walk-in Payment	\$ 1.68

**SUPPORT SERVICES DEPARTMENT**

Average Annual Maintenance Cost Per Piece of Equipment	\$ 1,700.00 20%
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**APPENDIX "C"**

**CONSULTING ENGINEER'S REPORT**

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ENGINEERING REPORT

# WATER AND SEWERAGE REVENUE BONDS SERIES 2015

BLACK & VEATCH PROJECT NO. 188512

PREPARED FOR

Sewerage and Water Board of New Orleans

24 NOVEMBER 2015

November 24, 2015

Sewerage & Water Board of New Orleans  
625 St. Joseph Street  
New Orleans, LA 70165

Dear Board Members:

We are submitting herewith our Engineering Report prepared in connection with the issuance of Water, Sewerage, and Drainage Revenue and Refunding Bonds, Series 2015. This report summarizes the findings of our engineering study related to the water, sewerage, and drainage systems of the City of New Orleans. We have made such investigation and review of the books, records, capital improvement programs, and water, sewerage and drainage systems and such other investigations as we deemed necessary.

In the preparation of this report, we performed site visits of Sewerage and Water Board of New Orleans (SWBNO) major water, sewerage and drainage facilities during the months of May and June 2015, collected and reviewed basic operating data, and conducted personal interviews with key Water System, Sewerage System, and Drainage System operating, maintenance, engineering, and administrative staff. The general physical condition of the water, sewerage and drainage systems have been evaluated using three rating categories – good, adequate, and poor – as described below.

- Good – The facility is in good condition and provides reliable operation in accordance with design parameters and requires only routine maintenance.
- Adequate – The facility is operating at or near design levels; however, upgrading and repairs are needed to ensure continued reliable operation.
- Poor – The facility cannot be operated within design parameters. Major renovations are required to restore the facility and ensure reliable operation.

Subject to the limitations set forth herein, this report was prepared for SWBNO by Black & Veatch Corporation (Black & Veatch) and is based on information not within the control of Black & Veatch. Black & Veatch has not been requested to make an independent analysis, to verify the information provided to it, or to render any independent judgment of the validity of the information provided by others. As such, Black & Veatch cannot, and does not, guarantee the accuracy thereof.

In conducting our analysis and in forming an opinion of the projection of future operations summarized in this report, Black & Veatch has made certain assumptions with respect to conditions, events, and circumstances that may occur in the future. The methodology utilized by Black & Veatch in performing the analysis follows generally accepted practices for such projections. While Black & Veatch believes the assumptions are reasonable and appropriate, and the projection methodology valid, actual results may differ materially from those projected,

as influenced by the conditions, events, and circumstances that actually occur that are unknown at this time and/or which are beyond the control of Black & Veatch.

SWBNO may only distribute the complete report to third parties, including the above statements and not parts thereof. Any distribution of this report, or any excerpt thereof, to third parties shall be at SWBNO's sole risk. SWBNO's duty to distribute only the complete report, including the above statements, shall not apply to internal SWBNO documents derived from the report that come within the scope of applicable records laws and are requested under such laws by interested citizens.

As a result of our facility inspections, we find the overall condition of these facilities to be adequate. This indicates that most of the facilities are operating in accordance with requirements and meeting the needs of the customers, however, significant improvements are needed over the coming years to improve the reliability and performance of critical assets. The capital improvement program for fiscal years 2015 through 2020 addresses the improvements needed to improve the reliability and performance issues related to critical assets.

We wish to acknowledge the cooperation and assistance of SWBNO staff in providing guidance and information for the study. Mr. Michael Borchers of our organization has been responsible for the detailed preparation of the study summarized in this report.

Very truly yours,

BLACK & VEATCH CORPORATION



Russell A. Feingold  
Vice President



Anna M. White  
Principal Consultant

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## Acronyms

AMI—Advanced Metering Infrastructure  
AWWA—American Water Works Association  
BMP—Best Management Practice  
BOD - Biochemical Oxygen Demand  
CAA—Clean Air Act  
CAFR—Comprehensive Annual Financial Report  
CAM—Customer Account Management  
CCR—Consumer Confidence Report  
CCTV—Closed Circuit Television  
CIP—Capital Improvement Program  
CIPP—Cured In Place Pipe  
COBOL—Common Business Oriented Language  
CWA—Clean Water Act  
D/DBPR—Disinfectants and Disinfection By-Products Rule  
DMR—Discharge Monitoring Reports  
DOC—Dissolved Organic Carbon  
DPW—Department of Public Works  
DROP—Deferred Retirement Option Plan  
ESSA—Emergency Sanitary Sewer Assessment  
ESWTR—Enhanced Surface Water Treatment Rule  
EWOCDS—Early Warning Organics Contamination Detection System  
FBBR—Filter Backwash Recycling Rule  
FBI—Fluidized Bed Incinerator  
FEMA—Federal Emergency Management Agency  
GC/MS—Gas Chromatograph/Mass Spectrometer  
GHRS—Government Human Resources Services  
GIS—Geographic Information System  
GWR—Groundwater Rule  
HAA5—Five Haloacetic Acids  
HMGP—Hazard Mitigation Grant Program  
Hz—Hertz  
IVR—Interactive Voice Response  
LDEQ—Louisiana Department of Environmental Quality  
LRAA—Locational Running Annual Averages  
LT2ESWTR—Long Term 2 Enhanced Surface Water Treatment Rule  
MCL—Maximum Contaminant Level

mgd—Million Gallons per Day  
mg/dscm—Milligrams per Dry Standard Cubic Meter  
mg/L—milligrams per Liter  
MQL—Minimum Quantification Levels  
MRDL—Maximum Residual Disinfectant Limit  
MS4—Municipal Separate Storm Sewer System  
MW—Megawatts  
NPDES—National Pollutant Discharge Elimination System  
NTU—Nephelometric Turbidity Unit  
PC—Personal Computer  
PPE—Personal Protective Equipment  
PSI—Pounds per Square Inch  
RAA—Running Annual Average  
RAS—Return Activated Sludge  
RFP—Request for Proposal  
RFQ—Request for Qualifications  
RMAP—Remedial Measures Action Plan  
RTCR—Revised Total Coliform Rule  
SCADA—Supervisory Control and Data Acquisition  
SDWA—Safe Drinking Water Act  
SELA—Southeast Louisiana  
SIU—Significant Industrial User  
SSO—Sanitary Sewer Overflow  
SWBNO—Sewerage and Water Board of New Orleans  
SWP3—Stormwater Pollution Prevention Plan  
TCR—Total Coliform Rule  
TOC—Total Organic Carbon  
TSS—Total Suspended Solids  
TTHM—Total Trihalomethanes  
UCMR-3—Unregulated Contaminant Monitoring Rule  
µg/L—Micrograms per Liter  
USACE—United States Army Corps of Engineers  
USEPA—United States Environmental Protection Agency  
USDOJ—United States Department of Justice  
WAS—Waste Activated Sludge  
WPP—Water Purification Plant

## II. Introduction

### A. PURPOSE

The purpose of this report (Report) is to summarize the findings of engineering studies performed by Black & Veatch Corporation (Black & Veatch) related to the water, sewerage and drainage systems of the Sewerage and Water Board of New Orleans (SWBNO) in conjunction with the issuance of a maximum of \$200,000,000 of Water and Sewerage, Service Revenue (Series 2015) bonds.

In the preparation of this Report, Black & Veatch performed site visits of SWBNO's major water, sewerage and drainage facilities during the months of May and June 2015, collected and reviewed basic operating data, and conducted personal interviews with key Water System, Sewerage System, and Drainage System operating, maintenance, engineering, and financial staff.

Subject to the limitations set forth herein, this Report was prepared for SWBNO by Black & Veatch and is based on information not within the control of Black & Veatch. Black & Veatch has not been requested to make an independent analysis, to verify the information provided to it, or to render any independent judgment of the validity of the information provided by others. As such, Black & Veatch cannot, and does not, guarantee the accuracy thereof.

In conducting the analysis and in forming an opinion of future operations summarized in this Report, Black & Veatch has made certain assumptions with respect to conditions, events, and circumstances that may occur in the future. The methodology utilized by Black & Veatch in performing the analysis follows generally accepted practices. While Black & Veatch believes the assumptions are reasonable and appropriate, and the methodology valid, actual results may differ materially from those anticipated, as influenced by the conditions, events, and circumstances that actually occur that are unknown at this time and/or which are beyond the control of Black & Veatch.

SWBNO may only distribute the complete Report to third parties, including the above statements and not parts thereof. Any distribution of this Report, or any excerpt thereof, to third parties shall be at SWBNO's sole risk. SWBNO's duty to distribute only the complete Report, including the above statements, shall not apply to internal SWBNO documents derived from the Report that come within the scope of applicable records laws and are requested under such laws by interested citizens.

### B. SCOPE

This Report addresses the organization and management, physical condition, adequacy of system capacity, operation and maintenance practices, and staffing levels of SWBNO's water, sewerage, and drainage systems. It also provides a review of the proposed Capital Improvement Program (CIP) of SWBNO.

This Report has been prepared in conjunction with the issuance of Water and Sewerage Service Revenue Bonds, Series 2015. The purpose of the Series 2015 bonds is to pay the costs of constructing system improvements, extensions, betterments and repairs to the water and sewerage systems.

## C. BLACK & VEATCH QUALIFICATIONS

Black & Veatch is one of the largest and most experienced engineering, construction, and consulting firms in the United States specializing in utility engineering. The firm's experience includes the planning, design, operational analysis, and construction of water, wastewater, and energy generation and transmission systems. In addition, the firm has extensive experience in assisting utilities with management and financial aspects of their operations. The firm has been engaged in more than 40,000 projects for over 7,000 clients, including utilities owned by municipalities ranging in size from small villages to large metropolitan regions, investor-owned utilities, industrial and commercial businesses, agencies of the United States, and international governmental agencies.

The physical evaluation of SWBNO's water, sewerage and drainage systems has included experienced personnel of the firm's Water Division which provides study, design, and construction services in all facets of the water and wastewater fields. Water system engineering experience of this business unit includes the design of a broad variety of facilities such as source of supply, pumping stations, treatment plants, and transmission and distribution systems. Wastewater and Drainage system engineering experience includes design of collection, interceptor, and trunk sewers; pumping stations; treatment systems; and sludge disposal facilities. The Water Division also has extensive experience in operator training, plant management studies, and preparation of operation and maintenance manuals for both water and wastewater systems.

In performing the engineering assessment of SWBNO, Black & Veatch reviewed the current condition and operation and maintenance of its water, sewerage and drainage systems. We conducted inspections of SWBNO's major water, sewerage and drainage facilities in May and June 2015, including the two sewage treatment plants and the two water treatment plants and evaluated the general physical condition of the facilities based on the definitions and criteria described below.

- Good—The facility is in good condition and provides reliable operation in accordance with design parameters and requires only routine maintenance.
- Adequate—The facility is operating at or near design levels; however, upgrading and repairs are needed to ensure continued reliable operation.
- Poor—The facility cannot be operated within design parameters. Major renovations are required to restore the facility and ensure reliable operation.

As a result of the facility inspections, Black & Veatch finds the overall condition of these facilities to be adequate. This indicates that most of the facilities are operating in accordance with requirements and meeting the needs of the customers, however, significant improvements are needed over the coming years to improve the reliability and performance of critical assets. We also met with key SWBNO water, sewerage and drainage system staff during this period to discuss other facilities, regulatory compliance, staffing, and the overall mission of the departments. Staff interviewed during the studies included representatives from the following departments:

- Environmental Affairs
- Planning & Budget
- Finance
- Information Systems
- Personnel Administration

- Purchasing
- Emergency Management
- Revenue and Customer Service
- Operations
- Facility Maintenance
- Networks
- Support Services
- Engineering

### III. Executive Summary

The purpose of this Report is to summarize the findings of engineering studies performed by Black & Veatch Corporation (Black & Veatch) related to the water, sewerage and drainage systems of the Sewerage and Water Board of New Orleans (SWBNO) in conjunction with the issuance of a maximum of \$200,000,000 of Water and Sewerage Service Revenue (Series 2015) bonds.

A summary of the conclusions is provided in the following section. As referenced above, this Report should be read and considered in its entirety as additional information relevant to the operations of SWBNO is provided outside of this executive summary.

#### A. ORGANIZATION AND MANAGEMENT CONCLUSIONS

Based on the review of SWBNO's organizational and managerial structures, Black & Veatch has reached the following conclusions:

- SWBNO is organized effectively to carry out its mission to provide drinking water, sewerage, and drainage services to the citizens of New Orleans. This includes managers who are experienced in the critical areas of utility finance, planning, operations, and engineering. There are administrative units tasked with key utility functions such as planning and budgeting, emergency management, human resources, and customer service. The operational units consist of departments focused on providing quality drinking water, sewerage, and drainage service.
- The management team consists of individuals with significant water, sewerage, and drainage experience. This experience has been developed both internally at SWBNO, and also at other respected, major water and sewer utilities.
- Similar to water and sewer utilities across the U.S., the departments that comprise SWBNO are faced with a significant number of pending retirements. Approximately 25 percent of current employees are either on the DROP program or are eligible for retirement which reflects a decrease of approximately 8 percent in the number of employees on DROP or eligible for retirement since 2014. Unless they continue to be replaced with a steady influx of qualified replacements, these pending retirements pose a significant threat to SWBNO's ability to perform its core operational and administrative functions. Succession planning and recruitment of qualified employees will be a key element for SWBNO to adjust to the pending retirements.
- There are several departments that are experiencing critical vacancies, including Engineering, Internal Audit, Information System Administration, Planning & Budget, Plumbing, and Support Services. SWBNO has made progress with reducing vacancies associated with water, sewer, and drainage operations and continues to address these vacancies to maintain effective operational and maintenance performance, and administrative oversight.
- With pending retirements, current vacancies, and a significant CIP to be implemented, a detailed staffing analysis of the various departments appears to be warranted. The staffing analysis, including an assessment of necessary skills and levels by department, can assist SWBNO's management with the efficient replacement of employees, as well as the development of revised job descriptions for use with the Civil Service hiring process.

- Many of the day to day administrative processes conducted by SWBNO are primarily paper-driven and not supported by its core information systems. In several instances, these information systems, while still functional, have been in place for almost 25 years. SWBNO is beginning a multi-year process to replace its core information systems, including information systems necessary for customer account management and billing, human resources, financial management and work order management.
- SWBNO has developed a strategic plan to address current and future challenges. The plan includes an assessment of strengths and weaknesses; as well as strategies and tactics for strengthening the organization over the coming years. There is specificity for key managers of the administrative and operational units to understand their role in the plan's implementation. The strategic plan should be followed up with department-developed tactical plans and metrics for tracking performance toward stated goals and objectives.

## **B. WATER SYSTEM CONCLUSIONS**

Based on the review of SWBNO's water system, Black & Veatch has reached the following conclusions:

- SWBNO has an abundant water supply via the Mississippi River to provide service to existing and future customers.
- SWBNO consistently meets or exceeds state and federal standards for the provision of drinking water. The treatment capacity for the Carrollton WPP and Algiers WPP is sufficient to meet current and projected demands.
- Overall, SWBNO's water purification plants are adequate and include processes and components that are common in the water industry. The water purification plants are in need of infrastructure upgrades or replacements to sustain reliable operation. Most critical are the Carrollton WPP filters and underdrains which are in poor condition.
- The amount of non-revenue water, which is water produced by SWBNO but not sold to customers, is well above what is typical for a similar sized utility. SWBNO is taking action to address the issue through the use of several initiatives, including the use of leak detection technology; the FEMA-funded replacement of the distribution system; the FEMA-funded Water Hammer program; meter replacement; and account validation. These initiatives are common techniques in the water industry for identifying and reducing non-revenue water and should eventually yield improved results over the long term.
- From 2008 through 2014, an outside consultant performed a water audit per AWWA guidelines. The American Water Works Association guidelines recommend that a water audit is developed annually. This annual water audit can provide an effective basis for understanding areas of non-revenue water and tracking progress toward reducing the amount of non-revenue water to more typical levels. The results of the most recent audit indicate that the Infrastructure Leak Index (ILI), which is a ratio of annual real losses to unavoidable annual real losses, has decreased from 46.0 in 2008 to 37.1 in 2014 or 19

percent. The Board's goal is to reduce the ILI by 4 points per year to achieve a 5-year target of 22.4 by 2020.

- Over the years, SWBNO has developed a redundant power supply that is available to primarily sustain drainage operations during significant emergencies such as hurricanes. The power plant is also able to provide power to sustain drinking water low service pumping, treatment operations, and high service pumping during events where the local power source is down. These power assets are unique within the water industry but necessary to provide a mechanism for SWBNO to sustain critical operations during significant storm events.
- Significant FEMA funds are being dedicated over the coming years to rehabilitate and prepare the power assets to provide reliable power during future storm events.
- SWBNO continues to rebuild the water system to recover from the impact of Hurricane Katrina in 2005. The FEMA-funded hurricane recovery projects will rehabilitate or replace significant pumping assets, as well as a significant portion of the water distribution system.

### **C. SEWERAGE SYSTEM CONCLUSIONS**

Based on the review of SWBNO's sewerage system, Black & Veatch has reached the following conclusions:

- Complying with the consent decree continues to be a major focus for SWBNO. Significant improvements have been made to the sewerage system including rehabilitation of sewage pump stations and the implementation of the Comprehensive Collection System Remedial Program. The number of Sanitary Sewer Overflows (SSOs) has been reduced but is still significant, and SWBNO has recently been able to negotiate an extension of its schedule for completing the rehabilitation of east bank basins at varying milestones through 2025. Meeting this schedule appears feasible, but will require diligent coordination between SWBNO and the City to keep sewer rehabilitation and street projects on track.
- The preventive maintenance inspections developed as part of the consent decree provide an effective means for consistently checking and correcting deficiencies in the east bank collection system. Based on a review of 2014 annual report to the USEPA, SWBNO has been complying with these important inspections.
- The sewage treatment plants have historically been compliant with meeting the limits set forth in their respective NPDES permits. There have been several, recent exceedances of the permit limits for the East Bank Plant; however, additional focus by the operator, Veolia, should return the plant to performance that is more consistent with its historical performance.
- The sewage treatment plants are comprised of processes and components for treating sewage and handling sludge that are common within the wastewater industry. The treatment capacity of the East Bank Plant is sufficient to meet existing and near term demand. SWBNO should continue to monitor the population growth and the impact of the

collection system rehabilitation projects to appropriately plan for any needed future expansions.

- Historically, there were several compliance issues related to meeting the reporting requirements for SWBNO's Title V permit for the power plant at the Carrollton WPP. There were no compliance issues in 2014 and SWBNO does not anticipate future occurrences.
- There is a new emissions rule developed by the USEPA related to sewage sludge incinerators that could result in needed modifications to the FBI located at the East Bank Plant. The new rule includes increased standards for mercury emissions, and it appears that emissions for current operations would exceed this limit. SWBNO is working with its operator, Veolia to design and construct exhaust improvements to the FBI to assure compliance

## **D. DRAINAGE SYSTEM CONCLUSIONS**

Based on the review of SWBNO's drainage system, Black & Veatch has reached the following conclusions:

- SWBNO has made significant progress with the rehabilitation of its drainage pump stations with the help of Federal disaster-recovery and hazard mitigation funds. Completed work includes rehabilitation of drainage pumps and motors; storm proofing of stations to protect the pumping assets from flood and wind; and installation of backup generators to ensure operations should loss of power occur. The proposed CIP includes additional, internal funds to continue the normal repair and replacement of drainage pumping assets.
- SWBNO is a participant along with the USACE in the SELA Drainage program. The CIP includes significant funds provided by the Federal government and SWBNO for constructing and improving canals to facilitate better drainage and flood control in the drainage system. The implementation of these improvements will continue to be a major focus of SWBNO in the coming years.
- Additional pumping stations (Lake Pontchartrain permanent stations) are being constructed by the USACE to improve the drainage of the system. SWBNO will likely assume some or all of responsibility for the three permanent stations on Lake Pontchartrain. These additional responsibilities would require additional O&M expense and employee resources that are yet to be determined.

## **E. CIP CONCLUSIONS**

Based on the review of the SWBNO's water, sewerage, and drainage systems and associated reports and documents, Black & Veatch has reached the following conclusions:

- The CIP developed by SWBNO appropriately addresses major system deficiencies and initiatives.
- About 40 percent of the total CIP is projected to be funded from other sources, including FEMA and USACE disaster-recovery and hazard mitigation funds. The majority of these

projects are focused on rebuilding the water, sewerage, and drainage systems, as well as preparing SWBNO to sustain operations during future storm events.

- SWBNO is developing its processes for monitoring and re-evaluating a prioritized CIP on an annual basis; as well as implementing a significant number of projects over the coming years. Adjustments to the costs and timing of CIP projects are expected once SWBNO initiates more detailed design. The prioritization component of SWBNO's CIP development process provides a logical basis for managing the implementation of the CIP.
- The CIP will result in an aggressive schedule for completing capital projects. SWBNO is qualified to manage the implementation of the CIP, and is planning to retain additional, outside engineering support to complete these projects. Increased focus by SWBNO on program management, purchasing, and project approval processes will be needed to prevent significant delays in the completion of the CIP.

Black & Veatch conducted an engineering assessment of SWBNO in 2014 in conjunction with the issuance of the Series 2014 bonds. Since the 2014 assessment, SWBNO has made administrative and operational progress throughout the divisions. Administratively, SWBNO began the process of replacing many of its information systems, made modifications to the number of Board of Directors and the selection process as well as the appointment of Mr. Cedric Grant as the Executive Director. Operationally, the overall condition of the water, sewerage and drainage facilities is adequate. This indicates that most of the facilities are operating in accordance with requirements and meeting the needs of the customers, however, significant improvements are needed over the coming years to improve the reliability and performance of SWBNO's critical assets. Further details are located throughout the report and thus it should be read and considered in its entirety.

## IV. Organization and Management

### A. ORGANIZATION AND STRUCTURE

The water, sewer, and drainage systems that provide service to the City of New Orleans (City) are operated by the Sewerage and Water Board of New Orleans (SWBNO) as a self-supporting enterprise fund utility. The systems date back to the late 19<sup>th</sup> century when City leaders moved to create drainage, water, and sewer systems to respond to flooding (drainage system), provide drinking water and fire protection (water system), and alleviate unsanitary conditions related to the disposal of human waste (sanitary sewer system). The Drainage Commission was organized in 1896 to develop a drainage master plan for the City. The Sewerage and Water Board was organized in 1899 to begin planning and constructing the water and sanitary sewer systems that would provide service to the residents of New Orleans. The Drainage Commission was merged with the Sewerage and Water Board in 1903 and has continued to provide drainage, water, and sanitary sewer service ever since as the Sewerage and Water Board of New Orleans. In addition to the operation of the water, sewerage, and drainage systems, SWBNO is responsible for capital planning; construction; budgeting and accounting; financial planning and rate setting; meter reading; billing; customer service; and various other administrative functions necessary for managing a utility.

SWBNO's Mission is to "provide safe drinking water to 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 vision of SWBNO is to have the trust and confidence of its customers for reliable and sustainable water services.

Based on the review of the assets and operations of SWBNO, there are several key challenges that it will face in the near future, including:

- *Compliance with the Consent Decree.* On July 17, 2014, SWBNO entered a Third Modified Consent Decree with the USEPA and USDOJ. The Third Modified Consent Decree builds on the original consent decree that was entered into by SWBNO in 1998 and subsequent modifications in 2010 and 2013. The primary purpose of the consent decree is to correct the instances of sewer overflows from the sanitary sewer system. This includes the rehabilitation of the sanitary sewer system to increase capacity, reduction of cross connections, operational response to overflows, and other pertinent items related to complying with the Clean Water Act and Clean Air Act and associated regulations. Additional information related to the consent decree is found in the Sewerage System section of this Report.
- *Hurricane Katrina Recovery Efforts.* In 2005, the City was devastated by flooding caused by levee breaks following Hurricane Katrina, which also had a significant impact on the assets of SWBNO. Since then, SWBNO has embarked on a substantial rebuilding effort that continues to this day. Significant ongoing projects related to the sewer pump stations, power plant, and water distribution system are meant to return these Katrina-impacted assets to good working condition. The capital budget planned by SWBNO includes a significant portion of Hurricane Katrina related projects to be completed over the coming years. Many of these projects are funded via federal grants from entities such as the

FEMA, United States Army Corps of Engineers (USACE), as well as State of Louisiana funding programs.

- *Staffing.* As with many other utilities across the U.S., SWBNO is facing a wave of retirements over the coming years. The loss of personnel and the associated experience will challenge management to hire and retain the next generation of employees to continue providing capable water, sewerage, and drainage services.
- *Information Systems.* The majority of business systems that SWBNO relies on for providing customer service and managing its business are outdated. Accordingly, SWBNO is planning to replace and/or upgrade several important systems over the coming years. This necessary venture will require planning and preparation to seamlessly integrate the new systems with ongoing operations and other planned initiatives.
- *Water System Non-Revenue Water.* The drinking water system experiences a significant amount of unmetered, non-revenue water that appears to be related to leaks in the transmission and distribution system. Over the coming years, SWBNO has planned several initiatives to address this condition including capital repair and replacement of water distribution mains; proactive use of leak detection technology; and the installation of Advanced Metering Infrastructure (AMI).
- *Other Capital Repair and Replacement Projects.* In addition to the projects mentioned above, SWBNO is planning to invest in projects to return other critical assets to good working order, including the water purification plants and sewage treatment plants.

Implementation of these initiatives will be the responsibility of the SWBNO Board of Directors and Management, which is described in more detail in the following sections.

## 1. Board of Directors

SWBNO is governed by an 11 member Board of Directors (Board), which includes the Mayor of New Orleans. In 2013, during a Louisiana regular legislative session, several changes were made to the state statutes that govern the makeup and actions of SWBNO. These major changes to SWBNO's Board are highlighted below:

- The number of Board members was decreased from 13 to 11. There is no longer a requirement for three Board members to be selected from the City Council.
- The Board includes two members from the City's Board of Liquidation and eight citizen members (5 from each of the council districts of the City, 1 at large, and 2 consumer advocates).
- The eight citizen members are selected by a Selection Committee that consists of ten members, including: 1) president of Dillard University or designee; 2) president of Loyola University or designee; 3) president of Tulane University or designee; 4) president of Xavier University or designee; 5) chancellor of Delgado Community College or designee; 6) chancellor of University of New Orleans or designee; 7) chancellor of Southern University at New Orleans or designee; 8) chair of board of directors of New Orleans Chamber of Commerce or designee; 9) president of the board of directors of New Orleans Regional Black Chamber of Commerce or designee; and 10) chair of board of directors of the Urban League of Greater New Orleans or designee.

- The process for determining Board members was amended. Generally, the process requires that vacancies to the Board are published to achieve public awareness and solicit nominees for replacement. The Selection Committee reviews the list of applicants and determines whether they are qualified, and then submits a list of three qualified candidates to the Mayor for consideration. The Mayor then selects one of the three individuals and submits the nominee to the City Council for consideration and approval. If City Council approves, the nominee is appointed to the Board. If the City Council does not approve, the Selection Committee is to re-convene and again select three qualified individuals for submittal to the Mayor to re-start the process.
- Each nominee needs to have experience either in architecture, environmental quality, finance, accounting, business administration, engineering, law, public health, urban planning, facilities management, public administration, science, construction, business management, community or consumer advocacy or other pertinent disciplines.
- The term of each Board member was reduced from nine years to four years. The members cannot serve more than two consecutive terms. There are staggered initial terms determined by lot for the eight citizen members.
- There is a requirement for the Board to submit additional reports on a quarterly basis to the City Council. The reports generally cover standard industry metrics; processes and indicators to prevent waste and fraud; performance metrics for employees and contractors; benchmarks on the coordination of SWBNO and the City's Department of Public Works for ensuring resource alignment; effectiveness and efficiency of information systems; improvements to system redundancy; and status of operational reforms, capital improvement programs, and service assurance programs.

## 2. Management

SWBNO is led by the Executive Director who reports to the Board. The Executive Director, Mr. Cedric S. Grant took charge of SWBNO in August of 2014. Mr. Grant also oversees the City's capital development, infrastructure projects, and community development initiatives under a cooperative endeavor agreement between SWBNO and the City. While the Board provides leadership, policy direction, and oversight, the day to day operations of SWBNO are managed by the Executive Director, Deputy Director, General Superintendent, and Deputy General Superintendent.

As seen in the organizational chart on the following page, operations, maintenance, and engineering functions are managed by the General Superintendent who reports to the Executive Director. The General Superintendent is supported by the Deputy General Superintendent. Business and administrative functions are managed primarily by the Executive Director and Deputy Director. The Deputy Director is Mr. Robert Miller who has over 33 years of experience in the water utility industry, including 26 years at the Louisville Water Company. He has been at SWBNO since 2009. The General Superintendent is Mr. Joe Becker who has approximately 28 years of service with SWBNO. Mr. Becker's background has been primarily in the Operations and Engineering departments of SWBNO. The General Superintendent is assisted by a Deputy General Superintendent. Currently, the position is vacant and SWBNO is working to identify a replacement. The management team appears well qualified to run SWBNO.

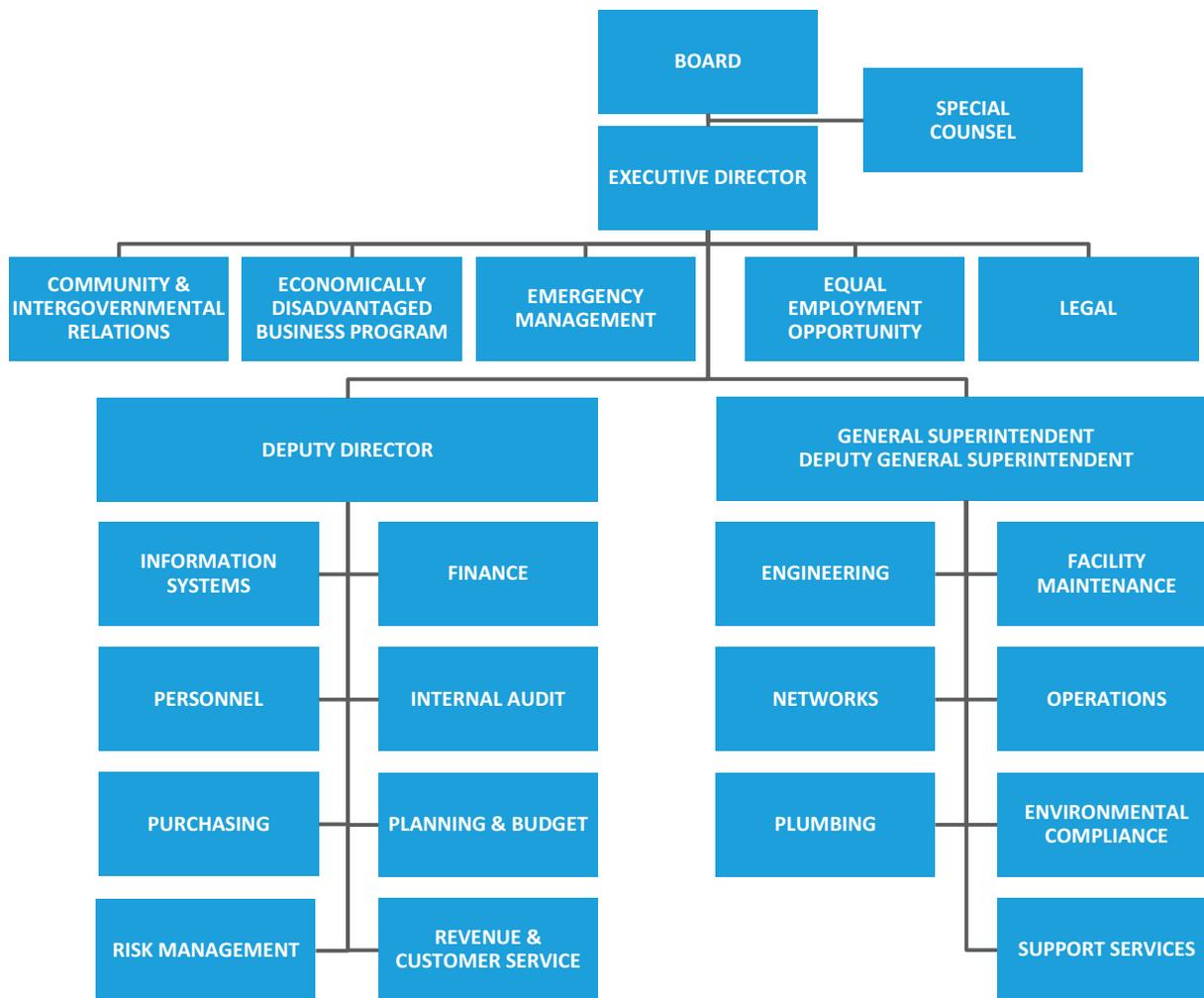


Figure 1—Organizational Chart

In addition to SWBNO’s core management team noted above, the department heads maintain significant operational and professional experience. For example, the head of the Operations, Facilities Maintenance, and Networks Departments each have over 30 years of experience, with SWBNO. Other managers maintain significant experience with SWBNO, but also have experience within the City or separate organizations. Discussions with staff have indicated that reporting lines do not always coordinate with the organizational structure. For example, the Geographic Information System (GIS) is housed within the Information Systems Department (Information Systems), but is required in the Engineering Department. In this instance, cooperation between administrative and operational units occurs to provide the necessary support across the organization.

### 3. Staffing

As noted above, key managers maintain significant experience with SWBNO operations and its business functions. While this provides current benefits, retirement is on the horizon for many of these key managers. According to SWBNO, approximately 25 percent of its workforce is eligible for

retirement which reflects a decrease of approximately 8 percent in the number of employees on DROP or eligible for retirement since 2014.

As of May 2015, SWBNO has approximately 1,103 total employees. This does not include contract employees, such as Veolia employees who operate and maintain the sewage treatment plants and Xerox employees who assist in Information Technology. Table 1, on the following page, provides the current number of employees at SWBNO by department and the associated number of vacancies to be filled.

As can be seen, there are significant vacancies in some of the key departments, including Water Purification and Lab unit of the Operations Department, as well as Engineering, Internal Audit, Information System Administration, Planning & Budget, Plumbing, and Support Services. These are key areas where the lack of qualified personnel can impact the performance of core responsibilities and administrative oversight. For the majority of these, the vacancies have been approved by the Board to be filled. SWBNO Board has approved requisitions for 179 vacancies. This means that the hiring of replacements has been initiated and will be pursued by SWBNO's Personnel Department in conjunction with the City of New Orleans' Department of Civil Service (Civil Service). While SWBNO initiates the hiring process, personnel management and the actual hiring process are managed by Civil Service. Civil Service has developed policies and procedures that must be followed by SWBNO for the hiring of any new personnel. In general, interviews with SWBNO indicate that hiring suitable replacements for the vacancies noted above is a challenge due to several factors including:

- **Lack of Qualified Candidates**—The operating departments for SWBNO include more technical and labor intensive positions such as electricians, engineers, laborers, and mechanics. In many instances, SWBNO managers report that the pool of candidates does not maintain the technical experience associated with the job needed.
- **Cumbersome Hiring Process**—The process for hiring through Civil Service requires reviewing and interviewing a significant number of applications. Civil Service groups candidates into bands that reflect compatibility with the requirements of the particular job opening. The candidates in qualified bands must be interviewed with recommendations reverted back to Civil Service. This process takes time, and in some instances managers report that qualified candidates will move on to other jobs that become available.
- **Pay Limits and Residency Requirements**—Working for SWBNO includes a residency requirement to live within Orleans Parish. Additionally, managers note that pay scales for more technical jobs such as engineering and skilled labor are not competitive with similar private sector jobs. In some instances disincentives exist where a promotion to a managerial position could result in less pay due to exemption from overtime.

Despite these hurdles, SWBNO management believes that the process for hiring additional employees and replacements for the existing employees that will be retiring can and will be improved. One initiative mentioned by staff is the Workforce Initiative. In September of 2014, the Board approved a partnership with the City of New Orleans, SWBNO, and Delgado Community College to recruit and train working-age candidates in sector-specific skills such as crafts, welding, machinist, and industrial maintenance in the waste water management fields. The initiative aims at

hiring an additional 250 employees, or 25% of the workforce. In addition, in 2016 SWBNO will conduct a comprehensive compensation analysis for all SWBNO positions to determine appropriate salaries and benefits for its employees.

Other initiatives include providing more SWBNO-specific job descriptions to Civil Service to assist with providing a more focused and qualified set of candidates to evaluate; completion of job studies to create or design new positions to meet the changing outlook of SWBNO; strengthening the communication between SWBNO and Civil Service; and participation by members of the Personnel Department (Personnel) at local and regional job fairs to recruit workers interested in the water, sewerage, and drainage fields.

Table 1—Current Number of SWBNO Employees and Vacancies (as of May 11, 2015)

DEPARTMENT	# OF EMPLOYEES	# OF VACANCIES	TOTAL	% VACANT
Executive Director	7	0	7	0.00%
Community & Intergovernmental Relations	4	2	6	33.33%
Economically Disadvantaged Business Program	7	0	7	0.00%
Emergency Management	5	4	9	44.44%
Equal Employment Opportunity	0	1	1	100.00%
Legal Department	8	1	9	11.11%
Administrative Services	2	1	3	33.33%
Environmental Affairs	11	4	15	26.67%
Finance	24	4	28	14.29%
Information Systems Administration	6	3	9	33.33%
Personnel Administration	14	0	14	0.00%
Planning & Budget	6	3	9	33.33%
Purchasing Administration	6	0	6	0.00%
Revenue & Customer Service	175	19	194	9.80%
Risk Management	9	3	12	25.00%
Internal Audit	3	5	8	62.50%
General Superintendent	4	0	4	0.00%
Engineering	46	22	68	32.35%
Facility Maintenance	63	8	71	11.27%
Networks	323	31	354	8.76%
Operations – Administrative	2	1	3	33.33%
Operations – Water Purification and Lab	72	10	82	12.20%
Operations – Pumping and Power	79	4	83	4.82%
Operations – Sewage and Drainage Pump Stations	109	9	118	7.63%
Operations – Sewage Treatment Plants	1	0	1	0.00%
Plumbing	18	7	25	28.00%
Support Services	96	39	135	28.89%
<b>Total</b>	<b>1,103</b>	<b>179</b>	<b>1,282</b>	<b>13.96%</b>

As SWBNO manages personnel in accordance with the City’s Civil Service Department, employees that are eligible for retirement can opt to enter the DROP program. The DROP program allows employees that are eligible for retirement to continue working while receiving their normal pay and retirement pay for up to five years. This benefit allows SWBNO employees to save additional

money prior to terminating their employment with SWBNO. A benefit for SWBNO is that the organization can begin planning for the departure of the employee. Currently, there are approximately 125 employees of SWBNO that are on DROP. There are an additional 147 current employees that are eligible for retirement. Thus, approximately 25 percent of SWBNO's current workforce is on DROP or eligible for retirement which reflects a decrease of approximately 8 percent in the number of employees on DROP or eligible for retirement since 2014.

The pending retirements facing SWBNO are not unique to SWBNO. Utilities across the U.S. are facing similar challenges as the workforce that was developed to manage and operate utilities during growth years approaches retirement age. In addition to pursuing replacements for the identified vacancies above, SWBNO also has several initiatives that are focused on mitigating the impact of the pending retirements, including:

- **Knowledge Management and Succession Planning**—In 2013 SWBNO developed a policy for initiating a program for Knowledge Management and Succession Planning. The focus of the program is to 1) capture knowledge from critical employees prior to retirement; 2) identify potential successors; and 3) transfer knowledge and develop potential successors. While this program is still in the early stages, it is evident from discussions with staff that one benefit of the DROP program is the advance notice that it provides management for preparing for the loss of critical personnel. This initiative is slowly being developed within the administrative departments that report to the Deputy Director. SWBNO management plans to continue to develop this program in the coming years.
- **Training**—SWBNO conducts training through approved online, on-site and off-site courses. The training courses include a variety of classes on subjects including, business administration; clerical; time management; diversity and communications; process and change management; and leadership. Managers in SWBNO identify classes for their employees and submit the list to the Personnel Department, who coordinates the training with the suppliers. Additionally, the operating divisions under the General Superintendent's Office maintain training regimens related to their specific focus areas. Since operational positions require annual training credits to maintain Louisiana State certification, the operating units obtain specialized training outside the purview of Personnel Administration. All training is then reported back to Personnel Administration for record keeping.

## **B. KEY OPERATING UNITS**

As seen in the organizational chart on above, the key operating units of SWBNO fall under the supervision of the General Superintendent and Deputy General Superintendent, who report directly to the Executive Director. The following sections provide an overview of key operating units, as well the major assets for which they have responsibility.

### **1. Operations**

The Operations Department (Operations) within SWBNO is organized into four separate units. These include Water Purification, Sewerage and Drainage Pumping, Water Pumping and Power, and Sewage Treatment. Operations coordinates with several other departments, including Engineering,

Networks, and Facility Maintenance to plan and perform maintenance related to SWBNO's key assets.

#### **a) Water Purification**

The Water Purification unit is responsible for the treatment of all drinking water supplied by SWBNO. This is accomplished at two purification plants, the Carrollton WPP and the Algiers WPP. The Carrollton WPP is the larger of the two and primarily serves the portion of the SWBNO service area that is on the east bank of the Mississippi River. The operating capacity of the Carrollton WPP is 232 million gallons per day (mgd). The Algiers WPP is located on the west bank of the Mississippi River and has a current operating capacity of 24 mgd.

Key responsibilities of the Water Purification unit include treating water that meets all parameters of the Safe Drinking Water Act (SDWA); controlling the rate of flow into the plants to assure the quantity of water is sufficient to meet system demand; operation of the laboratory to conduct process control sampling as well as compliance sampling; management of various chemicals used in the treatment process; general maintenance of treatment facilities, including backwashing of filters, painting, and other miscellaneous activities.

Another key function of the Water Purification unit is to monitor the raw water coming down the Mississippi River for any potential organic contaminants. This includes participating in the State of Louisiana Department of Environmental Quality (LDEQ) program for Early Warning Organics Contamination Detection System (EWOCDS). This system consists of monitoring stations equipped with sensors for detecting organic contaminants. If organic contaminants are detected, LDEQ, through the Louisiana Department of Health and Hospitals, notifies downstream utilities so they can prepare and utilize treatment options for the removal of organic contaminants.

#### **b) Sewerage and Drainage Pumping**

The Sewerage and Drainage Pumping unit primarily provides operation and maintenance of the sewerage and drainage pump stations owned by SWBNO. The topography of the SWBNO service area is unique and requires significant pumping assets for conveying sewage and storm runoff. There are approximately 1,547 miles of sewer mains in the system and 82 sewage pump and lift stations. With respect to the sewerage system, this unit operates the pump stations to assure effective flow of sewage to SWBNO's two treatment plants. SWBNO is under a consent decree with the USEPA to eliminate the instances of sanitary sewer overflows in the larger, east bank portion of its sewerage system. Thus, this unit plays a critical role as the pumping and lift stations need to be in good working order to prevent backups in the system and associated overflows that are required to be reported under the terms of the consent decree.

With respect to the drainage system, this unit operates 25 major drainage pump stations that are responsible for draining Orleans Parish during wet weather. The pumps in these drainage pump station require manual operation and therefore this unit provides a critical role in the drainage of Orleans Parish during wet weather. In addition to the drainage pump stations, this unit is responsible for monitoring and inspecting the various canals and 13 minor drainage stations that are used to collect and convey stormwater during wet weather events.

### **c) Water Pumping and Power**

The Water Pumping and Power unit (Pumping and Power) is responsible for the operation of SWBNO's power plant that is located at the Carrollton WWP. This power plant is primarily a 25 cycle plant that powers SWBNO's drainage pump stations and parts of the water purification plants. In addition to the power plant, this unit is also responsible for operating the major pumping assets that supply drinking water to SWBNO's customers. This includes the Panola and Claiborne high service pump stations, as well as high service pumps A and B that are located in the power plant at the Carrollton WWP. Additionally, this unit controls the low lift pumps that pump water from the river intakes to the two purification plants.

Electricity is a critical component for the provision of all water, sewerage, and drainage service. During an emergency situation, the power station uses steam produced from onsite boilers to power three turbines that produce electricity to keep the drainage pump stations up and running during a flood event or other disaster. There is an additional turbine that uses natural gas or diesel fuel to also supply 25 cycle power. The combined capacity of these four turbines is approximately 61 megawatts (MW). There is also a new 60 cycle, 15 MW power turbine that has been installed near the power plant. This turbine will provide redundancy to stations that rely on 60 cycle power that is provided by the local electricity provider, Entergy. The new turbine will have a feed line from it to Drainage Pump Station No. 1, which is a key pump station that serves the downtown portion of the drainage service area.

### **d) Sewage Treatment**

The sewage treatment plants owned by SWBNO are operated, maintained and managed under a contract with Veolia. In December of 2014, SWBNO and Veolia entered a new ten-year agreement that would guarantee Veolia will continue to operate, maintain and manage the sewage treatment plants and be responsible for complying with the NPDES permit requirements.

The sewage treatment operations and maintenance are managed by Veolia, with oversight by SWBNO. Veolia is responsible for the compliance with standards outlined in SWBNO's NPDES permit related to Clean Water Act (CWA) sewage treatment effluent standards, as well as Clean Air Act (CAA) regulations for emissions as the sewage treatment plants. Both Veolia and SWBNO cooperate with respect to identifying capital needs for the sewage treatment plants to assure that they remain in good working order.

## **2. Facility Maintenance**

The Facility Maintenance Department (Facility Maintenance) provides technical maintenance service to various critical assets owned by SWBNO. Facility Maintenance is divided into four units that focus on plant maintenance, welding and fabrication, electrical maintenance, and mechanical maintenance. Examples of the work performed by Facility Maintenance includes: cleaning and inspection of flocculation and sedimentation basins; welding and fabrication of various mechanical parts necessary for SWBNO's critical power and pumping equipment; electrical maintenance on the power delivery assets as well as the electrical equipment at pumping and treatment facilities; maintenance on pumping motors and associated equipment; and testing and maintenance on SWBNO's customer meters. The work performed by Facility Maintenance requires significant specialized technical skills as much of the SWBNO equipment related to the power plant, steam

pumps, and other older equipment cannot be replaced with the same equipment, and therefore must be maintained and repaired in house.

Work performed by Facility Maintenance is coordinated and tracked through SWBNO's Cassworks® work order maintenance system. Facility Maintenance is participating in several important initiatives, including: rehabilitation of the power plant and associated turbines; water hammer project related to replacing pumps at high service pump stations; sewerage and drainage pump station rehab projects; and maintenance on water purification plant sedimentation basins. These projects, combined with routine and reactive maintenance issues throughout the plants, stations and distribution, keep Facility Maintenance heavily engaged and require the normal use of overtime from employees to keep up with its work load.

### 3. Engineering

The Engineering Department (Engineering) includes Mechanical Engineering, Electrical Engineering, Civil Engineering, Construction Administration and Inspection, and Networks Engineering. Engineering administers major contracts for all projects related to SWBNO facilities, and coordinates with other agencies and consulting engineers for the design and construction of SWBNO capital improvements. The engineering staff works closely with the various Operations units. These close ties promote the effective execution of critical projects necessary to keep operations and processes working and producing the services for the community. Currently, there are 46 employees in Engineering with 22 vacancies.

Major areas of responsibility for Engineering include:

- Review of design packages from outside engineering firms that are related to SWBNO facilities.
- Inspection of projects currently under construction, e.g., the current rehabilitation of the steam driven high service pumps A and B.
- Internal design of systems such as the replacement of sewer lines or water distribution mains that serve the Orleans Parish.

The proposed CIP discussed in Section VII of this Report will be the focus for Engineering in the coming years. To supplement the existing Engineering staff, SWBNO has been seeking qualified firms that have expertise in specific areas to assist with the design and implementation of the various projects. This will shift much of the design of proposed projects to the outside engineering firms with SWBNO engineers providing program management.

### 4. Networks

The Networks Department (Networks) is responsible for the maintenance of the transmission and distribution lines for the water, sewer, and drainage systems, as well as responding to customer service requests that are routed via the Customer Service and Revenue employees using Cassworks®. Major areas of responsibility for this unit include:

- Sewer Overflow Response—As part of the consent decree, SWBNO is required to respond within four hours of a daytime sewer overflow to mitigate the impact of the overflow on

the environment. For sewer overflows that occur during the night time, or during holidays, the required response time is six hours.

- **Leak Detection**—This initiative to identify and repair leaks in the water distribution system is led by the Networks Department. SWBNO has been using firms with experience in leak detection, and the associated leak detection technology to survey various sections of the water distribution system.
- **System Inspections**—Networks is responsible for inspecting the various components of the water, sewer, and drainage systems. This includes manholes, pressure relief valves on force mains, exercising water distribution valves, closed circuit television (CCTV) sewer inspections, and inspection of fire hydrants. With respect to fire hydrants, the goal of the Networks Department is to inspect a fire hydrant once every two years. Additionally, the local fire department does its own check of fire hydrants on a semi-annual basis.
- **Technical Services**—Networks has engineers within its technical services group that focus on the management of network specific projects. These projects mainly include pipeline replacement projects.
- **Customer Response**—This includes service issues that impact customers such as main breaks, low pressure, or other events in the water distribution or sewer system that impact customer service.

To complete these various tasks, Networks distributes its employees into seven zones of operation. Employees assigned to Zones 1, 3, 4, 5 and 6 are responsible for maintenance and inspections within a specific geographical zone of SWBNO's service area. Employees assigned to Zone 2 focus solely on preventative maintenance tasks across the entire service area. Employees in Zone 7 focus on issues that occur outside of normal operating hours, i.e., "after hours." To supplement these employees, Networks maintains agreements with contractors to assist with activities such as water line repair, sewer line repair, and paving of areas where work is required under the street.

Another important SWBNO initiative where Networks plays a key role is the water line repair and sanitary sewer system rehabilitation projects. SWBNO strives to coordinate with the City's Department of Public Works (DPW) to conduct these rehabilitation projects concurrently as DPW is rehabilitating streets and sidewalks. Networks, as well as other SWBNO units provide input and coordination for the scheduling of these projects to prevent both entities from unnecessarily tearing up the street or disrupting traffic on two separate occasions.

## 5. Plumbing

The Plumbing Department (Plumbing) is responsible for plumbing code enforcement and inspection of new residential and commercial connections to the SWBNO collection and water distribution network. Areas of code enforcement include installation of relief valves, backflow preventers, and avoiding cross connections with SWBNO system. Additionally, Plumbing plays a key role in compliance with the consent decree. SWBNO is required to report any sewer overflows that are identified on private property. When Plumbing identifies a defect that causes a sewer overflow on private property, a letter is sent to the property owner informing them that a plumber must be retained to fix the defect to prevent further issues. These work activities are reported quarterly as part of the consent decree compliance.

## 6. Environmental Affairs

The Environmental Affairs Department (Environmental Affairs) oversees several critical functions with respect to maintaining and reporting compliance with the various permits held by SWBNO. While the operating units of SWBNO have the responsibility of complying with the parameters of the various permits, Environmental Affairs assists reporting and tracking to ensure the timely submission of required information to regulatory agencies. There are a total of 11 employees within Environmental Affairs and four vacancies. Key permits monitored by Environmental Affairs include:

- NPDES—Environmental Affairs manages SWBNO’s industrial pretreatment program required by the NPDES permit. This includes establishing discharge limits for significant industrial users and monitoring these customers to ensure they stay within the limits. With respect to sewage treatment plant effluent parameters outlined in the NPDES permits, Veolia is responsible for achieving compliance. Environmental Affairs reviews, certifies, and submits all discharge monitoring reports (DMRs) through the Net DMR reporting system. There are also discharge permits for the water purification plants to allow for the discharge of backwash water and clarifier sludge to the Mississippi River. Environmental Affairs.
- Title V Air Permits—There are two main permits for SWBNO’s operations, including the power plant at the Carrollton WPP and the incinerator at the East Bank Plant. Additionally, SWBNO maintains backup generators at many facilities. Environmental Affairs has led the initiative to have these generators registered with LDEQ.
- Municipal Separate Storm Sewer System (MS4) Permit—Along with the City of New Orleans and several other entities, SWBNO is a party to the stormwater permit that regulates stormwater discharges in the Orleans Parish area.

In addition to monitoring the permits above, Environmental Affairs also tracks other environmental requirements related to underground storage tanks and participates with the operating units in tracking and complying with the consent decree.

A key initiative that Environmental Affairs will lead includes the implementation of the green infrastructure project required under the third modified consent decree. This project will look at the viability of using components such as pervious pavement, rain gardens, or other components as part of construction projects that will mitigate the impact of stormwater during wet weather events. It will also include education about stormwater management best practices for the general public.

## 7. Support Services

Support Services falls under the purview of the General Superintendent, it provides various maintenance and support functions for the operating departments. Several of these support functions include:

- Fleet Management—SWBNO, through Support Services, manages the fleet of vehicles used by the various other divisions. The fleet consists of regular passenger vehicles and utility trucks, as well as larger vehicles such as vacuum trucks and trucks that are equipped with portable hydraulic equipment for operating valves throughout the system. Currently, there are approximately 753 pieces of rolling stock managed by Support

Services. Additionally, there approximately 117 pieces of equipment, such as portable pumps. All preventive maintenance is performed on the fleet by Support Services. Repairs to equipment are done both internally and via contracted maintenance.

- Maintenance—Support Services provides grounds maintenance for many of the unmanned properties owned by SWBNO. For example, grounds maintenance at the Carrollton WPP is performed by staff from the operating units located there, as well as the maintenance at the manned sewage pump stations. Support Services provides grounds maintenance at the unmanned pump stations and other similar facilities. Additionally, Support Services provides services for controlling vegetative growth along the drainage canals as well as general maintenance such as janitorial services and miscellaneous repair to building facilities.

Additional responsibilities that fall under the purview of Support Services include control of the warehouse, which includes the tracking and inventory of field supplies and equipment used by SWBNO, as well as managing the contracted security at the Central Yard, St. Joseph Street headquarters, and Algiers WPP.

## C. ADMINISTRATIVE AND SUPPORT UNITS

As seen on the organizational chart on page 14, the units that provide administrative and support functions for SWBNO report to the Deputy Director and Executive Director. Key functions include finance, planning and budget, information systems support, customer service and revenue collection, legal, purchasing, and other critical areas necessary for helping SWBNO perform its mission. The following sections provide an overview of several key Departments and their current initiatives.

### 1. Finance

The Finance Administration Department (Finance) is responsible for several important functions of SWBNO, including the following:

- Preparing monthly financial statements;
- Processing employee payroll;
- Managing receipts from customers, as well as disbursements to employees and vendors;
- Managing annual audit process;
- Overseeing pension fund;
- Monitoring and preparing annual report on debt service coverage;
- Inventory control; and
- Managing short-term investment portfolio

Finance currently has 28 budgeted positions with four vacancies.

Financial reporting is a critical function of Finance. On a monthly basis, this Department prepares an overview of the financial condition of SWBNO for presentation at the monthly regular Board meeting. Preparing these monthly reports in a timely manner is difficult due to the deficiencies of

the existing financial reporting system. A more modern financial system with increased functionality (see section on Information Systems) is desired...

Finance also handles year-end auditing and financial reports. It is the goal of Finance to complete the SWBNO audit by March 31st of each year. This includes completion of the audit and production of the Comprehensive Annual Financial Report (CAFR). The end of the financial reporting year is December 31st. Staff indicates that SWBNO has consistently received the Certificate of Achievement for Excellence in Financial Reporting for its annual financial statements, with the exception of one year in the aftermath of Hurricane Katrina.

Finance manages the payroll process for SWBNO. At this point, the process is still manual in nature. Time cards are collected from the various divisions and input into the payroll system. Payment is disbursed to employees electronically to their respective account on a weekly or bi-weekly schedule. SWBNO is in the early stages of exploring the next generation of software to manage its human resources (including payroll) functions.

