NEW ISSUE **RATINGS: See "RATINGS" herein**

In the opinion of Bond Counsel for the Series 2015 Notes (defined below), based upon an analysis of laws, regulations, rulings and court decisions, and assuming continuing compliance with certain covenants made by the District, and subject to the conditions and limitations set forth herein under the caption "TAX EXEMPTION," interest on the Series 2015 Notes is excludable from gross income for Federal income tax purposes and is not a specific item of tax preference for purposes of the Federal individual or corporate alternative minimum taxes. Interest on the Series 2015 Notes is exempt from Kentucky income tax and the Series 2015 Notes are exempt from ad valorem taxation by the Commonwealth of Kentucky and any of its political subdivisions. See "TAX EXEMPTION" herein.

$226,340,000
LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT SEWER AND DRAINAGE SYSTEM SUBORDINATED BOND ANTICIPATION NOTES, SERIES 2015

Dated: Date of Delivery
Interest Rate: 5.00%

Due Date: November 22, 2016
Priced to Yield: 0.380%
CUSIP: 546589YL0

Interest on the Series 2015 Notes is payable from their dated date at maturity on November 22, 2016.

The above-captioned notes (the "Series 2015 Notes") are being issued pursuant to the provisions of Chapters 58, 65 and 76 of the Kentucky Revised Statutes, as amended (collectively, the "Act") and a Subordinated Debt Resolution adopted by the District on April 26, 2010, as supplemented by a Subordinate Debt Sale Resolution adopted by the District on August 24, 2015 (collectively, the "Note Resolution"). The holders of the Series 2015 Notes shall have a lien on and security interest in the revenues of the District derived from the operation of the District's sewer and drainage system (the "System"), subject and subordinate, however, to the lien thereon granted to the holders of certain bonds and other indebtedness issued, or to be issued, under the provisions of the District's Revenue Bond Resolution adopted on December 7, 1992, as amended March 4, 1993, June 30, 1993, December 14, 1994, January 25, 1996, and February 24, 2003, and as further supplemented and amended from time to time (collectively, the "Bond Resolution"). See "SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2015 NOTES" herein.

The Series 2015 Notes will be fully registered notes in denominations of $5,000 or any integral multiple thereof without coupons. The Series 2015 Notes will be issuable under a book entry system, registered in the name of The Depository Trust Company ("DTC") or its nominee. There will be no distribution of the Series 2015 Notes to the ultimate purchasers. See "THE SERIES 2015 NOTES" - Book Entry System" and APPENDIX E herein. Principal and interest on the Series 2015 Notes is payable at the principal office of The Bank of New York Mellon Trust Company, N.A, Louisville, Kentucky, as Bond Registrar and Paying Agent (the "Paying Agent and Registrar").

The Series 2015 Notes are not subject to redemption prior to maturity.

The Series 2015 Notes are special and limited revenue obligations of the District and do not constitute a debt, liability or general obligation of the District, the Commonwealth of Kentucky or any political subdivision or taxing authority thereof, including the Louisville/Jefferson County Metro Government, the County of Jefferson, Kentucky, within the meaning of the Constitution and laws of the Commonwealth of Kentucky. See "SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2015 NOTES" herein.

The District deems this Preliminary Official Statement to be final for purposes of Security and Exchange Commission Rule 15c2-12, except for certain information on the cover page hereof and certain pages herein which has been omitted in accordance with the Rule and will be provided with the final Official Statement.

The Series 2015 Notes are offered when, as and if issued, subject to the approving legal opinion of Dinsmore & Shohl LLP, Bond Counsel, Covington, Kentucky. Certain legal matters have been passed upon for the District by its General Counsel, Paula M. Purifoy, Esq. The Series 2015 Notes are expected to be available for delivery on or about November 23, 2015.

BofA Merrill Lynch

Dated: November 3, 2015

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT

Board Members
Cyndi Caudill, Chair
Daniel Arbough, Vice Chair
Andrew Bailey
Yvonne Wells-Hatfield
Joyce Horton Mott
John Phelps
J.T. Sims
Sujata Chugh

Executive Director
James A. “Tony” Parrott

Chief Financial Officer, Secretary-Treasurer
Chad Collier

Director of Regulatory Management Services
Brian Bingham

Chief Engineer
Angela Akridge

General Counsel
Paula Purifoy, Esq.

CERTIFIED PUBLIC ACCOUNTANTS
Crowe Horwath LLP
Louisville, Kentucky

BOND COUNSEL
Dinsmore & Shohl LLP
Covington, Kentucky

FINANCIAL ADVISOR
J.J.B. Hilliard, W.L. Lyons, LLC
Louisville, Kentucky

PAYING AGENT AND REGISTRAR
The Bank of New York Mellon Trust Company, N.A
Louisville, Kentucky

REGARDING THIS OFFICIAL STATEMENT

This Official Statement, which includes the cover page, has been prepared by officials of the Louisville and Jefferson County Metropolitan Sewer District (the "District") in connection with the sale by the District of $226,340,000 aggregate principal amount of Sewer and Drainage System Subordinated Bond Anticipation Notes, Series 2015 of the District. Certain information concerning the authorization, purpose, terms, conditions of sale and sources of payment of, and security for, the Series 2015 Notes are described herein. Insofar as such information embodies statements of opinion, or estimates, even if not so labeled, it should be regarded as suggesting independent investigation or consultation of other sources prior to making investment decisions. Certain information may not be the most current that is available; however, attempts were made to date and document sources of information.

No dealer, broker, salesman or other person has been authorized by the District to give any information or to make any representation, other than those contained in this Official Statement, and, if given or made, such other information or representations must not be relied upon as having been given by the District. 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 Notes 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 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 the affairs of the District since the date hereof.

Neither this Official Statement nor any verbal or written representations by or on behalf of the District before sale of the Series 2015 Notes should be regarded as part of the contract with the holders from time to time of the District's Series 2015 Notes.

All financial and other information presented herein has been provided by the District from its records, except for information expressly attributed to other sources. It is intended to show recent historic information, and is not intended to indicate future or continuing trends in the financial position or other affairs of the District. No representation is made that past experience, as might be shown by such financial and other information, will necessarily continue or be repeated in the future.

Insofar as the statements contained in this Official Statement involve matters of opinion or estimates, even if not expressly stated as such, such statements are made as such and not as representations of fact or certainty, no representation is made that any of such statements have been or will be realized, and such statements should be regarded as suggesting independent investigation or consultation of other sources prior to the making of investment decisions. Certain information may not be current; however, attempts were made to date and document sources of information. Neither this Official Statement nor any oral or written representations by or on behalf of the District preliminary to sale of the Bonds should be regarded as part of the District's contract with the successful bidder or the holders from time to time of the Bonds.

References herein to provisions of Kentucky law, whether codified in the Kentucky Revised Statutes ("KRS") or uncodified, or of the Kentucky Constitution, are references to such provisions as they presently exist. Any of those provisions may from time to time be amended, repealed or supplemented.

As used in this Official Statement, "debt service" means principal of and interest on the obligations referred to, and "Commonwealth" or "Kentucky" means the Commonwealth of Kentucky.

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$226,340,000
LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
SEWER AND DRAINAGE SYSTEM SUBORDINATED BOND ANTICIPATION NOTES, SERIES 2015

INTRODUCTION

The purpose of this Official Statement, which includes the cover page and appendices hereto, is to provide certain information with respect to the issuance of the Series 2015 Notes.

This introduction is not a summary of this Official Statement. It is only a brief description of and guide to, and is qualified by, more complete and detailed information contained in the entire Official Statement, including the cover page and appendices hereto, and the documents summarized or described herein. A full review should be made of the entire Official Statement. The offering of the Series 2015 Notes to potential investors is made only by means of the entire Official Statement.

Any capitalized terms not otherwise defined in this Official Statement shall have the meaning ascribed to them in "Appendix A – Definitions of Certain Terms and Summary of Provisions of the Bond Resolution and Note Resolution."

The District

The Series 2015 Notes are being issued by the Louisville and Jefferson County Metropolitan Sewer District (the "District"), a public body corporate and politic and a political subdivision of the Commonwealth of Kentucky.

The District was created pursuant to the Act in 1946 to provide adequate sewer and drainage facilities and service in and around the City of Louisville, Kentucky (the "City") and within Jefferson County, Kentucky (the "County"). In 1987, the District became the sole local authority for providing flood control and storm water drainage services in a drainage service area which included the City of Louisville, many small incorporated areas, and portions of the unincorporated areas of the County (collectively hereinafter referred to as the "Drainage Service Area"). Substantially all the governmental and corporate functions of the City and the County merged effective January 6, 2003 into a single consolidated local government known as Louisville/Jefferson County Metro Government. The consolidated local government replaced and superseded the governments of the City and the County. The City no longer exists as an independent legal entity.

Purpose of the Series 2015 Notes

The proceeds of the Series 2015 Notes will be used to: (i) pay the costs of issuing the Series 2015 Notes and (ii) refund and retire on November 23, 2015 the District's outstanding Sewer and Drainage System Subordinated Bond Anticipation Notes, Series 2014 (the "Prior Notes"). To the extent unexpected excess proceeds from the Series 2015 Notes are received, such additional proceeds will be used to pay the costs of improvements to the District's sewer and drainage system (the "System"), including (a) wastewater and drainage system expansion and improvements; (b) improvements to wastewater treatment facilities; (c) rehabilitation of combined sewer overflow systems; (d) improvements to flood control and drainage facilities; (e) drainage and District improvements; (f) construction of collector sewers (g) construction and improvements of detention and retention basins, (h) construction of interceptor sewers; (i) combined sewer overflow and sanitary overflow abatement projects; (j) construction and improvements to force mains; (k) repairs and improvements to District pumping stations; (l) construction of regional storage facilities; and (m) miscellaneous improvements and acquisition of equipment and mapping hardware and software (collectively, the "Series 2015 Project").

The Series 2015 Project is part of the District's overall capital improvement program, which is more fully described in the Consulting Engineer's Report attached hereto as Appendix F.

Security and Source of Payment for the Series 2015 Notes

Pursuant to the provisions of Chapters 58, 65 and 76 of the Kentucky Revised Statutes, as amended (the "Act") and a Subordinated Debt Resolution adopted by the District on April 26, 2010, as supplemented by a Subordinate Debt Sale Resolution adopted by the District on August 24, 2015 (collectively, the "Note Resolution"), the District has pledged to the payment of the principal of, premium, if any, and interest on the Series 2015 Notes as and when same shall become due and payable: (i) the proceeds of the Series 2015 Notes pending their application pursuant to the Note Resolution, (ii) the proceeds of the sale of bonds the District expects to issue to retire the Series 2015 Notes at maturity, (iii) all Revenues, (iv) all amounts on deposit in the Funds or Accounts established under the Bond Resolution (as hereinafter defined) or the Note Resolution, except amounts required to be rebated to the United State Treasury, (iv) such other amounts as may be pledged from time to time by the District as security for the Series 2015 Notes, and (vi) all proceeds of the foregoing. The Series 2015 Notes rank on a parity as to source of payment with and Bonds which may be issued from time to time pursuant to the Resolution

THE SERIES 2015 NOTES ARE SECURED ON A BASIS INFERIOR AND SUBORDINATE TO BONDS AND OTHER OBLIGATIONS HERETOFORE ISSUED, OR TO BE ISSUED, AND SECURED BY A FIRST LIEN PLEDGE ON THE PLEDGED PROPERTY PURSUANT TO THE BOND RESOLUTION ADOPTED BY THE DISTRICT ON DECEMBER 7, 1992, AS AMENDED MARCH 4, 1993, JUNE 30, 1993, DECEMBER 14, 1994, JANUARY 25, 1996, AND FEBRUARY 24, 2003, AND AS FURTHER SUPPLEMENTED OR AMENDED FROM TIME TO TIME (COLLECTIVELY, THE "BOND RESOLUTION").

THE SERIES 2015 NOTES DO NOT CONSTITUTE AN INDEBTEDNESS OF THE DISTRICT, THE COMMONWEALTH OF KENTUCKY OR ANY POLITICAL SUBDIVISION OR TAXING AUTHORITY THEREOF, INCLUDING THE LOUISVILLE/JEFFERSON COUNTY METRO GOVERNMENT AND THE COUNTY OF JEFFERSON, KENTUCKY, WITHIN THE MEANING OF THE CONSTITUTION OF THE COMMONWEALTH OF KENTUCKY. THE SERIES 2015 NOTES ARE PAYABLE SOLELY FROM THE REVENUES OF THE SYSTEM AND THE ASSETS AND REVENUES PLEDGED THEREFORE UNDER THE RESOLUTION, AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE DISTRICT, THE COMMONWEALTH OF KENTUCKY OR ANY POLITICAL SUBDIVISION OR TAXING AUTHORITY THEREOF, INCLUDING THE LOUISVILLE/JEFFERSON COUNTY METRO GOVERNMENT AND OR THE COUNTY OF JEFFERSON, KENTUCKY, IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF, PREMIUM, IF ANY, AND INTEREST ON THE SERIES 2015 NOTES. THE DISTRICT HAS NO TAXING POWER. (see "SECURITY AND SOURCE OF PAYMENT FOR THE SERIES 2015 NOTES," herein).

Description of the Series 2015 Notes

No Early Redemption. The Series 2015 Notes are not subject to redemption prior to their maturity (see "THE SERIES 2015 NOTES – Redemption," herein).

Denominations. The Series 2015 Notes will be issued in principal amounts of $5,000 and integral multiples thereof.

Book Entry. The Series 2015 Notes are issuable only as fully registered Series 2015 Notes, without coupons. The Series 2015 Notes, when issued, will be registered in the name of Cede & Co., as nominee of The Depository Trust Company, New York, New York, which will act as securities depository for the Series 2015 Notes. Purchasers will not receive certificates representing their ownership interest in the Series 2015 Notes purchased. So long as DTC or its nominee is the registered owner of the Series 2015 Notes, payments of the principal of and interest due on the Series 2015 Notes will be made directly to DTC. Principal of, redemption premium, if any, and interest on the Series 2015 Notes will be paid directly to DTC by The Bank of New York Mellon Trust Company, N.A, Louisville, Kentucky, as Paying Agent and Registrar (the "Paying Agent" and "Registrar"). See "BOOK-ENTRY SYSTEM" and APPENDIX E - "Book-Entry Only System" herein.

Interest. The Series 2015 Notes will bear interest at the rates set forth on the cover hereof, payable at maturity on November 22, 2016. Interest will be computed on the basis of a 360-day year and twelve thirty-day months, accrued from the date of delivery.

Tax Exemption

Under the laws, regulations, rulings and judicial decisions in effect as of the date hereof, interest, including original issue discount, if any, on the Series 2015 Notes is excludible from gross income for Federal income tax purposes, pursuant to the Internal Revenue Code of 1986, as amended (the "Code"). Interest on the Series 2015 Notes will not be treated as a specific item of tax preference, under Section 57(a)(5) of the Code, in computing the alternative minimum tax for individuals and corporations. In rendering the opinions in this paragraph regarding the Series 2015 Notes, Bond Counsel has assumed continuing compliance with certain covenants designed to meet the requirements of Section 103 of the Code. Bond Counsel expresses no other opinion as to the federal tax consequences of purchasing, holding or disposing of the Series 2015 Notes. Interest on the Series 2015 Notes is exempt from income taxation and the Series 2015 Notes are exempt from ad valorem taxation by the Commonwealth of Kentucky and any of its political subdivisions.

The District has ***<u>not</u>*** designated the Series 2015 Notes as "qualified tax exempt obligations" with respect to certain financial institutions under Section 265 of the Code. See Appendix D hereto for the form of the opinion Bond Counsel proposes to deliver in connection with the Series 2015 Notes.

Parties to the Issuance of the Series 2015 Notes

The Paying Agent and Registrar for the Series 2015 Notes is The Bank of New York Mellon Trust Company, N.A., Louisville, Kentucky. Legal matters incidence to the issuance of the Series 2015 Notes and with regard to the tax-exempt status of the interest thereon are subject to the approving legal opinion of Dinsmore & Shohl LLP, Covington, Kentucky, Bond Counsel. Certain legal matters will be passed upon for the District by its General Counsel, Paula M. Purifoy, Esq. The financial advisor to the District with regard to the issuance of the Series 2015 Notes is J.J.B. Hilliard, W.L. Lyons, LLC, Louisville, Kentucky.

Authority for Issuance

Authority for the issuance of the Series 2015 Notes is provided by Chapters 58, 65 and 76 of the Kentucky Revised Statutes (the "Act") and the Note Resolution.

Offering and Delivery of the Series 2015 Notes

The Series 2015 Notes are offered when, as and if issued by the District. The Series 2015 Notes will be delivered on or about November 23, 2015 in New York, New York through the Depository Trust Company (DTC).

Disclosure Information

This Official Statement speaks only as of its date, and the information contained herein is subject to change. This Official Statement and continuing disclosure documents of the District are intended to be made available through one or more repositories. Copies of the basic documentation relating to the Series 2015 Notes, including the Note Resolution and the note form, are available from the District.

The District has deemed this Official Statement to be final for the purposes of Securities and Exchange Commission Rule 15c2-12.

Additional Information

Additional information concerning this Official Statement, as well as copies of the basic documentation relating to the Series 2015 Notes, is available from J.J.B. Hilliard, W.L. Lyons, LLC, Financial Advisor to the District, 500 West Jefferson Street, Suite 700, Louisville, Kentucky 40202, Telephone (502) 588-8639.

Brief descriptions of the Series 2015 Notes, security for the Series 2015 Notes, the District, the System and the Resolution are included in this Official Statement. Certain information with respect to the District is included in Appendices hereto. Capitalized terms not otherwise defined herein shall have the meanings assigned to them in the Resolution. All summaries herein of documents and agreements are qualified in their entirety by reference to such documents and agreements, copies of which are available at the office of the District.

THE SERIES 2015 NOTES

General

The Series 2015 Notes are to be issued only as fully registered notes in denominations of $5,000 or any integral multiple thereof without coupons. The Series 2015 Notes will be dated their date of delivery, will bear interest from that date as described herein, payable at maturity on November 22, 2016.

The Series 2015 Notes shall be payable at the principal office of the Paying Agent and Registrar with respect to principal or premium, if any, in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public or private debts. All interest will be payable at maturity by check of the Paying Agent mailed to such registered owner who shall appear as of the close of business on the fifteenth day (or if such day shall not be a business day, the preceding business day) of the calendar month next preceding such maturity date on the registration books of the District maintained by the Registrar, or if the registered owner shall be the registered owner of Series 2015 Notes in the aggregate principal amount of $1,000,000 or more, by wire transfer, if the registered owner has requested payment in such manner at such wire address as shall have been furnished by the registered owner on or prior to the fifteenth day next preceding the maturity date of the Series 2015 Notes (or if such date shall not be a business day, the next succeeding business day).

Each registered Series 2015 Note shall be transferable only upon the books of the Registrar, at the request of the registered owner thereof or by his authorized attorney upon surrender thereof together with an assignment satisfactory to the Registrar duly executed by the registered owner or his duly authorized attorney. Upon the transfer of any such Series 2015 Note, the District shall issue in the name of the transferee a new registered Series 2015 Note of the same aggregate principal amount, series and maturity as the surrendered Series 2015 Note. If any Series 2015 Note is mutilated, lost, stolen or destroyed, the District will execute and deliver a new Series 2015 Note in accordance with the Note Resolution.

No Early Redemption

The Series 2015 Notes are not subject to redemption prior to their stated maturity.

Book Entry System

The Series 2015 Notes initially will be issued solely in book entry form to be held in the book-entry only system maintained by DTC. So long as such book-entry system is used, only DTC will receive or have the right to receive physical delivery of Series 2015 Notes and Beneficial Owners will not be or be considered to be, and will not have any rights as, owners or holders of the Series 2015 Notes under the Note Resolution. For additional information about DTC and the book-entry-only system see "APPENDIX E – Book-Entry Only System."

THE INFORMATION IN THIS SECTION AND IN APPENDIX E CONCERNING DTC AND DTC'S BOOK-ENTRY SYSTEM HAS BEEN OBTAINED FROM SOURCES THAT THE DISTRICT BELIEVES TO BE RELIABLE, BUT THE DISTRICT TAKES NO RESPONSIBILITY FOR THE ACCURACY THEREOF.

Exchange and Transfer

The registration of any Series 2015 Note may be transferred only upon the books of the District kept by the Registrar, by the owner thereof, in person or by his or her attorney duly authorized in writing, upon surrender of such Series 2015 Note at the corporate trust office of the Registrar accompanied by a written instrument of transfer satisfactory to the Registrar and duly executed by the owner or by his or her duly authorized attorney. Any Bond may be exchanged at the corporate trust office of the Registrar for new Series 2015 Notes of any authorized denomination and of the same aggregate principal amount and Series and maturity as the surrendered Series 2015 Note. The Registrar will not charge for any new bond issued upon any transfer or exchange, but may require the owner requesting such exchange to pay any tax, fee or other governmental charge required to be paid with respect to such exchange or transfer. Neither the District nor the Registrar is required (a) to exchange or transfer any Bond during the period commencing on the fifteenth day of the month preceding an interest payment date and ending on such interest payment date.

SECURITY AND SOURCES OF PAYMENT FOR THE SERIES 2015 NOTES

The Series 2015 Notes are special and limited obligations of the District payable solely from and secured as to the payment of the principal and interest thereon, in accordance with their terms and the provisions of the Note Resolution solely by, the Pledged Property which is defined by the Note Resolution to be the proceeds of the sale of the Series 2015 Notes, the proceeds of the sale of bonds the District expects to issue to retire the Series 2015 Notes at maturity, all Revenues, all amounts on deposit in the Funds or Accounts established under the Bond Resolution or Note Resolution, except amounts required to be rebated to the United State Treasury, such other amounts as may be pledged from time to time by the District as security for the payment of bonds, notes or other evidences of indebtedness authenticated and delivered pursuant to the Bond Resolution or Note Resolution, and all proceeds of the foregoing.

The Series 2015 Notes are secured by and payable solely from pledged revenues derived from the collection of rates, rents and charges for the services rendered by the System as set forth in the Resolution. The Series 2015 Notes do not constitute an indebtedness of the Louisville/Jefferson County Metro Government or the County of Jefferson, Kentucky.

THE SERIES 2015 NOTES ARE SECURED ON A BASIS INFERIOR AND SUBORDINATE TO BONDS AND OTHER OBLIGATIONS HERETOFORE ISSUED, OR TO BE ISSUED, AND SECURED BY A FIRST LIEN PLEDGE ON THE PLEDGED PROPERTY PURSUANT TO THE BOND RESOLUTION ADOPTED BY THE DISTRICT ON DECEMBER 7, 1992, AS AMENDED MARCH 4, 1993, JUNE 30, 1993, DECEMBER 14, 1994, JANUARY 25, 1996, AND FEBRUARY 24, 2003, AND AS FURTHER SUPPLEMENTED OR AMENDED FROM TIME TO TIME (COLLECTIVELY, THE "BOND RESOLUTION").

The District has heretofore issued its Sewer and Drainage System Revenue Bonds outstanding in the amounts shown below (the "Outstanding Bonds"), each series of which ranks on a basis superior to the Series 2015 Notes as to the pledge of Pledged Property.

Series	Dated Date	Original Principal Amount	Principal Amount Outstanding[1]
Series 2006A[2]	May 1, 2006	100,000,000	$2,120,000
Series 2007A	November 15, 2007	61,125,000	45,815,000
Series 2008A	May 1, 2008	105,000,000	99,850,000
Series 2009A	May 15, 2009	76,275,000	47,280,000
Series 2009B	August 15, 2009	225,770,000	150,900,000
Series 2009C	November 24, 2009	180,000,000	180,000,000
Series 2010A	November 30, 2010	330,000,000	330,000,000
Series 2011A	August 24, 2011	263,360,000	256,490,000
Series 2013A	May 23, 2013	115,790,000	115,790,000
Series 2013B	May 23, 2013	119,515,000	119,515,000
Series 2013C	November 27, 2013	100,000,000	99,875,000
Series 2014A	November 25, 2014	80,000,000	80,000,000
Series 2015A	October 21, 2015	175,000,000	175,000,000
Series 2015B	October 21, 2015	81,750,000	81,750,000
	Total	$2,013,585,000	$1,784,385,000

(1) As of November 1, 2015
(2) Maturities on and after May 15, 2017 were refunded with proceeds of Series 2015 Bonds

As provided in the Bond Resolution, Additional Bonds may be issued on a parity with the Outstanding Bonds to finance the Cost of Acquisition and Construction of Additional Facilities upon the satisfaction of certain conditions. The Bond Resolution further provided that Refunding Bonds may be issued from time to time to refund outstanding obligations. The Series 2015 Notes would be inferior and subordinate as to the pledge of the Pledged Property with respect to any such Additional Bonds or Refunding Bonds issued on a parity with the Outstanding Bonds. The District recently issued $175,000,000 of Additional Bonds designated as its Sewer and Drainage System Revenue Bonds, Series 2015A (the "Series 2015A Bonds") and $81,750,000 of Refunding Bonds designated as its Sewer and Drainage System Revenue Refunding Bonds, Series 2015B (the "Series 2015B Bonds") and anticipates the future issuance of Additional Bonds in connection with the District's Capital Improvement Program described in "Appendix F - Consulting Engineer's Report." Furthermore, the District anticipates issuing Additional Bonds to retire the Series 2015 Notes at maturity. For additional information relating to the conditions for the issuance of Additional Bonds see Appendix A – Definitions of Certain Terms and Summary of Provisions of the Bond Resolution and Note Resolution- Summary of Certain Provisions of the Bond Resolution – Additional Bonds".

SWAPS, SUBORDINATED DEBT, AND OTHER FINANCIAL INSTRUMENTS

General

The District has entered into interest rate swap agreements with two counterparties as part of the management of its outstanding debt. Generally, each interest rate swap agreement calls for periodic net payments from or to the District depending upon whether a specified market interest rate index is above or below a specified fixed rate or another specified market interest rate index during that period. Each such swap agreement allows the District, at its option, to terminate the agreement at any time. Upon any such termination, a termination payment is to be made, calculated based on the mark-to-market value of the swap agreement plus dealer's spread. The swap agreements provide that under certain circumstances the counterparty to the swap agreement (but not the District) may be required to post collateral, depending upon the credit rating of that counterparty, with the amount of collateral required based on the mark-to-market value of the swap. The interest rate swap agreements entered into by the District provide that the counterparties to the agreements must post collateral if their respective ratings fall below A+/A 1. The agreements also provide the counterparties the right to terminate the agreements if the District's unenhanced bond rating is downgraded below BBB/Baa. The District's obligations under all of its outstanding swap agreements are unsecured and subordinate to all Bonds issued and outstanding under the Bond Resolution. Certain provisions of the District's outstanding swap agreements are summarized below.

The Bond Resolution permits the District to issue Senior Subordinated Debt secured by Revenues of the System, subject to the prior and senior lien on such Revenues of all Bonds issued and outstanding under the Bond Resolution. The decision of the District from time to time whether to issue Senior Subordinated Debt or Bonds depends, among other things, upon its assessment of market conditions at the time of issuance.

The District has previously issued Senior Subordinated Debt to provide interim financing for capital projects. Each series of Senior Subordinated Debt previously issued has been retired from the proceeds of Bonds issued under the Bond Resolution.

The District has from time to time entered into agreements with various counterparties to provide for the investment of amounts in various funds established under the Bond Resolution. Generally such agreements provide for the investment of funds at a contractually fixed rate of return to the District during their respective terms and provisions for termination, at the option of the District, based on payment of a termination fee determined based on the mark-to-market value of the contract plus dealer's spread.

The District reserves the right to enter into, amend, and terminate any existing or future interest rate swap transactions or other agreements or derivative transactions, from time to time, as part of its overall debt, investment or general management strategy. See also "APPENDIX A — Definitions of Certain Terms and Summary of Provisions of the Bond Resolution and Note Resolution".

Floating-to-Fixed Swap

In 2001, the District entered into two forward-starting interest rate swaps (the "1999 Swaps") pursuant to which beginning in November 2009 the District would pay a fixed rate of 4.4215% and receive 67% of the 30-day LIBOR index on a notional amount corresponding to the approximate amount needed to refund the District's Series 1999 Bonds. The District's original strategy in entering into the 1999 Swaps was to "lock in" a fixed rate for the variable rate debt that could be issued in 2009 to refund the Series 1999 Bonds. In August 2009, the District decided instead to refund the Series 1999 Bonds with proceeds of its fixed-rate Series 2009B Bonds and its fixed rate Series 2009A Notes. The Series 2009A Notes have since been refunded by the fixed-rate Series 2010A Notes which were currently refunded by the Series 2011A Notes, which were then in turn refunded by the Series 2011B Notes. The Series 2011B Notes were subsequently currently refunded by the Series 2012A Notes, which in turn were currently refunded by the Series 2013 Notes. The 2013 Notes were subsequently currently refunded by the Prior Notes, and the Prior Notes are being currently refunded with the proceeds of the Series 2015 Notes.

In August 2009, the District reversed that portion of the 1999 Swaps which corresponded in amount and amortization schedule to the portion of the Series 2009B Bonds used to refund the Series 1999 Bonds. The reversed portions of the 1999 Swap were subsequently terminated in April 2013. The only portion of the 1999 Swaps that remain in effect is the non-reversed portion of the 1999 Swaps, which amortizes in amounts that correspond with the expected maturity structure of a future hypothetical bond issue the District may issue to permanently refinance the Series 2015 Notes. The District's expectation is that variable payments received under the non-reversed portion of the 1999 Swaps will hedge future interest rate movements for any fixed-rate Bonds hereafter issued under the Resolution (or any other fixed rate renewal notes hereafter issued under the Subordinated Debt Resolution) to refinance the Series 2015 Notes. As of June 30, 2015 the estimated aggregate mark-to-market value of the non-reversed portion of the 1999 Swaps was approximately negative $78,166,086.

Subordinated Revolving Revenue Anticipation Note

On September 25, 2015, the District adopted a Subordinated Debt Revolving Revenue Anticipation Note Resolution (the "Revolving Note Subordinated Debt Resolution") authorizing its Revolving Revenue Anticipation Note (the "Revolving Note") in an aggregate maximum outstanding principal amount at any time of $25,000,000 for the purpose of temporarily paying, if and when needed, costs of operating and maintaining the System in anticipation of the receipt of future revenues of the System. The Revolving Note was issued and delivered on October 2, 2015 and has a final maturity of June 30, 2016. The Revolving Note will be payable upon such terms as are described in the Revolving Note Subordinated Debt Resolution; provided, however, that the pledge created by the Revolving Note, insofar as it relates to the revenues pledged under the Resolution, is subject and subordinate in all respects to the priorities, liens and rights created by and existing under the Resolution for the security and source of payment and protection of all Bonds previously issued, the Series 2015 Bonds and any Additional Bonds and Refunding Bonds which may be issued from time to time pursuant to the Resolution.

THE DISTRICT

General

The District was created and established pursuant to the Act, as a public body corporate, in 1946, in the interest of the public health and for the purpose of providing adequate sewer and drainage facilities. The District had complete jurisdiction, control, possession, and supervision of the then existing sewer and drainage system in the City, and with the power and authority, to operate, maintain, reconstruct, and improve said sewer and drainage system and construct any additions, betterments, and extensions thereto within the limits of the District area as defined in the Act. The District assumed jurisdiction over and administration of the then existing sewer and drainage system in the City on November 16, 1946, pursuant to Ordinance No. 90, Series 1946, passed by the Board of Aldermen of the City and approved by the Mayor thereof in accordance with the requirements of the Act.

Administration and Management of the District

The business, activities, and affairs of the District are managed, controlled, and conducted by a board (the "Board"), composed of eight members, not more than five of whom shall be affiliated with the same political party. The members are appointed by the Mayor subject to the approval of the Council of the Louisville/Jefferson County Metro Government. All appointments to the Board are made for three-year terms. The present members of the Board and the expiration dates of their respective terms are as follows:

Board Members	Term Expires
Cyndi Caudill (Chair)	August 31, 2017
Daniel Arbough (Vice-Chair)	June 30, 2018
Andrew Bailey	July 31, 2018
Sujata Marai Chugh	February 28, 2018
Joyce Horton Mott	August 31, 2017
John Phelps	July 31, 2016
J.T. Sims	July 31, 2017
Yvette Wells-Hatfield	June 30, 2016

The Board has delegated and placed the conduct of the day-to-day business affairs of the District under the direction of an Executive Director supported by administrative, engineering, legal and business staffs. The District's executive staff currently consists of the following individuals:

James A. "Tony" Parrott	Executive Director
Chad Collier	Chief Financial Officer and Secretary-Treasurer
Brian Bingham	Chief of Operations
Angela Akridge	Chief Engineer
John Loechle	Director of Engineering
Paula Purifoy, Esq.	General Counsel
Mark (Tom) Luckett	Information Technologies Director
David Johnson	Development and Stormwater Services Director
Lynne Fleming	Human Resources Director
Anthony Marconi	Operations and Support Services Director
Alex Novak	Treatment Facilities Director
Dennis Thomasson	Collections Systems Director

On July 27, 2015, the Board unanimously approved an employment agreement with Mr. James Parrott to serve as Executive Director of the District effective September 14, 2015 through September 13, 2018. Mr. Chad Collier and Ms. Angela Akridge similarly have employment agreements each effective through September 30, 2016.

The Corradino Group, Inc., Louisville, Kentucky (the "Consulting Engineers") has been retained by the District as its consulting engineering firm. The most recent report of the Consulting Engineers is appended to this Official Statement as Appendix F.

On August 1, 2011 the Auditor of Public Accounts of the Commonwealth of Kentucky (the "State Auditor"), an elected state official, informed the District that her office was undertaking a review and evaluation of the oversight and operation of the District, focusing on the District's policies, internal controls, financial activity, and other aspects of the District's operations, including specifically review of the District's board and committee structure, policies governing the District's internal audit process and reporting to the District's Board by its staff, and the District's policies regarding business conduct, conflicts of interest, ethics, and procurement. The State Auditor offered to make recommendations to strengthen and improve the District's internal controls, oversight, and operations and to ensure the transparent and efficient use of the District's financial resources. On December 16, 2011 the State Auditor issued a report of her examination containing recommendations for the improvement of various areas of the District's governance and operations, including more detailed oversight by the Board of the District's investment policies, practices, and procedures, investment portfolio, and use of interest rate swap agreements and other financial derivatives. The District provided monthly reports to the State Auditor regarding the District's progress in the implementation of the State Auditor's recommendations. The State Auditor's report and the District's progress reports are available at: http://www.msdlouky.org/aboutmsd/audit2012.htm1. As of October 30, 2015, the District had fully implemented all of the State Auditor's recommendations.

In January, 2012 Mayor Greg Fischer of the Louisville/Jefferson County Metro Government formed the Louisville Utilities and Public Works Advisory Group (the "Advisory Group") to examine the operations of the Louisville Water Company ("Louisville Water Company", see "LOUISVILLE WATER COMPANY" below), the District, and Metro Government's Department of Public Works & Assets ("DPW") to determine whether synergies exist between the entities that would allow for improved service or reduced costs. The Advisory Group engaged Black & Veatch Corporation, an experienced consultant to the utility industry, to assist the Advisory Group's evaluation of potential business restructuring scenarios ranging from the status quo to a full consolidation of Louisville Water Company, the District, and DPW. On August 1, 2012 the consultant presented a final report to the Advisory Group, available at http://www.msdlouky.org/pdfs/TaskForce/LouisyilleAdvisoryGroupFinalReport20120801.pdf, concluding that operational efficiencies and savings could be achieved by gradually consolidating the operations and governance of Louisville Water Company, the District, and DPW within the next five years. Although the outcome of the Advisory Group's report is not presently determinable, the District believes that any actions taken as a result of the Advisory Group's findings and recommendations will not adversely affect the operations, properties, or financial condition of the District or the payment of the Series 2015A Bonds and the District's other outstanding obligations in accordance with their terms.

In March of 2013, the District approved a letter of intent with the Louisville Water Company setting forth the due diligence efforts to be conducted by the parties in order to evaluate the governance, financial and environmental implications of a potential consolidation. In April 2013, the District and the Louisville Water Company formed due diligence teams to evaluate the Advisory Group's recommendations and provide recommendations to the District's and Louisville Water Company's Boards and to Mayor Fischer. The final Report on Due Diligence Analysis and Recommendation was completed in February 2014. As a result of those efforts, the District and the Board of Waterworks of the Louisville/Jefferson County Metro Government entered into an Interlocal Cooperation Agreement (the "Original ILA") on March 11, 2014, as approved by the Kentucky Attorney General on March 31, 2014. The Original ILA, effective through June 30, 2033 (unless earlier terminated by either party on six months' notice), provided for, among other items, the joint and/or cooperative development, provision, sharing and management of certain back-office, administrative and/or support services to include one or more of the following ("One Water"):

- Information Technology Services;
- Business Development Services;
- Engineering Services;
- Internal/External Communications Services;
- Finance Services;
- Risk Management Services;
- Human Resources; and
- Operations.

On August 24, 2015, the District and the Board of Waterworks of the Louisville Water Company entered into an Amended and Restated Interlocal Cooperation Agreement (the "Amended ILA," and together with the Original ILA, the "ILA"), as approved by the Kentucky Attorney General on September 17, 2015, in order to provide for more efficient implementation and expansion of the services provided in the Original ILA. The ILA, as so amended, is now effective through June 30, 2035 (unless earlier terminated by either party on 180 days' notice).

Phase I of the ILA was implemented in May 2014 with the establishment of a joint services steering committee comprised of an equal number of staff from the District and the Louisville Water Company. The Joint Services Steering Committee is responsible for the oversight of the operation, administration and maintenance of the services pending the formation of a collaborative administrative body known as "One Water" comprised of two members appointed by the District's Board from among its members, and two appointed by the Board of Waterworks from among its members, along with a designee of the Mayor of Louisville and Jefferson County Metro Government. The administration of the various service agreements will be the key to successfully providing consolidated services to both Louisville Water Company and the District. The goal of the ILA is to create coordinated teams of employees from both entities with the capability of delivering superior customer service at lower costs than the existing two entities combined.

The first phase entails the sharing of services in five functional groups plus one specialty area of focus. The five functional groups addressed in this phase include Procurement, Fleet, Human Resources, Information Technology, and Customer Service. The specialty area that will be evaluated will focus on energy savings as highlighted in the Black and Veatch report. It is anticipated that work on Phase I will continue through 2016 and that Phase II will begin in the fourth quarter of 2015. That phase will include the consolidation of additional back office functions and may also include operational areas as well. The effort of identifying and prioritizing these subsequent functions will be performed during Phase I and a detailed plan will be developed prior to starting that work.

At a joint board meeting of the District and the Board of Waterworks of the Louisville/Jefferson County Metro Government held on August 18, 2015, it was announced the One Water initiative will produce over $1 million in savings for 2015. The savings come from sharing resources and consolidating jobs. Louisville Water Company and the District recently hired a joint fleet manager and now utilize one fuel bid and a joint contract for parts and supplies. For Information Technology (IT), Louisville Water Company and the District are hiring a Chief Information Officer to oversee the IT efforts at both organizations. Louisville Water Company and the District have also found savings with joint purchases in other areas of the organization and sharing resources for the customer call centers. The savings for employment come through attrition. The organizations also realized a one-time savings of $10 million through a partnership with a new customer billing system.

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Customer History

Five Year Wastewater Customer History. The District's wastewater sewer system customer history for the past five fiscal years is as follows:

Residential	Number of Customers	Volume (million gallons)	Revenue (in thousands)
FY 2011	210,131	12,892	$78,552
FY 2012	214,158	11,772	80,779
FY 2013	218,352	11,760	86,409
FY 2014	219,132	11,202	89,691
FY 2015	230,504	11,334	96,230
Commercial			
FY 2011	19,724	10,289	$46,598
FY 2012	20,507	11,002	53,116
FY 2013	20,167	11,230	57,192
FY 2014	20,588	9,519	58,812
FY 2015	22,564	9,543	61,950
Industrial			
FY 2011	385	3,697	$21,141
FY 2012	471	3,260	18,063
FY 2013	455	3,744	19,536
FY 2014	454	3,674	19,738
FY 2015	394	4,965	17,289

Source: Metropolitan Sewer District

The Drainage System

Under an interlocal government agreement effective January 1, 1987, the District became the sole local authority for providing flood control and storm water drainage services in the Drainage Service Area. The District is responsible for the operation, maintenance, replacement, improvements and additions to existing flood control facilities and public storm water drainage facilities within the Drainage Service Area. The stormwater drainage system is comprised of various types of facilities to collect, convey, retain, and discharge stormwater runoff into sewers, rivers, streams, and creeks, which eventually drain into the Ohio River. These facilities include open channels, ditches, streams, ponds, pipes, culverts, conduits, bridge structures, detention basins, retention basins, pump stations, and other facilities.

In fiscal year 2015, the District had approximately 225,045 drainage service accounts and billed 6,334,953 equivalent service units (ESUs) at $8.10 per month which provided total annual drainage charge revenues of approximately $51.3 million.

By having a single authority responsible for drainage services and a dedicated source of revenue, the community benefits by having a more efficient, cost effective drainage service program. The District's consultants have developed a Storm Water Drainage Master Plan which, after public participation and approvals by local governments, will be used by the District for implementing improvements and extensions to the existing drainage facilities.

THE SERVICE AREA

The combined area of the former City and the County ("Louisville Metro") is located in the north-central portion of the Commonwealth on the south bank of the Ohio River. Louisville Metro is the largest city in Kentucky and is the center of the Louisville Metropolitan Statistical Area (MSA) which includes, in addition to Louisville Metro, the counties of Bullitt, Oldham and Shelby, in Kentucky, and Clark, Floyd, and Harrison, in Indiana. The Louisville MSA has exhibited a nationally familiar pattern of population dispersion from its core city to the balance of Louisville Metro, and from Louisville Metro to the adjacent counties in Kentucky and Indiana.

Annual Population Estimates

	Louisville Metro[1]	Louisville MSA[2]
1970	695,000	991,801
1980	684,300	1,054,368
1990	665,200	1,058,425
2000	693,604	1,161,975
2010	741,096	1,267,691
2011	746,906	1,310,945
2014	760,026	1,269,702

(1) Source: Population Division, U.S. Census Bureau website: www.census.gov (Jefferson County, KY)
(2) Source: Population Division, U.S. Census Bureau website: www.census.gov (Louisville/Jefferson County, KY-IN)

Louisville Metro possesses a diverse economic base which has exhibited the national pattern of a shift away from manufacturing towards services. In 2013 the average per capita personal income in Louisville-Jefferson County as reported by the U.S. Bureau of Economic Analysis was $41,477.

Louisville Metro, Kentucky
Largest Private Employers, 2015

Company	Employment
United Parcel Service Inc.	22,189
Humana, Inc.	12,900
Norton Healthcare, Inc.	10,739
Ford Motor Company	9,028
Amazon.Com	6,000
GE Appliances	6,000
Kentucky One Health, Inc.	6,000
Baptist Healthcare Systems Inc.	5,116
The Kroger Co.	4,892
Manna, Inc.	2,400

Source: Louisville Business First, July, 2015 edition

Approximately 61.1% of housing units in the Louisville-Jefferson County Metro area were owner occupied in 2013. The median home price for housing units in Jefferson County, Kentucky in 2013 was $167,000. 53.0% of housing units in Kentucky were built prior to 1980. Over 92% of adult workers in Kentucky drive to work with an average commuting time of 22.6 minutes. (Source: U.S. Census Bureau, 2009-2013 American Community Survey — 5 Year Estimate).

RATES AND CHARGES

Wastewater Service and Drainage Service Charges

The District derives its revenue for wastewater service and drainage service from the collection of rates, rentals and charges established in accordance with the provisions of the Act, for services rendered within the Service Area to customers served by the District's facilities. The District has no power to levy ad valorem taxes upon any property for any purpose whatsoever. Wastewater Service Rates, based on water consumed, are billed and collected by Louisville Water Company ("Louisville Water Company"), (a Kentucky corporation wholly owned as a public enterprise by the Louisville/Jefferson County Metro Government) for the District under terms of an agreement executed in January, 2013. These rates are billed simultaneously with the water bill on a single statement payable in total for both wastewater and water service rendered, and are subject to a late penalty of 5%. In the event of nonpayment of any such wastewater rates, rentals, or charges for a period of more than 30 days after they become due and payable, Louisville Water Company is required by law to discontinue water service. See "LOUISVILLE WATER COMPANY."

Louisville Water Company bills and collects the District's wastewater service charges. The bills are rendered bimonthly except for larger industrial/commercial accounts which are billed monthly. Louisville Water Company also bills and collects all of the District's drainage charges as additions to the water/sewer billings.

The District wastewater service rates include a fixed service charge based on the size of the public water meter serving the property plus a charge for each 1,000 gallons of water consumed on the premises. Each customer has the option of installing private meters to record water usage which does not enter the sewers. Industrial and commercial customers may use this option to obtain credit for water which does not enter the sewers. Drainage service rates are charged based on measured impervious areas with one equivalent service unit assigned for each 2,500 square feet of impervious area (residential unit).

Out of a total of 230,504 wastewater customer accounts, approximately 27 accounts have no public water meter because they are residential accounts served by well water. Such accounts are charged a fixed charge.

Rate Making Process

To amend rates, the District follows the following procedures:

(i) The Board of the District adopts and publishes a Preliminary Rate Resolution.

(ii) From date of publication, there is a 30-day period to receive comments.

(iii) Within 60 days of the publication, the Board of the District must adopt a Final Rate Resolution.

(iv) Before the new rate schedule becomes effective, the rates must be approved by the Council of the Louisville/Jefferson County Metro Government.

By the following provision within the District's approved rate ordinances, step (iv) above is not required under the conditions described below as follows:

"Whenever MSD's net revenues are less than 1.10 times the debt service on the District's outstanding revenue bonds for any consecutive six-month period, by order of the Board of the District, a schedule of wastewater service charges and storm water service charges shall be amended in order to maintain a 1.10 debt service coverage required by the District's 1971 Bond Authorizing Resolution which was approved by the City of Louisville Ordinance Number 86, Series 1971, by City of Louisville Ordinance Number 25, Series 1979, as amended by City of Louisville Ordinance Number 32, Series 1986, and City of Louisville Ordinance Number 152, Series 1979, as amended by City of Louisville Ordinance Number 388, Series 1986; provided the aggregate of such adjustments for any twelve-month period shall not generate additional revenue from wastewater service charges in excess of 7%. An explanation of proposed rate increases in excess of 4% shall be delivered to the Metro Council at least 60 days prior to approval by the District's Board. The term "net revenues" is defined as gross revenue from wastewater service charges less operating expenses and debt payments other than debt service payments on the District's outstanding revenue bonds."

An explanation of proposed rate increases in excess of 4% shall be delivered to the Council of the Louisville/Jefferson County Metro Government at least 60 days prior to approval by the District's Board.

This provision includes, by reference to "outstanding revenue bonds," all District debt service, including the debt service on the Series 2015 Notes and any future revenue bonds which the District may issue.

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Rate History

The following table summarizes the District's revenue and rate adjustments since 1987. Additional revenues from the rate increases are approximate and assume constant water usage.

Date of Rate Increase	% Rate Increase		Annual Additional Revenue from Rate Increase	% Rate Increase		Annual Additional Revenue from Rate Increase	Estimated Revenue EPA Consent Decree Surcharge
1/1/87*				N/A	0	$8,165,000	
7/1/88	4.3%	(A)	$1,496,000				
1/1/91	6.5	(A)	2,731,000				
1/1/92	4.5	(A)	1,973,000				
12/1/92				57.1%	(A)	4,879,000	
8/1/94	5.0	(B)	2,337,000				
8/1/95	7.0	(B)	3,516,000				
8/1/96	5.0	(B)	2,703,000	4.4	(A)	604,000	
8/1/97	5.0	(B)	2,772,000	4.5	(A)	663,000	
8/1/98	5.0	(B)	2,900,000	5.0	(A)	800,000	
8/1/99	5.0	(B)	3,150,000	5.0	(A)	850,000	
8/1/00	5.0	(B)	3,100,000	5.00	(A)	860,000	
8/1/01	5.0	(B)	3,313,000	5.0	(A)	921,000	
8/1/02	6.5	(B)	4,540,000	6.5	(A)	1,326,000	
8/1/03	6.5	(B)	5,012,659	6.5	(A)	1,407,505	
8/1/04	6.5	(B)	5,184,032	6.5	(A)	1,526,281	
8/1/05	6.5	(B)	5,655,634	6.5	(A)	1,671,724	
8/1/06	6.9	(B)	6,414,405	6.9	(A)	1,957,887	
8/15/07	0.0		0	0.0		0	$28,875,000(C)
8/1/08	6.5	(B)	8,017,688	6.5	(A)	2,015,401	
8/1/09	6.5	(B)	8,466,545	6.5	(A)	2,095,583	
8/1/10	6.5	(B)	8,683,175	6.5	(A)	2,246,123	
8/1/11	6.5	(B)	9,395,795	6.5	(A)	2,417,718	
8/1/12	6.5	(B)	9,705,399	6.5	(A)	2,627,897	
8/1/13	5.8	(B)	9,320,500	5.8	(A)	2,710,500	
8/1/14	5.5	(B)	9,833,128	5.5	(A)	2,859,578	
8/1/15	5.5	(B)		5.5	(A)		

*Initial stormwater rate: $1.75 per equivalent service unit.

(A) Across the board adjustment of all rates.

(B) Composite yield of a variety of rate adjustments.

(C) Special surcharge of $6.95 per account per month (plus additional volume charges for some commercial and industrial customers). This surcharge produces revenues equal to approximately 33% of total wastewater charges in the year it was instituted.

Source: Metropolitan Sewer District

HISTORIC AND PROJECTED REVENUES AND EXPENSES AND CAPITAL IMPROVEMENT PROGRAM

Certain historic revenues and expenses of the District for prior fiscal years and projected revenues and expenses of the District for the current and future fiscal years, with accompanying notes, are set forth in "Appendix F - Consulting Engineer's Report" attached hereto. The information on projected revenues and expenses may constitute a "forward looking statement" under federal securities law. Actual revenues, expenses, or both could differ materially from those forecasted and there can be no assurance that such estimates of future results will be achieved. For example, there can be no assurance that the Council of the Louisville/Jefferson County Metro Government will approve one or more new rate schedules as described above, or that the Council may not from time to time consider amending the District's approved rate ordinances. In general, important factors that could cause actual results to differ materially from the revenues or expenses presently estimated include, but are not limited to, material changes in the size and composition of the District's service area, unanticipated changes in law or unanticipated material litigation, efficiency of operations and the capital construction and expenditure plans and results of the District.

The projections shown in "Appendix F — Consulting Engineer's Report" are based, among other things, on the District's Capital Improvement Plan in effect as of the date of such report. Except as specifically described herein, there can be no assurance that the District will not amend or revoke the Capital Improvement Program described in "Appendix F - Consulting Engineer's Report" or that the District will issue or support bonds or other funding for the Capital Improvement Program in its current form or as amended or any substitute therefor.

LOUISVILLE WATER COMPANY

Louisville Water Company was chartered by special act of the General Assembly of Kentucky, approved March 6, 1854. The City was given authority to purchase the property at any time and also to subscribe for stock of Louisville Water Company.