Other critical responsibilities handled by Finance include managing accounts receivable, accounts payable and the various investments of SWBNO. Staff processes accounts receivables associated with miscellaneous revenues such as grants, FEMA reimbursements, and City refunds that are not handled by Revenue & Customer Service. Staff also processes accounts payable to vendors. The target is to process payments immediately after approval by the appropriate authority. Investments are made in short-term instruments such as the Louisiana Asset Management Pool (LAMP) and money market accounts. In addition, Finance is responsible for deposits to and disbursements from the pension fund, and retains an actuary on an annual basis to assess the fund value as part of the annual audit process.

Another responsibility of Finance is to conduct an inventory count of equipment for the SWBNO warehouse with the assistance of a contracted professional counter. This work consists of performing a physical count of equipment in the warehouse and cross-referencing it to forms that must be completed prior to reception or release of the equipment. The purpose of this inventory is to assure that SWBNO equipment is managed responsibly and used for its authorized purpose.

## **2. Planning & Budget**

The Planning & Budget Department (Planning & Budget) is responsible for developing the annual budget that by law must be completed by December 31st each year for the coming year. Planning & Budget currently has nine budgeted positions with three vacancies.

The annual budgeting process consists of developing both of the operating and capital budgets. The normal operating budgeting process begins in July of each calendar year. At that time, Planning & Budget submits a budget package to the Department heads that shows the actual spend versus budgeted amounts for the current year to date. The Department heads then perform their own internal analysis to review the current budget, spend to date, and ongoing operations to provide Planning & Budget with an assessment of budget changes for the coming fiscal year.

Planning & Budget reviews the budget information supplied by the Department heads for reasonableness and then inputs into the AFIN financial system. Planning & Budget develops the budgeted projection of water, sewer, and drainage revenue for SWBNO. The revenue and requested

operating budget is compared to determine whether sufficient funds are available to meet the budgeted costs. The Department heads then meet in person with Planning & Budget, as well as the Executive Director to review their requested budget and make final adjustments as necessary.

The capital budget is managed by the General Superintendent's office, which receives capital requests from all departments, prioritizes projects, and determines the funding source for each project. The funding source dictates which utility the project supports, as well as whether it will be paid from SWBNO funds, FEMA funds if the project meets specific requirements, or from another source. Planning & Budget takes this capital budget and analyzes it to determine whether there is sufficient revenue or funds on hand to complete the project. If there are not sufficient funds, the project is marked as unfunded and reverts to be considered during next year's capital budget cycle.

Additional initiatives that Planning & Budget is involved in include strategic planning, support of bond issuance, and tracking actual versus budgeted spend for the various departments.

### 3. Revenue & Customer Service

The Revenue & Customer Service Department (Revenue & Customer Service) provides the day to day interface with SWBNO customers. This includes operating the call center on a 24 hour/7 days a week basis, and manning the lobby customer service and payment centers. As the title of this department indicates, the two core functions provided are: 1) customer service which includes assisting customers with general payment and service issues and 2) revenue which includes meter reading, billing, and collection functions. Revenue & Customer Service currently has approximately 194 budgeted positions, with 19 vacancies.

Customer service is generally accomplished through the operation of the call center and lobby customer service center located at St. Joseph Street. SWBNO also maintains a customer service center located in Algiers on Behrman Place. SWBNO is investigating the possibility of opening a satellite customer service center in the eastern portion of its service territory. The call center operates 24 hours per day, seven days per week. Normal operating hours are from 7:00 AM to 7:00 PM, with the emergency group handling any calls after hours. The emergency group, while a part of Revenue & Customer Service, is set up to handle customer service issues that require a time sensitive response from SWBNO. A key reason for the existence of this group is to comply with SWBNO's consent decree, which requires the reporting of the date and time of SWBNO's response to an unauthorized discharge from the sanitary sewer system. The majority of calls received by the call center are related to billing issues.

Revenue & Customer Service staff acknowledges that the performance of the call center has been the most challenging aspect of their operations in recent years. Turnover remains high within the call center as salaries are considered low. Over the last three years, management has been tracking typical call center metrics such as number of abandoned calls and wait time, with the goal of improving performance in this area.

Another challenge mentioned by staff is the communication between the customer service call center and operations when service issues occur in the system. The main issue appears to be when a service issue such as an outage occurs due to a main break or other reason. In these instances, the call center struggles to provide customers with timely updates on the status of the outage and timing of service restoration. For planned outages, this communication is greatly improved as the

call center receives text from the community relations staff that provides pertinent information to relay to customers.

The call center has access to the Cassworks® work order system, which allows it to initiate service requests to be performed by operations. However, Cassworks® does not provide any additional information or functionality that would allow a call representative to update a customer that is inquiring about an open service request. In 2015, Revenue & Customer Service has begun to take a more proactive approach by seeking answers from operations and contacting customers before the customers call back to inquire.

Revenue & Customer Service also handles the billing and collection of SWBNO customers. Water and sewer revenue is derived from metered water use. Meters are read by Revenue & Customer Service employees on a monthly basis. Staff indicates that there are approximately 129,000 meters in the SWBNO system. Meters are read manually by approximately 25 meter readers. Data is uploaded each day to the Customer Account Management (CAM) system where it is consolidated and bills are generated each month via 20 billing cycles. Revenue & Customer Service is responsible for printing of bills, and has access to a local print shop in the event of any disruptions to the in-house print process.

Collection of revenue is primarily accomplished through traditional mail service. Customers can also pay online via credit card that includes a 5 percentage processing fee, or in person at the customer service centers. Payment at customer service centers is only available via cash or personal check. Revenue & Customer Service collects sanitation charges for the City's Sanitation Department and forwards the revenue to the City. Collection of the drainage system revenue is via property tax which is collected by the City. Revenue collected by the City is forwarded to SWBNO.

One SWBNO initiative that its staff believes will have a positive impact on the customer service and revenue collection efforts of SWBNO is the replacement of the existing CAM system that is used for billing, collection, and customer service functions. Revenue & Customer Service in conjunction with Information Technology has begun the process of converting their CAM system to a Cogsdale® Customer Service Management (CSM) system. It is envisioned that the new billing system will be able to allow Revenue & Customer Service to institute e-billing in lieu of the current paper driven process. Additionally, the new system will allow for Interactive Voice Response (IVR) to provide automatic reminder notices to those customers that are behind on payments. SWBNO has dedicated seven employees to an offsite facility that is in the process of implementing the new CSM system.

#### **a) Customer Service Metrics**

Revenue & Customer Service tracks several performance areas with respect to its call center, revenue, and billing. The table below provides an indication of its recent performance:

Table 2—SWBNO Internal Customer Service Performance Metrics

METRIC	2012 AVERAGE	2013 AVERAGE	2014 AVERAGE	INTERNAL GOAL	MEET INTERNAL GOAL?
Bills Adjusted	2.30%	2.40%	3.00%	Reduce over time	No
Bills Estimated	4.41%	3.00%	4.60%	< 2%	No
Calls Abandoned	15.10%	18.40%	13.70%	< 10%	No
Emergency Calls Abandoned	16.40%	15.50%	11.80%	< 10%	No
Inbound Customer Contacts	22,375	22,270	23,004	Reduce over time	No

As shown in the above table, the metrics related to actual abandoned calls are high compared to SWBNO's internal goals, but there was improvement in 2014.

### (1) Bills Adjusted

Revenue & Customer Service monitors the number of bills that are adjusted each month, compared to the total number of monthly bills computed for customers. A bill adjustment can occur due to an unknown leak, erroneous meter read, or other issue. For 2012, 2.3% of bills were adjusted, for 2013, 2.4% of bills were adjusted, and for 2014, 3.0% of bills were adjusted.

### (2) Bills Estimated

Revenue & Customer Service monitors the number of bills that are estimated each month, compared to the total number of monthly bills computed for customers. A bill is estimated if the meter is not read by the designated billing date, or when a meter is read and the reliability of the reading is doubtful and the account is placed on an exception report. Spikes in estimated bills can also occur during extreme weather. For 2012, 4.4% of bills were estimated, for 2013, 3.0% of bills were estimated, and for 2014, 4.6% of bills were estimated, all being higher than the internal goal of less than 2% of bills estimated.

### (3) Calls Abandoned

Revenue & Customer Service monitors the number of calls that are abandoned each month, compared to the total number of calls received from all customers. A customer will abandon a call if he or she perceives they have waited for an inconvenient amount of time. Some portion of the abandoned calls is also from customers calling and hanging up on multiple occasions. For 2012, 15.1% of calls were abandoned, for 2013 18.4% of calls were abandoned, and for 2014 13.7% of calls were abandoned, all percentages being higher than the desired goal of less than 10% of calls abandoned. SWBNO is focusing on hiring and training new call center representatives to provide better service in this area.

#### **(4) Emergency Calls Abandoned**

Revenue & Customer Service monitors the number of emergency calls that are abandoned each month, compared to the total number of emergency calls received from all customers. A customer will abandon a call if he or she perceives they have waited for an inconvenient amount of time. Some portion of the abandoned calls is also from customers calling and hanging up on multiple occasions. For 2012, 16.4% of emergency calls were abandoned, for 2013 15.5% of emergency calls were abandoned, and for 2014 11.8% of emergency calls were abandoned, all percentages being higher than the desired goal of less than 10% of calls abandoned.

#### **(5) Inbound Customer Contacts**

Revenue & Customer Service monitors the number of customer contacts each month. Customers contact SWBNO to start or end service, to request information about their bills, to report concerns about their water service, sewer connection, street flooding, or solid waste sanitation service, and other matters. For 2012, an average of 22,375 contacts per month was recorded, for 2013, an average of 22,270 contacts per month was recorded, and for 2014 an average of 23,004 contacts per month was recorded. SWBNO is working to improve this metric, analyzing what events trigger calls in order to determine methods to reduce the call volume.

### **4. Information Systems**

The Information Systems Department (Information Systems) manages the software and hardware technology systems that support SWBNO's operations. Information Systems performs its responsibilities via a contract with Xerox. Contract services have been used by SWBNO since approximately 1988. In total, this unit includes seven budgeted SWBNO employees and 31 employees of Xerox and Major Services. The majority of the contract with Xerox is related to providing O&M activities such as Help Desk assistance for employees, personal computer technicians and programming support of the existing software. The other major part of the contract deals with supporting activities related to implementing new systems to replace the current systems. The contract with Xerox is currently on a month to month extension and Information Systems is in the process of evaluating a new contract with Xerox or other alternatives.

SWBNO's technology systems are functional, but are outdated and in need of upgrades or replacement. In response, SWBNO has begun the process of replacing several of its most important business technology systems. The first planned replacement is of the CAM billing system. This system, in place since approximately 1988, is a COBOL, batch system that was developed in-house and is used to bill for water and sewer service. The system also handles sanitation billing for the City. SWBNO selected Cogsdale® Customer Service Management (CSM) system as the replacement of the CAM billing system. Information Systems anticipates that the timeline for complete conversion to the new CSM system is 2016.

Information Systems has also begun the process of replacing its human resources system. This human resource software system has been in place since the mid-1990s. It includes payroll, position control, worker's compensation and personnel management functions. Most notable is that SWBNO's timesheet process is still a manual and paper-driven process. Information Systems will replace the existing system with Cogsdale® Human Resources and Payroll System. Implementation of the new system will begin in December 2015 or January 2016. The new system will be able to

interact with the City's human resource system as SWBNO employees are part of the City's Civil Service program.

Information Systems anticipates that soon after the human resource management system is in place, it will replace its financial system. Information Systems is looking at CGI's financial management system, but has not decided on the vendor to date. Generally, the existing financial system, which is a COBOL-based program that was installed in approximately 1994, includes modules for managing the budget, tracking fixed assets (including inventory control), and performing accounting and purchasing functions. The individuals that have developed the COBOL-based programming for the system will be eligible for retirement in the coming years; therefore, Information Systems is taking prudent steps to plan for a replacement financial system. The replacement is expected to proceed during the 2016-2017 timeframe.

Another IT system managed by Information Systems is the Cassworks® system that is used to create and complete field service work orders. While Cassworks® appears functional for initiating and completing basic field service work orders, it lacks the functionality that would allow SWBNO to begin an enhanced asset management program. Thus, Information Systems has been assessing whether a move to an asset management system such as Cityworks® by Azteca would be warranted. Further evaluation of this potential move is anticipated in the coming years. The replacement of this system is expected to take approximately five years as it will be a complete replacement of the existing system with new technology.

In addition to the major systems noted above, Information Systems also is responsible for several other SWBNO initiatives, including the following: Personal Computer (PC) management and support; housing of GIS software; smart phone tracking and management for eligible employees; security cameras; and records and data management.

## 5. Emergency Management

The Emergency Management Department (Emergency Management) is primarily responsible for the planning associated with ensuring that SWBNO can provide effective water, sewer, and drainage service to customers during hazardous events, while minimizing the cost and damage to property from such events. This includes planning to ensure that employees and critical assets are prepared to perform during hazardous conditions. There are five full-time employees in Emergency Management, with three part-time employees. The Director is a FEMA certified emergency manager that has been at SWBNO for almost 20 years.

There are two primary responsibilities that fall to Emergency Management. The first is to ensure that SWBNO is prepared to provide its core water, sewerage, and drainage services should a disaster occur. The second is to track the completion of FEMA funded projects to ensure compliance with associated requirements.

To prepare for future incidents that may disrupt water, sewerage, or drainage service, Emergency Management completed a Hazard Mitigation Plan in 2010. The plan evaluates various potential occurrences such as hurricanes, earthquakes and floods to their potential for disrupting normal service to SWBNO's customers. The plan then includes recommendations to mitigate the impact from the potential occurrences. Examples of mitigation include storm proofing of critical pump stations or installing backup generators to ensure power delivery during a disruption of power. The

Hazard Mitigation Plan is developed to be compliant with FEMA Hazard Mitigation Grant Programs (HMGP) and the Disaster Mitigation Act of 2000, so that SWBNO can be eligible to directly apply for available FEMA grants should recovery be necessary. As seen in the CIP, there is significant funding for projects related to the HMGP.

Emergency Management also maintains an emergency management plan that is reviewed on an annual basis, primarily before the typical hurricane season; to ensure that managers are familiar with the plan of action should an emergency occurrence disrupt normal operations. The emergency management plant is available through an in-house app developed for smart phone operating systems.

Emergency Management is responsible for tracking and closing out FEMA-funded projects that are being completed after the occurrence of Hurricane Katrina. Emergency Management works with SWBNO project managers and the State of Louisiana to ensure that grant funds are used in compliance with applicable FEMA and state guidelines. There are approximately 490 projects totaling approximately \$852 million that are being tracked by Emergency Management. Emergency Management indicates that both internal and external audits of SWBNO's grant tracking program have not revealed any significant problems with how grant funded projects are implemented and completed. Overall, it appears that Emergency Management is well versed in the state and federal requirements for grant funded projects.

## 6. Personnel Administration

The Personnel Administration Department (Personnel) manages the personnel administration for SWBNO. There are a total of 14 employees in Personnel with no vacancies that focus on personnel operations and training. The general responsibilities of Personnel consist of the following:

- Recruiting and hiring
- Benefits administration
- Promotions, transfers, retirements, and terminations
- Training
- Tuition reimbursement program
- Retirement Administration

Employees of SWBNO are generally subject to the same civil service rules that govern employment with the City of New Orleans. This includes job classifications and pay scales for water, sewer, and drainage employees that are commensurate with other City job functions. The City's Civil Service Department is responsible for administering the civil service policies of the City, including procedures for SWBNO to request the filling of vacancies, hiring of new employees, as well as other personnel functions. This inhibits SWBNO's ability to directly hire for vacancies, but Personnel has been proactively recruiting at local job fairs to attract future employees are required to apply through the City's Civil Service Department.

There are four individuals in Personnel who manage employee training for SWBNO. They assist with arranging training that is available through the City Civil Service Department, local community colleges and other venues. Currently, training is primarily completed through online courses with supplemental training through on-site and off-site training. At one time, SWBNO had a full-time training group to arrange and track employee training. Now that it is included in Personnel, the

tracking of training has not occurred during recent years. Personnel plans to re-implement the tracking of training for SWBNO in the near future. More technical and operator-focused training is managed under the General Superintendent's office by the respective operating units.

The succession planning initiative remains an open priority for Personnel. Per the SWBNO strategic plan, this includes developing succession plans and performing knowledge transfer for all managerial positions. This is particularly important for individuals that are in the DROP program or eligible for retirement.

## 7. Purchasing

The Purchasing Department (Purchasing) is responsible for the procurement of all goods and services for SWBNO. This includes miscellaneous materials and supplies, as well as professional services in accordance with Louisiana state procurement laws. There are a total of six budgeted employees in Purchasing, and no vacancies.

Generally, the purchasing of goods and services consists of obtaining Board approval to advertise for procurement of a specific good or service; advertisement of bid to prospective bidders; conduct of pre-bid meeting to provide bidders with opportunity to ask questions; receipt and tabulation of bids; contract approval; obtainment of signatures; and monitoring of contracts while in effect. For services such as engineering or other professional services, the process is essentially the same except that Requests for Qualifications (RFQ) are used to first ensure that qualified firms respond. At this time the Purchasing handles about 2-5 construction phase contracts a month. In the 2013 to 2014 time frame, purchasing awarded 31 contracts for a total of \$97 million.

A challenge for Purchasing is that the current system for developing a project or requesting a good or service is very paper dependent. Thus, the required signatures and inputs from managers involved in the procurement process are routed via SWBNO's mail system for the various approvals. For capital project bids, the current process can sometimes take 6 to 8 months from project development to obtaining final signature on contracts by the Mayor. SWBNO is working on streamlining the process by avoiding final approval by the Mayor and allowing the Board to approve contracts. Another challenge is that three of the six current staff members, are on DROP and approaching retirement. . Thus, as SWBNO plans on implementing a significant capital program over the coming years, it will be necessary to hire and train qualified employees to keep the projects on track.

## 8. Risk Management

The Risk Management Department (Risk Management) is responsible for helping SWBNO managers create a safe working environment for all employees, as well as handling the various insurance claims that arise during the course of business. There are 12 budgeted positions within Risk Management and three vacancies.

To promote a safe work environment across SWBNO, Risk Management conducts inspections of facilities on an annual basis to identify workplace hazards. Risk Management then works with onsite managers to mitigate or correct the identified hazards to prevent workplace injuries. Additionally, construction projects and work repair sites are spot checked to ensure that safe practices are being used, Personal Protective Equipment (PPE) is being used, and that workers have

the appropriate licensing and training as necessary. Should a safety incident occur, there are two Safety Review Boards (one for auto-related incidents; one for non-auto-related incidents) that review the incident to determine the root cause and responsibility of the incident.

Risk Management also oversees claims from third parties that arise during the normal course of business. Claims can arise from a variety of issues such as vehicle accidents, main breaks, or other occurrences. SWBNO is fully self-insured, thus, Risk Management handles all claims that are made against SWBNO. This includes obtaining and evaluating damage estimates, and working with the Legal Department to deal with any issues that arise from the claims process.

#### **D. STRATEGIC PLAN**

In 2011, in order to determine the future direction of the organization, the SWBNO began the process of creating a Strategic Plan (Plan) for the ten-year period, 2011-2020. The Plan can be seen at the following link: <http://www.swbno.org/docs.asp>. The Board of Directors approved the initial Plan in September 2011. Since then, the Plan has been updated and revised, with the most recent version adopted by the Board of Directors in February 2013. The Plan presents SWBNO's Mission, Vision and Values; Goals and Objectives; Assumptions; Strengths, Weaknesses, Opportunities, and Threats; and Strategies and Tactics.

The SWBNO's Mission is to "provide safe drinking water to 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 Mission is to "have the trust and confidence of our customers for reliable and sustainable water services."

The Goals and Objectives outline how SWBNO will meet customer and stakeholder requirements. Identified stakeholders include ratepayers, taxpayers, elected officials, employees, bondholders, regulators, and other entities that interact with SWBNO on a day to day basis. The Plan indicates how SWBNO intends to interact with each of these stakeholders in a professional performance-driven manner, with one of the most notable goals to operate, maintain, rehabilitate, and replace the drinking water, sewerage, and drainage systems to deliver water services in perpetuity.

While SWBNO has the strength of an abundant water supply and reliable backup power supply, it has identified weaknesses that will impact its ability to achieve its mission, such as unresolved damage to buried infrastructure, extensive water loss, deferred maintenance of infrastructure, aging workforce, difficulty in hiring experienced technical employees, and information technology systems which have exceeded their design life.

The result of SWBNO's strategic planning process is the creation of six strategies to focus on continuous improvement over the coming years. These include:

1. Building the necessary infrastructure for the water, sewerage, and drainage systems in coordination with the City and other infrastructure providers;
2. Building SWBNO's financial capabilities;

3. Improve customer service capabilities;
4. Enhance business performance;
5. Enhance the capabilities of employees; and
6. Protect the environment.

Each of these strategies has tactics to provide more specific direction to SWBNO management with respect to implementing the strategies and thereby meeting the stated goals and objectives.

The Plan developed by SWBNO is a proactive document. It provides a foundation for management and employees to work toward rebuilding or strengthening the assets and performance of SWBNO over the coming years. The strategic plan should be followed up with department-developed tactical plans and metrics for tracking performance toward stated goals and objectives.

## **E. CONCLUSIONS**

Based on the review of SWBNO's organizational and managerial structure, Black & Veatch has reached the following conclusions:

- SWBNO is organized effectively to carry out its mission to provide drinking water, sewerage, and drainage services to the citizens of New Orleans. This includes managers who are experienced in the critical areas of utility finance, planning, operations, and engineering. There are administrative units tasked with key utility functions such as planning and budgeting, emergency management, human resources, and customer service. The operational units consist of departments focused on providing quality drinking water, sewerage, and drainage service.
- The management team consists of individuals with significant water, sewerage, and drainage experience. This experience has been developed both internally at SWBNO, and also at other respected, major water and sewer utilities.
- Similar to water and sewer utilities across the U.S., the departments that comprise SWBNO are faced with a significant number of pending retirements. Approximately 25 percent of current employees are either on the DROP program or are eligible for retirement which reflects a decrease of approximately 8 percent in the number of employees on DROP or eligible for retirement since 2014. Unless they continue to be replaced with a steady influx of qualified replacements, these pending retirements pose a significant threat to SWBNO's ability to perform its core operational and administrative functions. Succession planning and recruitment of qualified employees will be a key element for SWBNO to adjust to the pending retirements.
- There are several departments that are experiencing critical vacancies, including Engineering, Internal Audit, Information System Administration, Planning & Budget, Plumbing, and Support Services. SWBNO has made progress with reducing vacancies associated with water, sewer, and drainage operations and continues to address these vacancies to maintain effective operational and maintenance performance, and administrative oversight.

- With pending retirements, current vacancies, and a significant CIP to be implemented, a detailed staffing analysis of the various departments appears to be warranted. The staffing analysis, including an assessment of necessary skills and levels by department, can assist SWBNO's management with the efficient replacement of employees, as well as the development of revised job descriptions for use with the Civil Service hiring process.
- Many of the day to day administrative processes conducted by SWBNO are primarily paper-driven and not supported by its core information systems. In several instances, these information systems, while still functional, have been in place for almost 25 years. SWBNO is beginning a multi-year process to replace its core information systems, including information systems necessary for customer account management and billing, human resources, financial management and work order management.
- SWBNO has developed a strategic plan to address current and future challenges. The plan includes an assessment of strengths and weaknesses; as well as strategies and tactics for strengthening the organization over the coming years. There is specificity for key managers of the administrative and operational units to understand their role in the plan's implementation. The strategic plan should be followed up with department-developed tactical plans and metrics for tracking performance toward stated goals and objectives.

## V. Water System

### A. INTRODUCTION

SWBNO has been providing drinking water to the City since the early 1900s and serves the surrounding area with clean, treated drinking water from the Mississippi River. The major elements of its water system include three river supply intakes, two treatment plants, storage facilities and distribution network. The water system service area is shown in Figure 2 on the following page.

### B. WATER SUPPLY

SWBNO's water system presently supplies water to New Orleans which is located on the east and west banks of the Mississippi River. The Mississippi River supplies a reliable supply of water to meet the demands of the greater New Orleans area. As the Mississippi River adjacent to New Orleans is a major commercial shipping artery for various materials, a major risk that SWBNO must be prepared for is the occurrence of spills that could potentially pollute the water source. Thus, SWBNO participates in the EWOCDS run by the LDEQ. This system consists of a series of monitoring stations along the Mississippi River that notify LDEQ if any of the 60 USEPA listed pollutants are detected in the river water samples. The LDEQ disseminates the information to the program participants via the Department of Health and Hospitals, allowing an early warning of possible pollutants in the water source. The LDEQ maintains EWOCDS equipment at all participating locations; the program participants provide the manpower to collect and analyze the samples.

#### 1. System Capacity

SWBNO delivers water through an integrated system of raw water intake structures, treatment, storage, high service pumping, and distribution piping. The current treatment capacity of the Carrollton WPP located on the East Bank of the Mississippi River is 210 mgd which is by far the larger of the two plants. The Algiers WPP on the west bank of the Mississippi River has a current treatment capacity of 24 mgd. The Carrollton WPP production has ranged from 130 to 140 mgd since Hurricane Katrina in August of 2005. Prior to the levee failure caused by Hurricane Katrina, the plant was treating an average of approximately 120 mgd. The Algiers WPP has ranged from 10 to 12 mgd in average day production since the hurricane. At this time, the raw water facilities and treatment plants are able to meet the current and future demands of SWBNO.

Table 3—Water System Capacities

FACILITY	RAW WATER PUMPING CAPACITY	CURRENT TREATMENT CAPACITY	WATER STORAGE CAPACITY
	mgd	mgd	Treated Water mg
Carrollton WPP	310	210	35.8
Algiers WPP	55	24	10
<b>System Totals</b>	<b>365</b>	<b>234</b>	<b>45.8</b>

mg – million gallons

mgd – million gallons per day

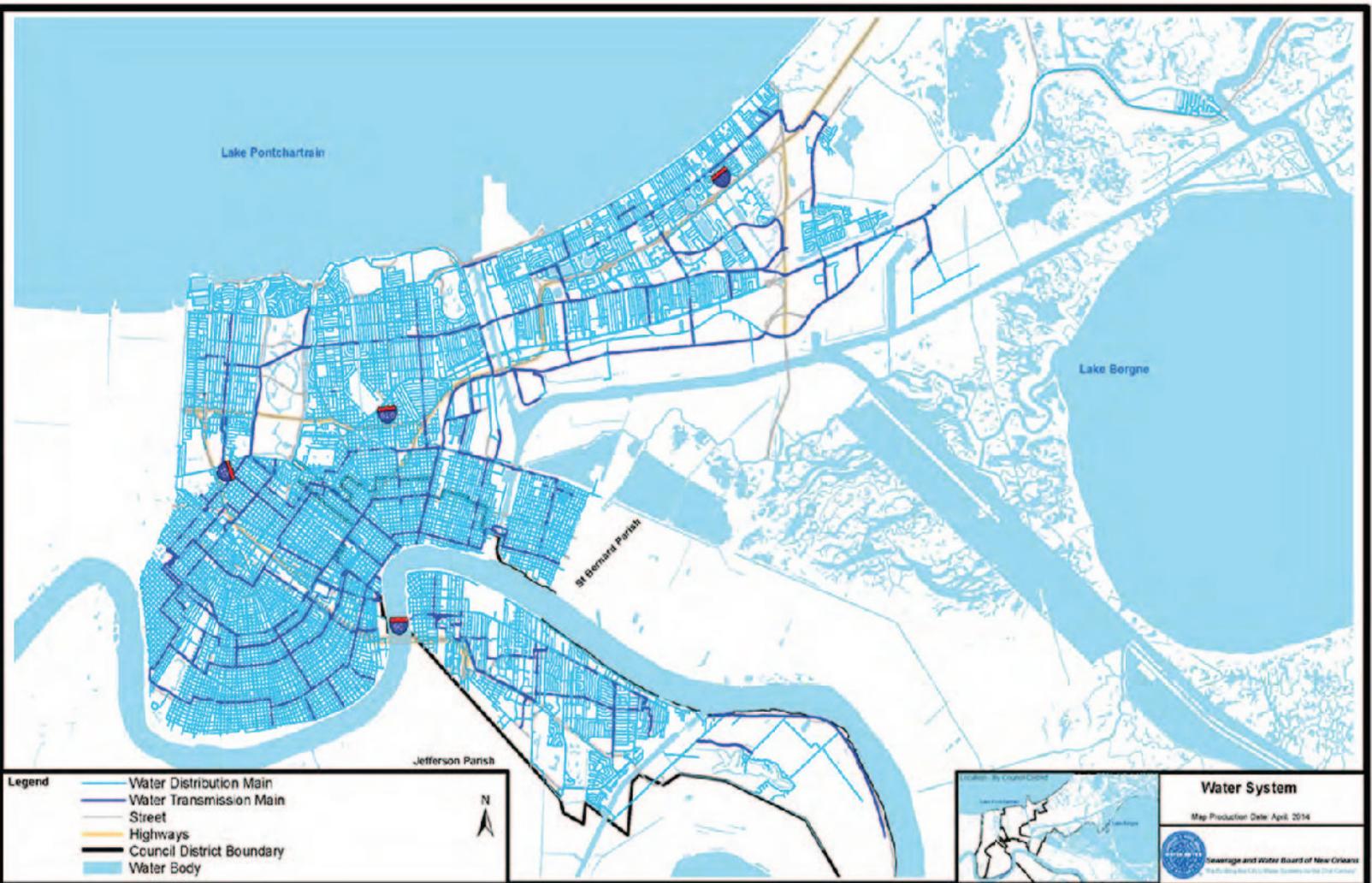


Figure 2—Overview of the SWBNO Water System

## 2. Population

The estimated population for Orleans Parish in August 2005, prior to Hurricane Katrina was 463,000. In November 2005, the population was estimated at 138,700 or about 30 percent of the pre-Hurricane Katrina population. At July 2013, the U.S. Census Bureau estimated New Orleans' population at 378,715, or 82 percent of the August 2005 population. As part of its annual report to the USEPA for the consent decree, SWBNO also provides an estimate of New Orleans' population. For the 2014 annual report, the estimated population for the east bank is 333,403. Combined with the 2013 annual report value of 53,053 for Algiers, the total is estimated at 386,456, or 83.4 percent of the August 2005 population.

## C. WATER SYSTEM PLANNING INITIATIVES AND COMPLIANCE

Based on discussions with staff, and a review of annual water quality reports, SWBNO is in compliance with all drinking water regulations. The USEPA promulgated two regulations in 2005 that went into full effect in 2012. SWBNO is in compliance with these new regulatory requirements as described in more detail below. This section describes SWBNO's water quality initiatives, compliance with present regulations, and planning initiatives and actions being taken to meet anticipated future regulations, water system demands and goals.

### 1. Regulatory Requirements

The water operations of SWBNO are subject to the requirements of the SDWA of 1974, as amended in 1986 and 1996. The 1986 amendments extended the regulatory agenda of the USEPA to include, among other things, the development of drinking water standards for 83 contaminants, criteria by which surface water supplies would be required to utilize filtration performance standards for disinfection, and the banning of lead-containing materials from distribution and home plumbing systems. The 1996 amendments changed the emphasis of developing rules only slightly, but these latest amendments did stress some new issues such as the protection of source waters, annual reports to consumers on the quality of their drinking water, regulation of filter backwash water within treatment facilities, and the establishment of a state revolving loan fund. Since 1998, several additional rules have been implemented.

The Interim Enhanced Surface Water Treatment Rule (ESWTR) and the Stage 1 Disinfectants and Disinfection Byproducts Rule (D/DBPR) were both promulgated in December 1999 and became effective in January 2002. The Filter Backwash Recycling Rule was promulgated in May 2001 and became effective in December 2003. The Radionuclides Rule was promulgated in December 2000 and also became effective in December 2003. The Arsenic Rule was promulgated in March 2001 and became effective in January 2006. The Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) and the Stage 2 D/DBPR were promulgated in January 2006 and became effective in March 2006 with full compliance required as of April 2012. The Groundwater Rule (GWR) was promulgated in November 2006 and became effective January 2007, but is not relevant to SWBNO who relies exclusively on surface water from the Mississippi River. Several of these key regulations are discussed below. The third Unregulated Contaminant Monitoring Rule (UCMR-3) was published in May 2012 with monitoring to begin in 2013. In addition to the above requirements, the State of Louisiana has recently required utilities to comply with a temporary emergency rule that has been established to prevent the harmful effect of amoeba parasites that have been found in two other

water systems in Louisiana. The emergency rule was renewed on March 5, 2014 and effective March 6.

The following sections provide an overview of specific areas of the SDWA and SWBNO's compliance. Concentrations are shown in milligrams per liter (mg/L) and micrograms per liter (µg/L). One milligram per liter is the equivalent of one part per million, while one microgram per liter is the equivalent of one part per billion.

#### **a) Lead and Copper Rule**

The Lead and Copper Rule was promulgated in June 1991. It addresses the control of copper and lead that may leach from home plumbing systems. Compliance with the rule is based upon treatment technique requirements that are triggered if measured lead and copper levels exceed the action levels of 0.015 mg/L for lead or 1.3 mg/L for copper at more than 10 percent of customer taps sampled. SWBNO adds lime to water to control the rate of metal loss by corrosion in the water supply network, which includes the internal piping in residences and commercial or industrial facilities.

**Compliance Status:** SWBNO is in full compliance with this regulation. Based on 2013 results, it achieved a 90th percentile lead level of 0.006 mg/L and 0.002 mg/L for the service areas served by the Carrollton and Algiers WPPs, respectively. It also achieved a 90th percentile copper level of 0.1 mg/L and 0.0 mg/L for the service areas served by the Carrollton and Algiers WPPs, respectively. USEPA uses a 90<sup>th</sup> percentile action level for the lead and copper rule. This means that hypothetically, a system with 10 required samples would use the ninth highest result to compare to the action levels for lead and copper.

#### **b) Total Coliform Rule (TCR)**

The TCR was published in 1989 and became effective in 1990. It set goals and limits for the presence of total coliforms in drinking water and required water systems to monitor for total and fecal coliform at specific locations throughout their distribution systems. USEPA published revisions to the TCR in February 2013. The Revised Total Coliform Rule (RTCR) goes into effect April 1, 2016.

The RTCR removes the maximum contaminant levels (MCL) for total coliform that was established under the TCR, and focuses more on using detection of total coliform as a means of identifying and addressing potential contamination issues. The rule also establishes criteria that enable systems to transition to reduced monitoring requirements. Such a system creates incentives for better system operation and has the potential to reduce monitoring burden. The RTCR maintains the MCL for *E.Coli* and the associated required actions.

**Compliance Status:** A review of the annual water quality reports for SWBNO shows that it is in compliance with the TCR.

#### **c) Disinfectants/Disinfection By-Products Rule (D/DBPR)**

This rule regulates levels of disinfectants and disinfection by-products. Stage 1 of the rule was promulgated in December 1998 and became effective on January 1, 2002. Stage 2 of this Rule was promulgated in January 2006 and became effective on March 6, 2006. These rules contain

maximum residual disinfectants levels (MRDLs), MCLs for disinfection by-products and a treatment technique for total organic carbon (TOC) removal. The Stage 1 Rule reduced the MCL for total trihalomethanes (TTHM) from 100 µg/L to 80 µg/L and established an MCL of 60 µg/L for the sum of five haloacetic acids (HAA5), another group of disinfection by-products. In addition, MRDLs were established for chlorine (4 mg/L), chloramines (4 mg/L), chlorine dioxide (0.8 mg/L), chlorite (1.0 mg/L), and bromate (0.010 mg/L).

**Compliance Status with Stage 1:** SWBNO is in compliance with the required MCLs and treatment technique based on a review of the 2014 Water Quality Report. Both water treatment plants are being operated to achieve TOC removal credits at or above the required running annual average. The highest running annual average level of TTHMs at the conclusion of 2014 for SWBNO's two water treatment plants was 29 µg/L. For HAA5s, the highest running annual average was 31 µg/L. SWBNO is in compliance with the 4.0 mg/L MRDL for chloramines, with the highest running annual average of monthly samples measuring 3.4 mg/L.

**Compliance Status with Stage 2:** The Stage 2 phase of the D/DBPR was promulgated in January 2006 and became effective on March 6, 2006 with compliance monitoring required as of April 2012. This rule maintains the TTHM and HAA5 MCLs at 80 µg/L and 60 µg/L, respectively, but changes the method of calculating the system annual average from running annual averages (RAAs) to locational running annual averages (LRAAs). Per discussions with SWBNO, LRAA concentrations for TTHM and HAA5s are similar to the system-wide averages seen for the Stage 1 Compliance which would indicate compliance with Stage 2.

#### d) ESWTR

This rule was promulgated in December 1998 and became effective on January 1, 2002. This Rule lowered the turbidity treatment technique level to 0.3 nephelometric turbidity unit (NTU) in 95 percent of the samples from the previous level of 0.5 NTU. It also set a maximum turbidity of 1.0 NTU in the finished water and required installation of continuous turbidity monitors on each filter. The Rule requires that operating procedures be revised and follow-up investigations be conducted if individual filters are found to exceed specific monitoring criteria.

**Compliance Status:** SWBNO is in compliance with all requirements of this Rule. SWBNO maintained filtered effluent turbidity at levels less than or equal to 0.3 NTU during 2014.

#### e) Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)

The LT2ESWTR was promulgated in January 2006 and became effective on March 6, 2006 with compliance monitoring to begin in April 2012. Regulatory requirements under the LT2ESWTR are based upon the concentration of *Cryptosporidium* or *E. coli* in the source water of individual treatment plants. The Rule required microbial monitoring (2 years of monthly *Cryptosporidium* and *E. coli* monitoring) to determine each drinking water treatment plants average source water *Cryptosporidium* level. Based on this level, the treatment plants are placed in different "bins" with varying removal and/or inactivation credit requirements, with higher influent *Cryptosporidium* levels requiring greater removal or inactivation. Utilities must meet their resulting requirements by implementing enhanced treatment practices as defined in the "microbial toolbox." The microbial toolbox defines a range of treatment, prevention or optimization options that utilities can

implement to obtain the additional removal and/or inactivation credits required to meet the treatment technique of this Rule.

**Compliance Status:** Per discussions with SWBNO, the required raw water sampling was conducted to assess the *Cryptosporidium* levels in the raw water. Based on those results, SWBNO indicates that no additional treatment credits were required.

#### **f) Consumer Confidence Reports Rule**

The 1996 SDWA Amendments require SWBNO to issue an annual report on treated water quality to its consumers, called the Consumer Confidence Report (CCR).

**Compliance Status:** SWBNO has done this annually in the format required by the Rule. SWBNO's CCR meets the requirements and provides educational information regarding source water and the water treatment process, along with information about current initiatives and projects being completed by SWBNO.

#### **g) Filter Backwash Recycling Rule (FBRR)**

The FBRR became effective in December 2003. The recycle streams regulated by the FBRR are filter backwash water, sludge thickener supernatant, and liquids from dewatering processes. The rule requires recycled flows to pass through all processes of the treatment plant in order to maintain removal credit for *Cryptosporidium*. In the case of conventional treatment facilities like those of SWBNO, this requires the return of recycled streams prior to or concurrent with the point of primary coagulant addition.

**Compliance Status:** The Carrollton WPP includes the ability to deliver water used in the filter backwash process to the beginning of the plant where it is recycled through the entire treatment process; therefore it meets the requirements of the FBRR. The Algiers WPP backwash and sludge from the settling tanks is discharged via permit to the Mississippi River.

#### **h) Emergency Rule**

As mentioned above, the State of Louisiana has recently established a new rule that is focused on preventing any harmful instances of amoeba parasites entering state water systems. Particular focus of this rule is on two areas, including requiring systems to maintain a minimum disinfection chloramine residual of 0.5 mg/L, as well as additional TCR sampling focused on areas of the distribution system with longer residence times. The new rule requires a greater number of TCR samples each month, as well as the reporting of instances where a system's disinfection residual drops below 0.5 mg/L.

**Compliance Status:** SWBNO is in full compliance with this new rule.

#### **i) Source Water Assessment Program**

The 1996 SDWA Amendments required each state to develop a Source Water Assessment Program, designed to stress protection of the source water prior to treatment. The Source Water Assessment for SWBNO was completed in August of 2001. The Assessment provides information related to potential threats or risks related to the source water, including high, medium and low risks to SWBNO's treatment plants. As the intakes for SWBNO are located on the Mississippi River, high

threats includes spills from barge traffic, storage tanks located adjacent to the river, and chemical plants

**Compliance Status:** As noted above, the source water assessment was completed for both the Carrollton WPP and Algiers WPP in 2001.

#### **j) Arsenic Rule**

The Arsenic Rule became effective on March 3, 2001 and established an MCL of 0.01 mg/L for total arsenic. The compliance date for systems with arsenic levels that exceed the MCL is January 23, 2006.

**Compliance Status:** SWBNO is in compliance with the Arsenic Rule. In 2014, Arsenic levels in the finished water supply were well below the established MCL of 10 ug/L.

## **2. Water Accountability**

Table 4 on the following page provides SWBNO's assessment of non-revenue water for the years 2012, 2013 and 2014. SWBNO has a high percent of non-revenue water. Some of the non-revenue water is considered a loss (leaks), while other non-revenue water is free water, metered and accounted for. Out of the total water pumped in 2014, only about 25.7% is water sold to customers. The other 74.3% of the water pumped is either tracked and accounted for as free metered water (municipal swimming pools, libraries, display fountains, parks and playgrounds, fire department and police department use, etc.), or it is categorized as unidentified leaks, accounted for leaks, or unmetered water used in firefighting or flushing of sewers. Water loss through leaks and unmetered use is by far the largest category of non-revenue water, accounting for 71.1% of the total pumped water in 2014. This category includes several items, the majority of which is likely unmeasured leaks in the distribution system. This amount of water results in a significant negative impact to SWBNO's operating costs and revenue.

Some other information about the non-revenue water:

- The free metered process water category (fountains, municipal swimming pools, etc.) accounts for approximately 1.20% of the total pumped water, and decrease slightly from 2013 to 2014.
- The free metered process water category accounts for 1.52% of the total pumped water in 2014, an increase from 2013.

Table 4 on the following page shows a summary of SWBNO's non-revenue water for 2012, 2013 and 2014 as it compares to the total pumped water for each year.

Table 4—SWBNO’s Water Pumped and Consumed

CATEGORY	2012		2013		2014	
	Gallons	Percent	Gallons	Percent	Gallons	Percent
Free Metered Process Water to Various City Departments and Charitable Institutions	672,837,900	1.23%	745,453,200	1.33%	622,811,700	1.20%
Free Metered Process Water by SWBNO	622,443,400	1.14%	593,075,100	1.06%	791,880,700	1.52%
Allowance for Leaks on Private Property	205,961,300	0.38%	209,863,900	0.38%	227,469,900	0.44%
Water Loss through Leaks and Unmetered Use	39,419,612,200	72.04%	40,753,881,800	72.90%	36,941,784,500	71.13%
Water Sold to Customers	13,801,965,200	25.22%	13,599,636,000	24.33%	13,352,983,200	25.71%
<b>Total Water Pumped</b>	<b>54,722,820,000</b>	<b>100.00%</b>	<b>55,901,910,000</b>	<b>100.00%</b>	<b>51,936,930,000</b>	<b>100.00%</b>

Additionally, a consultant for SWBNO has conducted a water audit in accordance with AWWA guidelines for the fiscal year 2008-2014 timeframe. The audit also shows that non-revenue water by volume was approximately 72 percent in 2014. According to the consultant’s report, the Infrastructure Leakage Index (ILI), which is a ratio of annual real losses to unavoidable annual real losses, reflects ratios for SWBNO that are significantly higher than other large U.S. water systems. However, the results of the most recent audit indicate that the ILI has decreased from 46.0 in 2008 to 37.1 in 2014 or 19 percent. SWBNO’s goal is to reduce the ILI by 4 points per year to achieve a 5-year target of 22.4 by 2020. To address the issue of non-revenue water in the SWBNO water system, there are several initiatives that are currently being planned or conducted including:

#### a) Leakage Management

The Networks Department has been employing leak detection technology to proactively seek, find, and fix leaks in the system. This technology includes proactive use of acoustic equipment to identify and subsequently fix leaks as they are discovered. It also has included using SmartBall® technology to survey larger transmission mains for leaks. While SWBNO believes this program has been effective, it has not been able to find significant leaks that would explain the large value of Leaks and Unmetered Use noted in the Table above.

**b) Water Main Replacement Program**

Another initiative that is being pursued is the FEMA-funded project to replace much of the water distribution system. This project is focusing on the identification of portions of the distribution system that experience multiple main breaks for replacement. The CIP includes approximately \$15 million annually to identify and replace main segments in the east bank portion of the water system.

**c) Account Validation**

The Plumbing Department is focusing on account validation related to ensuring the proper billing of existing customers. This program was initiated in 2011 and focuses on reviewing accounts in the field to ensure meters are working accurately and accounts are being billed properly.

**d) New Meters and Advanced Metering Infrastructure (AMI) Equipment**

The determination of non-revenue water is dependent on metered water leaving the WPPs, as well as metered water at the customer endpoint. SWBNO has included a project in its CIP to fund the installation of AMI equipment (\$20 million), as well as associated meters (\$20 million). This initiative would be funded by internal SWBNO funds.

**e) Water Hammer Program**

The Water Hammer Program is to address surges within the water distribution system which damage water mains. Two elevated tanks will be added to the distribution system to minimize surges. In addition, high service pumps and piping will be rehabilitated to reduce the impact of water hammer on the distribution system. Improvement include converting the high service pumps to variable speed pumps, as well as improvements to better control the opening and closing of major valves.

Each of the aforementioned initiatives should have a positive impact toward reducing non-revenue water over time. It is recommended that an annual, internally-driven water audit using the AWWA methodology continue to be conducted to 1) gain a better understanding of the causes of the high non-revenue water level; and 2) track improvement toward a more reasonable non-revenue water level.

**3. Water System Planning**

SWBNO has several planning initiatives ongoing that are specific to assessing the long-term needs of the water supply and system.

**a) Water Quality Master Plan**

SWBNO recently completed a Water Quality Master Plan to assess the current condition of the treatment plants. The assessment is a holistic look at the current treatment process and the future needs of New Orleans and surrounding communities and provides guidance with respect to prioritizing CIP projects related to the Carrollton WPP and Algiers WPP. Management is in the process of adopting the final document and anticipates the development of future capital projects based on the Water Quality Master Plan.

## D. WATER TREATMENT PLANTS

The water system is served by the Carrollton WPP and Algiers WPP. Both plants utilize water from the Mississippi River. Each plant provides similar treatment, consisting of raw water coagulation, flocculation, sedimentation, disinfection, media filtration, fluoridation and corrosion control. Finished water can be stored at the treatment site for later distribution, or discharged directly to the distribution system. Portions of the Carrollton WPP date from the early 1900s. The last major improvements and additions were completed at the plant in the 1960s. The Algiers WPP was built in the early 1900s and the last major improvements were completed in the 1990s. The plants have been maintained over the years to ensure quality water for the surrounding community.

### 1. Carrollton WPP

The Carrollton WPP became operational in the early 1900s. The plant draws water from the Mississippi River and sends treated water to either the Claiborne Pumping station, Panola Pumping Station or to the two steam driven pumps within the Power Station building. The Carrollton WPP is the larger of the two water plants, with an operating capacity of 232 mgd. Plant production information for the past five years is shown below in Table 5.

Table 5—Carrollton WPP Annual Plant Water Treated per Day

FISCAL YEAR	DAILY OUTPUT (MGD)	
	AVERAGE	MAXIMUM
2009	138	148
2010	137	157
2011	139	151
2012	138	163
2013	131	142
2014	133	157

The plant is budgeted for a staff of 72 but is in need of experienced operators with Level IV certification. Currently, the personnel with Class IV licenses spend overtime to cover shifts that need class IV operators. This is consistent with the vacancies seen in Section III of this Report.

The Carrollton WPP is currently treating approximately 135 mgd of water in spite of serving only 83.4 percent of the pre-Katrina population. Leaks in the distribution network are a source of persistent problems as additional unaccounted for water is also an issue. The water delivery pressure has been consistent throughout the last year at 70 pounds per square inch (psi) to maintain minimum pressure throughout the distribution system.

The plant has recently completed commissioning a new sodium hypochlorite feed system for disinfection. This has eliminated the need to bring in large rail cars of chlorine gas through the City of New Orleans. The Risk Management Plan has been updated to reflect the change from chlorine gas to sodium hypochlorite and the reduced hazards to the surrounding area. Some of the other major accomplishments related to the facility are listed below:

- There have been no violations at the Carrollton WPP within 2014 with respect to meeting drinking water standards.
- The G4 sedimentation basin rehabilitation was completed but is still not service. It is anticipated that G4 will be placed into service later this year.
- L3 sedimentation basin was removed from service on September 10, 2014 for a complete rehabilitation.
- All chemical systems are functional.

Items of concern at the plant include the following:

- The piping for the Sycamore filters is severely corroded and in need of replacement.
- Media replacement for Claiborne filters is currently ongoing.
- Eight of 28 filters in the Sycamore filter building are not functional due to failures of valves and actuators.
- Nine additional filters of the 28 filters in the Sycamore filter building are operational, but the rate of filtration actuators are not functional and must be controlled manually.
- Static mixing for ferric sulfate is insufficient due to low velocity through the mixers. In addition, the chemical flow through the rotameters that separate flow to the various application points are not accurate and are in need of constant monitoring.
- There are corrosion issues with the finished water tanks which need to be addressed. Tanks should be inspected, cleaned, sandblasted, and painted on a regular basis.
- The lime system is in need of replacement.
- A new dryer for the air compressor is needed with the Sycamore filter building to reduce condensation in the instrument air lines which causes plugging.
- A new compressor and dryer system is required for the Claiborne filter building for instrument air.
- The Sycamore wash water pump for the filters needs replacement. The packing seal was leaking during site visit and the pump is nearing the end its service life. The project has gained approval from the board and is waiting on a notice to proceed. Construction will be completed end of this year.
- The recycle basin pumps need to be replaced. Two of the four pumps are currently inoperable, and the other two pumps are nearing the end of their service life. The design for the pump replacement is complete, and construction will begin next year.
- Due to new Ten State Standards adopted by the LDEQ, all liquid chemical feed systems must have a day tank with walled containment. Currently, double walled tanks are used on site which does not meet the standards.
- The anhydrous ammonia system according to the new standards is required to be in a building and a scrubber system in place in case of a leak. Currently, the SWBNO tank is located outside in the plant yard.

- Overflow vents are recommended for the finished water tanks to reduce the potential for erosion around the tanks.
- The ferric sulfate chemical feed system should be expanded to 30 days of storage. Currently, there is only three to five days of storage onsite.

The CIP includes a variety of projects to address the above issues, most notably CIP Project #122 seen in Section VIII for approximately \$34,490,000 from 2015-2018 for work on the Sycamore and Claiborne filters, which are in poor condition.

## 2. Algiers WPP

The Algiers WPP began service in the 1900s. The plant was improved several times, including a renovation in the 1980s. The plant draws water from the Mississippi River and serves as the main distribution point the west bank portion of the system. The plant’s current operating capacity is 24 mgd. Recent plant production rates are shown below in Table 6.

Table 6—Algiers WPP Annual Plant Water Treated per Day

FISCAL YEAR	DAILY OUTPUT (MGD)	
	AVERAGE	MAXIMUM
2009	10.8	14.0
2010	11.3	15.7
2011	11.7	16.8
2012	11.6	15.5
2013	11.3	15.3
2014	10.4	15.6

There have been no violations at the Algiers WPP within 2014 with respect to meeting drinking water standards.

This plant has had issues with TOC removal, but has been able to use alternative criteria to comply with the regulation. The plant has had no violations in the past year and has fed required chemicals at the required dosages despite issues with the sodium hypochlorite generation system. Due to equipment issues and the cost of keeping the process online, the sodium hypochlorite generation system was decommissioned 6 months ago and the plant converted to liquid sodium hypochlorite.

The facility has partially commissioned a new ferric storage and feed system for flocculation. The new storage and feed system should be finished at the end of 2015. The following are additional improvements required at the Algiers WPP.

- The Supervisory Control and Data Acquisition (SCADA) system is out of service and its absence is impacting plant monitoring capabilities. At the time of the visit, a SCADA node was installed to help the lead operator monitor the turbidity readings from the filters and troubleshoot filter issues. Planned improvements to this system have been on hold due to insufficient funding.

- Nitrification is a problem in the finished water tanks. One cause for nitrification in the tanks can be insufficient mixing within the finished water tanks. A new mixer was purchased and installed within one of the water storage tanks. However, this new mixer has not resolved the current nitrification issues.
- Clarifier No. 3 and 4 are under contract for design of replacement of launder troughs. Clarifier 2 is scheduled to be painted by end of 2015.
- The raw water pumping and piping systems need to be improved to provide redundancy to the intake system. Currently, Intake Station No. 2 cannot provide redundant raw water pumping capacity. Modifications to the pumps and piping are required to pump from each station.
- Mud balls have formed in the filters. Super chlorination is helpful to clean the filters and return the filters to optimum efficiency. In addition, a few of the valves and actuators in the filter gallery are in need of replacement.

The plant is adequate to serve the public but is in need of funds to adequately address issues within the plant. The abovementioned issues are either included in the CIP, or are under consideration by SWBNO.

### **3. Water Quality Laboratory at the Carrollton WPP**

The water quality laboratory conducts daily analyses of river water quality and purified water at the Carrollton WPP and Algiers WPP. Water samples from the distribution network are also analyzed at the laboratory facility. The lab continues to meet the State/Federal mandated analytical requirements of the water plants, and is certified by the Louisiana Department of Health and Hospitals for analysis of coliform bacteria.

In addition to coliform analysis, the lab collects samples for protozoan analysis. Other regular analyses include hardness, turbidity, fluoride, ammonia, pH, alkalinity, TOC, dissolved organic carbon (DOC), phosphorus, corrosion monitoring, and chlorine residual at different stages of treatment. The solids are analyzed for total suspended solids (TSS) and total dissolved solids concentrations. River water and finished water samples are analyzed for volatile organic compounds.

The laboratory continues to maintain its involvement in the EWOCDS run by the LDEQ; however, several upstream stations have proved unreliable. Management indicates that the EWOCDS program has also been underfunded by the State of Louisiana, which has caused a reduction in sampling and analysis.

The laboratory is currently adequately staffed with one supervisor, one microbiologist, four chemists, and four technicians. Much of the lab instrumentation and equipment is reaching or has reached the end of its service life and is in need of replacement. Analytical instruments and equipment, such as a new gas chromatograph/mass spectrometer (GC/MS), autoclaves for the microbiology lab, and fume hoods in the chemistry lab are needed. Repairs have been made to the some of the fume hoods and they are operational. Currently, the lab staff is working toward certification of TOC analysis in order for TOC analysis to be performed at the lab facility.

## E. WATER PUMPING AND POWER

The Water Pumping and Power unit of SWBNO's Operations Department operates the power plant, as well as the low lift and high service pumps that bring raw water to the plants and pump treated water to the distribution systems. The power plant is located at Carrollton WPP. The power plant is currently undergoing significant rehabilitation work related to the FEMA-funded hazard mitigation project. This project consists of storm proofing the power plant, and rehabilitation of boilers and turbines to improve SWBNO's ability to provide 25 Hertz (Hz) power to the drainage pump stations and other pumping assets during a hurricane or flood event.

Significant assets managed by Water Pumping and Power include:

- Six boilers capable of producing 650,000 pounds of steam per hour. All boilers are to be rehabilitated as part of the hazard mitigation project. #1 and #3 boilers are to be redesigned to include more automation. Currently, the #5 boiler is out of service for rehabilitation.
- Three steam-powered turbines that produce 25 Hz power. #1 Turbine = 6 MW capacity; #3 Turbine = 15 MW capacity; #4 Turbine = 20 MW capacity. Currently, #4 Turbine is out of service for rehabilitation.
- One Natural Gas/Diesel powered turbine that produces 25 Hz power. #5 Turbine 20 MW.
- One Natural Gas/Diesel powered turbine that produces 60 Hz power. #6 Turbine 15 MW.

Significant high service pumping units include:

- Pump A and Pump B are steam-powered pumps located at the power plant. They are each capable of pumping 40 mgd. Pump A rehabilitation was completed and Pump B rehabilitation is scheduled to be completed by the end of the 3<sup>rd</sup> quarter in 2015.
- The Panola pump station is adjacent to the power plant and includes two pumps capable of pumping 50 mgd each. The pumps have the ability to operate on 25 Hz or 60 Hz power depending on the availability of 60 Hz power from the local electricity provider.
- The Claiborne pump station, located at the Carrollton WPP, consists of four pumps capable of pumping 40 mgd each. Currently, all of these pumps are in operation.

The intake structures for the two Carrollton WPP pump stations include the Old River Station and the New River Station. The New River Station is able to provide sufficient water to the Carrollton WPP. The Old River Station has pumps which are used for backup supply to the Carrollton WPP. The two pump stations cannot be used simultaneously, as the head created by the pumps at the New River Station is too great for the pumps at the Old River Station to overcome.

The Algiers WPP is served by a separate intake structure that is capable of supplying all of its raw water needs. There are also backup intake pumps from a second station for the Algiers WPP to provide redundancy. In addition to the assets above that serve the majority of the SWBNO system, Water Pumping and Power also manages power and pumping assets for the smaller, west bank portion of the system. While the primary power source for the west bank is the local energy provider Entergy, there is a generating station at the Algiers WPP that is capable of generating 60 cycle power using diesel generators. The power generation facility can also generate enough power

to support operations at the Algiers WPP. This station is also capable of performing a frequency change to convert 25 Hz power supplied from the power plant at WPP to 60 Hz power for west bank treatment and pumping assets.

As mentioned above, there are significant improvements included in the proposed CIP related to Water Pumping and Power. Two significant projects to be funded by FEMA include:

- FEMA HMGP for power-related projects including, refurbishment of turbines, replacement of power feeds; and design and construction of new Oak Street Raw Water Intake. The cost of these FEMA-funded projects is approximately \$246.7 million from 2015 through 2024.
- FEMA-funded Water Hammer program to rehabilitate low service and high service pumps used to provide drinking water as described above. These projects are expected to cost \$49.1 million from 2015 through 2024.

These projects are designed to rehabilitate key Water Pumping and Power assets from the effects of past hurricanes, as well as to harden and prepare them to sustain operations during future storm events.

SWBNO experienced a boil water advisory event on July 24-25, 2015. The period of time between when the water distribution system lost power and when the public was notified of a boil water advisory was 31 hours. As a result of this, steps were taken to accelerate public notification which included adding pressure gauges at several pump stations and installing water pressure monitoring equipment at the power plant. These improvements allow water plant staff to know in real-time if there is a water pressure drop at any point in the water system between the Carrollton WPP and the distribution points across the City. If there is a water pressure drop, SWBNO staff will be able to analyze the data more quickly, determine if the water system pressure has been compromised and notify management that a boil water advisory is necessary. In addition, SWBNO is collaborating with the electrical utility representatives as they install power monitoring equipment at their substations and at the Carrollton WPP. A second boil water advisory event took place on September 24-25, 2015 and reflected significant improvement in all aspects of the notification.

Both of these drops in water pressure were triggered by power interruptions from the electrical utility. Following the second interruption, SWBNO has switched over to using more of its own generated power and is relying less upon the electrical utility. All water samples from both advisory events came back clear.

## **F. DISTRIBUTION SYSTEM**

SWBNO's distribution system consists of approximately 1,812 miles of main generally ranging in size from 1-inch diameter to 54-inch diameter. There is little storage in the distribution system with the storage located at the treatment plants in ground storage tanks. Key components of the 1,812 mile distribution system also include approximately 29,730 valves and 23,117 hydrants.

The Networks Department provides preventative maintenance in terms of investigating leaks, exercising valves, and inspecting hydrants. The type and number of distribution system-related maintenance work orders completed for 2013 and 2014 are shown below in Table 7:

Table 7—Summary of Distribution Work Orders

TYPE OF WORK ORDER	2013 TOTAL	2014 TOTAL
Investigation of Water Leaks	339	309
Water Valves	1,340	1,190
Water Service Lines	10,027	10,219
Water Mains	1,643	1,647
Hydrants	1,132	1,074
Manholes	25	39
<b>Total</b>	<b>14,506</b>	<b>14,478</b>

As mentioned above, the FEMA-funded Water Hammer project and distribution system replacement will provide significant funds for improving the distribution system. The 2015 – 2020 CIP reflects approximately \$169.1 million in FEMA funds for this initiative, which includes \$120 million for main replacement, as well as eight new water distribution pumps at Claiborne, Panola and Low Lift Pump Stations. SWBNO’s Management indicates that the distribution system replacement will be coordinated with City street projects.

## G. WATER SYSTEM CONCLUSIONS

Based on the review of SWBNO’s water system, Black & Veatch has reached the following conclusions:

- SWBNO has an abundant water supply via the Mississippi River to provide service to existing and future customers.
- SWBNO consistently meets or exceeds state and federal standards for the provision of drinking water. The treatment capacity for the Carrollton WPP and Algiers WPP is sufficient to meet current and projected demands.
- Overall, SWBNO’s water purification plants are adequate and include processes and components that are common in the water industry. The water purification plants are in need of infrastructure upgrades or replacements to sustain reliable operation. Most critical are the Carrollton WPP filters and underdrains which are in poor condition.
- The amount of non-revenue water, which is water produced by SWBNO but not sold to customers, is well above what is typical for a similar sized utility. SWBNO is taking action to address the issue through the use of several initiatives, including the use of leak detection technology; the FEMA-funded replacement of the distribution system; the FEMA-funded Water Hammer program; meter replacement; and account validation. These initiatives are common techniques in the water industry for identifying and reducing non-revenue water and should eventually yield improved results over the long term.
- From 2008 through 2014, an outside consultant performed a water audit per AWWA guidelines. The AWWA guidelines recommend that a water audit is developed annually.

This annual water audit can provide an effective basis for understanding areas of non-revenue water and tracking progress toward reducing the amount of non-revenue water to more typical levels. The results of the most recent audit indicate that the Infrastructure Leak Index (ILI), which is a ratio of annual real losses to unavoidable annual real losses, has decreased from 46.0 in 2008 to 37.1 in 2014 or 19 percent. SWBNO's goal is to reduce the ILI by 4 points per year to achieve a 5-year target of 22.4 by 2020.

- Over the years, SWBNO has developed a redundant power supply that is available to primarily sustain drainage operations during significant emergencies such as hurricanes. The power plant is also able to provide power to sustain drinking water low service pumping, treatment operations, and high service pumping during events where the local power source is down. These power assets are unique within the water industry and provide a mechanism for SWBNO to sustain critical operations during significant storm events.
- Significant FEMA funds are being dedicated over the coming years to rehabilitate and prepare the power assets to provide reliable power during future storm events.
- SWBNO continues to rebuild the water system to recover from the impact of Hurricane Katrina in 2005. The FEMA-funded hurricane recovery projects will rehabilitate or replace significant pumping assets, as well as a significant portion of the water distribution system.

## VI. Sewerage System

### A. INTRODUCTION

The sewerage system operated by SWBNO dates back to the late 19<sup>th</sup> Century when City leaders decided to create a sewerage system for collecting sanitary sewage to alleviate various diseases and improve the overall sanitary health of the City. The current system consists of approximately 1,547 miles of sewers ranging in size from 4-inch to 72-inch in diameter, and are of various type including polyvinyl chloride, steel, vitrified clay, cast iron, ductile iron, and other. There are four major pump stations and 79 smaller, automatically operated pump and lift stations. There are two treatment plants, the East Bank Plant and the West Bank Plant. The permitted capacity of the East Bank Plant is 122 mgd and the permitted capacity of the West Bank Plant is 40 mgd. The sewerage system service areas are shown in Figure 3 on the following page.

The sewage collection and conveyance system, including the pumping and lift stations, are operated and maintained by SWBNO employees. The day to day operation and maintenance of the treatment plants is performed by Veolia. Major capital improvements for the treatment plants are funded by SWBNO.

### B. CONSENT DECREE FOR SEWERAGE SYSTEM

SWBNO is party to a consent decree lodged by the USEPA related to compliance issues with the CWA and the CAA. The original consent decree was lodged and agreed to by the parties in 1998. During the implementation of the elements of the original consent decree, Hurricane Katrina struck and prevented the Board from meeting several requirements. As a result, a Modified 2010 Consent Decree was entered into by the parties to continue the Board's progress toward compliance with the CWA and CAA. Due to the ongoing impact caused by Hurricane Katrina a Third Modified Consent Decree was entered into between SWBNO and the USEPA and USDOJ in 2014.

#### 1. Original and Second Modified Consent Decree

Major elements of the original and Second Modified Consent Decree include the following items. It should be noted that many of these items have already been completed by SWBNO.

- CAA Remedial Measures—SWBNO agreed to develop an operation and maintenance plan for operating its fluidized bed incinerator at the East Bank Plant, as well as to submit regular reports documenting its compliance with the approved plan.
- CWA Remedial Measures Pump Stations—SWBNO agreed to operate all pump stations such that if the largest capacity pump goes out of service, additional pumps can be activated to prevent unauthorized sewage discharges.
- CWA Remedial Measures SCADA—SWBNO agreed to install SCADA systems in its pump stations that continuously monitor the performance of the pump stations. The purpose of SCADA monitoring equipment is to allow personnel to more quickly respond to any malfunction of pumps that would lead to an unauthorized sewage discharge.

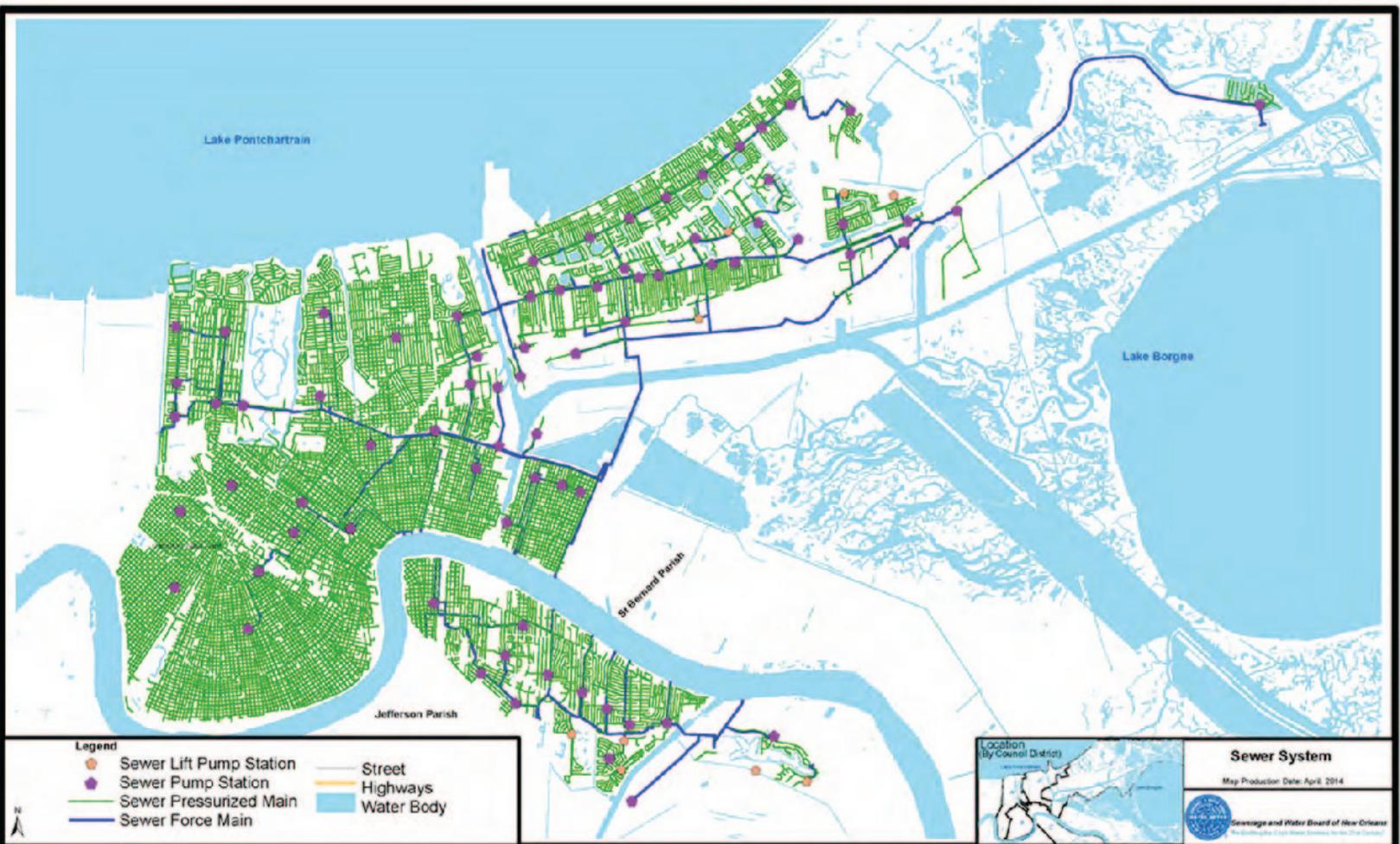


Figure 3—Overview of the SWBNO Sewerage System

- CWA Remedial Measures Cross Connections—SWBNO agreed to eliminate any cross connections that were not identified in the Cross Connection Security plan and inspect all retained cross connections. In addition, SWBNO agreed to not operate the retained cross connections without notifying USEPA.
  - CWA Remedial Measures Preventive Maintenance Program—SWBNO agreed to develop a preventative maintenance program for its sewage collection system and East Bank plant. The purpose of the program is to document the type and frequency of inspections, cleaning, and maintenance procedures to be conducted.
  - CWA Remedial Measures Sewer Overflow Action Plan—SWBNO agreed to develop a sewer overflow action plan for the purpose of efficiently responding the incidence of a sewer overflow to minimize the amount of unauthorized discharge.
  - CWA Remedial Measures Tracking and Reporting of Unauthorized Discharges—SWBNO agreed to establish a tracking program to ensure the all unauthorized discharges are identified and reported to USEPA.
  - CWA Remedial Measures Comprehensive Collection System Remedial Program—SWBNO agreed to perform comprehensive studies of its collection system basins to determine system needs and develop remedial action plans. Subsequent to approval of the remedial action plans by the USEPA, and due to the impact of Hurricane Katrina, SWBNO agreed to complete Emergency Sanitary Sewer Assessment (ESSA) of the collection systems served by SWBNO. This includes performing inspections of sewer mains to identify and repair blockages that would disrupt sewage flow from SWBNO pump stations. Additionally, SWBNO agreed to implement remedial measures action plans (RMAPs) for each of its nine basins. The schedule for implementing the RMAPs for the MidCity, Ninth Ward, Carrolton, New Orleans East, and South Shore basins was extended. The MidCity, South Shore, and Carrolton basins are to be implemented in 2015, the Ninth Ward basin by 2018, and the New Orleans East basin in 2019.
- The timeline for completing projects in the Ninth Ward basin was extended to March 31, 2018.
  - The timeline for completing projects in the New Orleans East basin was extended to October 31, 2019.
- CWA Remedial Measures Storm Sewer Monitoring Program—SWBNO agreed to collect samples at its drainage pump stations in the East Bank storm water drainage system to detect any presence of sewage before and after the implementation of the collection system remedial action plans described above.
  - Green Infrastructure—SWBNO agreed to explore areas for including green infrastructure measures as part of its Comprehensive Collection System Remedial Program. This includes cooperating with USEPA and the other interveners on green infrastructure projects in each of its east bank basins.

In addition to these remedial measures, the Board also agreed to undertake training for SWBNO's employees, conduct outreach and public awareness, and submit regular reports to USEPA documenting its progress toward complying with the terms of the consent decree.

## 2. Third Modified Consent Decree

The Third Modified Consent Decree is essentially the same as the original and Second Modified Consent Decree, with the following adjustment to the schedule for completing the Remedial Measures Comprehensive Collection System Remedial Program:

- Mid-City Basin—Extended Completion Date from 2015 to July 31, 2023
- South Shore Basin—Extended Completion Date from 2015 to October 31, 2021
- Carrollton Basin—Extended Completion Date from 2015 to October 31, 2025
- Ninth Ward Basin—Completion Date Remains at March 31, 2018
- New Orleans East Basin—Completion Date Remains at October 31, 2019

For each of these basins, SWBNO must report when the 25 percent, 50 percent, and 75 percent completion milestones have been completed. Additionally, SWBNO committed to developing a plan for coordinating green infrastructure into the collection system remedial program. SWBNO also committed to spending \$500,000 per year, averaged over the next five years, toward implementing green infrastructure projects as part of its collection system remedial program. Finally, the work for this Third Modified Consent Decree is to be coordinated with City street repair projects.

## C. RELEVANT REGULATORY PERMITS

SWBNO's sewage treatment plants and the collection system are regulated by three primary permits which include:

- NPDES Permits
- MS4 Permit
- Title V Major Source Operating Permits-Clean Air Act (Title V) Permit

### 1. NPDES Permits

The NPDES permits provide the regulatory guidelines that apply to both the East Bank and West Bank Plants. The primary function of the NPDES permits is to set the effluent limitations for both plants. The East Bank Plant has a second outfall that allows for discharge of treated sewage to the Bayou Bienvenue Wetlands for a wetlands assimilation project. At this time there is no discharge being conveyed to the wetlands assimilation project. Table 8, on the following page, provides a summary of the effluent limitations for both of SWBNO's primary treated sewage outfalls. Monthly Discharge Monitoring Reports (DMR) are submitted on the 15<sup>th</sup> day of each month to the LDEQ). Historically, this has been done by Veolia; however, Environmental Affairs now reviews, certifies, and submits DRMs to the regulatory agencies using NetDMR. Veolia will still be responsible for providing the DMR information to Environmental Affairs.

In addition to the effluent limits noted above, there are several other requirements identified in the NPDES permits including reporting requirements and procedures for monitoring and record keeping. It should be noted that the following provides a general description of NPDES permit items; the actual permits should be referred to for more specific details and information that is required by SWBNO.

Table 8—Current NPDES Key Effluent Limitations

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATION (EAST BANK PLANT)	DISCHARGE LIMITATION (WEST BANK PLANT)
BOD5 (mg/L) Monthly Average	30	30
BOD5 (mg/L) Weekly Average	45	45
BOD5 (lbs./day) Monthly Average	30,524	10,008
TSS (mg/L) Monthly Average	30	30
TSS (mg/L) Weekly Average	45	45
TSS (lbs./day) Monthly Average	30,524	10,008
Daily pH	6-9	6-9
Fecal Coliform Monthly Average	200 colonies/100 ml	200 colonies/100 ml
Fecal Coliform Weekly Average		400 colonies/100 ml
Fecal Coliform Daily Maximum	400 colonies/100 ml	
Total Residual Chlorine (mg/L)	0.5	1.4
Whole Effluent Toxicity Testing	Report Pass/Fail	Report Pass/Fail
Average Monthly Flow - AMF (mgd)	monitor/report	monitor/report
Average Weekly Flow – AWF (mgd)	monitor/report	monitor/report

mg/L milligrams per liter  
 lbs./day pounds per day  
 mgd million gallons per day  
 ml milliliter  
 BOD<sub>5</sub> Biochemical Oxygen Demand (five day)  
 TSS Total Suspended Solids

- **Stormwater Discharge**—This section refers to the stormwater management at both the East Bank and West Bank Plants. The permits require the development of a Stormwater Pollution Prevention Plan (SWP3) to assure that plant personnel are appropriately managing stormwater runoff. The SWP3 includes site map, employee training, potential pollutant sources, descriptions of stormwater Best Management Practices (BMPs) used, inspection areas, and washwater requirements (if not handled through the treatment process). Violation of the permit consists of stormwater runoff that has TOC concentration greater than 50 mg/L; Oil and grease concentrations greater than 15 mg/L; and pH levels that are outside the range of 6.0 to 9.0.
- **Municipal Water Pollution Prevention**—This item requires SWBNO to perform an Environmental Audit Report each year during the life of the permit. The audit should generally include information on influent and effluent loadings to each plant; bypasses and overflows of the tributary sewer system and treatment plant; sludge disposition; employee training; condition status; and other new developments at each facility. The audit must be completed under a resolution from the Board, and must be signed by a duly authorized representative.

- Pretreatment Program—SWBNO is required to have a pretreatment program in conjunction with requirements of the CWA. The pretreatment program is designed to identify and monitor the discharges related to Significant Industrial Users (SIU) that discharge sewage to the SWBNO system. This item requires SWBNO to establish discharge limits for SIUs, as well as monitor discharges from these customers to determine compliance. SWBNO has to keep track of its monitoring activities, and also track those industrial users that are in noncompliance with the established SWBNO discharge limitations for industrial users. SWBNO must also monitor the influent and effluent to the treatment plants for toxic substances.
- Monitoring of Toxic Substances—SWBNO must also monitor and report for many potential toxic substances in its sewage effluent. There are Minimum Quantification Levels (MQLs) for each potential toxic substance. If any of the MQLs are exceeded, SWBNO must initiate action to try and determine the source, as a means of abating the substance from entering the river source that is used by other communities downstream.
- Whole Effluent Toxicity Guidelines—The NPDES permits provide a section that outlines the requirements for conducting tests related to determining Whole Effluent Toxicity.
- Standard Permit Conditions—There is a section related to standard permit conditions that apply, including penalties for non-compliance; reporting and monitoring requirements; and definitions of significant terms.

The current status of the NPDES permit for the East Bank Plant is that it went into effect on June 1, 2009 and expired on June 1, 2014. SWBNO indicates that it submitted a permit renewal application with LDEQ, and has been notified that its submittal is administratively complete. Until a new permit is issued by LDEQ, SWBNO will continue to operate under the terms of the existing NPDES permit. With respect to the West Bank Plant, the effective date of the existing NPDES permit is June 1, 2014.

## 2. Title V Air Permit

SWBNO maintains Title V Air permits for its power plant at the Carrollton WPP and the East Bank Plant. The permit for the East Bank Plant is related to the FBI that incinerates sludge from the sewage process. The permit expired on October 1, 2013, and SWBNO had already submitted a renewal application on March 21, 2013. LDEQ has notified SWBNO that the application is administratively complete. SWBNO has received a draft permit from LDEQ and the final permit was issued with an effective date of January 23, 2015. SWBNO indicates that the permit for the East Bank Plant has been able to meet all requirements. There is a new requirement issued by the USEPA for sewage sludge incinerators outlined in 40 CFR 60, subpart Mmmm which establishes new final emissions limits for existing sewage sludge incinerators. SWBNO notes that the change of the mercury emissions limit to 0.037 milligrams per dry standard cubic meter (mg/dscm) will likely put the FBI over the new limit. Testing will also have to be conducted for several other emissions to determine compliance with the new rule.

The permit for the power plant at Carrollton WPP is in effect until January 24, 2017. SWBNO indicates that there have been past compliance issues with respect to meeting reporting requirements for this permit that have resulted in compliance orders from LDEQ. All compliance orders have been resolved and SWBNO has settled all outstanding compliance order.

SWBNO has also registered each of its backup generators located at various facilities with LDEQ. The Environmental Affairs Department has been developing training manuals and conducting training to assure that employees operate equipment in accordance with Title V regulations.

### 3. Municipal Separate Storm Sewer System Permit

SWBNO is a party to the MS4 permit issued by the LDEQ to regulate stormwater discharges to canals and rivers that are adjacent to Orleans Parish. Other parties include Jefferson Parish, City of New Orleans, Port of New Orleans, Orleans Levee District, and Louisiana Department of Transportation and Development (District 02). The permit covers all areas within Orleans Parish that are served by the separate storm sewer system. The effective date of the existing permit is October 1, 2013 and will expire October 1, 2018.

General items of the MS4 permit to which SWBNO is a party include:

- **Authorized and Unauthorized Discharges**—Generally, authorized discharges occur from wet weather events via approved system discharge points and should not be reasonably expected to result in a water quality violations. Unauthorized discharges are generally related to spills and other instances where non-stormwater discharges enter the separate storm sewer system.
- **Stormwater Pollution Prevention and Management**—The parties are required to establish a stormwater prevention and management program. This includes establishing controls to reduce the amount of pollutants in stormwater related to areas such as roadway, pesticides, areas of new development, and other areas that can contribute to stormwater pollution.
- **Monitoring and Reporting Requirements**—There are no discharge limitations for reporting, however, the parties must monitor for specific pollutants twice annually from a representative sample of stormwater outfalls.

There are also standard permit conditions (including penalties for violations of the permit) and additional guidelines related to monitoring, permit modifications, and definitions for specific terms used throughout the MS4 permit.

The effective date of the current permit is October 1, 2013, and the permit expires on September 30, 2018.

### D. OVERALL PERFORMANCE OF SWBNO'S SEWAGE TREATMENT PLANTS

The two sewage treatment plants are operated under a contract with Veolia for the operation and maintenance of all plant components. Major capital improvements are funded by SWBNO. The treatment plants generally remain in compliance; however, there have been several recent permit violations at the East Bank Plant that were reported to LDEQ. These include exceedance of daily max limit for fecal coliforms in January and December of 2014; exceedance of the monthly BOD average limit in February and April of 2014; and the exceedance of the monthly TSS average limit in April 2014. A review of the incident reports provided to SWBNO by Veolia indicates that:

- The cause of the January and December 2014 fecal coliform exceedances were investigated and believed to be a sample collection error on the part of the operator.

Veolia did indicate that samples prior to, and after the sample in question were all in compliance.

- The cause of the April 2014 BOD and TSS exceedance was due to high flows and having several clarifiers down for maintenance. Within 10 days, the clarifiers were repaired and back online.
- The cause of the February 2014 BOD exceedance is believed to be related to fluctuating flows to the plant, combined with maintenance issues at the oxygen facility, and needing an additional reactor in service.

The West Bank Plant has not had any permit violations over the past year.

In general, SWBNO indicates that Veolia's performance with respect to the operation of the treatment plants has been good. Excluding the permit exceedances above, there appear to have been few issues or permit violations.

### **1. Operation and Maintenance Agreement**

On December 9, 2014, SWBNO entered into a new ten-year contract with Veolia to provide operation, maintenance, and management of SWBNO's East Bank and West Bank treatment plants. The scope of services in the agreement contains the following elements:

- Operate, maintain and manage the WWTP's such that they meet compliance with all applicable regulations, laws and permits.
- Staff the WWTP's with sufficient qualified employees to perform managerial, administrative and technical duties.
- Conduct preventive maintenance and repairs on both WWTP's to maximize the service life of the facilities.
- Develop forward looking, ten-year capital plan for non-routine upgrades to the WWTP's.
- Keep an inventory of chemicals, equipment, material, supplies, spare parts and other assets on hand.
- Maintain all plans and reports required by permits, regulations and laws such as Emergency Response Plan, Worker Safety Plan, Hazardous Material Management Plan, etc.

## **E. EAST BANK SEWAGE TREATMENT PLANT**

### **1. Capacity and Performance**

SWBNO's East Bank Plant has a permitted average day capacity of 122 million gallons per day. The maximum day effluent flow from the plant in 2014 was 190 mgd, indicating significant infiltration and inflow in the collection system. Compared with average day effluent flows for 2012, 2013 and 2014 of 93 mgd, 98 mgd and 93 mgd, respectively, the current and near term permitted capacity appears sufficient. SWBNO should continue to assess the impact of increasing population, combined with the impact of the collection system rehabilitation on the potential future need for increased sewage treatment capacity. The East Bank Plant is the larger of SWBNO's two sewage treatment plants. During wet weather events, operators utilize abandoned primary clarifiers onsite to control

the flow through the secondary treatment process. After the wet weather flow subsides, the diverted flow is then conveyed through the secondary treatment process.

Plant performance is normally well below permit limits. In calendar years 2013 and 2014 effluent concentrations for BOD averaged 21.3 mg/L and 23.2 mg/L compared to a permit monthly average limit of 30 mg/L. The effluent concentrations for TSS averaged 15.5 mg/L and 15.8 mg/L compared to a permit monthly average limit of 30 mg/L.

There are approximately 35 Veolia employees that provide operations and maintenance of the facilities 24 hours per day. A tour of the plant was conducted on June 23, 2015. The Veolia capital projects manager provided an overview of plant operations and provided an update on recent operational and capital improvements.

## **2. Plant Treatment Components**

The plant consists of three influent bar screens that remove larger materials in the sewage such as rags and miscellaneous debris. Mechanical rakes are available to continually remove the debris from the screens and were in operation during the tour. There are six separate grit chambers for removal of grit that has passed through the screens. Grit from the chambers and debris from the screens are collected and eventually conveyed to the landfill. One recent addition to the plant is an odor control system consisting of Hydrogen Peroxide that is added to the influent flow.

From the grit chamber, sewage flows to the aerobic reactors via two channels. There are four reactors with eight mixers per reactor train. High purity oxygen is generated onsite and supplied to the reactors for use in the removal of BOD. There are approximately 35 tons per day of oxygen generated on average. The sewage then flows to secondary clarifiers for the settling of remaining solids. There are seven secondary clarifiers available at the plant. After secondary settling, the sewage is disinfected with a chlorine solution. The solution is generated onsite from chlorine gas that is stored onsite on a 90 ton rail car. After disinfection, the treated sewage is pumped to the Mississippi River via five effluent pumps.

The treatment of sewage is very reliant on electricity to keep the processes functioning properly. The plant is supplied primarily by Entergy via a 60 Hz power feed. In the event of an emergency, the plant has a 4.0 MW generator located above flood level to power the entire plant.

## **3. Plant Sludge Processing Components**

Sludge, which settles in the clarifier, is recycled in the process; this sludge is called Return Activated Sludge (RAS). A portion of the RAS called Waste Activated Sludge (WAS) is sent to sludge processing for disposal. RAS can be siphoned from the aerobic reactors and returned to the two reactor influent channels to keep the optimal level of microbes in the reactors for removing BOD. WAS is collected from the reactors and secondary clarifiers and conveyed to the plant's gravity thickening and belt filter press. After thickening and dewatering, it is either conveyed to an onsite incinerator or trucked to a landfill. Ash from the incinerator is stored onsite until it is collected and also transported to a landfill. During calendar year 2014, Veolia disposed of approximately 7,110 tons of sludge.

#### 4. Plant Site Visit

Black & Veatch conducted a site visit to the East Bank Plant on June 23, 2015, accompanied by the Veolia capital projects manager. Overall, the plant facilities appeared in good condition with appropriate maintenance being conducted. Some items noted during the site visit included:

- Reactors #1 and #4 were out of service for rehabilitation. The mixers on Reactor #1 were removed and the representative noted that the basin is scheduled to be cleaned by the end of 2015. Reactor #4 is scheduled to be rehabilitated in 2016.
- There is no automation for mechanical rake on bar screens; raking must be conducted manually at regular intervals.
- Cyclone grit separators showed corrosion.
- Operator noted that two channels from the grit chambers to the aerobic reactors will need cleaning.
- Return sludge line was corroded and out of service. A temporary, above ground, replacement line is being used to return sludge from the RAS pump stations to the influent channel. A project to install a permanent buried RAS line was awarded in February 2015.
- Operator noted that liquid oxygen tank is nearing the end of its useful life. High purity oxygen system components appeared in good condition.
- Several mechanical mixers on aerobic reactors were out of service due to regular preventative maintenance.
- Effluent pumps appeared in fair condition. The operator noted that there have been issues keeping these pumps operating reliably. The electrical system is to be evaluated and will likely require upgrades to increase the reliability of the effluent pumps.
- Electrical controls and switchgear for the effluent pumps appeared in poor condition. The operator noted that the older electrical equipment presents ongoing maintenance issues.
- A flood protection berm was completed at the plant to minimize future flooding at the plant.

#### 5. Planned Capital Improvements

Veolia generates a list of capital projects that is provided to SWBNO for consideration. SWBNO retains the decision-making and funding authority for projects over \$15,000. Based on discussions with the plant operator during the site visit and a review of the SWBNO capital budget, the following capital improvements are planned for the East Bank plant to be completed over the next five years:

- Rehabilitation of aerobic reactor #1
- Pave access from Florida Ave. to Plant gate
- Rehabilitate OASIS Trains #1 - 4
- Electrical system evaluation and upgrades

- Automation of headworks
- Improvements to RAS line
- Install automated valves on influent lines
- Incinerator and sludge handling improvements
- Replacement of liquid oxygen tank
- Install new sludge handling station for sludge from West Bank Treatment Plant
- Purchase spare pumps for RAS pump station
- Demolition of multiple hearth
- Upgrade electrical switchgear
- SCADA upgrades
- Rehabilitate belt filter press
- Install a new sludge dryer and heat recovery system to replace the multiple hearth incinerator

A review of the CIP indicates that a majority of these projects are included.

## **F. WEST BANK SEWAGE TREATMENT PLANT**

### **1. Capacity and Performance**

SWBNO's West Bank Plant has a permitted average day capacity of 40 mgd. It is the smaller of SWBNO's two sewage treatment plants and generally serves the southern portion of Orleans Parish.

During calendar years 2012, 2013 and 2014, the West Bank Plant's average day treated effluent flows were approximately 9.3 mgd, 10.1 mgd and 9.23 mgd, respectively. The maximum day plant effluent during 2014 was approximately 30 mgd, indicating significant infiltration and inflow into the collection system during storm events. The current capacity is sufficient to meet demand. Plant performance with respect to removal of BOD and TSS is typically well below permit limits. In calendar year 2013 and 2014, effluent concentrations for BOD averaged 8.9 mg/L and 8.68 mg/L compared to the permit monthly average of 30 mg/L. The effluent concentrations for TSS averaged 10.5 mg/L and 10.83 mg/L compared to the permit monthly average of 30 mg/L. SWBNO indicates that the West Bank Plant has not exceeded any of its NPDES permit limits.

Veolia operates and maintains the plant with six employees. Four are focused on operations and two are maintenance employees. There is also a contract employee that is an electrician that spends two days per week at the plant.

### **2. Plant Treatment Components**

The West Bank Plant consists of four influent bar screens with mechanical rake for removing larger debris as the flow enters the plant. Once through the bar screens, the flow enters two aerated grit chambers where larger solids are settled to prevent these from continuing through the process. Flow from the two aerated grit chambers then enters three primary sedimentation basins. This allows for continued settling of finer solids before moving to the secondary treatment process.

From the primary sedimentation basins, the flow moves to a collection basin where pumps distribute flow to two trickling filters. The trickling filters contain a plastic media that is used to facilitate the biological removal of BOD from the sewage. From the trickling filters, flow is distributed to four final sedimentation basins. The final sedimentation basins provide additional settling of suspended solids, and there are two basins for each trickling filter.

After the final settling process, the sewage is disinfected with a chlorine solution (derived from chlorine gas) before moving to the wet well adjacent to the effluent pump station. There are four effluent pumps that convey the treated sewage to the Mississippi River.

The main power source for the West Bank Plant is 60 cycle power provided by Entergy. For emergency power, there is a standby generator onsite and associated diesel fuel storage tank.

### 3. Plant Sludge Processing Components

Sludge from the treatment process is collected from the primary sedimentation basins, as well as the final sedimentation basins. The sludge is conveyed to a gravity thickening tank where it is stored and thickened. Filtrate from the gravity thickener is sent to the adjacent influent line and returned through the process. Sludge from the gravity thickener is trucked to the East Bank Plant five times a day, although the gravity thickener is capable of storing sludge for several days. Hauling sludge to the East Bank Plant occurs Monday through Friday. Sludge is not hauled on the weekends.

### 4. Plant Site Visit

Black & Veatch conducted a site visit to the West Bank Plant on June 23, 2015, accompanied by the Veolia plant supervisor. Overall, the plant facilities appeared in good condition with appropriate maintenance being conducted. Some items noted during the site visit include:

- Concrete and pavement adjacent to the bar screens and aerated grit basins showed cracks and settling.
- There are four bar screens. Bar screen #2 is in need of an adjustment. Bar Screen #3 is inoperable at time of visit and will be completed rehabbed in 2015. Bar screens 1, 2 and 4 are operational.
- Grit cyclones for collecting grit from the grit basins showed significant corrosion.
- Two grit pumps were replaced in late 2014.
- West Primary Clarifier will be rehabbed and painted by the end of 2015. A contractor is currently under contract to conduct the work. Effluent well on the back of West Primary Clarifier was recently repaired due to concrete cracking. Lastly, West Primary Clarifier also has a leaking valve during site visit. Central Primary Clarifier will have center well repairs conducted, but time frame not determined as of site visit.
- Main Collection Basin Pumps 4 and 5 had impellers replacements and rehab work completed in 2015. Pumps 1, 2 and 3 impellers will be checked and rehabbed later in 2015 or early 2016. The structural condition of the trickling filters appeared to be good. Minor structural issues with Trickling Filter No. 1 were noted and are getting worse since last site visit in 2014.

- The drive motor for the arms on the trickling filters is currently inoperable and operates based on hydraulics; however, treatment is still acceptable.
- Check valve on effluent pump 2 was replaced. Pump 2 is offline due to an additional inoperable valve. Maintenance is working on removing and repairing the valve in 2015.
- Standby generator is operational. An addition of air filtration system was made to the generator, as well as, a flap placed on the exhaust to prevent rain water from entering the generator.
- SCADA system was down during site visit but has been operated with intermittent disruptions during the first three quarters of 2015. SWBNO indicates that all operational issues with the system were resolved by September 30, 2015.

## 5. Planned Capital Improvements

Veolia generates a list of capital projects that is provided to SWBNO for consideration. SWBNO retains the decision-making and funding authority for projects over \$5,000. Based on discussions with the plant operator during the site visit and a review of the SWBNO capital budget, the following capital improvements are planned for the West Bank Plant to be completed over the next five years:

- Replacement of grit pumps
- Rehab of main pumps that feed the trickling filters
- Repair projects related to effluent pumps
- Rehab emergency generator and associated switchgear
- Rehab primary sedimentation basins
- Rehab belt filter press and other improvements to solids handling

A review of the CIP indicates that the majority of these projects are included.

## G. SEWAGE COLLECTION AND PUMPING

SWBNO's sewage collection and pumping systems are operated and maintained by SWBNO. The following sections provide an overview of these systems.

### 1. Sewage Collection

The sewage collection system has been a primary focus for SWBNO since the original consent decree for the larger, east bank portion of the system was entered into in the 1990s. Since that time, SWBNO has devoted considerable resources toward the rehabilitation of the sewage collection system and pump stations to reduce the occurrences of sanitary sewer overflows and assure that sewage flows properly to the two treatment plants.

The sewage collection system consists of approximately 1,547 miles of sewer lines ranging in size from 4-inch diameter to 72-inch diameter. The collection system is delineated into 10 basins. Nine of the basins (Lakeview, Uptown, Central Business District, Carrollton, Mid-City, Gentilly, Ninth Ward, New Orleans East, and South Shore) flow to the East Bank Plant; while the Algiers Basin flows to the West Bank Plant. The consent decree requires that each of the nine east bank basins be

rehabilitated as part of the Comprehensive Collection System Remedial Program. To date, SWBNO has completed work that consists of replacement, lining, point repairs, and other measures for four of the basins (Lakeview, Central Business District, Gentilly, and Uptown). The remaining basins are to be completed per the schedules outlined in the consent decree as noted above.

A key objective of the consent decree related to the collection system is the reduction of sanitary sewer overflows. The Table 9 shows the number of unauthorized sanitary sewer overflows for the east bank portion of the system from 2008-2014. This number of SSOs per mile of sewerage system is still significant, although management indicates that much progress has been achieved in reducing these instances since the inception of the consent decree in 1998.

Table 9—Unauthorized Sanitary Sewer Discharges for East Bank Portion of System

CALENDAR YEAR	2008	2009	2010	2011	2012	2013	2014
Unauthorized Discharges	163	214	225	189	184	177	207

To achieve the requirements of the consent decree, SWBNO has several projects anticipated for the coming years including:

- FEMA-funded HMGP projects for collection system point repairs, or the ESSA program. This program is related to finding and fixing issues in the collection system related to the effects of Hurricane Katrina. This program has been ongoing, however, \$6 million is included in the proposed CIP.
- Consent Decree rehabilitation of sewage system basins, including Lower Ninth Ward rehabilitation at approximately \$10.5 million, New Orleans East basin rehabilitation at approximately \$13.4 million, and South Shore basin rehabilitation at approximately \$18.0 million. These projects would be funded by SWBNO.
- Additional consent decree projects for the MidCity and Carrollton basins are also anticipated, as well as routine cleaning and inspections throughout Orleans Parish. These projects would be funded by SWBNO.

These projects that continue to rehabilitate the collection system should continue to reduce the instances of SSOs, as well as the amount of infiltration and inflow that enters the collection system.

## 2. Sewage Pumping

SWBNO operates and maintains 83 sewage pump stations with 65 serving the east bank collection system and 18 serving the west bank collection system. The majority of pumps related to these stations have been rehabilitated since Hurricane Katrina. There are continued improvements anticipated by SWBNO in the coming years, including:

- FEMA-funded HMGP projects related to relocating underground pump stations above ground for approximately \$4.0 million.
- Internal funds to storm proof Sewage Pump Station A for approximately \$3.0 million.
- Internal funds for miscellaneous repairs to the various pump stations at approximately \$1.0 million annually.

- Internal funds for the relocation and expansion of Sewage Pump Station No. 1 for approximately \$2.2 million.

### 3. Performance Metrics

As part of its consent decree compliance, SWBNO is required to track and report activities related to several operation and maintenance initiatives for the larger, east bank portion of the sewerage system. A review of SWBNO's 2014 annual report to the USEPA for the consent decree shows the following performance:

- Sanitary Sewer Line Inspection—SWBNO is required to inspect at least 9 percent of the east bank sanitary sewer system each year and 100 percent in 8 years. For 2014 SWBNO inspected 942,808 feet or approximately 16 percent of the east bank collection system.
- Sanitary Sewer Collection System Line Cleaning—SWBNO is required to clean at least 7 percent of the east bank sanitary sewer system each year and 100 percent in 10 years. For 2014 SWBNO cleaned 1,442,493 feet or approximately 24 percent of the east bank collection system.
- Sanitary Sewer System Manhole Inspections—SWBNO is required to inspect at least 25 percent of the east bank sanitary sewer system manholes each year and 100 percent in 3.3 years. For 2014 SWBNO inspected 8,094 manholes or approximately 35 percent of the total east bank collection system manholes.
- Sanitary Sewer Collection System Repairs—SWBNO is required to report all repairs made to the east bank collection system. In 2014 SWBNO made 3,487 repairs to the east bank collection system.
- Sewage Pump Station Preventative Maintenance—SWBNO is required to complete 90 percent of preventive maintenance work orders related to its sewage pump stations within two weeks of the scheduled date of completion. For 2014 SWBNO completed 4,941 work orders within two weeks of the scheduled date out of a total of 4,942 work orders or approximately 99.98 percent.
- Air Relief Valve Inspections—SWBNO is required to inspect the 34 air relief valves on a semi-annual basis. For 2014 SWBNO met this requirement.
- Force Main Isolation Valve Inspection and Exercise—SWBNO is required to inspect and exercise 172 force main isolation valves on an annual basis. SWBNO reports meeting this requirement for 2014.
- Cathodic Protection System Surveys—SWBNO is required to conduct annual surveys of cathodic protection sites. There are currently 22 sites and SWBNO reports meeting the requirement to survey these sites.

The preventive nature of these checks and inspections provides a proactive approach to maintenance and viewed as a positive outcome of the consent decree.

## H. SEWERAGE SYSTEM CONCLUSIONS

Based on the review of SWBNO's sewerage system, Black & Veatch has reached the following conclusions:

- Complying with the consent decree continues to be a major focus for SWBNO. Significant improvements have been made to the system including rehabilitation of sewage pump stations and the implementation of the Comprehensive Collection System Remedial Program. The number of SSOs has been reduced but is still significant, and SWBNO has recently been able to negotiate an extension of its schedule for completing the rehabilitation of east bank basins at varying milestones through 2025. Meeting this schedule appears feasible, but will require diligent coordination between SWBNO and the City to keep sewer rehabilitation and street projects on track.
- The preventive maintenance inspections developed as part of the consent decree provide an effective means for consistently checking and correcting deficiencies in the east bank collection system. Based on a review of 2014 annual report to the USEPA, SWBNO has been complying with these important inspections.
- The sewage treatment plants have historically been compliant with meeting the limits set forth in their respective NPDES permits. There have been several, recent exceedances of the permit limits for the East Bank Plant; however, additional focus by the operator, Veolia, should return the plant to performance that is more in line with its historical performance.
- The sewage treatment plants are comprised of processes and components for treating sewage and handling sludge that are common within the wastewater industry. The treatment capacity of the East Bank Plant is sufficient to meet existing and near term demand. SWBNO should continue to monitor the population growth and the impact of the collection system rehabilitation projects to appropriately plan for any needed future expansions.
- Historically, there were several compliance issues related to meeting the reporting requirements for SWBNO's Title V permit for the power plant at the Carrollton WPP. There were no compliance issues in 2014 and SWBNO does not anticipate future occurrences.
- There is a new emissions rule developed by the USEPA related to sewage sludge incinerators that could result in needed modifications to the FBI located at the East Bank Plant. The new rule includes increased standards for mercury emissions, and it appears that emissions for current operations would exceed this limit. SWBNO is working with its operator, Veolia to design and construct exhaust improvements to the FBI to assure compliance.

## VII. Drainage System

Within the Orleans Parish, a number of drainage stations are used to pump rain and surface water out of the City through a network of canal systems and drainage pump stations. These pumps allow SWBNO to dewater the City, particularly during large storms or hurricanes. The drainage pump stations employed are low head high flow pumps which are primarily powered by 25 cycle power from the SWBNO power plant located at the Carrollton WPP and 60 cycle power supplied by the local electrical utility company. The West Bank drainage pump stations use 25 cycle and 60 cycle power. There is a frequency changer available to convert 25 cycle power from SWBNO's power plant to 60 cycle power to power the West Bank drainage pump stations during an emergency. Figure 4 on the following page shows the drainage system and the associated pump stations located throughout the New Orleans area. In general, the drainage system operated by SWBNO consists of the following major assets:

- Approximately 90 miles of open channel canals
- Approximately 90 miles of covered, or below ground canals
- 25 major drainage pumps stations; 23 located on the east bank portion of the system and 2 located on the west bank portion of the system
- 13 smaller underpass pump stations that start automatically as water levels rise during wet weather
- 122 total pumps are located in the 25 major drainage stations

Since Hurricane Katrina in 2005, SWBNO has been undertaking significant improvements to the drainage pump stations, including the rebuilding of drainage pumps, storm proofing of facilities, and installation of backup generators. The following section provides an overview of significant projects anticipated as part of SWBNO's CIP.

### A. SELA PROJECTS

The SELA Drainage program is a partnership primarily between SWBNO and USACE to improve the drainage within Orleans Parish since Hurricane Katrina. The program has been funded by Federal government appropriation of approximately \$1.3 billion. Generally, individual projects for this program are funded 65 percent from the Federal government and 35 percent from SWBNO or other local governments, to be paid back over a 30 year period. In terms of project management, SWBNO is generally responsible for project design and public outreach, while the USACE is generally responsible for permitting, as well as the hiring and managing the construction contractors. A review of reports from SWBNO reflects several projects that are ongoing and described below:

- The Florida Avenue Canal, Phases 2-3 and 4 projects consists of widening the existing concrete flume section of the canal from Elysian Fields Avenue to Drainage Pump Station 19. In addition, modifications will be made to the existing drainage near Peoples Avenue and along the south and north sides of the Florida Avenue Canal to aid in getting more flow to this new canal. Both Phases were awarded September 2014 for construction cost of \$119 million and \$157.2 million, respectively.
- The Jefferson Avenue Canal, Phase 1 and 2 projects consists of adding a canal from Constance Street to S. Liberty Street and another canal from S. Liberty Street to S.

Claiborne Avenue in the Jefferson Avenue neutral ground. Additionally a canal from Nashville Avenue to Jefferson Avenue along Prytania Street will be constructed. Phase 1 was awarded July 2013 for a construction cost of \$55.9 million and Phase 2 was awarded January 2013 for a construction cost of \$46.2 million.

- The Louisiana Avenue Canal project consists of constructing a concrete box canal from Constance St. to S. Claiborne Ave in the Louisiana Avenue neutral ground. The project was awarded July 2014 for a construction cost of \$82.6 million.
- The Napoleon Avenue, Phase 2 and 3 projects consists of building a larger concrete box canal adjacent to the existing canal. Phase 2 was awarded September 2011 for a construction cost of \$55.1 million and Phase 3 was awarded October 2013 for a construction cost of \$38.1 million.
- The S. Claiborne Avenue, Phase 1 and 2 projects consists of adding a canal from Lowerline Street to Leonidas Street and a canal from Leonidas Street to Monticello Avenue in the S. Claiborne Avenue neutral ground. Phase 1 was awarded October 2011 for a construction cost of \$27.1 million and Phase 2 was awarded June 2012 for a construction cost of \$27.8 million.
- Participation in City Department of Public Works street projects where replacement of drainage assets are needed. The CIP includes internal funds of \$4.3 million.

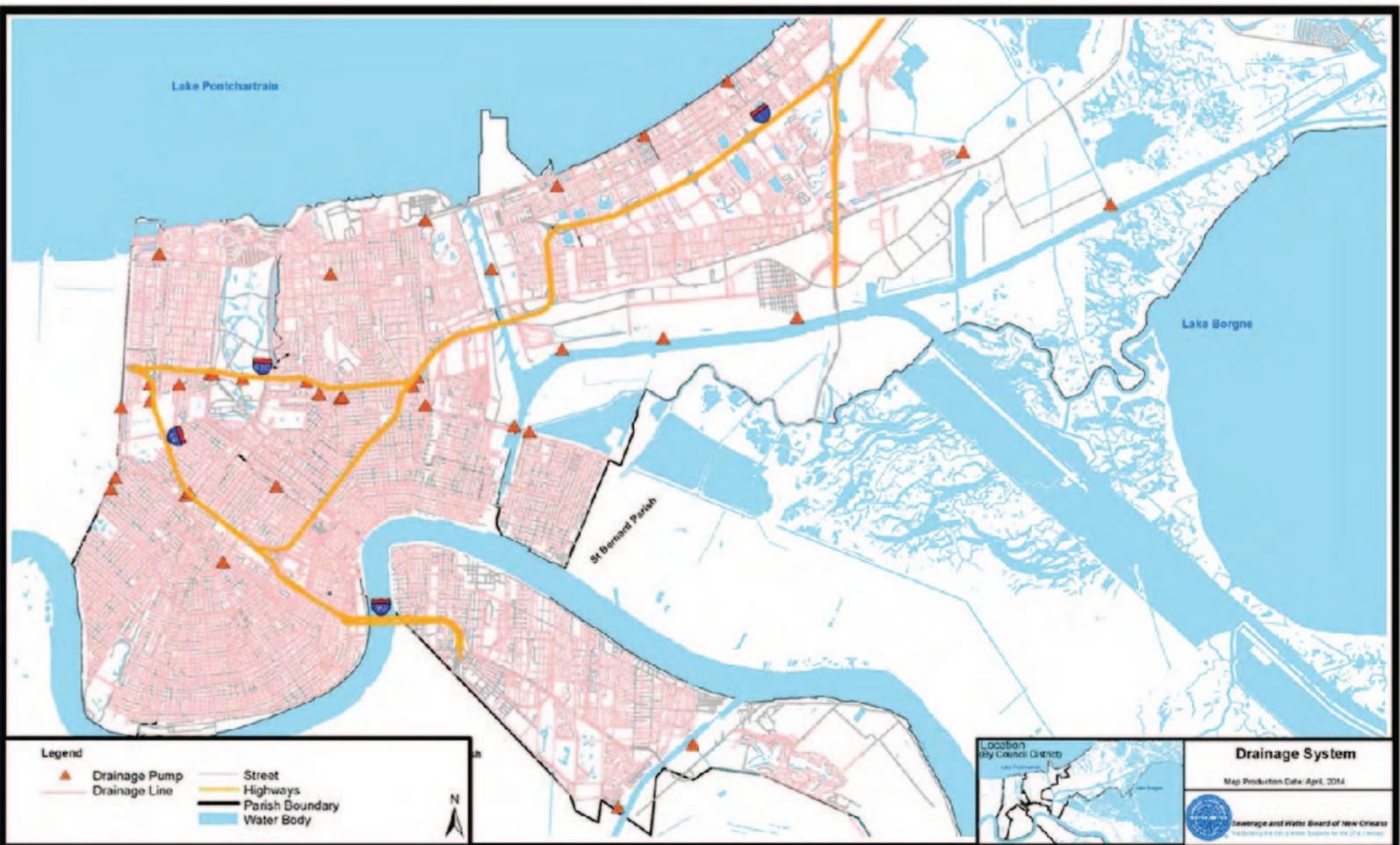


Figure 4—Overview of the SWBNO Drainage System

## B. DRAINAGE PUMP STATIONS

As noted above, the drainage pump stations are critical assets for preventing flooding of Orleans Parish during storm events. There are 25 major drainage pump stations with 122 pumps of various sizes. Since Hurricane Katrina, there has been considerable Federal disaster-recovery and hazard mitigation funds expended to rehabilitate the pumps and harden the station structures. During site visit to one of the two major drainage pump stations, the pump generally appeared to be operational and in good condition. There was evidence of completed storm proofing work, including a new roof, windows, doors, as well as new generators to provide backup power. One aspect of the drainage pump stations is that many of the pumps are old, and in-house fabrication of parts must be done when components break.

SWBNO is planning future work related to the drainage pump stations including:

- Normal extensions and replacement for the drainage pumping stations of approximately \$135.2 million. The majority of this (approximately \$120.7 million) is anticipated to be from internal SWBNO funds.

In the coming years, there are several initiatives related to drainage pump stations which will impact the SWBNO's operation of the drainage system. These initiatives include:

- West Closure Complex—The West Closure Complex is a drainage pump station constructed by the USACE. The new station handles flows from three separate systems during storm events, including SWBNO's system. The West Closure Complex is operated and maintained by the SELA Flood Control Authority.
- Permanent Drainage Pump Stations on Lake Pontchartrain—The USACE is also constructing three permanent drainage pump stations located adjacent to Lake Pontchartrain at the 17<sup>th</sup> Street, Orleans, and London canals. The combined pumping capacity for the three facilities is expected to be approximately 23,000 cubic feet per second, and will allow for more effective pumping of the drainage system to Lake Pontchartrain during storm events. SWBNO is expected to inherit responsibility and associated costs for operating and maintaining these three systems, which would include the need for additional employees and associated O&M expense.

## C. DRAINAGE SYSTEM CONCLUSIONS

Based on the review of SWBNO's drainage system, Black & Veatch has reached the following conclusions:

- SWBNO has made significant progress with the rehabilitation of its drainage pump stations with the help of Federal disaster-recovery and hazard mitigation funds. Completed work includes rehabilitation of drainage pumps and motors; storm proofing of stations to protect the pumping assets from flood and wind; and installation of backup generators to ensure operations should loss of power occur. The proposed CIP includes additional, internal funds to continue the normal repair and replacement of drainage pumping assets.
- SWBNO is a participant along with the USACE in the SELA Drainage program. The CIP includes significant funds provided by the Federal government and SWBNO for

constructing and improving canals to facilitate better drainage and flood control in the drainage system. The implementation of these improvements will continue to be a major focus of SWBNO in the coming years.

- Additional pumping stations (Lake Pontchartrain permanent stations) are being constructed by the USACE to improve the drainage of the system. SWBNO will likely assume some or all of responsibility for the three permanent stations on Lake Pontchartrain. These additional responsibilities would require additional O&M expense and employee resources that are yet to be determined.