The City began purchasing stock in Louisville Water Company in 1857 and had acquired substantially all the 12,571 outstanding shares by 1870, leaving only 51 shares in the hands of individual stockholders, this stock having been originally issued as directors' qualifying shares. By April 1907, all of this stock had been acquired by the City.

The affairs of Louisville Water Company were conducted by directors elected by the stockholders until passage of an act, approved March 6, 1906, creating the Board of Water Works of the City, which since that time (initially as the City, and thereafter through its successor, the Louisville/Jefferson County Metro Government) has had the responsibility for management and control of Louisville Water Company.

Since substantially all customers of the District are also customers of Louisville Water Company and Louisville Water Company already has the facilities, meters, equipment, and administrative organization for the billing and collection of charges for water service, it has proven both expedient and economical that the billing and collection of wastewater and stormwater service charges be accomplished simultaneously with and added as designated items on the bill rendered the water consumer for charges covering water service. Those sewer users who are not consumers of the public water supply are billed directly by the District.

By an agreement dated June 17, 1947, Louisville Water Company initiated billing and collection procedures for the District and has continued to perform such services to the present under subsequent agreements. Pursuant to a subsequent agreement with an effective date of July 13, 1976, as amended on November 23, 1986, such billing and collection procedures were amended to include drainage service charges. A new agreement with an effective date of January 1, 2013 is currently in place. This agreement increases the priority of drainage fees equivalent to water and sewer fees and includes the requirement that Louisville Water Company discontinue water service to those consumers whose wastewater or drainage service accounts remain unpaid thirty (30) days after the due date and to not re-establish such service until such time as all such service charges have been paid. This agreement is for a period of five years and can be terminated by either party upon two years written notice.

PLAN OF FINANCE

The proceeds of the Series 2015 Notes will be used to: (i) pay the costs of issuing the Series 2015 Notes and (ii) refund and retire on November 23, 2015 the Prior Notes. To the extent unexpected excess proceeds from the Series 2015 Notes are received, such additional proceeds will be used to pay the costs of improvements to the System.

The District has identified and designated the non-reversed portion of the 1999 Swap as a hedge for the Series 2015 Notes. The non-reversed portion of the 1999 Swap amortizes in amounts that correspond with the expected maturity structure of a future hypothetical bond issue the District anticipates issuing to permanently refinance the Series 2015 Notes. The District's expectation is that variable payments received under the non-reversed portion of the 1999 Swap will hedge future interest rate movements for any Bonds hereafter issued under the Bond Resolution (or any other renewal notes hereafter issued under the Note Resolution) to refinance the Series 2015 Notes. (see "SWAPS, SUBORDINATED DEBT, AND OTHER FINANCIAL INSTRUMENTS – Floating to Fixed Swap herein").

Sources and Uses of Funds

Sources	
Principal Amount of Series 2015 Notes	$226,340,000.00
Cash Contribution for interest on Prior Notes	4,514,225.56
Plus Original Issue Premium	10,386,742.60
TOTAL	$241,240,968.16
Uses	
Retirement of Prior Notes	$230,854,225.56
Underwriter's Discount	11,317.00
Construction Fund	10,211,608.60
Costs of Issuance	163,817.00
TOTAL	$241,240,968.16

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Estimated Debt Service Schedule

The following table sets forth the estimated aggregate annual debt service requirements for the District's Outstanding Bonds and Notes.

Bond Year Ending	Total Senior Lien Bond Debt Service	Direct Payments (1)	Net Senior Lien Bond Debt Service	Subordinated Debt Service (2)	Total Net Debt Service
2016	$114,355,540.86	($10,239,091.80)	$104,116,449.06	$14,231,692.00	$118,348,141.06
2017	119,421,550.02	(10,239,091.80)	109,182,458.22	20,990,455.89	130,172,914.11
2018	119,430,500.02	(10,239,091.80)	109,191,408.22	14,231,692.00	123,423,100.22
2019	119,453,200.02	(10,239,091.80)	109,214,108.22	14,231,692.00	123,445,800.22
2020	119,476,200.02	(10,239,091.80)	109,237,108.22	14,231,692.00	123,468,800.22
2021	120,494,800.02	(10,239,091.80)	110,255,708.22	14,231,692.00	124,487,400.22
2022	120,505,050.02	(10,239,091.80)	110,265,958.22	14,231,692.00	124,497,650.22
2023	120,500,800.02	(10,239,091.80)	110,261,708.22	14,227,183.09	124,488,891.31
2024	116,126,550.02	(10,986,150.00)	105,140,400.02	19,444,471.69	124,584,871.71
2025	116,106,150.02	(10,986,150.00)	105,120,000.02	19,438,777.69	124,558,777.71
2026	109,646,900.02	(10,986,150.00)	98,660,750.02	25,796,027.54	124,456,777.56
2027	124,687,325.02	(10,986,150.00)	113,701,175.02	12,512,447.69	126,213,622.71
2028	117,215,575.02	(10,220,525.00)	106,995,050.02	19,192,623.43	126,187,673.45
2029	117,515,575.02	(10,220,525.00)	107,295,050.02	18,987,054.76	126,282,104.78
2030	97,863,325.02	(10,220,525.00)	87,642,800.02	38,650,065.30	126,292,865.32
2031	76,234,331.28	(10,220,525.00)	66,013,806.28	60,299,875.56	126,313,681.84
2032	76,360,581.28	(10,220,525.00)	66,140,056.28	60,369,362.42	126,509,418.70
2033	76,180,875.02	(10,220,525.00)	65,960,350.02	60,515,111.82	126,475,461.84
2034	137,480,875.02	(10,220,525.00)	127,260,350.02	-	127,260,350.02
2035	137,373,850.02	(10,220,525.00)	127,153,325.02	-	127,153,325.02
2036	137,453,293.76	(10,220,525.00)	127,232,768.76	-	127,232,768.76
2037	137,602,281.26	(10,220,525.00)	127,381,756.26	-	127,381,756.26
2038	137,649,212.50	(10,220,525.00)	127,428,687.50	-	127,428,687.50
2039	138,490,550.00	(10,220,525.00)	128,270,025.00	-	128,270,025.00
2040	136,701,505.00	(8,393,859.26)	128,307,645.74	-	128,307,645.74
2041	134,769,950.00	(6,453,125.00)	128,316,825.00	-	128,316,825.00
2042	132,726,862.50	(4,383,859.38)	128,343,003.12	-	128,343,003.12
2043	130,616,400.00	(2,233,875.00)	128,382,525.00	-	128,382,525.00
2044	43,127,150.00	-	43,127,150.00	-	43,127,150.00
2045	43,246,800.00	-	43,246,800.00	-	43,246,800.00
2046	43,357,600.00	-	43,357,600.00	-	43,357,600.00
	$3,472,171,158.78	($269,968,353.04)	$3,202,202,805.74	$455,813,608.88	$3,658,016,414.62

Notes:

(1) Due to sequestration, the federal direct payments on the Louisville and Jefferson County Metropolitan Sewer District Sewer and Drainage System Revenue Bonds, Series 2009C Build America Bonds and Louisville and Jefferson County Metropolitan Sewer District Sewer and Drainage System Revenue Bonds, Series 2010A Build America Bonds were reduced by 6.8% for fiscal years 2016 through 2023. For fiscal years 2024 through 2043, the federal direct payments are assumed at the original rate due on the outstanding Series 2009C BABs and 2010A BABs.

(2) Includes estimated net swap payments and interest on and projected amortization following future refinancing of the Series 2015 Notes. Does not include the principal of the Series 2015 Notes payable at maturity.

LITIGATION INVOLVING DISTRICT

The District has advised that there is no litigation or other legal proceeding pending or, to the knowledge of the District, threatened to restrain or enjoin the issuance, sale or delivery of the Series 2015A Bonds or the implementation of the plan of financing described herein, or in any way contesting or affecting the validity of the Series 2015A Bonds or the plan of financing described herein or any proceedings of the District taken with respect to the issuance or sale of the Series 2015A Bonds, the pledge or application of any moneys or securities provided for the payment of the Series 2015A Bonds or the existence or powers of the District insofar as they relate to the authorization, sale and issuance of the Series 2015A Bonds or such pledge or application of moneys and securities or the implementation of the plan of financing described herein.

The District has further advised that there is no litigation or other legal proceeding pending or, to the knowledge of the District, threatened which challenges the authority of the District to operate the System or to collect revenues therefrom or which contests the creation, organization or existence of the District or the title of any of its Board members or executive staff to their respective offices.

On April 10, 2009 the United States District Court for the Western District of Kentucky, Louisville Division (the "Court"), entered an Amended Consent Decree, in Civil Action No.: 3:08-CV-00608-CRS (the "Amended Consent Decree"). The Amended Consent Decree amended, superseded and replaced the original Consent Decree entered by the Court on August 12, 2005 between the Commonwealth of Kentucky, the United States of America and the District. The Amended Consent Decree resolved all pending claims of violations of the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, and the Water Quality Act of 1987 (the "Clean Water Act") pursuant to 33 U.S.C. 1251 et seq. and the regulations promulgated thereunder.

By entering into the Amended Consent Decree the District neither admitted nor denied the alleged violations described therein but did acknowledge that sanitary sewer overflows and unauthorized discharges have occurred and the District accepted the obligations imposed under the Amended Consent Decree. To date, the District has complied with all submittals and reporting requirements contained in the Amended Consent Decree. A copy of the Amended Consent Decree is available at the offices of the District. The District intends to perform all Capital Improvement Program and other requirements contained in the Amended Consent Decree. The cost of the capital improvements required to be completed under the Amended Consent Decree is currently estimated to be approximately $850 million, of which approximately $480 million has been spent using proceeds of the District's Sewer and Drainage System Revenue Bonds, Series 2008, Series 2009C, Series 2010A, Series 2013C and Series 2014A. The Amended Consent Decree contains stipulated penalties for the District's failure to comply with provisions contained in the Amended Consent Decree. The District has agreed to make total expenditures under the original Consent Decree and the Amended Consent Decree for Supplemental Environmental Projects in an amount not less than $2,250,000.

The Final Sanitary Sewer Discharge Plan and the CSO Long Term Control Plan were submitted concurrently and certified on December 19, 2008, under the title of the Integrated Overflow Abatement Plan (IOAP). The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into the public record February 15, 2010.

On May 17, 2010, two individuals filed, pro se, in Jefferson Circuit Court, Louisville, Kentucky, a Complaint alleging that the District violated KRS 76.090 by implementing a revised rate schedule effective August 1, 2009 without required approvals. The District filed a Motion seeking to have the Circuit Court enter Judgment in the District's favor. On September 16, 2010, the Jefferson Circuit Court granted the District's Motion for Summary Judgment. The Judgment held that the District complied with all statutory notice and public disclosure requirements for its rate increase and dismissed with prejudice the Plaintiffs' Complaint. On October 15, 2010, Plaintiffs filed a Notice of Appeal, however they failed to perfect the appeal as required by the Kentucky Rules of Civil Procedure. On June 9, 2011, the District filed a Motion to Dismiss for failure to perfect and on December 9, 2011, the Kentucky Court of Appeals granted the District's Motion dismissing the Plaintiffs' appeal.

By letter dated October 25, 2013, the United States Department of the Treasury (the "Treasury") notified the District that the District apparently violated regulations governing the use of State and Local Government ("SLGS") securities by impermissibly using the Treasury's SLGS program to create a cost-free option and invited the District to respond. The District responded by letter dated February 13, 2014. On June 6, 2014, the Treasury issued a final agency decision stating, in effect, that the District had violated the regulations. The Treasury suspended the District from participating in the SLGS program for five years, but it left open the possibility of a waiver with respect to the purchase of certain SLGS securities. The District disagreed with the final agency decision, but elected not to contest the decision in court. By letter dated September 3, 2015, the United States Department of Justice ("DOJ") notified the District that it "has been investigating whether MSD's violations of the SLGS regulations may give rise to civil monetary liability" and that it "is considering initiating civil litigation against MSD." DOJ invited the District to present its position and to explore the possibility of resolving the matter without litigation. The District expects to present its position in the near future. At this time the District cannot predict the outcome, including potential monetary consequences, of the DOJ investigation.

The District is a defendant in various lawsuits. Although the outcome of these lawsuits is not presently determinable, it is the opinion of the District that resolution of these matters will not result in a material adverse effect on the operations, properties or financial condition of the District.

The District has further advised that there is no litigation or other legal proceeding (other than that relating to the Amended Consent Decree) pending or, to the knowledge of the District, threatened against or affecting the District or its Board wherein an unfavorable decision, ruling or finding would have a materially adverse effect on the operations, properties or financial condition of the District.

APPROVAL OF LEGAL PROCEEDINGS

The issuance of the Series 2015 Notes and certain legal matters incident to compliance by the District with Sections 103(b)(2) and 148 of the Code, and regulations thereunder relating to "arbitrage bonds" are subject to the approval of Dinsmore & Shohl LLP, Covington, Kentucky, Bond Counsel, whose approving opinion will be delivered with the Series 2015 Notes. Certain legal matters will be passed upon for the District by its General Counsel, Paula M. Purifoy, Esq.

Bond Counsel has reviewed legal matters incident to those sections of the Official Statement entitled "The Series 2015 Notes," "Security and Sources of Payment for the Series 2015 Notes," "Tax Exemption," and "Appendix A – Definitions of Certain Terms and Summary of Provisions of the Bond Resolution and Note Resolution," and is of the opinion that the statements contained in such identified sections are, as to law and legal conclusions, correct and that such sections fairly summarize the contents of documents therein described. Bond Counsel assumes no responsibility for the accuracy or completeness of other statements or financial information contained in this Official Statement.

TAX EXEMPTION

General

In the opinion of Bond Counsel for the Series 2015 Notes, based upon an analysis of existing laws, regulations, rulings and court decisions, interest on the Series 2015 Notes will be excludible from gross income for federal income tax purposes. Bond Counsel for the Series 2015 Notes is also of the opinion that interest on the Series 2015 Notes will not be a specific item of tax preference under Section

57 of the Internal Revenue Code of 1986 (the "Code") for purposes of computing the alternative minimum tax for individuals and corporations. Furthermore, Bond Counsel for the Series 2015 Notes is of the opinion that interest on the Series 2015 Notes is exempt from income taxation by the Commonwealth and the Series 2015 Notes are exempt from ad valorem taxation by the Commonwealth and any of its political subdivisions.

A copy of the form of opinion of Bond Counsel for the Series 2015 Notes is set forth in Appendix D, attached hereto.

The Code imposes various restrictions, conditions, and requirements relating to the qualification of the Series 2015 Notes as so-called "tax-exempt" bonds. The District has covenanted to comply with certain restrictions designed to ensure that interest on the Series 2015 Notes will not be includable in gross income for federal income tax purposes. Failure to comply with these covenants could result in the Series 2015 Notes not qualifying as "tax-exempt bonds," and thus interest on the Series 2015 Notes being includable in the gross income of the holders thereof for federal income tax purposes. Such failure to qualify and the resulting inclusion of interest could be required retroactively to the date of issuance of the Series 2015 Notes. The opinion of Bond Counsel assumes compliance with these covenants. However, Bond Counsel has not undertaken to determine (or to inform any person) whether any actions taken (or not taken) or events occurring (or not occurring) after the date of issuance of the Series 2015 Notes may adversely affect either the federal or Kentucky tax status of the Series 2015 Notes.

Certain requirements and procedures contained or referred to in the Resolution and other relevant documents may be changed and certain actions (including, without limitation, defeasance of the Series 2015 Notes) may be taken or omitted under the circumstances and subject to the terms and conditions set forth in such documents. Bond Counsel expresses no opinion as to any Series 2015 Notes or the interest thereon if any such change occurs or action is taken or omitted upon the advice or approval of bond counsel other than Dinsmore & Shohl LLP.

Although Bond Counsel for the Series 2015 Notes is of the opinion that interest on the Series 2015 Notes will be excludible from gross income for federal income tax purposes and the Series 2015 Notes will be exempt from Kentucky income tax, as described above, the ownership or disposition of, or the accrual or receipt of interest on, the Series 2015 Notes may otherwise affect a Holder's Federal, state or local tax liabilities. The nature and extent of these other tax consequences may depend upon the particular tax status of the Holder or the Holder's other items of income or deduction. Bond Counsel expresses no opinions regarding any tax consequences other than what is set forth in its opinion and each Holder or potential Holder is urged to consult with tax counsel with respect to the effects of purchasing, holding or disposing the Series 2015 Notes on the tax liabilities of the individual or entity.

Receipt of tax-exempt interest, ownership or disposition the Series 2015 Notes may result in other collateral federal, state or local tax consequence for certain taxpayers. Such effects may include, without limitation, increasing the federal tax liability of certain foreign corporations subject to the branch profits tax imposed by Section 884 of the Code, increasing the federal tax liability of certain insurance companies, under Section 832 of the Code, increasing the federal tax liability and affecting the status of certain S Corporations subject to Sections 1362 and 1375 of the Code, increasing the federal tax liability of certain individual recipients of Social Security or the Railroad Retirement benefits under Section 86 of the Code and limiting the amount of the Earned Income Credit under Section 32 of the Code that might otherwise be available. Ownership of any of the Series 2015 Notes may also result in the limitation of interest and certain other deductions for financial institutions and other taxpayers, pursuant to Section 265 of the Code. Finally, residence of the Holder of the Series 2015 Notes in a state other than Kentucky or being subject to tax in a state other than Kentucky, may result in income or other tax liabilities being imposed by such states or their political subdivisions based on the interest or other income from the Series 2015 Notes.

The District has ***not*** designated the Series 2015 Notes as "qualified tax-exempt obligations" under Section 265 of the Code.

Original Issue Premium

"Acquisition Premium" is the excess of the cost of a note over the stated redemption price of such note at maturity. The Series 2015 Notes have a yield that is lower than their stated interest rate, as shown on the cover page hereto, and are therefore being initially offered and sold to the public at an Acquisition Premium. For federal income tax purposes, the amount of Acquisition Premium on each note the interest on which is excludable from gross income for federal income tax purposes ("tax-exempt bonds") must be amortized and will reduce the bondholder's adjusted basis in that note. However, no amount of amortized Acquisition Premium on tax-exempt notes may be deducted in determining a noteholder's taxable income for federal income tax purposes. The amount of any Acquisition Premium paid on the Series 2015 Notes, that must be amortized during any period will be based on the "constant yield" method, using the original bondholder's basis in such bonds and compounding semiannually. This amount is amortized ratably over that semiannual period on a daily basis.

Holders of the Series 2015 Notes should consult their own tax advisors as to the actual effect of such Acquisition Premium with respect to their own tax situation and as to the treatment of Acquisition Premium for state tax purposes.

FINANCIAL STATEMENTS

The financial statements of the District for the fiscal year ended June 30, 2014 included as Appendix B of this Official Statement and an integral part of this Official Statement, have been audited Crowe Horwath LLP, independent auditors, as stated in their report.

RATINGS

Moody's Investors Service, Inc. ("Moody's") and Standard & Poor's Ratings Services, a Division of The McGraw Hill Companies, Inc. ("S&P") have assigned the ratings of "MIG 1" and "SP-1+", respectively, to the Series 2015 Notes. Such ratings reflect only the views of the respective rating agencies. An explanation of the significance of the rating given by Moody's may only be obtained from Moody's at Moody's Investors Service, Inc., 7 World Trade Center, 250 Greenwich Street, Public Finance Group - 23rd Floor, New York, New York 10007, (212) 553-0300; and an explanation of the rating given by S&P may be obtained from Standard & Poor's Ratings Services at 55 Water Street, New York, New York 10041, (212) 438-2124. There is no assurance that such ratings will continue for any given period of time or that they will not be revised downward or withdrawn entirely by such organizations if, in the judgment of such organizations, circumstances so warrant. Any such downward revision or withdrawal of such ratings could have adverse effects on the market price of the Series 2015 Notes.

UNDERWRITING

The Series 2015 Notes are being purchased for reoffering by Bank of America Merrill Lynch (the "Underwriter"). The Underwriter has agreed to purchase the Series 2015 Notes at an aggregate purchase price of $236,715,425.60 (reflecting the par amount of the Series 2015 Notes, plus premium of $10,386,742.60, and less underwriter's discount of $11,317.00). The initial public offering price, which produces the yield set forth on the cover page of this Official Statement, may be changed by the Underwriter and the Underwriter may offer and sell the Series 2015 Notes to certain dealers (including dealers depositing Series 2015 Notes into investment trusts) and others at prices lower than the offering price which produces the yield set forth on the cover page.

FINANCIAL ADVISOR

J.J.B. Hilliard, W.L. Lyons, LLC has been employed as Financial Advisor to the District in connection with the issuance of the Series 2015 Notes. The Financial Advisor's fee for services rendered with respect to the sale of the Series 2015 Notes is contingent upon the issuance and delivery thereof. The Preliminary Official Statement was prepared and distributed by the Financial Advisor. The information set forth herein was obtained from the District and other sources believed to be reliable, but is not guaranteed as to accuracy or completeness by, and is not to be construed as a representation of the Financial Advisor.

CONTINUING DISCLOSURE

In accordance with Securities and Exchange Commission Rule 15c2-12 (the "Rule"), the District will agree, pursuant to a Continuing Disclosure Certificate to be dated and delivered as of the date of issuance and delivery of the Series 2015 Notes (the "Disclosure Certificate"), to be delivered on the date of delivery of the Series 2015 Notes, to cause the following information to be provided:

(i) to the Municipal Securities Rulemaking Board (the "MSRB"), certain annual financial information and operating data, including audited financial statements prepared in accordance with generally accepted accounting principles as applied to governmental units, generally consistent with the information contained under the headings "THE DISTRICT – Customer History, " " THE DISTRICT – Rate History, " and in "Appendix B" (the "Financial Data") of the Official Statement; such information shall be provided on or before the January 1 following the fiscal year ending on the preceding June 30, commencing with the fiscal year ended June 30, 2015; provided that the audited financial statements may not be available by such date, but will be made available immediately upon delivery thereof by the auditor to the Obligated Person;

(ii) to the MSRB, notice of the occurrence of the following events, if material, with respect to the Bonds:

(a) Principal and interest payment delinquencies;
(b) Non-payment related defaults, if material;
(c) Unscheduled draws on debt service reserves reflecting financial difficulties;
(d) Unscheduled draws on credit enhancements reflecting financial difficulties;
(e) Substitution of credit or liquidity providers, or their failure to perform;
(f) 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 security, or other material events affecting the tax-exempt status of the security;
(g) Modifications to rights of security holders, if material;
(h) Bond calls, if material, and tender offers (except for mandatory scheduled redemptions not otherwise contingent upon the occurrence of an event);
(i) Defeasances;
(j) Release, substitution or sale of property securing repayment of the securities, if material;
(k) Rating changes;
(l) Bankruptcy, insolvency, receivership or similar event of the obligated person (Note: 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 an obligated person in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or

governmental authority has assumed jurisdiction over substantially all of the assets or business of the obligated person, or if such jurisdiction has been assumed by leaving the existing governing 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 of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the obligated person);

(m) The consummation of a merger, consolidation, or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, 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

(n) Appointment of a successor or additional trustee or the change of name of a trustee, if material.

(iii) in a timely manner, to the MSRB, notice of a failure (of which the Obligated Person has knowledge) of an Obligated Person to provide the required Annual Financial Information on or before the date specified in the Continuing Disclosure Certificate.

The Disclosure Certificate provides holders of the Series 2015 Notes, including beneficial owners of the Series 2015 Notes, with certain enforcement rights in the event of a failure by the District to comply with the terms thereof; however, a default under the Disclosure Certificate does not constitute an event of default under the Resolution. The Disclosure Certificate may also be amended or terminated under certain circumstances in accordance with the Rule as more fully described therein. Holders of the Series 2015 Notes are advised that the Disclosure Certificate, the form of which is obtainable from the Financial Advisor, should be read in its entirety for more complete information regarding its contents.

For purposes of this transaction with respect to events as set forth in the Rule:

(i) there are no credit enhancements applicable to the Bonds; and

(ii) there are no liquidity providers applicable to the Bonds.

Pursuant to outstanding continuing disclosure undertakings (the "Existing Undertakings") the District is required to file certain annual financial information with the MSRB by January 1 of each year. The District has filed its annual financial information in accordance with the Existing Undertakings and, to the best of the District's knowledge, is in material compliance with the continuing disclosure undertaking requirements of the Rule in connection with its outstanding obligations that are subject to such requirements. In the past five years, the District has been made aware that there have been changes to the credit ratings on certain obligations of the District resulting from changes to the credit rating of credit enhancers providing bond insurance for those obligations, for which continuing disclosure event notices were not filed (such changes to the credit ratings were made without any formal notice of the change to the District).

CONCLUDING STATEMENT

The foregoing summaries or descriptions of provisions in the Resolution and all references to other materials not purporting to be quoted in full, are only brief outlines of certain provisions thereof and do not purport to be complete statements of such documents and provisions. Reference is hereby made to the complete documents, copies of which will be furnished by the District upon request, for further information.

Any statements in this Official Statement involving matters of opinion, whether or not expressly so stated, are intended as such and not as representations of fact. This Official Statement is not to be construed as a contract or agreement between the District and the purchasers or holders of any of the Series 2015 Notes.

This Official Statement has been approved by the District as of the date set forth on the cover hereof.

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT

By: /s/ Cyndi Caudill
Chair

By: /s/ Chad Collier
Secretary-Treasurer

APPENDIX A

DEFINITIONS OF CERTAIN TERMS AND SUMMARY OF PROVISIONS OF THE BOND RESOLUTION AND NOTE RESOLUTION

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DEFINITIONS OF CERTAIN TERMS AND SUMMARY OF PROVISIONS OF THE BOND RESOLUTION AND NOTE RESOLUTION

The descriptions and summaries set forth herein are not intended to be comprehensive or definitive, and reference is made to the Bond Resolution and the Note Resolution for the complete details of all terms and conditions. All statements herein are qualified in their entirety by reference to the Bond Resolution and Note Resolution. Copies of the Bond Resolution and Note Resolution are available from the District.

Definitions

"Account" means an Account established pursuant to the Bond Resolution, including the General Subaccount in the Note Account and the Subordinated Debt Subaccounts.

"Accountant" shall mean an independent, certified public accountant, or a firm of independent, certified public accountants, selected by the District.

"Accountant's Certificate" means a certificate of an independent certified public accountant or firm of accountants (who may be the accountant or firm which regularly audits the books of the District) selected by the District.

"Accreted Value" means, with respect to any Capital Appreciation Bond, an amount equal to the principal amount of such Capital Appreciation Bond (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 Capital Appreciation Bond 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 Capital Appreciation Bonds shall mean the amount set forth for such date in the Supplemental Resolution authorizing such Capital Appreciation Bonds 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 (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date and (2) the difference between the Accredited Values for such Valuation Dates.

"Accrued Aggregate Debt Service" for any period means, as of any date of calculation and with respect to any Series, an amount equal to the sum of the amounts of accrued Debt Service with respect to all Series, calculating the accrued Debt Service with respect to each Series at an amount equal to the sum of [i] interest on the Bonds of such Series accrued and unpaid and to accrue to the end of the then current calendar month and [ii] Principal Installments due and unpaid and that portion of the Principal Installment for such Series next due which would have accrued (if deemed to accrue in the manner set forth in the definition of Debt Service) to the end of such calendar month. The principal and interest portions of the Accreted Value and Appreciated Value of Capital Appreciation Bonds and Capital Appreciation and Income Bonds, respectively, becoming due at maturity or by virtue of a Sinking Fund Installment shall be included in the calculations of accrued and unpaid and accruing interest or Principal Installments in such manner and during such period of time as is specified in the Supplemental Resolution authorizing such Bonds.

"Act" means Kentucky Revised Statutes Chapters 58, 65 and 76, including particularly Sections 76.055 et seq., inclusive, and Section 56.513, as the same may be from time to time amended, and successor provisions.

"Act of Bankruptcy" shall mean any of the following events:

(a) The District shall (1) apply for or consent to the appointment of, or the taking of possession by, a receiver, custodian, trustee, liquidator or the like of the District, or of all or a substantial part of the property of any of them, (2) commence a voluntary case under the Federal Bankruptcy Code (as now or hereafter in effect) or (3) file a petition seeking to take advantage of any other law relating to bankruptcy, insolvency, reorganization, winding-up or composition or adjustment of debts; or

(b) A proceeding or case shall be commenced, without the application or consent of the District, as the case may be, in any court of competent jurisdiction, seeking (1) the liquidation, reorganization, dissolution, winding-up, or the composition or adjustment of debts, of the District, (2) the appointment of a trustee, receiver, custodian, liquidator or the like of the District or of all or any substantial part of the assets of the District, or (3) similar relief in respect of the District under any law relating to bankruptcy, insolvency, reorganization, winding-up or composition or adjustment of debts, and such proceeding or case shall continue undismissed, or an order, judgment or decree approving or ordering any of the foregoing shall be entered and continue unstayed and in effect for a period of 30 days from the commencement of such proceeding or case.

"Additional Bonds" means Bonds authenticated and delivered upon original issuance pursuant to the Bond Resolution and any Bonds thereafter authenticated and delivered in lieu of or in substitution for such Bonds pursuant to the Bond Resolution.

"Affiliate" of any specified Person shall mean any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person. For purposes of this definition, "control" when used with respect to any specified Person shall mean the power to direct the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities by contract or otherwise; and the terms "controlling" and "controlled" have meanings correlative to the foregoing.

"Agent Member" shall mean a member of, or participant in, the Securities Depository.

"Aggregate Debt Service" for any period means, as of any date of calculation and with respect to all Bonds, the sum of the amounts of Debt Service for such period.

"Aggregate Net Debt Service" for any period means, as of any date of calculation and with respect to all Bonds, the Aggregate Debt Service for such period, less any amounts available or expected to be available in the ordinary course for the payment of Debt Service during such period pursuant to the Resolution (including but not limited to interest or other income available or expected to be available for payment of Debt Service during such period from the Reserve Account).

"Annual Budget" means the budget adopted or in effect for a particular Fiscal Year as provided in the Resolution.

"Appreciated Value" means, with respect to any Capital Appreciation and Income Bond up to the Interest Commencement Date, an amount equal to the principal amount of such Capital Appreciation and Income Bond (determined on the basis of the principal amount per $5,000 at the Interest Commencement Date thereof) plus the amount, assuming semi-annual compounding of earnings which would be produced on the investment of such principal amount, beginning on the dated date of such Capital Appreciation and Income Bond and ending on the Interest Commencement Date, at a yield which, if produced until the Interest Commencement Date, will produce $5,000 at the Interest Commencement Date. As of any Valuation Date, the Appreciated Value of any Capital Appreciation and Income Bond shall mean the amount set forth for such date in the Supplemental Resolution authorizing such Capital Appreciation Bonds and as of any date other than a Valuation Date, the sum of (a) the Appreciated Value on the preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date and (2) the difference between the Appreciated Values for such Valuation Dates.

"Authorized District Representative" shall mean the Chairperson or Vice-Chairperson or Executive Director or Director of Finance or Secretary or Treasurer of the District or such Persons as, at the time, are designated to act in behalf of the District by written certificate furnished to the Paying Agent and the District, containing the specimen signature of each such Person and signed on behalf of the District.

"Authorized Denominations" shall mean $5,000 or any integral multiple thereof.

"Authorized Investments" shall mean any of the following securities, to the extent legal for investment of the District's funds: [a] Government Obligations and, to the extent from time to time permitted by law, [b] obligations of [i] Federal Home Loan Banks, senior debt obligations, [ii] Federal Home Loan Mortgage Corporation, participation certificates and senior debt obligations, [iii] Student Loan Marketing Association, senior debt obligations, [iv] Resolution Funding Corporation and [v] Federal National Mortgage Association mortgage-backed securities and senior debt obligations; [c] money market funds registered under the Federal Investment Company Act of 1940, whose shares are registered under the Federal Securities Act of 1933, and having a rating by Standard and Poor's of AAAm-G, AAAm or AAm; [d] certificates of deposit or time deposits of any bank, any branch of any bank, trust company or national banking association or any savings and loan association; provided, however, that such certificates of deposit or time deposits shall be fully secured, to the extent not insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation, by Government Obligations in which the Note Registrar has a perfected first security interest, [e] investment agreements (for investment of moneys held in the Construction and Acquisition Fund) or other investments approved in writing by the Insurer, [f] commercial paper rated at the time of purchase, "Prime-1" by Moody's and "A-1" or better by S&P, [g] bonds or notes issued by any state or municipality which are rated by Moody's and S&P in one of the two highest rating categories assigned by such agencies, [h] federal funds or banker acceptances with a maximum term of 1 year with a rating of "Prime-1" or "A-3" or better by Moody's and "A-1" or "A" or better by S&P, and [i] any repurchase agreement approved in writing by the Insurer or any repurchase agreement with a term not in excess of 30 days that is a legal investment for public funds under state law (as determined by a written legal opinion delivered to the District) and is with a primary dealer on the Federal Reserve reporting dealer list rated A or better by Moody's and S&P or any bank or trust company (including the Note Registrar) rated "A" or better by Moody's and S&P for Government Obligations or obligations described in [b] above in which the Note Registrar shall be given a first security interest and on which no third party shall have a lien. The underlying repurchase obligations must be valued weekly and marked to market at a current market price plus accrued interest of at least 104% (105% if the underlying securities are Federal National Mortgage Association Mortgage-backed securities and senior debt obligations) of the amount of the repurchase obligations of the bank or trust company. All obligations purchased must be transferred to the Note Registrar or a third party agent by physical delivery or by an entry made on the records of the issuer of such obligations. Any investment in a repurchase agreement shall be considered to mature on the date the obligor providing the repurchase agreement is obligated to repurchase the obligations. Any investment in obligations described in [a] and [b] above may be made in the form of an entry made on the records of the issuer of the particular obligation.

The Note Registrar, any Paying Agent, or other custodian of funds of the District, respectively, may trade with itself in the purchase and sale of securities for such investment and may charge its ordinary and customary fees for such trades, including cash sweep account fees. In the absence of any direction from the District, the Note Registrar, any Paying Agent, or other custodian of funds of the

District, respectively, shall invest all funds in sweep accounts, money market funds and similar short-term investments, provided that all such investments shall constitute Authorized Investments.

"Authorized Newspaper" means The Bond Buyer or any other financial newspaper customarily published at least once a day for five days (other than legal holidays) in each calendar week, printed in the English language and of general circulation in the Borough of Manhattan, City and State of New York.

"Authorized Officer of the District" means any person authorized by the District to perform the act or sign the document in question.

"Board" means the Board of the District, or such board, commission or agency as may succeed to the duties and responsibilities of such Board.

"Bond" or "Bonds" means any bonds, notes or other evidences of indebtedness (other than Subordinated Debt), as the case may be, authenticated and delivered pursuant to the Resolution.

"Bond Counsel" means a nationally recognized municipal bond attorney or firm of municipal bond attorneys, acceptable to the District.

"Bond Fund" means the Bond Fund established in the Resolution.

"Bondholder" or "Holder of Bonds" or "Holder" means any person who shall be the registered owner of any Bond or Bonds. Notwithstanding this definition, with respect to any Bonds which are registered in Book-Entry Form, the Paying Agent shall be entitled to rely upon written instructions from a majority of the beneficial owners of the Bonds with reference to consent, if any, required from Bondholders under the Resolution.

"Bond Register" means the form or system or document in which the ownership of Bonds is recorded by the Bond Registrar.

"Bond Registrar" means any bank or trust company organized under the laws of any state of the United States of America or national banking association appointed by the District to perform the duties of Bond Registrar enumerated in the Resolution.

"Bond Resolution" shall mean the District's Sewer and Drainage System Revenue Bond Resolution as adopted on December 7, 1992, and amended on March 4, 1993, June 30, 1993, December 14, 1994, January 25, 1996 and February 24, 2003, as the same may be further amended and supplemented from time to time.

"Book-Entry Form" or "Book-Entry System" means, with respect to the Bonds, a form or system, as applicable, under which (i) the ownership of beneficial interests in Bonds and bond service charges may be transferred only through a book entry and (ii) physical Bond certificates in fully registered form are registered only in the name of a Securities Depository or its nominee as Holder, with the physical Bond certificates in the custody of a Securities Depository.

"Business Day" means any day other than a Saturday, Sunday or legal holiday in the Commonwealth or a day on which either Bond Registrar, the Paying Agent or the District is legally authorized to close.

"Capital Appreciation Bonds" means any Bonds issued under the Resolution as to which interest is payable only at the maturity or prior redemption of such Bonds, as further described in the Resolution.

"Capital Appreciation and Income Bonds" means any Bonds issued under the Resolution as to which interest is deferred prior to the Interest Commencement Date, as further described in the Resolution.

"Chairperson" means the Chairperson of the District, or such Officer of the District as may succeed to the duties and responsibilities of the Chairperson.

"Closing Date" shall mean the date of the issuance and delivery of a series of Notes.

"Code" shall mean the Internal Revenue Code of 1986, as amended, as it applies to the Notes, including applicable regulations and revenue rulings thereunder.

"Commonwealth" means the Commonwealth of Kentucky.

"Construction and Acquisition Fund" means the Construction and Acquisition Fund established in the Resolution.

"Cost of Construction and Acquisition" means, with respect to a Project, the District's costs, expenses and liabilities paid or incurred or to be paid or incurred by the District in connection with the planning, engineering, designing, acquiring, constructing, installing and financing, of a Project and the obtaining of all governmental approvals, certificates, permits and licenses with respect thereto, including, but not limited to, all costs relating to the acquisition, construction and installation of a Project and the cost of any demolitions or relocations necessary in connection therewith, any good faith or other similar payment or deposits required in connection with the purchase of a Project, the cost of acquisition by or for the District of real and personal property or any interests therein, and costs of the District incidental to such construction, acquisition or installation all costs relating to injury and damage claims relating to a Project, the cost of any indemnity or surety bonds and premiums on insurance, preliminary investigation and development costs, engineering fees and expenses, contractors' fees and expenses, the costs of labor, materials, equipment and utility services and supplies, legal and financial advisory fees and expenses, interest and financing costs, including, without limitation, bank commitment, line of credit, and letter of credit fees, bond insurance and indemnity premiums, and any other means of providing credit enhancement or credit support, costs incurred in connection with interest rate exchanges, futures contracts or other similar financing arrangements, fees and expenses of the Fiduciaries, including reasonable fees and expenses of counsel to the Fiduciaries, administration and general overhead expense and costs of keeping accounts and making reports required by the Resolution prior to or in connection with the completion of construction of a Project, amounts, if any, required by the Resolution to be paid into the Bond Fund to provide, among other things, for interest accruing on Bonds and to provide for the Debt Service Reserve Requirement or to be paid into the Renewal and Replacement Account for any of the respective purposes thereof, payment when due (whether at the maturity of principal or the due date of interest or upon redemption or purchase) on any indebtedness of the District, including Bonds, notes and Subordinate Debt, incurred in respect of any of the foregoing, and working capital and reserves therefor, and all federal, state and local taxes and payments in lieu of taxes legally required to be paid in connection with a Project and shall include reimbursements to the District for any of the above items theretofore paid by or on behalf of the District. It is intended that this definition of Cost of Construction and Acquisition be broadly construed to encompass all costs, expenses and liabilities of the District related to a Project which on the date of adoption of the Resolution or in the future shall be permitted to be funded with the proceeds of Bonds pursuant to the provisions of the laws of the Commonwealth.

"Credit Facility" means, a letter of credit, surety bond, loan agreement, standby purchase agreement or other credit agreement, facility or insurance or guaranty arrangement which has been rated not lower than "A" by Moody's or S&P's, or which is issued by an entity whose unsecured long term debt or claims paying ability is rated not lower than "A" by Moody's or S&P's, in either case, pursuant to which the District or another person is entitled to obtain funds to pay Bonds and interest thereon tendered to the District or a third party for payment, purchase or redemption in accordance with the Resolution.

"Debt Service" for any period means, as of any date of calculation and with respect to any Series, an amount equal to [i] the interest accruing during such period on Bonds of such Series plus [ii] the portion of each Principal Installment for such Series which would accrue during such period if such Principal Installment were deemed to accrue periodically in equal amounts from the next preceding Principal Installment due date for such Series (or, if there shall be no such preceding Principal Installment due date, from a date one year preceding the due date of such Principal Installment or from the date of issuance of the Bonds of such Series, whichever date is later). For Variable Interest Rate Bonds, the annual interest rate thereon and the resulting Debt Service shall be calculated by an Authorized Officer and evidenced by a certificate from such Authorized Officer of the District in accordance with the following procedure: for any Variable Interest Rate Bonds Outstanding on the date such certificate is delivered, an Authorized Officer of the District shall estimate the Debt Service on such Bonds upon reliance upon a written estimate of such Debt Service by the District's financial advisor which estimate shall include assumptions with respect to the interest rate or rates to be borne by such Bonds and the amounts and due dates of the Principal Installments for such Bonds; provided, however, that the interest rate or rates assumed to be borne by any Variable Interest Rate Bonds shall not be less than the interest rate borne by such Variable Interest Rate Bonds at the time that an Authorized Officer of the District delivers such certificate. The principal and interest portions of the Accreted Value and Appreciated Value of Capital Appreciation Bonds and Capital Appreciation and Income Bonds, respectively, becoming due at maturity or by virtue of a Sinking Fund Installment shall be included in the calculations of accrued and unpaid and accruing interest or Principal Installments in such manner and during such period of time as is specified in the Supplemental Resolution authorizing such Bonds.

"Debt Service Account" means the Debt Service Account of the Bond Fund.

"Debt Service Reserve Requirement" as of a particular date of computation means an amount, computed separately for each Series of Bonds, equal to the least of [i] ten percent (10%) of the face amount of such Series, [ii] one hundred percent (100%) of the maximum Aggregate Net Debt Service (as of the computation date) in the current or any future Fiscal Year and [iii] one hundred twenty-five percent (125%) of average Aggregate Net Debt Service (as of the computation date) in the current or any future Fiscal Year. For Variable Interest Rate Bonds, the Debt Service Reserve Requirement shall be the maximum permitted amount with interest calculated at the lesser of the 30-year Revenue Bond Index (published by The Bond Buyer no more than two weeks prior to the date of sale of such Variable Interest Rate Bonds) or the Maximum Interest Rate. If any Variable Interest Rate Bond shall be converted to a fixed rate Bond for the remainder of the term thereof, and as a result thereof a nominal deficiency shall be created in the Bond Fund, the Debt Service Reserve Requirement shall be adjusted so as to exclude the amount of such deficiency, but the Debt Service Reserve Requirement shall be increased in each Fiscal Year or portion thereof after the date of such conversion by an amount equal to one hundred percent (100%) of the nominal deficiency, until there is no longer a nominal deficiency.

"Default" shall mean any event which with the giving of notice or lapse of time, or both, would constitute an Event of Default.

"Defaulted Interest" shall have the meaning stated in Note Resolution.

"Defeasance Obligations" means (i) cash, (ii) U.S. Treasury Certificates, Notes and Bonds (including State and Local Government Series - "SLGS"), (iii) direct obligations of the United States Treasury which have been stripped by the Treasury itself (CATS, TIGRS and similar securities), (iv) interest components of obligations of the Resolution Funding Corporation in book-entry form if such obligations have been stripped by request to the Federal Reserve Bank of New York, (v) pre-refunded municipal bonds rated "Aaa" by Moody's and "AAA" by S&P; however, if the issue is only rated by S&P,

then the pre-refunded bonds must have been pre-refunded with cash, direct U.S. or U.S. guaranteed obligations, or AAA rated pre-refunded municipals, (vi) obligations issued by the following agencies which are backed by the full faith and credit of the United States: (a) direct obligations or fully guaranteed certificates of beneficial ownership of the U.S. Export-Import Bank (Eximbank), (b) certificates of beneficial ownership of the Farmers Home Administration, (c) obligations of the Federal Financing Bank, (d) participation certificates of the General Services Administration, (e) guaranteed Title XI financings of the U.S. Maritime Administration, (f) United States guaranteed New Community Debentures, (g) United States guaranteed public housing notes and bonds, and (h) project notes and local authority bonds of the U.S. Department of Housing and Urban Development, and (vii) any other investments approved in writing by the Insurer.

"District" means the Louisville and Jefferson County Metropolitan Sewer District, a public body corporate and political subdivision, created and established pursuant to the Act.

"District Certificate" shall mean a certificate signed by an Authorized District Representative and delivered to the Paying Agent.

"District Note" shall mean any Note registered in the name of the District or any beneficial ownership interest in the Notes held by the District.

"District Request", "District Order" or "District Consent" shall mean, respectively, a written request, order or consent of the District, signed by an Authorized District Representative and delivered to the Paying Agent.

"District Resolution" shall mean a resolution or other appropriate enactment by the District certified by the Secretary or another Authorized District Representative to have been duly adopted by the District and to be in full force and effect on the date of such certification, and delivered to the Paying Agent.

"Eastern Time" shall mean the prevailing time in the City of Louisville, Kentucky.

"Eligible Moneys" shall mean (a) proceeds of the sale of Notes not sold to the District or an Affiliate of the District, (b) moneys deposited with the Paying Agent by the District (including proceeds of Notes sold to an Affiliate of the District) for the benefit of the Noteholders for more than 183 days during which no Act of Bankruptcy has occurred as evidenced by a certificate of the District, (c) moneys with respect to which the District delivers to the Paying Agent an Opinion of Counsel with nationally recognized expertise in bankruptcy acceptable to the Paying Agent that such payments will not constitute a voidable transfer or preference under and pursuant to Section 547 of the Federal Bankruptcy Code and (d) investment income on the foregoing types of money.

"Event of Default" shall have the meaning given to such term herein under the caption "Events of Default."

"Extraordinary Services and Extraordinary Expenses" shall mean all reasonable services rendered and all reasonable expenses incurred by the Paying Agent under the Resolution other than Ordinary Services and Ordinary Expenses.

"Federal Reserve Bank" means any one of the central banks constituting the Federal Reserve System, created by the Federal Reserve Act of 1913, as amended, in order to regulate and aid the member banks in its respective Federal Reserve district.

"Fiduciary" or "Fiduciaries" means the Bond Registrar, the Paying Agents, or any or all of them, as may be appropriate or any bank, trust company, national banking association, savings and loan association, savings bank or other banking association selected by the District as a depositary of monies and securities held under the provisions of the Resolution, and may include the Bond Registrar.

"Fiscal Year" means each twelve (12) month period commencing on July 1 and ending on the succeeding June 30.

"Fitch" shall mean Fitch Ratings, its successors and their assigns, and if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a municipal securities rating agency, Fitch shall be deemed to refer to any other nationally recognized municipal securities rating agency designated by the District.

"Fund" or "Funds" means, as the case may be, each or all of the Funds established in the Resolution.

"Government Obligations" when used with respect to Bonds shall mean (i) any direct obligations of the United States of America (including obligations issued or held in book-entry form on the books of the Department of the Treasury) or obligations the principal and interest on which are unconditionally guaranteed by the United States of America, and (ii) bonds, debentures, notes or other evidences of indebtedness issued or guaranteed by any of the following federal agencies (including stripped obligations thereof if such obligations have been stripped by the issuing agency itself) provided such obligations are backed by the full faith and credit of the United States of America: [1] Farmer's Home Administration; [2] General Services Administration; [3] United States Maritime Administration - Guaranteed Title XI Financing; [4] Federal Financing Bank; [5] United States Department of Housing and Urban Development; [6] U.S. Export - Import Bank; [7] Federal Housing Administration Debentures, and [8] Government National Mortgage Association guaranteed mortgage-backed bonds and guaranteed pass-through obligations.

"Government Obligations" when used with respect to Notes shall mean, direct general obligations of, or obligations the prompt payment of the principal of and the interest on which are fully and unconditionally guaranteed by, the United States of America. In addition, investments having a maturity of seven days or less in a money market or other fund, which fund is rated by Moody's and S & P in the highest rating category, and investments of which fund are exclusively in Government Obligations, shall be considered investments in Government Obligations.

"Granting Clauses" means the granting clauses appearing at the beginning of the Resolution.

"Immediate Notice" shall mean notice (a) by telex, telecopier or telephone, or delivery by hand, (b) promptly followed by written notice by first class mail, postage prepaid, and (c) to such address or such telex, telecopier or telephone number as the Person receiving such notice shall have previously furnished to the Paying Agent in writing.

"Independent" when used with respect to any specified Person shall mean such a Person who (a) is in fact independent; (b) does not have any direct financial interest or any material indirect financial interest in the District or any Affiliate of the District, other than the payment to be received under a contract for services to be performed by such Person; and (c) is not connected with the District or any Affiliate of the District, as an official, officer, employee, promoter, underwriter, trustee, partner, subsidiary, director or Person performing similar functions.

"Interest Payment Date" shall mean the date or dates for the payment of interest on each series of Notes as provided in the applicable series of Notes.

"Insurer" means any nationally recognized company engaged in the business of insuring bonds which may from time to time insure the payment of the principal of and interest on all or a portion of the Bonds of any Series.

"Interest Commencement Date" means, with respect to any particular Capital Appreciation and Income Bond, the date specified in the Supplemental Resolution authorizing such Bonds, (which date must be prior to the maturity date for such Bonds) after which interest ceases to be deferred and compounds and the interest becomes currently payable.

"Investment Securities" means any of the following securities, to the extent legal for investment of the District's funds: [a] Government Obligations and, to the extent from time to time permitted by law, [b] obligations of [i] Federal Home Loan Banks, senior debt obligations, [ii] Federal Home Loan Mortgage Corporation, participation certificates and senior debt obligations, [iii] Student Loan Marketing Association, senior debt obligations, [iv] Resolution Funding Corporation and [v] Federal National Mortgage Association mortgage-backed securities and senior debt obligations; [c] money market funds registered under the Federal Investment Company Act of 1940, whose shares are registered under the Federal Securities Act of 1933, and having a rating by Standard and Poor's of AAAm-G, AAAm or AAm; [d] certificates of deposit or time deposits of any bank, any branch of any bank, trust company or national banking association or any savings and loan association; provided, however, that such certificates of deposit or time deposits shall be fully secured, to the extent not insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation, by Government Obligations in which the Bond Registrar has a perfected first security interest, [e] investment agreements (for investment of moneys held in the Construction and Acquisition Fund) or other investments approved in writing by the Insurer, [f] commercial paper rated at the time of purchase, "Prime-1" by Moody's and "A-1" or better by S&P, [g] bonds or notes issued by any state or municipality which are rated by Moody's and S&P in one of the two highest rating categories assigned by such agencies, [h] federal funds or banker acceptances with a maximum term of 1 year with a rating of "Prime-1" or "A-3" or better by Moody's and "A-1" or "A" or better by S&P, and [i] any repurchase agreement approved in writing by the Insurer or any repurchase agreement with a term not in excess of 30 days that is a legal investment for public funds under state law (as determined by a written legal opinion delivered to the District) and is with a primary dealer on the Federal Reserve reporting dealer list rated A or better by Moody's and S&P or any bank or trust company (including the Bond Registrar) rated "A" or better by Moody's and S & P for Government Obligations or obligations described in [b] above in which the Bond Registrar shall be given a first security interest and on which no third party shall have a lien. The underlying repurchase obligations must be valued weekly and marked to market at a current market price plus accrued interest of at least 104% (105% if the underlying securities are Federal National Mortgage Association Mortgage-backed securities and senior debt obligations) of the amount of the repurchase obligations of the bank or trust company. All obligations purchased must be transferred to the Bond Registrar or a third party agent by physical delivery or by an entry made on the records of the issuer of such obligations. Any investment in a repurchase agreement shall be considered to mature on the date the obligor providing the repurchase agreement is obligated to repurchase the obligations. Any investment in obligations described in [a] and [b] above may be made in the form of an entry made on the records of the issuer of the particular obligation.