## VIII. Capital Improvement Program

### A. OVERVIEW

SWBNO's CIP is managed by the General Superintendent's office and reflects the capital items requested by each of the Departments within SWBNO. SWBNO has developed a relatively new process for developing the CIP budget that includes a prioritization process to rank order projects for each operational sub-unit, i.e., water, sewerage, and drainage. Generally, the prioritization of capital projects falls to a committee consisting of the General Superintendent, Deputy General Superintendent, Chief of Engineering, Chief of Networks, Chief of Operations, and Planning and Budget. Projects are ranked on a scale of 1 to 10, with 10 receiving the highest priority for implementation by SWBNO. The prioritization process uses criteria that includes the following:

- General service criteria for SWBNO are weighted to provide a basis for comparing individual projects. The general service criteria includes customer service; regulatory compliance; system reliability; system repair/replacement; operational flexibility; system growth; and several other general service criteria. Criteria related to regulatory compliance and system repair/replacement would generally receive greater weighting compared to the criteria for system growth.
- Individual projects are assessed and ranked against each of the general service criteria to derive a weighted ranking for each project.
- Projects that are already underway, or that have designated funds from other sources, e.g., FEMA funds, typically receive the highest ranking.

The timing and cost included in the CIP are developed by managers using their experience or other information as known to provide a budget estimate for the CIP. The costs do not include any inflation for projects identified in future years. Many of the projects are yet to be designed, at which time more detailed design will likely result in changes to the CIP amounts prior to project implementation.

From a timing standpoint, individual or specific projects are noted in the year for which SWBNO anticipates initiating the project. For ongoing capital expenditures, e.g., annual renewal and replacement, the CIP shows annual amounts.

As mentioned in Section III of this Report, SWBNO anticipates undertaking more projects to continue improving the water, sewerage, and drainage systems. As such, SWBNO will need additional resources and focus on its processes to keep the pipeline of projects moving forward. SWBNO is taking steps to focus on getting projects ready for implementation, and will shortly begin seeking qualifications from engineering firms that will lead the design of projects based on their specific qualifications and focus areas. Engineers within SWBNO will provide overall program management with respect to the design and schedule of project implementation. Another focus to be sought by SWBNO from the aforementioned engineering firms is a focus on developing project scheduling and cash flows to track the implementation of the CIP. This will be an important process component for managing personnel and financial resources as the implementation of the CIP moves forward.

Another important component with respect to implementing the CIP is the purchasing process. As indicated in Section III, obtaining approval to get a capital project started can take 6 to 8 months. SWBNO will have to manage significantly more projects through this process to keep the project pipeline moving.

## B. FISCAL YEARS 2015-2020 CAPITAL IMPROVEMENT PROGRAM

A summary of SWBNO’s 2015 -2024 Capital Program for the years 2015 through 2020 is shown below in Table 10.

Table 10—Capital Improvement Program (Fiscal Years 2015-2020)

	FUNDED FROM OTHER SOURCES	INTERNAL FUNDS	UNFUNDED	TOTAL
Water System	\$232,489,000	\$312,874,000	\$28,277,000	\$573,640,000
Sewerage System	\$69,995,000	\$314,903,000	\$15,290,000	\$400,188,000
Drainage System	\$354,728,000	\$13,464,000	\$315,581,000	\$683,773,000
<b>Total</b>	<b>\$657,212,000</b>	<b>\$641,241,000</b>	<b>\$359,148,000</b>	<b>\$1,657,601,000</b>

Note:

1. Uninflated costs derived from SWBNO 2015-2024 Capital Budget.

The six-year CIP for the years 2015 through 2020 is comprised of projects to improve the water, sewerage, and drainage systems. Tables 11, 12, and 13 on the following pages provide a summary of the proposed projects anticipated by SWBNO. The majority of projects are focused on rehabilitation, replacement and upgrades, as well as Federally-funded disaster-recovery and hazard mitigation projects.

To reflect the difference in funding sources, each Table is broken out into two segments. The first segment reflects projects to be funded by other sources. These projects mainly consist of FEMA and USACE sources for disaster-recovery and hazard mitigation. The second segment of the Tables reflects the projects to be funded from internal SWBNO funds which include bond proceeds and self-generated funds.

## 1. Water System

Table 11—Water Capital Improvement Program

CAPITAL SPENDING (IN \$'000)	2015	2016	2017	2018	2019	2020	TOTAL SIX-YEAR PROGRAM
	<b>FEMA &amp; OTHER FUNDING SOURCES</b>						
175 Water Hurricane Recovery Bonds	69,717	20,000	20,000	20,000	20,000	20,000	169,717
214 Normal Extensions & Replacements	2,070	2,070	2,070	2,070	2,070	2,070	12,420
676 Modifications to Power Generating System HMGP	38,858	5,524	5,324	-	-	-	49,706
807 Improvements to Central Yard & St Joseph St	646	-	-	-	-	-	646
<b>TOTAL WATER SYSTEM - FEMA &amp; OTHER SOURCES</b>	<b>\$111,291</b>	<b>\$27,594</b>	<b>\$27,394</b>	<b>\$22,070</b>	<b>\$22,070</b>	<b>\$22,070</b>	<b>\$232,489</b>
	<b>INTERNAL CAPITAL</b>						
110 Normal Extensions & Replacements	\$14,569	\$24,520	\$24,720	\$18,520	\$12,420	\$13,970	\$108,719
112 Modifications to Oak St Raw Water Intake Station	1,200	5,500	5,000	-	-	-	11,700
122 Sycamore and Claiborne Filter Rehabilitation	1,490	3,000	0	30,000	-	-	34,490
135 Improvements to Chemical System	220	1,300	3,000	-	-	-	4,520

CAPITAL SPENDING (IN \$'000)	2015	2016	2017	2018	2019	2020	TOTAL SIX-YEAR PROGRAM
156 Advanced Water Treatment (Carr.)	6,815	200	20,120	120	120	560	27,935
157 Advanced Water Treatment (Algiers)	1,940	3,250	175	2,750	-	-	8,115
159 Water Plant Security Improvements	-	2,000	-	2,000	-	-	4,000
160 SELA Water Relocation Costs	843	643	320	-	-	-	1,806
214 Normal Extensions & Replacement	1,330	1,350	1,350	1,375	1,375	1,400	8,180
216 Water System Replacement Program	4,000	2,000	2,000	2,000	2,000	2,000	14,000
239 Mains D P W Contracts	5,200	3,200	3,200	3,200	3,200	3,200	21,200
492 – Donner Canal Improvements	-	17	578	2,145	-	-	2,740
600 Water Share of Power Projects	2,483	352	928	280	1,590	3,490	9,123
701 Water Reserve for Emergencies	1,500	1,500	1,500	1,500	1,500	1,500	9,000
800 Water Share - General Budget Items	12,396	8,190	7,163	6,669	6,492	6,436	47,346
<b>TOTAL WATER SYSTEM - INTERNAL CAPITAL <sup>1</sup></b>	<b>\$53,986</b>	<b>\$57,022</b>	<b>\$70,054</b>	<b>\$70,559</b>	<b>\$28,697</b>	<b>\$32,556</b>	<b>\$312,874</b>
<b>TOTAL WATER DEPARTMENT COMBINED <sup>2</sup></b>	<b>\$165,277</b>	<b>\$84,616</b>	<b>\$97,448</b>	<b>\$92,629</b>	<b>\$50,767</b>	<b>\$54,626</b>	<b>\$545,363</b>

<sup>1</sup> Excludes \$28,277,000 that has been identified by SWBNO as being unfunded.

<sup>2</sup> Uninflated costs derived from SWBNO 2015-2024 Capital Budget.

SWBNO has budgeted approximately \$545 million for its water system capital improvement projects for the six year period between fiscal years 2015 and 2020. Of the \$545 million total, \$313 million will be funded through internal capital funds and \$233 through a combination of other sources, including FEMA and USACE funds. In addition, SWBNO has identified \$28 million of unfunded capital improvement projects. It is recommended that SWBNO continue to pursue alternative funding sources to make progress towards completing these projects. The funded projects included for SWBNO's water system are summarized in Table 11 and include water plant security improvements, FEMA-funded hurricane recovery bond projects (e.g., Water Hammer Project and Waterline Replacement), normal extension and replacement, water intake modifications, filter rehabilitation, chemical system improvements, water treatment plan improvements, and main extensions among others. Some of the key project spending includes:

- Water Point repairs to be funded internally by SWBNO, including replacement of water mains damaged by hurricane Katrina. The total cost of the project is \$30 million for the FY 2015 through FY 2020 period (project # 110-51).
- Citywide AMI installation, for a total cost of \$20 million (project # 110-41). In addition to the \$20 million budgeted for AMI equipment installation, a total of \$10 million was budgeted between FY 2015 and FY 2020 for the replacement of water meters (project # 823).
- Sycamore Filter Modification, rehabilitation of filters 1-28 at the Sycamore Filter Gallery. Filter media replacement, underdrain inspection and maintenance, replacement of valve, actuator, meter and loss of head instrument, for a total project cost of \$33 million (project # 122-3).
- Improvements to the Carrollton WPP, including a new sludge line, sedimentation study, and improvements to the G&L sedimentation basins, for a total project cost of \$27.94 million (projects # 156-1 to 156-9).
- The Water Hammer and Waterline Replacement projects are part of the FEMA-Funded Water Line Replacement Program (WLRP). WLRP is intended to restore the City's water distribution system and is part of a larger City-wide, multi-year infrastructure repair/recovery effort. The total cost of the project is \$49 million for the FY 2015 through FY 2020 period (project # 175-11).
- Participation in DPW's Roadwork initiative results in a total project cost of \$21.2 million for the FY 2015 through FY 2020 planning period (project # 239).
- Included in the General Budget Items for the water system are improvements to SWBNO's information systems that were mentioned earlier in this Report. This includes \$750,000 for CAM, \$1,333,000 for the human resources/payroll system, \$1,167,000 for the financial system, and \$1,600,000 for the work order management system.

## 2. Sewerage System

Table 12—Sewerage Capital Improvement Program

CAPITAL SPENDING (IN \$000)	2015	2016	2017	2018	2019	2020	TOTAL SIX-YEAR PROGRAM
<b>FEMA &amp; OTHER FUNDING SOURCES</b>							
318 Rehabilitation Gravity Sewer System	\$1,035	\$1,035	\$1,035	\$1,035	\$1,035	\$1,035	\$6,210
368 Wetland Assimilation	8,400	200	-	-	-	-	8,600
375 Sewerage Hurricane Recovery Bonds	15,610	5,000	5,000	7,000	-	-	32,610
676 Modifications to Power Generating System HMGP	17,143	2,437	2,349	-	-	-	21,929
807 Improvements to Central Yard & St Joseph St	646	-	-	-	-	-	646
<b>TOTAL SEWERAGE SYSTEM - FEMA &amp; OTHER SOURCES</b>	<b>\$42,834</b>	<b>\$8,672</b>	<b>\$8,384</b>	<b>\$8,035</b>	<b>\$1,035</b>	<b>\$1,035</b>	<b>\$69,995</b>
<b>INTERNAL CAPITAL</b>							
313 Ext & Replace - Sewer Force Mains EPA Consent Decree	\$5,000	\$1,000	\$10,700	\$2,000	\$10,700	\$1,000	\$30,400
317 Ext & Replace - Gravity Mains EPA Consent Decree	1,817	19,969	7,086	16,893	13,754	39,115	98,634
318 Rehabilitation Gravity Sewer System	6,400	4,000	5,400	4,000	7,400	4,000	31,200

CAPITAL SPENDING (IN \$000)	2015	2016	2017	2018	2019	2020	TOTAL SIX-YEAR PROGRAM
319 Extension and Replacements - Sanitary Sewer Mains Algiers	-	-	500	-	-	-	500
326 Ext & Rep. to Pumping Stations EPA Consent Decree	3,934	4,760	5,550	2,500	5,800	1,650	24,194
339 Mains In D P W Contracts EPA Consent Decree	7,800	6,300	6,300	6,300	6,300	6,300	39,300
348 Extension and Replacement - WWTP	5,860	4,805	4,495	3,925	3,655	350	23,090
360 SELA Relocation Costs	1,043	643	337	578	1,945	-	4,546
375 Sewerage Hurricane Recovery Bonds	2,000						2,000
381 Modification & Extension of WBSTP to 20/50 MGD	1,270	355	4,170	245	-	-	6,040
600 Sewer Share of Power Projects	848	46	5,594	40	170	495	7,193
702 Sewer Reserve for Emergencies	700	700	700	700	700	700	4,200
800 Sewer Share of General Budget Items	14,910	7,415	6,385	6,006	5,813	5,777	46,306

CAPITAL SPENDING (IN \$000)	2015	2016	2017	2018	2019	2020	TOTAL SIX-YEAR PROGRAM
TOTAL SEWERAGE SYSTEM - INTERNAL CAPITAL <sup>1</sup>	\$51,582	\$49,993	\$54,517	\$43,187	\$56,237	\$59,387	\$314,903
TOTAL SEWER DEPARTMENT COMBINED <sup>2</sup>	\$94,416	\$58,665	\$62,901	\$51,222	\$57,272	\$60,422	\$384,898

<sup>1</sup> Excludes \$15,290,000 that has been identified by SWBNO as being unfunded.

<sup>2</sup> Uninflated costs derived from SWBNO 2015-2024 Capital Budget.

SWBNO’s sewerage system budget is approximately \$385 million for the fiscal years 2015 through 2020. Out of the \$385 million, \$315 million will be funded through internal capital funds and \$70 through a combination of other sources, including FEMA funds. In addition, SWBNO has identified \$15 million of unfunded capital projects. It is recommended that SWBNO continue to pursue alternative funding sources to make progress towards completing these projects. The funded projects included for SWBNO’s sewerage system are summarized in Table 12, and include rehabilitation of the gravity sewer system, extension and replacement of sewer force mains and gravity mains, extensions and replacements of pump stations and mains work in conjunction with the USEPA Consent Decree, and normal extensions and replacements to the sewage treatment plants among others. Some of the key project spending includes:

- Rehabilitation of the gravity sewer system, including restoration of gravity sewer mains by point repairs and Cured in Place Pipe (CIPP) lining at sites throughout Orleans parish. The budgeted spending is between \$2 and \$4 million per year, with a total project cost of \$15.2 million for the FY 2015 through FY 2020 planning period (project # 318-2).
- Rehabilitation of the gravity sewer system, including manhole to manhole sanitary sewer system replacement at various locations throughout Orleans Parish. The budgeted spending from internal funds is between \$2 and \$3.4 million per year, with a total project cost of \$17 million for the FY 2015 through FY 2020 planning period (project # 318-3).
- Participation in DPW’s Roadwork initiative results in a total project cost of \$33.3 million for the FY 2015 through FY 2020 planning period (project # 339).
- Included in the General Budget Items for the water system are improvements to SWBNO’s information systems that were mentioned earlier in this Report. This includes \$750,000 for CAM, \$1,333,000 for the human resources/payroll system, \$1,167,000 for the financial system, and \$800,000 for the work order management system.

### 3. Drainage System

Table 13—Drainage Capital Improvement Program

CAPITAL SPENDING (IN \$000)	2015	2016	2017	2018	2019	2020	TOTAL SIX-YEAR PROGRAM
	<b>FEMA &amp; OTHER FUNDING SOURCES</b>						
418 Normal Extensions & Replacements	\$230	\$230	\$2300	\$2300	\$2300	\$230	\$1,380
453 Improvements to Metairie Relief Canal (S&WB 76% Part.)	\$5,992	-	15,000	100	-		21,092
472 Tchoupitoulas Corridor Drainage	-	-	-	1,850	-		1,850
483 Airline & Monticello Canal Improvements	50	948	30,000	500	-		31,498
492 Donner Canal Improvements (SELA)	-	-	-	82,500			82,500
496 General De Gaulle Canal (SELA)	-	-	52,500	52,500			105,000
511 Normal Extensions & Replacements - Stations	1,013	13,457	-	-	-		14,470
535 DPS # 6 Improvements	-	-	160	320	320		800
575 Hurricane Recovery Bonds	6,600		-	-	-		6,600
613 Modifications to Power Generating System	5,330	-	-	-	-		5,330

CAPITAL SPENDING (IN \$000)	2015	2016	2017	2018	2019	2020	TOTAL SIX-YEAR PROGRAM
676 Modifications to Power Generating System HMGP	74,692	571	8,299	-	-	-	83,562
807 Improvements to Central Yard & St Joseph St	646	-	-	-	-	-	646
<b>TOTAL DRAINAGE SYSTEM - FEMA &amp; OTHER SOURCES</b>	<b>\$94,553</b>	<b>\$15,206</b>	<b>\$106,189</b>	<b>\$138,000</b>	<b>\$550</b>	<b>\$230</b>	<b>\$354,728</b>
	<b>INTERNAL CAPITAL</b>						
466 Louisiana Avenue Canal (SELA)	600	600	600	-	-	-	1,800
478 So. Claiborne-Lowerline To Monticello St. (SELA)	220	220	-	-	-	-	440
486 Napoleon Avenue Canal Improvements (SELA)	450	300	-	-	-	-	750
497 Florida Avenue Canal - DPS # 19 to Peoples (SELA)	950	300	-	-	-	-	1,250
498 Dwyer Intake Canal ( St. Charles Canal to Dwyer DPS) (SELA)	50	-	-	-	-	-	50
499 Jefferson Avenue Canal (SELA)	910	910	510	-	-	-	2,330
511 Normal Extensions & Replacements - Stations	2,500	550	550	600	600	650	5,450

CAPITAL SPENDING (IN \$'000)	2015	2016	2017	2018	2019	2020	TOTAL SIX-YEAR PROGRAM
800 Drainage Share of General Budget Items	814	140	122	88	140	90	1,394
<b>TOTAL DRAINAGE SYSTEM - INTERNAL CAPITAL <sup>1</sup></b>	<b>\$6,494</b>	<b>\$3,020</b>	<b>\$1,782</b>	<b>\$688</b>	<b>\$740</b>	<b>\$740</b>	<b>\$13,464</b>
<b>TOTAL DRAINAGE DEPARTMENT COMBINED <sup>2</sup></b>	<b>\$101,047</b>	<b>\$18,226</b>	<b>\$107,971</b>	<b>\$138,688</b>	<b>\$1,290</b>	<b>\$970</b>	<b>\$368,192</b>

<sup>1</sup> Excludes \$315,581,000 that has been identified by SWBNO as being unfunded.

<sup>2</sup> Uninflated costs derived from SWBNO 2015-2024 Capital Budget.

SWBNO has budgeted approximately \$368 million for drainage system capital improvements for the fiscal years 2015 through 2020. Out of the \$368 million, approximately \$13 million will be funded through internal capital funds, and approximately \$355 million through a combination of other sources, including FEMA funds. In addition, SWBNO has identified \$316 million of unfunded capital improvement projects. It is recommended that SWBNO continue to pursue alternative funding sources to make progress towards completing these projects. The funded projects included for SWBNO’s drainage system are summarized in Table 13, and include improvements to several canals, normal extensions and replacements, and pump station improvements among others. In addition to the drainage projects noted in Section VIII, some of the other key project spending includes:

- Participation in DPW’s Roadwork initiative results in a total project cost of \$25.8 million for the FY 2015 through FY 2020 planning period (project # 439).
- Included in the CIP for the drainage system is a portion of the FEMA-funded improvements for the power plant noted in Section III. The drainage system portion is approximately \$83.6 million to be funded by FEMA.
- Included in the General Budget Items for the water system are improvements to SWBNO’s information systems that were mentioned earlier in this Report. This includes \$1,167,000 for the human resources/payroll system, \$1,333,000 for the financial system, and \$1,600,000 for the work order management system.

### C. CONCLUSIONS

Based on the review of SWBNO’s water, sewerage, and drainage systems and associated reports and documents, Black & Veatch has reached the following conclusions:

- The CIP developed by SWBNO appropriately addresses major system deficiencies and initiatives.

- About 40 percent of the total CIP is projected to be funded from other sources, including FEMA and USACE disaster-recovery and hazard mitigation funds. The majority of these projects are focused on rebuilding the water, sewerage, and drainage systems, as well as preparing SWBNO to sustain operations during future storm events.
- SWBNO is developing its processes for monitoring and re-evaluating a prioritized CIP on an annual basis; as well as implementing a significant number of projects over the coming years. Adjustments to the costs and timing of CIP projects are expected once SWBNO initiates more detailed design. The prioritization component of SWBNO's CIP development process provides a logical basis for managing the implementation of the CIP.
- The CIP will result in an aggressive schedule for completing capital projects. SWBNO is qualified to manage the implementation of the CIP, and is planning to retain additional, outside engineering support to complete these projects. Increased focus by SWBNO on program management, purchasing, and project approval processes will be needed to prevent significant delays in the completion of the CIP.

**APPENDIX “D”**

**FINANCIAL CONSULTANT’S FEASIBILITY REPORT**

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# SEWERAGE AND WATER BOARD OF NEW ORLEANS, LOUISIANA

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## Financial Feasibility Evaluation of Sewerage System Revenue Bonds, Series 2015



OS Report

**December 3, 2015**

**EVALUATION BY FINANCIAL FEASIBILITY CONSULTANTS**  
**Sewerage and Water Board of New Orleans, Louisiana**  
**Sewerage System**  
**Revenue Bonds, Series 2015**

We have evaluated the accompanying Forecast Statement of Revenues, Expenses, Debt Service, and Debt Service Coverage (the “Forecast Statement”) for the Sewerage and Water Board of New Orleans (the “Board” or “SWBNO”) Sewerage System for the six fiscal years ending December 31, 2015 through December 31, 2020. Our evaluation was conducted in accordance with guidelines for the wastewater industry and included such procedures as we considered necessary to evaluate the assumptions of the Board.

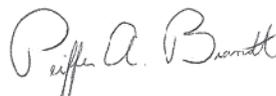
In evaluating the financial feasibility of the project, those assumptions that we believe are most significant include:

- Projected revenues from the approved rate adjustments during the six-year forecast period;
- Projected operating costs for providing sewerage services to meet necessary requirements during the forecast period;
- Projected capital improvements; and
- Projected future debt issues and the timing of additional debt service payments in order to meet capital investment needs.

The accompanying Forecast Statement is presented on an accrual basis, and is then adjusted to be consistent with the Board’s budgeting process for the Sewerage System, and the specific requirements of the coverage tests identified in the General Sewerage Service Bond Resolution (“General Bond Resolution”) adopted on May 21, 2014 as supplemented and amended by the First Supplemental Sewerage Service Revenue Bond Resolution also adopted on May 21, 2014 and the Second Supplemental Sewerage Service Revenue Bond Resolution adopted on October 21, 2015. The Forecast Statement, together with the Summary of Significant Forecast Assumptions, which is included as an integral part of the forecast, constitutes the “Feasibility Evaluation” for the proposed capital projects and bond financing.

In our opinion, the accompanying Forecast Statement is presented in conformity with industry guidelines for presentation of a forecast, and the underlying assumptions provide a reasonable basis for the Board’s forecast. Based upon the assumptions in our report, the projected Revenues provide adequate funds to operate the Sewerage System in a sustainable manner, to fund the capital plan, and to maintain the debt service coverage ratios required by the General Bond Resolution during the forecast period for the issuance of the Board’s Sewerage System Revenue Bonds, Series 2015. However, there will usually be differences between the forecast and actual results because events and circumstances frequently do not occur as expected, and those differences may be material. We have no responsibility to update this report for events and circumstances occurring after the date of this report.

Raftelis Financial Consultants, Inc.



By: Peiffer A. Brandt  
Chief Operating Officer

Charlotte, North Carolina  
December 3, 2015

**Sewerage and Water Board of New Orleans**  
**Sewerage Revenue Bonds, Series 2015**  
**Forecast Statement of Revenues, Expenses, Debt Service, and Debt Service Coverage**

	<i>Fiscal Year</i>					
	2015	2016	2017	2018	2019	2020
<b>Revenues</b>						
<b>Operating Revenues</b>						
Sewer Sales (1)	\$ 94,729,026	\$ 104,824,535	\$ 116,436,997	\$ 129,335,888	\$ 143,663,717	\$ 159,578,784
Plumbing inspection & license fees	299,729	326,081	326,081	326,081	326,081	326,081
Subtotal: Sewer Sales and Fees	\$ 95,028,755	\$ 105,150,616	\$ 116,763,078	\$ 129,661,969	\$ 143,989,799	\$ 159,904,865
Other Revenues	\$ 428,190	\$ 597,321	\$ 597,321	\$ 597,321	\$ 597,321	\$ 597,321
Additional Revenue (2)	-	-	-	-	-	-
<b>Total Operating Revenues</b>	<b>\$ 95,456,945</b>	<b>\$ 105,747,937</b>	<b>\$ 117,360,399</b>	<b>\$ 130,259,290</b>	<b>\$ 144,587,119</b>	<b>\$ 160,502,186</b>
Non-Operating Revenue	\$ 470,944	\$ 462,061	\$ 462,061	\$ 462,061	\$ 462,061	\$ 462,061
FEMA O&M Expense Reimbursements (3)	-	-	-	-	-	-
<b>Total Non-operating Revenues</b>	<b>\$ 470,944</b>	<b>\$ 462,061</b>				
<b>Total Revenues</b>	<b>\$ 95,927,889</b>	<b>\$ 106,209,998</b>	<b>\$ 117,822,460</b>	<b>\$ 130,721,350</b>	<b>\$ 145,049,180</b>	<b>\$ 160,964,247</b>
<b>Expenses</b>						
<b>Operating Expenses</b>						
O&M Expenditures (4)	\$ 55,868,190	\$ 58,767,884	\$ 62,085,412	\$ 65,790,370	\$ 69,614,354	\$ 71,586,452
Depreciation & Amortization (5)	14,299,824	14,299,824	14,299,824	14,299,824	14,299,824	14,299,824
Provision for Bad Debt (6)	947,290	1,048,245	1,164,370	1,293,359	1,436,637	1,595,788
<b>Total Operating Expenses</b>	<b>\$ 71,115,304</b>	<b>\$ 74,115,953</b>	<b>\$ 77,549,606</b>	<b>\$ 81,383,553</b>	<b>\$ 85,350,815</b>	<b>\$ 87,482,064</b>
<b>Net Revenues</b>	<b>\$ 24,812,584</b>	<b>\$ 32,094,044</b>	<b>\$ 40,272,853</b>	<b>\$ 49,337,797</b>	<b>\$ 59,698,365</b>	<b>\$ 73,482,183</b>
Less: Transfers to Rate Stabilization	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plus: Transfers from Rate Stabilization	-	-	-	-	-	-
Plus: Depreciation & Amortization	14,299,824	14,299,824	14,299,824	14,299,824	14,299,824	14,299,824
<b>Rate Covenant Net Revenues</b>	<b>\$ 39,112,408</b>	<b>\$ 46,393,868</b>	<b>\$ 54,572,677</b>	<b>\$ 63,637,621</b>	<b>\$ 73,998,189</b>	<b>\$ 87,782,007</b>
<b>Senior Debt Service - 2015 Issue</b>						
Existing Debt Service	\$ 16,394,603	\$ 18,538,060	\$ 19,806,489	\$ 18,139,057	\$ 16,713,963	\$ 16,730,455
Series 2015 (7)	-	4,777,778	5,000,000	5,000,000	5,000,000	5,000,000
Total Senior Debt Service	\$ 16,394,603	\$ 23,315,838	\$ 24,806,489	\$ 23,139,057	\$ 21,713,963	\$ 21,730,455
<b>Senior Debt Service Coverage - 2015 Issue</b>	<b>2.39</b>	<b>1.99</b>	<b>2.20</b>	<b>2.75</b>	<b>3.41</b>	<b>4.04</b>
<b>Senior Debt Service - Programmatic</b>						
Existing & 2015 Debt Service	16,394,603	23,315,838	24,806,489	23,139,057	21,713,963	21,730,455
Projected Future Bonds (8)	-	-	3,027,437	6,054,874	9,839,171	12,866,608
Total Senior Debt Service	\$ 16,394,603	\$ 23,315,838	\$ 27,833,926	\$ 29,193,931	\$ 31,553,133	\$ 34,597,063
<b>Senior Debt Service Coverage - Programmatic (9)</b>	<b>2.39</b>	<b>1.99</b>	<b>1.96</b>	<b>2.18</b>	<b>2.35</b>	<b>2.54</b>
<b>Total Debt Service Requirements</b>	<b>\$ 16,394,603</b>	<b>\$ 23,315,838</b>	<b>\$ 27,833,926</b>	<b>\$ 29,193,931</b>	<b>\$ 31,553,133</b>	<b>\$ 34,597,063</b>
<b>Total Debt Service Coverage (10)</b>	<b>2.39</b>	<b>1.99</b>	<b>1.96</b>	<b>2.18</b>	<b>2.35</b>	<b>2.54</b>
<b>Rate Covenant Net Revenues</b>	<b>\$ 39,112,408</b>	<b>\$ 46,393,868</b>	<b>\$ 54,572,677</b>	<b>\$ 63,637,621</b>	<b>\$ 73,998,189</b>	<b>\$ 87,782,007</b>
Less: Transfers from Rate Stabilization	-	-	-	-	-	-
Less: Grants	-	-	-	-	-	-
<b>Adjusted Rate Covenant Net Revenues</b>	<b>\$ 39,112,408</b>	<b>\$ 46,393,868</b>	<b>\$ 54,572,677</b>	<b>\$ 63,637,621</b>	<b>\$ 73,998,189</b>	<b>\$ 87,782,007</b>
<b>Total Debt Service Coverage on Adjusted Rate Covenant Net Revenues (11)</b>	<b>2.39</b>	<b>1.99</b>	<b>1.96</b>	<b>2.18</b>	<b>2.35</b>	<b>2.54</b>
<b>Revenue after Debt Service</b>	<b>\$ 22,717,805</b>	<b>\$ 23,078,031</b>	<b>\$ 26,738,752</b>	<b>\$ 34,443,690</b>	<b>\$ 42,445,056</b>	<b>\$ 53,184,944</b>
Less: GO Zone Repaymnet	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582
Less: Revenue Funded Capital	14,000,000	8,000,000	13,000,000	15,000,000	20,000,000	25,000,000
Less: Repayments	2,911,000	2,911,000	486,000	-	-	-
<b>Total Income/(Deficit)</b>	<b>\$ (426,777)</b>	<b>\$ 5,933,449</b>	<b>\$ 7,019,170</b>	<b>\$ 13,210,108</b>	<b>\$ 16,211,474</b>	<b>\$ 21,951,362</b>
<b>Ending Balance of Available Funds</b>	<b>\$ 43,500,000</b>	<b>\$ 50,481,694</b>	<b>\$ 58,665,234</b>	<b>\$ 73,168,701</b>	<b>\$ 90,816,812</b>	<b>\$ 114,363,961</b>
<i>Days of Cash on Hand</i>	284	314	345	406	476	583

- (1) Based on 2015 projected actual revenues with growth, rate increases (10% annually, which have been approved by City Council through 2020), and resistance factors. See Explanatory Note 5 for more detail.
- (2) Additional revenue, which was included in the Feasibility Report for the Series 2014 Bonds, has been incorporated in the Water Sales and Delinquent Fees line item.
- (3) At this point, no FEMA grants are anticipated during the Forecast period.
- (4) Based on the 2015 budget with annual increases. Year to date actual expenses are 6% below budget. Additional O&M to reach more sustainable O&M levels and efficiency savings which were included in the feasibility report for the Series 2014 Bonds have been incorporated. See Explanatory Note 6 for more detail.
- (5) Based on the average of the last two years in historical schedule. The Board anticipates continuing to combine Depreciation and Amortization into a single line item going forward.
- (6) Based on 1% of Sewer Sales.
- (7) Based on final pricing on December 2, 2015 of \$100 million in par amount of bonds.
- (8) Annual bond issues with no capitalized interest are expected throughout the forecast period. See Explanatory Note 8 for more detail.
- (9) Rate covenant requires coverage of 1.25 on Senior Debt Service.
- (10) Rate covenant requires coverage of 1.10 on Total Debt Service.
- (11) Rate covenant requires coverage of 1.00 on Total Debt Service after excluding certain revenues including FEMA O&M expense reimbursement grants.

**Sewerage and Water Board of New Orleans**  
**Sewerage Revenue Bonds, Series 2015**  
**Historical Statement of Revenues, Expenses, Debt Service, and Debt Service Coverage (1)**

	<i>Fiscal Year</i>					
	2009	2010	2011	2012	2013	2014
<b>Revenues</b>						
<b>Operating Revenues</b>						
Sewer Sales	\$ 66,102,946	\$ 69,534,779	\$ 70,358,076	\$ 71,407,835	\$ 78,535,785	\$ 86,553,262
Plumbing inspection & license fees	242,224	373,213	379,036	343,903	321,518	339,176
Subtotal: Sewer Sales and Fees	\$ 66,345,170	\$ 69,907,992	\$ 70,737,112	\$ 71,751,738	\$ 78,857,303	\$ 86,892,438
Other Revenues	\$ 388,528	\$ 260,785	\$ 3,044,483	\$ 288,943	\$ 766,030	\$ 906,120
Additional Revenue						
<b>Total Operating Revenues</b>	<b>\$ 66,733,698</b>	<b>\$ 70,168,777</b>	<b>\$ 73,781,595</b>	<b>\$ 72,040,681</b>	<b>\$ 79,623,333</b>	<b>\$ 87,798,558</b>
Non-Operating Revenue	\$ 499,506	\$ 14,756,175	\$ 427,166	\$ 350,944	\$ 451,435	\$ 574,919
O&M Expense Reimbursements	2,772,395	2,957,463	(35,272)	7,463	5,367	383,354
<b>Total Non-operating Revenues</b>	<b>\$ 3,271,901</b>	<b>\$ 17,713,638</b>	<b>\$ 391,894</b>	<b>\$ 358,407</b>	<b>\$ 456,802</b>	<b>\$ 958,273</b>
<b>Total Revenues</b>	<b>\$ 70,005,599</b>	<b>\$ 87,882,415</b>	<b>\$ 74,173,489</b>	<b>\$ 72,399,088</b>	<b>\$ 80,080,135</b>	<b>\$ 88,756,831</b>
<b>Expenses</b>						
<b>Operating Expenses</b>						
O&M Expenditures	\$ 49,879,872	\$ 44,361,297	\$ 43,173,641	\$ 44,869,796	\$ 45,378,129	\$ 46,758,426
Depreciation & Amortization	9,669,386	10,112,927	10,042,062	14,504,047	13,389,705	15,005,720
Provision for Bad Debts	(2,550,372)	1,801,499	(801,413)	525,961	824,362	944,199
Provision for Claims						565,222
<b>Total Operating Expenses</b>	<b>\$ 56,998,886</b>	<b>\$ 56,275,723</b>	<b>\$ 52,414,290</b>	<b>\$ 59,899,804</b>	<b>\$ 59,592,196</b>	<b>\$ 63,273,567</b>
<b>Net Revenues</b>	<b>\$ 13,006,713</b>	<b>\$ 31,606,692</b>	<b>\$ 21,759,199</b>	<b>\$ 12,499,284</b>	<b>\$ 20,487,939</b>	<b>\$ 25,483,264</b>
Less: Transfers to Rate Stabilization	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plus: Transfers from Rate Stabilization	-	-	-	-	-	-
Plus: Depreciation & Amortization	9,669,386	10,112,927	10,042,062	14,504,047	13,389,705	15,005,720
<b>Rate Covenant Net Revenues</b>	<b>\$ 22,676,099</b>	<b>\$ 41,719,619</b>	<b>\$ 31,801,261</b>	<b>\$ 27,003,331</b>	<b>\$ 33,877,644</b>	<b>\$ 40,488,984</b>
<b>Total Debt Service</b>						
Senior Debt Payment	\$ 20,313,968	\$ 20,250,057	\$ 20,263,432	\$ 20,713,082	\$ 20,726,719	\$ 18,472,037
Total Debt Service	\$ 20,313,968	\$ 20,250,057	\$ 20,263,432	\$ 20,713,082	\$ 20,726,719	\$ 18,472,037
<b>Senior Debt Service Coverage</b>	<b>1.12</b>	<b>2.06</b>	<b>1.57</b>	<b>1.30</b>	<b>1.63</b>	<b>2.19</b>
<b>Rate Covenant Net Revenue after Debt Service</b>	<b>\$ 2,362,131</b>	<b>\$ 21,469,562</b>	<b>\$ 11,537,829</b>	<b>\$ 6,290,249</b>	<b>\$ 13,150,925</b>	<b>\$ 22,016,947</b>
<b>Ending Balance of Available Funds (2)</b>	<b>\$ (260,693)</b>	<b>\$ (1,682,636)</b>	<b>\$ 2,083,063</b>	<b>\$ 9,548,524</b>	<b>\$ 22,397,304</b>	<b>\$ 25,554,380</b>
<i>Days of Cash on Hand</i>	(2)	(14)	18	78	180	199

(1) The data for this schedule comes primarily from the Board's Comprehensive Annual Financial Reports (CAFRs).

(2) For 2009 through 2012, the balance was assumed to be the unrestricted and undesignated cash and cash equivalents from the CAFRs, and in 2013 and 2014 the total also included the cash and cash equivalent designated for capital projects, which was not previously segregated in the Board's CAFRs.

**SEWERAGE AND WATER BOARD OF NEW ORLEANS  
SUMMARY OF SIGNIFICANT FORECAST ASSUMPTIONS**

**FOR THE SIX FISCAL YEARS ENDING  
DECEMBER 31, 2015 THROUGH DECEMBER 31, 2020**

**1. Basis of Presentation**

Raftelis Financial Consultants, Inc. (“RFC”) has been engaged by the Sewerage and Water Board of New Orleans (the “Board” or “SWBNO”) to evaluate the financial feasibility of proposed improvements to its Sewerage System. The opinion letter to the Board is based upon the Forecast Statement of Revenues, Expenses, Debt Service, and Debt Service Coverage (the “Forecast Statement”) and the Summary of Significant Forecast Assumptions (taken together, the “Feasibility Evaluation”) which presents, to the best of the Board’s knowledge and belief, based upon available information, the expected revenue, expenses, debt service, and debt service coverage for the Board’s Sewerage System during the forecast period.

All schedules in the Feasibility Evaluation have been presented in accordance with the Board’s annual accounting cycle, based upon its fiscal year beginning January 1 and ending December 31 (“Fiscal Year” or “FY”). Accordingly, the forecast reflects the Board’s judgment as of December 3, 2015, the date of this forecast, of the expected conditions and the Board’s expected course of action during each of the six fiscal years ending December 31, 2015 through December 31, 2020.

The Feasibility Evaluation has been included as a part of the Official Statement for the Board’s Sewerage System Revenue Bonds, Series 2015 (“Series 2015 Bonds”), which are being issued under the General Sewerage Service Revenue Bond Resolution (“General Bond Resolution”), adopted on May 21, 2014 as supplemented and amended by the First Supplemental Sewerage Service Revenue Bond Resolution also adopted on May 21, 2014 and the Second Supplemental Sewerage Service Revenue Bond Resolution adopted on October 21, 2015. This Feasibility Evaluation focuses on evaluating the impact of the Series 2015 Bonds, the proceeds of which (\$100 million in new money) will be used to finance various improvements to the Board’s Sewerage System. The proceeds from the Series 2015 Bonds will not be sufficient to fund all of the Board’s capital needs during the forecast period. To fund the remaining capital needs of the Sewerage System, the Board plans to annually issue additional revenue bonds and utilize cash generated from user rates and charges.

The Feasibility Evaluation is based upon cost, operating, demographic and other relevant information provided by the Board and the debt service schedules provided to the Board by its Financial Advisor, Public Financial Management, Inc. The Feasibility Evaluation is presented in conformity with the methodology for calculating debt service coverage for Indebtedness set forth in the General Bond Resolution. (The definitions of capitalized terms, not specifically provided in this document, are provided in the General Bond Resolution.)

The General Bond Resolution sets forth a three-part debt service coverage test as part of the Rate Covenant in Section 7.01. The Board shall fix, charge and collect rates, fees, and other charges

for the use of and the services furnished or to be furnished by the System, and that from time to time and as often as shall appear necessary, revise such rates, fees, and other charges so as to meet the following three independent requirements: (i) for the Tested Fiscal Year to (A) pay Annual Debt Service on Senior Debt, (B) deposit the necessary amount in any Series Debt Service Reserve Account, (C) to pay Annual Debt Service on Subordinate Debt (including reserves), (D) deposit the necessary amount(s) in the Operating Reserve Fund, and (E) pay all other amounts which the Board may by law or contract be obligated; (ii) for each Fiscal Year to generate Rate Covenant Net Revenues sufficient to at least equal 125% of the Annual Debt Service with respect to Senior Debt and 110% of the aggregate Annual Debt Service with respect to Senior Debt and Subordinate Debt; and (iii) for each Fiscal Year to generate Adjusted Rate Covenant Net Revenues (excluding transfers from the Rate Stabilization Fund to the Revenue Fund and proceeds of Grants) sufficient to at least equal 100% of the Annual Debt Service.

Forecasts of revenues and expenses are prepared on an accrual basis, and are then adjusted to be consistent with the Board's budgeting process, and the specific requirements of the coverage tests identified in the General Bond Resolution. Compliance with the Rate Covenant is demonstrated on the Forecast Statement under the headings Senior Debt Service Coverage and Total Debt Service Coverage. Since the ratios calculated using Rate Covenant Net Revenues are greater than 1.25 for Senior Debt and 1.10 for Total Debt in each year of the Forecast Statement, the requirements under the first and second parts of the test related to Indebtedness are met. Once adjusted for transfers from the Rate Stabilization Fund and proceeds of Grants, the total debt service coverage on Adjusted Rate Covenant Net Revenues is well above 1.00, satisfying the third part of the test.

The assumptions disclosed herein are those that the Board believes are significant to the Forecast Statement. There will usually be differences between forecasted and actual results because events and circumstances frequently do not occur as expected, and those differences may be material.

## 2. Background

### Overview of Service Area

According to the Census Bureau, the estimated 2014 population of New Orleans is 384,320. The population has increased from an estimate of 208,548 in 2006 following Hurricane Katrina. Over the last four years, the population has increased 3.7%, 2.4%, 2.6%, and 1.5%. Prior to Hurricane Katrina the population was approximately 455,000. Therefore, the City anticipates additional growth in future years.

### Governance

SWBNO was created in 1899 by Louisiana State Statutes and established as a “special board” operating independently of the government of the City of New Orleans. Even though SWBNO is a political subdivision of the State of Louisiana, SWBNO must obtain approval by the Board of Liquidation, City Debt and the New Orleans City Council to issue debt, modify millages, or increase rates and charges.

The Board of Directors includes 11 members – the Mayor of New Orleans, who serves as the President of the Board of Directors; two representatives of the Board of Liquidation, City Debt of the City of New Orleans; and eight appointees of the Mayor. The length of terms is four years, with a limit of two terms. The Mayor’s appointees are selected by the Mayor from a list of three names per position that is provided by a ten member selection committee of community leaders. At least one appointee is from each of the City’s five council districts, and the Board, as a whole, attempts to reflect the racial and gender composition of the City.

The Board recently directed staff to develop recommendations for Board committees. Staff has recommended that the Board replace the existing committees: Operations; Finance; Infrastructure and Executive, with the four committees. These committees and their roles are listed below.

- Audit – monitor internal and external compliance and controls efforts
- Governance – provide orientation and training to new Board members and drive Board performance improvement
- Finance and Administration – monitor financial performance for alignment with Board objectives
- Strategy – establish long-term objectives, identify risks, set strategy, and lead planning efforts

One of the primary objectives of the recommended structure is to foster strategic leadership by the Board while delegating operational responsibility and authority to the Executive Director.

The current organizational structure of the Board is included in Exhibit 1. This organizational structure has undergone a top-down restructuring. There are five additional Deputy Directors/Superintendents with oversight over the following areas.

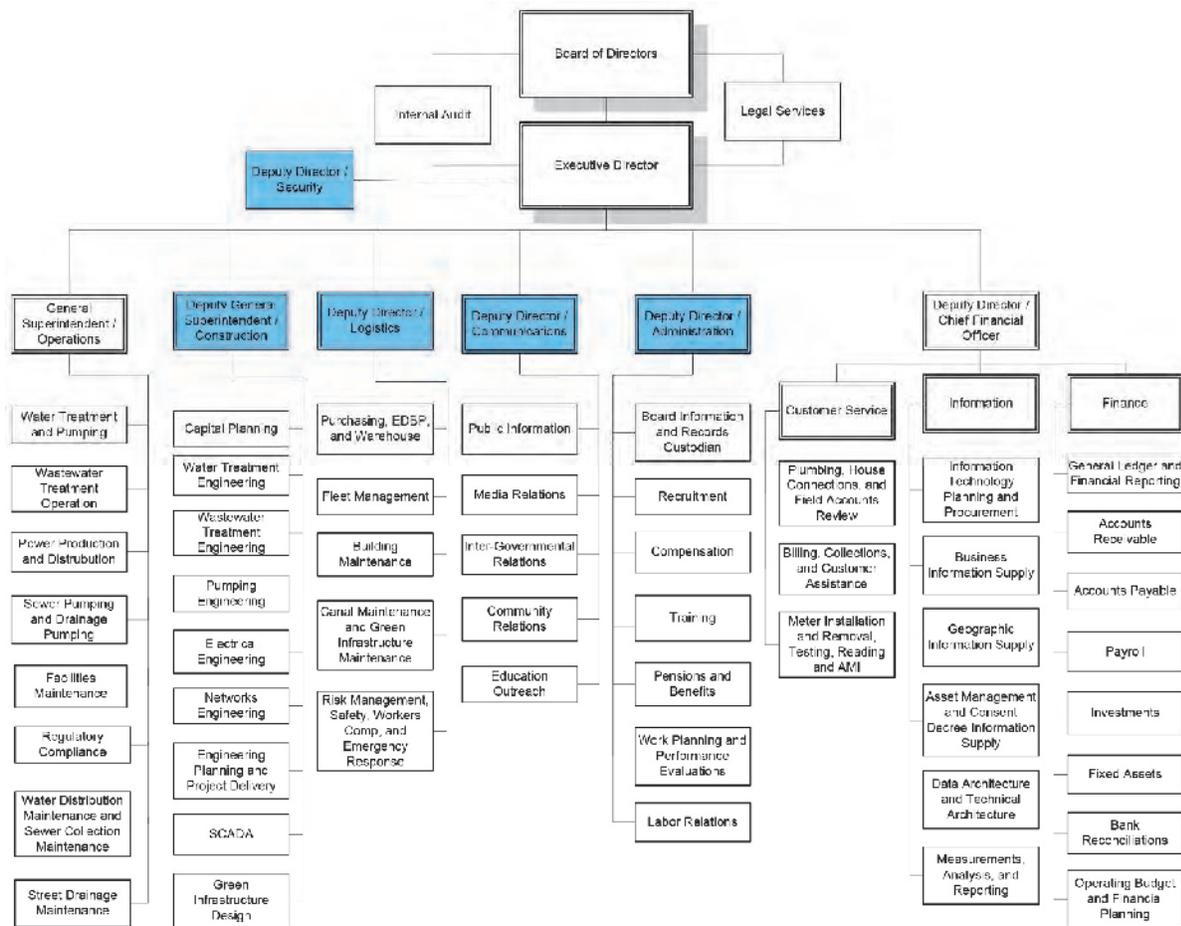
- Security

- Construction
- Logistics
- Communications
- Administration

The General Superintendent position remained and continues to be responsible for overseeing operations. The existing Deputy Director position also remained and continues to be responsible for financial matters, serving as the Chief Financial Officer (“CFO”) of the organization.

**Exhibit 1**

 SWBNO Organizational Chart as of August 2015



### *Sewerage System*

The flat New Orleans topography has required a robust system for sewage collection and disposal. The Sewerage System of the City is a gravity collection system, consisting of 1,536 miles of lateral and trunk sewers, ranging in size from 8 inches to 72 inches in diameter. Lifting and conveying the sewage by trunk sewers and sewer force mains requires 83 pumping and lift stations.

The Board has two sewage treatment plants, one on the east bank and one in Algiers, with a combined treatment capacity of 162 million gallons per day. The plants are currently operated by a large private contract operator. Both plants were built in the 1970s and have been upgraded, modernized, and expanded to increase capacity and to keep up with the growth of the City. The plants discharge treated wastewater into the Mississippi River.

The Board began a major rehabilitation and capacity upgrade of its aging sewage collection system in 1996. Like most of the nation's major metropolitan areas, New Orleans' underground water and sewer systems are at least 40 years old and, in some cases, over 100 years old. Factors common to this area, such as unstable soil conditions and large numbers of tree roots, contribute to a higher-than-normal number of breaks and deterioration of the sewer pipes.

### *Sewerage System Projects*

There is one major project that is currently underway or planned that will rehabilitate and update the Board's Sewerage System, the Sewer System Evaluation and Rehabilitation Program (SSERP);

#### **Sewer System Evaluation and Rehabilitation Program (SSERP)**

The Board has undertaken a multi-year program, the SSERP, to identify and address structural and mechanical deficiencies in the wastewater collection system. The SSERP, underway since 1996, is part of the EPA Consent Decree the Board signed in 1998. With the implementation of repairs identified and completed in the SSERP, the Board will not only be in compliance with federal regulations, but will also be accomplishing its goals of protecting the environment and increasing the sustainability of the Sewerage System.

Hurricane Katrina also caused extensive damage to the sewer collection system. As evidenced by the extent of damage in the areas where SSERP repairs had not yet been completed, it is clear that the work completed under the SSERP is greatly improving the resiliency and dependability of the Sewerage System. Work under the SSERP was interrupted following the storm, and the Board invoked Force Majeure with respect to its obligations under the Consent Decree. On March 22, 2010, the Board entered into a Modified Consent Decree that maintained the same basic structure of the original 1998 Decree. Subsequently, the Board has entered into a Second Modified Consent Decree and a Third Modified Consent Decree due to the ongoing impact caused by Hurricane Katrina. The completion dates identified in the Third Modified Consent Decree for the five basins range from March 31, 2018 to October 31, 2025.

### 3. Demand for Services

The Board provides sewerage service to all of the residential, commercial, and industrial customers within the City and Orleans Parish. As mentioned above, some of the population lost following Hurricane Katrina has returned, but the City is still 16% below its pre-Katrina population level. The City expects to continue to grow, and the forecast assumes a moderate level of growth in customers (2% annually) throughout the forecast period. However, like most utilities across the country, the Board is seeing declining per capita consumption. In addition, the Board anticipates there being some price elasticity impact due to the annual rate increases. Therefore, the forecast includes a resistance factor, which dampens the growth in sewerage sales. The resistance factor is 1% for the forecast period. As an example, the following equation is used to forecast sewerage sales for 2016.

2016 projected sales = 2015 estimated actual sales \* (1 + account growth factor) \* (1 – resistance factor)

Exhibit 2 presents the projected number of sewerage accounts and sewerage sales by customer class. Residential customers account for over 85% of total sewerage accounts of the Sewerage System.

#### Exhibit 2

#### Sewerage Account and Sales Projections

	Fiscal Year					
	2015	2016	2017	2018	2019	2020
<b>Residential</b>						
Customers	112,811	115,067	117,368	119,715	122,109	124,551
Sales (1,000,000 gal)	5,321	5,373	5,426	5,479	5,533	5,587
Sales per Customer (1,000 gal)	47	47	46	46	45	45
<b>Multi-Family</b>						
Customers	4,604	4,696	4,790	4,886	4,984	5,084
Sales (1,000,000 gal)	587	593	598	604	610	616
Sales per Customer (1,000 gal)	127	126	125	124	122	121
<b>Commercial</b>						
Customers	10,364	10,571	10,782	10,998	11,218	11,442
Sales (1,000,000 gal)	5,263	5,314	5,367	5,419	5,472	5,526
Sales per Customer (1,000 gal)	508	503	498	493	488	483
<b>Industrial</b>						
Customers	29	29	29	29	29	29
Sales (1,000,000 gal)	47	46	46	45	45	44
Sales per Customer (1,000 gal)	1,611	1,595	1,579	1,563	1,548	1,532
<b>Total</b>						
<b>Customers</b>	<b>127,808</b>	<b>130,363</b>	<b>132,969</b>	<b>135,628</b>	<b>138,340</b>	<b>141,106</b>
<b>Sales (1,000,000 gal)</b>	<b>11,217</b>	<b>11,326</b>	<b>11,436</b>	<b>11,548</b>	<b>11,660</b>	<b>11,773</b>

The Board has a diverse customer base, with the Board's ten largest customers accounting for only approximately 4.88% of annual sewerage revenues in FY 2014. The two largest customers of the Board (on an annual revenue basis) are Tulane University and the University of New Orleans. These customers are highly stable and do not present a risk of significant decrease in

consumption during the forecast period. Exhibit 3 shows the largest customers of the Sewerage System by revenues.

**Exhibit 3**

**////// Largest Sewerage System Customers by Revenue**

Customer's Name	Type of Business	Number of Accounts	Gallons Used	2014 Sewerage Revenue	% of Sewer Revenue
Tulane University	University	57	127,348,800	\$ 778,274	0.90%
UNO	University	6	108,228,000	589,307	0.68%
Triangle Real Estate (1)	Housing	8	99,631,200	547,561	0.63%
Hyatt Regency Hotel	Hotel	2	80,731,200	437,007	0.50%
LSU Medical	Hospital	17	65,631,600	412,560	0.48%
Tulane Medical	Hospital	4	68,295,600	338,695	0.39%
HANO	Housing	159	44,935,200	288,082	0.33%
Xavier University	University	20	42,829,200	283,057	0.33%
Ritz Carlton Hotel	Hotel	3	55,405,200	276,327	0.32%
N.O. Exhibition Authority	Government	4	54,242,400	275,120	0.32%
<b>TOTAL</b>				<b>\$ 4,225,990</b>	<b>4.88%</b>

(1) Triangle Real Estate is real estate investment firm that owns five large apartment complexes in East New Orleans.

#### 4. Rates and Charges

Each of the Board's three systems (water, sewerage, and drainage) operates as a distinct business enterprise. Appropriate fees and charges have been established to ensure that the Sewerage System can operate on a self-sustaining basis.

The Board initiated a comprehensive water and sewerage rate study in 2010. Over the next two and a half years, the Board worked diligently to identify an appropriate set of rate increases for implementation. Originally a five-year program of rate increases was contemplated, but later it evolved into an eight-year program of annual 10% sewerage rate increases, with the rate increases being applied across-the-board to the monthly base charges and the volumetric charge. The initial increase was implemented on January 1, 2013, so the Board is currently in the third year of the eight-year program.

##### Current Charges

The Board employs a sewerage rate structure with two components: a monthly service charge and a volumetric rate based on water consumed. The monthly service charge increases based on a customer's meter size. The volumetric rate is assessed as a uniform per thousand gallons rate for all customers. To recognize that a portion of the water used is not discharged to the Sewerage System, residential customers are assessed the volumetric charge based on 85% of water consumed, while non-residential customers are assessed the volumetric charge on 100% of water consumed.

##### Forecast Charges

The rates and charges forecast for 2016 through 2020 assume the approved annual 10% rate increases will be implemented. Even though the rates and charges will increase 61% during the five-year forecast period, we believe they will remain reasonable and relatively affordable with respect to peer utilities. See Explanatory Note 12 for an additional discussion on affordability of rates.

Exhibit 4 shows the Board's 2014, current, and forecast sewerage rates.

**Exhibit 4**

**Current and Projected Monthly Sewerage Rates and Charges**

	Fiscal Year						
	2014	2015	2016	2017	2018	2019	2020
Fixed Charge							
<u>Meter Size</u>							
5/8-inch	\$ 14.04	\$ 15.44	\$ 16.98	\$ 18.68	\$ 20.55	\$ 22.61	\$ 24.87
3/4-inch	19.97	21.97	24.17	26.59	29.25	32.18	35.40
1-inch	28.44	31.28	34.41	37.85	41.64	45.80	50.38
1-1/2-inch	52.34	57.57	63.33	69.66	76.63	84.29	92.72
2-inch	76.54	84.19	92.61	101.87	112.06	123.27	135.60
3-inch	181.50	199.65	219.62	241.58	265.74	292.31	321.54
4-inch	302.50	332.75	366.03	402.63	442.89	487.18	535.90
6-inch	605.00	665.50	732.05	805.26	885.79	974.37	1,071.81
8-inch	907.50	998.25	1,098.08	1,207.89	1,328.68	1,461.55	1,607.71
10-inch	1,210.00	1,331.00	1,464.10	1,610.51	1,771.56	1,948.72	2,143.59
12-inch	1,391.50	1,530.65	1,683.72	1,852.09	2,037.30	2,241.03	2,465.13
16-inch	1,875.50	2,063.05	2,269.36	2,496.30	2,745.93	3,020.52	3,322.57
Volumetric Rates							
All Usage	\$ 4.88	\$ 5.37	\$ 5.91	\$ 6.50	\$ 7.15	\$ 7.87	\$ 8.66
Approved Rate Increases	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%

Exhibit 5 shows the 2014, current, and projected sewerage costs for a residential customer having a 5/8” meter and that uses 5,300 gallons of water per month (the typical residential meter size and median residential monthly usage).

**Exhibit 5**

**Residential Customer Bills, FY 2014 to FY 2020 (Usage of 5,300 gallons per month)**

	<u>Monthly Service Charge</u>	<u>Volumetric Charge</u>	<u>Total Sewerage Bill</u>	<u>% Change</u>
FY 2014	\$ 14.04	\$ 21.98	\$ 36.02	N/A
FY 2015	15.44	24.19	39.63	10.0 %
FY 2016	16.98	26.62	43.60	10.0 %
FY 2017	18.68	29.28	47.96	10.0 %
FY 2018	20.55	32.21	52.76	10.0 %
FY 2019	22.61	35.45	58.06	10.0 %
FY 2020	24.87	39.01	63.88	10.0 %

**5. Revenues**

In order to meet the financial obligations of the Series 2015 Bonds, other debt service obligations and other sewerage expenses, sewerage revenue requirements must be recovered exclusively from revenues associated with the Sewerage System. Revenues, as defined in the General Bond Resolution, include operating revenues (charges for services and other operating revenues) and non-operating revenues as identified in this Feasibility Evaluation.

Exhibit 6 shows the projection of operating and non-operating revenues during the forecast period. The 2015 projection is based on actual results through August. Operating revenues are primarily comprised of revenues from user rates and charges. These revenues have increased due to the rate increases as well as field account reviews and appropriate billing of the school system. These last two revenue enhancements were included as “Additional Revenue” in the Feasibility Report for the 2014 bond issue, but have been incorporated into the Sewer Sales line item for this analysis. In addition, there are revenues from plumbing inspection and license fees and other revenues.

Overall, total operating revenues are forecast to increase at an average compound rate of 10.7% per year over the forecast period, which is driven by projected rate increases and expectations for 2% growth in customers. The Board has a high collection rate and this is expected to continue through the forecast period, so no impact from collections has been assumed in the Feasibility Evaluation.

Regarding non-operating revenues, at this point the Board does not anticipate receiving any FEMA reimbursements for point repairs that are necessary due to the effects of Hurricane Katrina during the forecast period.

**Exhibit 6**

 **Estimated Annual Sewerage Revenues**

	Fiscal Year					
	2015	2016	2017	2018	2019	2020
<b>Operating Revenues</b>						
Sewer Sales and Delinquent Fees	\$ 94,729,026	\$ 104,824,535	\$ 116,436,997	\$ 129,335,888	\$ 143,663,717	\$ 159,578,784
Plumbing Inspection & License Fees	299,729	326,081	326,081	326,081	326,081	326,081
Other Revenue	428,190	597,321	597,321	597,321	597,321	597,321
Additional Revenue	-	-	-	-	-	-
<b>Total Operating Revenues</b>	<b>\$ 95,456,945</b>	<b>\$ 105,747,937</b>	<b>\$ 117,360,399</b>	<b>\$ 130,259,290</b>	<b>\$ 144,587,119</b>	<b>\$ 160,502,186</b>
<b>Non-Operating Revenues</b>						
Non-Operating Revenue	\$ 470,944	\$ 462,061	\$ 462,061	\$ 462,061	\$ 462,061	\$ 462,061
FEMA O&M Expense Reimbursement	-	-	-	-	-	-
<b>Total Non-Operating Revenues</b>	<b>\$ 470,944</b>	<b>\$ 462,061</b>				
<b>Total Revenues</b>	<b>\$ 95,927,889</b>	<b>\$ 106,209,998</b>	<b>\$ 117,822,460</b>	<b>\$ 130,721,350</b>	<b>\$ 145,049,180</b>	<b>\$ 160,964,247</b>

## 6. Operating and Non-operating Costs

Expenditures are categorized as operating expenses, non-operating expenses, or other budgeted expenditures and transfers. Exhibit 7 shows a combined forecast of operating and non-operating expenses for the Sewerage System. Operating expenses represent normal recurring expenses incurred during the Board's annual accounting cycle based upon its fiscal year ending December 31<sup>st</sup>. Even though actual operating expenses through August are approximately 6% below budget, projected operating expenses are based on budget information from the FY 2015 sewerage budget to be conservative. Escalation rates differ for each budget line item, but overall the costs are escalated by an average growth rate of 3.2%.

The Board recognizes that its current operating costs are too low to allow it to efficiently and sustainably run the Sewerage System. As a result, the Board is anticipating increases in operations and maintenance ("O&M") expenses to reach spending levels consistent with national standards for O&M expenses. At the same time, the Board anticipates gaining some efficiencies as it spends more on operations and maintenance. Together, these are accounted for in the Incremental O&M line item. These costs have been incorporated into the other budget line items for FY 2015, so there are no costs for this specific line item in FY 2015. The projects identified in the CIP are not expected to increase the operating costs of the Sewerage System. In fact, the improvements are more likely to reduce costs, but no reduction in costs has been included in the Forecast. Overall, the compounded annual O&M expense increase is 5.1% for the forecast period. These increases in operating expenses should allow the Board to operate the Sewerage System in a sustainable manner through the forecast period and beyond.

Non-operating expenses include pay-as-you-go or PAYGO capital, also known as revenue-funded capital, and repayments. The level of revenue-funded capital is projected to vary over the forecast period. The initial amount of \$14,000,000 in FY 2015 will decrease to \$8,000,000 in 2016 and then increase to \$25,000,000 by FY 2020, and in total, will fund approximately 21% of the Board-funded portion of the five-year capital plan. The revenue funded capital spending generates revenue to support the Board's debt service coverage ratios at an increasing level, as shown on the Forecast Statement. The Sewerage System anticipates making payments to the City's Department of Public Works and to claimants during the forecast period for expenses accrued in previous years. These expenses are currently accounted for in accounts payable, which will be reduced through the cash payments. Debt service obligations are not included in non-operating costs.

**Exhibit 7**

**Operating and Non-Operating Expenses**

	Fiscal Year					
	2015	2016	2017	2018	2019	2020
<b>Operating and Maintenance</b>						
Executive Director	\$ 2,002,770	\$ 2,064,710	\$ 2,128,601	\$ 2,194,506	\$ 2,262,491	\$ 2,332,623
Gen Administrative	1,814,644	1,871,983	1,931,188	1,992,320	2,055,447	2,120,635
Management Services Director	-	-	-	-	-	-
Personnel	702,961	725,710	749,224	773,530	798,658	824,635
Finance	795,111	820,691	847,125	874,442	902,675	931,854
Information Systems	2,170,565	2,236,167	2,303,762	2,373,410	2,445,174	2,519,120
Revenue	4,754,425	4,909,379	5,069,597	5,235,269	5,406,590	5,583,764
Purchasing	235,741	243,186	250,874	258,812	267,008	275,472
Support Services	3,735,917	3,869,044	4,007,217	4,150,641	4,299,527	4,454,099
Miscellaneous Expenses (1)	(334,042)	(344,063)	(354,385)	(365,017)	(375,967)	(387,246)
General Supt.	187,224	193,199	199,371	205,746	212,333	219,138
Operations	15,717,536	15,932,036	16,447,530	16,980,365	17,531,156	18,100,539
Facility Maintenance	2,387,891	2,464,106	2,542,837	2,624,170	2,708,195	2,795,006
Networks	16,525,664	16,770,164	17,022,935	17,284,272	17,554,482	17,833,882
Engineering	1,437,829	1,483,364	1,530,385	1,578,942	1,629,089	1,680,879
Plumbing	616,636	634,818	653,628	673,089	693,225	714,061
Payroll Related	3,117,318	3,250,073	3,388,837	3,533,892	3,685,534	3,844,071
Incremental O&M (2)	-	1,643,318	3,366,689	5,421,980	7,538,737	7,743,921
<b>Total O&amp;M Expenses</b>	<b>\$ 55,868,190</b>	<b>\$ 58,767,884</b>	<b>\$ 62,085,412</b>	<b>\$ 65,790,370</b>	<b>\$ 69,614,354</b>	<b>\$ 71,586,452</b>
<b>Non-Operating</b>						
Revenue Funded Capital	\$ 14,000,000	\$ 8,000,000	\$ 13,000,000	\$ 15,000,000	\$ 20,000,000	\$ 25,000,000
Repayments (3)	2,911,000	2,911,000	486,000	-	-	-
<b>Total Non-Operating Expenses</b>	<b>\$ 16,911,000</b>	<b>\$ 10,911,000</b>	<b>\$ 13,486,000</b>	<b>\$ 15,000,000</b>	<b>\$ 20,000,000</b>	<b>\$ 25,000,000</b>
<b>Total Costs</b>	<b>\$ 72,779,190</b>	<b>\$ 69,678,884</b>	<b>\$ 75,571,412</b>	<b>\$ 80,790,370</b>	<b>\$ 89,614,354</b>	<b>\$ 96,586,452</b>

- (1) Miscellaneous Expenses is negative because it includes a large negative overhead allocation to capital.
- (2) The Incremental O&M is a function of additional O&M to become more consistent with other sustainably run sewerage utilities and efficiency gains from the additional O&M funding. For FY 2015, it has been incorporated into the other line items.
- (3) Repayments to DPW and Claimants are the result of arrangements prior to the forecast.

## 7. Capital Expenditures and Funding Sources

The Capital Improvement Plan (“CIP”) for the Board consists of a variety of sewerage projects that are anticipated to occur over the 2016 to 2020 forecast period. Annually the Board updates a ten-year CIP and the 2016-2025 CIP has been developed for approval by the Board by the end of 2015. For the Forecast, the first five years, 2016-2020 have been used for financial planning purposes. The CIP developed by Board staff includes a comprehensive list of projects, with the projects grouped into one of three funding source categories: 1) funded by others; 2) funded by the Board; and 3) unfunded. It should be noted that many projects included in the CIP are deferrable, and the Board anticipates evaluating the project list and available capital funding each year to determine specific projects which will be undertaken. Therefore, for the Forecast, it has been assumed that the unfunded projects will be deferred.

The Board remains under a consent decree and approximately 54% of the ten-year Sewerage CIP is required as part of the consent decree. Another portion of the CIP relates to projects associated with repairing and replacing aging infrastructure. Much of the Sewerage System was built at least 75 years ago, so there is significant need to recapitalize parts of the Sewerage System. Overall, the Board’s CIP provides a comprehensive list of projects needed to upgrade and maintain the Sewerage System facilities to ensure the Board is in compliance with all federal, state, and local regulations and mandates. The Sewerage System has sufficient capacity to meet current and projected demand, so the CIP is not focused on system extensions or increased treatment capacity.

Over the five-year period, the Board anticipates spending approximately \$439 million (in 2016 dollars) on capital projects (or almost \$463 million in escalated dollars)<sup>1</sup>. The Board will be responsible for approximately \$378 million (in 2016 dollars) of the CIP, while other contributors, such as the FEMA or the Corps of Engineers, are projected to spend almost \$61 million. Exhibit 8 shows the un-escalated and escalated five-year CIP with the responsibilities of the Board. Given the comprehensive nature of the CIP, as discussed above, Board staff identified the portion of the CIP which could be deferred each year. Currently the Board anticipates deferring approximately \$122 million (in 2016 dollars) over the five-year period. Exhibit 8 also shows the original CIP and the deferred portion of the plan.

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<sup>1</sup> The CIP was prepared in 2016 dollars so costs have been escalated 3.0% annually.

**Exhibit 8**

**Five-Year CIP**

	Fiscal Year					Total
	2016	2017	2018	2019	2020	
<b>Original CIP</b>						
CIP Projects to be Funded by the Board	\$ 78,015,719	\$ 82,879,599	\$ 74,676,201	\$ 101,335,374	\$ 41,476,315	\$ 378,383,208
CIP Projects to be Funded by Others	35,030,016	8,471,936	8,383,748	8,035,000	1,035,000	60,955,700
<b>Total Capital Projects</b>	<b>\$ 113,045,735</b>	<b>\$ 91,351,535</b>	<b>\$ 83,059,949</b>	<b>\$ 109,370,374</b>	<b>\$ 42,511,315</b>	<b>\$ 439,338,908</b>
<b>Adjustments to Board-Funded CIP</b>						
CIP Projects to be Funded by the Board	\$ 78,015,719	\$ 82,879,599	\$ 74,676,201	\$ 101,335,374	\$ 41,476,315	\$ 378,383,208
Unfunded Amount Deferred	25,170,741	27,329,400	23,951,775	22,099,060	23,680,000	122,230,976
CIP Projects to be Funded by the Board - Adjusted	<b>\$ 52,844,978</b>	<b>\$ 55,550,199</b>	<b>\$ 50,724,426</b>	<b>\$ 79,236,314</b>	<b>\$ 17,796,315</b>	<b>\$ 256,152,232</b>
<b>Unescalated Adjusted CIP</b>						
CIP Projects to be Funded by the Board	\$ 52,844,978	\$ 55,550,199	\$ 50,724,426	\$ 79,236,314	\$ 17,796,315	\$ 256,152,232
CIP Projects to be Funded by Others	35,030,016	8,471,936	8,383,748	8,035,000	1,035,000	60,955,700
<b>Total Capital Projects</b>	<b>\$ 87,874,994</b>	<b>\$ 64,022,135</b>	<b>\$ 59,108,174</b>	<b>\$ 87,271,314</b>	<b>\$ 18,831,315</b>	<b>\$ 317,107,932</b>
<b>Escalated - Adjusted CIP</b>						
CIP Projects to be Funded by the Board	\$ 52,844,978	\$ 57,216,705	\$ 53,813,544	\$ 86,583,660	\$ 20,029,909	\$ 270,488,796
CIP Projects to be Funded by Others	35,030,016	8,726,094	8,894,318	8,780,061	1,164,902	62,595,391
<b>Total Capital Projects</b>	<b>\$ 87,874,994</b>	<b>\$ 65,942,799</b>	<b>\$ 62,707,862</b>	<b>\$ 95,363,721</b>	<b>\$ 21,194,811</b>	<b>\$ 333,084,187</b>

The Board plans to issue additional debt annually to address capital needs during the forecast period. Exhibit 9 shows the five-year capital spending plan for the Sewerage System, along with projected funding sources, and excludes capital expenditures that are planned but will be funded beyond the forecast period.

**Exhibit 9**

**Five-Year Capital Funding Projections**

	Fiscal Year				
	2016	2017	2018	2019	2020
Beginning Unspent Bond Proceeds	\$ -	\$ 41,048,044	\$ 32,831,339	\$ 30,017,796	\$ 8,434,136
<b>Sources of Funds</b>					
Current Revenue Funded Capital	\$ 8,000,000	\$ 13,000,000	\$ 15,000,000	\$ 20,000,000	\$ 25,000,000
Revenue Bond Proceeds	112,826,410	40,000,000	40,000,000	50,000,000	40,000,000
Participation by Others	35,030,016	8,726,094	8,894,318	8,780,061	1,164,902
<b>Total Sources</b>	<b>\$ 155,856,426</b>	<b>\$ 102,774,138</b>	<b>\$ 96,725,658</b>	<b>\$ 108,797,857</b>	<b>\$ 74,599,038</b>
<b>Uses of Funds</b>					
Capital Improvement Program	\$ 87,874,994	\$ 65,942,799	\$ 62,707,862	\$ 95,363,721	\$ 21,194,811
Capitalized Interest Fund	-	-	-	-	-
Reimbursement of Expended Funds	18,300,000				
Debt Issuance Costs	725,528	600,000	600,000	750,000	600,000
Debt Service Reserve Fund	7,907,860	3,400,000	3,400,000	4,250,000	3,400,000
<b>Total Uses</b>	<b>\$ 114,808,382</b>	<b>\$ 69,942,799</b>	<b>\$ 66,707,862</b>	<b>\$ 100,363,721</b>	<b>\$ 25,194,811</b>
Ending Unspent Bond Proceeds	\$ 41,048,044	\$ 32,831,339	\$ 30,017,796	\$ 8,434,136	\$ 49,404,227
Carryforward Bond Projects - Cumulative	25,170,741	52,500,141	76,451,916	98,550,976	122,230,976

The Board plans to pay for a significant portion of the projected capital needs on a PAYGO basis. The level of revenue-funded capital is projected to vary during the forecast period, but is

expected to fund approximately 21% of the Board funded/deferred five-year CIP. The revenue-funded capital will support the Board's debt service coverage ratios, as shown on the Forecast Statement.

## 8. Financing Plan

The Board has worked with its financial advisors, underwriters, consulting engineers, and qualified independent consultants (the “Financing Team”) to evaluate various financing strategies for the CIP projects funded with the Series 2015 Bonds and future revenue bonds. The Board has selected a financing plan designed to accomplish the following objectives:

- Conform with credit criteria established by rating agencies;
- Minimize debt service and related charges; and
- Provide funds as needed and in the most cost-effective manner.

The proceeds from the Series 2015 Bonds will be available in July 2015 to fund the capital projects described in Explanatory Note 7.

### Exhibit 10

#### Sources and Uses of Series 2015 Bonds

	<u>Series 2015</u>
<b>Sources</b>	
Bond Proceeds:	
Par Amount	\$ 100,000,000
Premium	12,826,410
<b>Subtotal</b>	<u>\$ 112,826,410</u>
Other Sources of Funds:	
<b>Total</b>	<u><u>\$ 112,826,410</u></u>
<b>Uses</b>	
Project Fund Deposits	
Project Fund	\$ 104,193,022
Other Fund Deposits	
Debt Service Reserve Fund	\$ 7,907,860
Delivery Date Expenses	
Cost of Issuance	\$ 605,825
Underwriter's Discount	119,703
<b>Subtotal</b>	<u>\$ 725,528</u>
<b>Total</b>	<u><u>\$ 112,826,410</u></u>

Exhibit 11 shows the debt service schedule for current Outstanding Indebtedness for the Sewerage System. The Board's Indebtedness has been classified as Senior Indebtedness or Subordinated Indebtedness, consistent with the current General Bond Resolution.

**Exhibit 11**

**Existing Long-Term Debt Service**

	Fiscal Year					
	2015	2016	2017	2018	2019	2020
<b>Senior Debt Service</b>						
Series 2011	\$ 496,653	\$ 495,673	\$ 496,664	\$ 496,607	\$ 496,513	\$ 496,380
Series 2014 (1)	15,897,950	18,042,388	19,309,825	17,642,450	16,217,450	16,234,075
<b>Total Senior Debt</b>	\$ 16,394,603	\$ 18,538,060	\$ 19,806,489	\$ 18,139,057	\$ 16,713,963	\$ 16,730,455
<b>Other Debt Service</b>						
GO Zone Repayment (2)	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582
<b>Total Other Debt</b>	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,583
<b>Total Existing Debt Service</b>	\$ 22,628,185	\$ 24,771,642	\$ 26,040,071	\$ 24,372,639	\$ 22,947,545	\$ 22,964,038

(1) There was capitalized interest through 2016 on the new money component of the 2014 issue so this debt service is net of capitalized interest.

(2) This debt service is excluded from total debt service coverage calculations.

Exhibit 12 shows the forecasted debt service beyond 2015, which includes annual issues throughout the forecast period. The assumptions used to project future debt service include:

- 30-year term;
- 5.5% interest rate;
- No capitalized interest;
- 1.5% issuance costs;
- 8.5% debt service reserve requirement; and
- Equal annual total debt service payments.

Using these assumptions, it is anticipated that the size of future bond issues during the forecast period (issued after the Series 2015 Bonds) will be as follows:

- Series 2016 Bonds – \$44,000,000
- Series 2017 Bonds – \$44,000,000
- Series 2018 Bonds – \$55,000,000
- Series 2019 Bonds – \$44,000,000
- Series 2020 Bonds – \$22,000,000

**Exhibit 12**

**Projected Debt Issuances after 2015**

	Series 2016 Bonds	Series 2017 Bonds	Series 2018 Bonds	Series 2019 Bonds	Series 2020 Bonds
Net Proceeds	\$40,000,000	\$40,000,000	\$50,000,000	\$40,000,000	\$20,000,000
Capitalized Interest	\$0	\$0	\$0	\$0	\$0
Cost of Issuance	\$600,000	\$600,000	\$750,000	\$600,000	\$300,000
Debt Service Reserve Fund	\$3,400,000	\$3,400,000	\$4,250,000	\$3,400,000	\$1,700,000
<b>Total</b>	<b>\$44,000,000</b>	<b>\$44,000,000</b>	<b>\$55,000,000</b>	<b>\$44,000,000</b>	<b>\$22,000,000</b>

	Principal	Interest	Total	Grand Total												
2016	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0
2017	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0
2018	676,093	2,351,344	3,027,437	--	--	--	--	--	--	--	--	--	--	--	--	3,027,437
2019	713,278	2,314,699	3,027,437	713,278	2,314,699	3,027,437	--	--	--	--	--	--	--	--	--	6,054,874
2020	752,508	2,274,929	3,027,437	752,508	2,274,929	3,027,437	940,635	2,843,661	3,784,296	--	--	--	--	--	--	9,839,171
2021	793,896	2,233,541	3,027,437	793,896	2,233,541	3,027,437	992,370	2,791,926	3,784,296	793,896	2,233,541	3,027,437	--	--	--	12,866,608
2022	837,560	2,189,877	3,027,437	837,560	2,189,877	3,027,437	1,046,950	2,737,346	3,784,296	837,560	2,189,877	3,027,437	418,780	1,094,938	1,513,718	14,380,326

Exhibit 13 shows the forecast debt service, which includes annual issues throughout the forecast period. Overall, these assumptions are very conservative; for example, it should be anticipated the actual debt service will have lower interest rates and will be structured to better meet the future objectives of the Board.

**Exhibit 13**

**Projected Long-Term Debt Service**

	Fiscal Year					
	2015	2016	2017	2018	2019	2020
<b>Senior Debt Service</b>						
Existing Debt	\$ 16,394,603	\$ 18,538,060	\$ 19,806,489	\$ 18,139,057	\$ 16,713,963	\$ 16,730,455
Proposed Series 2015 (1)	-	4,777,778	5,000,000	5,000,000	5,000,000	5,000,000
Projected Series 2016			3,027,437	3,027,437	3,027,437	3,027,437
Projected Series 2017				3,027,437	3,027,437	3,027,437
Projected Series 2018					3,784,296	3,784,296
Projected Series 2019						3,027,437
<b>Total Senior Debt</b>	<b>\$ 16,394,603</b>	<b>\$ 23,315,838</b>	<b>\$ 27,833,926</b>	<b>\$ 29,193,931</b>	<b>\$ 31,553,133</b>	<b>\$ 34,597,063</b>
<b>Subordinate Debt Service</b>						
None	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Subordinate Debt</b>	<b>\$ -</b>					
<b>Other Debt Service</b>						
GO Zone Repayment	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582	\$ 6,233,582
<b>Total Subordinate Debt</b>	<b>\$ 6,233,582</b>					
<b>Total Proposed Debt Service</b>	<b>\$ 22,628,185</b>	<b>\$ 29,549,420</b>	<b>\$ 34,067,508</b>	<b>\$ 35,427,513</b>	<b>\$ 37,786,715</b>	<b>\$ 40,830,645</b>

(1) Based on debt service provided by PFM on December 2, 2015.

## 9. Additional Bonds Test

As the second issue under the General Bond Resolution, the issuance of the Series 2015 Bonds is subject to the additional bonds test. Under the General Bond Resolution, the Board may issue additional bonds only if any one of two requirements, or tests, set forth in Section 4.03(h), are met. Reproduced below are the requirements for the tests.

A certificate of (A) a Qualified Independent Consultant, stating that based on the Board's financial records for a Test Period, the Board would have been able to meet the Rate Covenant in Section 7.01, taking into account (i) the maximum Annual Debt Service on the proposed Series of Additional Bonds in the current or any future Fiscal Year, (ii) the Additional Net Revenues from the rates, fees and other charges adjusted to reflect any rate increases that had not been in effect throughout the Test Period but that have been approved by the Board, the Board of Liquidation, and the City at the time of the delivery of the proposed Series of Additional Bonds to go into effect within the following five years; and (iii) additional Net Revenues that the Board may realize from the addition to the System of the assets it proposes to finance through the issuance of the proposed Series of Additional Bonds or other funding sources within the following five years or (B) the Authorized Officer of the Board stating that based on the Board's financial records for a Test Period, the Board would have been able to meet the Rate Covenant in Section 7.01, taking into account the maximum annual Debt Service on the proposed Series of Additional Bonds. In making the certifications required under this paragraph, the Qualified Independent Consultant, as applicable, shall determine and utilize the Additional Indebtedness Test Net Revenues in place of the Rate Covenant Net Revenues in determining whether the Board would have been able to meet the Rate Covenant in Section 7.01.

Both tests are based on a historical Test Period, which is a consecutive 12-month period within the 24 months prior to the issuance of the bonds. Test A allows for adjustments based on approved rate increases for up to five years and based on additional revenues from assets financed through the additional bonds, while Test B allows for no adjustments to revenues. Exhibit 14 shows the Senior Debt service by year including the Series 2015 Bonds with the Maximum Annual Debt Service highlighted. Exhibit 15 shows that the Board is able to pass both Test A and Test B. The adjustments included in Test A are five 10% rate increases, one of which was implemented January 1, 2015 and four are approved for implementation on January 1 of each year, 2016 through 2019.

**Exhibit 14**

**Maximum Annual Debt Service (1)**

Year	Amount	Year	Amount	Year	Amount
2015	\$ 16,394,603	2025	\$ 12,162,588	2035	\$ 12,161,625
2016	\$ 23,315,838	2026	\$ 12,162,218	2036	\$ 12,162,625
<b>2017</b>	<b>\$ 24,806,489</b>	2027	\$ 12,162,060	2037	\$ 12,164,625
2018	\$ 23,139,057	2028	\$ 12,164,480	2038	\$ 12,161,750
2019	\$ 21,713,963	2029	\$ 12,165,861	2039	\$ 12,163,000
2020	\$ 21,730,455	2030	\$ 12,163,376	2040	\$ 12,162,250
2021	\$ 20,552,535	2031	\$ 12,164,304	2041	\$ 12,163,375
2022	\$ 18,434,951	2032	\$ 12,162,258	2042	\$ 12,165,125
2023	\$ 14,525,580	2033	\$ 12,164,913	2043	\$ 12,166,250
2024	\$ 14,074,295	2034	\$ 12,161,738	2044	\$ 12,165,500

(1) There is no subordinate debt in 2017, so this debt service is the maximum Senior Debt Service and Maximum Total Debt Service.

**Exhibit 15**

**Additional Bonds Test**

	Adjusted Actual (1) - Test A	Actual (FY 14) - Test B
Sewerage Service Charges	\$ 139,394,894	\$ 86,553,262
Other Operating Revenue	1,245,296	1,245,296
	\$ 140,640,190	\$ 87,798,558
Total O&M	\$ 63,273,567	
Less: Depreciation	15,005,720	
Net O&M	\$ 48,267,847	\$ 48,267,847
Additional Indebtedness Test Net Revenues	\$ 92,372,343	\$ 39,530,711
Maximum Annual Senior Debt Service	\$ 24,806,489	\$ 24,806,489
Maximum Annual Total Debt Service	\$ 24,806,489	\$ 24,806,489
<b>Maximum Annual Senior Debt Service Coverage</b>	<b>3.72</b>	<b>1.59</b>
<b>Required</b>	<b>1.25</b>	<b>1.25</b>
<b>Maximum Annual Total Debt Service Coverage</b>	<b>3.72</b>	<b>1.59</b>
<b>Required</b>	<b>1.10</b>	<b>1.10</b>
<b>Pass (Yes/No)</b>	<b>Yes</b>	<b>Yes</b>

(1) Assumes five approved 10% rate increases.

**10. Fund Balances**

The Board was able to provide the services necessary to allow for residents to return following Hurricane Katrina because it had strong financial reserves when Hurricane Katrina struck the City. Therefore, the Board understands the importance of maintaining appropriate levels of operating and capital reserves. The General Bond Resolution requires an Operating Reserve of 90 days of annual operating expenses (90 days cash on hand). However, the Board has set a target of having at least 180 days cash on hand between the Operating Fund and the Rate Stabilization Fund. As can be seen in Exhibit 16, the Board is materially in excess of this target in each year of the forecast period.

**Exhibit 16**

**Fund Balances**

Available Fund Balances	Fiscal Year					
	Initial	2016	2017	2018	2019	2020
<b>Beginning Unrestricted Balance (1)</b>	\$ 43,500,000	\$ 29,009,289	\$ 35,990,983	\$ 43,356,502	\$ 56,946,418	\$ 73,651,629
<b>Sources</b>						
Operating Revenues		\$ 105,747,937	\$ 117,360,399	\$ 130,259,290	\$ 144,587,119	\$ 160,502,186
Non-Operating Revenues		462,061	462,061	462,061	462,061	462,061
<b>Total Sources</b>		<b>\$ 106,209,998</b>	<b>\$ 117,822,460</b>	<b>\$ 130,721,350</b>	<b>\$ 145,049,180</b>	<b>\$ 160,964,247</b>
<b>Uses</b>						
Operating Expenses		\$ 58,767,884	\$ 62,085,412	\$ 65,790,370	\$ 69,614,354	\$ 71,586,452
Transfer to Operating Reserve Fund (2)	14,490,711	-	818,021	913,551	942,900	486,271
Transfer to Rate Stabilization Fund		-	-	-	-	-
Repayments		2,911,000	486,000	-	-	-
Debt Service		29,549,420	34,067,508	35,427,513	37,786,715	40,830,645
Revenue Funded Capital		8,000,000	13,000,000	15,000,000	20,000,000	25,000,000
<b>Total Uses</b>	<b>\$ 14,490,711</b>	<b>\$ 99,228,304</b>	<b>\$ 110,456,941</b>	<b>\$ 117,131,435</b>	<b>\$ 128,343,969</b>	<b>\$ 137,903,368</b>
<b>Remaining Unrestricted Funds for Tra</b>	<b>\$ 29,009,289</b>	<b>\$ 6,981,694</b>	<b>\$ 7,365,519</b>	<b>\$ 13,589,916</b>	<b>\$ 16,705,211</b>	<b>\$ 23,060,879</b>
<b>Total Available Funds - End of Year Balances</b>						
Remaining Unrestricted Funds	\$ 29,009,289	\$ 35,990,983	\$ 43,356,502	\$ 56,946,418	\$ 73,651,629	\$ 96,712,507
Operating Reserve Fund	14,490,711	14,490,711	15,308,732	16,222,283	17,165,183	17,651,454
Rate Stabilization Fund		-	-	-	-	-
<b>Total</b>	<b>\$ 43,500,000</b>	<b>\$ 50,481,694</b>	<b>\$ 58,665,234</b>	<b>\$ 73,168,701</b>	<b>\$ 90,816,812</b>	<b>\$ 114,363,961</b>
<i>Days of Cash on Hand (3)</i>	284	314	345	406	476	583

(1) The beginning balance for 2016 is estimated undesignated and designated unrestricted cash and cash equivalents as well as customer deposits.

(2) 90 days of O&M expenses as required in the General Sewerage Service Revenue Bond Resolution.

(3) The Board has an internal target of 180 days.

**11. Bill Comparisons**

One of the key objectives of the Board is to maintain rates and charges at a sufficient level to provide revenues to recover existing operating costs and capital costs associated with the issuance of the Series 2015 Bonds and future bonds. The Board’s current rates became effective January 1, 2015 and include the third of the approved eight annual 10% rate increases. The Feasibility Evaluation assumes the remaining five annual approved rate increases will be implemented through 2020. Although the Board and City Council have taken steps to address the need to set rates and charges at a level sufficient to address total System revenue requirements, the Board also considers objectives to maintain rates that are reasonably affordable and provide a competitive cost environment relative to other utilities. Exhibit 17 shows a comparison of wastewater costs with other peer communities. The cost comparison is based upon a projected monthly bill for a residential customer with a 5/8” meter (some utilities listed use a 3/4” meters for residential customers) and 5,300 gallons of water usage and a non-residential customer with a 2” meter and 374,000 gallons of water usage.

As shown, the annual wastewater bill for a residential customer using 5,300 gallons of water per month is \$39.63, or \$475.58 per year. Orleans Parish has an estimated median household income (“MHI”) of \$39,849 based on an assumed median household income of \$36,681 in 2012 escalated 2.8% annually. The ratio of annual wastewater costs for a typical residential customer to MHI is approximately 1.19%. This percentage falls well below the industry’s most commonly used affordability metric, the guideline of 2.00% as identified by the EPA’s Financial Capability Assessment publication.<sup>2</sup>

**Exhibit 17**

**Comparison of Sewerage Bills with Other Representative Communities, November 2015**

City	Monthly Bill (5,300 gallons/month)	Monthly Bill (374,000 gallons/month)
Atlanta	\$ 92.54	\$ 7,827.71
Birmingham	\$ 67.09	\$ 4,630.64
St. Louis	\$ 40.72	\$ 1,623.25
<b>New Orleans</b>	<b>\$ 39.63</b>	<b>\$ 2,092.57</b>
Mobile	\$ 38.63	\$ 2,586.35
Little Rock	\$ 35.28	\$ 2,489.90
Dallas	\$ 32.14	\$ 1,504.90
Houston	\$ 31.54	\$ 2,180.79
Nashville	\$ 31.32	\$ 2,217.09
Jackson	\$ 31.29	\$ 2,212.65
Baton Rouge	\$ 29.86	\$ 1,760.32
Memphis	\$ 12.02	\$ 847.86

<sup>2</sup> Combined Sewer Overflows: Guidance for Financial Capability Assessment and Schedule Development (Environmental Protection Agency, March 1997) page 19.

During the forecast period, the monthly sewerage bill for a typical customer will increase from \$39.63 to \$63.88. We anticipate the bills for the representative communities will also increase during this period.

## 12. Current Issues

There are three issues which the Board is particularly focused on evaluating and managing to the best of its ability. These issues include: 1) affordability of sewerage service; 2) stresses to net revenues, particularly related to declining per capita consumption; and 3) addressing the remaining capital plan after the forecast period. The following paragraphs discuss some of the analyses and planning associated with these issues.

### *Affordability*

Historically, sewerage rates nationally have been very low, so the affordability of sewerage service has not been a concern. In recent years, sewerage rates have been increasing as regulatory requirements and the need to repair and replace aging infrastructure have required increasing capital investments. Between 2004 and 2014, sewer rates nationally increased 6.1% annually, while the CPI only increased 2.4% annually.<sup>3</sup> This trend is expected to continue, meaning that affordability concerns are going to increase. As part of the Feasibility Evaluation, we calculated the customer impacts relative to median household income, which is typically used as a high-level test of affordability.

Exhibit 18 shows that even with the eight-year program of rate increases the sewerage rates will remain below 2.0% of projected median household income and just exceed 2.0% of median household effective buying income. This analysis indicates that the cost of sewerage service in New Orleans will remain affordable, based on a commonly used test, even with the approved rate increases.

### **Exhibit 18**

#### Forecast Affordability Ratios

	2015	2016	2017	2018	2019	2020	2021	2022
Median Household Income	\$ 39,849	\$ 40,965	\$ 42,112	\$ 43,291	\$ 44,503	\$ 45,749	\$ 47,030	\$ 48,347
Median Household Effective Buying Income	\$ 31,098	\$ 31,969	\$ 32,864	\$ 33,784	\$ 34,730	\$ 35,702	\$ 36,702	\$ 37,730
Average Monthly Bill								
Water	\$ 30.27	\$ 33.29	\$ 36.62	\$ 40.30	\$ 44.34	\$ 48.79	\$ 48.79	\$ 48.79
Sewer	\$ 39.63	\$ 43.60	\$ 47.96	\$ 52.76	\$ 58.06	\$ 63.88	\$ 63.88	\$ 63.88
Combined	\$ 69.90	\$ 76.90	\$ 84.59	\$ 93.06	\$ 102.41	\$ 112.67	\$ 112.67	\$ 112.67
% of MHI								
Water	0.91%	0.98%	1.04%	1.12%	1.20%	1.28%	1.24%	1.21%
Sewer	1.19%	1.28%	1.37%	1.46%	1.57%	1.68%	1.63%	1.59%
Combined	2.10%	2.25%	2.41%	2.58%	2.76%	2.96%	2.87%	2.80%
% of MHHEBI								
Water	1.17%	1.25%	1.34%	1.43%	1.53%	1.64%	1.60%	1.55%
Sewer	1.53%	1.64%	1.75%	1.87%	2.01%	2.15%	2.09%	2.03%
Combined	2.70%	2.89%	3.09%	3.31%	3.54%	3.79%	3.68%	3.58%

Even though this analysis indicates the Board's rates are affordable in general, the Board recognizes that a portion of its customer base may be impacted more significantly by the increases in sewerage rates and charges. As such, the Board is evaluating mechanisms that could help ensure sewerage service remains affordable to its low-income customers.

<sup>3</sup> AWWA & Raftelis Financial Consultants, Inc. 2014 Water and Wastewater Rate Survey.

**Net Revenue Impacts**

There are two ways that Net Revenues could be materially lower than projected in the Feasibility Evaluation: 1) revenues are lower than expected; or 2) operating expenses are higher than expected. The Board has examined these risks and believes the risk of lower revenues is of greater concern and has modeled different scenarios assuming lower revenues. While the Board has some control over operating expenses, it does not have control over the amount of water used by its customers, which is the basis for billing for sewerage service. The water industry is being impacted by the trend of declining per capita consumption. Efforts to promote conservation and efficient water use have sensitized customers. Perhaps more importantly, the evolution of more water efficient fixtures and appliances has also impacted per capita demand.

Since the volumetric component of the sewerage bill is based on water usage, the decline in water usage will impact revenues for the Sewerage System. The Feasibility Evaluation does incorporate some level of declining per capita demand by applying a resistance factor. As mentioned in Explanatory Note 3, the resistance factor is 1.0% for the forecast period. If demand is more negatively impacted than expected, this will affect the Sewerage System’s revenue stream. To evaluate the potential impact, we increased the resistance factor by 2.0% each of the first three years and 1.0% in the last three years of the forecast period. Therefore, the resistance factor is assumed to be 3.0% in 2016, 2017, and 2018, and 2.0% for the remainder of the forecast period. The increase in the resistance factor was ramped down after three years because there will likely be some demand hardening and each reduction propagates through the remainder of the forecast. Even though this stress test focuses on declining consumption, it shows the impact of lower Net Revenues, which could also be attributable to other factors. Exhibit 19 shows the impact of the increased resistance factor on coverage. Even though it would lower coverage, the Sewerage System revenues would easily satisfy the rate covenant.

**Exhibit 19**

**Debt Service Coverage under Stress Test for Declining Consumption**

	Fiscal Year					
	2015	2016	2017	2018	2019	2020
Forecast Debt Service Coverage	2.39	1.99	1.96	2.18	2.35	2.54
Stress Test Debt Service Coverage	2.39	1.90	1.80	1.92	2.03	2.18

**Capital Plan after 2020**

The Feasibility Evaluation has considered a five-year forecast, FY 2016 through FY 2020. Even though the capital improvements identified and funded during this period will help the Board become a more sustainable utility, there are additional projects that have been identified beginning in FY 2020 which will be critical to the Board’s long-term success. Currently, the ten-year CIP identifies approximately \$234 million (in 2016 dollars) in the five-year period from FY 2021 through FY 2025. These projects are not funded by the bond issues contemplated in this Feasibility Evaluation. Even though it is likely that the timing and size of these projects in FY 2021 and beyond will evolve over time, the Board recognizes it is possible that additional rate increases will be necessary to be able to fund the capital program after FY 2020 and anticipates beginning to further evaluate this need well in advance of FY 2021 as the timing and costs become more firm.

**APPENDIX "E"**

**GENERAL BOND RESOLUTION**

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**GENERAL SEWERAGE SERVICE  
REVENUE BOND RESOLUTION**

adopted on May 21, 2014

by the

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

---

**IN CONNECTION WITH THE ISSUANCE OF  
SEWERAGE SERVICE REVENUE BONDS  
OF THE  
CITY OF NEW ORLEANS, LOUISIANA**

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SEWERAGE AND WATER BOARD OF NEW ORLEANS

GENERAL SEWERAGE SERVICE REVENUE BOND RESOLUTION

The following resolution was offered by Dr. Beverly Wright and seconded by Kerri

Kane:

**GENERAL SEWERAGE SERVICE REVENUE BOND RESOLUTION**

A resolution authorizing the issuance from time to time of Sewerage Service Revenue Bonds of the City of New Orleans, Louisiana, providing for the general terms, form, manner of payment and security for payment of said bonds, providing for the issuance of a series of Sewerage Service Revenue and Refunding Bonds, and providing for other matters in connection therewith.

**WHEREAS**, pursuant to Part III, Chapter 9, Title 33 of the Louisiana Revised Statutes of 1950, as amended, in particular Section 4121 thereof (the "Act"), the Sewerage and Water Board of New Orleans (the "Board") in the name of the City of New Orleans, Louisiana (the "City") is authorized to issue bonds; and

**WHEREAS**, the City on behalf of the Board has previously issued and has outstanding the following bonds through its General Sewerage Service Revenue Bond resolution dated October 25, 1986 (as amended or supplemented from time to time, the "1986 Sewer Bond Resolution") and has determined not to issue any further series of bonds, including refunding bonds, pursuant to the 1986 Sewer Bond Resolution:

\$8,935,000 of outstanding Sewerage Service Revenue Bonds, Series 1997 (the "Series 1997 Bonds"), dated June 1, 1997, with a final maturity of June 1, 2017;

\$8,705,000 of outstanding Sewerage Service Revenue Bonds, Series 1998 (the "Series 1998 Bonds"), dated December 1, 1998, with a final maturity of June 1, 2018;

\$13,040,000 of outstanding Sewerage Service Revenue Bonds, Series 2000 (the "Series 2000 Bonds"), dated May 1, 2000, with a final maturity of June 1, 2020;

\$9,875,000 of outstanding Sewerage Service Revenue Bonds, Series 2000B (the "Series 2000B Bonds"), dated November 1, 2000, with a final maturity of June 1, 2020;

\$16,685,000 of outstanding Sewerage Service Revenue Bonds, Series 2001 (the "Series 2001 Bonds"), dated December 1, 2001, with a final maturity of June 1, 2021;

\$33,160,000 of outstanding Sewerage Service Revenue Bonds, Series 2002 (the "Series 2002 Bonds"), dated December 1, 2002, with a final maturity of June 1, 2022;

\$3,270,000 of outstanding Sewerage Service Revenue Bonds, Series 2003 (the "Series 2003 Bonds"), dated December 3, 2003, with a final maturity of June 1, 2023;

\$21,400,000 of outstanding Sewerage Service Revenue Bonds, Series 2004 (the "Series 2004 Bonds"), dated December 16, 2004, with a final maturity of June 1, 2024;

\$20,495,000 of outstanding Sewerage Service Revenue Refunding Bonds, Series 2009 (the "Series 2009 Bonds"), dated July 14, 2009, with a final maturity of June 1, 2029; and

\$8,589,000 of outstanding Sewerage Service Subordinate Revenue Bonds, Series 2011 (the "Series 2011 Bonds"), dated November 23, 2011, with a final maturity of November 1, 2032;

(the aforesaid Series 1997 Bonds, Series 1998 Bonds, Series 2000 Bonds, Series 2000B Bonds, Series 2001 Bonds, Series 2002 Bonds, Series 2003 Bonds, Series 2004 Bonds and Series 2009 Bonds are herein called the "Prior Bonds"); and

**WHEREAS**, the City desires to provide for the terms and conditions of, and security for, Bonds and other Indebtedness to be issued or incurred by the Board through this General Sewerage Service Revenue Bond Resolution (the "General Sewerage Service Revenue Bond Resolution") pursuant to supplemental resolutions related hereto adopted from time to time for a particular series (each a "Supplemental Resolution" and collectively the "Supplemental Resolutions," together with the General Sewerage Service Revenue Bond Resolution, as any may be amended or supplemented from time to time, herein referred to as the "Resolution"); and

**WHEREAS**, the Board has found and determined that the refunding of all or a portion of the Prior Bonds would be financially advantageous to the City and would allow for the modification of certain covenants related to the Prior Bonds, and pursuant to the provisions of Resolution Number R-034-2014, adopted on February 19, 2014, the Board authorized the issuance of not exceeding Two Hundred Million Dollars (\$200,000,000) of Sewerage Service Revenue and Refunding Bonds, Series 2014 of the City of New Orleans, Louisiana for the purpose of refunding all or a portion of the Prior Bonds and paying the costs of extensions, improvements, enlargements, betterments, alterations, renewals and replacements to the sewerage system of the City of New Orleans, Louisiana, including land, equipment and other real or personal properties (the "Project"), funding a debt service reserve fund and other reserve funds as required hereunder, and paying costs of issuance; and

**WHEREAS**, it is now the desire of the Board to adopt this General Sewerage Service Revenue Bond Resolution in order to provide for the issuance of the bonds to refund the Prior Bonds and pay Costs, and further to provide for the issuance from time to time of Additional Bonds and other Indebtedness as further provided herein;

NOW, THEREFORE, BE IT RESOLVED by the Sewerage and Water Board of New Orleans, as follows:

## ARTICLE I

### DEFINITIONS AND INTERPRETATION

SECTION 1.01. Short Title. This resolution may be hereafter cited, and is sometimes herein referred to, as the "General Sewerage Service Revenue Bond Resolution".

SECTION 1.02. Definitions. In this General Sewerage Service Revenue Bond Resolution unless a different meaning clearly appears from the context:

**"Account"** shall mean any of the various Accounts, sometimes created within a Fund, under this General Sewerage Service Revenue Bond Resolution, a Supplemental Resolution or by the Board or Board of Liquidation at their discretion as provided herein.

**"Accreted Values"** with respect to any Capital Appreciation Bonds, Capital Appreciation and Income Bonds, and Current Interest Capital Appreciation Bonds shall mean an amount equal to the Principal Amount of such Bonds (determined on the basis of the Principal Amount per \$5,000 at maturity thereof) plus the amount assuming semiannual compounding of earnings which would be produced on the investment of such Principal Amount, beginning on the dated date of such Bonds and ending at the maturity date thereof, at a yield which if produced until maturity will produce \$5,000 at maturity. As of any Valuation Date, the Accreted Value of any such Bonds shall mean the amount set forth for such date in the Supplemental Resolution and as of any date other than a Valuation Date, the sum of (a) the Accreted Value on the preceding Valuation Date and (b) the product of (i) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date, and (ii) the difference between the Accreted Values for such Valuation Dates. For purposes of consents, voting rights, Bondowner rights, or any other matter herein determined by a percentage of the aggregate Principal Amount of Bonds Outstanding, Capital Appreciation Bonds, Capital Appreciation and Income Bonds, and Current Interest Capital Appreciation Bonds shall be valued at their Accreted Values.

**"Act"** shall mean the Sewerage and Water Board Act, being Part III of Chapter 9 of Title 33 of the Revised Statutes of Louisiana, as amended.

**"Additional Bonds"** shall mean Bonds of the City issued pursuant to Section 4.03 hereof except for the initial Series of Bonds issued hereunder.

**"Additional Indebtedness Test"** means the certification requirement set forth in Section 4.03(h)(ii) or 4.03(i)(ii) for the issuance of Additional Bonds, in Section 4.04(a)(ii) for the Issuance of Other Senior Parity Indebtedness, or in Section 4.05 for Subordinate Debt.

**"Additional Indebtedness Test Net Revenues"** shall mean Net Revenues adjusted for the purpose of determining fulfillment of the Additional Indebtedness Test to exclude for the relevant Test Period any Revenues consisting of Direct Payments, Grants, proceeds of any business interruption insurance, and investment income earned on the Construction Fund and Rate Stabilization Fund.

**"Alternate Variable Rate Tax-Exempt Index"** shall mean such index as, at the time, is in general use by tax-exempt issuers as a proxy for short-term interest rates on debt obligations of state and local governments the interest on which is excluded from gross income for federal income tax purposes, as determined by an Authorized Officer.

**"Alternate Variable Rate Taxable Index"** shall mean such index as, at the time, is in general use by taxable issuers as a proxy for short-term interest rates on debt obligations of state and local governments the interest on which is not excluded from gross income for federal income tax purposes, as determined by an Authorized Officer.

**"Annual Budget"** shall have the meaning given such term in Section 7.02 hereof.

**"Annual Debt Service"** shall mean the amount of payments scheduled to come due within a specified Fiscal Year for principal of and interest on any specified Indebtedness, including mandatory sinking fund redemptions and payments pursuant to agreements with providers of Credit Facilities with respect to such Indebtedness to reimburse such providers for debt service payments made with respect to such Indebtedness, but net of any accrued interest and capitalized interest funded from proceeds of Bonds. For purposes of calculating Annual Debt Service, the following assumptions are to be used to calculate the principal and interest due in such specified Fiscal Year:

(a) In determining the Principal Amount due in the Fiscal Year, payment shall be assumed to be made in accordance with any amortization schedule established for such Indebtedness (unless a different subsection of this definition applies for purposes of determining principal maturities or amortization), including any scheduled redemption of such specified Indebtedness and, for such purpose, the redemption payment shall be deemed a principal payment;

(b) If any of the specified Indebtedness constitutes Tender Indebtedness, then Annual Debt Service on the options or obligations of the holders of such Indebtedness to tender the same for purchase or payment prior to their stated maturity or maturities shall be treated as a principal maturity occurring on the first date on which owners of such Indebtedness may or are required to tender such Indebtedness, except that any such option or obligation to tender Indebtedness shall be ignored and not treated as a principal maturity if (1) such Indebtedness is rated at least in the "A" rating category (without regard to any rating refinement or gradation by numerical modifier or otherwise) by a Rating Agency, or such Indebtedness is rated in one of the two highest short-term note or commercial paper rating categories by a Rating Agency, and (2) any obligation the Board may have, other than its obligation on such Indebtedness, to reimburse any provider of a Credit Facility shall either be subordinate to the obligation of the Board on such Indebtedness, or shall have been incurred under and shall have met the tests and conditions for the issuance of such specified indebtedness set forth herein;

(c) If any of the specified Indebtedness constitutes Variable Rate Indebtedness, the interest rate on such Indebtedness shall be assumed to be 100% of (1) with respect to any Variable Rate Indebtedness Outstanding as of the date of calculation, the daily average interest rate on such Indebtedness during any consecutive 12-month period during the immediately preceding 24 months ending with the month preceding the date of calculation, or such shorter

period that such Indebtedness shall have been Outstanding, or (2) with respect to any Variable Rate Indebtedness which is being issued on the date of computation, the Certified Interest Rate;

(d) For purposes of determining the annual amount payable in respect of any Indebtedness designated by the Board as a Refundable Principal Installment (including Bond Anticipation Notes), such Indebtedness that is or would be a Refundable Principal Installment shall be treated on the date of calculation as if (i) from the date of issuance thereof the principal amount of such Indebtedness had been payable as a part of equal annual installments of principal and interest over a period extending from the due date thereof through the 30<sup>th</sup> anniversary of the issue date of such Indebtedness and (ii) interest accrues at a rate equal to the actual fixed rate of interest on such Indebtedness or if such Indebtedness is Variable Rate Indebtedness, interest payable during such Fiscal Year shall be calculated in accordance with subsection (c) above.

**"Authorized Officer"** shall mean any officer, employee, agent or other person authorized by resolution of the Board or the Board of Liquidation, respectively, to act on behalf of said entity for any purpose of the Resolution.

**"Board"** shall mean the Sewerage and Water Board of New Orleans, a body politic and corporate and political subdivision of the State created and established pursuant to the Act.

**"Board of Liquidation"** shall mean the Board of Liquidation, City Debt, of the City of New Orleans.

**"Bond Anticipation Notes"** shall mean any notes issued in anticipation of the issuance of Bonds.

**"Bond Counsel"** shall mean Foley & Judell, L.L.P., or any attorney or firm of attorneys nationally recognized on the subject of municipal bonds and employed by the Board of Liquidation.

**"Bondholders"** or **"holder"** or **"Bondowner"** or **"owner"** shall mean the owner of Bonds, Other Senior Parity Indebtedness or the Subordinate Debt, as the case may be.

**"Bonds"** shall mean any of the Sewerage Service Revenue Bonds of the Board authenticated and delivered under the Resolution and the Series 2011 Bonds, but not including Subordinate Debt.

**"Business Day"** shall mean a day on which banking business is transacted, but not including a Saturday, Sunday or legal holiday, or any day on which banks located in the City of New Orleans, or any day on which the New York Stock Exchange is closed, or in the city in which the Paying Agent administers the payment of the Bonds, are authorized by law to close.

**"Capital Appreciation Bonds"** shall mean Bonds as to which the Accreted Value is payable only at the maturity or prior redemption of the Bonds. For purposes of consents, voting rights, Bondowner rights, or any other matter herein determined by a percentage of the aggregate Principal Amount of Bonds Outstanding, Capital Appreciation Bonds shall be valued at their Accreted Values.

**"Capital Appreciation and Income Bonds"** shall mean Bonds as to which interest is deferred and compounded prior to the date after which interest ceases to be deferred and compounded and the interest becomes currently payable. For purposes of consents, voting rights, Bondowner rights, or any other matter in herein determined by a percentage of the aggregate Principal Amount of Bonds Outstanding, Capital Appreciation and Income Bonds shall be valued at their Accreted Values.

**"Capital Improvement"** shall mean any extension, improvement, enlargement, betterment, alteration, renewal or replacement of the System (including land, equipment and other real or personal properties), which (i) is used or useful in connection with the System or any part thereof, (ii) is constructed, acquired, or made by or on behalf of the Board, and (iii) are properly chargeable (whether or not so charged by the Board), according to generally accepted accounting principles, as an addition to utility plant accounts.

**"CEA GO Zone Indebtedness"** shall mean the amounts payable under the Cooperative Endeavor Agreement dated July 19, 2006, between the State of Louisiana and the Sewerage and Water Board.

**"Certified Interest Rate"** shall mean (i) with respect to Variable Rate Indebtedness that was or will be, at the date of the original issuance thereof, the subject of an opinion of Bond Counsel to the effect that the interest thereon is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, a rate of interest equal to the average of the SIFMA Municipal Swap Index or, if such rate is no longer available, the Alternate Variable Rate Tax-Exempt Index for the five (5) years preceding such date of determination; and (ii) with respect to Indebtedness that was not and will not be, at the date of the original issuance thereof, the subject of an opinion of Bond Counsel to the effect that the interest thereon is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, a rate of interest equal to the average of the One-Month LIBOR Rate or, if such rate is no longer available, the Alternate Variable Rate Taxable Index for the five (5) years preceding such date of determination.

**"City"** shall mean the City of New Orleans, Louisiana.

**"Code"** shall mean the Internal Revenue Code of 1986, as amended, including applicable regulations, rulings and revenue procedures promulgated or applicable thereunder.

**"Common Debt Service Reserve Requirement"** shall mean, for all Common Debt Service Reserve Secured Bonds, the least of (i) 10% of the aggregate original stated Principal Amount of all Common Debt Service Reserve Secured Bonds (provided that if any Common Debt Service Reserve Secured Bonds have more than a *de minimis* (2%) amount of original issue discount or premium, the issue price of such Common Debt Service Reserve Secured Bonds (net of pre-issuance accrued interest) is used to measure the 10% limitation in lieu of its stated Principal Amount), (ii) the maximum amount of aggregate Annual Debt Service on all Common Debt Service Reserve Secured Bonds in any Fiscal Year, or (iii) 125% of average aggregate Annual Debt Service on all Common Debt Service Reserve Secured Bonds.