The Bond Registrar, any Paying Agent, other Fiduciaries, or other custodian of funds of the District, respectively, may trade with itself in the purchase and sale of securities for such investment and may charge its ordinary and customary fees for such trades, including cash sweep account fees. In the absence of any direction from the District, the Bond Registrar, any Paying Agent, other Fiduciaries, or other custodian of funds of the District, respectively, shall invest all funds in sweep accounts, money market funds and similar short-term investments, provided that all such investments shall constitute Investment Securities.

"Maturity" when used with respect to any Note shall mean the date on which the principal of such Note becomes due and payable as therein provided, whether at the Stated Maturity or by declaration of acceleration, call for redemption or otherwise.

"Maximum Interest Rate" means, with respect to any particular Variable Interest Rate Bond, an annual rate of interest, which shall be set forth in the Supplemental Resolution authorizing such Bond, that shall be the maximum rate of interest such Bond may at any time bear.

"Minimum Interest Rate" means, with respect to any particular Variable Interest Rate Bond, an annual rate of interest which may (but need not) be set forth in the Supplemental Resolution authorizing such Bond, that shall be the minimum rate of interest such Bond may at any time bear.

"Moody's" means Moody's Investors Service, Inc., a corporation organized and existing under the laws of the State of Delaware, its successors and their assigns, if any.

"Month" means a calendar month.

"Net Revenues" for any period shall mean Revenues, less Operating Expenses for such period.

"Noteholder", "Owner", "owner", "Holder" or "holder" or any similar term, when used with reference to any of the Notes, shall mean any Person who shall be the registered owner on the records of the Note Registrar of any then Outstanding Notes.

"Notes" shall mean the District's Subordinated Sewer and Drainage System Revenue Notes issued pursuant to the Note Resolution.

"Note Account" shall mean the fund created in Section 5.2 of the Note Resolution.

"Note Documents" shall mean the Note Resolution and the Notes.

"Note Register" shall have the meaning specified in Section 2.5 of the Note Resolution.

"Note Registrar" shall mean the Paying Agent in its capacity as bond registrar, appointed and serving in such capacity pursuant to the Note Resolution.

"Note Resolution" or "Subordinated Debt Resolution" shall mean the Subordinate Debt Resolution adopted by the District on April 26, 2010, as amended by the Subordinate Debt Sale Resolution adopted on August 24, 2015.

"Notice by Mail" or "notice" of any action or condition "by Mail" shall mean a written notice meeting the requirements of the Note Resolution mailed by first-class mail, postage prepaid, to the Holders of specified Notes at the addresses shown in the Note Register. If, because of the temporary or permanent suspension of mail service or for any other reason, it is impossible or impracticable to mail any such notice in the manner described, then such notification in lieu thereof as shall be made with the approval of the Paying Agent shall constitute a sufficient notice.

"Official Statement" shall mean the offering document for a series of Notes to be used by the Underwriter to offer such Notes, as from time to time amended.

"Operating Expenses" means the District's reasonable, ordinary, usual or necessary current expenses of maintenance, repair and operation of the System, determined in accordance with generally accepted accounting principles and the enterprise basis of accounting. Operating Expenses shall include, without limiting the generality of the foregoing, [i] expenses not annually recurring, [ii] administrative and engineering expenses (to the extent not paid or reimbursed as a Cost of Construction and Acquisition), payments to pension or retirement funds properly chargeable to the System, insurance premiums, fees and expenses of Paying Agents and legal expenses, [iii] interest on, redemption premium on, or principal of, Subordinated Debt, [iv] any other expenses required to be paid by the District under the provisions of the Resolution or by law and [v] amounts reasonably required to be set aside in reserves for operating items or expenses the payment of which is not then immediately required.

However, Operating Expenses do not include [i] reserves for extraordinary maintenance or repair, or any allowance for depreciation, or any deposits or transfers to the credit of the Bond Fund or the Renewal and Replacement Account, nor any amounts paid or required to be paid to the United States of America pursuant to the Resolution (except to the extent such rebate amounts must be paid from Revenues other than the investment income that generated the liability to the United States), [ii] non-capital Costs of Acquisition and Construction or other costs, to the extent composed of non-capital expenses, salaries, wages and fees that are necessary or incidental to capital improvements for which debt has been issued and which may be paid from proceeds of such debt or [iii] losses from the sale, abandonment, reclassification, revaluation or other disposition of properties of the System nor such property items, including taxes and fuel, which are capitalized pursuant to the then existing accounting practice of the District.

"Opinion of Counsel" means an opinion signed by an attorney or firm of attorneys of nationally recognized standing in the field of law relating to municipal bonds (who may be counsel to the District) selected by the District.

"Option Bonds" means Bonds which by their terms may be tendered by and at the option of the Holder thereof for payment or purchase by the District or a third party prior to the stated maturity thereof, or the maturities of which may be extended by and at the option of the Holder thereof

"Ordinary Services and Ordinary Expenses" shall mean those services normally rendered and those expenses normally incurred by a paying agent, bond registrar or trustee under instruments similar to the Note Resolution, including all costs of administering the optional redemption provisions contained in the Note Resolution including, but not limited to, reasonable attorneys' fees.

"Outstanding" when used with respect to Notes shall mean, as of the date of determination, all Notes theretofore authenticated and delivered under the Note Resolution, except:

Notes theretofore canceled by the Paying Agent or delivered to the Paying Agent for cancellation;

(a) Notes for whose payment or redemption money (which shall be Eligible Moneys to the extent, if any, provided in the Resolution) in the necessary amount has been theretofore deposited with the Paying Agent in trust for the Holders of such Notes, provided that, if such Notes are to be redeemed, notice of such redemption has been duly given pursuant to the Resolution or provision therefor satisfactory to the Paying Agent has been made;

(b) Notes in exchange for or in lieu of which other Notes have been authenticated and delivered pursuant to the Resolution; provided, however, that in determining whether the Holders of the requisite principal amount of Notes Outstanding have given any request, demand, authorization, direction, notice, consent or waiver hereunder, District Notes shall be disregarded and deemed not to be Outstanding, except that, in determining whether the Paying Agent shall be protected in relying upon any such request, demand, authorization, direction, notice, consent or waiver, only Notes of which the Responsible Officer of the Paying Agent located at the Paying Agent's principal corporate trust office has actual knowledge are District Notes are disregarded; and

(c) For purposes of any consent, request, demand, authorization, direction, notice, waiver or other action to be taken by the Holders of all or a specified percentage of Outstanding Notes hereunder, all District Notes.

"Outstanding" when used with reference to Bonds, means, as of any date, Bonds theretofore or thereupon being authenticated and delivered under the Resolution except:

(i) Bonds cancelled pursuant to the Resolution at or prior to such date;

(ii) Bonds (or portion of Bonds) for the payment or redemption of which monies, equal to the principal amount or Redemption Price thereof, as the case may be, with interest to the date of maturity or redemption date shall be held in trust under the Resolution and set aside for such payment or redemption (whether at or prior to the maturity or redemption date), provided that if such bonds (or portion of Bonds) are to be redeemed, notice of such redemption shall have been given or provision satisfactory to the District shall have been made for the giving of such notice as provided in the Resolution;

(iii) Bonds in lieu of or in substitution for which other Bonds shall have been authenticated and delivered pursuant to the Resolution;

(iv) Bonds deemed to have been paid as provided in the Resolution; and

(v) Option Bonds deemed tendered in accordance with the provisions of the Supplemental Resolution authorizing such Bonds on the applicable adjustment or conversion date if interest thereon shall have been paid through such applicable date and the purchase price thereof shall have been paid or amounts are available for such payment as provided in the Resolution.

"Paying Agent" means any bank or trust company organized under the laws of any state of the United States of America or any national banking association designated as paying agent for the Bonds of any Series, and its successor or successors hereafter appointed in the manner provided in the Resolution.

"Payment of the Notes" shall mean the payment in full of principal of, premium, if any, and interest on the Notes or provisions for such payment sufficient to discharge the Note Resolution.

"Person" shall mean any natural person, corporation, limited liability company, joint venture, cooperative, partnership, trust or unincorporated organization, government or governmental body or agency, political subdivision or other legal entity, as in the context may be appropriate.

"Pledged Property" means and includes the following property, as and when received by or for the account of the District, in each case pending the application or expenditure thereof in accordance with the Resolution: [i] the proceeds of sale of Bonds, [ii] all Revenues, [iii] all amounts on deposit in the Funds or Accounts established under the Resolution, [iv] such other amounts as may be pledged from time to time by the District as security for the payment of Bonds and [v] all proceeds of the foregoing.

"Principal Installment" means, as of the date of calculation and with respect to any Series, so long as any Bonds thereof are Outstanding, [i] the principal amount of Bonds of such Series due on a certain future date for which no Sinking Fund Installments have been established (including the principal amount of Option Bonds tendered for payment and not purchased), [ii] the Sinking Fund Installment due on a certain future date for Bonds of such Series and [iii] if such future dates coincide, the sum of such principal amount and such Sinking Fund Installment.

"Prior Bonds" or "Senior Debt" shall mean any bonds, notes or other obligations issued on a parity as to security and sources of payment pursuant to the Bond Resolution.

"Project" means a capital project of the District to be financed or refinanced with the proceeds of any of the Notes, and with respect to the Series 2015 Notes shall mean the refunding of certain of the District's outstanding Sewer and Drainage System Subordinated Bond Anticipation Notes, Series 2013.

"Rating Agency" shall mean Moody's, S&P and/or Fitch.

"Record Date" means a Regular Record Date or a Special Record Date.

"Redemption Date" when used with respect to any Note to be redeemed shall mean the date on which it is to be redeemed pursuant to the Resolution.

"Redemption Price" means, with respect to any Bond, the principal amount thereof plus the applicable premium, if any, payable upon redemption thereof pursuant to such Bond.

"Redemption Price" when used with respect to any Note to be redeemed shall mean the price at which it is to be redeemed.

"Refunding Bonds" means all Bonds, whether issued in one or more Series or as part of a Series, authenticated and delivered on original issuance pursuant to the Resolution.

"Renewal and Replacement Account" means the account of that name which is maintained pursuant to the Resolution.

"Reserve Account" means the Reserve Account of the Bond Fund.

"Resolution" means the Sewer and Drainage System Revenue Bond Resolution of the District originally adopted on December 9, 1992 and amended and restated in its entirety on June 30, 1993, as from time to time amended or supplemented.

"Responsible Officer" when used with respect to the Paying Agent shall mean the chairman or vice-chairman of the board of directors, the chairman or vice-chairman of the executive committee of the board of directors, the president, any vice-president, any trust officer, or any other officer of the Paying Agent customarily performing functions similar to those performed by any of the above designated officers and who, in any event is located at the principal corporate trust office of the Paying Agent and shall also mean, with respect to a particular corporate trust matter any other officer to whom such matter is referred because of his knowledge of and familiarity with the particular subject; with respect to any signature on or authentication of Notes by the Paying Agent, the term "Responsible Officer" shall also include any authorized signers of the Paying Agent.

"Revenue Fund" means the Revenue Fund which is maintained pursuant to the Resolution.

"Revenues" means all revenues, rates, fees, rents, charges and other operating income and receipts, as derived by or for the account of the District from or for the operation, use or services of the System, determined in accordance with generally accepted accounting principles and the enterprise basis of accounting. Revenues shall include, without limiting the generality of the foregoing, [i] revenue from capital charges recovered or reimbursed to the District, capacity charges and service connection fees, [ii] acquisition surcharges and assessments levied by the District (regardless of whether any of the same are allocated or designated by the District for capital expenditures) and [iii] interest or other income received or to be received from any source, including but not limited to interest or other income received or to be received on any monies or securities held pursuant to the Resolution. Revenues shall not include customer deposits and contributions in aid of construction, except to the extent the same would constitute revenues or income in accordance with generally accepted accounting principles.

"S&P" shall mean Standard & Poor's Ratings Group, a division of McGraw-Hill Financial Services Company, a corporation organized and existing under the laws of the State of New York, its successors and their assigns, and if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a municipal securities rating agency, S&P shall be deemed to refer to any other nationally recognized municipal securities rating agency designated by the District.

"Secretary-Treasurer" means the Secretary-Treasurer of the District, or such officer of the District as may succeed to the duties and responsibilities of the Secretary-Treasurer.

"Securities Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Securities Depository" means any securities depository that is 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, operating and maintaining, with its participants or otherwise, a Book-Entry System to record ownership of beneficial interests in bonds and bond service charges, and to effect transfers of bonds in Book-Entry Form, and means, initially, The Depository Trust Company (a limited purpose trust company), New York, New York.

"Securities Depository Nominee" means any nominee of a Securities Depository and shall initially mean Cede & Co., New York, New York, as nominee of The Depository Trust Company.

"Senior Debt" or "Prior Bonds" shall mean any bonds, notes or other obligations issued on a parity as to security and sources of payment pursuant to the Bond Resolution.

"Senior Subordinated Debt Fund" means the Senior Subordinated Debt Fund which is maintained pursuant to the Resolution.

"Series" means all of the Bonds authenticated and delivered on original issuance and identified pursuant to the Resolution or any Supplemental Resolution authorizing such Bonds as a separate Series of Bond, and any Bonds thereafter authenticated and delivered in lieu of or in substitution for such Bonds pursuant to the Resolution, regardless of variations in maturity, interest rate, Sinking Fund Installments, or other provisions.

"Series 2015 Notes" shall mean the District's Sewer and Drainage System Subordinated Bond Anticipation Notes, Series 2015 issued pursuant to the Note Resolution.

"Sinking Fund Installment" means an amount so designated which is established pursuant to the Resolution.

"Stated Maturity" when used with respect to any Note or any installment of interest thereon shall mean the date specified in such Note as the fixed date on which principal of such Note or such installment of interest is due and payable.

"Subordinated Debt Subaccounts" shall have the meaning assigned to such term in Section 6.05 of the Note Resolution.

"Subordinated Debt" means indebtedness of the System which is subordinate to the Bonds issued under the Resolution including the Senior Subordinated Debt.

"Supplemental Resolution" means any resolution supplemental to or mandatory of this Resolution adopted by the District in accordance with the Resolution.

"System" means [i] the sewer facilities, drainage facilities and all appurtenant facilities or any other facilities owned, operated or controlled by the District from time to time, [ii] any Project and [iii] all improvements, additions, extensions and betterments to the foregoing which may be hereafter acquired by the District by any means whatsoever.

"Trust Funds" shall mean all of the funds and accounts held by the Paying Agent pursuant to Note Resolution, but otherwise excluding the Rebate Fund.

"Trust Moneys" shall have the meaning stated in the Note Resolution.

"Valuation Date" means with respect to any Capital Appreciation Bonds and Capital Appreciation and Income Bonds, the date or dates set forth in the Supplemental Resolution authorizing such Bonds on which specific Accreted Values or Appreciated Values are assigned to the Capital Appreciation Bonds and Capital Appreciation and Income Bonds, as the case may be.

"Variable Interest Rate" means a variable interest rate to be borne by a Series of Bonds or any one or more maturities within a Series of Bonds.

"Variable Interest Rate Bonds" for any period means bonds which during such period bear a Variable Interest Rate, provided that Bonds the interest rate on which shall have been fixed for the remainder of the term thereof shall no longer be Variable Interest Rate Bonds.

"Vice-Chairperson" means the Vice-Chairperson of the District, or such officer of the District as may succeed to the duties and responsibilities of the Vice-Chairperson.

SUMMARY OF PROVISIONS OF THE BOND RESOLUTION

The Pledge Affected by the Resolution.

The Bonds are special and limited obligations of the District payable, solely from and secured as to the payment of the principal and Redemption Price thereof, and interest thereon, in accordance with their terms and the provisions of the Resolution, solely from the Pledged Property. There are by the Resolution pledged and assigned as security for the payment of the principal and Redemption Price of, and interest on, the Bonds in accordance with their terms and the provisions of the Resolution, subject only to the provisions of the Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in the Resolution, the Pledged Property.

Establishment of Funds and Accounts.

The Resolution establishes the following Funds and Accounts:

(a) Construction and Acquisition Fund to be held by the District,

(b) Revenue Fund to be held by the District,

(c) Bond Fund to be held by the Paying Agent which shall consist of a Debt Service Account and a Reserve Account,

(d) Renewal and Replacement Account to be held by the District, and

(e) Senior Subordinated Debt Fund to be held by the District.

The District may, for accounting or allocation purposes, [i] establish one or more additional accounts or subaccounts within the Construction and Acquisition Account, the Revenue Fund, the Bond Fund or the Renewal and Replacement Account, or [ii] to the extent not expressly prohibited by other provisions hereof, commingle amounts between or among any or all of such Funds or Accounts, except the Senior Subordinated Debt Fund.

Construction and Acquisition Fund.

There shall be paid into the Construction and Acquisition Fund the amounts required to be so paid by the provisions of the Resolution, and there may be paid into the Construction and Acquisition Fund, at the option of the District, any monies received by the District from any source, unless required to be otherwise applied as provided by the Resolution. Amounts in the Construction and Acquisition Fund shall be applied to pay the Cost of Construction and Acquisition in the manner provided in the Resolution and the Supplemental Resolution authorizing a Series of Bonds to finance the Cost and Acquisition of a Project.

There shall be established within the Construction and Acquisition Fund a separate account for a Project.

The proceeds of insurance, if any, maintained pursuant to the Resolution against physical loss of or damage to the System, or of contractors' performance bonds or other assurances of completion with respect thereof, or pertaining to the period of construction thereof, shall be paid into the appropriate separate account in the Construction and Acquisition Fund.

The Secretary-Treasurer of the District shall make payments from the Construction and Acquisition Fund, except payments and withdrawals pursuant to the Resolution as described in the next paragraph, in the amounts, at the times, in the manner, and on the other terms and conditions set forth in the Resolution. The Secretary-Treasurer or other Authorized Officer of the District shall maintain adequate records in respect of all payments made, including [a] the particular account established within the Construction and Acquisition Fund from which such payment is to be made, [b] the name and address of the person, firm or corporation to whom payment is due, [c] the amount to be paid and [d] the particular item of the Cost of Construction and Acquisition to be paid and that the cost or the obligation in the stated amount is a proper charge against the Construction and Acquisition Fund which has not been previously paid. The Secretary-Treasurer shall issue a check for each payment required by such requisition or shall by interbank transfer or other method arrange to make the payment required by such requisition.

Notwithstanding any of the provisions of the Resolution as described under this caption, except as provided below, to the extent that other monies are not available therefor, amounts in the Construction and Acquisition Fund shall be applied to the payment of Principal Installments of and interest on Bonds when due; provided, however, that proceeds (and investment earnings thereon) from the issuance by the District of Senior Subordinated Debt shall not be subject to the priority in favor of the Bonds created by the Resolution, but may instead be pledged by the District as security and a source of payment first for the Senior Subordinated Debt pursuant to the resolution or resolutions of the District authorizing such Senior Subordinated Debt, in which event such amounts shall be applied to the payment of debt service on the Senior Subordinated Debt when due to the extent that other monies are not available therefor, and shall not be used to pay debt service on any Bonds if there is any Senior Subordinated Debt which remains outstanding and unpaid.

An adequate record of the completion of construction of a Project financed in whole or in part by the issuance of Bonds shall be maintained by an Authorized Officer of the District. The balance in the separate account in the Construction and Acquisition Fund established therefor shall be transferred to the Reserve Account in the Bond Fund, if and to the extent necessary to make the amount of such Account equal to the Debt Service Reserve Requirement, and any excess amount shall be paid over or transferred to the District for deposit in the Revenue Fund.

Application of Revenues.

All Revenues shall be promptly deposited by the District upon receipt thereof into the Revenue Fund.

There shall be withdrawn in each month the following amounts, for deposit as set forth below and in the order of priority set forth below.

(i) To the Bond Fund, (i) for credit to the Debt Service Account, the amount, if any, required so that the balance in such Account shall equal the Accrued Aggregate Debt Service as of the last day of the then current month or, if interest or principal are required to be paid to Holders of Bonds during the next succeeding month on a day other than the first day of such month, Accrued Aggregate Debt Service as of the day through and including which such interest or principal is required to be paid and (ii) for credit to the Reserve Account, the amount, if any, required for such Account, after giving effect to any surety bond, insurance policy, letter of credit or other similar obligation deposited in such Account pursuant to the Resolution, to equal one-twelfth (1/12) of the difference between (a) the amount then in the Reserve Account immediately preceding such deposit and (b) the actual Debt Service Reserve Requirement as of the last day of the then current month; and

(ii) To the Senior Subordinated Debt Fund the amount, if any, required to pay the scheduled base and additional rental payments when due on the Senior Subordinated Debt and make deposits, if any, for reserves therefor, in accordance with the provisions of, and subject to the priorities and limitations and restrictions provided in, the Senior Subordinated Debt; and

(iii) Each month the District shall pay from the Revenue Fund such amounts as are necessary to meet Operating Expenses for such month; and

(iv) To the Renewal and Replacement Account, a sum equal to 1/12 of the amount, if any, provided in the Annual Budget to be deposited in the Renewal and Replacement Account during the then current Fiscal Year; provided that, if any such monthly allocation to the Renewal and Replacement Account shall be less than the required amount, the amount of the next succeeding monthly payment shall be increased by the amount of such deficiency.

The balance of monies remaining in the Revenue Fund after the above required payments have been made may be used by the District for any lawful purpose relating to the System; provided, however, that none of the remaining monies shall be used for any purpose other than those hereinabove specified unless all current payments and including all deficiencies in prior payments, if any, have been made in full and unless the District shall have complied fully with all the covenants and provisions of the Resolution.

So long as there shall be held in the Debt Service Account and the Reserve Account an amount sufficient to pay in full all Outstanding Bonds in accordance with their terms (including principal or applicable sinking fund Redemption Price and interest thereon), no transfers shall be required to be made to the Bond Fund; and provided further, that any deficiency in the Reserve Account, after giving effect to any surety bond, insurance policy or letter of credit deposited in such Account pursuant to the Resolution as described in the fourth paragraph under the caption "Bond Fund - Reserve Account" herein, other than a deficiency attributable to a withdrawal of amounts therefrom pursuant to the Resolution as described in the first paragraph under the caption "Bond Fund - Reserve Account" herein, shall be cured by depositing into the Reserve Account each month during the period commencing with the month following the month in which the determination of the deficiency was made an amount equal to one-twelfth (1/12th) of the deficiency, except that, if a new valuation of Investment Securities held in the Reserve Account is made pursuant to the Resolution during the period that such deposits are required, then the obligation of the District to make deposits during the balance of such period on the basis of the preceding valuation shall be discharged and the deposits, if any, required to be made for the balance of such period shall be determined under this proviso on the basis of the new valuation.

Bond Fund - Debt Service Account.

The Paying Agent, from amounts deposited therein, shall pay out of the Debt Service Account, [i] on or before each interest payment date for any of the Bonds, the amount required for the interest payable on such date, [ii] no later than each Principal Installment due date, the amount required for the Principal Installment payable on such due date and [iii] no later than any redemption date for the Bonds, the amount required for the payment of interest on the Bonds then to be redeemed. In the case of Variable Interest Rate Bonds, the District shall furnish the Paying Agent with a certificate setting forth the amount to be paid on such Bonds on each interest payment date, such certificate shall be furnished on or prior to the appropriate Record Date with respect to any interest payment date. Such amounts shall be applied by the Paying Agents on or after the due dates thereof. The Paying Agent shall also pay out of the Debt Service Account, from amounts deposited therein, the accrued interest included in the purchase price of Bonds purchased for retirement.

Amounts accumulated in the Debt Service Account with respect to any Sinking Fund Installment may be applied on or prior to the 40th day next preceding the due date of such Sinking Fund Installment, to [i] the purchase of Bonds of the Series and maturity for which such Sinking Fund Installment was established or [ii] the redemption at the applicable sinking fund Redemption Price of such Bonds, if then redeemable by their terms. All purchases of any Bonds pursuant to the Resolution as described in this paragraph shall be made at prices not exceeding the applicable sinking fund Redemption Price of such Bonds plus accrued interest. The applicable sinking fund Redemption Price (or principal amount of maturing Bonds) of any Bonds so purchased or redeemed shall be deemed to constitute part of the Debt Service Account until such Sinking Fund Installment date, for the purpose of calculating the amount of such Account. As soon as practicable after the 40th day preceding the due date of any such Sinking Fund Installment, the District shall proceed to call for redemption, by giving notice as provided in the Resolution, on such due date Bonds of the Series and maturity for which such Sinking Fund Installment was established (except in the case of Bonds maturing on a Sinking Fund Installment date) in such amount as shall be necessary to complete the retirement of the unsatisfied balance of such Sinking Fund Installment. The District shall pay out of the Debt Service Account to the appropriate Paying Agents, on or before such redemption date (or maturity date), the amount required for the redemption of the Bonds so called for redemption (or for the payment of such Bonds then maturing), and such amount shall be applied by such Paying Agents to such redemption (or payment).

Unless otherwise provided by the District, upon any purchase or redemption pursuant to the Resolution of Bonds of any Series and maturity for which Sinking Fund Installments shall have been established, there shall be credited, in increments of $5,000 to the extent practicable, toward each succeeding Sinking Fund Installment thereafter to become due on Bonds, of the same series and maturity (other than the Sinking Fund Installment next coming due) an amount bearing the same ratio, to the Sinking Fund Installment, as the total principal amount of Bonds purchased or redeemed bears to the total principal amount of all the Sinking Fund Installments to be credited. The portion of any principal Sinking Fund Installment remaining after the deduction of any such amounts are credited toward the same shall constitute the unsatisfied balance of such Sinking Fund Installment for the purpose of calculation of Sinking Fund Installments due on a future date.

The amount, if any, deposited in the Debt Service Account from the proceeds of each Series of Bonds shall be set aside in such Account and applied to the payment of interest on Bonds as provided in the Resolution or in accordance with certificates of the District delivered pursuant to the Resolution or, if the District shall modify or amend any such certificate by a subsequent certificate signed by an Authorized Officer of the District, then in accordance with the most recent amended certificate.

In the event of the refunding of any Bonds, the District may withdraw from the Debt Service Account in the Bond Fund all, or any portion of, the amounts accumulated therein with respect to Debt Service on the Bonds being refunded and deposit such amounts with itself to be held for the payment of the principal or Redemption Price, if applicable, and interest on the Bonds being refunded; provided that such withdrawal shall not be made unless (a) immediately thereafter Bonds being refunded shall be deemed to have been paid pursuant to the Resolution as described herein under the caption "Defeasance," and (b) the amount remaining in the Debt Service Account in the Bond Fund, after giving effect to the issuance of Refunding Bonds and the disposition of the proceeds thereof, shall not be less than the requirement of such Account pursuant to the Resolution in the second paragraph under this caption. In the event of such refunding, the District may also withdraw from the Debt Service Account in the Bond Fund all, or any portion of, the amounts accumulated therein with respect to Debt Service on the Bonds being refunded and deposit such amounts in any fund or Account under the Resolution; provided, however, that such withdrawal shall not be made unless items (a) and (b) referred to hereinabove have been satisfied and provided, further, that, at the time of such withdrawal, there shall exist no deficiency in any Fund or Account held under the Resolution, as confirmed in writing to the Bond Registrar by the Secretary-Treasurer.

Bond Fund - Reserve Account.

If five days prior to any interest or Principal Installment due date with respect to any Series of Bonds payment for such interest or Principal Installment in full has not been made or provided for, the District shall forthwith withdraw from the Reserve Account an amount not exceeding the amount required to provide or such payment in full and deposit such amount in the Debt Service Account for application to such payment.

Whenever the amount in the Reserve Account shall exceed the Debt Service Reserve Requirement, after giving effect to any surety bond, insurance policy or letter of credit deposited in such Account pursuant to the Resolution as described in the fourth paragraph under this caption, such excess shall be deposited in the Debt Service Account.

Whenever the amount in the Reserve Account (exclusive of any surety bond, letter of credit or insurance policy therein), together with the amount in the Debt Service Account is sufficient to pay in full all Outstanding Bonds in accordance with their terms (including principal or applicable sinking fund Redemption Price and interest thereon), the funds on deposit in the Reserve Account shall be transferred to the Debt Service Account. Prior to said transfer, all investments held in the Reserve Account shall be liquidated to the extent necessary in order to provide for the timely payment of principal and interest (or Redemption Price) on the Bonds.

In lieu of the required transfers or deposits to the Reserve Account, the District may cause to be deposited into the Reserve Account a surety bond or an insurance policy for the benefit of the holders of the Bonds or a letter of credit in an amount equal to the difference between the Debt Service Reserve Requirement and the sums then on deposit in the Reserve Account, if any, after the deposit of such surety bond, insurance policy or letter or credit. Such difference may be withdrawn by the District and be deposited in the Revenue Fund. The surety bond, insurance policy or letter of credit shall be payable (upon the giving of notice as required thereunder) on any due date on which monies will be required to be withdrawn from the Reserve Account and applied to the payment of a Principal Installment of or interest on any Bonds and such withdrawal cannot be met by amounts on deposit in the Reserve Account. If a disbursement is made pursuant to a surety bond, an insurance policy or a letter of credit provided pursuant to this subsection, the District shall be obligated either (i) to reinstate the maximum limits of such surety bond, insurance policy or letter of credit or (ii) to deposit into the Reserve Account, funds in the amount of the disbursement made under such surety bond, insurance policy or letter of credit, or a combination of such alternatives, as shall provide that the amount in the Reserve Account equals the Debt Service Reserve Requirement. Any other provision under this caption to the contrary notwithstanding, for each particular Series of Bonds or portion thereof which is insured by an Insurer, the right of the District under the Resolution to cause a surety bond or an insurance policy to be deposited into the Reserve Account in lieu of the required transfers or deposits thereto shall be subject to the condition that the District obtain the prior written consent of the Insurer as to the structure and the issuer of such surety bond or insurance policy.

In the event of the refunding of any Bonds, the District may withdraw from the Reserve Account in the Bond Fund all, or any portion of, the amounts accumulated therein with respect to the Bonds being refunded and deposit such amounts with itself to be held for the payment of the principal or Redemption Price, if applicable, and interest on the Bonds being refunded; provided that such withdrawal shall not be made unless (a) immediately thereafter the Bonds being refunded shall be deemed to have been paid pursuant to the Resolution as described in the second paragraph under the caption "Defeasance" herein, and (b) the amount remaining in the Reserve Account in the Bond Fund, after giving effect to the issuance of the Refunding Bonds and the disposition of the proceeds thereof, shall not be less than the Debt Service Reserve Requirement.

If any withdrawals are made from the Reserve Account pursuant to the Resolution, the resulting deficiency, if any, shall be remedied by the application of monthly payments into the Reserve Account as set forth in the Resolution, or by transfers from the Renewal and Replacement Account or both, until the amount on deposit in the Reserve Account is equal to the Debt Service Reserve Requirement, whereupon such deposits shall be discontinued until such time, if any, that there is again a deficiency.

Renewal and Replacement Account.

Monies to the credit of the Renewal and Replacement Account may be applied to the cost of major replacements, repairs, renewals, maintenance, betterments, improvements, reconstruction or extensions of the System or any part thereof as may be determined by the Board.

If at any time the monies in the Debt Service Account, the Reserve Account and the Revenue Fund shall be insufficient to pay the interest and Principal Installments becoming due on the Bonds, then the District shall transfer from the Renewal and Replacement Account for deposit in the Debt Service Account the amount necessary (or all the monies in said Fund if less than the amount necessary) to make up such deficiency.

Any balance of monies and securities in the Renewal and Replacement Account not required to meet a deficiency as set forth above or for any of the purposes for which the Renewal and Replacement Account was established, may, on direction of the District, be transferred from the Renewal and Replacement Account to the Reserve Account, if and to the extent necessary to make the amount in such Account equal to the Debt Service Reserve Requirement, and any balance may be deposited in the Debt Service Account or the Revenue Fund.

Senior Subordinated Debt Fund.

Subject to the provisions of the Resolution described in the next paragraph, the District shall apply amounts in the Senior Subordinated Debt Fund to the payment of debt service or the scheduled base and additional rental payments when due on the Senior Subordinated Debt and make deposits, if any, for reserves therefor in accordance with the provisions of, and subject to the priorities and limitations and restrictions provided in, the Senior Subordinated Debt.

Notwithstanding any of the other provisions of the Resolution described under this caption, if at any time the amount on deposit in the Reserve Account shall be less than the Debt Service Reserve Requirement, the District shall forthwith transfer from the Senior Subordinated Debt Fund for deposit in the Reserve Account the amount necessary (or all moneys in said Senior Subordinated Debt Fund, if necessary) to make up such deficiency.

Amounts in the Senior Subordinated Debt Fund which the District at any time determines to be in excess of the requirements of such fund may, at the discretion of the District, be transferred to the Debt Service Account or the Renewal and Replacement Account.

Investments.

In making any investment in any Investment Securities with monies in any Fund or Account established under the Resolution, the District may combine, to the extent permitted by law, or instruct such Fiduciary to combine, such monies with monies in any other Fund or Account, but solely for purposes of making such investment in such Investment Securities.

Monies held in the Bond Fund, the Revenue Fund, the Renewal and Replacement Account, the Senior Subordinated Debt Fund and the Construction and Acquisition Fund shall be invested and reinvested to the fullest extent practicable in Investment Securities, maturing not later than such times as shall be necessary to provide monies when needed for payments to be made from such Fund or Account. The Fiduciary, shall make all such investments of monies held by it in accordance with written instructions from time to time received from an Authorized Officer of the District.

Interest (net of that which represents a return of accrued interest) or gain realized on investments in such Funds and Accounts other than the Reserve Account of the Bond Fund, shall be paid into the Revenue Fund, provided that gain realized from the liquidation of an investment shall be governed by the provisions described below. Interest earned or gain realized on investments in the Reserve Account shall be transferred to the Debt Service Account, provided that gain realized from the liquidation of an investment shall be governed by the provisions of the Resolution as described in the first paragraph under the caption "Valuation and Sale of Investments" herein.

Nothing in the Resolution shall prevent any Investment Securities acquired as investments of or security for funds held under the Resolution from being issued or held in book-entry form on the books of the Department of the Treasury of the United States.

Nothing in the Resolution shall preclude any Fiduciary from investing or reinvesting monies through its respective trust department; provided, however, that the District may, in its discretion, direct that such monies be invested or reinvested in a manner other than through such respective trust department.

Valuation and Sale of Investments.

Obligations purchased as an investment of monies in any Fund or Account created under the provisions of the Resolution shall be deemed at all times to be a part of such Fund or Account. Any profit realized from the liquidation of such investment shall be credited to such Fund or Account, and any loss resulting from the liquidation of such investment shall be charged to the respective Fund or Account.

In computing the amount in any Fund or Account created under the provisions of the Resolution for any purpose provided in the Resolution, investments shall be valued at the then market price (as of the time of valuation) thereof. The accrued interest paid in connection with the purchase of an investment shall be included in the value thereof until interest on such investment is paid. Such computation shall be determined on June 30 and December 31 in each Fiscal Year and at such other times as the District shall determine.

Additional Bonds.

One or more Series of Additional Bonds may be authenticated and delivered upon original issuance at any time or from time to time for the purpose of paying all or a portion of the Cost of Construction and Acquisition of a Project. The proceeds, including accrued interest, of the Additional Bonds of each Series shall be applied simultaneously with the delivery of such Bonds as provided in the Supplemental Resolution authorizing such Series. The conditions for the issuance of Additional Bonds to finance the Acquisition and Construction of Additional Facilities include a certificate of an Authorized Officer of the District setting forth (A) for any period of 12 consecutive calendar months within the 24 calendar months preceding the date of the authentication and delivery, the Net Revenues for such period, and (B) the Aggregate Net Debt Service during the same period for which Net Revenues are computed, with respect to all Series of Bonds which were then Outstanding (excluding from Aggregate Net Debt Service any Principal Installment or portion thereof which was paid from sources other than Net Revenues), and showing that the amount set forth in (A) is equal to or greater than 110% of the amount set forth in (B). The conditions for the issuance of Additional Bonds to finance the Acquisition and Construction of Additional Facilities include a certificate of an Authorized Officer of the District setting forth (A) for the last full Fiscal Year of 12 months (ending June 30) immediately preceding the date of the authentication and delivery, the Net Revenues for such period, or, at the option of the District, for the last 12 consecutive full calendar months immediately preceding the date of the authentication and delivery, the Net Revenues for such period, and (B) the estimated maximum Aggregate Net Debt Service in the current or any future Fiscal Year with respect to [i] all Series of Bonds which are then Outstanding and [ii] the Additional Bonds then proposed to be authenticated and delivered (and for this purpose all Series of Bonds Outstanding plus such proposed Additional Bonds shall be treated as a single Series; that is, the maximum Aggregate Net Debt Service shall be computed collectively with respect to all such Bonds, and not computed cumulatively or separately for each particular Series), and showing that the amount set forth in (A) is equal to or greater than 110% of the amount set forth in (B). For purposes of computing the amount set forth in (A), Net Revenues may be increased to reflect the following amounts: [i] any increases in the rates, fees, rents and other charges for services of the System made subsequent to the commencement of such period and prior to the date of such certificate, [ii] any estimated increases in Net Revenues caused by any Project or Projects having been placed into use and operation subsequent to the commencement of such period and prior to the date of such certificate, as if such Project or Projects had actually been placed into use and operation for the entire period chosen in (A) above and [iii] 75% of any estimated increases in Net Revenues which would have been derived from the operation of any Project or Projects with respect to which the Cost of Construction and Acquisition is to be paid from proceeds of the Additional Bonds proposed to be authenticated and delivered, as if such Project or Projects had actually been placed into use and operation for the entire period chosen in (A) above.

Refunding Bonds.

One or more Series of Refunding Bonds may be issued at any time to refund [i] Outstanding Bonds of one or more Series or [ii] one or more maturities within a Series of any Bonds. Refunding Bonds shall be issued in a principal amount sufficient, together with other monies available therefor, to accomplish such refunding and to make the deposits in the Funds and Accounts under the Resolution required by the provisions of the Supplemental Resolution authorizing such Bonds.

Refunding Bonds of each Series shall be authenticated and delivered by the Bond Registrar only upon satisfaction of the following conditions (in addition to the other documents required by the

Resolution) of: [i] Instructions to the Bond Registrar, satisfactory to it, to give due notice of redemption, if applicable, of all the Bonds to be refunded on a redemption date or dates specified in such instructions, subject to the provisions of the Resolution described hereinafter under the caption "Defeasance"; [ii] if the Bonds to be refunded are not by their terms subject to redemption or will not be redeemed within the next succeeding 60 days, instructions to the escrow agent described in the Resolution, satisfactory to it, to mail the notice provided for in the Resolution described hereinafter under the caption "Defeasance" to the Holders of the Bonds being refunded; [iii] either (a) cash (including cash withdrawn and deposited pursuant to the Resolution as described herein under the captions "Bond Fund - Debt Service Account" and "Bond Fund - Reserve Account," respectively) in an amount sufficient to effect payment at the applicable Redemption Price of the Bonds to be refunded, together with accrued interest on such Bonds to the redemption date, which monies shall be held by the escrow agent described in the Resolution or any one or more of the Paying Agents in a separate account irrevocably in trust for and assigned to the respective Holders of the Bonds to be refunded or (b) Investment Securities in such principal amounts, of such maturities, bearing such interest, and otherwise having such terms and qualifications and any monies, as shall be necessary to comply with the provisions of the Resolution as described herein under the caption "Defeasance", which Investment Securities and monies shall be held in trust and used only as provided in the Resolution described hereinafter under the caption "Defeasance"; and [iv] such further documents and monies as are required by the provisions of the Resolution or any Supplemental Resolution adopted pursuant to the Resolution.

The proceeds, including accrued interest, of the Refunding Bonds of each Series shall be applied simultaneously with the delivery of such Bonds for the purposes of making deposits in such Funds and Accounts under the Resolution as shall be provided by the Supplemental Resolution authorizing such Series of Refunding Bonds and shall be applied to the refunding purposes thereof in the manner provided in such Supplemental Resolution.

Subordinated Debt.

The District may, at any time, or from time to time, issue debt or enter into a contract, lease, installment sale agreement or other instrument or lend credit to or guarantee debts, claims or other obligations of any person for any of its corporate purposes payable out of, and which may be secured by a pledge of, such amounts as may from time to time be available for the purpose of payment thereof; provided, however, that such pledge shall be, and shall be expressed to be, subordinate and junior in all respects to the pledge and lien created by the Resolution as security for the Bonds.

Creation of Liens; Sale and Lease of Property.

The District shall not issue any bonds, notes, debentures or other evidences of indebtedness of similar nature, other than the Bonds, payable out of or secured by a pledge or assignment of the Pledged Property and shall not create or cause to be created any lien or charge on the Pledged Property; provided, however, that nothing contained in the Resolution shall prevent the District from issuing, if and to the extent permitted by law [i] evidences of indebtedness (a) payable out of monies in the Construction and Acquisition Fund as part of the Cost of Construction and Acquisition of the System or (b) payable out of, or secured by a pledge or assignment of, Revenues to be received on and after such date as the pledge of the Pledged Property provided in the Resolution shall be discharged and satisfied as provided in the Resolution or [ii] Subordinated Debt.

Facilities of the System shall not be sold, leased, mortgaged or otherwise disposed of, except as follows: (A) The District may sell or exchange at any time and from time to time any property or facilities constituting part of the System, at such consideration as the District in its sole discretion deems reasonable or appropriate under all the circumstances, but only if it shall determine that ownership by the District of such property or facilities is not necessary or is not material for the purposes of the District in the operation of the System as a whole; or (B) The District may lease or make contracts or grant licenses for the operation of, or make arrangements for the use of, or grant easements or other rights with respect to, any part of the System, provided that any such lease, contract, license, arrangement, easement or right [i] does not materially impede the operation by the District or its agents of the System and [ii] does not materially impair or adversely affect the rights or security of the Bondholders under the Resolution.

Operation and Maintenance of System.

The District shall at all times use its best efforts to operate or cause to be operated the System properly and in an efficient and economical manner, and shall use its best efforts to maintain, preserve and keep the same or cause the same to be so maintained, preserved and kept, with the appurtenances and every part and parcel thereof, in good repair, working order and condition, and shall from time to time make or cause to be made, all necessary and proper repairs, replacements and renewals so that at all times the operation of the System may be properly and advantageously conducted. In rendering any report, certificate or opinion requested pursuant to the Resolution, an Authorized Officer of the District may rely upon information, certificates, opinions or reports required to be provided by others pursuant to the Resolution, and upon other sources which an Authorized Officer of the District considers reliable, and other considerations and assumptions as deemed appropriate by an Authorized Officer of the District.

Annual Budget.

On or before the first day of each Fiscal Year commencing with the Fiscal Year beginning July 1, 1993, the District shall prepare and adopt an Annual Budget for operating purposes for the ensuing Fiscal Year and will furnish copies thereof to any holder of any Bond. Said Annual Budget shall set forth in reasonable detail the estimated Revenues and Operating Expenses and other anticipated expenditures relating to the System for such Fiscal Year. Following the end of each fiscal quarter and at such other times as the District shall determine, the District shall review its estimates set forth in the Annual Budget for such Fiscal Year, and if a material change has occurred in such estimates, the District also may at any time adopt an amended Annual Budget for the remainder of the then current Fiscal Year.

Rents, Rates, Fees and Charges.

The District shall fix, establish, maintain and collect rates, fees, rents and charges for services of the System, which, together with other "Available Revenues" (as hereinafter defined) are expected to produce Available Revenues which will be at least sufficient for each Fiscal Year to pay the sum of [a] an amount equal to 110% of the Aggregate Net Debt Service for such Fiscal Year; and [b] the amount, if any, to be paid during such Fiscal Year into the Reserve Account in the Bond Fund (other than amounts required to be paid into such Account out of the proceeds of Bonds); and [c] all Operating Expenses for such Fiscal Year as estimated in the Annual Budget; and [d] to the extent not included in the foregoing, an amount equal to the debt service on the Senior Subordinated Debt, any other Subordinated Debt or other debt of the District for such Fiscal Year computed as of the beginning of such Fiscal Year; and [e] amounts necessary to pay and discharge all charges or liens payable out of the Available Revenues when due and enforceable.

For purposes of the preceding paragraph, "Available Revenues" means (i) revenues from all rates, rents and charges and other operating income derived or to be derived by the District from or for the operation, use or services of the System, (ii) any other amounts received from any other source by the District and pledged by the District as security for the payment of Bonds and (iii) interest received or to be received on any moneys or securities held pursuant to the Resolution and paid or required to be paid into the Revenue Fund or required to be retained in the Debt Service Account in the Bond Fund or transferred to the Debt Service Account in the Bond Fund. "Available Revenues" will exclude, however, any interest income which is capitalized pursuant to generally accepted accounting principles and the enterprise basis of accounting for governmental enterprises, as promulgated by the Governmental Accounting Standards Board, and governmental grants, in-kind contributions of assets and any assessments levied by the District to the extent that such grants, in-kind contributions and assessments are not recognized as operating revenues, other revenues or extraordinary gains pursuant to generally accepted accounting principles for governmental enterprises, as promulgated by the Governmental Accounting Standards Board. Nothing herein under this caption or in the definition of "Available Revenues" for purposes of the covenant described in the preceding paragraph, shall be construed so as to prohibit the District from taking into account interest earned on moneys or securities held under the Resolution, and other income available or expected to be available in the ordinary course for the payment of Debt Service pursuant to the Resolution, in calculating Aggregate Net Debt Service on the Bonds for any calculation period for purposes hereof or otherwise, nor prohibit the District from taking into account interest earned on moneys or securities held under any Resolution or indenture or similar document adopted or entered into in connection with an issuance of Subordinated Debt, and other income available or expected to be available in the ordinary course for the payment of debt service on Subordinated Debt, in calculating debt service payable on Subordinated Debt for any calculation period for purposes hereof or otherwise.

Promptly upon [i] any material decrease in the Revenues anticipated to be produced by any rates, fees, rents or charges or any later review thereof, [ii] any material increase in expenses of operation of the System not contemplated at the time of adoption of the rates, fees, rents and charges then in effect or any later review thereof or [iii] any other material change in the circumstances which were contemplated at the time such rates, fees, rents and charges were most recently reviewed, but not less frequently than once every 12 months, the District shall review the rates, fees, rents and charges so established and shall promptly establish or revise such rates, fees, rents and charges as necessary to comply with the foregoing requirements, provided that such rates, fees, rents and charges shall in any event produce Revenues sufficient, together with other Revenues, if any, available therefor, to enable the District to comply with all its covenants under the Resolution.

In estimating Aggregate Debt Service or Aggregate Net Debt Service on any Variable Interest Rate Bonds for purposes of the first paragraph under this caption, the District shall be entitled to assume that such Variable Interest Rate Bonds will bear such interest rate or rates as the District shall determine; provided, however, that the interest rate or rates assumed shall not be less than the interest rate borne by such Variable Interest Rate Bonds at the time such estimate is made.

Insurance

Maintenance of Insurance.

The District shall provide protection for the System to the extent necessary to properly conduct the business of the System. Said protection may consist of insurance, self-insurance and indemnities. Any insurance shall be in the form of policies or contracts for insurance with insurers of good standing, shall be payable to the District and may provide for such deductibles, exclusions, limitations, restrictions and restrictive endorsements customary in policies for similar coverage issued to entities operating properties similar to the properties of the System.

Application of Insurance Proceeds.

In the event of any loss or damage to the System covered by insurance, the District will, with respect to each such loss, promptly repair, reconstruct or replace the parts of the System affected by such loss or damage to the extent necessary to the proper conduct of the operation of the business of the System, shall cause the proceeds of such insurance to be applied for that purpose to the extent required therefor, and pending such application shall hold the proceeds of any insurance policy covering such damage or loss in trust to be applied for that purpose to the extent required therefor. Any excess insurance proceeds received by the District shall be transferred to the Revenue Fund.

Accounts and Reports.

The District shall keep or cause to be kept proper books of record and account (separate from all other records and accounts) in which complete and correct entries shall be made of its transactions relating to the System and each Fund and Account established under the Resolution and which, together with all other books and papers of the District, including insurance policies, relating to the System, shall at all times be subject to the inspection of the Bondholders and the Holders of an aggregate of not less than ten percent (10%) in principal amount of the Bonds then Outstanding or their representatives duly authorized in writing.

The District shall annually, within 180 days after the close of each Fiscal Year commencing with the Fiscal Year ending June 30, 1993, prepare an audit for such Fiscal Year, accompanied by a certificate of an Accountant relating to the System which shall include the following statements in reasonable detail: a statement of assets and liabilities as of the end of such Fiscal Year; and a statement of Revenues and Operating Expenses for such Fiscal Year. Such Certificate shall state whether or not, to the knowledge of the signer, the District is in default with respect to any of the covenants, agreements or conditions on its part contained in the Resolution, and if so, the nature of such default.

The reports, statements and other documents required pursuant to any provisions of the Resolution shall be available for the inspection of Bondholders and shall be mailed to each Bondholder who shall file a written request therefor with the District. The District may charge for such reports, statements and other documents, a reasonable fee to cover reproduction, handling and postage.

Tax Covenants Relating to the Internal Revenue Code.

The District shall do the following with respect to Bonds which, when initially issued, are the subject of an Opinion of Counsel to the effect that interest thereon is excluded from gross income for Federal income tax purposes pursuant to the Internal Revenue Code of 1986 or any successor thereto (the "Code"): [a] in order to maintain the exclusion of interest on the Bonds from gross income for Federal income tax purposes, and for no other purpose, the District shall comply with the Code; [b] in furtherance of the covenant contained in the preceding paragraph, the District shall make any and all payments required to be made to the United States Department of the Treasury in connection with the Bonds pursuant to Section 148(f) of the Internal Revenue Code; and [c] Notwithstanding any other provision of the Resolution to the contrary, so long as necessary in order to maintain the exclusion from gross income of interest on the Bonds for Federal income tax purposes, the covenants contained in this Section thereon, including any payment or defeasance thereof pursuant to the Resolution as described under the caption "Defeasance" herein.

Events of Default.

Each of the following events (being those provided by Section 76.160 of the Kentucky Revised Statutes) is hereby declared an "event of default"; that is, if: [a] payment of the principal of any of the Bonds is not made on the date therein specified for payment thereof, nor within thirty (30) days thereafter, or payment of any installment of interest is not made on the date specified for such payment, nor within thirty (30) days thereafter, or [b] default shall be made in the due and punctual observance or performance of any of the covenants, conditions and agreements on the part of the District, in the Bonds or in the Resolution, or in any pertinent law contained, and such default shall continue for a period of thirty (30) days.

Rights Arising Upon Occurrence of Event of Default.

That upon the happening of any event of default specified in the Resolution as described immediately above, the provisions of said Section 76.160 of Kentucky Revised Statutes shall become operative, and the holder or holders of twenty percent (20%) in principal amount or more of the Bonds then Outstanding pursuant to the Resolution may, by an instrument or instruments filed in the office of the County Clerk of Jefferson County, Kentucky, and approved or acknowledged in the same manner as a deed to be recorded, apply to a Judge in the Circuit Court of such County to appoint a trustee to represent all of the Bondholders. Upon such application, such Judge shall appoint a trustee and such trustee may, and upon the written request of the holder or holders of twenty percent (20%) in principal amount or more of the Bonds Outstanding under the Resolution, shall, in his or its name, (a) by mandamus or other suit, action or proceeding at law, or in equity, including mandatory injunction, enforce all rights of the District to collect rates, rentals and other charges adequate to carry out any agreement as to, or pledge of, the revenues and income of the District, and to require the District and its officers to carry out any other agreement with the Bondholders and to perform its and their duties imposed by law; (b) bring suit upon the Bonds; (c) by action or suit in equity require the District to account as if it were the trustee of an express trust for the Bondholders; (d) by action or suit in equity enjoin any acts or things which may be unlawful or in violation of the rights of Bondholders; (e) declare all Bonds due and payable; and (f) pursue any other rights or remedies available at law or in equity. For any Bonds registered in Book-Entry Form, notwithstanding the above definition of "Bondholder," the Paying Agent shall be entitled to rely upon written instructions from a majority of the beneficial owners of the Bonds with reference to consent, if any, required from Holders pursuant to the terms of the Resolution.

Any such trustee, whether or not all Bonds have been declared due and payable, shall be entitled as of right upon application to such Court to the appointment of a receiver, who may enter upon and take possession of the System, or any part or parts thereof, and operate and maintain the same, and collect and receive all rentals, rates, and other charges, and other revenues and income, of the District, thereafter arising therefrom, in the same manner as the District and its officers might do, and shall deposit all such monies in a separate account and apply the same in such manner as such Court shall direct. In any suit, action or proceeding, by the trustee, the fees, counsel fees and expenses of the trustee and of the receiver, if any, shall constitute disbursements taxable as costs. All costs and disbursements allowed by the Court shall be a first charge on any revenue and income derived from the System. Such trustee shall, in addition to the foregoing, have and possess all of the powers necessary or appropriate for the exercise of any functions specifically set forth herein or incident to the general representation of the Bondholders in the enforcement and protection of their rights.

Rights of Insurer.

Any other provision of the Resolution to the contrary notwithstanding, and to the extent permitted by law (including the Act), for each particular Series of Bonds or portion thereof that is insured by an Insurer, the exercise by the court appointed trustee or the Bondholders of any rights, powers or privileges granted thereto in the Resolution shall require the written consent of the Insurer, if the Insurer is not then in breach or default of its obligations under its insurance policy.

Bond Registrar; Paying Agents.

The Resolution permits the appointment by the District of a Bond Registrar and one or more Paying Agents. Any Paying Agent or Bond Registrar may at any time resign and be discharged of the duties and obligations created by the Resolution by giving at least 60 days written notice to the District and the other Paying Agents or Bond Registrars. Any Paying Agent or Bond Registrar may be removed at any time by an instrument filed with such Paying Agent or Bond Registrar and signed by an Authorized Officer of the District. Any successor Paying Agent or Bond Registrar shall be appointed by the District and shall be a bank or trust company organized under the laws of any state of the United States or a national banking association, having capital stock, surplus and undivided earnings aggregating at least $10,000,000, and 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.

Amendments and Supplemental Resolutions.

Any modification or amendment of the Resolution and of the rights and obligations of the District and of the Holders of the Bonds thereunder, in any particular, may be made by a Supplemental Resolution, with the written consent given as provided in the Resolution of [i] the Holders of at least a majority in principal amount of the Bonds Outstanding at the time such consent is given and [ii] if less than all of the Series of Bonds then Outstanding are affected by the modification or amendment, the Holders of at least a majority in principal amount of the Bonds of each Series so affected and Outstanding at the time such consent is given; provided that if such modification or amendment will, by its terms, not take effect so long as any Bonds of any specified like Series and maturity remain Outstanding, the consent of the Holders of such Bonds shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds under this Section. No such modification or amendment shall permit a change in the terms of redemption (including Sinking Fund Installments) or maturity of the principal of any Outstanding Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereof without the consent of the Holder of such Bond, or shall reduce the percentages or otherwise affect the classes of Bonds the consent of the Holders of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto. For the purpose of this caption, a Series shall be deemed to be affected by a modification or amendment of the Resolution if the same adversely affects or diminishes the rights of the Holders of Bonds of such Series. The District may in its sole discretion determine whether or not, in accordance with the foregoing powers of amendment, Bonds of any particular Series or maturity would be affected by any modification or amendment of the Resolution and any such determination shall be binding and conclusive on the District and all Holders of Bonds.

For any one or more of the following purposes and at any time or from time to time, a Supplemental Resolution of the District may be adopted, which, when adopted, shall be fully effective in accordance with its terms: [1] to close the Resolution against, or provide limitations and restrictions in addition to the limitations and restrictions contained in the Resolution on, the authentication and delivery of Bonds or the issuance of other evidences of indebtedness; or [2] to add to the covenants and agreements of the District in the Resolution, other covenants and agreements to be observed by the District which are not contrary to or inconsistent with the resolutions as theretofore in effect; or [3] to add to the limitations and restrictions in the Resolution, other limitations and restrictions to be observed by the District which are not contrary to or inconsistent with the Resolution as theretofore in effect; or [4] to authorize Bonds of a Series; or [5] to authorize one or more series of Subordinated Debt; or [6] to authorize, in compliance with all applicable law, Bonds of each Series to be issued in the form of coupon Bonds; or [7] to authorize, in compliance with all applicable law, Bonds of each Series to be issued in the form of Bonds issued and held in book-entry form on the books of the District or any Fiduciary appointed for that purpose by the District; or [8] notwithstanding any other provisions of the Resolution, to authorize Bonds of a Series having terms and provisions different than the terms and provisions theretofore provided in the Resolution; or [9] to confirm, as further assurance, any pledge or assignment under, and the subjection to any security interest, pledge or assignment created or to be created by, the Resolution of the Pledged Property and Credit Facilities or other agreements; or [10] to comply with the provisions of any federal or state securities law, including, without limitation, the Trust Indenture Act of 1939, as amended or comply with Section 103 of the Internal Revenue Code of 1986 or 1954, as applicable, as amended, or successor provisions; or [11] to modify any of the provisions of the Resolution in any other respect whatever, provided that [i] such modification shall be, and be expressed to be, effective only after all Bonds of each Series Outstanding at the date of the adoption of such Supplemental Resolution shall cease to be Outstanding and [ii] such Supplemental Resolution shall be specifically referred to in the text of all Bonds of any Series authenticated and delivered after the date of the adoption of such Supplemental Resolution and of Bonds issued in exchange therefore or in place thereof; or [12] to cure any ambiguity, defect or inconsistency provided that there is no material adverse impact on Bondholders.

Consent of the Insurer When Consent of Bondholder Required; Notice.

The Insurer, and not the registered Holders thereof, shall be deemed to be the Holder of Bonds of any Series as to which it is the Insurer at all times for the purpose of giving any approval or consent to the execution and delivery of any Supplemental Resolution or any amendment, change or modification of the Resolution which, as specified in the Resolution, requires the written approval or consent of the Holders of at least a majority in aggregate principal amount of Bonds of such Series at the time Outstanding. In such cases where the consent of the Insurer shall be necessary pursuant to the Resolution for the execution of a particular amendment, the District shall be required to send a copy of such amendment to S&P's. In addition, in such cases where the consent of the Insurer shall not be necessary pursuant to the Resolution for the execution of a particular amendment, the District shall provide the Insurer with written notice of such amendment prior to or within a reasonable time after the execution thereof.

Defeasance.

If the District shall pay or cause to be paid, or there shall otherwise be paid, to the Holders of all Bonds the principal or Redemption Price, if applicable, and interest due or to become due thereon, at the times and in the manner stipulated in the Bonds and in the Resolution, then the pledge of the Pledged Property and all covenants, agreements and other obligations of the District to the Bondholders, shall thereupon cease, terminate and become void and be discharged and satisfied.

Bonds or interest installments, or portions thereof, for the payment or redemption of which monies shall have been set aside and shall be held in trust by the Paying Agents (through deposit by the District of funds for such payment or redemption or otherwise) at the maturity or redemption date thereof shall be deemed to have been paid within the meaning and with the effect expressed in the Resolution. Subject to the provisions of the Resolution, any Outstanding Bonds shall prior to the maturity or redemption date thereof be deemed to have been paid within the meaning and with the effect expressed in the Resolution if the following conditions are met: (a) if any of such Bonds are to be redeemed on any date prior to their maturity, the District shall have instructed the Bond Registrar to mail as provided in the Resolution notice of redemption of such Bonds (other than Bonds which have been purchased or otherwise acquired by the District and delivered to the Bond Registrar as hereinafter provided prior to the mailing of notice of redemption), (b) there shall have been deposited with an escrow agent either cash (including amounts, if any, withdrawn and deposited pursuant to the Resolution as described herein under the captions "Bond Fund - Debt Service Account" and "Bond Fund - Reserve Account") in an amount which shall be sufficient, or Defeasance Obligations (including any Defeasance Obligations issued or held in book-entry form on the books of the Department of the Treasury of the United States) the principal of and the interest on which when due will provide cash which, together with any other cash on deposit with the escrow agent, shall be sufficient, to pay when due the principal or Redemption Price, if applicable, and interest due and to become due on the Bonds on or prior to the redemption date or maturity date thereof; as the case may be and (c) if the Bonds are not by their terms subject to redemption within the next succeeding 60 days, the District shall have instructed the Bond Registrar to mail a notice to the Holders of such Bonds to be paid or redeemed, that the deposit required by (b) above has been made and that the Bonds are deemed to have been paid in accordance with this Section and stating the maturity or redemption date upon which monies are expected to be available for the payment.

Such escrow agent shall, as and to the extent necessary, apply amounts held by it pursuant to this Section to the retirement of Bonds in amounts equal to the unsatisfied balances (determined as provided in the Resolution as described herein under the caption "Bond Fund - Debt Service Account") of any Sinking Fund Installments with respect to such Bonds, all in the manner provided in the Resolution. The escrow agent shall, if so directed by the District prior to the maturity or redemption date, as applicable, of

Bonds deemed to have been paid in accordance with the provisions of the Resolution described under this caption, apply cash, redeem or sell Defeasance Obligations so deposited with such escrow agent and apply the proceeds thereof, together with any cash on deposit with the escrow agent, to the purchase of such Bonds (and the Bond Registrar shall immediately thereafter cancel all such Bonds so purchased and delivered to it); provided, however, that the cash and Defeasance Obligations remaining on deposit with such escrow agent after the purchase and cancellation shall be sufficient to pay when due the principal or Redemption Price, as applicable, and interest due or to become due on all remaining Bonds in respect of which such cash and Defeasance Obligations are being held by such escrow agent on or prior to the redemption date or maturity date thereof, as the case may be. Except as otherwise provided in the Resolution, neither Defeasance Obligations nor cash deposited with such escrow agent pursuant to the Resolution nor principal or interest payments on any such Defeasance Obligations shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment of the principal or Redemption Price, as applicable, and interest on the Bonds with respect to which such cash and Defeasance Obligations have been deposited. Any excess cash received from such principal or interest payments on such Defeasance Obligations shall be paid over to the District as received by such escrow agent, free and clear of any trust, lien or pledge.

Notwithstanding any of the provisions of the Resolution regarding Defeasance, no forward supply contract shall constitute a "Defeasance Obligation" or otherwise be used to refund all or any portion of Bonds which are insured as to the payment of principal and interest by an Insurer, without first obtaining the prior written consent of such Insurer.

SUMMARY OF PROVISIONS OF THE NOTE RESOLUTION

The following is a brief summary of certain provisions of the District's Subordinated Debt Resolution adopted by the District on April 26, 2010 (the "Resolution" or the "Subordinated Debt Resolution") and used in this Official Statement. The summary does not purport to be comprehensive or definitive. All references herein to the Resolution are qualified in their entirety by reference to such Resolution, a copy of which is available for review prior to the issuance and delivery of the Series 2015 Notes, at the office of the District and thereafter at the office of the Paying Agent. All references to the Series 2015 Notes are qualified in their entirety by reference to the definitive form thereof and the information with respect thereto included in the Resolution.

GENERAL COVENANTS OF THE DISTRICT.

Payment of Notes.

The District shall promptly pay when due the principal or purchase price of (whether at maturity, upon acceleration, call for redemption or purchase or otherwise) and premium, if any, and interest on each series of Notes at the places, on the dates and in the manner provided the Resolution and in such Notes according to the true intent and meaning thereof; provided, however, that such obligations are not general obligations of the District but are limited obligations payable solely from the revenues and receipts described in the Granting Clauses to the Resolution and the other Pledged Property, all of which are specifically pledged to such purposes in the manner and to the extent provided the Resolution. The Notes and interest thereon shall not be deemed to constitute a debt or a pledge of the faith and credit of the State or any political subdivision thereof, including the District. Neither the State nor any political subdivision thereof, including the District shall be obligated to pay the principal of or interest on the Notes or other costs incident thereto except from the revenues and receipts pledged therefor, and neither the faith and credit nor the taxing power of the State or any political subdivision thereof, including the District is pledged to the payment of the principal of or interest on the Notes or other costs incident thereto.

Covenants and Representations of District.

The District shall observe and perform all covenants, conditions and agreements on its part contained in the Resolution, in every Note executed, authenticated and delivered hereunder and in all of its proceedings pertaining thereto. The District represents (a) that it is duly authorized under the Constitution and laws of the State, including particularly and without limitation the Act, to issue the Notes and to execute the Resolution; to execute the Note Purchase Agreement; and to pledge the revenues, receipts and funds in the manner and to the extent set forth in the Resolution; (b) that all action on its part for the issuance of the Notes and the execution and delivery of the Resolution has been duly and effectively taken; and (c) that the Notes in the hands of the Holders thereof are and will be valid and enforceable obligations of the District according to the terms thereof except as limited by bankruptcy laws and usual equity principles.

Further Assurances.

The District shall do, execute, acknowledge and deliver, or cause to be done, executed, acknowledged and delivered, such supplemental resolutions and such further acts, instruments and transfers as the Paying Agent may reasonably require for the better assuring, transferring, conveying, pledging and assigning to the Paying Agent of all the rights assigned by the Resolution and the revenues and receipts pledged to the payment of the principal of, premium, if any, and interest on the Notes. The District shall cooperate with the Paying Agent and the Noteholders in protecting the rights and security of the Noteholders.

Inspection of Books and Project.

All books and documents in the District's possession relating to each Project and the revenues derived therefrom shall at all times be open to inspection by such agents as the Paying Agent or the Holders of 25% in aggregate principal amount of Notes then Outstanding may from time to time designate.

Priority of Notes.

The District warrants and covenants that the lien created under the Resolution with respect to any series of Notes shall be superior in priority to all revenue debt of the District, except for the Senior Debt.

Prohibited Activities.

The District shall not knowingly engage in any activities or take any action that might result in (a) the income of the District derived from each Project becoming taxable to it, (b) any Note becoming an "arbitrage bond" within the meaning of Section 148 of the Code and the regulations and rulings thereunder, or (c) any interest on the Notes otherwise becoming includable in the gross income of the recipients thereof under the federal income tax laws or becoming taxable under the laws of the State.

Anticipation of Issuance of Bonds.

The District covenants that each series of Notes issued under the Resolution is issued in anticipation of the issuance by the District, prior to the maturity of such Notes whether by acceleration, redemption, or otherwise, of Additional Bonds (within the meaning of the Bond Resolution) on a parity with the Senior Debt under the Bond Resolution and pursuant to the Act. The District further covenants to, in a timely fashion, do any and all things necessary for the issuance of such Additional Bonds on a parity with the Senior Debt, to the extent necessary to pay such Notes and to the extent permitted by law. To the extent that any Notes of a particular series issued hereunder are not paid from the Revenues of the

District as described in the Resolution, including the proceeds of the Project for which such Notes were issued, such Notes shall be paid from the proceeds of such Senior Debt.

Tax Covenants.

The District covenants that within the meaning of Section 141 of the Code, [i] less than 10% of the proceeds of the Notes of any series, if any, will be applied for any private business use, and the payment of principal of or interest on less than 10% of the amount of the Notes of any series, if any, will be secured directly or indirectly by any interest in property used for a private business use, or payments in respect of such property, or will be derived from payments in respect of such property; [ii] at least 90% of the proceeds of the Notes of any series will be applied for a governmental use of the District; [iii] any private business use of the Project will be related to such governmental use of the District and will not be unrelated or disproportionate; and [iv] none of the proceeds of the Notes of any series will be used, directly or indirectly, to make or finance loans to private Persons; and the District covenants further that the Notes of any series will not be federally guaranteed within the meaning of Section 149(b) of the Code.

APPLICATION OF FUNDS.

"***Trust Moneys" Defined***.

All moneys received by the Paying Agent to be held and applied under the Resolution, or required to be paid to the Paying Agent and whose disposition is not elsewhere in the Resolution otherwise specifically provided for, including but not limited to the investment income of all Trust Funds held by the Paying Agent under the Resolution (all such moneys pending the expenditure thereof, including but not limited to the proceeds of Notes deposited in the Subordinated Debt Subaccounts of the Construction and Acquisition Fund and investment income thereon pending the expenditures thereof, and all proceeds of any such moneys pending the expenditure of such proceeds, being defined as the "Trust Moneys") shall be held by the Paying Agent as a part of the Pledged Property, and, upon the exercise by the Paying Agent of any remedy specified in the Resolution, such Trust Moneys shall be applied in accordance with the Resolution, except to the extent that the Paying Agent is holding in trust moneys and/or Government Obligations for the payment of any specified Notes which are no longer deemed to be Outstanding under the provisions of the Resolution, which moneys and/or Government Obligations shall be applied only as provided in said Article. Prior to the exercise of any such remedy, all or any part of the Trust Moneys shall be held, invested, withdrawn, paid or applied by the Paying Agent, from time to time.

NOTE ACCOUNT.

(a) A special trust fund is established under the Resolution with the Paying Agent and designated as the "Note Account." The Note Account constitutes a part of the Senior Subordinated Debt Fund of the District pursuant to the Bond Resolution, but is maintained as a separate special trust fund. Established within the Note Account is a General Subaccount.

There shall be credited to the General Subaccount in the Note Account, as and when received,

(i) each payment received by the Paying Agent under and pursuant to any of the provisions of the Resolution which is required, or which is accompanied by directions that such payment is, to be credited to the Note Account; and

(ii) all income derived from the investment of amounts described in clause (i) as realized.

(b) The Paying Agent shall disburse, from time to time, sufficient moneys from the Note Account as specified below to pay the principal of, premium if any, and the interest on, the Notes as the same become due and payable.

(c) Funds for the payment of the principal of, premium, if any, and interest on the Notes shall be derived from the following sources:

(1) Funds for the payment of the principal of and premium, if any, on the Notes, at Maturity, shall be disbursed by the Paying Agent from the Note Account in the order of priority indicated below:

(i) Eligible Moneys in the General Subaccount in the Note Account; and

(ii) all other amounts in the General Subaccount in the Note Account which were received by the Paying Agent under and pursuant to the Resolution from the District or from any other Person or Fund, and amounts derived from the investment of such amounts.

(2) Funds for the payment of interest on the Notes shall be derived from the following sources in the order of priority indicated below and in each case applied to interest on Notes:

(i) Eligible Moneys in the General Subaccount in the Note Account; and

(ii) all other amounts in the General Subaccount in the Note Account which were received by the Paying Agent under and pursuant to the Resolution from the District or from any other Person or Fund, and amounts derived from the investment of such amounts.

(d) Upon the occurrence of an Event of Default described in clauses (d) of Section 8.1, the Paying Agent shall pay, to the extent moneys are available, to the Noteholders, in accordance with the provisions of Section 2.2 of the Resolution, in payment of the principal of and interest on the Notes, an amount equal to the principal of and interest on the Notes due upon the date of acceleration of the Notes as provided in Section 8.2 of the Resolution and to the extent of such payment, the obligations of the District under the Resolution and the Notes shall be deemed to have been satisfied.

(e) If any Note shall not be presented for payment at Maturity, provided moneys sufficient to pay such Note shall have been made available to the Paying Agent and are held in the Note Account for the benefit of the Holder thereof, all liability of the District to the Holder thereof for the payment of such Note shall forthwith cease, determine and be completely discharged, and thereupon it shall be the duty of the Paying Agent to hold such moneys in the Note Account, without liability to the Holder for interest thereon, for the benefit of the Holder of such Note, who shall thereafter be restricted exclusively to such moneys for any claim of whatever nature on the part of such Holder hereunder or on, or with respect to, such Note.

(f) All moneys paid over to the Paying Agent for the account of the Note Account shall be held in trust by the Paying Agent for the benefit of the Holders of the Notes as each is entitled to be paid therefrom.

(g) Any moneys remaining in the Note Account after any Interest Payment Date and after Payment of the Notes, and payment of the fees, charges and expenses of the Paying Agent which have accrued and which will accrue and all other items required to be paid hereunder, shall be paid to the District.

Payment Into Construction and Acquisition Fund; Use of Proceeds.

The proceeds of sale of each series of Notes shall be deposited in a separate subaccount in the Construction and Acquisition Fund (collectively, the "Subordinated Debt Subaccounts"), each of the Subordinated Debt Subaccounts to be designated in a manner which will distinguish it from all other subaccounts of the Construction and Acquisition Fund and to consist of Pledged Property on which the holders of such series of Notes shall have a first lien. The District shall use such proceeds of the Notes only to pay costs of a Project with respect to which at the time of use the District reasonably intends to issue Additional Bonds on a parity with the Prior Bonds to permanently finance the Project.

Trust Moneys; Reports.

All Trust Moneys shall be trust funds and shall not be subject to lien or attachment of any creditor of the District or the Paying Agent. Such Trust Moneys shall be held in trust and applied in accordance with the provisions of the Resolution. The Paying Agent shall furnish to the District on at least a semi-annual basis a statement of the moneys (including all investment activity) in each Trust Fund.

Arbitrage.

The District covenants and agrees that it will commit knowingly no act that would cause any Notes of any series to be "arbitrage bonds" within the meaning of Section 148(a) of the Code (including the applicable regulations thereunder). The Paying Agent covenants that it will comply with any instructions of the District regarding investment or other use of proceeds of the Notes so as to prevent the Notes from becoming "arbitrage bonds" but shall otherwise have no other liability or obligations with respect to preventing the Notes from becoming "arbitrage bonds." The Paying Agent shall file a copy of any applicable Opinion of Bond Counsel received by it with the District.

Rebate Requirements.

The District covenants and agrees to comply with any requirements to rebate moneys to the United States of America as may be required by law. Moneys in any rebate fund established for this purpose, including investment earnings thereon, if any, shall not be subject to the pledge of the Resolution and shall not constitute part of any of the Funds and Accounts held under the Resolution for the benefit and security of the Noteholders.

INVESTMENTS.

Investments.

Moneys held in any Accounts hereunder (other than Eligible Moneys) shall be invested and reinvested in Authorized Investments maturing or subject to redemption at the option of the Holder as needed as directed by the District in writing, or if orally, promptly confirmed in writing, or in such other manner as is acceptable to the Paying Agent. Eligible Moneys held in any Accounts hereunder shall be invested in Government Obligations maturing as needed as directed by the District in writing, or if orally, promptly confirmed in writing, or in such other manner as is acceptable to the Paying Agent. All such investments shall be held by or under the control of the Paying Agent except as may be otherwise permitted or authorized in the Resolution, and shall be deemed at all times a part of the fund or account in which the moneys so invested were originally held and the interest accruing thereon and any profit realized therefrom shall be credited to and held in such fund or account and any loss resulting therefrom shall be charged to such fund or account. The Paying Agent is directed to sell and convert to cash a sufficient amount of such investments in any fund whenever the cash held in such fund is insufficient for the purposes thereof Moneys held in the Subordinated Debt Subaccounts shall not be invested except as otherwise permitted in the Resolution or in the Bond Resolution for amounts on deposit in the Construction and Acquisition Fund.

Limitation of Liability.

(a) The Paying Agent shall not be responsible for any losses on investments or from the redemption, sale or maturity of any such investments made in accordance with the Resolution, and the District specifically holds the Paying Agent harmless and agrees to indemnify the Paying Agent for any claim resulting from any losses on investments made in accordance with the District's instructions.

(b) Notwithstanding any provision of the Resolution to the contrary, unless otherwise specifically agreed in a separate written agreement, the Paying Agent shall not be liable or responsible for any calculation or determination which may be required in connection with, or for the purpose of complying with, Section 148 of the Code, or any successor statute or any regulation, ruling or other judicial or administrative interpretation thereof, including, without limitation, the calculation of amounts required to be paid to the United States of America or the determination of the maximum amount which may be invested in nonpurpose obligations having a yield higher than the yield on the Notes, or the determination as to whether any investments are permissible under Section 148 of the Code, and the Paying Agent shall not be liable or responsible for monitoring the compliance by the District with any of the requirements of Section 148 of the Code or any judicial or administrative interpretation thereof; it being acknowledged and agreed that the sole obligation of the Paying Agent in this regard shall be to hold and invest monies received by it pursuant to the terms of the Resolution and in each case pursuant to the instructions of the District.

DISCHARGE OF LIEN.

Discharge of Lien and Security Interests.

If the District shall pay or cause to be paid in full the principal of and the interest on any series of Notes or if the District has deposited or caused to be deposited with the Paying Agent in trust cash and/or Government Obligations, which do not permit the redemption thereof at the option of the issuer thereof, the principal of, premium, if any, and interest on which when due (or upon the redemption thereof at the option of the Holder), will, without reinvestment, provide cash which, together with the cash, if any, deposited with the Paying Agent at the same time, shall be sufficient to pay and discharge the entire indebtedness on such series of Notes as the same become due not theretofore canceled by the Paying Agent or delivered to the Paying Agent for cancellation, for principal and interest (and premium, if any) which have become due and payable, or to the Maturity thereof or earlier Redemption Date and (a) has paid or made arrangements satisfactory with the Paying Agent to pay, all fees and expenses (including, without limitation, counsel's fees and expenses) of the Paying Agent respecting such series of Notes which have accrued or which the Paying Agent estimates will accrue prior to the final payment of such series of Notes in full, (b) has furnished to the Paying Agent an Opinion of Bond Counsel to the effect that the deposit of such cash and Government Obligations is in compliance with the provisions of the Resolution, will not adversely affect the exclusion of interest on such Notes from gross income for purposes of Federal income taxation and that payments to the owners of such Notes will not constitute a voidable transfer or preference under and pursuant to the Federal Bankruptcy Code as then in effect in the event of a bankruptcy proceeding thereunder by or against the District, and (c) has made arrangements satisfactory to the Paying Agent for the giving of notice of redemption, if any, then the lien of the

Resolution, these presents and the security interests in the Resolution with respect to such series of Notes shall cease, determine and be void. Upon the discharge of the lien of the Resolution with respect to the applicable series of Notes, these presents and the security interests therein ceasing, determining and being void as provided in the preceding sentence, the Paying Agent shall, upon receipt of evidence satisfactory to it that all conditions precedent to the satisfaction and discharge of the Resolution with respect to such Notes have been complied with, cancel and discharge the Resolution with respect to such Notes and the security interests therein, execute and deliver to the District such instruments in writing as shall be required to cancel and discharge the Resolution with respect to such Notes and the security interests therein and apply any moneys and investments held in the Note Account with respect to such Notes in accordance with Sections 5.2, provided that all moneys then held in the Note Account for the purpose of paying such Notes of the applicable series which have not yet been presented for payment shall be held thereafter in trust solely for the Holders of such Notes pending the payment thereof to such Holders. If such Notes will not be redeemed in whole within 60 days of such discharge, the Paying Agent shall promptly give notice of such discharge, to all Noteholders of such Notes in the manner described in Section 3.6(a) for the giving of notices of redemption. If the lien and security interests of the Resolution with respect to all series of Notes are discharged, the Resolution, at the request of the District, shall be discharged and canceled.

Discharge of the Resolution.

Notwithstanding the fact that the lien of the Resolution upon the Pledged Property may have been discharged and canceled with respect to a series of Notes, the Resolution and the rights granted and duties imposed by the Resolution, to the extent not inconsistent with the fact that the lien upon the Pledged Property may have been discharged and canceled with respect to one or more series of Notes, shall nevertheless continue and subsist until the principal of, premium, if any, and the interest on, all of the Notes shall have actually been paid in full, all amounts owed by the District to the Paying Agent shall have been paid in full, and the Paying Agent shall have applied amounts in the Note Account and all funds theretofore held by the Paying Agent for payment of any Notes not theretofore presented for payment or purchase, as the case may be, which funds shall be held in trust solely for the Holders of such Notes pending their application in accordance herewith, until such funds have been applied in accordance herewith.

DEFAULT PROVISIONS AND REMEDIES.

Events of Default.

Each of the following events is defined as and declared to be and to constitute an "Event of Default" hereunder with respect to the Notes of a particular series:

(a) default in the due and punctual payment of any interest on any Note when the same shall become due and payable; or

(b) default in the due and punctual payment of the principal of or premium on any Note at its maturity or upon mandatory redemption; or

(c) the declaration of an Event of Default hereunder with regard to the Notes of any series; or

(d) the failure of the District to observe and perform any of the covenants, conditions, agreements, or provisions contained in the Resolution, or in the Notes, on the part of the District to be observed or performed and the continuation thereof for thirty days after written notice, specifying such default and requiring the same to be remedied, is given to the District by the Paying Agent.

Acceleration.

Upon the occurrence of any Event of Default described in subsection (a), (b) or (c) of Section 8.1 of the Resolution, the Paying Agent may or the Holders of more than fifty percent (50%) in aggregate principal amount of the Outstanding Notes of the particular series shall, and, upon the occurrence and continuance of an Event of Default described in subsection (d) of Section 8.1 of the Resolution, the Paying Agent shall by notice in writing delivered to the District declare the principal of all the Notes immediately due and payable as of the fifth Business Day following such date, whereupon the same shall become immediately due and payable. Upon any such acceleration, the Notes and the interest thereon shall forthwith be paid in accordance with the Resolution. Upon any declaration of acceleration hereunder, the Paying Agent shall immediately declare the payments required to be made by the District hereunder to be immediately due and payable.

Other Remedies.

Upon the occurrence of an Event of Default, the Paying Agent shall have the power to proceed with any right or remedy available at law or in equity or by statute, as it may deem best, including any suit, action or special proceeding in equity or at law for the collection of amounts due and to become due hereunder and under the Notes or the performance of any covenant or agreement contained in the Resolution or for the enforcement of any proper legal or equitable remedy as the Paying Agent shall deem most effectual to protect the rights aforesaid, insofar as such may be authorized by law.

No delay or omission to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or shall be construed to be a waiver of any such Event of Default or acquiescence therein; and every such right and remedy may be exercised from time to time and as often as may be deemed expedient.

No waiver of any Event of Default hereunder, whether by the Paying Agent or by the Noteholders, shall extend to or affect any subsequent or other Event of Default, or impair any rights or remedies consequent thereon.

Rights of Noteholders.

Upon the occurrence of an Event of Default and if requested so to do by the Holders of more than fifty percent (50%) in aggregate principal amount of the Notes then Outstanding and if indemnified, the Paying Agent shall be obligated to exercise such one or more of the rights and remedies conferred by the Resolution as the Paying Agent, being advised by Counsel, shall deem most expedient in the interests of the Noteholders.

Right of Noteholders to Direct Proceedings.

Except in the case of an Event of Default under Section 8.1(d) of the Resolution, the Holders of more than fifty percent (50%) in aggregate principal amount of the Notes then Outstanding shall have the right, at any time, by an instrument or instruments in writing executed and delivered to the Paying Agent, to direct (as between such Noteholders and the Paying Agent) the time, method and place of conducting all proceedings otherwise permitted to be taken in connection with the enforcement of the terms and conditions of the Resolution, or for the appointment of a receiver or any other proceedings, provided the Paying Agent is indemnified

Application of Moneys.

All moneys received by the Paying Agent pursuant to any right given or remedy or action taken under the provisions of the Resolution shall, after payment of all fees and expenses of the Paying Agent, including, without limitation, the costs and expenses of the proceedings resulting in the collection of such other moneys and of the related expenses, liabilities and advances incurred or made by the Paying Agent, be deposited in the General Subaccount in the Note Account. All such other moneys shall be applied by the Paying Agent as follows:

(a) Unless the principal of all the Notes shall have become 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 Outstanding Notes (other than District Notes), 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 of such installment ratably, according to the amounts due on such installment, to the Persons entitled thereto, without any discrimination or privilege;

Second. to the payment to the Persons entitled thereto of the unpaid principal of any of the Outstanding Notes which shall have become due (other than District Notes), in the order of their due dates, with interest on such Notes at the rate last borne by the Notes from the respective dates upon which they became due and, if the amount available shall not be sufficient to pay in full the principal which became due on such Notes on any particular date, together with such interest, then to the payment thereof ratably, according to the amount of principal due on such date, to the Persons entitled thereto, without any discrimination or privilege;

Third. to the payment of the principal of and interest on the District Notes in the same order of priority as specified in the first and second clauses.

(b) If the principal of all the Notes shall have become due or shall have been declared due and payable, all such moneys shall be applied FIRST, to the payment of the principal and the interest then due and unpaid on the Outstanding Notes (other than District Notes), 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 such Note over any other such Note, ratably, according to the amounts due respectively for principal and interest, to the persons entitled thereto without any discrimination or privilege, and SECOND to the payment of the principal of and interest on the District Notes in the same manner as specified in this first clause.

(c) If the principal of all such Notes shall have been declared due and payable, and if such declaration shall thereafter have been rescinded and annulled under the provisions of the Resolution, in the event that the principal of all the Notes shall later become due or be declared due and payable.

Such moneys shall be applied at such times, and from time to time, as the Paying Agent 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 Paying Agent shall apply such funds, it shall fix the date (which shall be an Interest Payment Date unless it shall deem another date more suitable or unless the principal of all of the Notes has been declared immediately due and payable, in which case application shall be made immediately) upon which such application is to be made and upon such date interest on the amount of principal to be paid on such dates shall cease to accrue provided that such amount of principal is in fact paid on such date. The Paying Agent shall give such notice to the Holders of the Notes as it may deem appropriate of the deposit with it of any such moneys and of the fixing of any such date, and shall not be required to make payment from such moneys to the Holder of any Notes until such Note shall be presented to the Paying Agent.

Whenever all Notes and the interest thereon have been paid in full and all expenses and charges of the Paying Agent have been paid, any balance remaining in the Note Account shall be disposed of in the manner provided in the Resolution.

Rights and Remedies Vested in Paying Agent.

All rights of action and remedies (including the right to file proofs of claim) hereunder or under any of the Notes may be enforced by the Paying Agent without the possession of any of the Notes or the production thereof in any trial or other proceedings relating thereto and any such suit or proceeding instituted by the Paying Agent shall be brought in its name as Paying Agent without the necessity of joining as plaintiffs or defendants any Holders of the Notes, and any recovery of judgment shall be for the equal benefit of the Holders of the Notes.

Rights and Remedies of Noteholders.

No Holder of any Note shall have any right to institute any suit, action or proceeding in equity or at law for the enforcement of the Resolution, for the execution of any trust or for the appointment of a receiver or to enforce any other right or remedy under the Resolution unless (a) a Default has occurred of which the Paying Agent has been notified as provided in subsection (e) of Section 9.1 of the Resolution, or of which by said subsection it is deemed to have notice, (b) such Default shall have become an Event of Default and the Holders of more than fifty percent (50%) in aggregate principal amount of Notes then Outstanding shall have made written request to the Paying Agent and shall have offered reasonable opportunity to the Paying Agent either to proceed to exercise the powers in the Resolution before granted or to institute such action, suit or proceeding in its own name, and (c) such Noteholders have offered to the Paying Agent indemnity and the Paying Agent shall thereafter fail or refuse to exercise the powers in the Resolution before granted, or to institute such action, suit or proceeding in its own name. Such notification, request and offer of indemnity are at the option of the Paying Agent to be conditions precedent to the execution of the powers and trusts, and to any action or cause of action for the enforcement of the Resolution, or for the appointment of a receiver or for any other right or remedy under the Resolution; it being understood and intended that no one or more Holders of the Notes shall have any right in any manner whatsoever to affect, disturb or prejudice the lien of the Resolution by its, his or their action or to enforce any right or remedy, and that all proceedings at law or in equity shall be instituted, had and maintained in the manner provided in the Resolution and for the benefit, first, of the Holders of all Notes other than District Notes and, second, of the Holders of District Notes. Nothing in the Resolution shall, however, affect or impair the right of any Noteholder to enforce the payment of the principal and redemption or purchase price of, and interest on, any Note at and after the date such payment is due, or the obligation of the District or the Paying Agent to pay the principal and redemption or purchase price of, and interest on, each of the Notes to the respective Holders thereof at the time, place, from the source and in the manner expressed in the Notes.

Termination of Proceedings.

If the Paying Agent shall have proceeded to enforce any right or remedy hereunder by any action at law or in equity, by the appointment of a receiver or otherwise, and such proceedings shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Paying Agent, then and in every such case the District, the Paying Agent and the Noteholders shall be restored to their former positions and rights hereunder, respectively, with respect to the Pledged Property, and all rights, remedies and powers of the Paying Agent and the Noteholders, respectively, shall continue as if no such proceedings had been taken.

Waivers of Events of Default.

(a) The Paying Agent shall waive any Event of Default hereunder and its consequences upon the written request of the Holders of more than fifty percent (50%) in aggregate principal amount of all Notes then Outstanding, provided, however, that except as permitted in subsection (b) below (relating to the rescission and annulment of declarations of acceleration of the Notes), there shall not be waived:

(1) any Event of Default pertaining to the payment of the principal or redemption or purchase price of any Note at its Maturity or Redemption Date; or

(2) any Event of Default pertaining to the payment when due of the interest on any Note unless prior to such waiver, all arrears of interest and all principal or redemption or purchase price payments in respect of which such Event of Default shall have occurred, with interest thereon (to the extent permitted by law) for the period from the occurrence of such Event of Default until paid in full at a rate per annum equal to the interest rate payable on the Notes from time to time during such period in accordance with the terms of the Notes, and all expenses of the Paying Agent in connection with such Event of Default, shall have been paid or provided for, and in case of any such waiver, or in case any proceeding taken by the Paying Agent on account of any such Event of Default shall have been discontinued or abandoned or for any reason, or shall have been determined adversely to the Paying Agent, then and in every such case the District, the Paying Agent and the Noteholders shall be restored to their former positions and rights hereunder, respectively, but no such waiver shall extend to or affect any subsequent or other Event of Default, or impair any rights or remedies consequent thereon.

The Paying Agent shall not have any discretion to waive any Event of Default hereunder and its consequences except in the manner and subject to the terms expressed above or in subsection (b) below.

(b) If a declaration of acceleration is made then and in every such case, the Paying Agent shall upon the written request of the Holders of more than fifty percent (50%) in principal amount of such Notes then Outstanding rescind and annul such declaration, and the consequences thereof, provided that at the time such declaration is rescinded and annulled:

(1) no judgment or decree has been entered for the payment of any moneys due pursuant to the Notes;

(2) all arrears of interest on all of the Notes and all other sums payable under the Notes (except as to principal of, and interest on, the Notes which have become due and payable by reason of such declaration) shall have been duly paid; and

(3) each and every Event of Default hereunder shall have been waived pursuant to the preceding paragraph or otherwise made good or cured;

and, provided further, that no such rescission and annulment shall extend to or affect any subsequent or other Event of Default or impair any rights or remedies consequent thereon. The Paying Agent shall not have any discretion to rescind and annul any declaration of acceleration and its consequences except in the manner and subject to the terms expressed in the Resolution.

SUPPLEMENTAL RESOLUTIONS.

Supplemental Resolutions Not Requiring Consent of Noteholders.

The District may adopt, effective upon filing of a copy thereof certified by the District with the Paying Agent and without the consent of, or notice to, any of the Noteholders, one or more supplemental resolutions for any one or more of the following purposes, provided that in the opinion of the District the change effected thereby is not to the prejudice of the interests of the Paying Agent or the Noteholders:

(a) to cure any ambiguity or formal defect or omission in the Resolution or between the terms and provisions of any other instrument or document executed in connection herewith or with the issuance of the Notes;

(b) to grant to or confer upon the Noteholders, the Paying Agent or for the benefit of the Noteholders or the Paying Agent any additional rights, remedies, powers or authorities that may lawfully be granted to or conferred upon the Noteholders or the Paying Agent;

(c) to subject to the lien and pledge of the Resolution, additional payments, revenues, properties or collateral including a lien, mortgage or security interest in a Project;

(d) to modify, amend or supplement the Resolution or any supplemental resolution in such manner as to permit the qualification under the Trust Indenture Act of 1939, as amended, or any similar Federal statute hereafter in effect or to permit the qualification of the Notes for sale under the securities laws of any of the states of the United States of America or the Securities Act of 1933, and, if it so determines, to add to any supplemental resolution such other terms, conditions and provisions as may be permitted by the Trust Indenture Act of 1939, as amended, or similar Federal statute;

(e) to evidence the appointment of a Co-Paying Agent or the succession of a new Paying Agent;

(f) to effect any other supplement to the Resolution which, in the judgment of the District, will not adversely affect the interests of the Noteholders; or

(g) to modify or supplement the Resolution in such manner as may be necessary, in the Opinion of Bond Counsel, to comply fully with all applicable rules, rulings, policies, procedures, regulations or other official statements promulgated or proposed by the Department of the Treasury or the Internal Revenue Service.

SUPPLEMENTAL RESOLUTIONS REQUIRING CONSENT OF NOTEHOLDERS.

(a) Exclusive of supplemental resolutions, and not otherwise, the Holders of not less than two-thirds (2/3) in aggregate principal amount of the Notes Outstanding shall have the right, from time to time, to consent to and approve the adoption by the District of such other supplemental resolution or resolutions as shall be deemed necessary and desirable by the District for the purpose of modifying, altering, amending, adding to or rescinding, in any particular, any of the terms or provisions contained in the Resolution or in any supplemental resolution; provided, however, that nothing in this Section contained shall permit, or be construed as permitting, (1) an extension of the maturity date on which the principal of or the interest on any Note is, or is to become, due and payable, (2) a reduction in the principal amount of any Note, premium, if any, or interest rate on any of the Notes, (3) the creation of a lien ranking prior to or on a parity with the lien of the Resolution on the property conveyed pursuant to the Resolution or the deprivation of such lien, (4) a privilege or priority of any Note or Notes over any other Note or Notes, (5) the elimination of any mandatory redemption or mandatory purchase of Notes, extension of the due date for the purchase of Notes or call for mandatory redemption or the reduction of the purchase price or Redemption Price for the Notes or (6) a reduction in the aggregate principal amount of the Notes required for consent to such supplemental resolution without the consent of all Noteholders.

(b) If the District shall notify in writing the Paying Agent of the desire of the District to adopt any such supplemental resolution for any of the purposes of this Section, the Paying Agent shall, upon being satisfactorily indemnified with respect to expenses, cause written notice of the proposed adoption of such supplemental resolution together with a copy of such proposed supplemental resolution to be given by first class mail, postage prepaid, to the Holders of the Notes at their addresses shown on the Paying Agent's books of registration. If, within 60 days following the mailing of such notice or such longer period as shall be prescribed by the District and specified in such notice, the Holders of not less than two-thirds (2/3) in aggregate principal amount of the Notes Outstanding shall have consented to and approved the adoption of such supplemental resolution as provided in the Resolution, no Holder of any Note shall have any right to object to any of the terms and provisions contained therein, or the operation thereof, or in any manner to question the propriety of the adoption thereof, or to enjoin or restrain the District from adopting the same or the District or the Paying Agent from taking any action pursuant to the provisions thereof. Upon the adoption of any such supplemental resolution as in this section permitted and provided, and effective upon filing of a copy thereof certified by the District with the Paying Agent, and subject to Section 10.4 of the Resolution, the Resolution shall be modified and amended in accordance therewith.

(c) The Resolution may not be amended, changed or modified except by the execution and delivery of a supplemental resolution entered into in accordance with the provisions of Article X of the Resolution.

APPENDIX B

AUDITED FINANCIAL STATEMENTS FOR THE FISCAL YEAR ENDED JUNE 30, 2014

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT (MSD)

A COMPONENT UNIT OF THE LOUISVILLE/JEFFERSON
COUNTY METRO GOVERNMENT
LOUISVILLE, KENTUCKY

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FOR THE YEARS ENDED
JUNE 30, 2014 AND 2013

Prepared by the Division of Budget and Finance
Chad Collier, CFO, Secretary/Treasurer

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPREHENSIVE ANNUAL FINANCIAL REPORT
FOR THE FISCAL YEARS ENDED JUNE 30, 2014 AND 2013

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INTRODUCTORY SECTION

Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street
Louisville Kentucky 40203-1911
502-540-6000
www.msdlouky.org

Letter of Transmittal

October 27, 2014

Customers, Investors and MSD Board
Louisville and Jefferson County Metropolitan Sewer District

Ladies and Gentlemen:

The Comprehensive Annual Financial Report ("CAFR") of the Louisville and Jefferson County, Kentucky, Metropolitan Sewer District ("MSD") for the fiscal year ended June 30, 2014 ("2014") is submitted herewith. Responsibility for both the accuracy of the data, and the completeness and fairness of the presentation, including all disclosures, rests with MSD. To provide a reasonable basis for making these representations, the management of MSD has established a comprehensive internal control framework that is designed to both protect its assets from loss, theft, or misuse and to compile sufficient reliable information for the preparation of MSD's financial statements in conformity with Generally Accepted Accounting Principles ("GAAP"). Because the cost of internal controls should not outweigh their benefits, MSD's comprehensive framework of internal controls has been designed to provide reasonable rather than absolute assurance that the financial statements will be free from material misstatement. To the best of MSD's knowledge and belief, the accompanying data are accurate in all material respects and are reported in a manner designed to present fairly the financial position and results of operations of MSD. All disclosures necessary to enable the reader to understand MSD's financial activities have been included. We encourage readers to review the narrative introduction, overview, and analysis found in Management's Discussion and Analysis ("MD&A") along with the footnotes that accompany the financial statements.

Profile of MSD

MSD was created in 1946 as a public body corporate and subdivision of the Commonwealth of Kentucky ("the Commonwealth"). MSD has complete control, possession and supervision of the sewer and drainage systems within the majority of Louisville Metro, which now comprises all of Jefferson County, Kentucky. Chapter 76 of the Kentucky Revised Statutes authorizes MSD to construct additions, betterments, and extensions within its service area and to recover the cost of its services in accordance with rate schedules adopted by its Board.

MSD is considered a component unit of the Louisville-Jefferson County Metro government ("Louisville Metro government"). The Louisville Metro Mayor appoints, with the approval of the Louisville Metro Council, the members to MSD's governing Board. The Board, which has statutory authority to enter into contracts and agreements for the management, regulation and financing of MSD, manages its business and activities. The Board has full statutory responsibility for approving and revising MSD's budgets, for financing deficits and for disposition of surplus funds. MSD has no special financial relationship with the Louisville Metro government; however, effective July 1, 2006, MSD began providing free sewer and drainage services to the Metro government. The value of these services in 2014 was $6.3 million.

Letter of Transmittal

Economic Condition and Outlook

MSD's sanitary sewer and drainage service areas lie within Jefferson County, which, with a 2013 population of approximately 756,980, is Kentucky's largest and the center of the seven Kentucky and Indiana counties which comprise the Louisville metropolitan area ("Greater Louisville"). The employment count (not seasonally adjusted) for the Louisville Metropolitan Statistical Area ("Louisville MSA") increased in June 2014 to 607,080; an increase of 6,590 from the June 2013 level of 600,490. The June 2014 unemployment rate for the Louisville MSA was 6.8% compared to a rate in June 2013 of 8.4%, a national average rate of 6.3% and a state average rate of 7.4% for this same time period.

The Metro Mayor is Greg Fischer, who began his term as Mayor in January 2011. Mayor Fischer replaced former Mayor Jerry E. Abramson, who served as Mayor of the city of Louisville for 13 years, from January 1986 through 1998 and as Mayor of Louisville Metro from January 2003 through 2010.

According to Greater Louisville Inc., The Metro Chamber of Commerce, economic indicators show Louisville moving in a positive direction. Louisville's housing sector has been in various stages of recovery since 2011 with particularly rapid growth over the past year. In 2014, housing remains one of the stronger sectors in the Louisville economy. Also, industrial real estate is booming in the area. There is more than 3.8 million square feet of industrial space –a record amount- currently under construction in the MSA

Through November 2013, the Louisville area has more than regained the number of jobs lost during the recession. Manufacturing employment, representing about 12 percent of total nonfarm employment in Louisville, has been a particularly strong growth driver. Generally on trend with the U.S., Louisville's manufacturing employment began largely outpacing U.S. growth over the past year. In fact, manufacturing employment contributed one-third of the new jobs in Louisville over the 12 months. This strong growth from manufacturing employment and the consistency from Louisville's traditionally strong sectors such as health care and logistics have contributed to an overall positive current outlook for our economy. The Louisville MSA is expected to see above average job growth in 2014, positioning the Louisville MSA to add nearly 20,000 jobs in 2014. This job growth should also result in additional declines to the unemployment rate, reversing the small increases of 2013.

Louisville's economy has benefited in recent years from significant hires at the two Ford plants, GE Appliances, and UPS. In addition, the $2.6 billion Ohio River Bridges Project is expected to have a positive impact on construction employment and generate significant economic benefits over the next three-plus years. Another economic development effort is the Bluegrass Economic Advancement Movement, or BEAM. Louisville Mayor Greg Fischer and Lexington Mayor Jim Gray launched it with the goal of attracting more advanced manufacturing jobs to the 22-county region around and between Louisville and Lexington. In late November, Gray and Fischer unveiled a BEAM strategic plan around the ideas of embracing innovation, increasing Kentucky exports and improving education and workforce development.

During 2014, MSD continued to benefit from a diversified customer base. Fifty-two percent (52%) of its service charge revenue came from residential customers with the remaining forty-eight percent (48%) coming from commercial and industrial customers. During 2014, sewer accounts increased by 840, or 0.6%, to 240,174.

Letter of Transmittal

Major Initiatives:

Strategic Planning

MSD's last multiyear strategic plan was completed in the year 2000 and allowed MSD to focus its resources toward improving the environment, providing customer service and empowering employees, while also building and maintaining the existing wastewater, stormwater and flood protection infrastructure. Starting in 2003, MSD directed its attention to compliance with the Clean Water Act and began a series of communications with the U. S. Environmental Protection Agency towards signing the initial Consent Decree in 2005 and subsequent amendments in 2009 and 2013. The activities of the Amended Consent Decree have been MSD's major strategic focus during the past 5 years.