**"Common Debt Service Reserve Secured Bonds"** shall mean any Series of Bonds for which the Supplemental Resolution authorizes said Bonds to be secured by the Common Debt Service Reserve Requirement.

**"Connection Fees"** shall mean all nonrecurring fees that the Board collects from developers, builders or others (1) to compensate the Board for providing System capacity, or (2) to connect facilities related to installation of and expansion of the System.

**"Construction Fund"** shall mean the fund so designated and created by Section 6.01 hereof.

**"Cost,"** as applied to any Capital Improvement, shall mean all or any part of the cost, paid by or on behalf of or reimbursable by or to the Board, of (a) construction, acquisition, alteration, reconstruction and remodeling of such Capital Improvement, (b) all lands, real and personal property, rights of way, water rights, air rights, franchises, easements and interests necessary or convenient therefor, (c) any demolitions or relocations necessary in connection therewith, financing charges, interest prior to, during and for such period as the Board shall determine after the period of construction of such Capital Improvement on Indebtedness issued in whole or in part to finance such construction, architectural, engineering, financial and legal services, plans, specifications, appraisals, surveys, inspections, estimates of costs and revenues, and other expenses necessary or incident to determining the feasibility or practicality of such work, (e) organizational, administrative, operating and other expenses prior to the commencement of and during such work, (f) advance training of operating personnel and other expense, including initial working capital, of completing such work and placing the same in operation, and (g) any other item of Cost attributable to the construction, acquisition, alteration, reconstruction and remodeling of such Capital Improvement and placing the same in operation.

**"Cost of Issuance"** shall mean all items of expense directly or indirectly payable or reimbursable by or to the Board or the Board of Liquidation and related to the authorization, sale and issuance of Indebtedness, including but not limited to printing costs, costs of preparation and reproduction of documents, filing and recording fees, initial fees and charges of any Fiduciaries, legal fees and charges, fees and disbursements of consultants and professionals, costs and expenses of refunding, costs and expenses of any Credit Facility with respect to such Indebtedness, fees and expenses payable in connection with any remarketing agreements or interest rate indexing agreements and any other cost, charge or fee in connection with the original issuance of Indebtedness.

**"Counsel's Opinion"** shall mean an opinion signed by an attorney or firm of attorneys selected by the Board, the Board of Liquidation or the Trustee, respectively.

**"Credit Facility"** shall mean a letter of credit, liquidity facility, a bond insurance policy, surety bond or similar arrangement securing any obligation of the Board with respect to any Indebtedness.

**"Current Interest Capital Appreciation Bonds"** shall mean Bonds as to which a portion of interest is currently payable and a portion of the interest is deferred and compounded until the Accreted Value is payable only at the maturity or prior redemption of the Bonds. For purposes

of consents, voting rights, Bondowner rights, or any other matter herein determined by a percentage of the aggregate Principal Amount of Bonds Outstanding, Current Interest Capital Appreciation Bonds shall be valued at their Accreted Values.

**"Debt Service Fund"** shall mean the fund so designated and created by Section 7.03(c) hereof.

**"Debt Service Reserve Fund"** shall mean the fund so designated and created by Section 7.03(d) hereof.

**"Direct Payment"** shall mean a credit payment allowed pursuant to Section 54AA(g) of the Code that is payable to the Board of Liquidation by the U.S. Treasury, as provided in Section 6431 of the Code, or any other payment by the U.S. Treasury, the State or any other public or private entity to the Board of Liquidation to subsidize or reimburse the Board of Liquidation for all or a portion of the interest cost that the Board of Liquidation may pay on Indebtedness that qualifies for such payment under any successor or substantially similar program.

**"DPW Payments"** shall mean certain past due payments owed by the Board to the Department of Public Works ("DPW") of the City of New Orleans under certain contractual arrangements and payments incurred in the future which are agreed to by the Board and the City to be payable over time and not as a current Operating Expense with respect to certain reimbursement of expenses incurred by the DPW on behalf of the Board in connection with certain sewerage improvements.

**"Escrow Trustee"** shall have the meaning given in Section 13.01 hereof.

**"Event of Default"** shall mean any of the events enumerated in Section 10.01.

**"Fiduciary"** shall mean the Paying Agent or any Trustee.

**"Fiscal Year"** shall mean the period beginning on January 1 of any calendar year and ending on December 31 of such calendar year or such other period of twelve calendar months as may be provided by the Act or authorized by the Board pursuant to the Act.

**"Fitch"** shall mean Fitch Ratings, Inc. or its successors.

**"Fund"** shall mean any of the funds created under Sections 6.01 and 7.03 hereof.

**"GAAP"** shall mean generally accepted accounting principles, consistently applied.

**"Government Obligations"** shall mean noncallable direct general obligations of the United States of America or obligations unconditionally guaranteed in principal and interest by the United States of America, including certificates or other evidence of an ownership interest in such noncallable direct obligations, which may consist of specified portions of interest thereon, such as those securities commonly known as CATS, TIGRS, and STRPS.

**"Grant"** shall mean a grant provided by any entity to or for the Board for the payment of Operating Expenses.

**"Indebtedness"** shall mean Senior Debt and Subordinate Debt.

**"Interest,"** with respect to any Bond, shall mean the stated interest payment thereon or such other amount payable on any designated as interest pursuant to a Supplemental Resolution.

**"Interest Account"** shall mean the Interest Account in the Debt Service Fund so designated and created by Section 7.03(c) hereof.

**"Moody's"** shall mean Moody's Investors Service or its successors.

**"Net Proceeds"** shall mean the gross proceeds from any insurance recovery or recovery in any condemnation proceeding remaining after payment of attorneys' fees, fees and all other expenses incurred in collection of such gross proceeds.

**"Net Revenues"** shall mean Revenues in any Fiscal Year less Operating Expenses for that period.

**"One-Month LIBOR Rate"** shall mean, on any date of determination, the offered rate (rounded up to the next highest one one-thousandth of one percent (0.001%)) for deposits in U.S. dollars for a one-month period which appears on L.P.'s Bloomberg Professional System at approximately 11:00 A.M., London time, on such date, or if such date is not a date on which dealings in U.S. dollars are transacted in the London interbank market, then on the next preceding day on which such dealings were transacted in such market.

**"Operating Expenses"** shall mean all current expenses directly or indirectly attributable to the ownership or operation of the System, including reasonable and necessary usual expenses of administration, operation, maintenance and repair; costs for billing and collecting the rates; insurance premiums; costs and expenses of any Credit Facility; legal, engineering, auditing and financial advisory expenses; expenses and compensation of the Fiduciaries; and deposits into a self-insurance program as described in this Resolution; all as determined (except as other specified in this Resolution) in accordance with GAAP for entities such as the Board consistently applied. Operating Expenses may include payments by the Board for water or other commodities under Take-or-Pay Contracts, without regard to the Board's receipt of the commodity for which a payment is made, but only if the requirements in Section 4.06 for such inclusion are met. Operating Expenses shall not include any payments in lieu of taxes or allowance for depreciation or amortization. Operating Expenses shall also exclude expenses which constitute extraordinary, nonrecurring and non-continuing expenses of the System in the written opinion of the Qualified Independent Consultant.

**"Operating Fund"** shall mean the Operating Fund designated and created by Section 7.03(b) hereof.

**"Operating Reserve Fund"** shall mean the Operating Reserve Fund designated and created by Section 7.03(e) hereof.

**"Operating Reserve Requirement"** shall mean an amount equal to 90 days of Operating Expenses based on the Operating Expenses relating to the most recent Fiscal Year prior to such calculation for which the audit required in Section 9.10 hereof has been completed.

**"Other Senior Parity Indebtedness"** shall mean any other Indebtedness incurred by the Board under this Resolution that the Board is required, or has elected, to treat as payable on a parity with the Bonds with respect to the pledge of Net Revenues.

**"Outstanding"**, when used with reference to Indebtedness, shall mean as of a particular date, all Bonds theretofore and thereupon being authenticated and delivered except (i) any Bond cancelled by the Board or a Fiduciary at or before said date, (ii) any Bond in lieu of or in substitution for which another Bond shall have been authenticated and delivered pursuant to the Resolution and (iii) Bonds deemed to have been paid as provided in the Resolution.

**"Owner"** shall mean the registered owner of a Bond of a particular Series of Bonds as shown on the register for such Series of Bonds.

**"Paying Agent"** or **"Paying Agent/Registrar"** shall mean the paying agent appointed in accordance with Section 12.02 hereof, and its successors which may at any time be substituted in its place pursuant to the Resolution.

**"Permitted Investments"** shall mean the following, to the extent permitted under State law at the time of investment:

(i) direct obligations of the United States of America (including obligations issued or held, in book-entry only form on the books of the Department of the Treasury of the United States of America and including certificates or other instruments evidencing ownership interests in such direct obligations of the United States of America) or obligations the timely payment of the principal of and interest on which are fully guaranteed by the United States of America, including obligations of any agency, department or instrumentality that is fully guaranteed as to the payment of principal and interest by the United States;

(ii) obligations issued or guaranteed by Federal Home Loan Bank System, Export-Import Bank of the United States, Federal Financing Banks, Government National Mortgage Association, Federal National Mortgage Association, Farmer's Home Administration, Federal Home Loan Mortgage Corporation or Federal Housing Administration; or by any agency, department or instrumentality of the United States if such obligations are rated in one of the two highest rating categories by Fitch, S&P and Moody's

(iii) interest-bearing bankers acceptances or certificates of deposit of, or time deposits in any bank (including any Fiduciary), lead bank of a parent holding company, or any savings and loan associations whose unsecured obligations are rated in one of the two highest rating categories by all of the Rating Agencies, provided such deposits are either (a) secured at all times, in the manner and to the extent provided by law, by collateral security (described in clause (i) or (ii) of this definition) of a market value of no less than the amount of moneys so invested or (b) fully insured by the Federal Deposit Insurance Corporation;

(iv) repurchase agreements which satisfy the following criteria: (a) repurchase agreement which provides for the transfer of securities from dealer banks or securities firms to the Fiduciary or its agents, and the transfer of cash from the Fiduciary to the dealer bank or securities firm with an agreement that the dealer bank or securities firm will repay the cash, plus a yield to the Fiduciary, in exchange for the securities at a specified date; (b) repurchase agreement must be between the Fiduciary and a dealer bank or securities firm which are either a primary dealer on the Federal Reserve reporting dealer list or a bank rated "A" or above by all of the Rating Agencies; (c) the written repurchase agreement must include the following terms: (1) securities which are acceptable for transfer are (A) direct United States government obligations, or (B) obligations of federal agencies backed by the full faith and credit of the United States government; (2) with respect to control of the collateral, if the dealer bank or securities firm supplied the collateral pursuant to the repurchase agreement, it may not retain possession of such collateral and the collateral must be delivered to the Fiduciary (unless the Fiduciary is supplying the collateral) or a third party acting as agent for the Fiduciary before or simultaneous with payment; and (3) the securities must be valued weekly, marked-to-market at current market price plus accrued interest, the value of collateral must be equal to 102% of the amount of cash transferred by the Fiduciary to the dealer bank or securities firm under the repurchase agreement, plus accrued interest, and if the value of securities held as collateral is less than 104% of the value of the cash transferred by Fiduciary, then additional cash and/or acceptable securities must be transferred; and (d) to the extent required by a credit enhancer, an opinion of Bond Counsel, to the effect that such repurchase agreements are obligations in which public funds are permitted to be invested under State law, shall be delivered to the Fiduciary;

(v) commercial paper of "prime" quality of the highest ranking or the highest rating category as provided by all of the Rating Agencies;

(vi) obligations, the interest on which is exempt from federal income taxation, and which, if rated by the Rating Agencies, are rated in one of the two highest rating categories of such Rating Agencies;

(vii) a time deposit account drawn on the Fiduciary for amounts whose aggregation is less than \$5,000;

(viii) mutual funds, including any such fund of a Fiduciary or any affiliate of the Fiduciary, which invest exclusively in any investment described in clauses (i) through (vii) otherwise left uninvested in the funds;

(ix) corporate bonds, defined as all corporate and financial institution debt securities with a maximum remaining maturity of three years or less, issued by corporations or financial institutions organized and operating in the United States. Eligible corporate bonds shall be rated in one of the two highest categories by at least two of the Rating Agencies;

(x) Investment agreements or guaranteed investment contracts with entities whose long-term ratings at the time of investment are in one of the two highest rating categories by at least two of the Rating Agencies.

(xi) Collateralized investment agreements and flexible repurchase agreements with entities whose long-term ratings at the time of investment are in one of the three highest rating categories by at least one of the Rating Agencies, provided that collateral consisting of those described in clauses (i) and (ii) be posted to a third-party custodial account at a margin of 104% for collateral described in clause (i) and 105% for collateral described in clause (ii); and

(xii) Forward delivery agreements with entities whose long-term ratings at the time of investment are in one of the three highest rating categories by one of the Rating Agencies, provided that eligible deliverables under the contract be limited to those described in clauses (i) and (ii).

**"Principal Account"** shall mean the Principal Account in the Debt Service Fund established and created by Section 7.03(c) hereof.

**"Principal Amount,"** with respect to any Indebtedness, shall mean the stated principal thereon, the Accreted Value thereof, as applicable, or such other amount payable on any Indebtedness that is designated as principal pursuant to a Supplemental Resolution.

**"Prior Bonds"** shall mean all Sewerage Service Revenue Bonds of the Board issued and outstanding as of the date of this Resolution, except for the Series 2011 Bonds, and as more specifically described in the preamble hereto.

**"Project"** shall mean a Capital Improvement to the System, all or a portion of the Cost of which is financed by or reimbursed from proceeds of Indebtedness.

**"Qualified Independent Consultant"** shall mean an independent professional consultant nationally recognized as having the skill and experience necessary to provide the particular certificate, report or approval required by this Resolution or any Supplemental Resolution in which such requirement appears.

**"Rate Covenant"** shall mean the obligation of the Board to fix, charge, collect and revise rates, fees and other charges for the use of, and the services furnished by, the System sufficient to meet the requirements of this Resolution, including, without limitation, Section 7.01.

**"Rate Covenant Net Revenues"** shall mean Net Revenues, provided that Net Revenues shall be adjusted for the purpose of determining compliance with the Rate Covenant as follows: (i) to include transfers from the Rate Stabilization Fund to the Revenue Fund (as provided in Section 7.05 hereof), and (ii) to exclude transfers to the Rate Stabilization Fund from the Revenue Fund (as provided in Section 7.04 hereof).

**"Rate Stabilization Fund"** shall mean the fund so designated and created by Section 7.03(h) hereof.

**"Rating Agency" or "Rating Agencies"** shall mean Fitch, Moody's or Standard & Poor's, or any of them, and their successors. The Board may seek a rating from any other nationally recognized securities rating agency, but such rating agency shall not be a "Rating Agency" hereunder.

**"Record Date"** shall mean the fifteenth day of the month preceding each interest payment date, or as otherwise provided in a Supplemental Resolution.

**"Redemption Fund"** shall mean the fund so designated and created by Section 7.03(i) hereof.

**"Refundable Principal Installment"** shall mean the Bond Anticipation Notes or any other Indebtedness, the principal of which the Board intends to pay with monies which are not Revenues, provided that such intent shall have been expressed in the Resolution or other document authorizing such Indebtedness and provided further that such Indebtedness shall be a Refundable Principal Installment only through the date which is thirty (30) days prior to the date on which such Indebtedness comes due or such earlier time as the Board has determined to pay such Indebtedness with moneys which are not Revenues.

**"Reserve Determination Date"** shall mean (a) annually, the first Business Day of each Fiscal Year and (b) any other date established in writing by an Authorized Officer of the Board for the valuation of obligations on deposit in any Series Debt Service Reserve Account.

**"Resolution"** shall mean this General Sewerage Service Revenue Bond Resolution as the same may be amended or supplemented in accordance herewith.

**"Revenue Fund"** shall mean the Revenue Fund designated and created by Section 7.03(a) hereof.

**"Revenues"** shall mean all moneys received as income, rates, fees, charges, receipts, profits and other moneys derived by the Board from its ownership and operation of the System, and for the use of and for the services furnished by the System, or by the Board of Liquidation on behalf of the Board in connection with the System, including Connection Fees, Direct Payments, Grants, proceeds of any business interruption insurance, and investment earnings on all of the funds held by the Board of Liquidation under this Resolution and the Board, all as determined (except as otherwise provided in this definition) in accordance with GAAP for entities such as the Board, consistently applied, except any rebate fund that may be created under the Resolution. Revenues shall not include refundable customer deposits or other payments solely in aid of construction; the proceeds resulting from the sale of all or a portion of the System other than such minor parts or portions thereof as may be disposed of due to normal wear and tear and obsolescence; revenues derived from a Separate System; and sanitation or other charges that the Board collects not for the services of the System but solely as a fiscal agent or in another such agency capacity, other than the net revenues of such sanitation or other charges retained by the Board to the extent allocated to the System.

**"Senior Debt"** shall mean shall mean Bonds and Other Senior Parity Indebtedness.

**"Separate Series Debt Service Reserve Requirement"** shall mean, for any Series of Additional Bonds for which the Supplemental Resolution authorizes a Separate Series Debt Service Reserve Requirement, the amount, if any, specified in such Supplemental Resolution as the Separate Series Debt Service Reserve Requirement; provided, however, that such amount shall not exceed the maximum amount permitted by the Code.

**"Separate Series Debt Service Reserve Secured Bonds"** shall mean any series of Bonds for which the Supplemental Resolution authorizes said Bonds to be secured by the Separate Series Debt Service Reserve Requirement.

**"Separate System"** shall mean a separate sewerage system that the Board does not own or operate as of the date of this Resolution, but of which the Board subsequently becomes the operator under a contract that (i) does not obligate the Board to pay the expense of operating, maintaining or improving that system from any revenues other than those the Board derives from that system, and (ii) does not obligate the Board to assume responsibility for the payment of any debt obligation other than from revenues derived from that System.

**"Series"** when used with respect to less than all of the Bonds, shall mean such Bonds designated as a Series of Bonds pursuant to a Supplemental Resolution.

**"Series Construction Account"** shall mean each account established in the Construction Fund pursuant to a Supplemental Resolution for a Series of Bonds the proceeds of which are to be used to pay Costs.

**"Series Debt Service Reserve Account"** shall mean each account in the Debt Service Reserve Fund related to a particular Series of Bonds that is required to be funded as required in a Supplemental Resolution.

**"Series Debt Service Reserve Requirement"** for any Series of Bonds shall be the Common Debt Service Reserve Requirement or the Separate Series Debt Service Reserve Requirement set forth in the Supplemental Resolution authorizing such Series of Bonds.

**"Series 2011 Bonds"** shall mean the City's outstanding Sewerage Service Subordinate Revenue Bonds, Series 2011, dated November 23, 2011, affirmed as Bonds hereunder and entitled to the provisions hereof.

**"Sewer System Fund"** shall mean the Sewer System Fund designated and created by Section 7.03(i) hereof.

**"SIFMA Municipal Swap Index"** means the SIFMA Municipal Swap Index of Municipal Market Data, formerly the BMA Municipal Swap Index (as such term is defined in the 1992 ISDA U.S. Municipal Counterparty Definitions).

**"Signing Parties"** shall mean those parties designated to execute the Bonds by a Supplemental Resolution.

**"Sinking Fund Account"** shall mean the Sinking Fund Account in the Debt Service Fund created in Section 7.03(c) hereof.

**"Standard & Poor's"** shall mean Standard & Poor's Ratings Services, a Standard & Poor's Financial Services LLC business, or its successors.

**"State"** shall mean the State of Louisiana.

**"Subordinate Debt"** shall mean any bonds, notes or other obligations issued in connection with the System (a) which are designated by the Board as Subordinate Debt, and (b) which have pledged to their payment Net Revenues, alone or in conjunction with other sources, as a subordinate lien pledge after the pledge of Net Revenues to Senior Debt.

**"Subordinate Debt Debt Service Fund"** shall mean the Subordinate Debt Debt Service Fund designated and created by Section 7.03(f) hereof.

**"Subordinate Debt Debt Service Reserve Fund"** shall mean the Subordinate Debt Debt Service Reserve Fund designated and created by Section 7.03(g) hereof.

**"Supplemental Resolution"** shall mean with respect to any Series of Bonds, the Supplemental Resolution authorizing such Series of Bonds, and any other resolution of the Board amending or supplementing the Resolution adopted and becoming effective in accordance with the terms of Article IX.

**"System"** shall mean all plants, systems, facilities, equipment, real and personal property and tangible and intangible property, together with all future extensions, improvements, enlargements and additions thereto, and all replacements thereof, used, or to be used, in connection with the sewerage system of the Board, other than a Separate System.

**"Take-or-Pay Contract"** shall mean a contract which obligates the Board to pay to another entity a certain amount for goods or services, whether or not such goods or services are taken or used by the Board, and which contract payments are designated by the Board, at the time of execution, as Indebtedness or Operating Expenses as provided in Section 4.07 hereof.

**"Tender Indebtedness"** shall mean any Indebtedness a feature of which is an option or obligation on the part of the holders of such Indebtedness to tender all or a portion of such Indebtedness to a fiduciary for purchase or redemption prior to the stated maturity date of such indebtedness, which may include Variable Rate Indebtedness with such a feature.

**"Term Bonds"** shall mean any Bonds stated to mature on a specified date and required to be redeemed in part prior to maturity according to a sinking fund schedule.

**"Test Period"**, for purposes of the Additional Indebtedness Test, shall mean any 12 consecutive months of the last 24 months prior to the issuance of such Indebtedness.

**"Trustee"** means the trustee appointed in accordance with Section 12.01, if any, and its successor or successors and any other corporation which may at any time be substituted in its place pursuant to the Resolution.

**"Valuation Date"** with respect to any Capital Appreciation Bonds, Capital Appreciation and Income Bonds, or Current Interest Capital Appreciation Bonds, shall mean the date or dates set forth in the Supplemental Resolution on which specific Accreted Values are assigned to such Capital Appreciation Bonds, Capital Appreciation and Income Bonds, or Current Interest Capital Appreciation Bonds.

**"Variable Rate Indebtedness"** shall mean any Indebtedness the interest rate on which is not established at the time of incurrence at a fixed or constant rate, provided that (a) the maximum interest rate on such Indebtedness and the maximum rate payable to any Credit Facility provider with respect to such indebtedness shall be specified at the time of issuance of such indebtedness; (b) any Credit Facility provider shall cause such Indebtedness to be rated by a Rating Agency in one of the two highest short-term rating categories of such Rating Agency; (c) any accelerated principal payments or any interest in excess of the bond interest rate payable to such Credit Facility provider shall be subordinate to the payment of debt service on Bonds, and (d) any two or more series of Bonds that are issued on the same date, the interest on which when such series are considered in the aggregate shall be a fixed or constant rate, shall not be considered Variable Rate Indebtedness.

SECTION 1.03. Rules of Interpretation. Unless the context clearly indicates to the contrary, the following rules shall apply to the interpretation and construction of this Resolution:

- (1) words importing the singular number shall include the plural number and *vice versa*;
- (2) all references to particular articles or sections herein are references to articles or sections of this Resolution;
- (3) the captions and headings herein are solely for convenience of reference and shall not constitute a part of this Resolution, nor shall they affect its meaning, construction or effect;
- (4) the terms "herein," "hereunder," "hereby," "hereof," and any similar terms, refer to the Resolution as a whole; the term "heretofore" shall mean before the effective date of the Resolution; and the term "hereafter" shall mean after the effective date of the Resolution; and
- (5) any reference to "Louisiana Revised Statutes" or "La. R.S." shall refer to the referenced section of the Louisiana Revised Statutes of 1950, as amended.

## ARTICLE II

### AUTHORIZATION AND ISSUANCE OF BONDS

SECTION 2.01. Authority for the Resolution. The Resolution is adopted pursuant to the Act.

SECTION 2.02. Resolution to Constitute a Contract. In consideration of the purchase and acceptance of the Indebtedness by those who shall own the same from time to time, the Resolution shall constitute a contract among the Board, the Board of Liquidation, the City and the registered owners from time to time of the Indebtedness, and the pledge made in the Resolution and the covenants and agreements therein set forth to be performed by or on behalf of the Board shall be for the equal benefit, protection and security of the registered owners of any and all of the Indebtedness, all of which, regardless of the time or times of their issue or maturity, shall be of equal rank without preference, priority or distinction of any of the Indebtedness over any other thereof, except as expressly provided herein with respect to Subordinated Debt and as otherwise expressly provided in or permitted by the Resolution.

SECTION 2.03. Authorization of Bonds. There is hereby established and created an issue of Bonds of the City issued through the Board to be designated as "Sewerage Service Revenue Bonds," which Bonds may be issued in multiple series as hereinafter provided from time to time, without limitation as to amount except as provided in the Resolution or as limited by law. The Bonds may, if and when authorized by the Board pursuant to one or more Supplemental Resolutions, be issued in one or more Series, and the designation thereof, in addition to the name "Sewerage Service Revenue Bonds", may include such further appropriate designations added to or incorporated in such title for the Bonds of any particular Series as the Board may determine. Each Series of Bonds shall have such interest rates, redemption provisions, Principal Amounts, and maturity dates as shall be set forth in or pursuant to a Supplemental Resolution. Notwithstanding anything herein to the contrary, the Series 2011 Bonds shall be considered Bonds hereunder and entitled to the provisions hereof, and the resolution authorizing the issuance of the Series 2011 Bonds shall be deemed automatically amended to reflect the provisions of this Resolution. The Series 2011 Bonds shall further be considered Common Debt Service Reserve Secured Bonds hereunder.

## ARTICLE III

### EXECUTION, AUTHENTICATION, DELIVERY, REGISTRATION AND FORM OF BONDS

SECTION 3.01. Form and Details of Bonds. Unless otherwise provided in the applicable Supplemental Resolution, the Bonds shall be issuable only as registered Bonds without coupons, in denominations of \$5,000 and multiples thereof. The form, details, delivery and terms of each Series of Bonds and such other matters as the Board may deem appropriate shall be set forth in the applicable Supplemental Resolution for such Series of Bonds. Principal, premium, if any, and interest shall be payable in lawful money of the United States of America.

SECTION 3.02. Execution of Bonds. Unless otherwise provided in the applicable Supplemental Resolution, the Bonds shall be signed by the manual or facsimile signatures of the Signing Parties, and the corporate seal of the City shall be affixed thereto or a facsimile thereof printed or otherwise reproduced thereon. In case any officer whose signature or a facsimile of whose signature shall appear on any Bond shall cease to be such officer before the delivery of such Bond, such signature or such facsimile shall nevertheless be valid and sufficient for all purposes the same as if he had remained in office until such delivery. Any Bond may bear the facsimile signature of or may be signed by such persons as at the actual time of the execution thereof shall be the proper officers to sign such Bond although at the date of such Bond such persons may not have been such officers. Any Bond of a Series may be signed and sealed on behalf of the Board, the Board of Liquidation and the City by such persons as at the actual time of the execution of such Bond shall be duly authorized or hold the proper office respectively, although at the date of the Bonds of such Series such persons may not have been so authorized or have held such office.

SECTION 3.03. Authentication of Bonds. Unless otherwise provided in the applicable Supplemental Resolution, the Bonds shall bear a certificate of authentication and shall not be valid until the Paying Agent shall have executed the certificate of authentication and inserted the date of authentication thereon. The Paying Agent shall authenticate each Bond with the signature of an authorized officer or employee, but it shall not be necessary for the same person to authenticate all of the Bonds or all of the Bonds of any Series. Only such authenticated Bonds shall be entitled to any right or benefit under this Resolution, and such certificate on any Bond issued hereunder shall be conclusive evidence that the Bond has been duly issued and is secured by the provisions hereof.

SECTION 3.04. Registration and Transfer of Bonds; Persons treated as Owners.

(a) All Bonds issued under this Resolution shall be negotiable, subject to the provisions for registration and registration of transfer thereof contained herein or a Supplemental Resolution.

(b) The Board of Liquidation shall cause the Paying Agent to maintain registration books with respect to each Series of Bonds at the offices of the Paying Agent and shall provide for the registration and registration of transfer of any Bond of such Series under such reasonable

regulations as the Paying Agent may prescribe. The Paying Agent shall maintain books for purposes of exchanging and registering Bonds in accordance with the provisions hereof.

(c) Each Bond of a Series shall be registered or registered for transfer only upon the registration books maintained by the Paying Agent, by the Bondholder thereof in person or by his attorney duly authorized in writing, upon presentation and surrender thereof together with a written instrument of transfer satisfactory to the Paying Agent duly executed by the registered Bondholder or his duly authorized attorney. Upon surrender for registration of transfer of any such Bond, the Board of Liquidation shall cause to be executed and the Paying Agent shall authenticate and deliver, in the name of the transferee, one or more new Bonds of the same Series, interest rate, maturity, Principal Amount and date as the surrendered Bond, as fully registered Bonds only.

(d) The Paying Agent shall treat the registered owner as the person exclusively entitled to payment of principal, premium, if any, and interest and the exercise of all other rights and powers of the owner on the registration books, except that interest payments shall be made to the person shown as owner on the Record Date.

SECTION 3.05. Exchange of Bonds; Charges for Exchange of Bonds. Bonds, upon presentation and surrender thereof to the Paying Agent, together with written instructions satisfactory to the Paying Agent, duly executed by the registered Bondholder or his attorney duly authorized in writing, may be exchanged for an equal aggregate Principal Amount of fully registered Bonds of the same Series and tenor.

Any exchange of Bonds shall be at the expense of the Board of Liquidation, except that the Paying Agent may charge the person requesting such exchange the amount of any tax or other governmental charge required to be paid with respect thereto.

SECTION 3.06. Temporary Bonds. Prior to the preparation of Bonds in definitive form, the Board may issue temporary Bonds in such denominations as the Board may determine, but otherwise in substantially the form set forth in the applicable Supplemental Resolution, with appropriate variations, omissions and insertions. The Board of Liquidation shall promptly prepare, execute and deliver to the Paying Agent before the first interest payment date Bonds in definitive form and thereupon, upon surrender of Bonds in temporary form, the Paying Agent shall authenticate and deliver in exchange therefor Bonds in definitive form of the same maturity having an equal aggregate Principal Amount. Until exchanged for Bonds in definitive form, Bonds in temporary form shall be entitled to the lien and benefit of this Resolution.

SECTION 3.07. Mutilated, Lost, Stolen or Destroyed Bonds. In the event any outstanding Bond, whether temporary or definitive, is mutilated, lost, stolen or destroyed, the Board of Liquidation may execute and, upon its written request, the Paying Agent may authenticate a new Bond of the same Principal Amount and of like tenor as the mutilated, lost or stolen or destroyed Bond; provided that, in the case of any mutilated Bond, such mutilated Bond shall first be surrendered to the Paying Agent, and in the case of any lost, stolen or destroyed Bond, there shall be first furnished to the Board of Liquidation and the Paying Agent evidence of such loss, theft or destruction in form satisfactory to the Board of Liquidation and the Paying Agent, together with indemnity satisfactory to them. In the event any such Bond shall have

matured, instead of issuing a substitute Bond the Board of Liquidation may authorize the payment of the same. The Board of Liquidation and the Paying Agent may charge the owner of such Bond with their reasonable fees and expenses in this connection. Any Bond issued under the provisions of this Section in lieu of any Bond alleged to be destroyed, lost or stolen shall constitute an original additional contractual obligation on the part of the Board of Liquidation, whether or not the Bond so alleged to be destroyed, lost or stolen be at any time enforceable by anyone, and shall be equally and proportionately entitled to the benefits of this Resolution together with all other Bonds in substitution for which such Bonds were issued

SECTION 3.08. Cancellation and Disposition of Bonds. All Bonds that have been surrendered for transfer or exchange pursuant to Sections 3.04 and 3.05, paid (whether at maturity, by sinking fund redemption, acceleration, call for redemption or otherwise), or delivered by the Board of Liquidation to the Paying Agent for cancellation shall not be reissued, and the Paying Agent shall, unless otherwise directed by the Board of Liquidation, shred or otherwise dispose of such Bonds. The Paying Agent shall deliver to the Board of Liquidation a certificate of any such shredding or other disposition.

SECTION 3.09. Non-Presentation of Bonds.

(a) If any Bond is not presented for payment when the principal thereof becomes due (whether at maturity, by sinking fund redemption, upon acceleration or call for redemption or otherwise), all liability of the Board of Liquidation to the holder thereof for the payment of such Bond shall be completely discharged if moneys sufficient to pay such Bond and the interest due thereon shall be held by the Paying Agent for the benefit of such holder, and thereupon it shall be the duty of the Paying Agent to hold such moneys, subject to subsection (b) below, without liability for interest thereon, for the benefit of such holder, who shall thereafter be restricted exclusively to such moneys for any claim of whatever nature on his part under this Resolution or on, or with respect to, such Bond.

(b) Notwithstanding anything in this Resolution to the contrary, any cash or Government Obligations deposited with the Paying Agent for the payment of the principal of, premium, if any, and interest on any Series of Bonds remaining unclaimed for more than three years after the principal of such Series of Bonds has become due and payable shall be paid to the Board and shall be held by the Board in trust for the benefit of bondholders in a separate account for seven years and thereafter in the general fund of the Board of Liquidation. After such moneys have been paid to the Board, the holders of such Bonds shall be entitled to look only to the Board of Liquidation, and all liability of the Paying Agent with respect to such amounts shall cease.

## ARTICLE IV

### ISSUANCE OF BONDS

SECTION 4.01. Purposes of Bonds. Bonds may be issued (a) to pay Costs, (b) to refund Bonds or any other Indebtedness, (c) to pay Costs of Issuance, (d) to fund reserves and/or pay costs associated with capitalized interest, or (e) for a combination of such purposes.

SECTION 4.02. Parity of Senior Debt. This Resolution constitutes a continuing, irrevocable pledge of Net Revenues to secure payment of the principal of, premium, if any, and interest on all Senior Debt and, on a subordinate basis to Senior Debt, on all Subordinate Debt that may from time to time be issued and Outstanding. Each Series of Senior Debt shall be issued pursuant to a Supplemental Resolution or evidenced by other documents and shall be equally and ratably secured by the pledge of Net Revenues under this Resolution, without preference; priority or distinction; provided, however, that the Common Debt Service Reserve Secured Bonds or Separate Series Debt Service Reserve Secured Bonds shall only be secured by the account in the Debt Service Reserve Fund for Common Debt Service Reserve Secured Bonds or each Separate Series Account in the Debt Service Reserve Fund for Separate Series Debt Service Reserve Secured Bonds, as provided in a Supplemental Resolution, and provided further that any Senior Debt may have additional revenues or other security pledged to its payment. In connection with the issuance of Senior Debt, there may be created additional accounts and subaccounts within any fund or account established by this Resolution. Credit Facilities may be provided as additional security for any Series as provided in a Supplemental Resolution. Nothing herein shall be construed, however, as requiring that any Senior Debt bear interest at the same rate or in the same manner as any other Senior Debt, have the same, or an earlier or later, maturity, or be subject to mandatory, optional or extraordinary redemption prior to maturity on the same basis as any other Senior Debt, and provided further that nothing contained in this Resolution shall prevent the Board from issuing (i) bonds, notes or other obligations or evidences of indebtedness under another and separate resolution or ordinance to finance a Separate System; or (ii) other bonds, notes or other obligations or evidences of indebtedness under another and separate resolution or ordinance payable from, among other sources, those moneys withdrawn by the Board from the Sewer System Fund for any lawful purpose permitted for the expenditure of such monies in the Separate System Fund by the Board. The Bonds do not constitute a debt of the City of New Orleans, and neither the credit nor taxing power of the City of New Orleans is pledged to the payment thereof, or any part thereof, or to the payment of any interest thereon.

SECTION 4.03. Conditions for Issuing Bonds. Before the issuance and authentication of any Series of Bonds by the Paying Agent, there shall be filed with the Board of Liquidation (which shall be confirmed in writing):

- (a) In the case of the initial Series of Bonds:
  - (i) A certified copy of this Resolution;
  - (ii) A Counsel's Opinion, subject to customary exceptions and qualifications, substantially to the effect that this Resolution: has been duly authorized, executed and

delivered to the Paying Agent and is a valid, binding and enforceable obligation of the Board.

(b) A certified copy of a Supplemental Resolution which (1) shall include: (A) provisions authorizing the issuance, fixing the Principal Amount and setting forth the details of such Bonds, including their date, the interest rate or rates and the manner in which the Bonds are to bear and pay interest (including whether such Bonds constitute Capital Appreciation Bonds, Capital Appreciation and Income Bonds or Current Interest Capital Appreciation Bonds), the principal and interest payment dates of the Bonds; the purposes for which such Bonds are being issued, the manner of numbering of such Bonds, the Series designation, the denominations, the maturity dates and principal maturities, the Principal Amounts required to be redeemed pursuant to any mandatory redemption provisions or the manner for determining such Principal Amounts, any provisions for optional or extraordinary redemption before maturity, and any provisions regarding the Common Debt Service Reserve Requirement or Separate Series Debt Service Reserve Requirement; and (B) provisions for the application of the proceeds of such Bonds; and (2) may include: (A) provisions for Credit Facilities and for other Funds and Accounts to be established with respect to such Bonds; (B) provisions necessary or expedient for the issuance and administration of Bonds bearing interest at a variable rate or other manner of bearing interest, including remarketing provisions, liquidity facility provisions and provisions for establishing the variable rate and converting to a fixed rate; (C) provisions for entering into credit enhancement devices permitted by State law; (D) provisions respecting the designation of Refundable Principal Installments, and (E) such other provisions as the Board may deem appropriate.

(c) A certified copy of applicable resolution(s) of the Board and the Board of Liquidation authorizing, as required by law, the issuance, sale, award, execution and delivery of such Bonds and, in the case of a Series of Bonds issued to refund Indebtedness, calling for redemption or payment of the Indebtedness to be refunded, fixing any redemption date and authorizing any required notice of redemption in accordance with the provisions of this Resolution.

(d) A certificate signed by an Authorized Officer of the Board and dated the date of such issuance, to the effect that:

(i) Either (A) upon and immediately following such issuance, no Event of Default has occurred which has not been cured or waived, and no event or condition exists which, with the giving of notice or lapse of time or both, would become an Event of Default or (B) if any such event or condition is happening or existing, specifying such event or condition, stating that the Board will act with due diligence to correct such event or condition after the issuance of such Bonds, and describing in reasonable detail the actions to be taken by the Board toward such correction; and

(ii) All required approvals, limitations, conditions and provisions precedent to the issuance of such Series of Bonds have been obtained, observed, met and satisfied.

(e) All policies or certificates of insurance (and any amendments to such policies) or evidence of appropriate substitute arrangements required by this Resolution in connection with

the issuance of such Bonds and a certificate of the Authorized Officer of the Board that all policies (and amendments) or appropriate substitute arrangements required to be in effect at that time are in full force and effect and are in such forms as necessary to comply with and satisfy all requirements of this Resolution.

(f) A Counsel's Opinion, subject to customary exceptions and qualifications, substantially to the effect that the Supplemental Resolution for such Series of Bonds has been duly authorized, executed and delivered, is binding on the Board and complies in all respects with the requirements of this Resolution.

(g) An opinion of Bond Counsel, subject to customary exceptions and qualifications, substantially to the effect that the issuance of such Bonds has been duly authorized, that such Bonds are valid and binding limited obligations of the City, and with respect to Bonds to be issued on a tax-exempt basis that the interest on such Bonds is excludable from gross income for purposes of Federal income taxation.

(h) Except in the case of the initial Series of Bonds issued under this Resolution, if a Series of Bonds are issued to pay Costs, the following:

(i) (A) if the Bonds are Common Debt Service Reserve Secured Bonds, evidence that upon issuance of such Bonds, the Common Debt Service Reserve Requirement will be fully funded, or (B) if the Bonds are Separate Series Debt Service Reserve Secured Bonds, evidence that, upon issuance of such Bonds, the Separate Series Debt Service Reserve Requirement for such Bonds will be fully funded or will be funded in accordance with the requirements of the applicable Supplemental Resolution; and

(ii) A certificate of (A) a Qualified Independent Consultant, stating that based on the Board's financial records for a Test Period, the Board would have been able to meet the Rate Covenant in Section 7.01, taking into account (i) the maximum Annual Debt Service on the proposed Series of Additional Bonds in the current or any future Fiscal Year, (ii) the Additional Net Revenues from the rates, fees and other charges adjusted to reflect any rate increases that had not been in effect throughout the Test Period but that have been approved by the Board, the Board of Liquidation, and the City at the time of the delivery of the proposed Series of Additional Bonds to go into effect within the following five years; and (iii) additional Net Revenues that the Board may realize from the addition to the System of the assets it proposes to finance through the issuance of the proposed Series of Additional Bonds or other funding sources within the following five years or (B) the Authorized Officer of the Board stating that based on the Board's financial records for a Test Period, the Board has met the Rate Covenant in Section 7.01, taking into account the maximum annual Debt Service on the proposed Series of Additional Bonds. In making the certifications required under this paragraph, the Authorized Officer of the Board or the Qualified Independent Consultant, as applicable, shall determine and utilize the Additional Indebtedness Test Net Revenues in place of the Rate Covenant Net Revenues in determining whether the Board would have been able to meet the Rate Covenant in Section 7.01.

(i) Except in the case of the initial Series of Bonds issued under this Resolution, if any Bonds are issued to refund any Indebtedness, the following:

(i) Evidence that the Board has made provision as required by this Resolution for the payment or redemption of all Indebtedness to be refunded;

(ii) A certificate of an Authorized Officer of the Board demonstrating that the proposed refunding will not result in an increase in the Annual Debt Service payable on all Indebtedness in any Fiscal Year. If the proposed refunding will result in an increase in the Annual Debt Service payable on all Indebtedness in any Fiscal Year, then the issuance of that Series of Additional Bonds shall be subject to the same requirements as the issuance of a Series of Additional Bonds to pay Costs under Section 4.03(h)(ii).

(j) A request and authorization of the Board of Liquidation, signed by an Authorized Officer of the Board of Liquidation, to the Paying Agent to authenticate and deliver such Bonds to the purchaser upon payment to the Paying Agent for the account of the Board of Liquidation of a specified sum plus accrued interest to the date of delivery.

Except for the requirements of subsection (d) of this Section (which may be waived by the purchasers of such Bonds by an instrument or concurrent instruments in writing signed by such purchasers), none of the requirements in this Section may be waived without the consent of the holders of not less than a majority in aggregate Principal Amount of the Outstanding Bonds.

#### SECTION 4.04. Other Senior Parity Indebtedness.

(a) The Board may incur or refinance Other Senior Parity Indebtedness provided that:

(i) the documents relating to the Other Senior Parity Indebtedness acknowledge that such debt constitutes Other Senior Parity Indebtedness under this Resolution and is subject to the applicable terms and conditions hereof as if it were Bonds, and specify the amounts and due dates of Annual Debt Service with respect to the Other Senior Parity Indebtedness,

(ii) the requirements of Sections 4.03(h) or 4.03(i), as appropriate, have been met as if the Other Senior Parity Indebtedness was an additional Series of Bonds,

(iii) the Paying Agent receives written notice of the issuance of the Other Senior Parity Indebtedness and the material terms and conditions thereof and the Paying Agent shall register the holder as owner thereof as such on its books and records, and

(iv) the Paying Agent and the Board of Liquidation receive a Counsel's Opinion that the documents creating the Other Senior Parity Indebtedness have been duly authorized, executed and delivered on behalf of the Board and constitute valid, binding and enforceable obligations.

In connection with the incurrence of any Other Senior Parity Indebtedness that is not issued under and secured by a Supplemental Resolution, the Board of Liquidation shall enter into an intercreditor arrangement with the holder of such Other Senior Parity

Indebtedness, the terms of which shall be consistent with the requirements of this Resolution and determined at the time of incurrence of such Other Senior Parity Indebtedness.

(b) The Board shall fulfill its obligations under all contracts or agreements creating Other Senior Parity Indebtedness as they may exist from time to time.

SECTION 4.05. Subordinate Debt. Notwithstanding anything in this Resolution to the contrary, the Board may at any time issue additional Subordinate Debt and pledge Net Revenues thereto on a basis subordinate to Senior Debt so long as the Paying Agent is furnished a certificate of an Authorized Officer of the Board or of a Qualified Independent Consultant, as the case may be, that would meet the requirements of Section 4.03(h)(ii) if the proposed Subordinate Debt were Bonds except for the fact that the debt service on the proposed Subordinate Debt would not constitute Annual Debt Service on Senior Debt for purposes of the certification required by that Section. Subordinate Debt may not be accelerated if any Senior Debt is outstanding.

SECTION 4.06. CEA GO Zone Indebtedness and DPW Payments. Notwithstanding anything to the contrary contained herein, the DPW Payments and CEA GO Zone Indebtedness shall not be included in any Additional Indebtedness Test under Sections 4.03, 4.04 or 4.05 hereof or any Rate Covenant calculation as provided in Section 7.01.

SECTION 4.07. Take-or-Pay Contracts. The provision for payments under Take-or-Pay Contracts may be treated as Operating Expenses if, prior to the Board's entering into such a contract that exceeds an annual obligation which is in excess of 2% of Revenues as calculated for the Fiscal Year immediately preceding the date of incurrence of the Take-or-Pay Contract, a Qualified Independent Consultant certifies that in doing so the Board is not reasonably expected to impair its ability to fulfill the Rate Covenant during the next five years. Additionally, any Take-or-Pay Contract with a stated term in excess of five (5) years shall be deemed to be Indebtedness. If the Qualified Independent Consultant does not deliver such certificate, payments under the Take-or-Pay Contracts shall be deemed to be Indebtedness and may be incurred only if the provisions of Section 4.03, 4.04 or 4.05, as the case may be, are complied with.

## ARTICLE V

### REDEMPTION OF BONDS

SECTION 5.01. Redemption Provisions to be Fixed by Supplemental Resolution. The Bonds of any Series shall be subject to mandatory, extraordinary or optional redemption prior to maturity on such dates and under such conditions as may be provided in the Supplemental Resolution authorizing the issuance of such Series of Bonds. The Bonds of any Series to be called for redemption shall be selected as provided in the applicable Supplemental Resolution. The Paying Agent shall treat each Bond of a denomination greater than the minimum denomination authorized in the applicable Supplemental Resolution as representing the number of separate Bonds of such minimum denomination as can be obtained by dividing the Bond's actual Principal Amount by such minimum denomination.

SECTION 5.02. Notice of Redemption. Unless otherwise provided in the applicable Supplemental Resolution, the Paying Agent shall, upon receipt of written notice from the Board of Liquidation specifying the information contained in this paragraph and given at least five (5) Business Days before the date the Paying Agent is requested to issue such Notice, send notice of the call for redemption, identifying the Bonds or portions thereof to be redeemed, not less than 30 days prior to the redemption date, (a) by registered or certified mail or overnight express delivery or via accepted form of electronic communication, to the Holder of each Bond to be redeemed at the address as it appears on the registration books kept by the Paying Agent, and (b) to each nationally recognized municipal securities information repository designated as such by the Securities and Exchange Commission.

In preparing and delivering such notice, the Paying Agent shall take into account, to the extent applicable, the prevailing tax-exempt securities industry standards and any regulatory statement of any Federal or state administrative body having jurisdiction over the Board of Liquidation or the tax-exempt securities industry. Failure to give any notice specified in (a) above, or any defect therein, shall not affect the validity of any proceedings for the redemption of any Bond with respect to which no such failure or defect has occurred. Failure to give any notice specified in (b) above, or any defect therein, shall not affect the validity of any proceedings for the redemption of any Bonds with respect to which the notice specified in (a) above is correctly given.

In the case of an optional redemption, the notice may state (i) that it is conditioned upon the deposit of moneys, in an amount equal to the amount necessary to effect the redemption, with the Paying Agent no later than the redemption date, or (ii) that the Board of Liquidation retains the right to rescind such notice at any time prior to the scheduled redemption date if the Board of Liquidation delivers a certificate of an Authorized Officer to the Paying Agent instructing the Paying Agent to rescind the redemption notice (in either case, a "Conditional Redemption"), and such notice and optional redemption shall be of no effect if such moneys are not so deposited or if the notice is rescinded as described herein. The Paying Agent shall give prompt notice of such rescission to the affected Bondowners. Any Bonds subject to Conditional Redemption where redemption has been rescinded shall remain Outstanding, and the rescission shall not constitute an Event of Default. Further, in the case of a Conditional Redemption, the failure of the Board

of Liquidation to make funds available in part or in whole on or before the redemption date shall not constitute an Event of Default.

Any notice mailed or provided herein shall conclusively be presumed to have been given whether or not actually received by any Bondholder.

SECTION 5.03. Bonds Payable on Redemption Date; Interest Ceases to Accrue. On or before the date fixed for redemption, moneys shall be deposited with the Paying Agent to pay the principal of and premium, if any, and interest accrued to the redemption date on the Bonds called for redemption. Upon the happening of the conditions of this Section, the Bonds or portions thereof thus called for redemption shall cease to bear interest from and after the redemption date, shall no longer be entitled to the benefits provided by this Resolution and shall not be deemed to be Outstanding under the provisions of this Resolution.

SECTION 5.04. Purchase of Bonds. The Board or Board of Liquidation may purchase or cause to be purchased any Bonds of any particular Series or maturity in lieu of redemption of such Bonds (in which event any Bonds so purchased shall be cancelled and shall cease to bear interest as provided in Sections 3.08 and 5.03) or for any other purpose pursuant to written instructions given by the Board or Board of Liquidation to the Paying Agent. Such purchases shall be made in such manner as directed by the Board or Board of Liquidation. The Board, the Board of Liquidation or the Paying Agent shall pay the purchase price of such Bonds together with accrued interest thereon from such funds as maybe available therefor pursuant to this Resolution, any Supplemental Resolution, or as otherwise may be made available by the Board or the Board of Liquidation.

## ARTICLE VI

### CUSTODY AND APPLICATION OF BOND PROCEEDS AND PAYMENTS IN AID OF CONSTRUCTION

SECTION 6.01. Custody and Application of Bond Proceeds. There is hereby established a Construction Fund to be held by the Board of Liquidation, subject to the lien of this Resolution. The Construction Fund shall constitute the special sewerage service revenue bond account referred to in Louisiana Revised Statute 33:4121, as amended or supplemented from time to time.

The proceeds of a Series of Bonds which are to be used to pay Costs shall be deposited in the related Series Construction Account and held in trust by the Board of Liquidation and used solely to pay Costs and Costs of Issuance, except as provided herein. The proceeds of a Series of Bonds which are to be used to refund any Indebtedness secured by or payable from Net Revenues shall be held by the Paying Agent, an Escrow Trustee (as defined in Section 13.01) or other Fiduciary, as specifically provided in the Supplemental Resolution related to such refunding.

The Board of Liquidation may establish additional Accounts and subaccounts within the Construction Fund as may be provided in a Supplemental Resolution. Deposits shall be made to the credit of the Construction Fund and any Accounts and subaccounts as provided in such Supplemental Resolution. All earnings on moneys in each Account and subaccount shall be credited to such Account and subaccount.

Payments from the applicable Series Construction Account or other Account or subaccount of the Construction Fund shall be made in accordance with the provisions of this Section. Such amounts shall be disbursed pursuant to warrants drawn by the Board under the provisions of Louisiana Revised Statute 33:4094, or in such manner as the Board and the Board of Liquidation shall agree, if such statute no longer exists.

Upon completion of all Projects the Board reasonably expects to fund from any Account or subaccount in the Construction Fund, the Board shall file with the Board of Liquidation a final certificate of an Authorized Officer setting forth the balance, if any, remaining in the applicable Account or subaccount in the Construction Fund not required for the payment of Costs of Issuance or for the payment of Cost of such Projects. Any such balance shall be applied by the Board of Liquidation, at the direction of the Board (i) to additional Costs by deposit of such amount in another and separate Account or subaccount in the Construction Fund, or (ii) to the redemption of the Bonds of the Series for which such Series Construction Account was established by deposit of such amount in the Principal Account of the Debt Service Fund.

Notwithstanding anything herein to the contrary, upon occurrence of an Event of Default, any amounts remaining in any Series Construction Account for which warrants have not yet been received by the Board of Liquidation shall be transferred to the Debt Service Fund and applied in accordance with Section 10.06 hereof.

## ARTICLE VII

### REVENUES AND FUNDS

#### SECTION 7.01. Rate Covenant.

(a) The Board shall fix, charge and collect such rates, fees and other charges for the use of and the services furnished by the System and shall, from time to time and as often as shall appear necessary, revise such rates, fees and other charges so as to meet the following three independent requirements:

(i) Rate Covenant Net Revenues shall be sufficient in each Fiscal Year (the "Tested Fiscal Year") to pay (A) the amount required to pay Annual Debt Service on Senior Debt in such Fiscal Year, (B) any amount necessary to be deposited in any Series Debt Service Reserve Account to restore the amount on deposit therein to the applicable Series Debt Service Reserve Requirement, (C) the amount required to pay Annual Debt Service on Subordinate Debt in such Fiscal Year (including reserves in connection therewith and the required restoration thereof), (D) any amount necessary to be deposited in the Operating Reserve Fund to maintain the required balance therein and (E) all other amounts which the Board may by law or contract be obligated to pay.

(ii) Rate Covenant Net Revenues shall be sufficient in each Tested Fiscal Year to be at least equal to each of the following: (A) 125% of the Annual Debt Service with respect to Senior Debt for such Fiscal Year; and (B) 110% of the aggregate Annual Debt Service with respect to Senior Debt and Subordinate Debt for such Fiscal Year.

(iii) Rate Covenant Net Revenues excluding transfers from the Rate Stabilization Fund to the Revenue Fund (as provided in Section 7.05 hereof) and the proceeds of Grants in each Tested Fiscal Year shall at least equal 100% of Annual Debt Service on Senior Debt and Subordinate Debt for such Fiscal Year.

In all cases, Annual Debt Service related to the CEA GO Zone Indebtedness and all DPW Payments shall be excluded from the foregoing calculations.

The Board shall test for compliance with this Section 7.01(a) within 120 days after the end of each Tested Fiscal Year.

(b) If, subject to the provisions of subsection (c) below, the Rate Covenant Net Revenues are less than the amounts specified in (a) above, the Board must take appropriate action under the law and subsection (d) below within its powers to revise the Board's rates, fees and other charges or the method of operation of the System in order to satisfy the foregoing requirements in the next Fiscal Year following the Tested Fiscal Year (the "Current Fiscal Year").

(c) For purposes of this Section, the Board shall not be deemed to have failed to comply with the Rate Covenant and shall not be required to implement the procedures set forth in subsection (b) hereof, if an Authorized Officer of the Board certifies in writing that the Rate

Covenant Net Revenues the Board would have received in the Tested Fiscal Year would have been sufficient to meet the requirements of subsection (a) hereof if the Revenues for the Tested Fiscal Year were determined by giving effect for the entire Tested Fiscal Year to any increase or decrease in rates, fees, rentals or other charges already authorized by the Board, the Board of Liquidation, and the City to be implemented on a date that is within 120 days after the end of the Tested Fiscal Year.

(d) If the Board fails to comply with the Rate Covenant, the Board shall immediately request a Qualified Independent Consultant to submit a written report and recommendations with respect to increases in the Board's rates, fees and other charges and improvements in the operations of and the services rendered by the System and the Board's accounting and billing procedures necessary to bring the Board into compliance with the Rate Covenant. Any failure to meet the Rate Covenant will not constitute an Event of Default under this Resolution if within 180 days after the end of the Tested Fiscal Year, (1) the report and recommendations of the Qualified Independent Consultant shall be filed with the Board of Liquidation and the Board, and (2) the Board shall revise its rates, fees and charges, and alter its operations and services to conform with the report and recommendations of the Qualified Independent Consultant to the extent permitted by law.