With almost half the Consent Decree completed, MSD was positioned to once again pursue a multiyear strategic business plan to accomplish a broader array of strategies including the continuation of the Amended Consent Decree. During the spring of 2013, MSD began working on a new strategic plan with employee groups across all divisions and members of the Board of Directors. The 2014-2018 Strategic Business Plan was approved for implementation by the Board on January 27, 2014. This plan provides MSD with a broader focus designed to move towards a new Vision Statement – ***Achieving Clean, Safe Waterways for a Healthy and Vibrant Community*** and incorporates MSD's three statutory business requirements into a new Mission Statement – ***Providing Exceptional Wastewater, Drainage and Flood Protection Services for Our Community.*** Included in the plan are eight strategies incorporating numerous initiatives and objectives that will drive MSD's activities over the next 5 years. The Board also requested semiannual updates on progress towards meeting these strategic objectives.

New Organization Structure

During February of 2014, the senior management team announced a new organizational structure aligned to meet both MSD's strategic objectives and operational requirements. The primary changes involve placing all engineering activities under the Chief Engineer and aligning the operating areas into Treatment, Collections and Drainage and Flood Protections Departments under the Chief of Operations. This new alignment will facilitate MSD's transition from 18 wastewater plants to 5 regional plants by 2016. It will also optimize operations, assure compliance with the Amended Consent Decree and allow for partnering opportunities with the Louisville Water Company on the Mayor's One Water initiative. The new management structure is shown on the organizational chart following this section, and a complete organizational chart can be found on MSD's web site.

Comprehensive 20-Year Facilities Plan

The intent of the Comprehensive 20-Year Facilities Plan is to identify and prioritize the future capital program and rate structure of MSD over the next 20-year period. A public outreach and external stakeholder involvement component is included to help shape the values-based risk management approach, gain insight on community needs, and provide information to customers on the relationship between the level of protection requested and the corresponding cost of service that is acceptable. The Plan will aid MSD in defining the extent of utility-wide infrastructure needs, the schedule for which they should be accomplished to achieve the desired level of protection, and the associated cost of service for short and long-term budgeting purposes. An engineering consulting firm has been hired to complete this plan over the next 18 months.

Factors Affecting Financial Condition

Investment Policy and Performance

In November 2012, MSD's Board approved a new Investment Policy to insure that all investment activity regarding all MSD's funds be in conformance with KRS 66.480. The primary objectives contained in MSD's Investment Policy, in priority order, are safety, liquidity and yield.

- Safety - safety of principal is the foremost objective of the investment program. Investments shall be undertaken in a manner that seeks to ensure the preservation of capital in the overall portfolio.

- Liquidity – the investment portfolio shall remain sufficiently liquid to meet all operating requirements that may be reasonably anticipated. The portfolio shall be structured so that securities mature concurrent with cash needs to meet anticipated demands (static liquidity) and, to meet unanticipated cash demands, the portfolio should consist largely of securities with active secondary markets (dynamic liquidity).

- Yield – the investment portfolio shall be designed with the objective of attaining a market rate of return throughout budgetary and economic cycles, taking into account the investment risk constraints of safety and liquidity needs. The core of investments are limited to relatively low risk securities in anticipation of earning a fair return relative to the risk being assumed with securities generally being held to maturity.

MSD's Investment Policy identifies the types of investments permitted as those defined by KRS 66.480. The investment portfolio will be managed in accordance with the parameters specified within the policy and monthly reports will be provided to the Board for their review to insure that appropriate measures have been implemented to minimize investment risks.

Cash temporarily idle during the year was invested in insured certificates of deposit, repurchase agreements, commercial paper and obligations of the U.S. Treasury. MSD's investment policy is to minimize credit and market risks, while maintaining a competitive yield on its portfolio. Accordingly, deposits either were insured by federal depository insurance or collateralized.

Gross investment income in 2014 was $20.2 million compared to gross earnings of $16.3 million in 2013.

Other Information

Independent Audit

MSD is required by law and its Revenue Bond Resolution to undergo an annual audit by independent certified public accountants. Crowe Horwath, LLP was selected by the MSD Board to conduct the 2014 audit. The goal of the independent audit was to provide reasonable assurance that the financial statements of MSD for the fiscal years ended June 30, 2014 and 2013 are free of material misstatement. The independent audit involved examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements; assessing the accounting principles used and significant estimates made by management; and evaluating the overall financial statement presentation.

The independent auditors concluded, based upon the audit, that there was a reasonable basis for rendering an unmodified opinion that MSD's financial statements for the fiscal years ended June 30, 2014 and 2013 are fairly presented in conformity with GAAP. The auditors' opinion and report on the basic financial statements is included in the Financial Section of this report.

Awards and Acknowledgements

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to MSD for its comprehensive annual financial report for the fiscal year ended June 30, 2013. This was the 24th consecutive year that MSD has achieved this prestigious award. In order to be awarded a Certificate of Achievement, MSD must publish an easily readable and efficiently organized CAFR. The report satisfied both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for one year only. MSD believes that its current CAFR continues to meet the Certificate of Achievement Program's requirements and will submit the current report to GFOA to determine its eligibility for another Certificate.

I wish to take this opportunity to thank the MSD Board and Executive Director Greg Heitzman, for their continued support and fiscally responsible management of MSD's financial resources.

Respectfully submitted,

Maria B. Mullaney

Controller

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

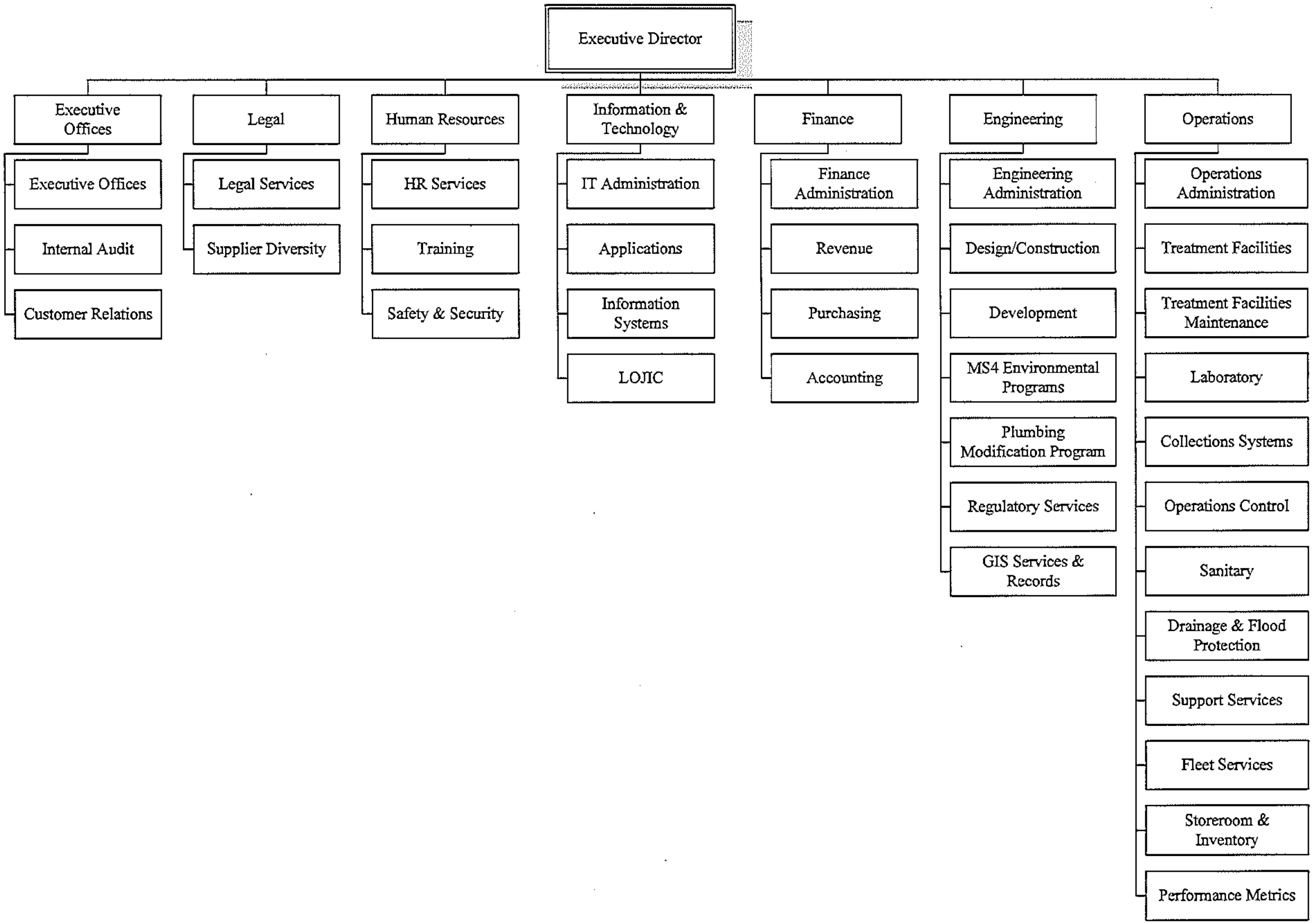
Louisville and Jefferson County
Metropolitan Sewer District
Kentucky

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2013

Executive Director/CEO

Louisville and Jefferson County
Metropolitan Sewer District
Organization Chart



List of Board Members and Principal Officers

MSD BOARD:

James Craig, Chairperson

Tom Austin, Vice Chairperson

Yvonne Wells-Hatfield

Daniel Arbough

John Phelps

Cyndi Caudill

Joyce Horton Mott

Lonnie Calvert

PRINCIPAL OFFICERS:

Greg Heitzman, Executive Director

Steve Emly, Chief Engineer

Chad Collier, Chief Financial Officer
Secretary/Treasurer

Paula Purifoy, General Counsel

W. Brian Bingham, Chief of Operations

Lynne Fleming, Human Resources Director

Tom Luckett, Information Technology Director

FINANCIAL MANAGERS:

Maria B. Mullaney, Controller

Rene' Thomas, Purchasing Manager

Sharon Dawson, Revenue Manager

Patrick Meador, Budget Administrator

FINANCIAL SECTION

Crowe Horwath.

Crowe Horwath LLP
Independent Member Crowe Horwath International

INDEPENDENT AUDITOR'S REPORT

Board of Directors
Louisville and Jefferson County Metropolitan Sewer District
Louisville, Kentucky

Report on the Financial Statements

We have audited the accompanying financial statements of the Louisville and Jefferson County Metropolitan Sewer District, a component unit of the Louisville-Jefferson County Metro Government, as of and for the years ended June 30, 2014 and 2013, and the related notes to the financial statements, which collectively comprise the Louisville and Jefferson County Metropolitan Sewer District'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.

Auditor's Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Louisville and Jefferson County Metropolitan Sewer District, as of June 30, 2014 and 2013, and the changes in financial position and its cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

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 11-17 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 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.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Louisville and Jefferson County Metropolitan Sewer District's basic financial statements. The introductory and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements. The introductory and statistical 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.

Report on Other Legal and Regulatory Requirements

In accordance with *Government Auditing Standards,* we have also issued our report dated October 27, 2014 on our consideration of Louisville and Jefferson County Metropolitan Sewer District'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 Louisville and Jefferson County Metropolitan Sewer District's internal control over financial reporting and compliance.

Crowe Horwath LLP

Crowe Horwath LLP

Louisville, Kentucky
October 27, 2014

MSD
Metropolitan Sewer District

Louisville and Jefferson County Metropolitan Sewer District
700 West Liberty Street
Louisville Kentucky 40203-1911
502-540-6000

Management's Discussion and Analysis

As management of the Louisville and Jefferson County Metropolitan Sewer District (MSD), we offer readers of MSD's financial statements this narrative overview and analysis of the financial activities for the fiscal years ended June 30, 2014 and 2013. We encourage readers to consider the information presented here in conjunction with additional information that we have furnished in our letter of transmittal, which can be found on pages 1-5 of this report.

FINANCIAL HIGHLIGHTS

- MSD's net position increased by $35.8 million (6.3%) as a result of this year's operations
- Operating revenues increased by $6.6 million (3.1%) to $217 million.
- Operating expenses excluding depreciation decreased by $1.6 million (2.2%)
- Non-operating revenues:
  - Investment income and sale of assets increased by $4.0 million (24.4%)
  - The fair value of swaps decreased 2014 revenue by $1.2 million, compared to an increase of $36.2 million in 2013
- Non-operating expenses:
  - Interest and capital related expenses and reimbursements decreased by $5.1 million (6.7%)

OVERVIEW OF THE FINANCIAL STATEMENTS

This annual report consists of three parts: Introductory Section, Financial Section, and Statistical Section. The Financial Section includes notes that provide additional information relating to MSD's financial condition. Readers are encouraged to read the notes to better understand the financial statements.

REQUIRED FINANCIAL STATEMENTS

- **Statement of Net Position** - This financial statement includes all of MSD's assets, liabilities and deferred outflow & inflow of resources. It also provides information about the nature and amounts of investments in assets and the obligations to creditors. In addition, it provides the basis for computing rate of return, evaluating the capital structure of MSD and assessing the liquidity and financial flexibility of the organization.

- **Statement of Revenues, Expenses and Changes in Net Position** - This financial statement identifies the revenues generated and expenses incurred during the fiscal year. This statement helps the user to assess the profitability of MSD during the time period for which the statement relates.

- **Statement of Cash Flows** - This financial statement provides information relating to MSD's cash receipts and cash expenditures during the fiscal year. The statement reports cash receipts, cash payments, and net changes in cash resulting from operations, investing, and financing activities and provides answers to such questions as where did cash come from, what was cash used for, and what was the change in the cash balance during the reporting period.

FINANCIAL INFORMATION

Statement of Net Position: MSD's net position increased by $35.8 million in FY 2014 to $602.7 million.

- MSD's total assets and deferred outflow of resources increased by $112.4 million in FY 2014. This overall increase can be attributed primarily to additions to plant, lines and other facilities and bond proceeds to be used for capital construction. In FY 2013, total assets and deferred outflows decreased by $29.4 million from FY 2012. The decrease was primarily due to funds used to retire debt and a reduction in receivables.
- Total liabilities and deferred inflow of resources increased by $76.5 million in 2014. This increase was due to the $100 million issuance of 2013A Revenue Bonds. During FY 2013 there was a decrease of $87.8 million from FY 2012 due to an increase in the fair value of swaps agreements of $36.3 million and retirement of $59.4 million of debt.
- Unrestricted net position increased $21.2 million during FY 2014 and has increased $48.0 million since FY 2012.

TABLE 1
Condensed Statement of Net Position
(000's)

	FY 2014	FY 2013	FY 2012
Assets			
Unrestricted Current Assets	$ 111,934	$ 89,403	$ 66,465
Restricted Current Assets	161,922	154,050	289,653
Noncurrent Assets	2,304,003	2,226,327	2,141,424
Total Assets	2,577,859	2,469,780	2,497,542
Deferred Outflow of Resources	17,811	13,511	15,176
Total Assets and Deferred Outflows	**2,595,670**	**2,483,291**	**2,512,718**
Current Liabilities	13,653	12,693	16,470
Current Liab. from Restricted Assets	286,240	285,489	279,708
Noncurrent Liabilities	1,610,724	1,535,962	1,588,274
Total Liabilities	1,910,617	1,834,144	1,884,452
Deferred Inflow of Resources	82,293	82,233	119,680
Total Liabilities and Deferred Inflows	**1,992,910**	**1,916,377**	**2,004,132**
Net Investment in Capital Assets	368,346	365,225	313,575
Restricted, net	148,451	136,939	157,002
Unrestricted	85,963	64,750	38,009
Total Net Position	**602,760**	**566,914**	**508,586**
Total Liab, Deferred Inflows & Net Position	**$ 2,595,670**	**$ 2,483,291**	**$ 2,512,718**

Results of Operations

Revenues:

- **Total Operating Revenues** as of June 30, 2014 were $216.6 million compared to $210.0 million for the same period last year and $192.2 million in FY 2012. An increase of $6.5 million, or 3.1%, and $24.4 million, or 12.7%, respectively. This increase in operating revenues is primarily driven by Board-approved rate increases of 5.8% in FY 2013 and 6.5% in FY 2012.

- **Wastewater Service Charges** totaled $165.6 million as of June 30, 2014. This represents an increase of $5.8 million or 3.6% from a year ago. Wastewater Services charges for FY 2013 and FY 2012 were $159.8 million and $149.6 million respectively. The majority of MSD's wastewater customers are billed based on the volume of water used. Because substantially all of MSD's customers are also customers of the Louisville Water Company, this charge is billed and collected by the Louisville Water Company on behalf of MSD.

- **Stormwater Service Charges** were $48.5 million as of June 30, 2014. This represents an increase of $3.0 million, or 6.7%, from the same period one year ago. Stormwater service charges for FY 2013 and FY 2012 were $45.4 million and $40.9 million respectively.

- **Other Operating Income** was $4.8 million in FY 2014, which is $2.2 million less than FY 2013. FY 2013 and FY 2012 were $4.8 million and $1.8 million respectively.

- **Free Services**: In FY 2007, MSD began offering free wastewater and stormwater service to the Louisville Metro Government. This free service amounted to $6.3 million in FY 2014, $6.6 million in FY 2013 and $5.2 million in FY 2012.

TABLE 2
Condensed Statements of Revenues, Expenses, and Changes in Net Position
(000's)

	FY 2014	FY 2013	FY 2012
Service Charges	$ 214,058	$ 205,222	$ 190,482
Other Operating Income	2,576	4,823	1,756
Total Operating Revenues	216,632	210,045	192,238
Investment Income	20,330	16,301	42,352
Total Revenues	236,962	226,346	234,590
Depreciation & Amortization Expense	63,516	60,335	60,527
Other Operating Expenses	73,353	74,931	75,126
Nonoperating Expenses	71,128	76,172	75,341
Change in Fair Value - Swaps	1,222	(36,286)	52,897
Total Expenses	209,219	175,152	263,891
Net Income (Loss) before Contributions	27,743	51,194	(29,301)
Contributions	8,103	7,134	2,095
Change in Net Position	35,846	58,328	(27,206)
Beginning Net Position	566,914	508,586	535,792
Ending Net Position	$ 602,760	$ 566,914	$ 508,586

Expenses:

Table 3 shows the composition of gross service and administrative costs by major classification of expense for the past three fiscal years. Gross service and administrative costs decreased by $1.2 million in FY 2014 from FY 2013 level and decreased by $.2 million in FY 2013 from FY 2012 level. MSD's employee count, including vacant positions, increased from 649 in FY 2013 to 660 full-time equivalent positions in FY 2014. Labor cost was 52% of gross service and administrative costs in FY 2014 and 51% in both FY 2013 and FY 2012.

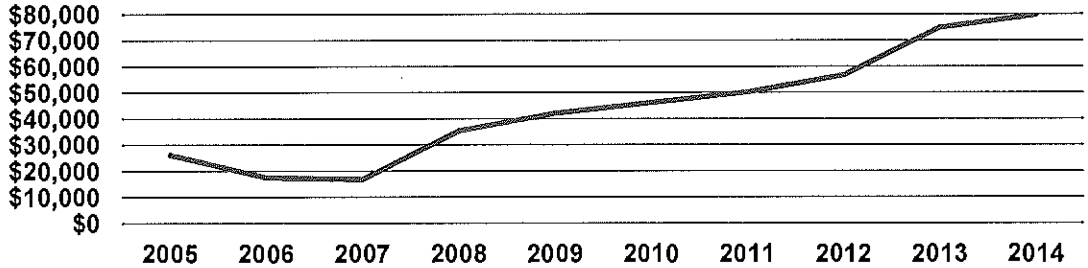
TABLE 3
Gross Service and Administrative Costs
(000's)

	2014	%	2013	%	2012	%
Gross Service and Administrative Costs:						
Labor	$ 55,356	52%	$ 55,028	51%	$ 55,010	51%
Utilities	14,563	14%	12,821	12%	14,555	13%
Materials and supplies	8,151	8%	8,990	8%	8,972	8%
Professional services	1,932	2%	3,942	4%	2,416	2%
Maintenance and repairs	9,096	8%	10,866	10%	11,090	10%
Billing and collections	4,095	4%	4,904	5%	4,309	4%
Chemicals	3,306	3%	4,082	4%	3,894	4%
Fuel	1,837	2%	1,825	2%	1,820	2%
Biosolids disposal	1,795	2%	1,709	2%	1,759	2%
All other	7,238	7%	4,369	4%	4,901	5%
Total	**$ 107,369**	**100%**	**$ 108,536**	**100%**	**$ 108,726**	**100%**

Income from Operations:

MSD recorded a net operating income of $79.8 million in FY 2014 compared to $74.8 million in FY 2013, an increase of $5.0 million or 6.7%. Increases in revenues of $6.6 million from FY 2013 accounted for the majority of this change. Net cash provided by operating activities increased $12.1 million from $128.0 million in FY 2013 to $140.0 million in FY 2014. The increase from FY 2012 to FY 2013 was $10.6 million.

Table 4
Income from Operations
(000s)



Capital Assets:

MSD's total gross capital assets (additions) increased by $51.3 million in FY 2014. Major additions include:

- $8.7 million completion of sewer line installations,
- $9.3 million in wastewater treatment facilities,
- $12.6 million in sewer, drain & pump facilities and
- $19.1 million in capitalized interest expense.

Readers are encouraged to review the Comparative Schedules of Plant, Lines, and Other Facilities that are contained in the Statistical Section of the CAFR and Note 5 for additional information regarding changes to capital assets.

Depreciation expense was $62.2 million, or $3.2 million more than FY 2013. These expenses are expected to increase in future years as MSD adds additional capital assets to its wastewater and stormwater systems.

Short-term and Long-term Debt:

Significant debt transactions included the following:

- On November 6, 2013, MSD issued $100,000 of Sewer and Drainage System Revenue Bonds, Series 2013C. Proceeds of the 2013C bonds, net of issuance cost were used to pay the cost of improvements to MSD's sewer and drainage system.

- On November 6, 2013 MSD issued $226,340 of Sewer and Drainage System Subordinated Bond Anticipation Notes, Series 2013A Notes with an interest rate of 2.00%. The proceeds of the notes were used to refinance the 2012A Notes. The 2013A Notes mature on November 26, 2014.

Net interest expense totaled $71.1 million in FY 2014, a decrease of $5.0 million from $74.6 million in FY 2013.

Additional information on MSD long-term debt can be found in Note 7 on pages 34-39 of this report.

Debt Service Ratio:

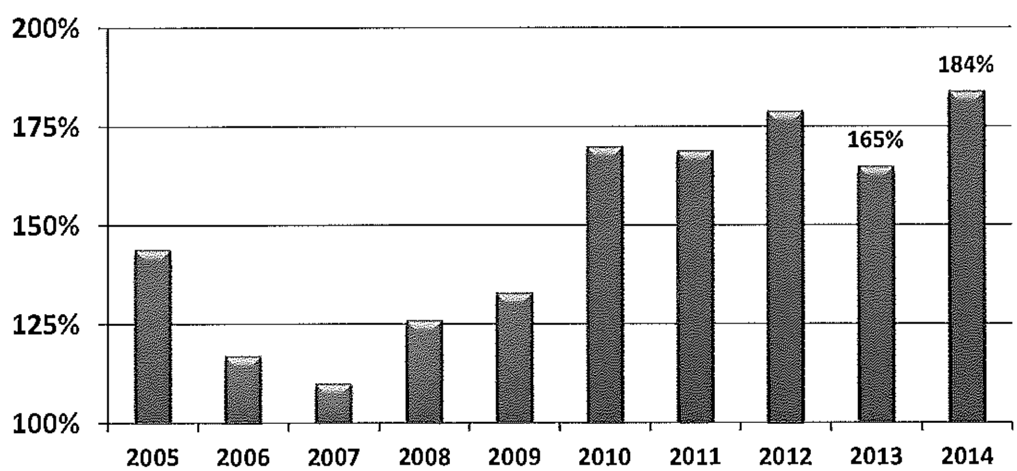
Although net operating income is the most significant component of determining MSD's debt service coverage ratio, other sources, including investment income and current period payments of property owner assessments also are included in "available revenues" and "net revenues" for purposes of demonstrating MSD's compliance with debt service ratio tests of the 1993 Sewer and Drainage System Revenue Bond Resolution (the Resolution). MSD's debt service coverage, calculated on the foregoing basis, was 184% in 2014 and 163% in 2013. Key aspects include:

- The 1993 Resolution and its supplements require MSD to provide "available revenues," sufficient to pay 110% of each year's "aggregate net debt service" on Revenue Bonds and 100% of "operating expenses." "Available revenues," as used only for purposes of the Resolution, means all revenues and other amounts received by MSD and pledged as security for payment of bonds issued pursuant to the Resolution, but exclude any interest income which is capitalized in accordance with generally accepted accounting principles.

- "Operating expenses" include all reasonable, ordinary, usual or necessary current expenses of maintenance, repair and operation determined in accordance with generally accepted accounting principles and the enterprise basis of accounting. "Operating expenses" do not include reserves for extraordinary maintenance and repair, or administrative and engineering expenses of MSD which are necessary or incidental to capital improvements for which debt has been issued and which may be paid from proceeds of such debt.

- "Aggregate net debt service" is aggregate debt service on all bonds issued pursuant to the Resolution, excluding (i) interest expense which, in accordance with generally accepted accounting principles, is capitalized and which may be paid from the proceeds of debt and (ii) other amounts, if any, available or expected to be available in the ordinary course of business for payment of debt service.

Table 5
Debt Service Coverage



The formula authorized by the Louisville Metro Government to calculate allowable rate increases does not allow for the inclusion of depreciation expense. The applicable rate ordinances allow MSD to increase rates to maintain the 100% revenue coverage of service and administrative costs and 110% coverage of aggregate net principal and interest requirements on Revenue Bonds that MSD covenants in the Revenue Bond Resolution.

Other Significant Matters:

In April 2009, MSD agreed to enter into an Amended Consent Decree with the Commonwealth of Kentucky's Environmental and Public Protection Cabinet ("KEPPC") and the U.S. Environmental Protection Agency ("EPA"). The agreement calls for MSD to design and implement projects within specified deadlines that will eliminate sewer overflows in its service area. The cost of the projects is estimated to be $850 million over the next two decades. MSD has submitted plans to finance the projects through additional bonds and future rate increases. In a letter dated June 6, 2014, MSD requested approval from the KEPPC and the EPA for the IOAP 2012 Modifications, dated May 2014. The IOAP 2012 Modifications represents a revision to 28 separate projects set forth in the original IOAP, dated September 30, 2009. The IOAP Modifications were approved and will supersede and replace the 2009 IOAP. To date, MSD has complied with all submittals and reports requirements contained in the Amended Consent Decree (see Note 13 to the financial statements.)

In December 2011, Kentucky's Auditor of Public Accounts (APA) issued the findings of a management audit of MSD containing administrative recommendations, including updating management policies, improving Board oversight and strengthening internal controls. The audit contained no findings regarding MSD's financial statements, nor were there any findings regarding illegal or unethical practices by MSD's Board or staff. A year later on December 16, 2012, MSD presented a final report on the status of MSD's initiatives related to the Examination. The report was accepted by the APA, closing this matter. The MSD Executive Director advised that the initiatives have strengthened the utility.

In January 2012, Mayor Greg Fischer formed The Louisville Utility and Public Works Advisory Group (Advisory Group) to examine the operations of MSD, LWC and Louisville Metro Department of Public Works and Assets (DWP). The Advisory Group was tasked to determine whether synergies existed between the entities that would allow for improved service or reduced costs. The evaluation was intended to consider an array of potential business scenarios ranging from current state where the entities essentially operate separately to a full consolidation. The Advisory Group found that there were potential cost savings from pursuing Inter-local Agreements (ILA) to a full consolidation of the two agencies. However, the findings had not included consideration of consolidation structures allowable under current law based on the statutory governance structure of each entity. MSD is a not-for-profit political subdivision of the Commonwealth of Kentucky and governed under state statutes, while LWC is a private for-profit company of which Metro Louisville owns 100% of the stock.

In April 2013, the Boards of MSD and LWC signed a Letter of Intent to pursue a thorough due diligence evaluation of various consolidation structures. This effort was in response to the Advisory Group and the Mayor's recommendation that a complete legal, financial and environmental analysis be undertaken to determine the full risk and opportunity of a potential consolidation. As a result, both MSD and LWC formed a due diligence team consisting of internal senior management from both entities, with the assistance of outside experts when needed.

The due diligence analysis recommended pursuing a Comprehensive ILA approach and implementation began in mid-February, 2014 after the Mayor and both Boards approved the recommendation. *Onewater* is the initiative outlined in the Comprehensive ILA which was approved by the Kentucky Attorney General on April 2014. The administration of the various service agreements will be the key to successfully providing consolidated services to both LWC and MSD. The goal of the Comprehensive ILA is to *create coordinated teams of employees from both companies with the capability of delivering superior customer service at lower costs than the existing two corporate entities combined.*

The implementation plan will consist of two phases. The first phase will entail the sharing of services in five functional groups plus one specialty area of focus. The five functional groups to be addressed in this phase include Procurement, Fleet, Human Resources, Information Technology, and Customer Service and the specialty area will be focused on energy savings. It is anticipated that phase II will begin in the fourth quarter of 2015. This phase will include the consolidation of additional back office functions and may also include operational areas.

Requests for Additional Information

This report is intended to provide readers with a general overview of MSD's finances and to provide information regarding the receipts and uses of funds. If you need clarification regarding a statement(s) made in the report or need additional information, please contact the Louisville and Jefferson County Metropolitan Sewer District, 700 West Liberty Street, Louisville Kentucky 40203. You can also submit a request for additional information via MSD's website. www.msdlouky.org

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENT OF NET POSITION
June 30, 2014 and 2013
(Dollars in thousands)

	2014	2013
Current Assets:		
Unrestricted cash and cash equivalents	$ 84,780	$ 66,376
Unrestricted investments	100	100
Restricted cash and cash equivalents	39,507	62,249
Restricted investments	121,216	90,574
Accounts receivable, less allowance for		
doubtful accounts of $1,029 (2014), $1,080 (2013)	21,809	18,465
Inventories	3,808	3,579
Accrued interest receivable	1,199	1,226
Prepaid expenses and other current assets	1,437	884
Total current assets	273,856	243,453
Noncurrent Assets:		
Long-term assessment receivables	16,358	17,549
Unamortized bond closing costs	17,143	18,713
Plant, lines and other facilities, net	2,270,502	2,190,065
Total noncurrent assets	2,304,003	2,226,327
Total Assets	$ 2,577,859	$ 2,469,780
Deferred Outflow of Resources:		
Unamortized loss on refunding	17,811	13,511
Total Assets and Deferred Outflow of Resources	$ 2,595,670	$ 2,483,291
Current Liabilities:		
Current liabilities (payable from unrestricted assets):		
Accounts payable and accrued expenses	$ 13,653	$ 12,693
Current liabilities (payable from restricted assets):		
Accounts payable and accrued expenses,		
includes contractor retainage of $6,169 (2014), $5,444 (2013)	14,712	16,168
Accrued interest payable	12,834	12,458
Refundable deposits	1,568	1,137
Subordinated Debt	228,601	228,691
Current maturities of bonds payable	28,525	27,035
Total current liabilities	299,893	298,182
Non-current Liabilities:		
Bonds payable	1,549,700	1,478,225
Unamortized debt premium / discount	60,263	56,764
Other long term liabilities	761	973
Total non-current liabilities	1,610,724	1,535,962
Total Liabilities	$ 1,910,617	$ 1,834,144
Deferred Inflow of Resources:		
Interest rate swaps	73,640	72,418
Other deferred inflows	8,653	9,815
Total deferred inflow of resources	82,293	82,233
Total Liabilities and Deferred Inflow of Resources	$ 1,992,910	$ 1,916,377
Net Position:		
Net investment in capital assets	$ 368,346	$ 365,225
Restricted for payment of bond principal and interest	148,451	136,939
Unrestricted	85,963	64,750
Total net position	602,760	566,914
Total Liabilities, Deferred Inflow of Resources and Net Position	$ 2,595,670	$ 2,483,291

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
Years Ended June 30, 2014 and 2013
(Dollars in thousands)

	2014	2013
Operating Revenues		
Service charges, net of free services of $6,300 and $6,600	$ 214,056	$ 205,222
Other operating income	2,576	4,823
Total operating revenues	216,632	210,045
Operating Expenses		
Service and administrative costs	73,353	74,931
Depreciation and amortization	63,516	60,335
Total operating expenses	136,869	135,266
Income from Operations	79,763	74,779
Non-operating Revenue (Expenses)		
Gain / loss on disposal of assets	-	45
Investment income	10,234	5,315
Build America Bond refund	10,096	10,986
Interest expense - bonds	(80,613)	(92,616)
Interest expense - swaps	(9,733)	(10,200)
Interest expense - other	(4,629)	(4,829)
Amortization of debt discount / premium	7,296	6,735
Amortization of loss on refunding	(2,552)	(1,665)
Capitalized interest	19,103	26,358
Change in fair value - swaps	(1,222)	36,286
Total non-operating revenue (expenses) - net	(52,020)	(23,585)
Income (loss) before Contributions	27,743	51,194
Contributions:	8,103	7,134
Change in net position	35,846	58,328
Net position, beginning of year	566,914	508,586
Net position, end of year	$ 602,760	$ 566,914

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENT OF CASH FLOWS
Years Ended June 30, 2014 and 2013
(Dollars in thousands)

	2014	2013
Cash Flows from Operating Activities:		
Cash received from customers	$ 213,215	$ 207,905
Cash paid to suppliers	(34,446)	(42,003)
Cash paid to employees	(38,729)	(37,923)
Net cash provided by operating activities	140,040	127,979
Cash Flows from Capital and Related Financing Activities:		
Proceeds from issuance of revenue bonds	100,000	115,790
Proceeds from subordinated debt	226,340	228,735
Build America Bond refund	10,096	10,986
Assessments receivable	1,695	1,833
Interest income - assessments	687	731
Principal paid on revenue bonds	(27,035)	(173,040)
Interest paid on revenue bonds	(91,719)	(98,944)
Subordinated debt principal payments	(226,430)	(226,384)
Acquisition and construction of capital assets	(113,859)	(105,915)
Retainage payable	725	(95)
Acquisition of non-operating property	(211)	(223)
Net cash, provided by / (used in), capital and related financing activities	(119,711)	(246,526)
Cash Flows from Investing Activities:		
Restricted investments	(30,642)	4,064
Income on investments	15,897	14,130
Interest expense - swap agreements	(9,733)	(10,200)
Unamortized premium on forward delivery agreement	(189)	(189)
Net cash (used in) provided by investing activities	(24,667)	7,805
Net Increase (Decrease) in Cash and Cash Equivalents	(4,338)	(110,742)
Cash and cash equivalents, beginning of year	128,625	239,367
Cash and cash equivalents, end of year	$ 124,287	$ 128,625

LOUISVILLE AND JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENT OF CASH FLOWS
Years Ended June 30, 2014 and 2013
(Dollars in thousands)

	2014	2013
Reconciliation of Operating Income to Net Cash provided by Operating Activities:		
Income from operations	$ 79,763	$ 74,779
Adjustments to reconcile income (loss) from operations to net cash provided by (used in) operating activities:		
Depreciation and amortization	63,516	60,335
Capital expense over/under applied	-	(910)
Accounts receivable	(3,848)	(2,265)
Inventories	(229)	(95)
Prepaid expense	(553)	(214)
Accounts payable	1,076	(4,082)
Customer deposits	431	125
Accrued liabilities	(116)	306
Net cash provided by operating activities	$ 140,040	$ 127,979
Non-cash capital financing and investing activities:		
Contribution of plant, lines and other facilities by developers and property owners	$ 8,103	$ 7,134
Increase in accounts payable incurred for construction	$ (2,181)	$ (861)
Change in fair value of investments	$ (3,201)	$ 2,706
Decrease in interest rate swap deferred revenue	$ 972	$ 972
Change in fair value - swap agreements	$ (1,222)	$ 36,286
Advance refunding of bonds	$ -	$ 119,515

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The financial statements of the Louisville and Jefferson County Metropolitan Sewer District ('MSD") are prepared in conformity with accounting principles generally accepted in the United States of America as applied to government units. The Governmental Accounting Standards Board ("GASB") is the accepted standard-setting body for establishing governmental accounting and financial reporting principles. MSD follows GASB Pronouncements as codified under GASB 62, including electing to report as a regulated operation. MSD uses proprietary fund accounting (enterprise fund). Due to the election as a regulated operation under GASB 62, to meet industry accounting standards and follow transactional intent, MSD uses, as applicable, ASC 980, Regulated Accounting.

Beginning July 1, 2012, MSD adopted or early adopted GASB:

- Statement No. 60, *"Accounting and Financial Reporting for Service Concession Arrangements"*
- Statement No. 61, *"The Financial Reporting Entity: Omnibus—an amendment of GASB Statements No. 14 and No. 34."*
- Statement No. 63, *"Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources and Net Position"*
- Statement No. 65, "Items Previously Reported as Assets and Liabilities."
- Statement No. 66, *"Technical Corrections"*

MSD has adopted or is evaluating the following GASBs during the current year:

- GASB Statement No. 67, *"Financial Reporting for Pension Plans"*, is effective for periods beginning after June 15, 2013 and GASB Statement No. 68, *"Accounting and Financial Reporting for Pensions"*, and GASB Statement No. 71, *"Pension Transition for Contributions Made Subsequent to the Measurement Date, an amendment of GASB Statement No. 68"*, are effective for periods beginning after June 15, 2014.

  With the implementation of GASB 68 and GASB 71 in the year ending June 30, 2015, MSD will be required to report a net pension liability on the Statement of Net Position as a retroactive prior period adjustment for the beginning net pension liability. Any annual changes in the net pension liability will be recorded in the Statement of Revenues, Expenses and Changes in Net Position.

- GASB Statement No. 69, *"Government Combinations and Disposals of Government Operations"* is effective for the year ending June 30, 2015. MSD has not yet adopted this standard and is evaluating the impact they may have on its financial statements.

- MSD has determined that GASB Statement No. 70, *"Accounting and Financial Reporting for Nonexchange Financial Guarantees"*, effective for the fiscal year ended June 30, 2014, had no effect on its financial statements.

The significant MSD accounting policies are described hereinafter.

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

A. Reporting Entity

MSD is a public body corporate, and political subdivision of the Commonwealth of Kentucky. MSD was created in 1946 pursuant to Chapter 76 of the Kentucky Revised Statutes, in the interest of the public health and for the purpose of providing adequate sewer and drainage facilities in the urbanized area of the Louisville Metropolitan Area. Pursuant to Chapter 76, MSD is governed by a Board which consists of eight members who are appointed by the Mayor of the Louisville Metro government, subject to approval of the Louisville Metro Council. Not more than five Board members may be of the same political party. However, there is not a continuing supervisory relationship exercised by the Louisville Metro government over MSD with respect to MSD's statutory public functions.

Chapter 76 authorizes MSD to provide sewer and drainage facilities and services. MSD is further authorized by the statute to establish and collect service charges and to budget there from for operations and maintenance, capital outlays and debt service on obligations it is authorized by the statute to incur. No special financing relationship exists between the Louisville Metro government and MSD, nor is the Louisville Metro government empowered by law or custom to approve MSD operating or capital budgets; nor are they responsible for financing deficits or disposing of surplus funds.

MSD has complete control, possession and supervision of the sewer and drainage system in large portions of Jefferson County, and has statutory authority to construct additions, betterments and extensions within its service area. Additionally, MSD has statutory responsibility for approval of the design and proper construction of sewer and drainage facilities within the County's boundaries. There are cities within the County that, by statute, have the option of using MSD sewer services on a contractual basis. Third and fourth class cities also have the option of obtaining drainage services from MSD. MSD's enterprise business activities are managed by its Board, which has statutory authority to elect officers, enact bylaws and enter into agreements and contracts for the management and regulation of MSD's affairs.

MSD's revenue is derived from sewer and drainage service charges which are collected from residential, commercial and industrial customers. MSD controls the collection of all revenue, disbursement of payables and title to all sewer and drainage assets. Sewer service charges are distributed among customer classes on the basis of actual costs incurred to collect and treat wastewater. Drainage service charges are distributed among customer classes on the basis of actual costs of drainage services per equivalent unit of impervious surface.

Changes in MSD's service charges are implemented by MSD's Board, but no change in the service charge schedule is final within the Louisville Metro area until approval by the Louisville Metro Council. However, the statute provides that such approval may not be arbitrarily withheld and that the schedule shall be sufficient to provide revenues for the operation and maintenance of the system and for debt service. By ordinance, the Louisville Metro Government has provided that MSD's Board may amend its service charge schedule to maintain a debt service ratio of 1.10 for MSD's sewer and drainage revenue bonds, and that such Amendments will be effective within the Metropolitan area when adopted by MSD's Board, so long as the amended rates do not generate additional revenue from service charges in excess of 7% during the twelve months succeeding the period in which the deficiency was identified.

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Chapter 76 permits MSD to finance sewer and drainage system construction, acquisition and other capital improvements through the issuance of its revenue bonds and with the proceeds of governmental grants, property owner contributions in aid of construction and bonds and loans for which pledge of repayment is subordinated to the pledge of revenues given by MSD for the security of its revenue bond holders. MSD indebtedness does not constitute indebtedness of the Louisville Metro government or the Commonwealth, but the Louisville Metro government must authorize by ordinance the issuance by MSD of revenue bonds to finance projects within the Metropolitan area.

B. Basis of Accounting

The sewer and drainage system owned and operated by MSD 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 the system are included on the statement of net position. Total net position is segregated into net investment in capital assets, restricted for payment of bond principal and interest and unrestricted. Operating statements present increases (e.g., revenues) and decreases (e.g., expenses) in net position. MSD utilizes the accrual basis of accounting wherein revenues are recorded when earned and expenses are recorded at the time the liability is incurred.

C. Cash and Cash Equivalents

For purposes of the Statements of Cash Flows, MSD includes repurchase agreements and other investments with an original maturity of three months or less in cash and cash equivalents.

D. Restricted and Unrestricted Funds

Restricted funds are reserved for the purpose of bond debt service, funding of capital construction, cost of issuance, and debt service reserves. Unrestricted funds, generated from service fees and other operating income, are used to pay for operating expenses. When an expense or outlay is incurred for which both restricted and unrestricted net position is available, it is MSD's practice is to use revenue from operations to finance construction, then to reimburse from net position restricted for construction as it is needed.

E. Investment Securities

Investments are stated at fair value. Investment income consists of interest income and the change in fair value of investments. Investment income is reduced by estimated federal arbitrage liability.

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

F. Operating/Non-Operating Revenues, Expenses & Receivables

Operating revenues are those revenues that are generated directly from the primary activity of MSD. These revenues are wastewater and stormwater service charges. The Louisville Water Company is responsible for billing and collection of these charges on behalf of MSD on a monthly basis. Operating expenses are expenses incurred through the activities of operating and maintaining MSD facilities.

Non-operating revenues and expenses are comprised of investment and financing earnings and costs, changes in the fair value of derivatives, as well as contributions from outside sources.

Accounts receivable are stated at the amount management expects to collect from outstanding balances. Balances are considered past due 30 days from the invoice date. Management provides an allowance for probable uncollectible amounts based on its assessment of the current status of individual accounts. Balances that are still outstanding after management has used reasonable collection efforts are written off through a charge to the allowance and a credit to accounts receivable.

Assessment receivables represent amounts billed to residents to have sewer lines installed in their neighborhood. Assessment receivables are considered past due once the balance is 90 days in arrears. Management considers all amounts collectible on the basis that liens are placed on properties at the time of assessment.

G. Inventories

Inventories are stated at the lower of cost (principally weighted average cost) or market. They consist of supplies and parts used in the operation of MSD's treatment plants and for the maintenance of sewers, fleet vehicles and other related equipment.

H. Contributed Capital and Construction Grants

Construction and acquisition of sewer and drainage plant, lines and other facilities are financed in part by governmental grants and contributions in aid of construction from property owners and developers. Governmental grants in aid of construction represent the estimated portion of construction costs incurred for which grants are expected to be paid to MSD by the governmental grantor. These amounts are recorded as a receivable and revenues from contributions at the time the related expenditures are incurred. The revenues from contributions are part of the change in net position.

I. Plant, Lines and Other Facilities

Plant, lines and other facilities are recorded at historical cost or, if contributed, at fair value as determined by engineering estimates on the date the contribution is received. Capital assets are defined by MSD as assets with an initial, individual cost of more than $20 or renewal and replacement cost of a component of existing assets with a cost of more than $20, which extends the life of an asset beyond its original useful life. It is MSD's policy to depreciate the costs of these assets over their estimated useful lives on a straight line basis.

(Dollars in thousands)

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Estimated useful lives on depreciable assets are as follows:

Buildings and other structures	30 - 50 years
Land improvements	10 - 30 years
Miscellaneous machinery	10 - 20 years
Vehicles	6 - 12 years
Equipment, heavy	15 - 30 years
Equipment, light	5 - 15 years
Sewer lines and drainage channels	80 years

Costs incurred for capital construction and acquisition are carried in construction in progress until disposition or completion of the related projects. The major components of construction in progress are sewer lines, wastewater treatment and stormwater facilities. Costs relating to projects not pursued are expensed, while costs relating to completed projects are capitalized as plant, lines and other facilities.

J. Capitalized Interest

Interest capitalized on projects funded from bond proceeds is recorded as the difference between the interest costs of the borrowing less interest earned on undisbursed invested proceeds during the construction period. Interest is not capitalized on project costs that are reimbursed by contributions of capital from government, property owners and developers.

K. Impairment of Capital Assets

In accordance with GASB Statement No. 42, "Accounting and Financial Reporting for Impairment of Capital Assets and for Insurance Recoveries," management evaluates prominent events or changes in circumstances affecting capital assets to determine whether impairment of a capital asset has occurred. Such events or changes in circumstances that may be indicative of impairment include evidence of physical damage, enactment or approval of laws or regulations, other changes in environmental factors, technology changes or evidence of obsolescence, changes in the manor of duration of use of a capital asset, and construction stoppage. A capital asset is generally considered impaired if both (a) the decline in service utility of the capital asset is large in magnitude and (b) the event or change in circumstance is outside the normal life cycle of the capital asset. No impairment losses were recognized in the years ended June 30, 2014 and 2013.

L. Bonds Payable

Bonds payable are recorded at the principal amount outstanding, net of any applicable premium or discount.

Refunding: Bonds outstanding, which have been refunded and economically defeased, are not included in long-term debt. The related assets are not included in investments. The loss on refunding, which is the difference between the reacquisition price and the net carrying amount of the old debt, is deferred outflow of resources and amortized as a component of interest expense over the average remaining life of the old debt.

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Derivatives: MSD enters into interest rate swap agreements to modify interest rates on outstanding debt. MSD records the net interest expenditures resulting from these agreements and amortizes gains/losses resulting from the termination of these agreements until the original termination date of the agreement. Derivative instruments are reported at fair value as deferred inflow of resources. Changes in fair value of derivative instruments are reported in non-operating revenue (expenses) on the Statement of Revenues, Expenses and Changes in Net Position.

Bond Issuance Costs: Bond issue costs are capitalized and amortized over the life of the respective bond issue using the straight-line method, which approximates the effective interest method, pursuant to the election of regulatory operation under GASB 62, as they are deemed recoverable through future rates.

Original Issue Discount/Premium: Original issue discounts and premiums on bonds are amortized as a component of interest expense using the straight-line method, which approximates the effective interest method, over the lives of the bonds to which they relate.

M. Compensated Absences

Vacation and personal pay benefits are accrued as vested by MSD employees.

N. Allocation of Overhead

MSD allocates overhead costs to its core business processes which are: operations and maintenance (service and administrative costs); design, construction and acquisition of plant lines and other facilities; and subsidiary business enterprises.

O. 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 assumptions and estimates that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

P. Income Tax Status

MSD is exempt from federal income tax under the Internal Revenue Code as a political subdivision of the Commonwealth of Kentucky.

Q. Reclassifications

Certain reclassifications have been made to the 2013 financial statements to conform to those used in 2014. These reclassifications had no impact on total net position or the change in net position.

(Dollars in thousands)

NOTE 2 DEPOSITS AND INVESTMENTS

A comparative statement of cash, cash equivalents and investments held in MSD's portfolio follows:

June 30, 2014

Investment Type	Fair Value	Weighted Average Maturity in Years	Credit Rating
U S Agency Securities	$ 27,953	0.95	Aaa
Municipal Bonds	93,263	24.44	Aa
Money Market Funds	68,256	0.13	Aaa
Commercial Paper	29,993	0.14	A-1 / P-1
Repurchase Agreement/Cash	26,038		
Certificate of Deposit	100		
Total	245,603	10.57	
Accrued interest	1,199		
Total cash, cash equivalents and investments	$ 246,802		

June 30, 2013

Investment Type	Fair Value	Weighted Average Maturity in Years	Credit Rating
Fed Nat'l MTGE Assn Pool	$ 22,639	0.32	Aaa
Municipal Bonds	90,575	26.20	Aa
Money Market Funds	53,162	0.13	Aaa
Commercial Paper	29,992	0.11	A-1 / P-1
Repurchase Agreement/Cash	22,831		
Certificate of Deposit	100		
Total	219,299	12.17	
Accrued interest	1,226		
Total cash, cash equivalents and investments	$ 220,525		

Section 66.480 of the Kentucky Revised Statutes and the District's bond resolutions authorize the District to invest money subject to its control in, among other securities, (i) obligations of the United States and of its agencies and instrumentalities, including obligations subject to repurchase agreements, (ii) certificates of deposit or other interest-bearing accounts of any bank or savings and loan institution which are insured by the Federal Deposit Insurance Corporation or, to the extent not so insured, collateralized by obligations described in clause (i) above, (iii) securities issued by a state or local government, or any instrumentality or agency thereof, in the United States, and rated in either of the two highest categories by a nationally recognized rating agency, and (iv) money-market mutual funds investing in any of the securities described above. MSD bond resolutions and covenants contain similar restrictions.

Investments are made based upon prevailing market conditions at the time of the transaction with the intent to hold the instrument until maturity. With this strategy, investments would be expected to reach maturity with limited realized gains or losses. If the yield of the portfolio can be improved upon by the sale of an investment, prior to its maturity, with the reinvestment of the proceeds, then this provision is also allowed.

(Dollars in thousands)

NOTE 2 DEPOSITS AND INVESTMENTS (Continued)

Concentration of Credit Risk:

MSD's Investment Policy ("The Policy") requires that investments be divided to eliminate the risk of loss resulting from over-concentration of assets in a specific maturity, a specific issuer, or a specific class of securities. Section VIII of The Policy outlines the permitted investments and identifies the limitations placed on the types of investments to minimize the risk.

Interest Rate Risk:

The Policy also requires that all investments have among the highest category of ratings by the nationally recognized rating agencies. The credit ratings are shown in the preceding table. Where applicable, all of the above investments have such ratings. The weighted average maturity in years represents the interest rate risk for MSD.

Custodial Credit Risk:

This is the risk that, in the event of the failure of the counterparty, MSD would not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The collateral provided by financial institutions is considered adequate to cover all balances in excess of limits set forth by the Federal Deposit Insurance Corporation. All of MSD's investments are held by MSD or in the name of MSD by a Trustee.

Foreign Currency Risk:

This risk relates to any potential adverse effects on the fair value of an investment from changes in exchange rates. MSD did not hold any foreign currency as of June 30, 2014 and 2013.