(e) If the Board fails for three consecutive months to make the deposits required by Section 7.04 to the Interest Account and the Principal Account (or the Sinking Fund Account, as applicable), or if there is a deficiency in the Debt Service Reserve Fund for which the Board has not made required restoration payments for three consecutive months, the Board shall immediately request a Qualified Independent Consultant to submit a written report and recommendations with respect to increases in the Board's rates, fees and other charges and improvements in the operations of and the services rendered by the System and the Board's accounting and billing procedures necessary to bring the Board into compliance with the Rate Covenant. The report and recommendations shall be filed with the Board of Liquidation and the Board within 60 days from the date of discovery of failure to make the required deposits, and within 90 days from the receipt of such report, the Board shall revise its rates, fees and charges, and alter its operations and services to conform with the report and recommendations of the Qualified Independent Consultant to the extent permitted by law.

#### SECTION 7.02. Annual Budget.

(a) Before the beginning of each Fiscal Year, the Board shall adopt a budget for the operation of the System for the ensuing Fiscal Year, which shall be called the Annual Budget.

(b) The Annual Budget shall be prepared in such manner as to show in reasonable detail:

(i) Revenues estimated to be received during such Fiscal Year,

(ii) Operating Expenses expected to be incurred during such Fiscal Year,

(iii) the amount of principal of, premium, if any, and interest on the Indebtedness that will become due during such Fiscal Year,

(iv) any amount necessary to be deposited in the Debt Service Reserve Fund to restore the amount on deposit in each Account therein to the amount of the applicable Series Debt Service Reserve Requirement,

(v) any amount necessary to be deposited in the Operating Reserve Fund to restore the amount on deposit therein to the amount of the Operating Reserve Requirement,

(vi) the amount of principal of, premium, if any, and interest on the Subordinate Debt that will become due during such Fiscal Year,

(vii) any amount necessary to be deposited in the Subordinate Debt Debt Service Reserve Fund to restore the amount on deposit therein to the amount of the Subordinate Debt Debt Service Reserve Requirement, and

(viii) the amount of Net Revenues available during such Fiscal Year to meet the Rate Covenant.

The Annual Budget shall be prepared in sufficient detail to show the amounts to be deposited in the various funds, Accounts and subaccounts created by or under this Resolution or Funds and Accounts otherwise required to be maintained on behalf of the System.

(c) The Board may amend the Annual Budget at any time during the Fiscal Year.

(d) If for any reason an Annual Budget has not been adopted within the time required by subsection (a) of this Section, the last previously adopted Annual Budget shall be deemed to provide for and regulate and control expenditures during such Fiscal Year until an Annual Budget for such Fiscal Year has been adopted.

A copy of the Annual Budget and any amendments thereto shall be filed promptly with the Board of Liquidation.

SECTION 7.03. Funds and Accounts. In addition to the Construction Fund established in Section 6.01 hereof, there are hereby established the following Funds and Accounts to be held by the Board or Board of Liquidation, as applicable:

(a) Revenue Fund to be held by the Board, subject to the lien of the Resolution;

(b) Operating Fund to be held by the Board, not subject to the lien of the Resolution;

(c) Debt Service Fund, in which there shall be established an Interest Account, a Principal Account and a Sinking Fund Account, and a separate subaccount in each such Account with respect to (i) all Series of Common Debt Service Reserve Secured Bonds and (ii) each Series of Separately Secured Debt Service Reserve Fund Bonds; and (iii) each incurrence of Senior Parity Indebtedness, to be held by the Board of Liquidation, subject to the lien of the Resolution;

(d) Debt Service Reserve Fund to be held by the Board of Liquidation, subject to the lien of the Resolution, in which there shall be established (1) a Series Debt Service Reserve Account for all Series of Common Debt Service Reserve Secured Bonds, and (2) as applicable, a Series Debt Service Reserve Account for each Series of Bonds that has a Separate Series Debt Service Reserve Requirement;

(e) Operating Reserve Fund to be held by the Board, subject to the lien of the Resolution;

(f) Subordinate Debt Debt Service Fund to be held by the Board of Liquidation, subject to the lien of the Resolution;

(g) Subordinate Debt Debt Service Reserve Fund to be held by the Board of Liquidation, subject to the lien of the Resolution;

(h) Rate Stabilization Fund to be held by the Board, subject to the lien of the Resolution;

(i) Sewer System Fund to be held by the Board, subject to the lien of the Resolution; and

(j) Redemption Fund to be held by the Board of Liquidation, subject to the lien of this Resolution.

SECTION 7.04. Disposition of Revenues. All Revenues shall be deposited in the Revenue Fund to be held by the Board; provided, however, that upon an Event of Default, the Board will transfer all amounts in all Board held funds (other than the Operating Fund) to the Board of Liquidation, and the Board of Liquidation shall hold such moneys in trust for the beneficiaries hereunder.

Prior to any such Event of Default, throughout the month but no later than the 20<sup>th</sup> day of each month, the Board shall transfer from the Revenue Fund to the Operating Fund an amount sufficient to pay Operating Expenses during such month. Thereafter, Net Revenues shall be disbursed by the Board no later than the 20<sup>th</sup> day of each month in the following order (except that no distinction or preference shall exist in the use in an amount sufficient to make the following deposits of Net Revenues for payment into the Interest Account, the Principal Account or the Sinking Fund Account of the Debt Service Fund, such accounts being on a parity with each other as to payment from Net Revenues):

(a) To the Debt Service Fund:

(i) to the subaccounts established for each Series of Bonds or Other Senior Parity Indebtedness into the Interest Account, monthly, on or before the 20<sup>th</sup> day of each month, an amount equal to 1/6 of the amount of interest falling due on the next interest payment date, or such other proportionate amount as shall be necessary to ensure monthly deposits for the payment in full of interest on the next interest payment date, as set forth in the applicable Supplemental Resolutions with respect to each Series of Bonds or Other Senior Parity Indebtedness; provided, however, that if such Other Senior Parity

Indebtedness is evidenced by documents other than a Supplemental Resolution, to the related interest accounts set forth therein, as applicable; and such deposits shall be adjusted to give credit for any other available money then in such interest account or subaccount or otherwise available and designated to be used for such purpose. Moneys in the Interest Account shall be used to pay interest required to be paid on any interest payment date (including any redemption date other than a mandatory sinking fund redemption date) related to such Series of Bonds or Other Senior Parity Indebtedness, as applicable.

(ii) To the subaccounts established for each Series of Bonds or Other Senior Parity Indebtedness into the Principal Account and Sinking Fund Account, monthly, on or before the 20<sup>th</sup> day of each month, an amount equal to 1/12 of the amount of principal falling due on the next principal payment date or redemption amount due on the next sinking fund redemption date, as applicable, or such other proportionate amount as shall be necessary to ensure monthly deposits for the payment in full of principal on the next principal payment date or sinking fund redemption date, as set forth in the applicable Supplemental Resolutions with respect to each Series of Bonds or Other Senior Parity Indebtedness; provided, however, that if such Other Senior Parity Indebtedness is evidenced by documents other than a Supplemental Resolution, to the related principal and sinking fund accounts set forth therein, as applicable; and such deposits shall be adjusted to give credit for any other available money then in the principal or sinking fund account or subaccount or otherwise available and designated to be used for such purpose. Moneys in the Principal Account shall be used to pay principal required to be paid on any principal payment date related to such Series of Bonds or Other Senior Parity Indebtedness, as applicable. Moneys in the Sinking Fund Account shall be used to pay the amount required for mandatory sinking fund redemption on the applicable redemption date (including any redemption date other than a mandatory sinking fund redemption date) related to such Series of Bonds or Other Senior Parity Indebtedness, as applicable.

(b) To the Debt Service Reserve Fund the amounts, if any, required to be deposited pursuant to (i) Section 7.06 hereof, to restore the amount on deposit in each Series Debt Service Reserve Account to the related Series Debt Service Reserve Requirement or to reimburse the provider of any Credit Facility deposited in the Debt Service Reserve Fund, and (ii) a Supplemental Resolution, to fund a Series Debt Service Reserve Account to the applicable Separate Series Debt Service Reserve Requirement or Common Debt Service Reserve Requirement, and such amounts shall be transferred to the appropriate Series Debt Service Reserve Account.

(c) To the Subordinate Debt Service Fund, the amount equal to the deposits to such Funds and Accounts required by the related Supplemental Resolution or other documents evidencing such debt. To the extent that the Subordinate Debt is issued pursuant to Subordinate Debt documents, applicable amounts shall be transferred to the respective Subordinate Debt trustee. In addition, to the extent that moneys on deposit in the Debt Service Fund are insufficient to make the required interest and principal payments on Senior Debt, moneys in the Subordinate Debt Service Fund shall be used, prior to any withdrawal from the Debt Service Reserve Fund, to cure any such deficiencies, but only after withdrawals from the Sewer System Fund, the

Operating Reserve Fund and any Subordinate Debt Debt Service Reserve Fund, in that order, for that purpose.

(d) To Subordinate Debt Debt Service Reserve Fund with respect to each Subordinate Debt issue the amounts, if any, necessary to restore the amount on deposit therein to the related Subordinate Debt Debt Service Reserve Requirement. To the extent that the Subordinate Debt is issued pursuant to Subordinate Debt documents, applicable amounts shall be transferred to the respective Subordinate Debt fiduciary.

(e) To the Operating Reserve Fund the amounts, if any, necessary to restore the amounts on deposit therein to the Operating Reserve Requirement. Such amounts shall be funded within 24 months of withdrawal by depositing in such fund 1/24 of the Operating Reserve Requirement on the last Business Day of each month after such withdrawal, if necessary. Moneys in the Operating Reserve Fund shall be used to pay, to the extent necessary, Operating Expenses of the Board. In addition, to the extent that moneys on deposit in the Debt Service Fund are insufficient to make the required interest and principal payments on Senior Debt, moneys in the Operating Reserve Fund shall be used, prior to any withdrawal from the Subordinate Debt Service Fund, any Subordinate Debt Debt Service Reserve Fund, and then the Debt Service Reserve Fund, in that order, to cure any such deficiencies, but only after withdrawals from the Sewer System Fund for that purpose.

(f) To the Sewer System Fund, any moneys remaining in the Revenue Fund after all deposits and transfers required by subsections (a) through (e) of this Section have been made. To the extent that moneys on deposit in the Debt Service Fund are insufficient to make the required interest and principal payments on Senior Debt, moneys in the Sewer System Fund shall be transferred to the Debt Service Fund, and then there shall be withdrawals from the Operating Reserve Fund, the Subordinate Debt Service Fund, any Subordinate Debt Debt Service Reserve Fund, and the Debt Service Reserve Fund, in that order, to cure any such deficiencies. If not needed for that purpose, moneys in the Sewer System Fund may be used for any authorized purpose, including but not limited to transfers in an amount that the Executive Director may determine, in his discretion, to transfer to the Rate Stabilization Fund or the Debt Service Fund to be used to redeem Bonds as herein provided for deposit in any Account therein. Notwithstanding the foregoing, moneys in the Sewer System Fund shall be used on January 15 and July 15 of each year through July 15, 2026, to pay an amount to the Board of Liquidation necessary to make those certain principal and interest payments related to the CEA GO Zone Indebtedness and on any date on which funds are available to make the DPW Payments; provided, however, that if the Board does not have Net Revenues sufficient to make such payments when required, the Board will make such payments to the Board of Liquidation or the City when and if Net Revenues are available, and the failure to make such payments shall not constitute an Event of Default under this Resolution. Additionally, moneys remaining in the Sewer System Fund to the extent all transfers required by subsection (a) through (f) of this section have been made, shall be applied for any lawful purpose of the Board.

The Board shall provide the Board of Liquidation with a monthly certificate which certifies that the transfers required by the foregoing subsections have been made and the specified respective balances of such funds. If the Board fails to make the transfers required by subsections (a) through (f) of this Section, the Board of Liquidation shall give notice of such

failure to the Board within 10 days of such failure. Notwithstanding anything in this Resolution to the contrary, at any time that the Board is required to make transfers pursuant to subsections (a) through (f) of this Section, and there are insufficient Net Revenues to make all required transfers pursuant to such subsections, the Board shall make the transfers in the order set forth above first from Net Revenues, then from any other legally available monies.

In the event this Section requires transfers to the Debt Service Fund or the Debt Service Reserve Fund from any Fund held by the Board, the Board shall effect that transfer to the Board of Liquidation in accordance with this Section.

The Board of Liquidation shall provide for a mandatory sinking fund redemption of any Term Bonds in accordance with the schedules set forth in the Supplemental Resolution for such Bonds; provided, however, that on or before the 45th day next preceding any such sinking fund payment date, the Board may:

- (i) deliver to the Board of Liquidation for cancellation Term Bonds of the maturity required to be redeemed on such sinking fund payment date in any aggregate Principal Amount desired; or
- (ii) instruct the Board of Liquidation to apply a credit against the Board's next sinking fund redemption obligation for any such Term Bonds that previously have been redeemed (other than through the operation of the sinking fund) and canceled but not theretofore applied as a credit against any sinking fund redemption obligation.

Upon the occurrence of any of the events described in the subsections (i) or (ii) above, the Board of Liquidation shall credit against the Board's sinking fund redemption obligation on the next sinking fund payment date the amount of such Term Bonds so delivered or previously redeemed. Any Principal Amount of such Term Bonds in excess of the Principal Amount required to be redeemed on such sinking fund payment date shall be similarly credited in such order as may be determined by the Board against future payments to the Sinking Fund Account and shall similarly reduce the Principal Amount of the Term Bonds of the applicable Series to be redeemed on the next sinking fund payment date. Within seven days of receipt of such Term Bonds or instructions to apply as a credit, any amounts remaining in the Sinking Fund Account in excess of the amount required to fulfill the remaining required sinking fund redemption obligation on the next sinking fund payment date shall be used in such manner as determined at the direction of the Board of Liquidation.

In the event the amount on deposit in the Interest Account on any interest payment date exceeds the amount required to pay interest on the Senior Debt on the next interest payment date, the Board shall, if the amount on deposit in any Series Debt Service Reserve Account is less than the applicable Series Debt Service Reserve Requirement, transfer such excess to any Series Debt Service Reserve Account to the extent of such deficiency (on a *pro rata* basis if funds are not sufficient to cause the Series Debt Service Reserve Requirement to be fully funded at the Common Debt Service Reserve Requirement or Separate Series Debt Service Reserve Requirement), and otherwise retain any remaining excess in the Interest Account or transfer any remaining excess to the related Principal Account to be credited against subsequent required deposits thereto, as determined by the Board of Liquidation.

In the event the amount on deposit in the Principal Account or Sinking Fund Account on any principal or mandatory redemption payment date exceeds the amount required on such date to pay Bonds at maturity or to redeem Term Bonds pursuant to mandatory sinking fund requirements, the Board shall, if the amount on deposit in any Series Debt Service Reserve Account is less than the applicable Series Debt Service Reserve Requirement, transfer such excess to the Series Debt Service Reserve Account to the extent of such deficiency (on a *pro rata* basis if funds are not sufficient to cause the Series Debt Service Reserve Requirement to be fully funded at the Common Debt Service Reserve Requirement or Separate Series Debt Service Reserve Requirement), and otherwise retain such excess in the Principal Account or transfer such excess to the Interest Account to be credited against subsequent required deposits thereto, as determined by the Board of Liquidation.

SECTION 7.05. Rate Stabilization Fund. The Rate Stabilization Fund authorized by Section 7.03 shall be held by the Board in an Account separate and apart from all other funds and Accounts of the Board and payments therefrom shall be made as hereinafter provided. Moneys may be transferred by the Executive Director to the Rate Stabilization Fund from the Revenue Fund as provided in Section 7.04 as determined by the Executive Director. At any time the Executive Director shall transfer from the Rate Stabilization Fund to the Revenue Fund an amount determined by the Executive Director.

SECTION 7.06. Debt Service Reserve Fund.

(a) The Series Debt Service Reserve Account maintained for all Common Debt Service Reserve Secured Bonds shall be funded at all times to the Common Debt Service Reserve Requirement, and all other Series Debt Service Reserve Accounts shall be funded at all times to the applicable Separate Series Debt Service Reserve Requirement as set forth in a Supplemental Resolution. Amounts in each Series Debt Service Reserve Account shall be used to pay debt service on the related Series of Bonds on the date such debt service is due if insufficient funds for that purpose are available in the related Series subaccount in the Interest Account and the related Series subaccount in the Principal Account (but only to the extent amounts in such subaccounts are less than the amounts required). Amounts in each Series Debt Service Reserve Account shall be pledged to Holders of the Bonds secured by such Series Debt Service Reserve Account.

(b) Within five Business Days after each Reserve Determination Date, the Board of Liquidation shall determine if the balance on deposit in each Series Debt Service Reserve Account was, as of the Reserve Determination Date, at least equal to the applicable Series Debt Service Reserve Requirement. In making such determination, any obligations in the Series Debt Service Reserve Account shall be valued in accordance with Section 8.01.

(c) In the event the amount on deposit in a Series Debt Service Reserve Account exceeds the applicable Series Debt Service Reserve Requirement, the Board of Liquidation shall (a) transfer such excess to the Debt Service Fund to be deposited in the related Series subaccount in the Interest Account and the related Series subaccount in the Principal Account to the extent amounts in such subaccounts are less than the amounts required to be paid on the next interest payment date and principal payment date, respectively, and (b) transfer such excess to the Board to be used to pay all or any portion of Costs designated by the Board and approved by Bond

Counsel; provided, however, that if an Authorized Officer of the Board calls for a Reserve Determination Date in connection with the refunding and/or defeasance of a Series of Bonds, then the Board of Liquidation is authorized to take such refunding and/or defeasance into account in valuing the Series Debt Service Reserve Account securing such Series of Bonds and is further authorized to direct the Board of Liquidation to transfer the amount of any surplus arising from such valuation to the Debt Service Fund.

(d) If at any time it shall be necessary to use moneys in the Debt Service Reserve Fund for the purpose of paying principal or interest on Bonds secured by a Series Debt Service Reserve Account as to which there would otherwise be a default, then the moneys so used shall be replaced within twenty-four (24) months by depositing in the Debt Service Reserve Fund twenty-four (24) substantially equal consecutive monthly deposits, commencing not later than the month following the occurrence of such deficiency. In the event of a deficiency in more than one Series Debt Service Reserve Account, the Board of Liquidation shall credit each deposit required in this Section 7.06(d) to each Series Debt Service Reserve Account in which such a deficiency exists on a pro rata basis.

(e) In lieu of or in addition to cash or Permitted Investments, at any time the Board may cause to be deposited to the credit of any Series Debt Service Reserve Account any form of Credit Facility, including a reserve fund surety bond, in the amount of all or a portion of the Series Debt Service Reserve Requirement, irrevocably payable to the Board of Liquidation or the Paying Agent as beneficiary for the Holders of the respective Series of Bonds, provided that (a) the Credit Facility provider has a credit rating in one of the three highest credit rating categories by at least one Rating Agency at the time the Credit Facility is deposited in the Series Debt Service Reserve Account, (b) the obligation of the Board to pay the fees of and to reimburse the provider of the Credit Facility is subordinate to its obligation to pay debt service on the respective Series of Bonds, (c) the initial term of the Credit Facility is at least 36 months, (d) the only condition to a drawing under the Credit Facility is insufficient amounts in the applicable Funds and Accounts held by the Board of Liquidation with respect to such Series of Bonds when needed to pay debt service on such Series or the expiration of the Credit Facility, and (e) the provider of the Credit Facility shall notify the Board and the Board of Liquidation at least 18 months prior to the expiration of the credit facility. If (1) the Board receives such expiration notice and the provider of such Credit Facility does not extend its expiration date, or (2) the Board receives notice of the termination of the Credit Facility, the Board shall (A) immediately provide a substitute credit facility that meets the requirements set forth in the foregoing sentence, or (B) replenish the Series Debt Service Reserve Account to the applicable Series Debt Service Reserve Requirement by making the deposits required in Section 7.06(d) hereof and/or, if applicable, initiating a draw on such Credit Facility.

If a disbursement is made pursuant to any Credit Facility, the Board shall either (a) replenish the applicable Series Debt Service Reserve Account to the applicable Series Debt Service Reserve Requirement by making the deposits required in Section 7.06(d) hereof, or (b) reinstate the maximum limits of such Credit Facility within twenty-four (24) months pursuant to the terms of the Credit Facility.

Amounts, if any, released from any Series Debt Service Reserve Account upon deposit to the credit of such Account of a Credit Facility shall, upon designation by an Authorized Officer

of the Board, accompanied by an Opinion of Bond Counsel that such use will not adversely affect the exclusion from gross income of interest on the respective Series of Bonds, be transferred by the Board of Liquidation (a) to the subaccount of the Principal Account with respect to such Series of Bonds and used to pay principal of or to redeem such Bonds, or (b) to the Board to be used to pay all or any portion of the Costs designated by the Board and approved by Bond Counsel.

SECTION 7.07. Redemption of Bonds. The Board of Liquidation shall have the authority to create a separate Account within the Debt Service Fund for each Series of Bonds, as necessary, into which it shall deposit (1) any moneys transferred from the Sewer System Fund for such purpose as directed by the Board, , and (2) any other moneys (other than proceeds of Bonds which are to be used to redeem Indebtedness) which may be available to the Board of Liquidation to redeem bonds in advance of maturity and which the Board has requested the Board of Liquidation to so use. The Board of Liquidation shall hold the amounts in any Account in the Debt Service Fund in trust solely for the benefit of the holders of the Bonds for which such Account was created and use such amounts to redeem such Bonds in advance of maturity; provided, however, that the Board of Liquidation may deposit any such amounts to an Escrow Trustee (as defined in Section 13.01) to be held in trust solely for the benefit of the holders of the Bonds for which such Account was created and used to redeem such Bonds in advance of maturity.

Notwithstanding the foregoing, if at any time the amount on deposit and available therefor in the Interest Account or Principal Account of the Debt Service Fund is insufficient to pay the principal of and interest on the Bonds then due, the Board of Liquidation shall withdraw from the any Account established to redeem Bonds (other than amounts held therein for the redemption of the Bonds for which (i) a notice of redemption shall have been given and/or (ii) Government Securities have been purchased with the effect of defeasing such Bonds pursuant to the terms of the Supplemental Resolution providing for the issuance of such Bonds) and deposit in the Debt Service Fund the amount necessary to meet the deficiency.

SECTION 7.08. Payments In Aid of Construction. The Board shall use any payments made to the Board by any persons as payment for constructing water, wastewater or stormwater facilities at the request of such persons, whether such payments are made prior to or after such construction, only to pay the cost of such construction. After completion of such construction, the Board may use any moneys remaining after such construction is completed to pay all or any portion of Costs designated by the Board and approved by Bond Counsel.

SECTION 7.09. Other Funds and Accounts. The Board may establish in each Supplemental Resolution such other funds and Accounts within funds as the Board may determine to be desirable.

SECTION 7.10. Pledge of Net Revenues and Certain Funds and Accounts. Net Revenues are hereby pledged equally and ratably to the payment of principal of and interest on all Senior Debt, subject only to the right of the Board and the Board of Liquidation to make application thereof to other purposes as provided herein. All funds created hereunder other than the Operating Fund shall be trust funds and are hereby pledged (except as provided in the next sentence hereof) equally and ratably to the payment of the principal of and interest on all Senior

Debt, subject only to the right of the Board or the Board of Liquidation to make application thereof to other purposes as provided herein. The lien and trust hereby created are for the benefit of the Holders of Senior Debt and for their additional security until all the Senior Debt has been paid; provided, however, that the Common Debt Service Reserve Secured Bonds or Separate Series Debt Service Reserve Secured Bonds shall only be secured by the account in the Debt Service Reserve Fund for Common Debt Service Reserve Secured Bonds or each Separate Series Account in the Debt Service Reserve Fund for Separate Series Debt Service Reserve Secured Bonds, and moneys in any account of the Debt Service Fund relating to a particular Senior Debt shall only secure such Senior Debt.

SECTION 7.11. Disposition of Balances in Funds after Payment of Indebtedness. After the principal of and premium, if any, and interest on all of the Indebtedness, any amounts required to be paid pursuant to the terms of this Resolution or any Supplemental Resolution and all expenses and charges herein required have been paid or provision therefor has been made, the Board of Liquidation shall pay to the Board any balance remaining in any fund then held by it.

SECTION 7.12. Acknowledgment of Board as Collection Agent for the City with Respect to Sanitation Charges. The Board, pursuant to a Cooperative Endeavor Agreement between the City and the Board, acts as collection agent for the City for certain sanitation charges which are identified as such on the billing statement (the "Sanitation CEA"). As of the date hereof, it is acknowledged that not all bills are paid in full. For all accounts processed and billed after January 1, 2014 for water rates and charges, sewer rates and charges, and sanitation charges, the Board is hereby authorized to account for such partial payments on a *pro rata* basis amongst the three billed amounts. Past due bills prior to January 1, 2014 shall be collected by the Board and paid to the City.

## ARTICLE VIII

### INVESTMENT OF FUNDS

#### SECTION 8.01. Investment of Funds.

(a) Any moneys held as part of any Fund or Account shall be invested or reinvested by the Board of Liquidation and by the Board at the direction of an Authorized Officer of the Board of Liquidation or the Board, as applicable, to the extent such investments are permitted by law in Permitted Investments. Prior to the filing of the certificate of completion related to improvements of the System which are financed with the proceeds of Bonds issued hereunder, all earnings on moneys held in the Construction Account shall be retained in such fund. Subsequent to the filing of the certificate of completion, the Board of Liquidation shall deposit any moneys remaining in a Construction Account in the Construction Fund to the related subaccount of the Interest Account of the Debt Service Fund. The investments shall have maturities consonant with the need for funds as estimated by the Board.

(b) Any moneys held as part of the Debt Service Fund and not immediately required for the purposes of such respective fund, shall be invested or reinvested by the Board of Liquidation in Government Obligations that mature not later than the next date on which Principal on any Bonds is due and payable. Earnings on moneys held in the Series Account in the Debt Service Fund shall be transferred to the related subaccount of the Interest Account of the Debt Service Fund.

(c) Any moneys held as part of the Revenue Fund, Operating Reserve Fund, Construction Fund, the Sewer System Fund and the Rate Stabilization Fund and not immediately required for the purposes of such respective Fund, as the case may be, shall be invested and reinvested by the Board in Permitted Investments.

(d) Any moneys held as part of the Debt Service Reserve Fund shall be invested or reinvested by the Board of Liquidation in Permitted Investments that mature not later than five years from the date of acquisition of the investment or the final maturity of the applicable Series of Bonds unless invested in Permitted Investments that allow for a par withdrawal within 24 hours of notice.

(e) Any moneys held as part of the Subordinate Debt Service Fund and Subordinate Debt Service Reserve Fund not immediately required for the purposes thereof, as the case may be, shall be invested or reinvested by the Board of Liquidation in Permitted Investments.

(f) In computing the amount in any fund or Account created by this Resolution, except for the Debt Service Reserve Fund, obligations purchased as an investment of moneys therein shall be valued at cost or fair market value thereof, whichever is lower, plus accrued interest. Investments in the Debt Service Reserve Fund shall be valued at least semiannually at the fair market value at least semiannually at the fair market value thereof plus accrued interest. Such valuations for each such fund or Account, other than the Debt Service Reserve Fund, shall be made by the party holding each such fund or Account at least annually not later than the end of each Fiscal Year and at such other times as the Board may deem appropriate.

(g) For the purposes of this Section, investment agreements shall be deemed to mature on the date on which amounts deposited thereunder may be withdrawn without penalty in accordance with the terms of such agreements.

The Board of Liquidation may sell or redeem any obligation in which moneys shall have been invested as provided in this Article to the extent necessary to provide cash in the respective funds or accounts, to make any payments required to be made therefrom or to facilitate the transfers of money between various Funds and Accounts as may be required or permitted from time to time pursuant to the provisions of this Article.

In computing the value of the assets of any fund or account established hereunder, investments and accrued interest thereon shall be deemed a part thereof

Notwithstanding provisions herein for transfer to or holding in particular Funds and Accounts amounts received or held by the Board and Board of Liquidation hereunder, for purposes of making, holding and disposing of investments, investments (except amounts held in any arbitrage rebate fund) in any and all Funds and Accounts created by this Resolution may be commingled (except amounts held in any arbitrage rebate fund), provided that, notwithstanding any such commingling, the Board and the Board of Liquidation shall at all times account for such investments in the Funds and Accounts to which they are credited and otherwise as provided in this Resolution.

The investments authorized by this Article shall at all times be subject to the provisions of applicable law, as amended from time to time. In the event that the Board and the Board of Liquidation, based upon an opinion of Bond Counsel, addressed to the Board and the Board of Liquidation, that it is necessary to restrict or limit the yield on the investment of any money or securities held in any fund in order to avoid the Bonds being considered "arbitrage bonds" within the meaning of section 148 of the Code, the Board and the Board of Liquidation shall take whatever action is necessary to properly restrict or limit the yield on the investment in accordance with such instructions.

## ARTICLE IX

### PARTICULAR COVENANTS

SECTION 9.01. Payment of Indebtedness; Limited Obligations. The Board and the Board of Liquidation shall promptly pay or cause to be paid when due the principal of (whether at maturity, by acceleration, call for redemption or otherwise) premium, if any, and interest on the Indebtedness at the places, on the dates and in the manner provided herein and in the Indebtedness according to the true intent and meaning thereof, provided, however, that such obligations are not general obligations of the Board but are limited obligations payable solely from Net Revenues, except to the extent payable from the proceeds of Indebtedness, the income, if any, derived from the investment thereof, certain reserves, proceeds of Credit Facilities, income from investments pursuant to this Resolution or proceeds of insurance, which Net Revenues and other moneys are hereby specifically pledged to such purposes in the manner and to the extent provided herein. The Indebtedness does not constitute a debt of the City of New Orleans, but is payable as to principal and interest solely from the Net Revenues pledged for that purpose.

SECTION 9.02. Limitations on Indebtedness. The Board shall not issue any bonds, notes or other obligations that shall be secured by a pledge of Net Revenues (a) senior to the pledge of Net Revenues securing the Senior Debt, (b) except in compliance with Section 4.03 or Section 4.04, on a parity with the pledge of Net Revenues securing the Senior Debt, or (c) except in compliance with Section 4.05, subordinate to the pledge of Net Revenues securing the Senior Debt. The Board shall not issue Bonds, Other Senior Parity Indebtedness or Subordinate Debt unless the Board complies with the provisions of Sections 4.03, 4.04 or 4.05, as applicable.

SECTION 9.03. Covenants and Representations of Board. The Board shall faithfully observe and perform all covenants, conditions and agreements on its part contained in this Resolution, in every issue of Indebtedness issued hereunder and in all proceedings of the Board pertaining thereto. The Board represents that it is duly authorized under the Act to issue the Indebtedness, to execute this Resolution, and to pledge Net Revenues in the manner and to the extent herein set forth. The Board covenants that it will take all action necessary for issuance of the Indebtedness and the execution of this Resolution, and that upon issuance the Indebtedness will be valid and enforceable obligations of the Board according to the import thereof.

SECTION 9.04. Covenants with Credit Banks, Insurers, etc. The Board may make such covenants and agreements in a Supplemental Resolution as it may determine to be appropriate with any insurer, credit bank or other financial institution that agrees to insure or to provide a Credit Facility. Such covenants and agreements may be set forth in the applicable Supplemental Resolution and shall be binding on the Board and all the holders of Indebtedness the same as if such covenants were set forth in full in this Resolution.

SECTION 9.05. Operation and Maintenance. The Board shall establish and enforce reasonable rules and regulations governing the use of and the services furnished by the System, shall maintain and operate the System in an efficient and economical manner, shall maintain the same in good repair and sound operating condition and shall make all necessary repairs, replacements and renewals. All compensation, salaries, fees and wages paid by the Board in

connection with the operation and maintenance of the System shall be reasonable. The Board shall observe and perform all of the terms and conditions contained in the Act, and comply with all valid acts, rules, regulations, orders and directions of any legislative, executive, administrative or judicial body applicable to the System or the Board.

SECTION 9.06. Free Service, Competing Service, Billing and Enforcement of Charges.

(a) The Board shall not permit connections to or use of the System or provide any services of the System without making a charge therefor in accordance with the Board's schedule of rates, fees and charges for the System other than those connections, use or services already in existence or as may be required by law; provided, however, the Board may accept proffers and other forms of payment in lieu of cash payments that the Board deems are in its best interest to accept, provided that such proffers do not cause a violation of the rate covenant set forth in Section 7.01.

(b) The Board shall not provide, grant any franchise to provide or give consent for anyone else to provide any services which would compete with the System unless the Board determines that such franchise or provision of services would provide services that the Board has determined are not in its best interest to provide and would not materially impair the interests of the holders of Indebtedness.

(c) The Board shall bill customers for the services of the System on a regular basis.

(d) If any rates, fees or other charges for the use of or for the services furnished by the System shall not be paid after the same shall become due and payable, the Board shall, to the extent permitted by applicable laws and regulations, disconnect the premises from the System or otherwise suspend service to such premises until such delinquent rates, fees or other charges and any interest, penalties or charges for reconnection of service to such delinquent customer shall have been paid in accordance with law, the policies of the Board, or a payment plan with respect to such amounts has become effective.

SECTION 9.07. Sale or Encumbrance of System

(a) Neither the System nor any integral part thereof shall be leased, sold, mortgaged or otherwise disposed of without an Qualified Independent Consultant's certification that such disposition will not have a negative impact on the overall viability of the System unless the proceeds of such disposition, together with any other legally available moneys, are sufficient to pay the principal of, premium, if any, and interest on all Indebtedness then Outstanding and the proceeds are used for such purpose. The Board shall have and hereby reserves the right, however, to sell, lease, or otherwise dispose of any of the property comprising a part of the System in the following manner, if any one of the following conditions exists: (i) such property is not necessary for the operation of the System; (ii) such property is not useful in the operation of the System; (iii) such property is not profitable in the operation of the System; or (iv) the disposition of such property will be advantageous to the System and will not adversely affect the security for the Bondholders. All proceeds of any such sale shall be deposited in the Sewer System Fund.

(b) Prior to the sale or lease of assets constituting in excess of 3% of the net assets on the Board's most recent audited balance sheet to an entity other than a political subdivision, the Board shall:

(i) obtain a written report of a Qualified Independent Consultant, describing the financial impact of any such sale or lease on the Revenues, Net Revenues, and balance sheet of the Board;

(ii) obtain a written report of a Qualified Independent Consultant, setting forth alternatives to the proposed sale or lease of such assets and comparing such alternatives to the proposal;

(iii) obtain an opinion of a Qualified Independent Consultant to the effect that such sale or lease will not, in the current or any future Fiscal Year, result in the Board not meeting the required Rate Covenant or that Rate Covenant will be less than 100% of the Annual Debt Service on all Indebtedness to be Outstanding after such sale or lease. In reaching its conclusion, the Qualified Independent Consultant shall take into consideration such factors affecting the Net Revenues of the Board as the Consultant may deem significant, including (A) anticipated diminution of Net Revenues, (B) anticipated increases or decreases in Operating Expenses whether or not attributable to such sale or lease, and (C) the reduction in the Annual Debt Service attributable to the application of the sale proceeds to the provision for payment of Indebtedness theretofore Outstanding; and

(iv) make a written determination, approved by the Board, that the proposed sale or lease is more beneficial than (a) not entering into such sale or lease and (b) entering into one of the alternatives reviewed and presented by a Qualified Independent Consultant.

Notwithstanding anything in this Resolution to the contrary, the Board may acquire items of personal property constituting part of the System under lease purchase agreements or similar financing arrangements entered into in the ordinary course of business which may be subject to purchase money security interests or other liens in an aggregate amount not to exceed five percent (5%) of the net amount of plant, property and equipment.

Notwithstanding the provisions of subsection (a) of this Section, the Board may sell, transfer or otherwise dispose of all or substantially all of the System for purposes of consolidating the System with or merging the System into one or more regional systems of which the Board is a participating member jurisdiction or consolidating and merging the water system of the Board and the System into one system if: (1) the successor entity assumes in writing all of the Indebtedness then Outstanding, (2) the successor entity covenants in writing to comply with the Rate Covenant, (3) the Board obtains an opinion of Bond Counsel, subject to the customary exceptions and qualifications, substantially to the effect that the assumption by the successor entity of all, of the Indebtedness then Outstanding shall not have an adverse effect on the tax-exempt status of the interest on any such Indebtedness the interest on which was excludable from gross income for purposes of Federal income taxation when issued, (4) an opinion of a Qualified Independent Consultant to the effect that such sale will not, in the current

or any future Fiscal Year, result in Net Revenues not meeting the required Rate Covenant or that Rate Covenant will be less than 100% of the Annual Debt Service on all Indebtedness to be Outstanding after such sale. In reaching its conclusion, the Qualified Independent Consultant shall take into consideration such factors as such Qualified Independent Consultant may deem significant, including (i) anticipated diminution of Net Revenues, (ii) anticipated increases or decreases in Operating Expenses whether or not attributable to such sale, and (iii) reduction in the Annual Debt Service attributable to the application of the sale proceeds to the provision for payment of Indebtedness theretofore Outstanding. Such sale may include a partial interest in a sewer facility owned or to be owned in whole or in part by the Board. All proceeds of any such sale shall be deposited in the (on a *pro rata* basis if funds are not sufficient to cause the Series Debt Service Reserve Requirement to be fully funded at the Common Debt Service Reserve Requirement or Separate Series Debt Service Reserve Requirement), and then the Sewer System Fund.

SECTION 9.08. Insurance. The Board shall continuously maintain insurance with recognized responsible commercial insurance companies against such risks and in such amounts as are customary for public bodies owning and operating similar systems, including (a) insurance against loss or damage to the System, (b) public liability insurance against liability for bodily injury, including death resulting therefrom, and for damage to property, including loss of use thereof, arising out of the ownership or operation of the System, and (c) workers' compensation insurance with respect to the System.

In lieu of insurance written by commercial insurance companies, and to the extent allowed by the laws of the State, the Board may maintain a program of self-insurance or participate in group risk financing programs, including sponsored insurance programs, risk pools, risk retention groups, purchasing groups and captive insurance companies, and in state or Federal insurance programs; provided, however, that the Board shall obtain and maintain on file a tri-annual favorable written opinion of a Qualified Independent Consultant that such alternative is reasonably acceptable with respect to the coverages under all the circumstances.

SECTION 9.09. Damage, Destruction, Condemnation and Loss of Title. If all or any part of the System is destroyed or damaged by fire or other casualty, condemned or lost by failure of title, the Board shall restore promptly the property destroyed or damaged to substantially the same condition as before such destruction, damage; condemnation or loss of title with such alterations and additions as the Board may determine and which will not impair the capacity or character of the System for the purpose for which it is then being used or is intended to be used. The Board shall apply so much as may be necessary of such Net Proceeds received on account of any such destruction, damage, condemnation or loss of title to payment of the cost of such restoration, either on completion or as the work progresses. If such Net Proceeds are not sufficient to pay in full the cost of such restoration, the Board shall pay so much of the cost as may be in excess of such Net Proceeds from any legally available moneys. Any balance of such Net Proceeds remaining after payment of the cost of such restoration shall be deposited in the Debt Service Fund to the extent needed to make any payments with respect to any Indebtedness, otherwise such monies shall be deposited in the Revenue Fund.

SECTION 9.10. Records and Accounts; Inspections and Reports. The Board shall keep proper books of records and accounts, separate from any of its other records and accounts,

showing complete and correct entries of an transactions relating to the System, and the Trustee shall have the right at all reasonable times to inspect the System and all records, accounts and data relating thereto. The Board shall also cause a certified audit of its records and accounts to be made in accordance with generally accepted accounting principles by an independent certified public accountant at the end of each Fiscal Year which shall reflect in reasonable detail the financial condition and results of operation of the System and whether the Board has complied with the Rate Covenant and such report shall be delivered to the Board of Liquidation.

SECTION 9.11. Capital Budget. The Board shall annually adopt a multi-year financial plan for capital expenses encompassing at least the forthcoming 5 fiscal years.

## ARTICLE X

### DEFAULTS AND REMEDIES

SECTION 10.01. Events of Default. Each of the following events shall be an Event of Default:

(a) Default in the due and punctual payment of the principal of or premium, if any, on any Bond (whether at maturity, call for redemption or otherwise);

(b) Default in the due and punctual payment of the interest on any Bond;

(c) Subject to the remedial provisions of Section 7.01, failure of the Board to observe and perform any of its other covenants, conditions or agreements under this Resolution or in the Bonds for a period of 60 days after written notice either from the Paying Agent or the Board of Liquidation or holders of not less than 25% in aggregate Principal Amount of Bonds then Outstanding (unless the Paying Agent, the Board of Liquidation or the holders agree in writing to an extension of such time prior to its expiration), specifying such failure and requesting that it be remedied, or in the case of any such default that cannot with due diligence be cured within such 60 day period, failure of the Board to proceed promptly to cure the same and thereafter prosecute the curing of such default with due diligence within 60 days thereafter.

(d) The failure of the Board to make any required payment with respect to any Other Senior Parity Indebtedness, and any period of grace with respect thereto shall have expired, or an event of default as defined in any mortgage, indenture, or instrument under which there may be issued, or by which there may be secured or evidenced any Other Senior Parity Indebtedness, shall occur, which event of default shall not have been waived by the holder of such mortgage, indenture or instrument; provided, however, that such default shall not constitute an Event of Default within the meaning of this Section if within 30 days, or within the time allowed for service of a responsive pleading if any proceeding to enforce payment of the Other Senior Parity Indebtedness is commenced, the Board in good faith shall commence proceedings to contest the obligation to pay or the existence of such Other Senior Parity Indebtedness.

(e) (1) Commencement by the Board of a voluntary case under the Federal bankruptcy laws, as now or hereafter constituted, or any other applicable Federal or state bankruptcy, insolvency or similar law, (2) consent by the Board to the appointment of a receiver, liquidator, assignee, trustee, custodian, sequestretor or other similar official for the Board, the System or any substantial part of the Board's property, or to the taking possession by any such official of the System or any substantial part of the Board's property, (3) making by the Board of any assignment for the benefit of creditors, or (4) taking corporate action by the Board in furtherance of any of the foregoing;

(f) The entry of any (1) decree or order for relief by a court having jurisdiction over the Board or its property in an involuntary case under the Federal bankruptcy laws, as now or hereafter constituted, or any other applicable Federal or state bankruptcy, insolvency or other law, (2) appointment of a receiver, liquidator, assignee, trustee, custodian, sequestrator or similar

official for the Board, the System or any substantial part of the Board's property, or (3) order for the termination or liquidation of the Board or its affairs; or

(g) Failure of the Board within 60 days after the commencement of any proceedings against it under the Federal bankruptcy laws, or any other applicable Federal or state bankruptcy, insolvency or similar law, to have such proceedings dismissed or stayed.

SECTION 10.02. Notice to Holders of Senior Debt of Certain Default. If the Board of Liquidation is required to draw moneys from the Debt Service Reserve Fund to pay principal or interest on the Bonds, then the Board of Liquidation shall cause to be posted on EMMA a Material Event Notice as provided in any continuing disclosure agreement designed to comply with Rule 15c2-12(b)(5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

SECTION 10.03. Acceleration. Upon the occurrence and continuation of an Event of Default, either the Board of Liquidation (by notice in writing by the Board) or holders of not less than 25% in aggregate Principal Amount of Bonds then Outstanding (by notice in writing to the Board and the Board of Liquidation) may declare the entire unpaid principal of the Bonds due and payable and, thereupon, the entire unpaid principal of the Bonds shall forthwith become due and payable. Upon any such declaration the Board shall forthwith pay to the holders of the Bonds the entire unpaid principal of premium, if any, and accrued interest on the Bonds, but only from Net Revenues and other moneys herein specifically pledged for payments of Bondholders. If at any time after such a declaration and before the entry of a final judgment or decree in any suit, action or proceeding instituted on account of such default or before the completion of the enforcement of any other remedy under this Resolution, the principal of all Bonds that have matured or been called for redemption pursuant to any sinking fund provision and all arrears of interest have been paid and any other Events of Default which may have occurred have been remedied, then the Board of Liquidation may, by written notice to the Board, rescind or annul such declaration and its consequences. No such rescission or annulment shall extend to or affect any subsequent default or impair any right consequent thereon. Subordinate Debt may not be accelerated if any Senior Debt is outstanding.

SECTION 10.04. Proceedings Brought by the Board of Liquidation

(a) Whether or not a declaration shall be made by the Board of Liquidation or Bondholders pursuant to Section 10.01, if an Event of Default shall happen and shall not have been remedied, then and in every such case, the Board of Liquidation may proceed to protect and enforce its rights and the rights of the registered owners of the Bonds under this Resolution by a suit or suits in equity or at law, whether for the specific performance of any covenant herein contained, or in aid of the execution of any power herein granted, or for an accounting against the Board as if the Board were the trustee of an express trust, or for the enforcement of any other legal or equitable right as the Board of Liquidation, being advised by counsel, shall deem most effectual to enforce any of its rights or to perform any of its duties under this Resolution.

(b) Upon the occurrence of an Event of Default, by suit, action or proceedings in any court of competent jurisdiction, the Board of Liquidation shall be entitled to obtain the appointment of a receiver of the moneys, securities and funds then held by the Board in any fund or account under this Resolution and of the Revenues and the whole or any part of the System,

with all such powers as the court making such appointment shall confer. Such receiver may take possession of the System, operate and maintain it, and collect and receive the Revenues in the same manner as the Board itself might do, including, if necessary, the use of a lock box, and shall apply the same in accordance with the obligations of the Board. Notwithstanding the appointment of any receiver, the Board of Liquidation shall be entitled to retain possession and control of and to collect and receive income from, any moneys, securities and funds deposited or pledged with it under the resolution or agreed or provided to be delivered to or deposited or pledged with it under this Resolution.

(c) All rights of action under this Resolution may be enforced by the Board of Liquidation without the possession of any of the Bonds or the production thereof on the trial or other proceedings.

(d) The registered owners of a majority in Principal Amount of the Bonds Outstanding may direct the time, method and place of conducting any proceeding for any remedy available to the Board of Liquidation, provided that the Board of Liquidation shall have the right to decline to follow any such direction if the Board of Liquidation shall be advised by counsel that the action or proceeding so directed may not lawfully be taken, or if the Board of Liquidation in good faith shall determine that the action or proceeding so directed would involve the Board of Liquidation in personal liability or be unjustly prejudicial to the Bondholders not parties to such direction. The Board may only follow directions from the holders of Subordinate Debt if no Senior Debt is outstanding.

(e) Regardless of the happening of an Event of Default, the Board of Liquidation shall have power to, but unless requested in writing by the registered owners of a majority in Principal Amount of the Bonds then Outstanding and furnished with reasonable security and indemnity, shall be under no obligation to, institute and maintain such suits and proceedings as it may deem necessary or expedient to prevent any impairment of the security under this Resolution by any acts which may be unlawful or in violation of this Resolution, or necessary or expedient to preserve or protect its interests and the interests of the Bondholders.

(f) No remedy conferred by this Resolution upon or reserved to the Board of Liquidation and Bondholders is intended to be exclusive of any other remedy, but each such remedy shall be cumulative and shall be in addition to any other remedy given to the Board of Liquidation and holders of Bonds hereunder or now or hereafter existing at law, in equity or by statute.

No delay or omission to exercise any right or power accruing upon any default or Event of Default shall impair any such right or power or shall be construed to be a waiver of any such default or Event of Default or acquiescence therein, and every such right and power may be exercised from time to time and as often as may be deemed expedient.

No waiver of any default or Event of Default hereunder by the Board of Liquidation or Bondholders shall extend to or shall affect any subsequent default or Event of Default or shall impair any rights or remedies consequent thereon.

SECTION 10.05. Right of Bondholders to Direct Proceedings. Anything in this Resolution to the contrary notwithstanding, the holders of a majority in aggregate Principal Amount of Bonds then Outstanding shall have the right, at any time, by an instrument or instruments in writing executed and delivered to the Board of Liquidation, to direct the method and place of conducting all proceedings to be taken in connection with the enforcement of the terms and conditions of this Resolution or any other proceedings hereunder, provided, however, that such direction shall not be otherwise than in accordance with the provisions of law and of this Resolution.

No registered owner of any Bond shall have any right to institute any suit, action or proceeding at law or in equity for the enforcement of any provision of this Resolution or for any remedy under this Resolution, unless such registered owner shall have previously given to the Board of Liquidation written notice of the happening of any Event of Default and the registered owners of at least twenty-five percent (25%) in Principal Amount of Bonds then Outstanding shall have filed a written request with the Board of Liquidation, and shall have offered it reasonable opportunity, to exercise the powers granted in this Article in its own name, and unless such registered owners shall have offered to the Board of Liquidation adequate security and indemnity against the costs, expenses and liabilities to be incurred thereby, and the Board of Liquidation shall have refused to comply with such request within a reasonable time.

Nothing in this Resolution shall affect or impair the obligation of the Board to pay on the respective dates of maturity thereof the Principal Amount of and interest on the Bonds, or affect or impair the right of action of any registered owner to enforce the payment of his Bond.

SECTION 10.06. Application of Moneys. All moneys received by the Board of Liquidation pursuant to any right given or action taken under the provisions of this Article shall, after payment of the cost and expenses of the proceedings resulting in the collection of such moneys, the expenses, liabilities and advances incurred or made by the Board of Liquidation and the fees and the expenses of the Board of Liquidation in carrying out this Resolution, be deposited in the Debt Service Fund and applied as follows and for no other purpose:

(a) Unless the principal of all of Bonds shall have become due or shall have been declared due and payable, all such moneys shall be applied:

First – To the payment to the persons entitled thereto of all installments of interest then due on the Senior Debt, in the order of the maturity of the installments of such interest and, if the amount available shall not be sufficient to pay in full any particular installment, then to the payment ratably, according to the amounts due on such installment, to the persons entitled thereto, without any discrimination or preference except as to any difference in the respective rates of interest specified in the Senior Debt; and

Second – To the payment to the persons entitled thereto of the unpaid principal of and premium, if any, on any of the Senior Debt which shall have become due (other than Senior Debt called for redemption for the payment of which moneys are held pursuant to the provisions of this Resolution), in the order of their due dates, and, if the amount available shall not be sufficient to pay in full Senior Debt due on any particular date, and then to the payment of such principal and premium, if any, ratably, according to the

amount of such principal due on such date, to the persons entitled thereto, without any discrimination or preference.

(b) If the principal of all the Bonds shall have become due or shall have been declared due and payable, all such moneys shall be applied to the payment of the principal and interest then due and unpaid on the Senior Debt, including, to the extent permitted by law, interest on overdue installments of interest, without preference or priority of principal over interest or of interest over principal, or of any installment of interest over any other installment of interest, or of any Senior Debt over any other Senior Debt, ratably, according to the amounts due respectively for principal and interest, to the persons entitled thereto, without any discrimination or preference except as to any difference in the respective rates of interest specified in the Senior Debt.

(c) If the principal of all the Bonds shall have been declared due and payable and if such declaration shall thereafter have been rescinded and annulled under the provisions of this Article, then, subject to the provisions of subsection (b) of this Section in the event that the principal of all the Senior Debt shall later become due or be declared due and payable, the moneys shall be applied in accordance with the provisions of subsection (a) of this Section.

Whenever moneys are to be applied pursuant to the provisions of this Section, such moneys shall be applied at such times and from time to time as the Board of Liquidation shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future. Whenever the Board of Liquidation shall apply such moneys, it shall fix the date (which shall be an interest payment date unless it shall deem another date more suitable) on which such application is to be made and on such date interest on the amounts of principal to be paid and on such dates shall cease to accrue. The Board of Liquidation shall give such notice as it may deem appropriate of the deposit with it of any such moneys and of the fixing of any such date.

Whenever there are moneys remaining after application to the Debt Service Fund for the payment of Senior Debt, the Board of Liquidation shall apply such remaining moneys, allocated in a similar manner as provided above, to the payment of Subordinate Debt and thereafter to the CEA GO Zone Indebtedness and the DPW Payments.

Whenever the principal of and premium, if any, and interest on all Indebtedness have been paid under the provisions of this Section, all payments required by the terms of any Supplemental Resolution have been paid and all expenses and charges of the Board of Liquidation have been paid, any balance remaining in the several funds created by this Resolution shall be paid to the Board as provided in Section 7.10.

SECTION 10.07. Remedies Vested in Board of Liquidation. All rights of action (including the right to file proof of claims) under this Resolution or under any of the Bonds may be enforced by the Board of Liquidation without the possession of any of the Bonds or the production thereof in any trial or other proceeding relating thereto and any such suit or proceeding instituted by the Board of Liquidation may be brought in its name without the necessity of joining as plaintiffs or defendants any Bondholders, and any recovery of judgment shall be for the equal benefit of the Bondholders.

SECTION 10.08. Limitation on Suits. Except to enforce the rights given under Sections 10.04 and 10.05, no Bondholder shall have any right to institute any action, suit or proceeding at law or in equity for the enforcement of this Resolution or for the execution of any trust thereof or any other remedy hereunder, unless (a) a default has occurred and is continuing of which the Board of Liquidation has been notified as provided in Section 10.03, or of which by such Section it is deemed to have notice, (b) such default has become an Event of Default and the holders of 25% in aggregate Principal Amount of Bonds then Outstanding have made written request to the Board of Liquidation and offered it reasonable opportunity either to proceed to exercise the powers hereinbefore granted or to institute such action, suit or proceeding in its own name, (c) such requesting Bondholders have offered to the Board of Liquidation indemnity as provided herein, (d) the Board of Liquidation has thereafter failed or refused to exercise the powers hereinbefore granted, or to institute such action, suit or proceeding in its, own name, (e) no direction inconsistent with such written request has been given to the Board of Liquidation by the holders of a majority in aggregate Principal Amount of Bonds then Outstanding, and (f) notice of such action, suit or proceeding is given to the Board of Liquidation; it being understood and intended that no one or more holders of the Bonds shall have any right in any manner whatsoever to. affect, disturb or prejudice this Resolution by its or their action or to enforce any rights hereunder except in the manner herein provided, and that all proceedings at law or in equity shall be instituted and maintained in the manner herein provided and for the equal benefit of the holders of all Bonds then Outstanding. The notification, request and offer of indemnity set forth above, at the option of the Board of Liquidation, shall be conditions precedent to the execution of the powers and trusts of this Resolution and to any action or cause of action for the enforcement of this Resolution or for any other remedy hereunder.

SECTION 10.09. Termination of Proceedings. In case the Board of Liquidation shall have proceeded to enforce any right under this Resolution and such proceedings shall have been discontinued or abandoned for any reason or shall have been determined adversely to the Board of Liquidation, then and in every such case the Board and the Board of Liquidation shall be restored to their former positions and rights hereunder, and all rights, remedies and powers of the Board of Liquidation shall continue as if no such proceedings had been taken.

SECTION 10.10. Waivers of Events of Default. The Board of Liquidation may in its discretion waive any Event of Default hereunder or any action taken pursuant to any Event of Default and rescind any acceleration of maturity of principal of and interest on the Bonds, and shall do so at the request of the holders of (a) a Majority in aggregate Principal Amount of Bonds then Outstanding in respect of which default in the payment of principal and/or premium, if any, and/or interest exists, or (b) a majority in aggregate Principal Amount of Bonds then Outstanding in the case of any other default; provided, however, that

(a) there shall not be waived without the consent of the holders of all Bonds then Outstanding (A) any Event of Default in the payment of the principal of any Outstanding Bonds (whether at maturity or by sinking fund redemption), or (B) any default in the payment when due of the interest on any such Bonds unless, prior to such waiver or rescission,

(i) there shall have been paid or provided for all arrears of interest with interest, to the extent permitted by law, at the rate borne by the Bonds on overdue installments of interest, all arrears of principal and premium, if any, and all expenses of the Board of Liquidation in connection with such default, and

(ii) in case of any such waiver or rescission or in the case of any discontinuance, abandonment or adverse determination of any proceeding taken by the Board of Liquidation on account of any such default, the Board, the Board of Liquidation, and the holders of Bonds shall be restored to their former positions and rights hereunder respectively; and

(b) no acceleration of maturity under Section 10.03 made at the request of the holders of 25% in aggregate Principal Amount of Bonds then Outstanding shall be rescinded unless requested by the holders of at least 25% in aggregate Principal Amount of Bonds then Outstanding.