A reconciliation of cash, cash equivalents and investments as shown on the Comparative Statement of Net Position for MSD is as follows:

	June 30, 2014	June 30, 2013
Cash and cash equivalents - unrestricted	$ 84,780	$ 66,376
Investments - unrestricted	100	100
Cash and cash equivalents - restricted	39,507	62,249
Investments - restricted	121,216	90,574
	$ 245,603	$ 219,299

(Dollars in thousands)

NOTE 3 RESTRICTED CASH, CASH EQUIVALENTS AND INVESTMENTS

MSD's revenue bond resolution provides that MSD shall maintain in a Debt Service Reserve Account a balance equal to the maximum annual aggregate gross principal and interest due on all outstanding revenue bonds; or, in lieu of cash and investments in that amount, a letter of credit or policy of bond insurance payable in that amount. Cash, cash equivalents and investments segregated as accounts restricted for authorized construction include proceeds from issuance of MSD bonds.

Restriction	June 30, 2014	June 30, 2013
Payment of bond / BAN principal and interest and reserves	$ 148,451	$ 134,701
Authorized construction	12,272	18,122
Total restricted cash, cash equivalents and investments	$ 160,723	$ 152,823

NOTE 4 SCHEDULE OF NET POSITION

A comparative schedule of net position follows:

Net Position	2014	2013
Net investment in capital assets:		
Plant, lines and other facilities net of depreciation	$ 2,270,502	$ 2,190,065
Outstanding debt that applies to plant, lines and other facilities	(1,806,826)	(1,733,951)
Other capital related debt	(107,602)	(109,011)
Unspent bond proceeds	12,272	18,122
Total	368,346	365,225
Restricted:		
Funds held in bank	160,723	152,822
less: Unspent bond proceeds	(12,272)	(18,122)
Other	-	2,239
Total	148,451	136,939
Unrestricted net position	85,963	64,750
Total net position	$ 602,760	$ 566,914

(Dollars in thousands)

NOTE 5 CAPITAL ASSETS - PLANT, LINES AND OTHER FACILITIES

A comparative schedule of plant, lines and other facilities for the years 2014 and 2013 follows:

Year ended June 30, 2014

	Beginning Balance	Additions	Retirements / Reclassifications	Ending Balance
Capital assets:				
Sewer lines	$ 1,265,437	$ 4,596	$ 4,147	$ 1,274,180
Wastewater treatment facilities	479,998	143	9,148	489,289
Stormwater drainage facilities	443,577	2,503	2,819	448,899
Pumping and lift stations	89,503	769	6,547	96,819
Administrative facilities	49,317	30	(5)	49,342
Maintenance facilities	8,037	-	-	8,037
Machinery and equipment	56,840	4	1,491	58,335
Miscellaneous	27,042	21	(3)	27,060
Capitalized interest	282,697	19,103	-	301,800
Total capital assets	2,702,448	27,169	24,144	2,753,761
Less accumulated depreciation:				
Sewer lines	(255,797)	(15,620)	-	(271,417)
Wastewater treatment facilities	(306,365)	(20,100)	-	(326,465)
Stormwater drainage facilities	(114,582)	(5,135)	-	(119,717)
Pumping and lift stations	(41,809)	(4,339)	-	(46,148)
Administrative facilities	(30,457)	(1,759)	-	(32,216)
Maintenance facilities	(5,480)	(244)	-	(5,724)
Machinery and equipment	(48,472)	(3,943)	-	(52,415)
Miscellaneous	(13,330)	(3,980)	-	(17,310)
Capitalized interest	(67,907)	(7,107)	-	(75,014)
Total accumulated depreciation	(884,199)	(62,227)	-	(946,426)
Construction in progress	371,816	115,495	(24,144)	463,167
	$ 2,190,065	$ 80,437	$ -	$ 2,270,502

Capital assets include non-depreciable assets for land related to the facilities, and pumping and lift stations. The carrying value was $14,889,222 and $12,962,037 at June 30, 2014 and 2013.

(Dollars in thousands)

NOTE 5 CAPITAL ASSETS - PLANT, LINES AND OTHER FACILITIES (Continued)

Year ended June 30, 2013

	Beginning Balance	Additions	Retirements / Reclassifications	Ending Balance
Capital assets:				
Sewer lines	$ 1,179,685	$ 12,756	$ 72,996	$ 1,265,437
Wastewater treatment facilities	479,226	565	207	479,998
Stormwater drainage facilities	437,139	650	5,788	443,577
Pumping and lift stations	73,023	2,135	14,345	89,503
Administrative facilities	46,068	896	2,353	49,317
Maintenance facilities	8,037	-	-	8,037
Machinery and equipment	55,390	202	1,248	56,840
Miscellaneous	21,678	549	4,815	27,042
Capitalized interest	260,157	22,540	-	282,697
Total capital assets	2,560,403	40,293	101,752	2,702,448
Less accumulated depreciation:				
Sewer lines	(241,161)	(14,636)	-	(255,797)
Wastewater treatment facilities	(286,257)	(20,108)	-	(306,365)
Stormwater drainage facilities	(109,499)	(5,083)	-	(114,582)
Pumping and lift stations	(38,384)	(3,425)	-	(41,809)
Administrative facilities	(29,292)	(1,165)	-	(30,457)
Maintenance facilities	(5,210)	(270)	-	(5,480)
Machinery and equipment	(43,885)	(4,587)	-	(48,472)
Miscellaneous	(10,161)	(3,169)	-	(13,330)
Capitalized interest	(61,356)	(6,551)	-	(67,907)
Total accumulated depreciation	(825,205)	(58,994)	-	(884,199)
Construction in progress	370,350	103,218	(101,752)	371,816
	$ 2,105,548	$ 84,517	$ -	$ 2,190,065

(Dollars in thousands)

NOTE 6 CAPITALIZED INTEREST

A comparative schedule of net interest cost capitalized and net interest expense reported in non-operating revenues in 2014 and 2013 follows:

Year ended June 30, 2014	Capitalized	Included in Non-Operating	Total
Investment earnings	$ -	$ 20,330	$ 20,330
Interest cost	(19,103)	(71,129)	(90,232)
Net interest	$ (19,103)	$ (50,799)	$ (69,902)

Year ended June 30, 2013	Capitalized	Included in Non-Operating	Total
Investment earnings	$ 3,818	$ 16,301	$ 20,119
Interest cost	(26,358)	(76,217)	(102,575)
Net interest	$ (22,540)	$ (59,916)	$ (82,456)

(Dollars in thousands)

NOTE 7 LONG-TERM DEBT

A comparative schedule of long-term debt outstanding at June 30, 2014 and 2013 follows:

Revenue Bonds	Original Issue Amount	Interest Rates	Final Payment In	Outstanding as of: 2014	Outstanding as of: 2013
2005 Sewer and Drainage System Revenue Bonds Series 2005A	64,740	3.00% - 5.00%	2026	$ 18,820	$ 20,770
2006 Sewer and Drainage System Revenue Bonds Series 2006A	100,000	4.00% - 5.00%	2038	89,325	91,280
2007 Sewer and Drainage System Revenue Bonds Series 2007A	61,125	4.00% - 5.00%	2025	48,080	50,240
2008 Sewer and Drainage System Revenue Bonds Series 2008A	105,000	4.00% - 5.00%	2038	100,860	101,810
2009A Sewer and Drainage System Revenue Bonds Series 2009A	76,275	5.00%	2022	52,720	57,945
2009B Sewer and Drainage System Revenue Bonds Series 2009B	225,770	2.00% - 5.00%	2023	164,785	177,785
2009C Sewer and Drainage System Revenue Bonds Series 2009C	180,000	5.98%	2040	180,000	180,000
2010A Sewer and Drainage System Revenue Bonds Series 2010A	330,000	6.25%	2043	330,000	330,000
2011A Sewer and Drainage System Revenue Bonds Series 2011A	263,360	3.00% - 5.00%	2034	258,330	260,125
2013A Sewer and Drainage System Revenue Bonds Series 2013A	115,790	4%	2036	115,790	115,790
2013B Sewer and Drainage System Revenue Bonds Series 2013B	119,515	4.00% - 5.00%	2038	119,515	119,515
2013C Sewer and Drainage System Revenue Bonds Series 2013C	100,000	3.00% - 5.00%	2044	100,000	-
Total Long-Term Debt				1,578,225	1,505,260
Less: Current Maturities				(28,525)	(27,035)
Add : Unamortized Premium/Discount				60,263	56,764
Total Long-Term Debt, net				$ 1,609,963	$ 1,534,989

(Dollars in thousands)

NOTE 7 LONG-TERM DEBT (Continued)

A schedule of future debt service requirements after June 30, 2014 follows:

	Revenue Bonds		
	Principal	Interest	Total
Year Ending June 30,			
2015	$ 28,650	$ 81,603	$ 110,253
2016	30,100	80,189	110,289
2017	31,775	78,707	110,482
2018	33,550	77,140	110,690
2019	35,440	75,466	110,906
2020-2024	200,820	348,756	549,576
2025-2029	229,580	296,250	525,830
2030-2034	143,080	250,097	393,177
2035-2039	426,780	190,514	617,294
2040-2044	418,450	66,143	484,593
	$ 1,578,225	$ 1,544,865	$ 3,123,090

A comparative summary of current and long-term revenue bond activity for the years ended June 30, 2014 and 2013 follows:

	2014	2013
Revenue Bonds - beginning of year, net	$ 1,505,260	$ 1,562,510
Bonds issued	100,000	235,305
Principal paid on bonds and bond refunding	(27,035)	(292,555)
Revenue Bonds - end of year, net	$ 1,578,225	$ 1,505,260

MSD long-term debt is issued to provide sufficient funding for sewer and drainage projects approved for construction. MSD has arbitrage calculations performed as needed by an independent third party to comply with federal regulations.

A summary of significant debt transactions follows:

New Debt Transactions: On November 6, 2013, MSD issued $100,000 of Sewer and Drainage System Revenue Bonds, Series 2013C. Proceeds of the 2013C bonds, net of issuance cost were used to pay the cost of improvements to MSD's sewer and drainage system.

NOTE 7 LONG-TERM DEBT (Continued)

2013 Refunding Transaction: On April 23, 2013, MSD issued $115,790 of Sewer and Drainage System Revenue Bonds, Series 2013A. Proceeds of the 2013A bonds, net of issuance cost and together with funds released from the Reserve Account were used to currently refund $131,670 of MSD's outstanding Sewer and Drainage System Revenue Bonds, Series 2001A. On April 23, 2013, MSD issued $119,515 of Sewer and Drainage System Revenue Bonds, Series 2013B. Proceeds of the 2013B bonds, net of issuance cost and together with funds released from the Reserve Account were deposited into an Escrow Fund with the Paying Agent to advance refund $100,000 of MSD's outstanding Sewer and Drainage System Revenue Bonds, Series 2004A and to advance refund $34,345 of Series 2005A. As a result, the refunded bonds are considered to be defeased and the liability has been removed from MSD's Statement of Net Position. Both refundings were undertaken to reduce debt service payments over the next 26 years by $111,513 and resulted in a present value savings of $43,779.

Debt Service Covenant: A debt ratio covenant has been established under the 1993 Sewer and Drainage System Revenue Bond Resolution. MSD was in compliance with the ratio covenant as of June 30, 2014 and 2013.

Swap Terminations: MSD enters into swaps and other derivative contracts to lock in long term rates in advance of issuing long term debt to create and manage variable rate exposure in its debt portfolio and to take advantage of market opportunities that hedge embedded interest rate and tax regulation risk that exists on its statement of net position.

Upon a termination of a swap, any termination receipt or payment is amortized into income or expense until the original expiration date of that swap. Any unamortized portion of the receipt or payment is recorded as a deferred debit or credit in long-term liabilities. MSD has swap agreement terminations with outstanding balances accreting to non-operating revenue as follows:

- On January 24, 2001, MSD terminated a nineteen-year interest rate swap agreement for $100,000 of its fixed-rate 1999 Series Sewer and Drainage Revenue Bonds. The termination of this swap agreement resulted in the receipt of a payment in the amount of $7,935. This payment will be amortized annually into income until 2019, the original termination date on the agreement.

- In April 2006, MSD entered into a swap agreement with Deutsche Bank AG for an initial notional amount of $171,405 which provided that beginning May 15, 2006, a net payment will be made based on MSD paying 78.78% of the 3-month LIBOR Index on the notional amount and receiving 73.45% of the 5-year LIBOR Index on the notional amount. On January 23, 2008, MSD terminated this swap agreement and received a termination payment of $4,170 that will be amortized until 2023, the original termination date of the agreement.

- On January 25, 2008, MSD terminated a twenty-seven year Floating to Floating (Basis) Interest Rate Swap agreement with a notional amount of $282,165. MSD entered into this agreement with Morgan Stanley in April 2006 and paid 67% of the 1-Month LIBOR index and received 62.2% of the 5-Year LIBOR Index. The termination of this Swap agreement resulted in the receipt of a payment in the amount of $5,756. This payment will be amortized annually into income until 2033, the original termination date of the agreement.

- In May and June of 2013, MSD terminated two Floating to Fixed Interest Rate swap agreements, two Basis swap agreements and three Reversal swap agreements. Additionally, MSD partially terminated two Floating to Fixed Interest Rate swap agreements. The termination value of all swap agreements resulted in a net payment by MSD of $152. This action will result in a savings of $13.5 million over the next ten years.

(Dollars in thousands)

NOTE 7 LONG-TERM DEBT (Continued)

Derivatives:

At June 30, 2014 MSD had the following derivative instruments outstanding:

Item	Counter-Party	Initial Notional Amount	Current Notional Amount	Payment Start Date	Termination Date	MSD Payment Terms	MSD Receipt Terms	6/30/2014 Fair Value	6/30/2013 Fair Value	Change in Fair Value
A	Wells Fargo	$ 225,732	$ 180,716	11/15/2009	5/15/2033	4.4215%	67% of 30-day LIBOR	$ (58,897)	$ (57,923)	$ (974)
B	Bank of America	56,433	45,284	11/15/2009	5/15/2033	4.4215%	67% of 30-day LIBOR	(14,743)	(14,495)	(248)
	Total	$ 282,165	$ 226,000					$ (73,640)	$ (72,418)	$ (1,222)

LIBOR = London Interbank Offering Rate
SIFMA = Securities Industry and Financial Markets Association

A comparative summary of the change in fair value of swaps for the years ended June 30, 2014 and 2013 follows:

	2014	2013
Fair value - beginning of year	$ (72,418)	$ (108,704)
Change in fair value	(1,222)	36,286
Fair value - end of year	$ (73,640)	$ (72,418)

MSD originally entered into interest rate swaps as a hedging derivative instrument. The interest rate swaps were found to be ineffective as of June 30, 2010, based on evaluation and consideration of consistent critical terms and quantitative methods. The total of investment derivatives are reported as interest rate swaps on the Statement of Net Position. All changes in fair value of the derivatives are recorded as a separate component of non-operating revenue (expense).

MSD's outstanding swaps consist of two Floating-to-Fixed swaps described as follows:

Floating-to-Fixed Swaps are structured so that the notional amount of the swap decreases over time corresponding to the maturity and sinking fund schedule of the actual or expected bond issue being hedged. The Floating-to-Fixed swaps have been done on a forward basis with the swap payments starting at a future date when MSD anticipates refunding outstanding debt, which can be issued as variable rate bonds or short-term notes. In 2001, MSD entered into two swaps (A and B) for a synthetic advance refunding of its Series 1999A Bonds. In 2002, MSD entered into two swaps (C and D) for a synthetic advance refunding of its Series 1993 Bonds, and subsequently issued variable-rate Series 2003 Bonds to complete the refunding.

(Dollars in thousands)

NOTE 7 LONG-TERM DEBT (Continued)

Derivatives - (Continued)

Credit Risk:

MSD has implemented steps to safeguard it against the risks associated with the aforementioned swap transactions. If the counter-party does not maintain A1/A+ ratings from Moody's and Standard and Poor's, the swaps contain provisions that require them to be marked to market weekly with monthly statements sent to MSD and the value will be collateralized with U.S. Treasury and Agency securities with the securities held by a tri-party custodian approved by MSD. All costs of collateralization will be borne by the downgraded party who must post the collateral. In addition, the October 2002 (A and B) swaps were awarded to multiple firms to further mitigate the credit risk associated with the transactions. The credit ratings as of 6/30/2014 for the counter-parties are as follows:

	Credit Ratings	
Rating Agency	Moody's	Standard & Poor's
Bank of America	A2	A
Wells Fargo	Aa3	AA -

The agreements also provide for automatic termination if MSD's unenhanced bond rating is downgraded below BBB/Baa. MSD's obligations under all of its outstanding swap agreements are unsecured and subordinate to all bonds issued and outstanding.

The positive and negative fair values of the swap agreements were provided by a third-party financial advisor. The net swap payments made in FY 2014 and FY 2013 were $9,733 and $10,200 respectively.

Arbitrage Rebate Liability:

Federal tax regulations generally require the periodic payment to the U.S. Treasury of investment earnings on the proceeds of an issue of tax-exempt municipal bonds to the extent those earnings exceed the yield on the bonds. Such payments, known as arbitrage rebate, are normally payable every fifth year following the issuance of a series of bonds and upon the retirement of the bond issue. As of June 30, 2014 and 2013, MSD's accrued liability for arbitrage rebate was $0 and $0 respectively.

(Dollars in thousands)

NOTE 8 SHORT TERM DEBT

A summary of short term debt activity is provided below:

- On November 6, 2013 MSD issued $226,340 of Sewer and Drainage System Subordinated Bond Anticipation Notes, Series 2013A Notes with an interest rate of 2.00%. The proceeds of the notes were used to refinance the 2012A Notes. The 2013A Notes mature on November 26, 2014.

A comparative summary of short term debt for the years ended June 30, 2014 and 2014 follows:

	June 30, 2014	June 30, 2013
Short-term debt - beginning of year	$ 228,691	$ 226,340
Debt incurred	226,340	228,735
Principal paid on debt	(226,430)	(226,384)
Short-term debt - end of year	$ 228,601	$ 228,691

NOTE 9 RETIREMENT PLAN AND POSTRETIREMENT BENEFITS

Plan Description: MSD contributes to the County Employees Retirement System (CERS) which is a cost-sharing multiple-employer defined benefit pension plan administered by the Kentucky Retirement System, an agency of the Commonwealth of Kentucky. The CERS provides for retirement, disability and death benefits to plan members and beneficiaries. The Kentucky Retirement System issues a publicly available financial report that includes financial statements and required supplemental information for the CERS. That report may be obtained by writing to the Kentucky Retirement System, 1260 Louisville Road, Frankfort, Kentucky 40601-6124.

Funding Policy: Plan members hired before September 1, 2008 are required to contribute 5% of their creditable compensation. MSD is required to contribute at an actuarially determined rate. Plan members hired after September 1, 2008 contribute 6%. The employer contribution rates for the years ending June 30, 2014, 2013, and 2012 were 18.89%, 19.55% and 18.96% respectively, of participating employees' compensation.

Annual Pension Cost: The contribution requirements of plan members and MSD are established and may be amended by the CERS Board of Trustees. MSD's contributions to the CERS for the years ending June 30, 2014, 2013 and 2012 were $7,122, $7,219 and $7,156 respectively, equal to 100% of the required contributions for each year.

Healthcare Plan: The Kentucky Retirement Systems Insurance Fund ("Fund") was established to provide hospital and medical insurance for members receiving benefits from CERS, the Kentucky Employees Retirement System and the State Police Retirement System. The Fund pays a prescribed contribution for whole or partial payment of required premiums to purchase hospital and medical insurance. For the fiscal year ended June 30, 2014 and 2013, insurance premiums withheld from benefit payments for members of CERS were approximately $27,800 each year.

(Dollars in thousands)

NOTE 10 RISK MANAGEMENT

MSD is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; natural disasters; and injuries to MSD's employees. These risks are provided for through various programs.

MSD participates in the Louisville Area Governmental Self-Insurance Trust ("The Trust"). The Trust, which is certified by the Kentucky Department of Insurance to practice as a "group liability self-insurance trust," was created on January 1, 1987. Trust members currently include the Louisville Metro Government, six smaller cities, and six government agencies. The Trust was formed to provide better risk protection and lower cost liability insurance by sharing the risk with all of its members. MSD's payments to the Trust are reflected on the financial statements as an expense. The Trust provides, after a $300 deductible various liability coverage up to $5,000 per occurrence. Excess insurance may provide an additional $2,000 of coverage, above the Trust $5 million, to MSD. The amount of coverage available to MSD could be limited by the total assets of the Trust. For fiscal year 2014, the LAGIT Trust did not make any MSD claim payments.

MSD has chosen to self-insure the basic worker's compensation insurance. Claims administration is handled by a third-party administrator and includes claims monitoring, check issuance, settlement negotiations and loss control services. Liabilities are reported when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated. A separate insurance policy provides coverage in excess of $300 for catastrophic injury claims by an employee or several employees as a result of a single occurrence.

A roll forward of for worker's compensation claims follows:

	June 30, 2014	June 30, 2013	June 30, 2012
Liability - beginning of year	$ 1,832	$ 1,757	$ 1,723
Claims and changes in estimates	760	1,433	977
Payments	(864)	(1,358)	(943)
Liability - end of year	$ 1,728	$ 1,832	$ 1,757

MSD joined the Louisville Area Governmental General Insurance Trust ("Property Self-Insurance Trust") in September 2002. The Property Self-Insurance Trust was created to provide lower cost to participants and broader coverage for property risks.

MSD is responsible for covered property damage up to $100, except for flood and vehicle collision coverage, which have separate deductibles. The Property Self-Insurance Trust provides coverage for the next $900 per occurrence, except for Flood Zone A locations. An excess insurance policy with a third-party carrier covers claims in excess of $1,000.

In the past three fiscal years (2012-2014), the LAGIT Trust has paid a total of $470 on two MSD liability claims and the LAGGIT Trust paid $602 on one MSD property claim and $112 on another MSD hail claim that exceeded MSD's deductibles under the Trusts. There have been no changes in MSD's self-insurance coverage from the prior year.

NOTE 11 DEFERRED COMPENSATION

MSD offers its employees deferred compensation plans created in accordance with Internal Revenue Service Code Sections 401(k) and 457. These plans, available to all MSD employees, permit them to defer the payment of a portion of their salary until future years. Participation in these plans is voluntary and MSD makes no contributions to these plans on behalf of the employee. The deferred compensation is not available to employees until termination, retirement, death, or unforeseen emergency. All amounts of compensation deferred, including the investments and earnings thereon, vest with the employee and are not subject to the claims of MSD's general creditors.

NOTE 12 COMMITMENTS AND CONTINGENCIES

Sale of Sewer Assessments:

MSD has entered into agreements to sell sanitary sewer assessments to a local bank. These assessments reflect the portion of the cost that residents pay to have sewer lines installed in their neighborhood. Residents are given the opportunity to pay the assessment in full or to finance it over a twenty-year period at 7% interest per annum. The original agreement called for the bank to accept up to $25,000 of outstanding assessments and for MSD to receive 104% of the face value of the assessments.

The subsequent agreement allows an additional $5,000 of assessments to be sold to the bank at face value. These agreements give the bank the option to place the assessments back to MSD if the payments of the property owner are ninety days in arrears or the property owner does not respond to the bank's demand for payment within a ninety day period after the issuance of the assessment. Sales to the bank are net of any subsequent repurchases of warrants by MSD. The unpaid principal balance of loans held by the bank at June 30, 2014 and 2013 was $2,544 and $3,101, respectively.

EPA Consent Decree:

In April 2005, MSD agreed to enter into a Consent Decree with the Commonwealth of Kentucky's Environmental and Public Protection Cabinet ("The Cabinet") and the U.S. Environmental Protection Agency ("EPA").

The Consent Decree calls for MSD to submit a final Long-Term Control Plan ("LTCP") to The Cabinet/EPA for review and joint approval by December 31, 2008, which was completed. The final LTCP includes schedules, deadlines, and timetables for projects to be completed by December 31, 2020. In addition, a Sanitary Sewer Discharge Plan ("SSDP") was due by December 31, 2008, which was completed. The SSDP includes schedules and deadlines for capital projects to be completed by the end of 2024. The cost of the projects is estimated to be $850,000.

Also, MSD agreed to pay a civil penalty to the Commonwealth of Kentucky in the amount of one million dollars ($1,000) to resolve the violations alleged in the Cabinet's and EPA's complaints up through the date of entry of the Consent Decree. The agreement also calls for MSD to perform supplemental environmental projects (SEPS) at an amount of not less than $2,250. MSD neither admitted nor denied the alleged violations but acknowledged that discharges occurred and accepted the obligations imposed in the Consent Decree. The Consent Decree, as negotiated, was entered by the U.S. District Court Judge on August 12, 2005. In April 2009, MSD agreed to enter into an Amended Consent Decree with the Commonwealth of Kentucky's Environmental and Public Protection Cabinet and the EPA. The agreement called for MSD to design and implement projects within specified deadlines that will eliminate sewer overflows in its service area. In a letter dated June 6, 2014, MSD requested approval from the

KEPPC and the EPA for the IOAP 2012 Modifications, dated May 2014. The IOAP 2012 Modifications represents a revision to 28 separate projects set forth in the original IOAP, dated September 30, 2009. The IOAP Modifications were approved and will supersede and replace the 2009 IOAP. To date, MSD has complied with all submittals and reports requirements contained in the Amended Consent Decree. The enforcement actions initiated by the EPA are not unique in the wastewater treatment industry. Several wastewater utilities have signed, or are in the process of signing, Consent Decrees. In the opinion of MSD, the resolution of any violations will not result in material adverse affect on the operation, property or finances of MSD.

Other Matters:

MSD is a defendant in various lawsuits. Although the outcome of these lawsuits is not presently determinable, it is the opinion of the MSD's management that resolution of these matters will not have a material adverse effect on the financial statements of MSD.

The value of construction contracts signed, where work has not yet been performed at June 30, 2014, amounted to $108,823, and was $46,450 at June 30, 2013.

NOTE 13 SUBSEQUENT EVENTS

On August 1, 2014, MSD's rates for wastewater and stormwater charges increased by 5.5%.

MSD plans to issue $80,000 of Revenue Bonds in November 2014 to fund capital projects.

MSD plans to issue $226,340 of Bond Anticipation Notes in November 2014 to refinance the 2013A Notes.

STATISTICAL SECTION

This section of the Louisville & Jefferson County Metropolitan Sewer District's (MSD) Comprehensive Annual Financial Report presents detailed information as a supplement to the information presented in the financial statements and note disclosures to assist readers in assessing MSD's overall financial health.

Contents **Page**

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
COMPARATIVE SCHEDULES OF DEBT SERVICE COVERAGE
YEARS ENDED JUNE 30
($ in thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Revenues:										
Service charges	$ 214,056	$ 205,222	$ 190,482	$ 183,297	$ 168,610	$ 163,004	$ 156,889	$ 126,490	$ 122,643	$ 113,561
Other operating income	2,576	4,823	1,756	2,379	2,980	4,552	4,394	5,966	7,122	9,288
Assessments	2,129	2,392	2,405	2,740	7,093	4,387	2,251	8,237	6,796	10,731
Investment income	20,330	20,119	40,687	33,700	36,045	25,568	6,085	8,417	5,558	14,503
Less: capitalized investment income	-	(3,817)	(1,851)	(12,134)	(5,990)	-	(1,190)	(3,747)	(1,594)	(6,245)
Total revenues	239,091	228,739	233,479	209,982	208,738	197,511	168,429	145,363	140,525	141,838
Operating expenses:										
Service and administrative costs	106,921	108,041	108,325	107,307	101,068	93,935	96,845	89,194	86,433	78,835
Less: capitalized project costs	(33,568)	(33,110)	(33,200)	(30,308)	(28,129)	(25,257)	(26,510)	(25,715)	(25,387)	(25,286)
Total operating expenses	73,353	74,931	75,125	76,999	72,939	68,678	70,335	63,479	61,046	53,549
Net revenues	165,738	153,808	158,354	132,983	135,799	128,833	98,094	81,884	79,479	88,289
Aggregate debt service:										
Current maturities of long-term debt	28,525	27,035	25,740	24,840	23,785	23,105	21,255	18,190	17,250	15,685
Interest expense	80,613	92,616	89,243	78,954	69,949	72,776	66,918	70,548	66,162	72,395
Less: capitalized interest expense	(19,103)	(26,358)	(26,384)	(25,195)	(13,910)	-	(10,530)	(14,140)	(15,758)	(26,603)
Aggregate net debt service	$ 90,035	$ 93,293	$ 88,599	$ 78,599	$ 79,824	$ 95,881	$ 77,643	$ 74,598	$ 67,654	$ 61,477
Debt service coverage ratio	184%	165%	179%	169%	170%	134%	126%	110%	117%	144%

This table has been prepared using the definitions of revenue, expense and debt service contained in MSD's 1993 Sewer & Drainage System Revenue Bond Resolution.

The 1993 Resolution and its supplements require MSD to provide "Available Revenues", as defined in the Resolution, sufficient to pay 110% of each fiscal year's "Aggregate Net Debt Service" on Revenue Bonds and 100% of "Operating Expenses". "Available Revenues", as used only for purposes of the Resolution, means all revenues and other amounts received by MSD and pledged as security for payment of Bonds issued pursuant to the Resolution, but excludes any interest income which is capitalized in accordance with generally accepted accounting principles. "Operating Expenses" includes all reasonable, ordinary, usual or necessary current expenses of maintenance, repair and operation determined in accordance with generally accepted accounting principles and the enterprise basis of accounting. "Operating Expenses" does not include reserves for extraordinary maintenance and repair, nor does it include administrative and engineering expenses of MSD which are necessary or incidental to capital improvements for which debt has been issued and which may be paid from the proceeds of such debt. "Aggregate Net Debt Service" is aggregate current principal and interest requirements on all Bonds issued pursuant to the Resolution, excluding (i) interest expense, which in accordance with generally accepted accounting principles, is capitalized and which may be paid from the proceeds of debt, and (ii) other amounts, if any, available, or expected to become available in the ordinary course for payment of principal and interest, and not included in "Available Revenues".

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENT OF NET POSITION
JUNE 30
($ in thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Current Assets:										
Unrestricted cash and cash equivalents	$ 84,780	$ 66,376	$ 12,040	$ 34,508	$ 24,700	$ 22,552	$ 10,524	$ 1,912	$ 17,198	$ 28,732
Unrestricted investments	100	100	100	100	100	7,733	14,379	24,935	18,645	7,163
Restricted cash and cash equivalents	39,507	62,249	227,327	112,559	58,923	35,988	105,299	3,133	24	65,423
Restricted investments	121,216	90,574	94,639	294,868	394,880	61,303	27,202	73,801	134,850	33,934
Accounts receivable	21,809	18,465	16,666	17,789	15,779	18,065	16,732	15,398	17,401	13,716
Inventories	3,808	3,579	3,484	3,435	3,110	3,027	3,020	3,091	2,874	3,090
Prepaid expenses and other current assets	2,636	2,110	1,862	2,841	2,513	1,965	2,020	1,181	1,359	803
Total current assets	273,856	243,453	356,118	466,100	500,005	150,633	179,176	123,451	192,351	152,861
Long-term receivables	16,358	17,549	18,917	21,260	22,527	25,146	26,334	28,749	27,778	29,712
Unamortized bond issuance costs	17,143	18,713	16,959	15,351	13,418	74,477	32,705	-	-	-
Plant, Lines and Other facilities:										
Completed projects	2,753,762	2,702,448	2,560,403	2,498,355	2,445,755	2,314,406	2,281,413	2,149,779	2,049,762	1,874,875
Less: Accumulated depreciation	(946,427)	(884,199)	(825,205)	(768,423)	(734,552)	(680,380)	(628,296)	(578,643)	(527,799)	(477,624)
	1,807,335	1,818,249	1,735,198	1,729,932	1,711,203	1,634,026	1,653,117	1,571,136	1,521,963	1,397,251
Construction in progress	463,167	371,816	370,350	272,850	140,134	182,711	136,695	193,420	211,761	297,705
Net plant, lines and other facilities	2,270,502	2,190,065	2,105,548	2,002,782	1,851,337	1,816,737	1,789,812	1,764,556	1,733,724	1,694,956
Total assets	$ 2,577,859	$ 2,469,780	$ 2,497,542	$ 2,505,493	$ 2,387,287	$ 2,066,993	$ 2,028,027	$ 1,916,756	$ 1,953,853	$ 1,877,529
Deferred outflow of resources	17,811	13,511	15,176	16,842	18,507	14,743	16,020	19,859	21,779	22,699
Total assets and deferred outflows	$ 2,595,670	$ 2,483,291	$ 2,512,718	$ 2,522,335	$ 2,405,794	$ 2,081,736	$ 2,044,047	$ 1,936,615	$ 1,975,632	$ 1,900,228

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENT OF NET POSITION
JUNE 30
($ in thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Liabilities:										
Current liabilities (payable from current assets):										
Accounts payable and accrued expenses	$ 13,653	$ 12,693	$ 16,470	$ 15,732	$ 11,141	$ 11,035	$ 10,548	$ 16,639	$ 22,619	$ 17,781
Total current liabilities (payable from current assets)	13,653	12,693	16,470	15,732	11,141	11,035	10,548	16,639	22,619	17,781
Current liabilities (payable from restricted assets):										
Accounts payable and accrued expenses	14,712	16,168	12,656	15,105	13,692	7,735	5,250	4,239	1,072	5,863
Accrued interest	12,834	12,458	13,959	12,360	14,701	8,143	8,597	10,824	10,456	9,768
Subordinated Debt	228,601	228,691	226,340	226,340	452,680					
Current maturities of bonds payable	28,525	27,035	25,740	24,840	23,785	23,105	21,255	18,190	17,250	15,685
Refundable Deposits	1,568	1,137	1,013	1,341	1,622	3,478	4,209			
Total Current liabilities (payable from restricted asset	286,240	285,489	279,708	279,986	506,480	42,461	39,311	33,253	28,778	31,316
Non-current liabilities:										
Bonds payable	1,549,700	1,478,225	1,536,770	1,591,670	1,302,000	1,385,185	1,421,825	1,327,095	1,345,785	1,263,665
Unamortized debt premium/discount	60,263	56,764	45,841	25,646	9,562	8,912	16,685	14,312	14,975	15,637
Other long-term liabilities	761	973	5,663	5,561	1,630	2,114	2,375	2,632	2,890	3,117
Total long-term debt	1,610,724	1,535,962	1,588,274	1,622,877	1,313,192	1,396,211	1,440,885	1,344,039	1,363,650	1,282,419
Total liabilities	1,910,617	1,834,144	1,884,452	1,918,595	1,830,813	1,449,707	1,490,744	1,393,931	1,415,047	1,331,516
Deferred inflow of resources	82,293	82,233	119,680	67,948	82,185	74,942	2,784	(8,690)	(8,878)	(9,563)
Net position:										
Net investment in capital assets	368,346	365,225	313,575	363,334	450,753	470,445	478,833	479,305	489,973	497,314
Restricted for payment of bond principal & interest	148,451	136,939	157,002	141,217	334,186	100,225	135,537	7,034	8,927	14,133
Unrestricted	85,963	64,750	38,009	31,241	(292,143)	(13,583)	(63,851)	65,035	70,563	66,828
Total net position	602,760	566,914	508,586	535,792	492,796	557,087	550,519	551,374	569,463	578,275
Total liabilities, deferred inflows and net position	$2,595,670	$2,483,291	$2,512,718	$2,522,335	$2,405,794	$2,081,736	$2,044,047	$1,936,615	$1,975,632	$1,900,228

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENTS OF REVENUES, EXPENSES AND CHANGE IN NET POSITION
YEARS ENDED JUNE 30
($ in thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Operating revenue:										
Wastewater service charges	$ 165,599	$ 159,791	$ 149,626	$ 145,880	$ 133,853	$ 130,661	$ 125,782	$ 96,594	$ 93,907	$ 87,653
Stormwater service charges	48,457	45,431	40,856	37,417	34,757	32,343	31,107	29,896	28,736	25,908
Other operating income	2,576	4,823	1,756	2,379	2,980	4,552	4,394	5,956	7,122	9,288
Total operating revenue	216,632	210,045	192,238	185,676	171,590	167,556	161,283	132,446	129,765	122,849
Operating expenses:										
Service and administrative costs	106,921	108,041	108,326	107,307	101,068	93,935	96,845	90,157	86,433	78,835
Capitalization/recovery of cost	(33,568)	(32,200)	(30,860)	(30,472)	(28,129)	(24,401)	(26,510)	(26,678)	(25,387)	(25,286)
Capitalized overhead (over) under applied	-	(910)	(2,340)	164	(2,988)	(856)	-	-	-	-
Depreciation and amortization	63,516	60,335	60,527	58,741	58,513	56,727	55,363	52,177	51,174	43,161
Total operating expenses	136,869	135,266	135,653	135,740	128,464	125,405	125,698	115,656	112,220	96,710
Income from operations	79,763	74,779	56,585	49,936	43,126	42,151	35,585	16,790	17,545	26,139
Non-operating revenue (expense):										
Gain (loss) on disposal of assets	-	45	(19)	194	-	(64)	(122)	-	-	-
Investment Income	20,330	16,301	40,687	33,700	36,045	25,568	4,895	4,670	3,964	8,259
Interest expense - bonds	(80,613)	(92,616)	(89,243)	(78,954)	(69,949)	(69,893)	(56,388)	(56,408)	(50,404)	(45,792)
Interest expense - swaps	(9,733)	(10,200)	(11,235)	(11,627)	(8,815)	(2,883)	-	-	-	-
Interest expense - other	115	241	437	(1,833)	(3,723)	-	-	-	-	-
Capitalized Interest	19,103	26,358	26,384	25,195	13,910	-	-	-	-	-
Decrease upon hedge termination	-	-	-	-	(58,556)					
Change in fair values - swaps	(1,222)	36,286	(52,897)	22,638	(19,889)	-	-	-	-	-
Total non-operating revenue (expenses)	(52,020)	(23,585)	(85,886)	(10,687)	(110,977)	(47,272)	(51,615)	(51,738)	(46,440)	(37,533)
Income / (loss) before contributions	27,743	51,194	(29,301)	39,249	(67,851)	(5,121)	(16,030)	(34,948)	(28,895)	(11,394)
Contributions										
Property owner assessments	-	-	-	334	(545)	2,239	164	7,634	4,862	12,478
All other	8,103	7,134	2,095	3,413	4,105	9,450	15,011	9,225	15,221	15,388
Change in net position	35,846	58,328	(27,206)	42,996	(64,291)	6,568	(855)	(18,089)	(8,812)	16,472
Net position, beginning of year	566,914	508,586	535,792	492,796	557,087	550,519	551,374	569,463	578,275	561,803
Net position, end of year	$ 602,760	$ 566,914	$ 508,586	$ 535,792	$ 492,796	$ 557,087	$ 550,519	$ 551,374	$ 569,463	$ 578,275

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
COMPARATIVE STATEMENTS OF CASH FLOWS
YEARS ENDED JUNE 30
($ In thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Cash flows from operating activities:										
Cash received from customers	$ 213,215	$ 207,905	$ 193,446	$ 182,976	$ 171,641	$ 166,123	$ 159,539	$ 134,160	$ 125,918	$ 123,269
Cash paid to suppliers and employees	(73,175)	(79,926)	(76,077)	(72,566)	(72,426)	(66,297)	(72,227)	(69,536)	(56,548)	(45,851)
Net cash provided by operating activities	140,040	127,979	117,369	110,410	99,215	99,826	87,312	64,624	69,370	77,418
Cash flows from capital and related financing activities:										
Proceeds from issuance of revenue bonds	100,000	115,790	263,360	330,000	405,770	76,275	166,125	-	100,000	64,740
Proceeds from subordinated debt	226,340	228,735	226,340	226,340	452,680	-	-	-	-	-
Capital contributed by governments, property owners & developers	8,103	7,134	2,095	3,747	3,560	11,689	15,174	16,861	1,460	2,838
Build America Bond Interest Income	10,096	10,986	10,986	7,978	2,260					
Assessments receivable	1,695	1,833	1,930	1,676	2,998	557	2,703	(645)	-	-
Interest income - assessments	687	731	852	994	1,588	1,471	1,405	1,670	-	-
Principal paid on revenue bonds	(27,035)	(173,040)	(317,360)	(39,275)	(488,275)	(95,045)	(84,350)	(17,250)	(16,815)	(79,620)
Interest paid on revenue bonds	(91,719)	(98,944)	(94,240)	(86,191)	(70,192)	(69,063)	(69,145)	(70,180)	(65,474)	(26,751)
Acquisition and construction of capital assets	(121,962)	(113,049)	(119,581)	(172,455)	(87,545)	(75,504)	(81,044)	(65,669)	(67,035)	(109,200)
Retainage payable	725	(95)	(407)	4,639	955	(466)	430	(33)	-	-
Acquisition of non-operating property	(211)	(223)	(213)	(221)	(484)	(261)	(257)	(258)	-	-
Principal paid on subordinated debt	(226,430)	(226,384)	(226,340)	(452,680)	-	-	-	-	-	-
Net cash (used in) provided from capital & related financing activities	(119,711)	(246,526)	(252,578)	(175,448)	223,315	(150,347)	(48,959)	(135,504)	(47,864)	(147,993)
Cash flows from investing activities:										
Restricted Investments	(30,642)	4,064	200,229	100,012	(333,577)	(34,101)	45,656	-	-	-
Unrestricted Investments	-	-	-	-	7,633	6,646	10,555	-	-	-
Assessment principal payments	-	-	-	-	-	-	-	-	8,621	10,301
Interest received on termination of swap agreement	-	-	-	-	-	-	-	-	-	(421)
Purchase of investment securities	-	-	-	-	-	-	-	(72,800)	(303,998)	(100,889)
Proceeds from sale and maturities of investment securities	-	-	-	-	-	-	-	137,908	177,341	110,070
Income received on investments	15,897	14,130	38,705	40,287	37,519	24,936	4,889	7,642	5,551	14,155
Interest expense - swap agreements	(9,733)	(10,200)	(11,235)	(11,627)	(8,832)	(4,166)	-	-	-	-
Unamortized premium on forward delivery agreement	(189)	(189)	(190)	(190)	(190)	(77)	1,399	-	-	-
Unamortized gain on termination of swap agreements	-	-	-	-	-	-	9,926	-	-	-
Net cash (used in) provided from investing activities	(24,667)	7,805	227,509	128,482	(297,447)	(6,762)	72,425	72,750	(112,485)	33,216
Net increase (decrease) in cash and cash equivalents	(4,338)	(110,742)	92,300	63,444	25,083	(57,283)	110,778	1,870	(90,979)	(37,359)
Cash and cash equivalents, beginning of year	128,625	239,367	147,067	83,623	58,540	115,823	5,045	3,176	94,155	131,514
Cash and cash equivalents, end of year	$ 124,287	$ 128,625	$ 239,367	$ 147,067	$ 83,623	$ 58,540	$ 115,823	$ 5,045	$ 3,176	$ 94,155

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
COMPARATIVE SUMMARIES OF OPERATING REVENUE
YEARS ENDED JUNE 30
($ in thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Service charges:										
Wastewater service charges:										
Residential	$ 89,691	$ 86,409	$ 80,779	$ 78,552	$ 73,228	$ 71,159	$ 64,978	$ 48,338	$ 47,555	$ 43,320
Commercial	58,812	57,192	53,116	46,598	42,741	42,312	38,935	28,892	27,619	25,274
Industrial	19,738	19,536	18,063	21,498	18,948	18,216	21,324	18,431	17,279	17,142
Other - net	2,611	2,267	2,219	1,847	1,756	1,601	2,382	1,993	1,454	1,917
Free sewer to Metro Governmen	(5,253)	(5,613)	(4,551)	(2,615)	(2,820)	(2,627)	(1,837)	(1,060)		
Total wastewater service charge	165,599	159,791	149,626	145,880	133,853	130,661	125,782	96,594	93,907	87,653
Stormwater service charges:										
Residential	18,522	17,372	15,907	14,776	13,613	12,709	12,198	11,617	11,205	10,304
Commercial	27,910	26,123	23,017	20,862	19,433	18,012	17,276	16,741	15,683	13,854
Industrial	3,112	2,956	2,575	2,351	2,189	2,064	1,988	1,930	1,848	1,750
Free drainage to Metro Governm	(1,087)	(1,020)	(643)	(572)	(478)	(442)	(355)	(392)		
Total stormwater service charge	48,457	45,431	40,856	37,417	34,757	32,343	31,107	29,896	28,736	25,908
Total service charges	214,056	205,222	190,482	183,297	168,610	163,004	156,889	126,490	122,643	113,561
Other operating income:										
Capacity charges	1,620	1,624	335	446	564	820	2,521	2,538	4,772	6,925
Connection fees	133	93	64	71	68	47	172	146	220	411
Regional facilities fees	-	-	-	-	-	-	-	(11)	357	513
Reserve capacity charges	-	64	-	-	11	28	37	5	22	40
Wastewater miscellaneous	823	2,984	1,299	1,804	2,279	3,599	1,606	3,220	1,693	1,342
Stormwater miscellaneous	-	58	58	58	58	58	58	58	58	57
Total other operating income	2,576	4,823	1,756	2,379	2,980	4,552	4,394	5,956	7,122	9,288
Total operating revenue	$ 216,632	$ 210,045	$ 192,238	$ 185,676	$ 171,590	$ 167,556	$ 161,283	$ 132,446	$ 129,765	$ 122,849

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
COMPARATIVE SUMMARIES OF SERVICE AND ADMINISTRATIVE COSTS
YEARS ENDED JUNE 30
($ in thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Service and administrative costs:										
Labor	$ 55,356	$ 55,028	$ 55,010	$ 56,358	$ 52,945	$ 49,354	$ 49,431	$ 47,079	$ 42,287	$ 40,948
Utilities	14,563	12,821	14,555	13,853	11,879	10,818	12,989	10,976	12,518	10,119
Materials and supplies	8,151	8,990	8,972	9,043	9,031	8,742	8,707	8,197	7,745	6,625
Professional services	1,932	3,942	2,416	2,624	2,363	2,730	3,126	2,797	2,543	2,698
Maintenance and repairs	9,096	10,866	11,090	10,054	8,847	9,675	8,926	8,035	7,762	5,874
Billing and collections	4,095	4,904	4,309	4,318	4,461	3,623	5,319	2,889	3,869	3,371
Chemicals and fuel	5,143	5,907	5,714	5,702	6,099	5,687	5,148	4,825	5,088	4,099
Biosolids disposal	1,795	1,709	1,759	2,035	2,186	2,063	1,661	1,412	1,554	1,451
All other	7,238	4,369	4,901	3,694	3,638	2,817	2,800	3,947	3,067	3,650
Gross service and administrative costs	107,369	108,536	108,726	107,681	101,449	95,509	98,107	90,157	86,433	78,835
Less: Recovery of cost										
Capitalized project cost	(33,568)	(33,110)	(33,200)	(30,472)	(28,129)	(24,401)	(26,510)	(25,715)	(24,450)	(24,419)
Revenue recoveries	(448)	(495)	(400)	(374)	(381)	(1,574)	(1,262)	(963)	(937)	(867)
Recovery of cost	(34,016)	(33,605)	(33,600)	(30,846)	(28,510)	(25,975)	(27,772)	(26,678)	(25,387)	(25,286)
Net service and administrative costs	$ 73,353	$ 74,931	$ 75,126	$ 76,835	$ 72,939	$ 69,534	$ 70,335	$ 63,479	$ 61,046	$ 53,549

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
COMPARATIVE SCHEDULES OF PLANT, LINES AND OTHER FACILITIES
YEARS ENDED JUNE 30
($ in thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Completed projects										
Sewer lines	$ 1,274,180	$ 1,265,437	$ 1,179,685	$ 1,159,437	$ 1,134,637	$ 1,042,742	$ 1,022,859	$ 963,798	$ 915,527	$ 819,349
Wastewater treatment facilities	489,289	479,998	479,226	471,190	470,527	459,238	456,955	422,483	418,997	389,747
Stormwater drainage facilities	448,899	443,577	437,139	434,943	427,431	400,118	390,699	366,745	337,039	308,282
Pumping and lift stations	96,819	89,503	73,023	71,122	70,643	69,301	66,990	60,877	55,407	51,389
Administrative facilities	49,342	49,317	46,068	46,078	45,561	45,561	45,561	45,347	45,347	45,239
Maintenance facilities	8,037	8,037	8,037	8,037	7,827	7,827	7,833	7,313	7,470	7,395
Machinery, equipment and other	85,395	83,882	77,068	71,923	93,240	74,975	75,872	62,526	58,613	56,749
Capitalized interest	301,800	282,697	260,157	235,624	222,564	214,644	214,644	220,690	211,362	196,725
Total completed projects	2,753,761	2,702,448	2,560,403	2,498,354	2,472,430	2,314,406	2,281,413	2,149,779	2,049,762	1,874,875
Less accumulated depreciation	(946,426)	(884,199)	(825,205)	(768,423)	(734,552)	(680,380)	(628,296)	(578,643)	(527,799)	(477,624)
Total completed projects - net	1,807,335	1,818,249	1,735,198	1,729,931	1,737,878	1,634,026	1,653,117	1,571,136	1,521,963	1,397,251
Total construction in progress	463,167	371,816	370,350	272,850	140,134	182,711	136,695	193,420	211,761	297,705
Total net plant, lines and other facilities	$ 2,270,502	$ 2,190,065	$ 2,105,548	$ 2,002,781	$ 1,878,012	$ 1,816,737	$ 1,789,812	$ 1,764,556	$ 1,733,724	$ 1,694,956

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
WASTEWATER TREATMENT PLANT CAPACITY
YEARS ENDED JUNE 30
($ in thousands)

Plant	Design Capacity MGD	Avg Daily Flow MGD	Eventual Capacity MGD	Customer Base Residential	Customer Base Commercial	Customer Base Industrial	Total	Year Built	Treatment Process
Morris Forman	120.0	92.9	120.0	122,935	14,674	410	138,019	1958	Secondary added in 1972.
Derek R. Guthrie*	30.0	32.3	45.0	61,456	3,826	24	65,306	1986	Secondary
Jeffersontown	4.0	3.6	4.0	5,844	891	14	6,749	1956	Secondary
Hite Creek	6.0	4.5	8.0	7,441	519	5	7,965	1970	Tertiary: sand filter
Cedar Creek	7.5	3.8	7.5	10,140	234	-	10,374	1995	Tertiary: sand filter
Floyd's Fork	6.5	2.7	9.8	7,270	323	1	7,594	2001	Tertiary: sand filter
13 Small WQTC**	2.6	1.3	-	4,046	121	-	4,167	Most 1970s	Various: developer-built package plants
Total treatment system	176.6	141.1	194.3	219,132	20,588	454	240,174		

* Formerly known as the West County WTP
** Lake Forest / Chenoweth Run WQTC eliminated in July 2012
Source: MSD Engineering Department

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
GREATER LOUISVILLE/KENTUCKIANA
EMPLOYERS OF 1,000 EMPLOYEES OR MORE

	2014 Rank		2013 Rank		2012 Rank		2011 Rank		2010 Rank		2009 Rank		2008 Rank		2007 Rank		2006 Rank		2005 Rank		Type of business
United Parcel Service, Inc.	1	20,931	1	20,047	1	20,117	1	20,388	1	20,125	1	20,513	1	20,560	1	20,674	1	18,398	1	17,543	P Air cargo transport and distribution
Jefferson County, KY Public Schools	2	14,676	2	14,269	2	14,366	2	13,840	2	13,964	2	13,326	2	13,917	2	13,593	2	13,281	2	13,235	G Primary and secondary education
Humana, Inc.	3	12,371	3	11,235	3	11,000	3	10,017	3	9,400	3	10,096	3	9,854	3	8,775	5	7,458	6	5,850	P Group health insurance/HMOs
Norton Healthcare (formerly Alliant Health)	4	10,245	4	9,666	4	9,658	4	9,421	4	8,698	4	8,142	4	7,978	4	7,690	4	7,783	4	8,525	N Hospital and health care facilities
Ford Motor Company	5	8,987	6	8,512	5	8,696	11	3,847	9	5,397	8	5,624	6	5,929	5	7,586	3	8,745	3	8,972	P Vehicle manufacturing
General Electric Company	6	6,230	8	6,000	9	5,000	10	3,988	11	4,100	11	4,000	9	5,000	9	5,000	10	5,000	9	5,000	P Appliance manufacturing
University of Louisville	7	6,161	7	6,187	6	6,273	6	5,746	5	6,352	6	6,135	7	5,866	7	5,763	8	5,563	8	5,236	G Higher education
Louisville-Jefferson County Metro Governme	8	5,654	9	5,651	8	5,689	7	5,706	7	5,765	7	5,811	8	5,639	8	5,698	6	5,993	5	5,893	G City/County Government
Kentucky One Health Inc (formerly Jewish Hc	9	5,602	5	8,893	7	5,898	5	5,819	6	5,782	5	6,500	5	6,203	6	6,229	7	5,907	7	5,405	N Hospital and health care facilities
The Kroger Company	10	5,417	10	5,152	n/a	n/a															P Grocery Retailer
Baptist Healthcare System	11	5,339	11	4,854	11	4,219	12	3,752	12	3,889	12	3,305	12	3,089	12	3,536	12	3,140	12	3,179	N Hospital and health care facilities
Commonwealth of Kentucky	12	4,042	12	4,161	10	4,232	9	4,488	10	4,361	10	4,253	11	4,498	11	4,535	11	4,700	10	4,952	G General purpose government
U.S. Postal Service	13	2,546	13	2,509	n/a	n/a	14	2,653	18	1,991	14	2,626	14	2,651	15	2,653	14	2,674	14	2,902	G Mail distribution
Roman Catholic Archdiocese of Louisville	14	2,260	14	2,345	13	2,352	15	2,416	17	2,142	17	2,343	15	2,351	17	2,348	15	2,437	15	2,680	N Religious, educational, social services
U.S. Federal Government	15	2,252	15	2,191	12	2,676	13	2,855	13	3,575	13	2,985	13	2,853	14	2,822	13	2,826	13	2,941	G General purpose government
BF Cos./ERJ Dining	16	2,250	NR																		P Food service provider
Kindred Healthcare (formerly Vencor Inc.)	17	2,249	17	2,130	15	2,252	18	2,297	16	2,224	18	2,153	19	2,079	13	3,033	16	2,349	16	2,342	P Long-term health care, facilities
LG&E and KU Energy (formerly EON)	18	2,178	16	2,131	16	2,066	19	1,976	19	1,976	20	1,902									P Gas & Electric Utility
Floyd Memorial Hospital & Health Services	19	1,769	19	1,711	20	1,612	24	1,546	29	1,473	32	1,338	33	1,316	30	1,409	29	1,337	27	1,412	P Hospital and health services provider
Robley Rex VA Medical Center	20	1,703	18	1,799	18	1,728	22	1,671	24	1,596											N Hospital and health care facilities
New Albany - Floyd County Schools	21	1,648	20	1,640	n/a	n/a															G Primary and secondary education
Bullitt County Public Schools	22	1,633	21	1,629	n/a	n/a															G Primary and secondary education
Oldham County Public Schools	23	1,576	22	1,602	19	1,690	21	1,689	28	1,500	25	1,568	25	1,519	28	1,448	28	1,407	31	1,320	G Primary and secondary education
Greater Clark County, IN School Corp.	24	1,303	30	1,357	27	1,346	28	1,364	30	1,395	27	1,409	27	1,491	23	1,600	22	1,598	24	1,509	G Primary and secondary education
Papa John's International	25	1,503	35	1,143	NR	918															P Quick service restaurant
Securitas Security Services USA Inc.	26	1,476	25	1,476	21	1,598	33	1,191	41	1,150	35	1,150									P Security Services
Lowe's Cos Inc	27	1,435	27	1,389	n/a	n/a															P Home Improvement Retailer
Publishers Printing Company	28	1,432	24	1,516	24	1,450	27	1,367	27	1,500	23	1,600	20	1,860	21	1,689	21	1,702	23	1,633	P Trade, professional, special printing
Horseshoe Southern IN (formerly Caesars')	29	1,404	26	1,418	25	1,437	31	1,244	26	1,540	22	1,697	21	1,858	19	1,895	19	1,942	20	1,918	P Gaming and entertainment resort
Yum! Brands Inc. (formerly Tricon)	30	1,270	23	1,544	22	1,558	23	1,640	21	1,757	19	2,076	18	2,243	18	2,219	18	2,123	18	2,195	P Food service provider
Brown-Forman Corp.	31	1,256	32	1,244	31	1,196	34	1,184	37	1,240	37	1,081	35	1,256	34	1,317	33	1,264	39	1,075	P Distilled spirits manufacturing
Anthem, Inc.	32	1,139	37	1,100	34	1,122	35	1,150	36	1,276	29	1,358	31	1,381	29	1,438	23	1,575	21	1,687	P Health insurance sales and services
Seven Counties Services	33	1,129	36	1,111	30	1,215	32	1,202	40	1,187	36	1,118	40	1,110	39	1,100	37	1,137	36	1,159	N Health care provider
U.S. Bureau of the Census	34	1,085	28	1,372	23	1,468	20	1,862	14	3,106	16	2,491	17	2,248	22	1,638	20	1,810	22	1,672	G General purpose government
ResCare Inc	35	1,054	NR																		P Health care provider
Al J Schneider Co	36	1,050	NR																		P Hotel / Restaurants
		144,255		138,984		122,832		116,319		118,461		116,600		114,749		115,688		112,149		110,235	

P=for-profit organization N=not-for-profit organization G=governmental organization

Source: Business First of Louisville, KY

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
LOUISVILLE/JEFFERSON COUNTY PRINCIPAL EMPLOYERS
CURRENT YEAR AND NINE YEARS AGO

Employer	Employees	2014 Rank	Percentage of Total Employment
United Parcel Service, Inc.	20,047	1	3.30%
Jefferson County, KY Public Schools	14,269	2	2.35%
Humana, Inc.	11,235	3	1.85%
Norton Healthcare (formerly Alliant Health)	9,666	4	1.59%
Kentucky One Health Inc (formerly Jewish Hosp)	8,893	5	1.46%
Ford Motor Company	8,512	6	1.40%
University of Louisville	6,187	7	1.02%
General Electric Company	6,000	8	0.99%
Louisville-Jefferson County Metro Government	5,651	9	0.93%
The Kroger Company	5,152	10	0.85%
Total	95,612		15.75%
Total Employment (MSA) Louisville, KY-IN	607,080		

Employer	Employees	2005 Rank	Percentage of Total Employment
United Parcel Service, Inc.	17,543	1	3.00%
Jefferson County, KY Public Schools	13,235	2	2.26%
Ford Motor Company	8,972	3	1.53%
Norton Healthcare (formerly Alliant Health)	8,525	4	1.46%
Louisville-Jefferson County Metro Government	5,893	5	1.01%
Humana, Inc.	5,850	6	1.00%
Kentucky One Health Inc (formerly Jewish Hosp)	5,405	7	0.92%
University of Louisville	5,236	8	0.89%
General Electric Company	5,000	9	0.85%
Commonwealth of Kentucky	4,952	10	0.85%
	80,611		13.77%
Total Employment (MSA) Louisville, KY-IN	585,530		

Source: Business First of Louisville
Workforce Kentucky

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
RATIO OF OUTSTANDING DEBT AND MISC. DEMOGRAPHIC INFORMATION
YEARS ENDED JUNE 30
($ in thousands)

Fiscal Year	Revenue Bond	Bond Anticipation Notes	Total Debt	Population	Personal Income	Percentage of Personal Income	Unemployment Rate	# of MSD Employees	# of MSD Service Connections	Miles of Sewer Line
2005	$ 1,279,350	$ -	$ 1,279,350	710,018	$ 26,913,343	4.75%	6.00%	607	220,599	3,035
2006	1,363,035	-	1,363,035	715,149	28,754,463	4.74%	5.70%	612	222,698	3,099
2007	1,345,285	-	1,345,285	723,040	29,594,360	4.55%	5.10%	614	224,654	3,133
2008	1,443,080	-	1,443,080	730,194	30,196,557	4.78%	6.40%	625	226,430	3,200
2009	1,408,290	-	1,408,290	736,705	29,191,601	4.82%	10.40%	633	226,711	3,197
2010	1,325,785	452,680	1,778,465	742,324	29,921,911	5.94%	9.80%	651	228,580	3,207
2011	1,616,510	226,340	1,842,850	746,372	31,154,544	5.92%	9.9%	655	230,240	3,200
2012	1,562,510	226,340	1,788,850	750,828	32,592,092	5.49%	8.4%	666	235,136	3,232
2013	1,505,260	226,340	1,731,600	756,980	N/A	N/A	8.3%	649	239,334	3,240
2014	1,578,225	226,340	1,804,565	N/A	N/A	N/A	6.8%	606	240,174	3,263

Source: U.S. Census Bureau (census.gov)
Source: Workforce Kentucky Website (www.workforcekentucky.ky.gov)
Source: Bureau of Economic Analysis website (www.bea.gov)

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY
METROPOLITAN SEWER DISTRICT
TOP 10 WASTEWATER AND STORMWATER CUSTOMERS
CURRENT YEAR AND NINE YEARS AGO

Rank	Customer Name	FY '14 Wastewater Billed	Percent Total Wastewater Revenue	Customer Name	FY '05 Wastewater Billed	Percent Total Wastewater Revenue
1	Lubrizol Advanced Material***	$ 2,403,315	1.45%	Protein Technologies	$ 2,743,539	3.13%
2	Early Times Distillery	$ 1,993,992	1.20%	E.I. Dupont	$ 1,998,488	2.28%
3	Swift & Company	$ 1,671,739	1.01%	Opta Food	$ 1,402,448	1.60%
4	Heaven Hill Distilleries	$ 1,479,429	0.89%	OXY Vinal	$ 1,314,795	1.50%
5	Ford Motor Co.	$ 1,448,638	0.87%	Ford Motor Co.	$ 937,887	1.07%
6	Louisville Metro Housing Authority	$ 1,297,997	0.78%	Lou. Metro Housing Auth.	$ 867,765	0.99%
7	UPS Air District	$ 1,108,602	0.67%	Jefferson Co. Bd. of Educ.	$ 771,346	0.88%
8	Sunopta Ingredients Group	$ 957,081	0.58%	Swift & Company	$ 709,989	0.81%
9	General Electric	$ 824,136	0.50%	Brown Forman Corp.	$ 631,102	0.72%
10	BYK Additives Inc	$ 444,961	0.27%	Rohm & Haas	$ 613,571	0.70%
	Total	**$ 13,629,890**	**8.23%**	**Total**	**$ 11,990,930**	**13.68%**
	Total FY '14 Wastewater Revenue:	$ 165,599,000		Total FY '05 Wastewater Revenue:	$ 87,653,000	

Rank	Customer Name	FY '14 Stormwater Billed	Percent Total Stormwater Revenue	Customer Name	FY '05 Stormwater Billed	Percent Total Stormwater Revenue
1	Regional Airport Authority	$ 1,152,439	2.38%	Regional Airport Authority	$ 487,070	1.88%
2	United Parcel Service	$ 611,250	1.26%	United Parcel Service	$ 336,804	1.30%
3	Jeff Co Board of Education	$ 498,098	1.03%	Ford Motor Company	$ 248,717	0.96%
4	Ford Motor Company	$ 397,235	0.82%	Jefferson Co. Bd. of Educ.	$ 238,354	0.92%
5	KY State Fair Board	$ 248,975	0.51%	University of Louisville	$ 183,947	0.71%
6	Churchill Downs	$ 226,679	0.47%	Churchill Downs	$ 142,494	0.55%
7	LIT Industrial Limited Partnership**	$ 200,558	0.41%	Trammell Crow Co.	$ 124,358	0.48%
8	U of L Belknap Campus	$ 179,562	0.37%	KY State Fair Board	$ 121,768	0.47%
9	Seaboard Syst RR-00822	$ 168,402	0.35%	Norfolk Southern Corp.	$ 108,814	0.42%
10	Lou/Jeff Cty Redev Auth	$ 165,284	0.34%	Louisville Gas & Electric	$ 106,223	0.41%
	Total	**$ 3,848,482**	**7.94%**	**Total**	**$ 2,098,548**	**8.10%**
	Total FY '14 Stormwater Revenue:	$ 48,457,000		Total FY '05 Stormwater Revenue:	$ 25,908,000	

APPENDIX C

UNAUDITED INTERIM FINANCIAL STATEMENTS
FOR THE FISCAL YEAR ENDED JUNE 30, 2015

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Statement of Revenues, Expense and Changes in Net Position

	2015		2014	
Sewer Charges				
Residential	$	96,012,778	$	89,690,959
Commercial		61,950,745		58,811,830
Industrial		17,288,740		19,737,899
Other		2,814,000		2,611,249
Free Sewer Charges		(5,336,221)		(5,235,486)
Total Sewer Charges		172,730,042		165,616,451
Drainage Charges		51,313,119		48,457,208
Total Service Charges		224,043,161		214,055,660
Other Operating Income		4,326,961		2,576,436
Total Operating Revenues	$	228,370,122	$	216,632,096
Operating Expenses				
Salaries & Wages	$	37,941,728	$	38,716,849
Labor Related Overhead		16,014,168		16,639,160
Utilities		13,817,280		14,563,432
Materials & Supplies		10,168,339		8,150,622
Chemicals		22,492,111		19,483,408
Fuel		3,653,618		3,306,437
Insurance Premiums & Claims		1,762,411		1,836,718
Bad Debt		2,421,552		1,947,591
Other Operating Expense		1,567,878		1,780,756
Mapping & Insurance Recovery		1,122,549		943,603
Capitalized Overhead		(2,465,137)		(447,685)
Capital Expenses (over)/under applied		(30,963,787)		(33,568,196)
Total Service and Administrative Costs		77,532,710		73,352,695
Depreciation		61,969,025		62,162,084
Amortization		1,309,397		1,354,446
Total Depreciation/Amortization		63,278,422		63,516,529
Total Operating Expenses	$	140,811,132	$	136,869,224
Net Operating Income	$	87,558,990	$	79,762,872
Non-Operating Revenue (Expenses)				
Gain/Loss Disposal of Assets		-		-
Investment Income	$	17,628,069	$	20,330,483
Interest Expense		(72,741,901)		(71,128,758)
Total Non-Operating Revenue (Expenses)		(55,113,832)		(50,798,275)
Contributions		4,398,861		8,103,079
Change in Net Position before change in Swaps		36,844,019		37,067,675
Change in Fair Value of Swaps		(5,240,061)		(1,222,058)
Change in Net Position after change in Swaps	$	31,603,958	$	35,845,616

Statement of Net Position

	2015	2014
Current Assets		
Unrestricted Cash & Cash Equivalents	$ 60,899,441	$ 84,879,792
Sewer & Drainage Receivable	20,652,187	14,323,549
Assessment Warrants Receivable	2,599,875	1,830,268
Miscellaneous Receivables	4,966,850	5,655,371
Inventories	3,989,685	3,808,106
Prepaid Expenses	611,219	1,437,389
Restricted Funds	155,121,442	160,723,431
Accrued Interest Receivable	1,198,685	1,198,685
Total Current Assets	250,039,383	273,856,590
Non-Current Assets		
Utility Plant in Service	2,776,380,515	2,753,761,748
Accumulated Depreciation	(1,008,460,768)	(946,426,412)
Construction in Progress	611,484,072	463,166,825
Net Fixed Assets	2,379,403,819	2,270,502,161
Non-Current Receivables	29,998,383	33,500,266
Total Assets	2,659,441,585	2,577,859,017
Total Deferred Outflow of Resources	15,830,728	17,810,582
Total Assets & Deferred Outflow of Resources	$ 2,675,272,313	$ 2,595,669,599
Current Liabilities		
Miscellaneous Accounts Payable	$ 12,711,392	$ 8,496,109
Accounts Payable - Construction	10,280,073	8,543,026
Contract Retainage	8,892,995	6,168,611
Accrued Interest Payable	13,035,917	12,833,726
Current Maturities of Bonds Payable	29,415,000	28,525,000
Bond Anticipation Notes	228,507,615	228,600,605
Deposits Payable	1,639,768	1,568,449
Accrued Salaries & Wages	1,443,160	1,266,993
Accrued Workers' Comp Insurance	1,728,014	1,728,014
Employee Comp Absences Payable	2,124,417	2,162,070
Total Current Liabilities	309,778,352	299,892,604
Non-Current Liabilities		
Long-Term Debt Payable	1,583,390,000	1,549,700,000
Unamortized Debt Premium	61,310,429	61,023,830
Total Non-Current Liabilities	1,644,700,429	1,610,723,830
Total Liabilities	1,954,478,780	1,910,616,434
Total Deferred Inflow of Resources	86,429,693	82,293,284
Total Assets & Deferred Outflow of Resources	$ 2,040,908,473	$ 1,992,909,717
Net Position	$ 634,363,840	$ 602,759,882

APPENDIX D

FORM OF BOND COUNSEL OPINION

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[Date of Delivery]

Louisville and Jefferson County Metropolitan Sewer District
Louisville, Kentucky

Ladies and Gentlemen:

We have acted as bond counsel in connection with the authorization, sale and issuance by Louisville and Jefferson County Metropolitan Sewer District (the "District"), a public body corporate and politic and a political subdivision of the Commonwealth of Kentucky, acting by and through its Board as its duly authorized governing body, of $226,340,000 principal amount of Sewer and Drainage System Subordinated Bond Anticipation Notes, Series 2015 (the "Series 2015 Notes").

The Series 2015 Notes have been authorized and issued pursuant to (i) Chapters 58, 65 and 76 of the Kentucky Revised Statutes (the "Act"), (ii) the Subordinated Debt Resolution adopted by the District on April 26, 2010, as supplemented by a Subordinate Debt Sale Resolution adopted by the District on August 24, 2015 (collectively, the "Note Resolution") and (iii) the Sewer and Drainage System Revenue Bond Resolution adopted by the District on December 7, 1992, as amended March 4, 1993, June 30, 1993, December 14, 1994, January 25, 1996, and February 24, 2003 (collectively, the "Bond Resolution"),. Pursuant to the Note Resolution, the District has authorized the issuance of the Series 2015 Notes for the purpose of (i) paying the costs of issuing the Series 2015 Notes; and (ii) refunding and retiring the District's outstanding Sewer and Drainage System Subordinated Bond Anticipation Notes, Series 2013 (the "Prior Notes"). Capitalized terms utilized herein and not defined have the meanings ascribed to such terms in the Bond Resolution and Note Resolution

We have examined such portions of the Constitution and Statutes of the United States, the Constitution and Statutes of the Commonwealth of Kentucky, and such applicable court decisions, regulations, rulings and opinions as we have deemed necessary or relevant for the purposes of the opinions set forth below.

We have also examined records, and the transcript of proceedings relating to the authorization and issuance of the Series 2015 Notes, including a specimen Series 2015 Note, and other relevant matters. We have also made such investigation as we have deemed necessary for the purposes of such opinions, and relied upon certificates of officials of the District as to certain factual matters. Based upon the foregoing, we advise you that in our opinion under existing law:

1. The District is a public body corporate and politic and a political subdivision of the Commonwealth of Kentucky, validly existing under the provisions of the Constitution and laws of the Commonwealth of Kentucky, including the Act, with right and power under the Act to adopt the Bond Resolution and Supplemental Bond Resolution.

2. The Bond Resolution and Note Resolution have been duly and lawfully adopted by the Board of the District, and constitute valid and binding special limited obligations of the District enforceable in accordance with their respective terms.

3. The Series 2015 Notes have been duly authorized, executed and issued by the District in accordance with the Constitution and Statutes of the Commonwealth, including the Act, and in accordance with the Bond Resolution and Note Bond Resolution, and constitute valid and binding special obligations of the District, payable as to principal, interest, and premium, if any, solely from the property pledged therefore in the Note Resolution (the "Pledged Property"). The pledge of the Pledged Property securing the Series 2015 Notes is inferior and subordinate to the pledge thereof to the Prior Bonds (as defined in the Bond Resolution).

4. The Series 2015 Notes are special and limited revenue obligations of the District and do not constitute a debt, liability or general obligation of the District, the Commonwealth of Kentucky or any political subdivision or taxing authority thereof, including the Louisville/Jefferson County Metro Government and the County of Jefferson, Kentucky, within the meaning of the Constitution and laws of the Commonwealth of Kentucky. The District has no taxing power.

5. The interest on the Series 2015 Notes is not subject to taxation by the Commonwealth of Kentucky, and the Series 2015 Notes are not subject to ad valorem taxation by the Commonwealth of Kentucky or by any political subdivision thereof.

6. Under the laws, regulations, rulings and judicial decisions in effect as of the date hereof, interest on the Series 2015 Notes is excludible from gross income for Federal income tax purposes, pursuant to the Internal Revenue Code of 1986, as amended (the "Code"). Furthermore, interest on the Series 2015 Notes will not be treated as a specific item of tax preference, under Section 57(a)(5) of the Code, in computing the alternative minimum tax for individuals and corporations, nor be includable in adjusted current earnings, under Section 56(c) of the Code, in computing the alternative minimum tax for corporations. In rendering the opinions in this paragraph, we have assumed continuing compliance with certain covenants designed to meet the requirements of Section 103 of the Code. We express no other opinion as to the federal or state tax consequences of purchasing, holding or disposing of the Series 2015 Notes.

7. The District has **not** designated the Series 2015 Notes as "qualified tax-exempt obligations" with respect to investments by certain financial institutions under Section 265 of the Code.

In rendering this opinion, we have relied upon covenants and certifications of facts, estimates and expectations made by officials of the District and others contained in the transcript which we have not independently verified. It is to be understood that the enforceability of the Bond Resolution, the Supplemental Bond Resolution, the Series 2015 Notes and agreements relating thereto may be limited by bankruptcy, insolvency, reorganization, moratorium, insolvency, or other similar laws relating to or affecting the enforcement of creditors' rights or by general equitable principles.

Without having undertaken to determine independently or to verify the accuracy or completeness of the statements contained in the Official Statement issued with respect to the Series 2015 Notes, and expressing no opinion as to the financial statements or any other financial or statistical data contained therein, nothing has come to our attention in the course of our professional engagement as Bond Counsel which would lead us to believe that the Official Statement contains any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements contained therein, in the light of the circumstances under which they were made, not misleading.

Very truly yours,

DINSMORE & SHOHL LLP

APPENDIX E

BOOK-ENTRY ONLY SYSTEM

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BOOK-ENTRY ONLY SYSTEM

The Depository Trust Company ("DTC"), New York, NY, will act as securities depository for the Series 2015 Notes. The Series 2015 Notes will be issued as fully-registered securities 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 Series 2015 Note certificate will be issued for each maturity date of the Series 2015 Notes, each in the aggregate principal amount of such maturity, and will be deposited with DTC.

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.

Purchases of Series 2015 Notes under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2015 Notes on DTC's records. The ownership interest of each actual purchaser of each Series 2015 Note ("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. Transfers of ownership interests in the Series 2015 Notes 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 Series 2015 Notes, except in the event that use of the book-entry system for the Series 2015 Notes is discontinued.

To facilitate subsequent transfers, all Series 2015 Notes 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 Series 2015 Notes with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not affect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2015 Notes; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2015 Notes 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.

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 Series 2015 Notes may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Series 2015 Notes, such as redemptions, tenders, defaults, and proposed amendments to the Series 2015 Note documents. For example, Beneficial Owners of Series 2015 Notes may wish to ascertain that the nominee holding the Series 2015 Notes 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.

Redemption notices shall be sent to DTC. If less than all of the Series 2015 Notes 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.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Series 2015 Notes unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the District 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 Series 2015 Notes are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds, distributions, and dividend payments on the Series 2015 Notes 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 District or 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, Agent, or the District, 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 District or 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.

DTC may discontinue providing its services as depository with respect to the Series 2015 Notes at any time by giving reasonable notice to the District or Agent. Under such circumstances, in the event that a successor depository is not obtained, Series 2015 Note certificates are required to be printed and delivered.

The District may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, Series 2015 Note certificates will be printed and delivered to DTC.

The information in this section concerning DTC and DTC's book-entry system has been obtained from sources that the District believes to be reliable, but the District takes no responsibility for the accuracy thereof.

APPENDIX F

CONSULTING ENGINEER'S REPORT

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Louisville and Jefferson County Metropolitan Sewer District

Series 2015A Revenue Bonds, Series 2015 BAN, and 2015B Refunding Revenue Bonds

Engineer's Report

Prepared For:

Louisville and Jefferson County
Metropolitan Sewer District

Prepared By:

The Corradino Group, Inc.
200 South Fifth Street, Suite 503 North
Louisville, Kentucky 40202

September 25, 2015

The Program

Since 1992, The Corradino Group (Corradino) (the Engineering Consultant) has closely and continuously monitored the Capital Improvement Program (CIP), operations, and financial structure of the Louisville and Jefferson County Metropolitan Sewer District (MSD). We have prepared all of the Engineer's Reports for MSD Sewer and Drainage System Revenue Bond and Subordinated Bond Anticipation Note (BAN) issues since 1993. This report presents the findings and conclusions of Corradino pertaining to the proposed issuance by MSD of its Series 2015A Revenue Bonds, Series 2015 BAN, and Series 2015B Refunding Revenue Bonds (hereinunder collectively, the "Series 2015 Bonds"). Corradino has reviewed, studied, evaluated, and presented findings and conclusions relative to the following aspects of MSD: (1) historical perspective; (2) CIP; (3) financial structure; (4) financial capability of MSD to implement the CIP; and, (5) the purpose and need for the Series 2015 Bonds. Corradino concludes that the issuance of the Series 2015 Bonds is financially feasible and desirable, and sound from an engineering and operations perspective.

The Engineering Consultant

Corradino, founded in 1970, is a national engineering and planning professional services practice with offices in Louisville and Owensboro (KY), Indianapolis (IN), Nashville (TN), and Miami, Ft. Lauderdale, Orlando, Ft. Pierce and West Palm Beach (FL). Corradino is the Engineering Consultant for the MSD Sewer and Drainage System Series 2015 Bonds and has been for all of the Engineer's Reports for MSD Sewer and Drainage System Revenue Bonds and Subordinated Bond Anticipation Note issues since 1993. Corradino also serves as program manager for the $800+ million Louisville Airport Improvement Program (LAIP) and has since its inception in 1988. Corradino recently served as the Florida Department of Transportation's Oversight Construction, Engineering and Inspections (CEI) firm for the I-595 Express Corridor. This $1.3 billion project consisted of the reconstruction of the I-595 mainline and all associated improvements to frontage roads and ramps for a 13-mile corridor. Corradino is currently part of the program management team for the $790 million, 8,000-foot new south runway at the Fort Lauderdale-Hollywood International Airport. Corradino has served as engineering consultant in the planning, development, and construction of billions of dollars' worth of infrastructure projects built throughout the United States.

THE CORRADINO GROUP, INC.

CORRADINO

ENGINEERS • PLANNERS • PROGRAM MANAGERS • ENVIRONMENTAL SCIENTISTS

September 25, 2015

Members of the Board
Louisville and Jefferson County
Metropolitan Sewer District
700 W. Liberty St.
Louisville, KY 40203

Re: Engineer's Report Summary
Series 2015A Revenue Bonds, Series 2015 BAN, and Series 2015B Refunding Revenue Bonds (collectively "Series 2015 Bonds")

Dear Members of the Board:

This letter summarizes our findings and conclusions pertaining to the proposed Sewer and Drainage System Series 2015A Revenue Bonds, Series 2015 BAN, and Series 2015B Refunding Revenue Bonds for the Louisville and Jefferson County Metropolitan Sewer District (MSD) (collectively, the "Series 2015 Bonds").

Financing Objectives

MSD has from its inception in 1946 promulgated a schedule of rates and charges in order to finance the maintenance, repair, renewal, replacement, and expansion of its wastewater and stormwater conveyance and treatment facilities. From time to time, it has been necessary for MSD to issue revenue bonds and other long-term debt for additions, betterments, improvements, and expansions of the existing wastewater and stormwater facilities to comply with state and federal water quality standards and for the protection of the public's general health, safety, and welfare. The purposes of the Series 2015 Bonds are to: (i) pay the costs of issuing the Series 2015 Bonds; (ii) make a deposit to the Reserve Account; and, (iii) make a deposit to the Construction and Acquisition Fund to pay the costs of improvements to MSD's sewer and drainage system (the "System"), including (a) wastewater and drainage system expansion and improvements; (b) improvements to wastewater treatment facilities; (c) rehabilitation of combined sewer overflow systems; (d) improvements to flood control and drainage facilities; (e) drainage and MSD improvements; (f) construction of collector sewers (g) construction and improvements of detention and retention basins, (h) construction of interceptor sewers; (i) construction of combined sewer overflow and sanitary overflow abatement projects; (j) construction and improvements to force mains; (k) repairs and improvements to MSD pumping stations; (l) construction of regional storage facilities; and, (m) miscellaneous improvements and acquisition of equipment and mapping hardware and software (collectively, the "Series 2015 Project").

Based on Reasonable Assumptions

Certain assumptions and projections were made relative to the financial and engineering issues that were reviewed and evaluated in the preparation of this report. The assumptions and

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projections were necessary in order to review, evaluate, and estimate the engineering merits of the proposed Capital Improvement Program (CIP) projects and the financial implications of their implementation over the next five years. These assumptions and projections have also been reviewed and evaluated. The assumptions and projections made with regard to reviewing and evaluating the financial and engineering issues associated with the Series 2015 Bonds and the CIP were determined to be reasonable and in accordance with accepted engineering practices.

New MSD Leadership

Louisville Metro Mayor Greg Fischer, who began his term in January 2011, has carefully selected, appointed, and re-appointed members to MSD's Board of Directors to add diversity. The individual board members bring backgrounds in financial, legal, labor relations, and engineering professions. Combining their time in service and diversity, aligned with MSD's purpose and objectives, provides for a stable, strong governing board that will continue to provide guidance during MSD's evolution.

The Board has delegated and placed the conduct of the day-to-day business affairs of MSD under the direction of an Executive Director supported by administrative, engineering, legal and business staffs. The executive staff includes three who were appointed by Mayor Fischer as required by law.

On July 21, 2015, Louisville Metro Mayor Greg Fischer appointed James A. "Tony" Parrott as Executive Director to take over from retiring Greg Heitzman, PE, September 14, 2015. Mr. Heitzman will continue to act in an advisory capacity until September 30, 2015. In September 2013, Mayor Fischer appointed Chad Collier Secretary-Treasurer. May 1, 2015, Mayor Fisher appointed Angela Akridge, PE, Chief Engineer to replace retiring Steve Emly. Mr. Parrott, Mr. Collier and Ms. Akridge are supported by an MSD executive team and staff who contribute to MSD's industry leading service delivery. Evidence of MSD's industry performance is their receipt of awards presented by professional associations.

MSD takes leadership seriously and has instituted two programs toward that end, "Aspire" is designed to improve leadership skills throughout the organization. The "Management Development Program" emphasizes day-to-day management skills to improve the functioning of MSD. Each internal program is designed to advance leadership qualities of staff.

Status of 2011 Auditor of Public Accounts Examination of MSD

The Kentucky Auditor of Public Accounts (APA) delivered a report titled "Examination of Certain Policies, Procedures, Controls, and Financial Activity of Metropolitan Sewer District" (the "Examination") to MSD's Chairperson on December 16, 2011. The report presented 27 findings and offered approximately 150 recommendations to strengthen MSD's controls and management oversight procedures. A year later on December 16, 2012, MSD presented a final report on the status of MSD's initiatives related to the Examination. The report was accepted by the APA, closing this matter. The MSD Executive Director advised Corradino that the initiatives have strengthened the utility.

Status of 2012 Utilities Operation Review - One Water

On January 12, 2012, The Louisville Utility and Public Works Advisory Group (Advisory Group) was formed by Mayor Greg Fischer and tasked with examining the operations of the Louisville Water Company (LWC), MSD, and the Louisville Metro Department of Public Works & Assets (DPW) to determine whether synergies exist among the entities to improve service or reduce costs. The evaluation was to consider a range of potential business scenarios from the current status to a full consolidation of LWC and MSD. The major tasks were assessed by a consultant team and presented in the August 1, 2012, "Final Report – Utility Operations Review."

The Advisory Group Recommendations developed from the Utilities Operation Review included a three-phased approach with synergies and improvements to be accomplished within a five-year period. The phases include the following:

- Phase I – Interlocal Agreements (2013-2014)
- Phase II – Expanded Interlocal Agreements (2013-2016)
- Phase III – Combine LWC and MSD (2013-2017)
    - Due Diligence and Risk Assessment
    - Review Legislative Changes

MSD and LWC continue to work and expand interlocal agreements (Phase II) with a comprehensive interlocal agreement approved by the Kentucky Attorney General in October 2013. Phase III activities are underway at this time.

One Water is the initiative outlined in the Interlocal Agreement (ILA), approved by the Kentucky Attorney General in April 2014, between the LWC Board of Water Works and MSD as political subdivisions and "public agencies" defined in the Interlocal Cooperation Act, Kentucky Revised Statutes §65.210 et seq. *One Water* will provide for the joint and/or cooperative development, sharing, and management of certain back-office, administrative, and/or support services currently provided independently by both MSD and LWC. *One Water* will assist each entity in the provision of such services to the extent possible to fulfill their mutual needs, reduce costs, increase operational efficiency, and improve customer service.

Corradino observed through discussions with MSD leadership and review of MSD activities that the actions taken to date and actions to be taken will strengthen MSD's operations.

Consent Decree

In August 2005, MSD entered into a Consent Decree (CD) with the Kentucky Department for Environmental Protection (DEP), the U.S. Department of Justice, and the U.S. Environmental Protection Agency. The CD is a 19-year program that requires MSD to minimize combined sewer overflows and eliminate sanitary sewer overflows, while rehabilitating MSD's aging sewer system.

As a means of proactively meeting the requirements of the CD, MSD launched a new initiative called Project WIN or Waterway Improvements Now. Project WIN presents planned upgrades which will allow MSD to comply with Clean Water Act regulations and also address problems with combined and sanitary sewer overflows. Included in Project WIN is a revised public outreach program aimed at updating the public on MSD's primary business functions with emphasis on wastewater, stormwater, and flood protection. This public outreach has been presented to more than 230 community groups. A portion of the presentation includes information related to the CD, including potential program direction and anticipated costs.

MSD has also developed and provided internal and external training related to the CD to its employees and consultants. Associated with the CD are compliance programs and schedules for achieving specific objectives. MSD is meeting all of the reporting requirements of the CD in a timely manner.

MSD adopted a financial surcharge to help fund the CD projects in August 2007. The acceptance of this surcharge by Louisville Metro and by MSD's customer base reflects the success of MSD's public outreach program. The community has accepted the need for the projects and the need to fund those projects.

Amended Consent Decree

The Consent Decree as amended (the "Amended Consent Decree"), entered by the court in April 2009, incorporates, amends, supersedes, and replaces the original Consent Decree, and requires MSD to undertake action necessary to achieve compliance with its Kentucky Pollution Discharge Elimination System (KPDES) permits, eliminate prohibited bypasses, conduct comprehensive monitoring and reporting with respect to its sewer operations, and pay an additional civil penalty in the amount of $230,000. The agreement called for MSD to design and implement projects within specified deadlines that will eliminate sewer overflows in its service area through an Integrated Overflow Abatement Plan (IOAP) dated September 30, 2009. In a letter dated June 6, 2014, MSD requested approval from the KEPPC and the EPA for IOAP 2012 Modifications, dated May 2014, a revision to 28 separate projects set forth in the original IOAP. The IOAP Modifications were approved and supersede and replace the 2009 IOAP. To date MSD has complied with all submittals and reports requirements contained in the Amended Consent Decree. The enforcement actions initiated by the EPA are not unique in the wastewater treatment industry. In the opinion of MSD, the resolution of any violations will not result in material adverse effect on the operation, property or finances of MSD.

Operations and Maintenance Expenses and Revenue Growth

Total operating expenses, net of capitalized overhead, and contingency reserve are projected to increase by 2.3 percent in Fiscal Year (FY) 2016, 2.0 percent in 2017 and 2018, 2.5 percent in 2019, and 3.0 percent in 2020. Increased labor and utility costs are anticipated to be the largest components of the increase in operating expenses.

Revenues from wastewater service charges are projected to increase by 4.7 percent in FY 2016 and continue to grow at that rate through FY 2020. Revenues for the current planning period are affected by changes in the customer base. The projected increase in the customer base is expected to result in a total of approximately 23,000 new wastewater customers (mostly residential customers) for the five-year planning period FY 2016 through FY 2020.

Stormwater revenues are projected to increase by 6.0 percent in FY 2016 and continue to grow at 5.5 percent through FY 2020. Stormwater revenue increases are projected primarily from service area expansion and expansion of impervious surfaces within MSD's service area.

Total available revenues are projected to increase by 5.2 percent in 2016 and by 4.9 percent in FYs 2017 through 2020.

MSD is continuing to implement revenue enhancement strategies to compensate for declining revenue associated with decreased investment income and reductions in wastewater generation. These revenue enhancement strategies include non-rate-affecting methods to adjust revenue. An example is MSD's review of customer accounts where wastewater flows have increased significantly. In some cases those customers may have converted a single-family home to a multi-family dwelling, which should have changed its billing classification and increased the revenue from that property. MSD attributes part of the revenue growth in FYs 2012 through 2015 to customer reclassification activities.

MSD's Capital Improvement Program

MSD provides sanitary sewer, stormwater drainage, and flood protection services to over 250,000 customer accounts. Each year, MSD will add approximately 4,600 wastewater service customers. The MSD Capital Improvement Program (CIP) is a result of MSD's careful planning to upgrade, improve, and allow for the controlled expansion of the wastewater and stormwater drainage systems to serve existing and future developing areas.

Corradino has reviewed the implementation of the plans that form the conceptual basis of the current and future CIP. The plans and their implementation are consistent with standard engineering practice for CIP planning and implementation. The goal of MSD to create a comprehensive capital facilities development strategy is supported by these plans. MSD has demonstrated its commitment to implement the proposed CIP in a timely manner in accordance with schedules that it has developed.

Specific strategies for extending wastewater services to developing portions of the service area have been identified. Strategies for implementing stormwater action plans to alleviate storm drainage problems within the service area have been identified. MSD has also identified operational plans to deal with its Morris Forman water quality treatment center; regional water quality treatment centers; pump station operations and maintenance; old combined sewers and combined sewer overflows; sanitary sewer overflows; and, the administrative functions of MSD, such as building renovations and energy conservation.

Project WIN – Waterway Improvements Now

Project WIN is a comprehensive sewer improvement plan designed to meet the requirements of the original Consent Decree. In addition, it also involves keeping the public informed of potential health risks, financial impacts, and construction project activity. Project WIN was estimated to cost approximately $850 million over a twenty-year period. In April 2009, MSD entered into an Amended Consent Decree to further address sanitary sewer overflows and unauthorized discharges from MSD's sanitary sewer system, combined sewer system, water quality treatment centers, and combined sewer overflow locations identified in the Kentucky Pollutant Discharge Elimination System (KPDES) permit for the Morris Forman Water Quality Treatment Center. The IOAP, developed under Project WIN, is a long-term plan to control discharges from MSD's sewer system. As projects are completed, MSD is implementing a rigorous performance monitoring program for the individual projects and systematic performance to confirm and report compliance within intended objectives and to develop remedial measures where necessary.

"Green" Infrastructure Projects

As part of the IOAP, MSD initiated a plan for controlling combined sewer overflows that affect the water quality of rivers, streams, and creeks by utilizing innovative green infrastructure whenever feasible within the combined sewer area. This approach will cut the size and cost of traditional gray sewer infrastructure and preserve and restore natural landscape features. MSD focuses on the storage and infiltration of stormwater, using green practices that mimic predevelopment.

Wastewater Projects

Other wastewater projects not related to the Amended Consent Decree that are part of the CIP will eliminate several small water quality treatment centers (WQTCs), many pump stations, and thousands of individual on-site disposal systems. More specifically, MSD plans to eliminate all remaining small WQTCs by early 2016 resulting in complete regionalization of MSD's wastewater collection and water quality treatment systems.

MSD's CIP includes, among others, the following capital projects:

- Sanitary trunk sewers;
- Neighborhood collector sewer systems;
- Combined and sanitary sewer overflow abatement;
- Treatment plant upgrades;
- Surface drainage improvements; and,
- Flood protection facilities.

On October 31, 2014, the Morris Forman WQTC had a 10" process waterline break on the second floor of the Main Equipment Building, due to corrosion. The tunnels and lower levels of two buildings flooded. No one was injured, but $5 million in damages were sustained.

On March 7/8, 2015, a lightning strike at the Morris Forman WQTC knocked out power to the plant, resulting in 90 million gallons of raw sewage passing into the Ohio River in the first day, with nearly 2 billion gallons of partially treated waste water released before full treatment was restored by April 30. Repair and replacement costs are covered by insurance, and improvements are being designed to prevent a repeat occurrence. Changes will replace some aging infrastructure and result in a more secure design.

Stormwater Drainage Projects

The stormwater drainage projects that are part of the CIP are the continuing results of the 1988 Stormwater Drainage Improvement Master Plan at MSD, the implementation of the 1993-1997 Drainage Improvement Program, the implementation of the Drainage Request Action Plan (DRAP), the Neighborhood Drainage Programs, and Project DRI (Drainage Response Initiative). Projects for the five-year CIP are to be generated from Project DRI and Neighborhood Drainage Programs that are part of the Infrastructure and Flood Protection Division’s responsibility. Project DRI was developed from customer service requests and MSD’s historical knowledge base.

Flood Pumping Stations

In 1987, MSD assumed the responsibility of providing drainage and flood protection to most areas of Jefferson County, including the operation and maintenance of the Ohio River Flood Protection System. The system consists of 29 miles of concrete wall and earthen levees, almost 200 floodgates, and 52 street closures. Located along the system are 16 flood pumping stations, which move inland water to the river when the levees and floodwalls are sealed.

In order to maintain the integrity of the flood protection along the Ohio River, MSD has been upgrading the flood wall, improving electrical systems and repairing/replacing flood gates. Additionally, MSD monitors the major pumping stations along the Ohio River. In its most recent review, the U.S. Army Corps of Engineers gave MSD a "positive" levee system evaluation.

MSD Strategic Business Plan

In 2014, MSD completed a new Strategic Business Plan for 2014 -2018. The Strategic Business Plan resulted in new MSD vision and mission statements, as well as eight strategies that “are the road map of the future.”

<u>Vision</u>
Achieving Clean, Safe Waterways for a Healthy and Vibrant Community

<u>Mission</u>
Providing Exceptional Wastewater, Drainage, and Flood Protection Services for Our Community

<u>Strategies</u>
1. Build MSD’s Brand Promise
2. Provide Premium Customer Care and Service
3. Improve Information Technology Systems
4. Invest in Infrastructure and Ensure Compliance with Amended Consent Decree
5. Develop Disaster Response and Business Continuity Plan
6. Develop and Invest in Employees

7. Implement Partnerships
8. Ensure Financial Viability

Conclusion

The issuance of the Series 2015 Bonds is financially feasible and desirable, sound from an engineering and operations perspective, and necessary to allow the system to properly serve the existing and growing service areas in an efficient and proper manner.

On the basis of previous studies, investigations, and our analysis, it can be concluded that the financial capability of MSD remains strong. The authorizing legislation, pursuant to which the Series 2015 Bonds are being issued, permits better utilization of existing capital funds and supports more efficient timing and utilization of financing for CIP projects than the previous authorizing legislation. It is our opinion that the financial restructuring accomplished through prior debt issuances has enhanced MSD's ability to implement its wastewater infrastructure projects, neighborhood assessment and collector sewer projects, stormwater drainage projects, water quality treatment centers projects, equipment replacement/enhancement programs, and the combined sewer rehabilitation and CSO abatement programs.

As a result of MSD's financial restructuring and ongoing financial strategies, MSD projects an increasing debt service coverage ratio of 180 to 190 percent from FY 2016 through FY 2020, excluding certain defined Subordinated Debt, and 157 to 169 percent when such Subordinated Debt is included. For comparative purposes, the minimum debt service coverage is 110 percent under the applicable bond resolution.

MSD has an established customer base that is supporting current wastewater and stormwater utility rates and charges, which are still comparatively low, with the average monthly residential wastewater bill ranking just slightly below the national average. As MSD continues to grow, it should continue to benefit from economies of scale, tending to reduce unit operating costs.

Sincerely yours,

THE CORRADINO GROUP, INC.

Joseph C. Corradino, P.E.
Chief Executive Officer

Robert Regalado
Project Manager

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List of Acronyms

AAOV	Average Annual Overflow Volume
ACD	Amended Consent Decree
APA	Auditor of Public Accounts (Kentucky)
CCP	Composite Correction Plan
CD	Consent Decree
CIP	Capital Improvement Program
CMOM	Capacity, Management, Operations, and Maintenance
CRCC	Customer Relations Call Center
CRT	Customer Response Team
CPE	Comprehensive Performance Evaluation
CSO	Combined Sewer Overflow
CSR	Customer Service Requests
CSS	Combined Sewer System
DEP	Kentucky Department for Environmental Protection
DPW	Department of Public Works and Assets
DRAP	Drainage Request Action Plan
DRI	Drainage Response Initiative
DOW	Division of Water
DWO	Dry Weather Overflow
EPA	Environmental Protection Agency (USA)
ESU	Equivalent Service Unit
FEMA	Federal Emergency Management Agency
FIA	Federal Insurance Administration
FPS	Flood Pump Station
IDDE	Illicit Discharge Detection and Elimination
ILA	Interlocal Agreement
IOAP	Integrated Overflow Abatement Plan
ISSDP	Interim Sanitary Sewer Discharge Plan
KDEP	Kentucky Department of Environmental Protection
KEPPC	Kentucky Environment and Public Protection Cabinet
KPDES	Kentucky Pollutant Discharge Elimination System
LOJIC	Louisville/Jefferson County Information Consortium
LTCP	Long Term Control Plan
LWC	Louisville Water Company
MS4	Municipal Separate Storm Sewer System (distinct from the combined sewer system)
MSD	Metropolitan Sewer District
NACWA	National Association of Clean Water Agencies
NCSP	Neighborhood Collector Sewer Projects
NMC	Nine Minimum Control
RTC	Real Time Control
SEP	Supplemental Environmental Protection
SORP	Sewer Overflow Response Protocol
SSDP	Sanitary Sewer Discharge Plan
SSO	Sanitary Sewer Overflow
SSS	Sanitary Sewer System
WIN	Waterways Improvements Now
WQTC	Water Quality Treatment Center
WTP	Wastewater Treatment Plan
WWT	Wet Water Team

1. Introduction

The Louisville and Jefferson County Metropolitan Sewer District (MSD) retained The Corradino Group, Inc. (Corradino) to monitor, review, study, evaluate, and report on engineering and related financial issues concerning the wastewater and stormwater drainage systems (collectively, the "System") operated by MSD in Jefferson County, Kentucky (Louisville Metro). This report is prepared in conjunction with MSD's proposed Sewer and Drainage System Series 2015A Revenue Bonds, Series 2015 Bond Anticipation Notes (BAN), and 2015B Refunding Revenue Bonds (collectively, "Series 2015 Bonds"). This report is intended for inclusion in the Official Statement for the Series 2015 Bonds as Appendix F – Consulting Engineer's Report.

The Series 2015 Bonds are being issued pursuant to the provisions of Chapter 76 of the Kentucky Revised Statutes, as amended (the "Act"), a Revenue Bond Resolution adopted by the MSD on December 7, 1992, as amended March 4, 1993, June 30, 1993, December 14, 1994, January 25, 1996, and February 24, 2003 and the Twenty-first and Twenty-second Supplemental Sewer and Drainage System Revenue Bond Resolutions adopted by MSD on August 24, 2015, and September 25, 2015, respectively (collectively, the "Resolution").

The proceeds of the Series 2015 Bonds will be used to: (i) pay the costs of issuing the Series 2015 Bonds; (ii) refund and retire on November 23, 2015 the District's outstanding Sewer and Drainage System Subordinated Bond Anticipation Notes Series 2014 (the "Prior Notes"); and, (iii) retire the 2006A bonds, in advance of maturity. Additional proceeds will be used to pay the costs of improvements to the District's sewer and drainage system (the "System"), including (a) wastewater and drainage system expansion and improvements; (b) improvements to wastewater treatment facilities; (c) rehabilitation of combined sewer overflow systems; (d) improvements to flood control and drainage facilities; (e) drainage and District improvements; (f) construction of collector sewers (g) construction and improvements of detention and retention basins, (h) construction of interceptor sewers; (i) combined sewer overflow and sanitary overflow abatement projects; (j) construction and improvements to force mains; (k) repairs and improvements to District pumping stations; (l) construction of regional storage facilities; and (m) miscellaneous improvements and acquisition of equipment and mapping hardware and software (collectively, the "Series 2015 Project").

In the next four sections, this report reviews the following subjects:

- Historical, current and funding background;
- MSD service areas;
- Capital Improvement Program (CIP); and,
- Financial structure.

In the final section, the report presents Corradino's findings and conclusions regarding the financial capability of MSD to implement its CIP and the engineering soundness of that program.

2. Historical, Current, and Funding Background

2.1 Authorizing Legislation

The earliest sewers in the Louisville area were constructed around 1850, with the initial combined storm and sanitary sewers being constructed around 1860. In 1946, MSD was formed (1) to take over the operation and maintenance of the existing city of Louisville sewer and drainage system and (2) to expand the system throughout the county.

MSD is the public agency empowered to provide wastewater and stormwater drainage services throughout Louisville Metro. An eight-member board, appointed by the Metro Mayor subject to the approval of the Metro Council, governs MSD. MSD was established in 1946 to provide wastewater and stormwater drainage services for the city of Louisville and Jefferson County in accordance with state enabling legislation. Kentucky Revised Statutes (KRS) Section 76.010, allowing the creation of MSD, states:

> *"In the interest of public health and for the purpose of providing adequate sewer and drainage facilities in and around each city of the first and second class and in each county containing such city, there may be created and established a joint metropolitan sewer district under the provisions of KRS 76.010 to 76.210 as herein described, to be known by and under the name of (name of city of the first or second class) and (name of county) Metropolitan Sewer District, which district under that name shall be a public body corporate and political subdivision, with power to adopt, use and alter at its pleasure a corporate seal, sue and be sued, contract and be contracted with, and in other ways to act as a natural person within the purview of KRS 76.010 to 76.210 (ENACT ACTS 1946, Ch. 104 Section 1; 1968, Ch. 152 Section 50)."*

In addition, in 1986, an Agreement of Interlocal Cooperation ("Agreement") between MSD, the city of Louisville, and Jefferson County was signed to improve and enhance flood control and stormwater drainage services in the city of Louisville and Jefferson County. The Agreement transferred all drainage and flood control facilities and property to the custodianship of MSD and clearly mandated MSD to be the responsible agency for providing flood and stormwater drainage services. The Agreement supplemented, where needed, the powers MSD already possessed pursuant to the provisions of KRS Chapter 76. MSD also has entered into separate, similar agreements with the third-class and some fourth-class cities in Jefferson County to provide drainage services and charge the same rates being charged to the owners of real property within MSD's Drainage Service Area. These agreements were necessary because KRS 76.172 does not allow MSD to unilaterally annex into MSD's Drainage Service Area cities of the fourth class or higher.