(c) any such waiver and/or rescission shall only be effective with respect to the Bonds if the holders of Other Senior Parity Indebtedness shall have waived any event of default related to such Other Senior Parity Indebtedness or any action taken pursuant to such event of default and/or rescinded any declaration of maturity of principal of and interest on the Other Senior Parity Indebtedness.

No such waiver or rescission relating to the Bonds shall extend to any subsequent or other default or impair any right consequent thereon.

SECTION 10.11. Unconditional Right to Receive Principal, Premium and Interest. Nothing in this Resolution shall, however, affect or impair the right of the Board of Liquidation or any Bondholder to enforce, by action at law, payment of the principal of, premium, if any, or interest on any Bond at and after the maturity thereof, or on the date fixed for redemption or upon the same being declared due prior to maturity as herein provided, or the obligation of the Board to pay the principal of, premium, if any, and interest on each of the Bonds issued hereunder to the respective holders thereof at the time and place, from the source and in the manner herein and in the Bonds expressed.

## ARTICLE XI

### SUPPLEMENTAL RESOLUTIONS

SECTION 11.01. Supplemental Resolutions Not Requiring Consent of Holders of Bonds. The Board may at any time and from time to time, adopt a resolution supplementing the Resolution for any one or more of the following purposes, which resolution, upon the approval by and the filing with the Board of Liquidation in accordance with Section 11.03 of a copy thereof certified by an Authorized Officer of the Board, shall be fully effective in accordance with its terms:

- (a) To cure any ambiguity, formal defect or omission in this Resolution;
- (b) To grant to or confer upon the Bondholders any additional rights, remedies, powers or authority that may lawfully be granted to or conferred on the Bondholders;
- (c) To add to the covenants and agreements of the Board in this Resolution other covenants and agreements to be observed by the Board;
- (d) To modify, amend or supplement this Resolution in such manner as required to permit the Board to comply with the provisions of the Code relating to the rebate to the United States of America of earnings derived from the investment of the proceeds of Bonds, provided that such modification, amendment or supplement does not materially adversely affect the holders of all Outstanding Bonds;
- (e) To modify, amend or supplement this Resolution in such manner as may be required by a Rating Agency to maintain or enhance its rating on the Senior Debt, provided that such modification, amendment or supplement does not materially adversely affect the holders of all Outstanding Bonds;
- (f) To modify, amend or supplement this Resolution to implement any covenants or agreements contemplated by Section 9.04;
- (g) To authorize the issuance of and to secure one or more issues of Indebtedness pursuant to Article IV;
- (h) To amend any agreement with a securities depository relating to a book-entry system to be maintained with respect to any Bonds; and
- (i) To modify, amend or supplement this Resolution in any manner that the Trustee concludes is not materially adverse to the holders of all Outstanding Bonds.

SECTION 11.02. Supplemental Resolutions Requiring Consent of Bondholders. Exclusive of Supplemental Resolutions authorized by Section 11.01 and subject to the terms and provisions contained in this Section, the holders of not less than a majority in aggregate Principal Amount of Outstanding Bonds shall have the right from time to time, notwithstanding anything in this Resolution to the contrary, to consent to the adoption by the Board of such other resolution or resolutions supplemental hereto as shall be deemed necessary or desirable by the

Board for the purpose of modifying, altering, amending, adding to or rescinding, in any particular, any of the terms or provisions contained in this Resolution and any Supplemental Resolutions; provided, however, that nothing in this Resolution shall permit, or be construed as permitting, (a) an extension of the maturity of the principal of or the interest on any Bonds, (b) a privilege or priority of any Senior Debt over any other Senior Debt, (c) a reduction in the aggregate Principal Amount of Bonds required for consent to such Supplemental Resolutions, (d) a reduction in the Principal Amount of or premium, if any, on any Bonds or the rate of interest thereon, or (e) an extension of time or a reduction in amount of any payment required by any sinking fund that may be applicable to any Bonds, without the consent of the holders of all of the Outstanding Bonds; provided, however that there shall be no modification of the Net Revenue pledge which secures the Other Senior Parity Indebtedness nor of the Net Revenue pledge which secures the Subordinate Debt, if such respective modification would adversely affect the interests of the holders of such debt.

If at any time the Board determine to adopt a Supplemental Resolution as described in this Section 11.02, the Board of Liquidation shall cause notice of the proposed adoption of such Supplemental Resolution to be sent by registered or certified mail to the registered owner of each Bond at his address as it appears on the registration books. Such notice shall briefly set forth the nature of the proposed Supplemental Resolution and shall state that a copy thereof is on file at the corporate trust office of the Trustee for inspection by all Bondholders. If within 90 days or such longer period as shall be prescribed by the Board following the giving of such notice, the holders of not less than a majority in aggregate Principal Amount of Outstanding Bonds, or in the case of (a) through (e) above, the holders of all Outstanding Bonds, shall have consented to and approved the execution thereof as herein provided, no holder of any Bond shall have any right to object to any of the terms and provisions contained therein, or the operation hereof, or in any manner to question the propriety thereof, or to enjoin or restrain the Board from adopting such Supplemental Resolution or from taking any action pursuant to the provisions thereof. Upon the adoption of any such Supplemental Resolution as in this Section permitted and provided, this Resolution shall be and be deemed to be modified and amended in accordance therewith.

Bonds owned or held by or for the account of the Board shall not be deemed Outstanding for the purpose of consent or any calculation of Outstanding Bonds provided for in this Resolution. At the time of any such calculation, the Board shall furnish the Board of Liquidation a certificate of an Authorized Officer of the Board upon which the Board of Liquidation may rely, describing all Bonds so to be excluded.

Notwithstanding anything in this Resolution to the contrary; the Board may enter into any Supplemental Resolution upon receipt of the consent of the holders of all Outstanding Bonds.

SECTION 11.03. Adoption and Filing of Supplemental Resolutions. Any resolution of the Board referred to and permitted or authorized by this Article XI may be adopted by the Board without the consent of any of the Bondholders, but shall become effective only on the conditions to the extent and at the time provided in this Article. Every such resolution so becoming effective shall thereupon form a part of the Resolution. Any such resolution when filed with the Board of Liquidation shall be accompanied by a Counsel's Opinion to the effect that such Resolution has been duly and lawfully adopted by the Board, in accordance with the provisions of the

Resolutions, is authorized or permitted by the Resolution, and constitutes the lawful and binding obligation of the Board in accordance with its terms.

## ARTICLE XII

### TRUSTEE; PAYING AGENT

#### SECTION 12.01. Trustee.

(a) Upon the occurring of (i) the Board of Liquidation's refusal to accept its fiduciary duties hereunder, or (ii) the abolishment of the Board of Liquidation without the establishment of a successor in function, a Trustee shall be appointed in the Supplemental Resolution adopted by the Board and said Trustee shall thereafter assume the duties of the Board hereunder.

(b) The Trustee shall be a bank or trust company organized under the laws of the State, or a national banking association doing business in Louisiana, having a capital and surplus aggregating at least fifty million dollars (\$50,000,000), if there be such a bank or trust company or national banking association willing and able to accept the office on reasonable and customary terms and authorized by law to perform all duties imposed upon it by the Resolution.

#### SECTION 12.02. Paying Agent.

(a) The Paying Agent for the Bonds of any Series authorized by the Resolution shall be the Paying Agent selected by the Board of Liquidation to serve as its Paying Agent. Each Paying Agent shall be a bank or trust company or national banking association having a capital and surplus aggregating at least fifty million dollars (\$50,000,000), if there be such a bank or trust company or national banking association willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by the Resolution. Each Paying Agent shall signify its acceptance of the duties and obligations imposed upon it by the Resolution by executing and delivering to the Board of Liquidation a written acceptance thereof.

(b) In addition to the other obligations imposed on the Paying Agent hereunder, or under the applicable Supplemental Resolution, the Paying Agent shall agree with respect to its related Series of Bonds to:

(i) hold all Bonds delivered to it for purchase trust for the benefit of the registered owners thereof until moneys representing the purchase price of such Bonds shall have been delivered to or for the account of or to the order of such Bondholders;

(ii) hold all moneys representing the purchase price of Bonds in trust for the benefit of the persons entitled to receive the payment of such purchase price;

(iii) keep such books and records as shall be consistent with prudent industry practice and make such books and records available for inspection by the Board and the Board of Liquidation at all reasonable times;

(iv) maintain the Register and transfer and exchange Bonds; and

(v) deliver to the Board and the Board of Liquidation upon request a list of the names and addresses of the registered owners of the Bonds.

(c) If at any time the Paying Agent is unable or unwilling to act as Paying Agent, the Paying Agent may resign, upon 30 days' prior written notice to the Board and the Board of Liquidation. Such resignation shall become effective upon the date specified in such notice, unless a successor Paying Agent have not been appointed, in which case such resignation shall become effective upon the appointment of such successor. The Paying Agent may be removed at any time by the Board of Liquidation by written notice signed by the Board of Liquidation delivered to the Board, each Bondholder and the Paying Agent. The Board of Liquidation shall promptly certify to the Board that it has mailed such notice and such certificate will be conclusive evidence that such notice was given in the manner required hereby. Upon resignation or removal of the Paying Agent, the Board of Liquidation shall appoint a successor Paying Agent which is a bank or trust company which. meets the requirements of subsection (a) above. The Board of Liquidation shall notify each Bondholder of the related Series of Bonds of the appointment of such successor. Upon the resignation or removal of the Paying Agent, the Paying Agent shall pay over, assign and deliver any moneys and Bonds held by it in trust pursuant to this Section 12.02 to its successor.

(d) The Board may appoint in the applicable Supplemental Resolution a Co-Paying Agent for the Bonds of any Series for purposes of paying the principal on such Bonds or effecting transfers and exchanges, subject to the provisions above and those set forth in the applicable Supplemental Resolution.

SECTION 12.03. Trustee Acceptance of Trusts and Obligations. The following provisions are applicable only if a Trustee shall be appointed hereunder.

Any Trustee so appointed hereunder shall, in writing, accept the trusts and obligations imposed upon it by this Resolution and agrees to perform such trusts and obligations, but only upon and subject to the following express terms and conditions and no implied covenants or obligations shall be read into this Resolution against the Trustee:

(a) The Trustee, prior to the occurrence of as Event of Default and after the curing of all Events of Default which may have occurred, undertakes to perform such duties and only such duties.as are specifically set forth in this Resolution. Upon the occurrence and continuation of an Event of Default (which has not been cured or waived), the Trustee shall exercise such of the rights and powers vested in it by this Resolution and use the same degree of care and skill in its exercise as a prudent man ordinarily would exercise and use under the circumstances in the conduct of his own affairs.

(b) The Trustee may execute any of the trusts or powers hereof and perform any of its duties by or through attorneys, agents, receivers or employees but shall be answerable for the conduct of the same in accordance with the standard specified above, and shall be entitled to act upon the opinion or advice of its counsel concerting all matters of trust hereof and the duties hereunder, and may in all cases pay reasonable compensation to all such attorneys, agents, receivers and employees as may reasonably be employed in connection with the trust hereof. The Trustee may act on a Counsel's Opinion and shall not be responsible for any loss or damage resulting from any action or nonaction by it taken or omitted to be taken in good faith and in reliance on such Counsel's Opinion.

(c) The Trustee shall not be responsible for any recital herein or in the Bonds (except in respect to the certificate of the Trustee endorsed on the Bonds) or for the recording, re-recording, filing or re-filing of any financing or continuation statement or any other document or instrument, or for insuring the System, collecting any insurance moneys, or for the validity of the execution by the Board of this Resolution or for any supplements thereto or instruments of further assurance, or for the sufficiency of the security for the Bonds issued hereunder or intended to be secured hereby, and the Trustee shall not be bound to ascertain or inquire as to the observance or performance of any covenants, conditions or agreements on the part of the Board except as hereinafter set forth. The Trustee shall not be responsible or liable for any loss suffered in connection with any investment of moneys made by it in accordance with Section 8.02.

(d) The Trustee shall not be accountable for the use of any Bonds authenticated or delivered hereunder. The bank or trust company acting as Trustee and its directors, officers, employees or agents may in good faith buy, sell, own, hold and deal in the Bonds and may join in any action which any holder of Bonds may be entitled to take with like effect as if such bank or trust company were not the Trustee. To the extent permitted by law, such bank or trust company may also receive tenders and purchase in good faith Bonds from itself including any department, affiliate or subsidiary, with like effect as if it were not the Trustee.

(e) The Trustee shall be protected in acting on any notice, request, consent, certificate, order, affidavit, letter, telegram or other paper or document reasonably believed by it to be genuine and correct and to have been signed or sent by the proper person or persons. Any action taken by the Trustee pursuant to this Resolution on the request or authority or consent of any person who at the time of making such request or giving such authority or consent is the owner of any Bonds shall be conclusive and binding upon all future owners of the same Bonds and upon Bonds issued in exchange therefor or in place thereof.

(f) As to the existence or non-existence of any fact or as to the sufficiency or validity of any instrument, paper or proceeding, the Trustee shall be entitled to rely on a certificate signed on behalf of the Board by an Authorized Officer, or such other person or persons as may be designated for such purposes by resolution of the Board, as sufficient evidence of the facts therein contained, and prior to the occurrence of a default of which the Trustee has been notified as provided in subsection (h) of this Section, or of which by said subsection it is deemed to have notice, may also accept a similar certificate to the effect that any particular dealing, transaction or action is necessary or expedient, but may at its discretion secure such further evidence deemed necessary or advisable, but shall in no case be bound to secure the same. The Trustee may accept a certificate of an Authorized of the Board to the effect that a resolution in the form therein set forth has been adopted by the Board as conclusive evidence that such resolution has been duly adopted and is in full force and effect.

(g) The permissive right of the Trustee to do things enumerated in this Resolution shall not be construed as a duty, and the Trustee shall not be answerable for other than its negligence or willful default.

(h) The Trustee shall not be required to take notice or be deemed to have notice of any default hereunder, except failure by the Board to cause to be made any of the payments to the Trustee required to be made by Article VII or failure by the Board to file with the Trustee

any document required by this Resolution to be so filed, unless the Trustee shall be notified of such default by the Board or by the holders of 25% in aggregate Principal Amount of Bonds then outstanding.

(i) At any and all reasonable times the Trustee and its duly authorized agents, attorneys, experts, engineers, accountants and representatives shall have the right, but shall not be required, to inspect the System and all books, papers and records of the Board pertaining to the System and the Bonds, and to make such memoranda from and in regard thereto as may be desired.

(j) The Trustee shall not be required to give any bond or surety with respect to the execution of its rights and obligations hereunder.

(k) Notwithstanding any other provision of this Resolution, the Trustee shall have the right, but shall not be required, to demand, as a condition of any action by the Trustee in respect of the authentication of any Bonds, the withdrawal of any cash, the release of any property, or any action whatsoever within the purview of this Resolution, any showings, certificates, opinions, appraisals or other information, or corporate action or evidence thereof; in addition to that required by the terms hereof.

(l) Before taking any action under this Resolution the Trustee may require that satisfactory indemnity be furnished to it for the reimbursement of all expenses to which it may be put and to protect it against all liability by reason of any action so taken, except liability which is adjudicated to have resulted from its negligence or willful default

(m) All moneys received by the Trustee shall, until used or applied or invested as herein provided, be held in trust in the manner and for the purposes for which they were received but need not be segregated from other moneys except to the extent required by this Resolution or law. The Trustee shall not be under any liability for interest on any moneys received hereunder except such as may be agreed upon.

SECTION 12.04. Fees, Charges and Expense of Trustee. The Trustee shall be entitled to payment of and reimbursement for reasonable fees for its services and all expenses reasonably incurred by it hereunder, including the reasonable fees and disbursements of its counsel.

SECTION 12.05. Notice Required of Trustee. If the Board or the Board of Liquidation shall fail to collect and deposit Net Revenues to the Debt Service Fund and Debt Service Reserve Fund as provided in Article VII, the Trustee shall give notice thereof by telephone or telegram to the Board on the next succeeding Business Day and shall confirm such notice in writing by first class registered or certified mail. In the event of (a) the continuance for 30 days of any such failure to make payment, or (b) notification to the Trustee by the holders of 25% in aggregate Principal Amount of the Bonds then Outstanding of any default hereunder, then the Trustee shall give notice thereof to the Bondholders then Outstanding.

SECTION 12.06. Intervention by Trustee. In any judicial proceeding to which the Board is a party and which in the opinion of the Trustee has a substantial bearing on the interests of the Bondholders, the Trustee may intervene on behalf of the Bondholders and, subject to Section

12.03(1), shall do so if requested by the holders of 25% in aggregate Principal Amount of Bonds then outstanding.

SECTION 12.07. Merger or Consolidation of Trustee. Any corporation or association into which the Trustee may be converted or merged, or with which it may be consolidated, or to which it may sell or transfer its corporate trust business and assets as a whole or substantially as a whole, or any corporation or association resulting from any such conversion, sale, merger, consolidation or transfer to which it is a party shall be and become successor Trustee hereunder and vested with all the trusts, powers, discretion, immunities, privileges and all other matters as was its predecessor, without the execution or filing of any instrument or any further act, deed or conveyance on the part of any of the parties hereto, provided, however, that so long as no Event of Default has occurred and is continuing, the Board shall have the right to appoint a successor Trustee other than corporation or association that results from such conversion, sale, merger, consolidation or transfer.

SECTION 12.08. Resignation by Trustee. The Trustee may at any time resign from the trusts hereby created by giving 30 days' notice to the Board of Liquidation, provided that such resignation shall not take effect until the appointment of a successor or temporary Trustee by the Bondholders, the Board of Liquidation or a court of competent jurisdiction.

SECTION 12.09. Removal of Trustee. The Trustee may be removed at any time (a) by an instrument or concurrent instruments in writing delivered to the Trustee and the Board of Liquidation, and signed by the owners of a majority in aggregate Principal Amount of Bonds then Outstanding, or (b) by the Board of Liquidation by notice in writing given by an Authorized Officer of the Board of Liquidation to the Trustee 30 days before the removal date; provided, however, that the Board shall have no right to remove the Trustee during any time when an Event of Default has occurred or is continuing or when an event has occurred and is continuing or condition exists that with the giving of notice or the passage of time, or both, would be an Event of Default. The removed Trustee shall return to the Board of Liquidation the amount of the Trustee's annual fee allocable to the portion of the current year remaining after the removal date. Notwithstanding the foregoing, nothing contained in this Resolution shall relieve the Board of Liquidation of its obligation to pay the Trustee's fees and expenses incurred to the date of such removal. Such removal shall take effect upon the appointment of a successor Trustee or the earlier appointment of a temporary Trustee by the Bondholders, the Board of Liquidation or a court of competent jurisdiction.

SECTION 12.10. Appointment of Successor Trustee by Bondholders; Temporary Trustee. In case the Trustee hereunder shall resign, be removed, be dissolved, be in course of dissolution or liquidation or otherwise become incapable of acting hereunder, or in case it shall be taken under the control of any public officer or officers or of a receiver appointed by a court, a successor may be appointed by the owners of a majority in aggregate Principal Amount of Bonds then outstanding, by an instrument or concurrent instruments in writing signed by such owners; provided, however, that in case of such vacancy the Board, by an instrument signed by an Authorized Officer, may appoint a temporary Trustee to fill such vacancy until a successor Trustee shall be appointed by the bondholders in the manner provided above; and any such temporary Trustee so appointed by the Board shall immediately and without further act be superseded by the Trustee so appointed by such bondholders. Every such Trustee appointed

pursuant to this section shall be, if there be such an institution willing, qualified and able to accept the trust upon reasonable or customary terms, a bank or trust company having a combined capital, surplus and undivided profits of not less than \$50,000,000.

SECTION 12.11. Concerning any Successor Trustee. Every successor Trustee appointed hereunder shall execute, acknowledge and deliver to its predecessor and also to the Board an instrument in writing accepting such appointment hereunder, and thereupon such successor, without any further act, deed of conveyance, shall become fully vested with all the properties, rights, powers, trusts, duties and obligations of its predecessor; but such predecessor shall, nevertheless, on the request of the Board, execute and deliver an instrument transferring to such successor Trustee all the properties, rights, powers and trusts of such predecessor hereunder, and every predecessor Trustee shall deliver all securities and moneys held by it as Trustee hereunder to its successor. Should any instrument in writing from the Board be required by any successor Trustee for more fully and certainly vesting in such successor the properties, rights, powers and duties hereby vested or intended to be vested in the predecessor, any and all such instruments in writing shall, on request, be executed, acknowledged and delivered by the Board.

SECTION 12.12. Trustee Protected in Relying on Resolutions, etc. The resolutions, opinions, certificates and other instruments provided for in this Resolution may be accepted by the Trustee as conclusive evidence of the facts and conclusions stated therein and shall be full warrant, protection and authority to the Trustee for the release of property and the withdrawal of cash hereunder or the taking of any other action by the Trustee as provided hereunder.

SECTION 12.13. Successor Trustee as Custodian of Funds. In the event of a change in the office of Trustee, the predecessor Trustee which has resigned or been removed shall cease to be custodian of the funds created hereunder, and the successor Trustee shall become such custodian.

## ARTICLE XIII

### DISCHARGE OF RESOLUTION

SECTION 13.01. Discharge of Resolution. If (a) (1) all Bonds and Subordinate Debt issued hereunder shall have become due and payable in accordance with their terms or otherwise as provided in this Resolution or have been duly called for redemption or irrevocable instructions to call the Bonds or Subordinate Debt issued hereunder to pay them at maturity have been given by the Board of Liquidation to an escrow trustee meeting the requirements of Trustee (the "Escrow Trustee"), and (2) the Escrow Trustee holds for such purpose noncallable Government Obligations or other securities legally sufficient to defease Bonds pursuant to Chapter 14 of Title 39 of the Louisiana Revised Statutes of 1950, as amended, the principal of and the interest on which, as verified by a licensed independent certified public accountant reasonably acceptable to the Escrow Trustee and the Board of Liquidation, at maturity will be sufficient (without reinvestment) (A) to redeem in accordance with the relevant Section hereof or of the Supplemental Resolution all Bonds or Subordinate Debt issued hereunder that have been called for redemption, or for which irrevocable instructions for call for redemption have been given, on the date set for such redemption, (B) to pay at maturity all Bonds or Subordinate Debt issued hereunder not irrevocably called for redemption, (C) to pay interest accruing on all Bonds or Subordinate Debt issued hereunder prior to its redemption or payment at maturity, (D) to make all payments required by the terms of any Supplemental Resolution, and (E) to pay the fees and expenses of any Fiduciary and any other fees and expenses for which the Board is responsible under this Resolution, including the costs and expenses of canceling and discharging this Resolution, and (b) the Escrow Trustee shall have received notification from the holders of all other Indebtedness that such Indebtedness has been paid, or payment has been provided for such Indebtedness, in accordance with the documents related thereto, then the Board of Liquidation shall, at the expense of the Board, cancel and discharge this Resolution and execute and deliver to the Board such instruments in writing as shall be necessary to cancel the lien hereof, and assign and deliver to the Board any property at the time subject to this Resolution that may then be in its possession, except moneys or securities in which such moneys are invested which are held by the Escrow Trustee for the payment of principal, or premium, if any, or interest on the Bonds and Subordinate Debt issued hereunder.

Bonds for the payment or redemption of which cash or noncallable Government Obligations or other securities legally sufficient to defease Bonds pursuant to Chapter 14 of Title 39 of the Louisiana Revised Statutes of 1950, as amended, the principal of and premium, if any, and interest on which will be sufficient therefor, as determined by the Escrow Trustee in reliance on a report of a licensed independent certified public accountant, shall have been deposited with the Escrow Trustee (whether upon or prior to the date of their maturity or their redemption date) shall be deemed to be paid and no longer Outstanding; provided, however, that if such Bonds are to be redeemed prior to the maturity thereof, notice of such redemption shall have been duly given or arrangements satisfactory to the Escrow Trustee shall have been made for the giving thereof.

For purposes of determining whether any Outstanding Variable Rate Indebtedness is deemed paid and discharged pursuant to this Article XIII, such Variable Rate Indebtedness shall

be deemed to bear interest at the maximum rate of interest such Variable Rate Indebtedness may bear pursuant to the applicable Supplemental Resolution.

This Resolution may be discharged in full even if the CEA GO Zone Indebtedness or DPW Payments have not been paid in full.

## ARTICLE XIV

### MISCELLANEOUS

SECTION 14.01. Consents, etc., of Bondholders. Any consent, request, direction, approval, objection or other instrument (collectively, a "Consent") required by this Resolution to be executed by the Bondholders may be in any number of concurrent writings of similar tenor and may be executed by such Bondholders in person or by agent appointed in writing. Proof of the execution of a Consent or of the writing appointing any such agent shall be sufficient for any of the purposes of this Resolution and shall be conclusive in favor of the Board with regard to any action taken under the Consent if the fact and date of the execution by any person of any such writing is proved by a certificate of any officer in any jurisdiction who by law has power to take acknowledgments within such jurisdiction that the person signing such writing acknowledged before him the execution thereof; or by affidavit of any witness to such execution.

SECTION 14.02. Limitation of Rights. With the exception of rights herein expressly conferred, nothing expressed or mentioned in or to be implied from this Resolution Or the Bonds is intended or shall be construed to give to any person other than the parties hereto and the holders of the Bonds any legal or equitable right, remedy or claim, under or in respect to this Resolution or any covenants, conditions and agreements herein contained since this Resolution and all of the covenants, conditions and agreements hereof are intended to be and is for the sole and exclusive benefit of the parties hereto and the holders of the Bonds as herein provided.

SECTION 14.03. Limitation of Liability of Members of the Board, etc. No covenant, agreement or obligation contained herein shall be deemed to be a covenant, agreement or obligation of any present or future member of the Board or officer; employee or agent of the Board in his or her individual capacity, and neither the members of the Board nor any officer of the Board executing the Bonds shall be liable personally on the Bonds or be subject to any personal liability or accountability by reason of the issuance thereof. No member of the Board or officer, employee, agent or advisor of the Board shall incur any personal liability with respect to any other action taken by him pursuant to this Resolution, provided such member, officer, employee, agent or advisor acts in good faith.

SECTION 14.04. Severability. If any provision of this Resolution shall be held invalid by any court of competent jurisdiction, such holding shall not invalidate any other provision hereof and this Resolution shall be construed and enforced as if such illegal provision had not been contained herein.

SECTION 14.05. Notices. Unless otherwise provided herein, all demands, notices, approvals, consents, requests, opinions and other communications hereunder shall be in writing and shall be deemed to have been given when delivered in person or mailed by first class registered or certified mail, postage prepaid, addressed (a) if to the Board, at 625 St. Joseph Street, New Orleans, Louisiana 70165 (Attention: Executive Director) or (b) if to the Board of Liquidation, at Room 8E17, City Hall, 1300 Perdido Street, New Orleans, Louisiana 70112, Attention: David Gernhauser, Secretary). The Board and the Board of Liquidation may, by notice given hereunder, designate any further or different addresses to which subsequent

demands, notices, approvals, consents, requests, opinions or other communications shall be sent or persons to whose attention the same shall be directed.

SECTION 14.06. Successors and Assigns. This Resolution shall be binding upon, inure to the benefit of and be enforceable by the parties and their respective successors and assigns.

SECTION 14.07. Applicable Law. This Resolution shall be governed by the applicable laws of the State of Louisiana.

SECTION 14.08. Counterparts. This Resolution may be executed in several counterparts, each of which shall be an original and all of which together shall constitute but one and the same instrument.

This resolution having been submitted to a vote, the vote thereon was as follows:

<u>Member</u>	<u>Yea</u>	<u>Nay</u>	<u>Absent</u>	<u>Abstaining</u>
Suchitra Satpathi (for Mitchell J. Landrieu)	X			
William Raymond Manning	X			
Marion Bracy	X			
Kerri Kane	X			
Mark M. Moody			X	
Glen Pilie	X			
Florence Schornstein	X			
Charles F. Webb	X			
Beverly Wright, PhD.	X			
Loyce P. Wright	X			

And the resolution was declared adopted on this 21st day of May, 2014.

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**FORM OF LEGAL OPINION  
OF  
CO-BOND COUNSEL**

[FORM OF LEGAL OPINION]

Sewerage and Water Board  
of New Orleans  
New Orleans, Louisiana

Board of Liquidation, City Debt  
New Orleans, Louisiana

**\$100,000,000**  
**CITY OF NEW ORLEANS, LOUISIANA**  
**SEWERAGE SERVICE REVENUE BONDS, SERIES 2015**

We have acted as co-bond counsel to the City of New Orleans, Louisiana (the "City"), in connection with the issuance by the City of the captioned bonds (the "Bonds"). The Bonds are issued in fully registered form, are dated, bear interest at the rates, mature on the dates and in the principal amounts, and are subject to redemption as set forth in the Resolution (hereinafter defined) and the Certificates of Determination executed by the Board and the Board of Liquidation on December 3, 2015. Capitalized terms used herein and not specifically defined have the meanings assigned to them in the Resolution.

The Bonds have been issued by the City, acting by and through the Sewerage and Water Board of New Orleans (the "Board") and the Board of Liquidation, City Debt (the "Board of Liquidation"), pursuant to a General Sewerage Service Revenue Bond Resolution adopted by the Board on May 21, 2014, as supplemented through the Second Supplemental Sewerage Service Bond Resolution adopted by the Board on October 21, 2015 (collectively, the "Resolution"), for the purpose of (i) paying the costs of extensions, improvements, enlargements, betterments, alterations, renewals, and replacements to the sewerage system of the City including land, equipment and other real or personal properties, (ii) funding a deposit to the Debt Service Reserve Fund, and (iii) paying costs of issuance. The Bonds are issued under the authority conferred by Section 4121 of Title 33 of the Louisiana Revised Statutes of 1950, as amended (the "Act"), and other constitutional and statutory authority.

We have examined the provisions of the Constitution and statutes of the State of Louisiana, a certified transcript of the proceedings of the Board and the Board of Liquidation relating to the issuance of the Bonds and such other documents, proofs and matters of law as we deemed necessary to render this opinion.

As to questions of fact material to our opinion, we have relied upon the certified proceedings and other certifications of public officials and others furnished to us without undertaking to verify the same by independent investigation. On the basis of the foregoing examinations, we are of the opinion, as of the date hereof and under existing law, that:

1. The Bonds have been duly authorized, executed and delivered and constitute legally binding special and limited obligations of the City.

2. The Resolution creates the valid pledge and dedication which it purports to create of the funds and accounts held by the Board of Liquidation under the Resolution and the Net Revenues (as defined in the Resolution) of the System and the moneys, securities and funds held or set aside under the Resolution, subject to the provisions of the Resolution requiring or permitting the application thereof for the purposes and on the terms and conditions set forth in the Resolution.

3. The Bonds have been issued on a parity in all respects with the City's outstanding (i) Sewerage Service Revenue Bonds, Series 2011 and (ii) Sewerage Service Revenue and Refunding Bonds, Series 2014 (collectively, the "Parity Bonds"), and rank equally with and enjoy complete parity of lien with the Parity Bonds on the Net Revenues of the System. The lien of the owners of the Bonds and the Parity Bonds on the Net Revenues of the System will be superior to the lien on such Net Revenues of any obligations hereafter issued and payable therefrom except *pari passu* additional obligations hereafter issued within the terms, limitations and restrictions contained in the Resolution.

4. Interest on the Bonds is excluded from gross income for federal income tax purposes and is not an item of tax preference for purposes of the federal alternative minimum tax imposed on individuals and corporations; it should be noted, however, that for the purpose of computing the alternative minimum tax imposed on certain corporations, such interest is taken into account in determining adjusted current earnings.

5. Under the Act, the Bonds are exempt from all taxation in Louisiana for state, parish, municipal or other local purposes.

In rendering the opinion expressed in numbered paragraph 4 above, we have relied on representations of the Board and the Board of Liquidation with respect to questions of fact material to our opinion without undertaking to verify same by independent investigation, and have assumed continuing compliance with covenants in the Resolution pertaining to those sections of the Internal Revenue Code of 1986, as amended, which affect the exclusion from gross income of interest on the Bonds for federal income tax purposes. In the event that such representations are determined to be inaccurate or incomplete or the Board or Board of Liquidation fails to comply with the foregoing covenants in the Resolution, interest on the Bonds could become included in gross income from the date of original delivery, regardless of the date on which the event causing such inclusion occurs.

Except as stated above, we express no opinion as to any federal, state or local tax consequences resulting from the ownership of, receipt of interest on, or disposition of the Bonds.

It is to be understood that the rights of the owners of the Bonds and the enforceability of the Bonds and the Resolution may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted to the extent constitutionally applicable, and that their enforceability may also be subject to the exercise of the sovereign police powers of the State of Louisiana, or its governmental bodies, and the exercise of judicial discretion in appropriate cases.

Respectfully submitted,

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**APPENDIX "G"**

**FORM OF CONTINUING DISCLOSURE CERTIFICATE**

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**[FORM OF CONTINUING DISCLOSURE CERTIFICATE]**

**\$100,000,000 SEWERAGE SERVICE REVENUE BONDS, SERIES 2015 OF THE CITY OF  
NEW ORLEANS, LOUISIANA**

This Continuing Disclosure Certificate (the “Disclosure Certificate”) is executed and delivered by the City of New Orleans, Louisiana (the “Issuer” or the “City”), acting through its duly elected Mayor, the Board of Liquidation, City Debt (the “Board of Liquidation” or the “Board”), and the Sewerage and Water Board of New Orleans (the “Sewerage and Water Board”), the entities created and charged by law with the issuance and administration of the sewerage service revenue bonds of the Issuer, acting through its undersigned officers, duly authorized hereunto, in connection with the issuance of \$100,000,000 City of New Orleans, Louisiana Sewerage Service Revenue Bonds, Series 2015 (the “Bonds”). The Bonds are being issued pursuant to: the General Sewerage Service Revenue Bond Resolution adopted by the Sewerage and Water Board on May 21, 2014 (the “General Resolution”); the First Supplemental Sewerage Service Revenue Bond Resolution also adopted by the Sewerage and Water Board on May 21, 2014; the Second Supplemental Sewerage Service Revenue Bond Resolution adopted by the Sewerage and Water Board on October 21, 2015; a Resolution adopted by the Council of the City of New Orleans on November 5, 2015; and a Resolution adopted by the Board of Liquidation on November 18, 2015 (collectively, the “Resolutions”); and the Bonds are described in that certain Official Statement dated December 3, 2015, which contains certain information concerning the Issuer, the Board and the Sewerage and Water Board, the security for the Bonds, and certain financial and other information relating thereto. The Issuer, the Board and the Sewerage and Water Board covenant and agree as follows:

SECTION 1. *Definitions.* In addition to the definitions set forth in the Resolutions, which apply to any capitalized term used in this Disclosure Certificate unless otherwise defined in this Section, the following capitalized terms shall have the following meanings:

“**Annual Report**” shall mean any Annual Report provided by the Issuer pursuant to, and as described in, Sections 3 and 4 of this Disclosure Certificate.

“**Beneficial Owner**” shall mean any person who has or shares the power, directly or indirectly, to make investment decisions concerning ownership of any Bonds (including persons holding Bonds through nominees, depositories or other intermediaries).

“**Dissemination Agent**” shall mean the duly appointed Secretary of the Board of Liquidation, or any successor Dissemination Agent designated by the City acting through the Board of Liquidation.

“**EMMA**” shall mean the internet-based portal referred to as the Electronic Municipal Market Access system operated and maintained by the Municipal Securities Rulemaking Board. The online address of EMMA is [www.emma.msrb.org](http://www.emma.msrb.org).

**“GAAP”** shall mean generally accepted accounting principles, as such principles are prescribed, in part, by the Financial Accounting Standards Board and modified by the Government Accounting Standards Board and in effect from time to time.

**“Listed Events”** shall mean any of the events listed in Section 5(a) of this Disclosure Certificate.

**“MSRB”** shall mean the Municipal Securities Rulemaking Board, which has been designated by the Securities and Exchange Commission as the single centralized repository for the collection and availability of continuing disclosure documents for purpose of the Rule. The continuing disclosure documents must be provided to the MSRB in searchable portable document format (PDF) to the following:

Municipal Securities Rulemaking Board  
Electronic Municipal Market Access Center  
[www.emma.msrb.org](http://www.emma.msrb.org)

**“Notice of Material Events”** shall mean the Notice required to be given in accordance with Section 5 hereof.

**“1934 Act”** shall mean the Securities Exchange Act of 1934, as amended.

**“Official Statement”** shall mean the Official Statement with respect to the Bonds dated December 3, 2015.

**“Participating Underwriter”** shall mean any of the original Underwriter(s) (as defined in the Resolutions) of the Bonds required to comply with the Rule in connection with an offering of the Bonds.

**“Rule”** shall mean Rule 15c2-12 (b) (5) adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

**“SEC”** shall mean the Securities and Exchange Commission.

**“Securities Counsel”** shall mean legal counsel expert in federal securities law.

SECTION 2. *Purpose of the Disclosure Certificate.* This Disclosure Certificate is being executed and delivered by the Issuer, the Board of Liquidation and the Sewerage and Water Board for the benefit of the owners of the Bonds, including owners of beneficial interests in the Bonds, and the Participating Underwriter, and in order to assist the Participating Underwriter in complying with S.E.C. Rule 15c2-12(b) (5).

SECTION 3. *Provision of Annual Reports.*

(a) Each year, the Issuer, acting through the Board of Liquidation, and the Sewerage and Water Board shall provide, or shall cause the Dissemination Agent to provide, not later than eight (8) months from the end of the Sewerage and Water Board’s fiscal year, commencing with

the Sewerage and Water Board's Annual Report for its fiscal year ending December 31, 2015, to the MSRB an Annual Report for the preceding fiscal year which is consistent with the requirements of Section 4 of this Disclosure Certificate. Not later than five (5) business days prior to said date, the Sewerage and Water Board shall provide the Annual Report to the Dissemination Agent. In each case, the Annual Report may be submitted as a single document or as separate documents comprising a package, and may include by specific reference other information as provided in Section 4 of this Disclosure Certificate.

(b) If the Dissemination Agent is unable to provide to the MSRB an Annual Report by the date required in subsection (a), the Dissemination Agent, on behalf of the Sewerage and Water Board, shall send a notice, in a timely manner, to the MSRB, in substantially the form attached as Exhibit A.

(c) If the City's or the Sewerage and Water Board's fiscal year changes, the Dissemination Agent shall send written notice of such change to the MSRB, in substantially the form attached as Exhibit B.

(d) In connection with providing the Annual Report, the Dissemination Agent is not obligated or responsible under this Disclosure Certificate to determine the sufficiency of the content of the Annual Report for purposes of the Rule or any other state or federal securities law, rule, regulation or administrative order.

SECTION 4. *Content of Annual Reports.* The Annual Report shall contain or incorporate by reference the following:

a. Audited financial statements of the Issuer and the Sewerage and Water Board for the preceding fiscal year. If any of the aforesaid audited financial statements are not available by the time the Annual Report is required to be filed pursuant to Section 3(a), the Annual Report shall contain unaudited financial statements in a format similar to the financial statements contained in the final Official Statement, and the audited financial statements shall be filed in the same manner as the Annual Report when they become available.

b. Basis of accounting used by the City or the Sewerage and Water Board in reporting its financial statements. The Issuer and the Sewerage and Water Board follow GAAP principles and mandated Louisiana statutory accounting requirements as in effect from time to time. In the event of any material change in such requirements the impact of such changes will be described in the Annual Report of the year such change occurs.

c. Updates of the following tables in the Official Statement which are under the following captions (such tables will be presented in the same format presented in the Official Statement):

- Total Monthly Service Charge
- Total Quantity Charge (billed per 1,000 increments)
- Excessive Strength Surcharge
- Sewerage System Historical Customers, Sales and Sales Per Customer
- Sewerage System Projected Customers, Sales and Sales Per Customer
- Largest Customers of the Sewerage System

Historical Financial Operations  
Forecast Statement of Revenues, Expenses, Debt Service and Debt Service Coverage

d. Updates of the proposed issuance of additional bonds on a parity with the Bonds as described under the caption entitled “**SECURITY AND SOURCE OF PAYMENT – Additional Bonds and Other Parity Senior Indebtedness**” in the Official Statement.

Any or all of the items listed above may be incorporated by reference from other documents, including official statements of debt issues of the City or the Sewerage and Water Board, or related public entities, which have been submitted to EMMA or the Securities and Exchange Commission. If the document incorporated by reference is a deemed final official statement, it shall be available from the Municipal Securities Rulemaking Board. The Commission shall clearly identify each such other document so incorporated by reference.

*SECTION 5. Reporting of Listed Events.*

(a) The Dissemination Agent, on behalf of the City and the Sewerage and Water Board, covenants to provide, or cause to be provided, to the MSRB notice of the occurrence of any of the following events with respect to the Bonds, in a timely manner not in excess of ten (10) business days after the occurrence of the event. Each notice shall be so captioned and shall prominently state the date, title and CUSIP numbers of the Bonds:

- (1) principal and interest payment delinquencies;
- (2) non-payment related defaults, if material;
- (3) unscheduled draws on debt service reserves reflecting financial difficulties;
- (4) unscheduled draws on credit enhancements reflecting financial difficulties;
- (5) substitution of credit or liquidity providers, or their failure to perform;
- (6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;
- (7) modifications to rights of Bondholders, if material;
- (8) Bond calls, if material, and tender offers;
- (9) defeasances;
- (10) release, substitution or sale of property securing repayment of the Bonds;
- (11) rating changes;

(12) bankruptcy, insolvency, receivership, or similar event of the City or the Sewerage and Water Board<sup>(1)</sup>;

(13) the consummation of a merger, consolidation, or acquisition involving the State or the sale of all or substantially all of the assets of the State, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; and/or

(14) appointment of a successor or additional trustee or the change of name of a trustee, if material.

(b) In connection with providing a notice of the occurrence of a Listed Event, the Board, solely in its capacity as Dissemination Agent, is not obligated or responsible under this Disclosure Certificate to determine the sufficiency of the content of the notice for purposes of the Rule or any other state or federal securities law, rule, regulation or administrative order.

(c) The Dissemination Agent, on behalf of the City and the Sewerage and Water Board, acknowledges that the “rating changes” referred to above in Section 5(a)(11) of this Disclosure Certificate may include, without limitation, any change in any rating on the Bonds or other indebtedness issued under the General Resolution.

(d) The Dissemination Agent, on behalf of the City and the Sewerage and Water Board, acknowledges that it is not required to provide a notice of a Listed Event with respect to credit enhancement when the credit enhancement is added after the primary offering of the Bonds, the Dissemination Agent, on behalf of the City or the Sewerage and Water Board, does not apply for or participate in obtaining such credit enhancement, and such credit enhancement is not described in the Official Statement.

(e) As of the date of this Disclosure Certificate, the Listed Events described in subsections (a)(4) and (a)(5) are not applicable to the Bonds.

SECTION 6. *Mandatory Electronic Filing with EMMA.* All filings with the MSRB under this Disclosure Certificate shall be made by electronically transmitting such filings through the EMMA Dataport at <http://www.emma.msrb.org> as provided by the amendments to the Rule adopted by the SEC in Securities Exchange Release No. 59062 on December 5, 2008.

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<sup>(1)</sup> For the purposes of this event, the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the City or the Sewerage and Water Board in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court of governmental authority has assumed jurisdiction over substantially all of the assets or business of the City or the Sewerage and Water Board, or if such jurisdiction has been assumed by leaving the existing government body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan or reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the City or the Sewerage and Water Board.

SECTION 7. *Termination of Reporting Obligation.*

(a) The City's and the Sewerage and Water Board's obligations under this Disclosure Certificate shall terminate upon the legal defeasance of the General Resolution or the prior redemption or payment in full of all of the Bonds.

(b) This Disclosure Certificate, or any provision hereof, shall be null and void in the event that the City, the Board and/or the Sewerage and Water Board (i) receives an opinion of Securities Counsel, addressed to the City, the Board and/or the Sewerage and Water Board, to the effect that those portions of the Rule, which require such provisions of this Disclosure Certificate, do not or no longer apply to the Bonds, whether because such portions of the Rule are invalid, have been repealed, amended or modified, or are otherwise deemed to be inapplicable to the Bonds, as shall be specified in such opinion, and (ii) files notice to such effect with the MSRB.

SECTION 8. *Dissemination Agent.* The City and the Sewerage and Water Board, from time to time, may appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any such Dissemination Agent, with or without appointing a successor Dissemination Agent. The initial Dissemination Agent shall be the Board of Liquidation. Except as otherwise provided in this Disclosure Certificate, the Dissemination Agent shall not be responsible in any manner for the content of any notice or report prepared by the State pursuant to this Disclosure Certificate.

SECTION 9. *Amendment; Waiver.*

(a) Notwithstanding any other provision of this Disclosure Certificate, this Disclosure Certificate may be amended, and any provision of this Disclosure Certificate may be waived, provided that the following conditions are satisfied:

(1) if the amendment or waiver relates to the provisions of Section 3(a), (b), (c), 4 or 5(a), it may only be made in connection with a change in circumstances that arises from a change in legal requirements, a change in law or a change in the identity, nature or status of the City, the Board or the Sewerage and Water Board or the type of business conducted by the City, the Board or the Sewerage and Water Board;

(2) this Disclosure Certificate, as so amended or taking into account such waiver, would, in the opinion of Securities Counsel, have complied with the requirements of the Rule at the time of the original issuance of the Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and

(3) the amendment or waiver does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the Bondholders or Beneficial Owners.

(b) In the event of any amendment to, or waiver of a provision of, this Disclosure Certificate, the City, the Board and the Sewerage and Water Board shall describe such amendment or waiver in the next Annual Report, and shall include an explanation of the reason for such amendment or waiver. In particular, if the amendment results in a change to the annual financial information required to be included in the Annual Report pursuant to Section 4 of this

Disclosure Certificate, the first Annual Report that contains the amended operating data or financial information shall explain, in narrative form, the reasons for the amendment and the impact of such change in the type of operating data or financial information being provided. Further, if the annual financial information required to be provided in the Annual Report can no longer be generated because the operations to which it related have been materially changed or discontinued, a statement to that effect shall be included in the first Annual Report that does not include such information.

(c) If the amendment results in a change to the accounting principles to be followed in preparing financial statements as set forth in Section 4 of this Disclosure Certificate, the Annual Report for the year in which the change is made shall include a comparison between the financial statements or information prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles. The comparison shall include a qualitative discussion of such differences and the impact of the changes on the presentation of the financial information. To the extent reasonably feasible, the comparison shall also be quantitative. A notice of the change in accounting principles shall be filed by the City or the Sewerage and Water Board, or the Dissemination Agent at the written direction of the City or the Sewerage and Water Board with the MSRB.

SECTION 10. *Additional Information.* Nothing in this Disclosure Certificate shall be deemed to prevent the City, the Board or the Sewerage and Water Board from disseminating any other information, using the means of dissemination set forth in this Disclosure Certificate or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Certificate. If the City, the Board or the Sewerage and Water Board chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Certificate, the City, the Board or the Sewerage and Water Board shall have no obligation under this Disclosure Certificate to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

SECTION 11. *Failure to Comply.* In the event of a failure of the City, the Dissemination Agent or the Sewerage and Water Board to comply with any provision of this Disclosure Certificate, any Bondholder or Beneficial Owner may bring an action to obtain specific performance of the obligations of the City, the Dissemination Agent or the Sewerage and Water Board under this Disclosure Certificate, but no person or entity shall be entitled to recover monetary damages hereunder under any circumstances, and any failure to comply with the obligations under this Disclosure Certificate shall not constitute a default with respect to the Bonds or under the General Resolution authorizing the issuance of the Bonds.

SECTION 12. *Duties of Dissemination Agent.* The Dissemination Agent shall have only such duties as are specifically set forth in this Disclosure Certificate.

SECTION 13. *Beneficiaries.* This Disclosure Certificate shall inure solely to the benefit of the City, the Dissemination Agent, the Sewerage and Water Board, the Participating Underwriter, the Bondholders and the Beneficial Owners, and shall create no rights in any other person or entity.

SECTION 14. *Transmission of Information and Notices.* Unless otherwise required by law or this Disclosure Certificate, and, in the sole determination of the City, the Sewerage and Water Board or the Dissemination Agent, as applicable, subject to technical and economic feasibility, the City, the Sewerage and Water Board or the Dissemination Agent, as applicable, shall employ such methods of information and notice transmission as shall be requested or recommended by the herein designated recipients of such information and notices.

SECTION 15. *Additional Disclosure Obligations.* The City, the Board of Liquidation and the Sewerage and Water Board acknowledge and understand that other State of Louisiana (the "State") and federal laws, including, without limitation, the Securities Act of 1933, as amended, and Rule 10b-5 promulgated by the SEC pursuant to the 1934 Act, may apply to the City, the Board of Liquidation and the Sewerage and Water Board, and that under some circumstances, compliance with this Disclosure Certificate, without additional disclosures or other action, may not fully discharge all duties and obligations of the City, the Board of Liquidation and the Sewerage and Water Board under such laws.

SECTION 16. *Governing Law.* This Disclosure Certificate shall be construed and interpreted in accordance with the laws of the State, and any suits and actions arising out of this Disclosure Certificate shall be instituted in a court of competent jurisdiction in the State. Notwithstanding the foregoing, to the extent this Disclosure Certificate addresses matters of federal securities laws, including the Rule, this Disclosure Certificate shall be construed and interpreted in accordance with such federal securities laws and official interpretations thereof.

IN FAITH WHEREOF, the undersigned has executed this Continuing Disclosure Certificate on this, the 17th day of December, 2015.

**CITY OF NEW ORLEANS, LOUISIANA**

By: \_\_\_\_\_  
Name: Mitchell J. Landrieu  
Title: Mayor

**BOARD OF LIQUIDATION, CITY DEBT**

By: \_\_\_\_\_  
Name: Mary K. Zervigon  
Title: President

Attest: \_\_\_\_\_  
David W. Gernhauser, Secretary

**SEWERAGE AND WATER BOARD OF NEW ORLEANS**

By: \_\_\_\_\_  
Name: Cedric S. Grant  
Title: Executive's Director

**EXHIBIT A**  
**to Continuing Disclosure Certificate**

**NOTICE OF  
FAILURE TO FILE ANNUAL REPORT**

**\$100,000,000 SEWERAGE SERVICE REVENUE BONDS, SERIES 2015 OF THE CITY OF NEW  
ORLEANS, LOUISIANA**

NOTICE IS HEREBY GIVEN that the \_\_\_\_\_ has not provided an Annual Report as required by the General Resolution adopted by the Sewerage and Water Board on May 21, 2014 providing for the issuance of Bonds. The \_\_\_\_\_ anticipates that its Annual Report will be filed by \_\_\_\_\_.

Date: \_\_\_\_\_

**BOARD OF LIQUIDATION, CITY DEBT**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**EXHIBIT B**

**NOTICE OF CHANGE IN \_\_\_\_\_ FISCAL YEAR**

Name of Obligated Person: \_\_\_\_\_

Name of Bond Issue: \$100,000,000 Sewerage Service Revenue and Refunding Bonds,  
Series 2015 of the City of New Orleans, Louisiana

Date of Bonds: December 17, 2015

NOTICE IS HEREBY GIVEN that the fiscal year of the \_\_\_\_\_ changed.  
Previously, the \_\_\_\_\_ fiscal year ended on \_\_\_\_\_. It now ends on  
\_\_\_\_\_.

**CITY OF NEW ORLEANS, LOUISIANA**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: Mayor

**SEWERAGE AND WATER BOARD OF NEW  
ORLEANS**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

**APPENDIX “H”**

**DTC BOOK-ENTRY ONLY SYSTEM**

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## BOOK-ENTRY ONLY SYSTEM

The Bonds initially will be issued solely in book-entry only form to be held in the system maintained by DTC. So long as such book-entry only system is used, only DTC will receive or have the right to receive physical delivery of the Bonds and Beneficial Owners will not be or be considered to be, and will not have any rights as, owners or holders of the Bonds under the Bond Resolution.

*The following information about the book-entry only system applicable to the Bonds has been supplied by DTC. The Issuer makes no representations, warranties or guarantees with respect to its accuracy or completeness.*

1. The Depository Trust Company (“DTC”), New York, NY, will act as securities depository for the Bonds. The Bonds will be issued as fully-registered bonds registered in the name of Cede & Co. (DTC’s partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered Bond will be issued for each maturity of the Bonds, in the aggregate principal amount of such maturity, and will be deposited with DTC.

2. DTC, the world’s largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a “banking organization” within the meaning of the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code, and a “clearing agency” registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC’s participants (“Direct Participants”) deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants’ accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation (“DTCC”). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). DTC has a Standard & Poor’s rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at [www.dtcc.com](http://www.dtcc.com).

3. Purchases of the Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC’s records. The ownership interest of each actual purchaser of each Bond (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfer

of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

4. To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

5. Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Bonds, such as redemptions, tenders, defaults, and proposed amendments to the Bond documents. For example, Beneficial Owners of Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the registrar and request that copies of notices be provided directly to them.

6. Redemption notices shall be sent to DTC. If less than all of the Bonds within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

7. Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Issuer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

8. Redemption proceeds, distributions, and dividend payments on the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Issuer or Paying Agent, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, Paying Agent, or the Issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions, and dividend payments to Cede & Co. (or such other nominee as may be

requested by an authorized representative of DTC) is the responsibility of the Issuer or Paying Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

9. DTC may discontinue providing its services as depository with respect to the Bonds at any time by giving reasonable notice to the Issuer or Paying Agent. Under such circumstances, in the event that a successor depository is not obtained, the Bonds are required to be printed and delivered.

10. The Issuer may decide to discontinue use of the system of book-entry only transfers through DTC (or a successor securities depository). In that event, Bonds will be printed and delivered to DTC.

11. The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that the Issuer believes to be reliable, but the Issuer takes no responsibility for the accuracy thereof.

THE ISSUER CANNOT AND DOES NOT GIVE ANY ASSURANCES THAT THE DTC PARTICIPANTS OR THE INDIRECT PARTICIPANTS WILL DISTRIBUTE TO THE BENEFICIAL OWNERS OF THE BONDS (i) PAYMENTS OF PRINCIPAL OF OR INTEREST AND PREMIUM, IF ANY, ON THE BONDS; (ii) CONFIRMATION OF BENEFICIAL OWNERSHIP INTERESTS IN BONDS; OR (iii) REDEMPTION OR OTHER NOTICES SENT TO DTC OR CEDE & CO., ITS NOMINEE, AS THE REGISTERED OWNERS OF THE BONDS, OR THAT THEY WILL DO SO ON A TIMELY BASIS OR THAT DTC, DTC PARTICIPANTS OR INDIRECT PARTICIPANTS WILL SERVE AND ACT IN THE MANNER DESCRIBED IN THIS OFFICIAL STATEMENT. THE CURRENT "RULES" APPLICABLE TO DTC ARE ON FILE WITH THE SECURITIES AND EXCHANGE COMMISSION AND THE CURRENT "PROCEDURES" OF DTC TO BE FOLLOWED IN DEALING WITH DTC PARTICIPANTS ARE ON FILE WITH DTC.

NEITHER THE ISSUER NOR THE PAYING AGENT WILL HAVE ANY RESPONSIBILITY OR OBLIGATIONS TO SUCH DTC PARTICIPANTS OR THE BENEFICIAL OWNERS WITH RESPECT TO (1) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC OR ANY DTC PARTICIPANT; (2) THE PAYMENT BY ANY DTC PARTICIPANT OF ANY AMOUNT DUE TO ANY BENEFICIAL OWNER IN RESPECT OF THE PRINCIPAL AMOUNT OR INTEREST OR PREMIUM, IF ANY, ON THE BONDS; (3) THE DELIVERY BY ANY DTC PARTICIPANT OF ANY NOTICE TO ANY BENEFICIAL OWNER WHICH IS REQUIRED OR PERMITTED UNDER THE TERMS OF THE BOND RESOLUTION TO BE GIVEN TO BONDHOLDERS; (4) THE SELECTION OF THE BENEFICIAL OWNERS TO RECEIVE PAYMENT IN THE EVENT OF ANY PARTIAL REDEMPTION OF THE BONDS; OR (5) ANY CONSENT GIVEN OR OTHER ACTION TAKEN BY DTC AS BONDHOLDER.

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