2.2 MSD Organization and Leadership

The business, activities, and affairs of MSD are managed, controlled, and conducted by a board (the "Board"), composed of eight members, not more than five of whom shall be affiliated with the same political party. The members are appointed by the Mayor subject to the approval of the Council of the Metro Government. All appointments to the Board are made for three-year terms. Table 2-1 presents members of the Board and the expiration dates of their respective terms.

Table 2-1. MSD Board of Directors

Board Member	Term Expires
Cyndi Caudill (Chair)	August 31, 2017
Daniel Arbough (Vice Chair)	June 30, 2018
John Phelps	July 31, 2016
Yvonne Wells-Hatfield	June 30, 2016
Joyce Horton Mott	August 31, 2017
Sujata Chugh	February 28, 2018
Andrew Bailey	July 31, 2018
J.T. Sims	July 31, 2017

The majority of the current board has been serving together for more than three years. Three members were recently reappointed for additional three-year terms, and three new members were appointed in 2015. Mayor Fischer carefully selected and appointed the members to achieve diversity on the Board. The individual board members bring backgrounds in financial, legal, labor relations, and engineering professions. Combining their time in service and diversity, aligned with MSD's purpose and objectives, provides for a stable, strong governing board that will provide guidance during MSD's evolution.

The Board has delegated and placed the conduct of the day-to-day business affairs of the MSD under the direction of an Executive Director supported by administrative, engineering, legal, and business staffs. Table 2-2 presents MSD's executive staff, the first three of whom are appointed by Mayor Fischer as required by law.

Table 2-2. MSD Executive Staff

Greg Heitzman, PE	Executive Director (retires September 13, 2015)
James A. "Tony" Parrott	Executive Director (begins September 14, 2015)
Chad Collier	Chief Financial Officer, Secretary-Treasurer
Angela Akridge, PE	Chief Engineer
John Loechle, PE	Director of Engineering
Brian Bingham	Chief of Operations
Paula Purifoy, Esq.	General Counsel
Mark (Tom) Luckett	Information Technology Director
Lynne Fleming	Human Resources Director
David Johnson	Development and Stormwater Services Director
Anthony Marconi	Operations and Support Services Director
Alex Novak	Treatment Facilities Director
Dennis Thomasson	Collections Systems Director

On July 27, 2015, the Board unanimously approved an employment agreement with James A. "Tony" Parrott to serve as Executive Director. Mr. Parrott will begin work as Executive Director September 14, 2015, with Greg Heitzman retiring effective September 13, 2015, but staying on as an advisory until September 30, 2015. Mr. Parrott's contract is effective through September 13, 2018. Mr. Chad Collier and Ms. Angela Akridge have employment agreements effective through September 30, 2015, that will automatically be renewed for one more year. Evidence of MSD's industry performance includes receipt of multiple awards in 2015 presented by professional associations.

Better Business Bureau – Torch Award for Marketplace Ethics

American Council of Engineering Companies (ACEC) – March 25, 2015

- Preston Highway Green Infrastructure Project
- The Buechel Basin Wastewater Storage Facility Project

2015 National Association of Clean Water Agencies ("NACWA") Awards

- Peak Performance - Platinum Award
- Environmental Achievement - Mitigating Combined Sewer Overflows (CSO) with Green Infrastructure - CSO130 Green Infrastructure Project

KY-TN Water Environment Association – July 2015: 13 Operational Excellence Awards for permit compliance, bio-engineering, pollution prevention, or the use of technology to map, identify, or quantify sources of pollution.

2.3 Status of 2011 Auditor of Public Accounts Examination of MSD and 2012 Utilities Operation Review

2.3.1 Status of the Auditor of Public Accounts Examination

The Kentucky Auditor of Public Accounts Auditor of Public Accounts (APA) delivered a report titled "Examination of Certain Policies, Procedures, Controls, and Financial Activity of Metropolitan Sewer District" (the "Examination") to MSD's Chairperson on December 16, 2011. The report presented 27 findings and offered approximately 150 recommendations to strengthen MSD's controls and management oversight procedures. A year later on December 16, 2012, MSD presented a final report on the status of MSD's initiatives related to the Examination. The report was accepted by the APA, closing this matter. The MSD Executive Director advised that the initiatives have strengthened the utility.

2.3.2 Status of Utilities Operation Review – One Water

On January 12, 2012, The Louisville Utility and Public Works Advisory Group (Advisory Group) was formed by Mayor Greg Fischer and tasked with examining the operations of the Louisville Water Company (LWC), MSD, and the Louisville Metro Department of Public Works & Assets (DPW) to determine whether synergies exist among the entities to improve service or reduce costs. The evaluation was to consider a range of potential business scenarios from the current state to a full consolidation of LWC and MSD. The major tasks assessed by a consultant team and presented in the August 1, 2012, "Final Report – Utility Operations Review" included the following:

- Assessment and evaluation of operations and business practices of LWC, MSD, and DPW to identify synergies and potential cost savings;
- Review of existing and potential governance models that LWC, MSD, and DPW could utilize to improve overall cooperation; and,
- Development of a financial analysis to understand the benefits of up to three strategic options.

The Advisory Group Recommendations developed from the Utilities Operation Review included a three-phased approach with synergies and improvements to be accomplished within a five-year period. The phases include the following:

- Phase I – Interlocal Agreements (2013-2016)
- Phase II – Expanded Interlocal Agreements (2013-2016)
- Phase III – Combine LWC and MSD (2013-2017)
    - Due Diligence and Risk Assessment
    - Review Legislative Changes

"One Water" is the initiative outlined in the Comprehensive Interlocal Agreement (ILA), approved by the Kentucky Attorney General on April 2014, between the LWC Board of Water Works and MSD as political subdivisions and "public agencies" defined in the Interlocal Cooperation Act, Kentucky Revised Statutes §65.210 et seq. One Water will provide for the joint and/or cooperative development, sharing, and management of certain back-office, administrative, and/or support services currently provided independently by both MSD and LWC. One Water will assist each entity in the provision of such services to the extent possible to fulfill their mutual needs, reduce costs, increase operational efficiency, and improve customer service.

The administration of the various service agreements will be the key to successfully providing consolidated services to both LWC and MSD. The goal of the Comprehensive ILA is to create coordinated teams of employees from both companies with the capability of delivering superior customer service at lower costs than the existing two corporate entities combined. Implementation began in mid-February 2014, after the Mayor and both Boards approved the comprehensive ILA approach.

The implementation plan consists of two phases. The first phase will entail the sharing of services in five functional groups plus one specialty area of focus. The five functional groups to be addressed in this phase include Procurement, Fleet, Human Resources, Information Technology, and Customer Service. The specialty area is energy savings as highlighted in the Black and Veatch report. It is anticipated that Phase II will begin in the fourth quarter of 2015. That phase will include the consolidation of additional back office functions and may also include operational areas as well. The effort of identifying and prioritizing these subsequent functions will be performed during Phase I, and a detailed plan will be developed.

At a joint LWC/MSD board meeting August 18, 2015, it was announced the One Water initiative will produce over $1 million in savings for 2015. The savings come from sharing resources and consolidating jobs. Louisville Water and MSD recently hired a joint Fleet Manager and now utilize one fuel bid and a joint contract for parts and supplies. For Information Technology (IT), Louisville Water and MSD are hiring a Chief Information Officer to oversee the IT efforts at both organizations. Louisville Water and MSD have also found savings with joint purchases in other areas of the organization and sharing resources for the Customer Call Centers. The savings for employment come through attrition. The organizations also realized a one-time savings of $10 million through a partnership with a new customer billing system. On August 24, 2015, LWC/MSD entered into an Amended and Restated Interlocal Cooperation Agreement to provide more efficient implementation and expansion of the services provided in the Original ILA, effective through June 30, 2035 (unless earlier terminated by either party on 180 days' notice).

Work in Phase I will continue through 2016 and Phase II planning starts in the fall of 2015 to identify additional cost savings and shared resources in other function areas.

Corradino observed through discussions with MSD leadership and review of MSD activities that the actions taken to date and actions to be taken will strengthen MSD's operations and reduce costs.

2.4 Prior Bond and Bond Anticipation Note Issues

From its inception, MSD has maintained a schedule of rates, rentals, and charges in order to produce revenue sufficient to finance the operation, maintenance, repair, and expansion of the System. Revenue bonds were issued in 1949, 1952, 1954, 1956, 1960, and 1965 pursuant to a resolution adopted on July 7, 1949, (the "1949 Bond Resolution") in order to provide capital for system expansion. Under a resolution adopted on June 7, 1971, (the "1971 Board Resolution"), bonds were issued in order to finance water quality treatment plant improvements. Two series of bonds were issued in 1989 under the 1971 Bond Resolution ("Bond Resolution") to refund issues outstanding under the 1949 and 1971 Resolutions and to finance both sewer system expansion and drainage improvements.

MSD has heretofore issued under the Bond Resolution its Sewer and Drainage System Revenue Bonds outstanding in the amounts shown in Table 2-3. The Series 2015 Bonds will rank on a parity as to source of payment with Bonds previously issued and any Additional Bonds and Refunding Bonds which may be issued from time to time pursuant to the Resolution (collectively, the "Bonds").

Table 2-3. MSD Outstanding Bonds

Series	Issue Date	Original Principal Amount	Principal Amount Outstanding[(1)]
Series 2006A	May 1, 2006	$100,000,000	$87,290,000
Series 2007A	November 15, 2007	61,125,000	45,815,000
Series 2008A	May 1, 2008	105,000,000	99,850,000
Series 2009A	May 15, 2009	76,275,000	47,280,000
Series 2009B	August 15, 2009	225,770,000	150,900,000
Series 2009C	November 24, 2009	180,000,000	180,000,000
Series 2010A	November 30, 2010	330,000,000	330,000,000
Series 2011A	August 24, 2011	263,360,000	256,490,000
Series 2013A	May 23, 2013	115,790,000	115,790,000
Series 2013B	May 23, 2013	119,515,000	119,515,000
Series 2013C	November 27, 2013	100,000,000	99,875,000
Series 2014A	November 25, 2014	80,000,000	80,000,000
	Total	**$1,756,835,000**	**$1,612,805,000**

[(1)] As of November 1, 2015

The purpose of the Bond Resolution was to create one new revenue bond resolution which would provide MSD needed flexibility for funding capital projects associated with wastewater and stormwater drainage services. The Series 1993 Bonds were structured to achieve level debt service over the remaining 26 years of MSD's outstanding debt. MSD had approximately $158.3 million in bonds and other long-term debt outstanding at the time of issuance of the Series 1993 Bonds. MSD was intent on creating a unified planning, financing, development, and management framework to promote more efficient and effective use of its capital and operating funds. Consolidating all existing non-operating funds created one "Construction and Acquisition Fund." One "Revenue Fund" was created to receive all MSD revenue and income.

The purpose of the 2006A Revenue Bonds was to finance the acquisition and construction of capital improvement projects.

The purpose of the 2007A Revenue Bonds was to refund certain of MSD's outstanding Sewer and Drainage System Revenue Bonds, Series 1997B.

The purpose of the 2008A Revenue Bonds was to finance MSD's Capital Improvement Program.

The purpose of the 2009A Revenue Bonds was to refund a portion of MSD's outstanding Sewer and Drainage System Revenue Bonds, Series 1998A.

The purpose of the 2009B Revenue Bonds was to refund certain of MSD's outstanding Sewer and Drainage System Revenue Bonds, Series 1999A, Series 2003A, and Series 2003B.

The Series 2009C Revenue Bonds were issued to provide sufficient funds for sewer and drainage projects of MSD approved for construction.

The Series 2010A Revenue Bonds were issued to fund obligations contained in MSD's Amended Consent Decree in addition to other initiatives including Project DRI, the Western Flood Pumping Station rehabilitation, water quality treatment center modifications, sewer assessments, and capital equipment purchases, and to fund a debt service reserve account in an amount not to exceed $30 million.

The Series 2011A Bonds were issued for the purpose of refunding a portion of MSD's outstanding Series 2001A Bonds and Series 1998A Bonds.

The Series 2013A Bonds were issued to currently refund MSD's outstanding Sewer and Drainage System Revenue Bonds, Series 2001A.

The Series 2013B Bonds were issued to advance refund MSD's outstanding Sewer and Drainage System Revenue Bonds, Series 2004A and certain of MSD's outstanding Sewer and Drainage System Revenue Bonds, Series 2005A Bonds.

The Series 2013C Bonds were issued for the purpose of financing MSD's capital improvement program.

The Series 2014A Bonds were issued for the purpose of financing MSD's capital improvement program.

2.5 Purpose of Series 2015 Bonds

The proceeds of the Series 2015 Bonds will be used to: (i) pay the costs of issuing the Series 2015 Notes and (ii) refund and retire on November 23, 2015 the District's outstanding Sewer and Drainage System Subordinated Bond Anticipation Notes, Series 2014 (the "Prior Notes"). "); and, (iii) retire the 2006A bonds, in advance of maturity. Additional proceeds will be used to pay the costs of improvements to the District's sewer and drainage system (the "System"), including (a) wastewater and drainage system expansion and improvements; (b) improvements to wastewater treatment facilities; (c) rehabilitation of combined sewer overflow systems; (d) improvements to flood control and drainage facilities; (e) drainage and District improvements; (f) construction of collector sewers (g) construction and improvements of detention and retention basins, (h) construction of interceptor sewers; (i) combined sewer overflow and sanitary overflow abatement projects; (j) construction and improvements to force mains; (k) repairs and improvements to District pumping stations; (l) construction of regional storage facilities; and (m) miscellaneous improvements and acquisition of equipment and mapping hardware and software (collectively, the "Series 2015 Project").

3. MSD Service Area

3.1 General Area Wide Description

On January 6, 2003, the governmental and corporate functions vested in the former city of Louisville and in Jefferson County were consolidated. The result is a consolidated local government, Louisville/Jefferson County Metro Government. According to the U.S. Census Bureau's 2014 ranking of incorporated places Louisville Metro is the nation's 30th largest city. Louisville Metro Government's jurisdiction encompasses the former city of Louisville, the 83 suburban cities in Jefferson County, and the former unincorporated portion of Jefferson County.

Louisville Metro is located in the north-central portion of the Commonwealth of Kentucky. It is bordered on the north and west by the Ohio River, to the east by Oldham, Shelby, and Spencer counties, to the south by Bullitt County, and to the most southwesterly corner by Hardin County.

For purposes of organization and authorization of governmental powers, the Commonwealth of Kentucky classifies cities according to population. Jefferson County includes 83 smaller cities classified as third-, fourth-, fifth-, and sixth-class cities. The third- and fourth-class cities receive MSD stormwater drainage services by Agreements of Interlocal Cooperation with MSD. All cities in Jefferson County can receive wastewater services and can be served by MSD according to state statute. The city of Jeffersontown (reclassified from a third-class city in 2000) is the only second-class city, and the cities of Shively and Prospect are the only third-class cities in the county. There are nine fourth-class cities in the county: Anchorage, Douglass Hills, Graymoor-Devondale, Hurstbourne, Hurstbourne Acres, Lyndon, Middletown, St. Matthews, and St. Regis Park.

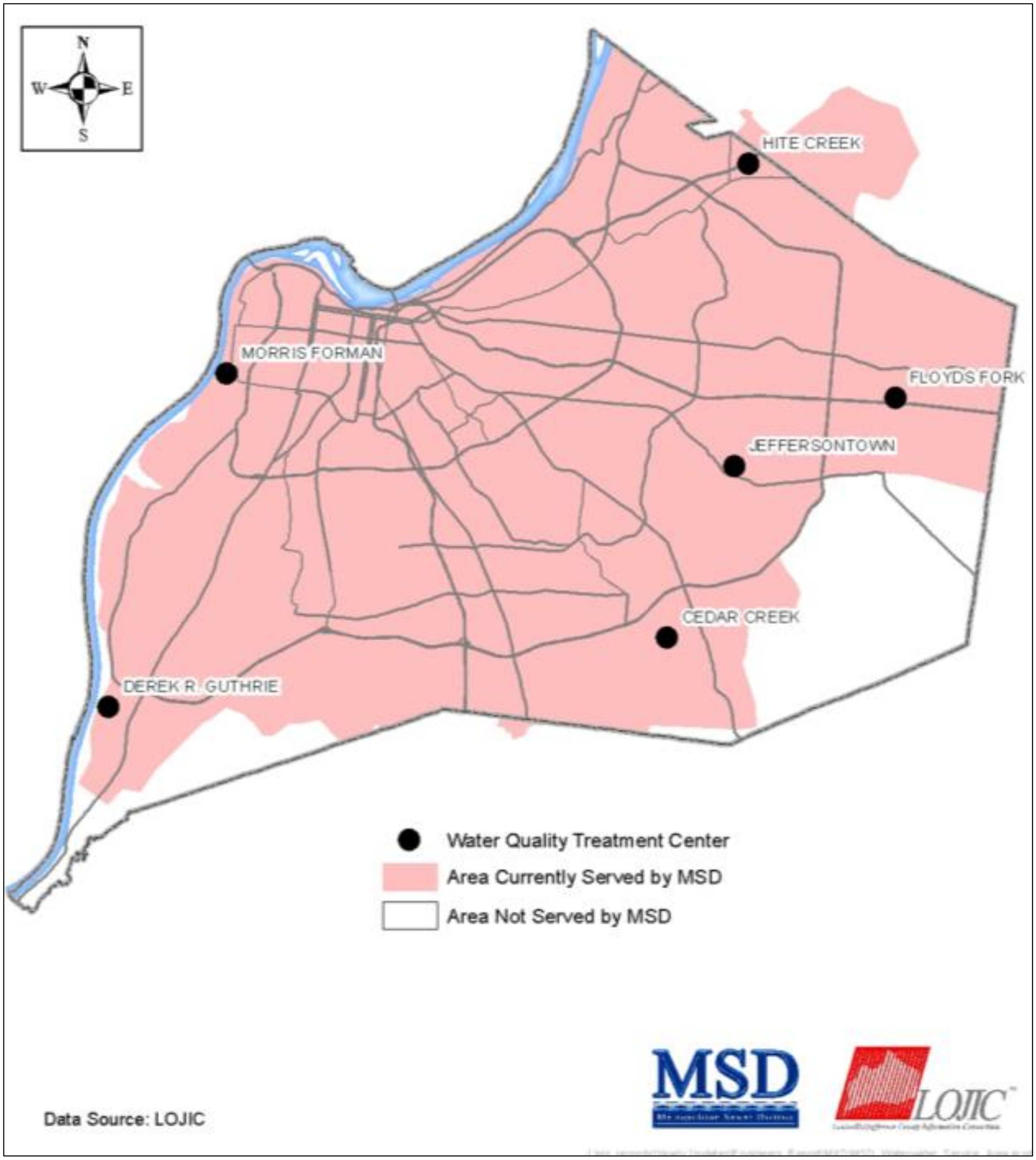
Louisville Metro encompasses a total area of approximately 375 square miles. It is topographically divided into 11 major watersheds which convey stormwater runoff and natural surface water via manmade facilities, natural channels, or a combination of both, that eventually drain into the Ohio River. The area that formerly was the city of Louisville forms the single largest component of MSD's Service Area. MSD has formerly divided Louisville Metro into geographical service areas: Morris Forman, Beargrass/City, Mill Creek/Pond Creek, and North County/Floyds Fork. Each service area contains multiple watersheds. Several scattered small-to-intermediate water quality treatment facilities that have served Louisville Metro are being closed by April 2016, with wastewater diverted to the five remaining Water Quality Treatment Centers (WQTC):

- Morris Foreman;
- Derek R. Guthrie;
- Cedar Creek;
- Hite Creek; and,
- Floyds Fork.

Figure 3-1 shows MSD's service area and the locations of these five WQTC. Jeffersontown is in the process of being closed. Other privately owned water quality treatment centers and individual systems exist in Louisville Metro and are not included in MSD's Service Area.

Most of Oldham County drains into the Harrods Creek and Floyds Fork watersheds in Jefferson County and is therefore of interest to MSD. The Oldham County Action Plan Update (1997) allows for partnership in providing sewer services to that county. MSD and Oldham County have executed an interlocal agreement that allows MSD to partner with Oldham County in providing sanitary sewer service to a portion of Oldham County. The city of Crestwood, in Oldham County,

Figure 3-1. MSD Service Area and Major Water Quality Treatment Centers



has an interlocal agreement with MSD whereby MSD operates and maintains and plans for the expansion of the city of Crestwood sewer system. MSD continues to study regional opportunities in Shelby, Bullitt, and Hardin counties in Kentucky and in Southern Indiana.

The floodways and floodplains of the Ohio River and several major streams have affected development of Louisville Metro. Development also has been influenced by the topography of outlying areas surrounding the former city of Louisville. These areas have slopes with ranges from 12 percent to 20 percent and greater that restrict various types of development. A northwest to southeast ridge generally bisects the south county geologically. Areas west of the ridge exhibit predominantly poorly draining alluvial type soils. Areas to the east are shallow layers of well-draining soils on limestone and dolomite rock layers. These conditions increase the cost of local development related to additional structural, sanitary systems (pump stations), and drainage considerations, but do not preclude development from occurring.

Another local aspect impacting growth and development of Louisville Metro is the major transportation corridors, especially the interstate highway system. The Gene Snyder Freeway (I-265) has increased access to vacant lands in the northeastern, eastern and southern portions of Louisville Metro. Two new bridges across the Ohio River will serve I-65 downtown and I-265 in the east county. These will substantially improve regional mobility when they open in 2016.

The Central Business District and surrounding neighborhoods are experiencing significant amounts of new development and redevelopment. These types of development offer MSD an opportunity to increase its customer base without the investment required for new customers beyond the Gene Snyder Freeway.

3.1.1 <u>The Economy</u>

The Louisville area experienced significant economic prosperity during the 1990s. Louisville's growth was driven primarily by the manufacturing and service sectors. In the 1990s, Louisville saw major investments at the two Ford Motor plants and at General Electric's Appliance Park. Other notable developments in the 1990s included an expanded airport, several new industrial parks, an expanded convention center, a new football stadium, a large riverboat casino in nearby Harrison County, Indiana, a new minor league baseball stadium, a revived downtown, a redeveloped riverfront, and a thriving real estate market.

While the national trend of economic expansion stalled, local economic investment continued, but at a slower pace than in previous years. Investment in the service sector is still ongoing. The service sector includes healthcare, insurance, restaurants, and the like, and the distribution industry, which may be the single most important economic growth industry in Louisville Metro today and for the foreseeable future. The most notable local example is United Parcel Service (UPS). UPS completed a $1.1 billion, automated sorting facility, UPS Worldport, at Louisville International Airport in September 2002. Worldport is UPS's all points, worldwide sorting facility for express mail packages. Continued UPS expansion of Worldport for an additional $1+ billion was completed in May 2010. This expansion included the addition of two aircraft load/unload "wings" to the hub, followed by the installation of a high-speed conveyor and computer control system and increased Worldport by 1.2 million square feet to 5.2 million square feet.

The local transportation infrastructure and distribution network continues to attract other businesses to the area. Louisville International Airport ranked third in 2013 among U.S. airports for air cargo volume and seventh worldwide. The airport handled over 2.29 metric tons of cargo, freight and mail in 2014, up from 2.22 metric tons .in 2013.[1]

The following are examples of recent and continuing local development activities and accomplishments:

In September 2014, the International Trade Administration released its 2014 rankings for U.S. metropolitan area exports. Exports were stable comparted to 2013 at $8.9 Million. Louisville ranked 37 overall for total exports.[2]

Greater Louisville, Inc. the Metro Chamber of Commerce, tracks how Louisville Metro is viewed from the outside. Several notable observations are[3]:

- Louisville ranked 22nd out of 373 MSAs on "Area Development Magazine's" Leading Locations for 2015 list after coming in at 120 last year.
- *TIME* magazine named Louisville in its top 20 for America's Best Food Cities; *Fodor*'s "2015 Places to Go" listed Louisville; *Trivago* named Louisville among "America's 50 Best Value Destinations"; *National Geographic Traveler* named Louisville one of its "Best of the World destinations"; *Zagat Restaurant Digest* named Louisville's NuLu as one of the "Top 20 Hot Food Neighborhoods."
- Louisville was ranked in the top 10 cities for first-time homebuyers by *Business Insider* and 8th in *Forbes*' 2014 "America's Most Affordable Cities."
- The State Entrepreneurship Index ranked Kentucky No. 4 for its ability to create new businesses and *Site Selection Magazine* placed Kentucky 8th in the country in its 2014 Top State Business Climate ranking.
- *Rolling Stone Magazine* ranked Louisville's KFC Yum! Center as the seventh-best arena or stadium for concerts in America, and Louisville Slugger Field ranked #2 in *USA Today Travel's* "10 Best Minor League Ballparks in U.S."

Six hotel projects have begun or been announced in downtown Louisville in 2014/2015.[4] The largest project is a $261 million development that includes a 600-room Omni Hotel, 200 apartments, and a grocery store.[5] In July 2014, the Kentucky International Convention Center announced a $176 million dollar expansion.[6]

In September 2014, GE announced it would sell its appliance division located in Louisville's Appliance Park to Electrolux for $3.3 billion. Employment at Appliance Park remains stable and a $250 million investment is planned.[7] Electrolux and GE continue negotiations, but the deal faces regulatory hurdles, as the U.S. Justice Department has sued to stop the deal.[8]

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[1] Preliminary World Airport Traffic and Rankings 2014. Airports Council International – North America. March 26, 2015
[2] Exports from U.S. Metropolitan Areas. International Trade Association, U.S. Department of Commerce. Accessed August 13, 2015, from http://tse.export.gov/metro/SelectReports.aspx?DATA=Metro
[3] http://www.greaterlouisville.com/Templates/ED/ed_2rows.aspx?pageid=1286
[4] Louisville Could Be Getting Another Downtown Hotel. Louisville Business First. September 9, 2014
[5] Omni Hotel Headlines $261 Million Downtown Development Project. Louisville Business First. March 6, 2014
[6] Tourism Officials Excited About Convention Center Upgrade, Downtown Hotel Developments, Louisville Business First, July 18, 2014
[7] GE in midst of spending $250 million on Appliance Park upgrades. Louisville Business First. Apr 23, 2015
[8] U.S. sues to stop Electrolux acquiring GE's appliance business. Reuters. July 1, 2015

Humana has been in discussion with several insurance companies regarding merger, with Aetna being the leading candidate. Aetna is the third largest U.S. health insurer, and Humana ranks No. 4. Such a merger may face federal concerns regarding decreased competition.

Major private sector employers increased employment from 2014 to 2015. UPS went from 20,931 to 22,189; Humana from 12,371 to 12,900; Norton Healthcare from 10,245 to 10,739; and Ford Motor Company from 8,987 to 9,028.[9] GE Appliance's employment has been flat at about 6,200.

3.2 Demographic Data

There are three key demographic variables which must be used as indicators of the vitality of the Louisville Metro economy with regard to services of MSD. The first two are households and population. Of these two, households is somewhat more important since each household generates a certain amount of water and sewer usage that is to some degree independent of the number of persons in the household. This includes such uses as cooking, laundering, and dishwashing, among others. For the decade 2000 to 2010, there was a gain of 22,000 households in Jefferson County. The upcoming decade (2010 to 2020) should see a smaller increase of an additional 2,600 households, with a more substantial gain of approximately 27,000 households projected between 2020 and 2030. This household gain reflects a projected 9.1 percent increase from 2020 to 2030. This is compared with a projected increase of just 3.4 percent (24,000) in population over the same period and is the result of a projected decline in persons per household from 2.27 persons in 2020 to 2.18 persons in 2030.[10]

As stated, the second of these growth factors, population, is projected to show an increase of about 24,000 persons between 2020 and 2030. Most of this increase will take place in the northeastern and eastern parts of the county. There is, of course, also a direct relationship between the number of persons and sewer revenues.

The third important demographic factor is the number of jobs. Jefferson County continues to have job growth. Even though much of the population growth which necessarily follows jobs will occur in counties surrounding Jefferson, a significant number of the actual job sites are anticipated to be in Jefferson County.

The key to much of this job growth is the presence of United Parcel Service at Louisville International Airport. As UPS continues its remarkable expansion in Louisville to the point where it is Kentucky's largest private employer, with over 22,000 jobs, the area is continuing to attract businesses which find it advantageous to locate close to the nation's largest package carrier. As the nation's economy continues to demand just-in-time delivery of products and overnight response to orders for high-value capital goods and repairs, the benefits of being able to drop off a product at the UPS hub at Louisville International Airport at 10:00 p.m. and expect delivery virtually any place in the nation less than 12 hours later is an advantage with which only Memphis, Tennessee (the headquarters and central hub of Federal Express) can compete.

3.2.1 Population

During the 20 years from 1970 to 1990, Jefferson County was characterized by relatively flat population figures. Those flat population figures, however, masked a growth in the number of

[9] The List: Major Employers. Louisville Business First. July 24, 2015.
http://www.bizjournals.com/louisville/subscriber-only/2015/07/24/major-employers-2015.html
[10] KIPDA

households and a strong growth in the number of jobs in the county. Population increased from 1990 to 2000 and 2000 to 2010, and is projected to grow moderately through 2020 and 2030.

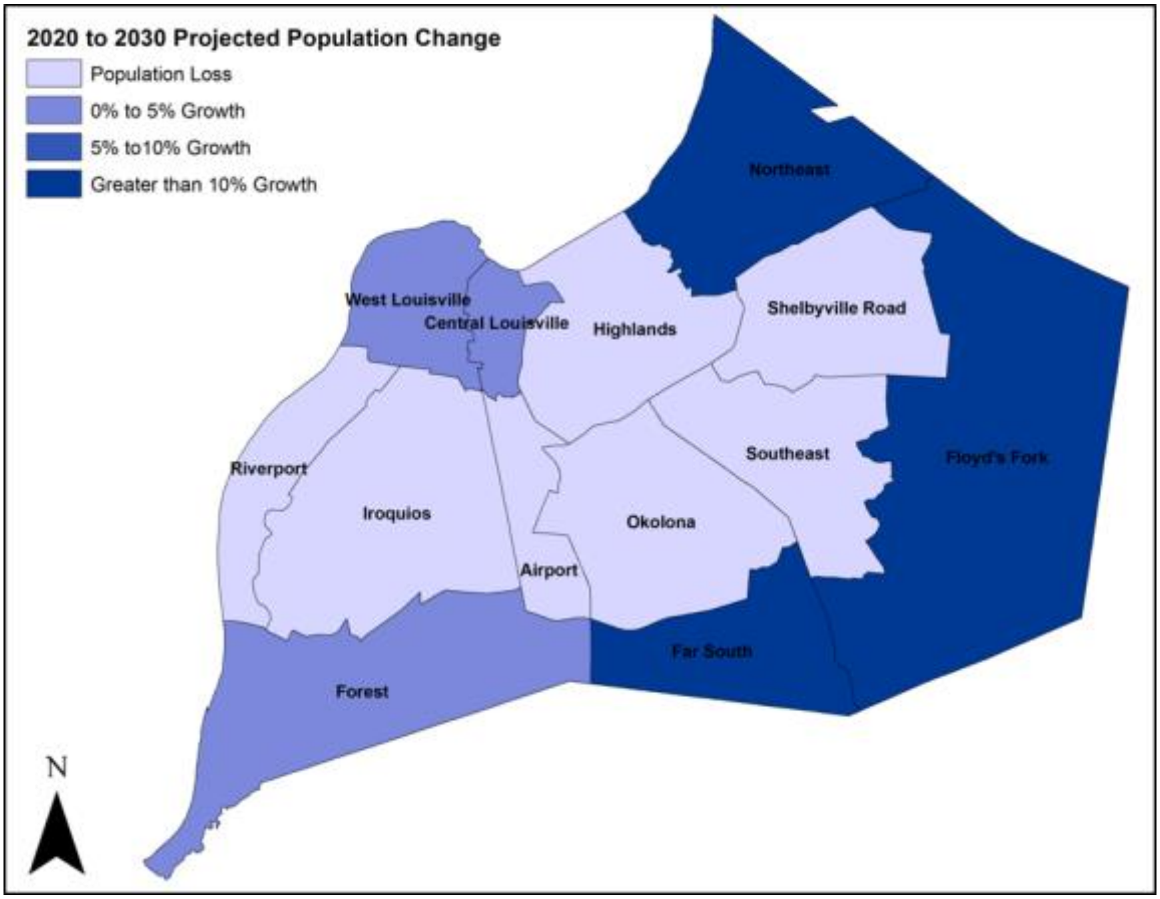
The population projections for Jefferson County through the year 2030 are shown in Table 3-1 and Figure 3-2. The Kentuckiana Regional Planning and Development Agency (KIPDA) developed the projections for the region's federal air quality conformity process and for use in the regional transportation model. These projections were performed for the years 2020 and 2030. The projections were done by Traffic Analysis Zone (TAZ) and aggregated to the market areas developed in Cornerstone 2020, the Comprehensive Plan for Louisville and Jefferson County.

Table 3-1. Population Projections by Cornerstone 2020 Market Area

Market Areas	Projected Population		2020-2030 Change	
	2020	2030	Amount	Percent
Northeast	58,174	65,972	7,798	13.4
West Louisville	58,797	61,313	2,516	4.3
Floyds Fork	41,611	67,316	25,705	61.8
Shelbyville Road	67,131	59,830	-7,301	-10.9
Highlands	85,803	77,761	-8,042	-9.4
Central Louisville	28,404	29,753	1,349	4.7
Riverport	11,530	11,356	-174	-1.5
Southeast	73,723	72,850	-873	-1.2
Iroquois	134,108	130,188	-3,920	-2.9
Airport	3,872	3,828	-44	-1.1
Okolona	81,331	76,145	-5,186	-6.4
Far South	29,289	39,865	10,576	36.1
Forest	33,085	34,714	1,629	4.9
County Totals	706,858	730,891	24,033	3.4

Source: KIPDA

Figure 3-2. Projected Population Change 2020 to 2030 by Cornerstone 2020 Market Areas



Source: KIPDA and The Corradino Group, Inc.

These projections indicate Jefferson County's overall pollution will grow to 730,891 by 2030. The overall population trend for Jefferson County masks the shift of population, population growth, and increase in population density in eastern Jefferson County. Figure 3-2 graphically displays the population change projected in each of Cornerstone 2020's market areas. Population in the county will continue to shift east and south. Growth is expected in the Floyds Fork market area (25,700), followed by the Northeast (7,800), Far South (10,600), and Forest (1,600) areas. West Louisville and Central Louisville are projected to experience modest growth. The Airport area is expected to lose just over one percent of its population over the 2020 to 2030 period. The Iroquois area is and will remain the most populated market area in the county with a 2030 population of 130,000 persons, although it is expected to incur a population loss of 3,900 during the period. A comparison of the 2020 population projected by KIPDA as shown in 2020 and the 2014 population estimates from the U.S. Census Bureau (Table 3-2) show that the KIPDA projections for 2020 and 2030 are lower. Still, the distribution of population and magnitude of change can be considered valid.

Over the past decades, areas of large population growth are suburban, moderate to high income, and white-collar areas, and areas of decline reflect the natural life cycle (e.g., older, more densely populated, blue collar areas of the western and southwestern parts of the county). The Airport area has also experienced a decline in population due to noise-related relocation efforts. All of the population projections reflect an anticipated dispersion to surrounding counties within the metropolitan area due to the increased convenience of transportation to newly developing areas.

Table 3-2 details the population for 2000 and 2010 in Jefferson and adjacent counties from the Decennial Census, as well as more recent estimates from the U.S. Census Bureau's American Community Survey. Estimates of the Residential Population, updated to July 1, 2014 show Oldham County's population increased by 30.6 percent from 2000 to 2010 and increased by an additional estimated 3.4 percent in 2014. Bullitt County has experienced a large rate of population growth with an increase in population of 21.4 percent between 2000 and 2010 and an additional 3.4 percent in 2014. Jefferson County's population increased by 6.8 percent from 2000 to 2010 and an additional 2.6 percent in 2014. The important trend for MSD is that all three counties continue to experience population growth. State law permits MSD to extend its service area to surrounding counties by interlocal agreement. MSD has entered into an interlocal agreement with the city of Crestwood in Oldham County.

Table 3-2. Population Change in Jefferson, Oldham, and Bullitt Counties – U.S. Census

	2000	2010	2000-2010 % Change	2013	2010-2013 % Change	2014	2010-2014 % Change
Jefferson	693,604	741,096	6.8%	757,282	2.18%	760,026	2.55%
Oldham	46,178	60,316	30.6%	62,454	3.54%	63,490	3.40%
Bullitt	61,236	74,319	21.4%	76,819	3.36%	77,955	3.40%

Source: U.S. Census Bureau

Jefferson County is home to thirteen second-, third-, and fourth-class cities (Table 3-3). The population of these cities was about 14.1 percent of the county total in 2000, dropped to 13.9 percent in 2010, and remained there in 2013. Most of the small cities with growth are located in the eastern portion of Jefferson County, with Prospect experiencing the highest rate of growth

3.2.2 Households

Between 2000 and 2010 Jefferson County gained over 22,000 households, an increase of 7.7 percent (Table 3-4). From 2010 to 2013, the number is estimated to have dropped about 3,300 households (1.1%). If this estimate is true, it appears to be a short-term trend, as building permit activity has improved steadily each year since 2009 (Table 3-5), with a large increase in 2012. The number of permitted units has increased every year shown, while the number of buildings has increased only since 2012. This trend indicates a period when a higher percentage of multi-family buildings were being permitted, especially in 2010 and 2011.

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Table 3-3. Population of Second, Third, and Fourth Class Cities in Jefferson County

		2000	2010	2000-2010 % Change	2013	2010-2013 % Change
Anchorage	Population	2,264	2,348	3.7%	2,399	2.2%
	Households	729	754	3.4%	707	-6.2%
Douglass Hills	Population	5,718	5,484	-4.1%	5,614	2.4%
	Households	2,428	2,359	-2.8%	2,438	3.3%
Graymoor-Devondale	Population	2,925	2,870	-1.9%	2,927	2.0%
	Households	1,134	1,159	2.2%	1,161	0.2%
Hurstbourne	Population	3,884	4,216	8.5%	4,316	2.4%
	Households	1,699	1,871	10.1%	1,885	0.7%
Hurstbourne Acres	Population	1,504	1,811	20.4%	1,854	2.4%
	Households	909	996	9.6%	860	-13.7%
Indian Hills	Population	2,882	2,868	-0.5%	2,934	2.3%
	Households	1,119	1,113	-0.5%	1,100	-1.2%
Jeffersontown	Population	26,633	26,595	-0.1%	26,993	1.5%
	Households	10,653	11,065	3.9%	10,542	-4.7%
Lyndon	Population	9,369	11,002	17.4%	11,259	2.3%
	Households	4,520	5,374	18.9%	5,106	-5.0%
Middletown	Population	5,744	7,218	25.7%	7,388	2.4%
	Households	2,391	3,292	37.7%	3,312	0.6%
Prospect	Population	4,657	4,698	0.9%	4,835	2.9%
	Households	1,732	1,857	7.2%	1,820	-2.0%
St. Matthews	Population	15,852	17,472	10.2%	17,841	2.1%
	Households	7,978	8,725	9.4%	8,624	-1.2%
St. Regis Park	Population	1,520	1,454	-4.3%	1,489	2.4%
	Households	582	569	-2.2%	608	6.9%
Shively	Population	15,157	15,264	0.7%	15,584	2.1%
	Households	6,667	6,404	-3.9%	6,158	-3.8%

Source: U.S. Census Bureau

Table 3-4. Households Change in Jefferson, Oldham, and Bullitt Counties – U.S. Census

	2000	2010	2000-2010 % Change	2013	2010-2013 % Change
Jefferson	287,012	309,175	7.7%	305,832	-1.08%
Oldham	14,856	194,31	30.8%	19,532	0.52%
Bullitt	22,171	27,673	24.8%	27,874	0.73%

Source: U.S. Census Bureau

Table 3-5. Jefferson County Annual New Privately-owned Residential Building Permits

Year	Buildings	Units
2014	1,211	2,431
2013	1,024	2,232
2012	935	2,044
2011	662	1,006
2010	674	1,003
2009	793	877

Source: U.S. Census Bureau

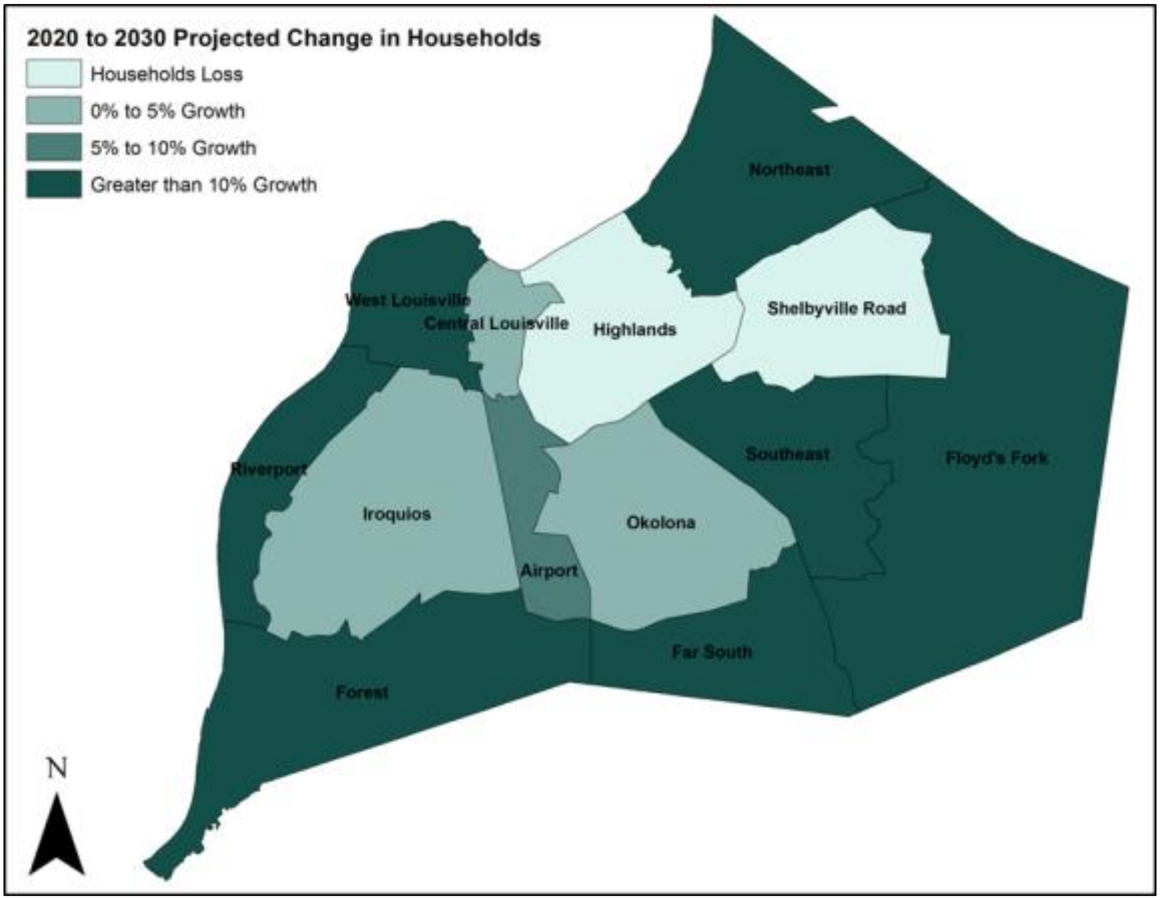
KIPDA projections for 2020 and 2030 indicate households in Jefferson County will continue to increase, to a total of about 308,000 by 2020 and 336,000 by 2030 (Table 3-6). The 2030 estimate is nine percent higher than 2020, even though the population is projected to only grow by 3.4 percent during that time (Table 3-1). This follows national trends of a decreasing number of persons per household associated with aging of the population, changes in living arrangements and family composition, and a declining fertility rate. The average Jefferson County household size in 2020 is projected to be 2.27 persons, dropping to 2.18 persons by 2030. Table 3-6 shows the number of households in each of Cornerstone 2020's market areas. The major growth areas for households are similar to the major growth areas for population. These include the Southeast (5,900), Floyds Fork (5,900), the Northeast (4,500), and the Far South (4,500). Figure 3-3 shows the projected change in households from 2020 to 2030.

Table 3-6. Households Projections by Cornerstone 2020 Market Area

Market Areas	Projected Households		2020-2030 Change	
	2020	2030	Amount	Percent
Northeast	23,854	28,360	4,506	18.9
West Louisville	23,861	27,061	3,200	13.4
Floyds Fork	12,901	18,796	5,895	45.7
Shelbyville Road	30,429	29,231	-1,198	-3.9
Highlands	44,156	42,172	-1,984	-4.5
Central Louisville	16,523	17,231	708	4.3
Riverport	4,576	5,148	572	12.5
Southeast	32,190	38,125	5,935	18.4
Iroquois	58,710	61,605	2,895	4.9
Airport	1,624	1,744	120	7.4
Okolona	34,619	36,006	1387	4.0
Far South	11,257	15,797	4,540	40.3
Forest	13,114	14,461	1,347	10.3
County Totals	307,814	335,737	27,923	9.1

Source: KIPDA

Figure 3-3. Projected Households Change 2020 to 2030 by Cornerstone 2020 Market Areas



Source: KIPDA and The Corradino Group

3.2.3 Employment

Table 3-7 details the changes in total establishments and total employment in Jefferson County from 2007 to the last quarter of 2014. Total employment and establishments reached their lowest levels in 2011. However, as of the last quarter of 2014, both are almost back to their pre-recession levels. The substantial increase in establishments translates to additional commercial customers for MSD.

Table 3-8 details projected jobs for the Cornerstone 2020 market areas for the period 2020 to 2030. Jefferson County employment is expected to increase by more than 50,000 jobs, 8.2 percent, from 2020 to 2030. Only two market areas in Jefferson County (Figure 3-4) are expected to have a decrease in jobs from 2020 to 2030. These are Central Louisville (36,150) and Forest (846). The Far South and Floyds Fork market areas are expected to see the largest percentage increases in job growth over the ten-year period. From 2020 to 2030, the number of jobs in the Far South area is expected to increase by nearly 84 percent, an increase of 2,620 jobs, while the number of jobs in the Floyds Fork area is expected to increase by over 90 percent, an increase of 17,200 jobs. Continued commercial development of the land east of Blankenbaker Parkway will generate thousands of retail, service, and distribution jobs in the Floyds Fork area. The Southeast, Riverport, and Okolona market areas are also expected to see significant increases in the number of new jobs.

Table 3-7. Jefferson County Employment 2007-2014

Year	Total Establishments	Total Employees
2014	24,344	404,556
2013	19,270	401,108
2012	19,224	392,257
2011	19,173	380,789
2010	19,628	380,915
2009	19,533	390,000
2008	19,902	410,818
2007	20,046	401,448

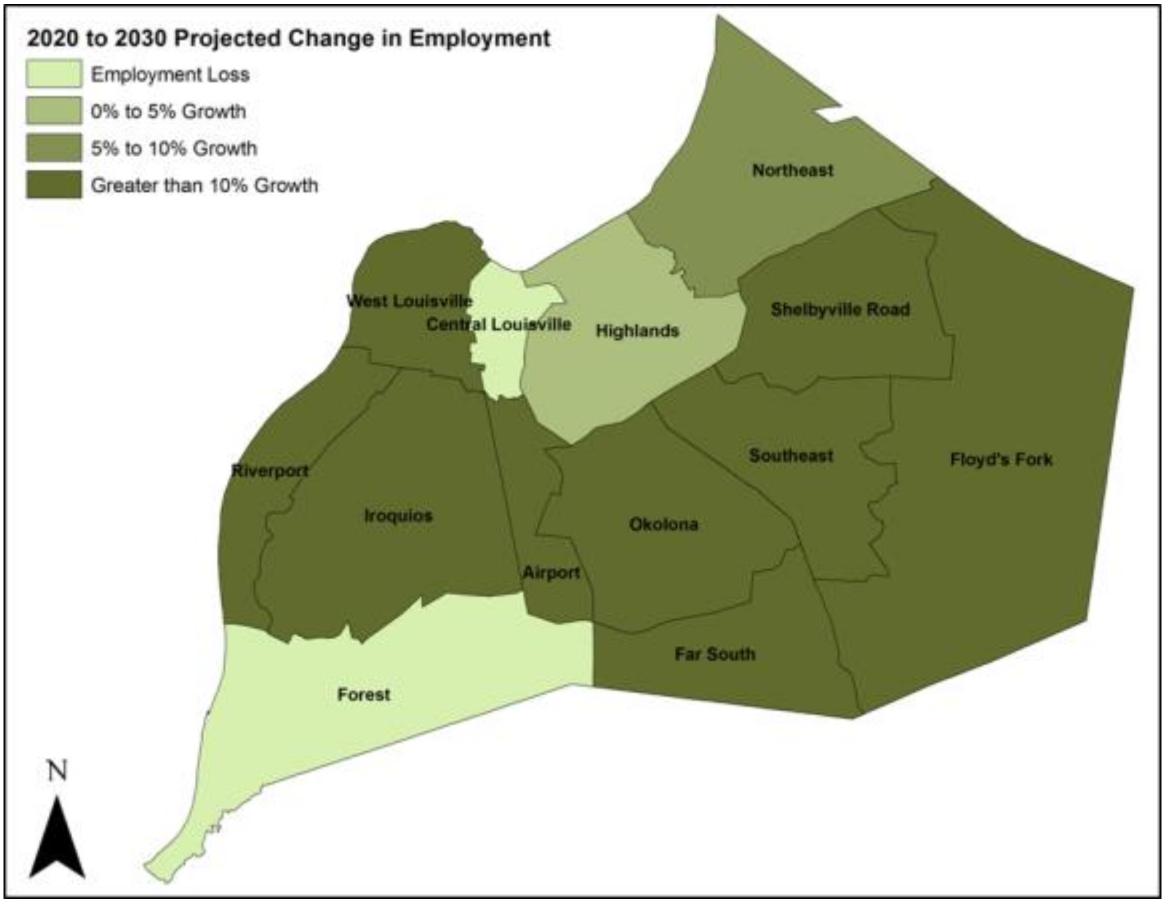
Sources: U.S. Census Bureau and U.S. Bureau of Labor Statistics. 2007-2013 data from Census County Business Patterns. 2014 data from Bureau of Labor Statistics Quarterly Census of Employment and Wages

Table 3-8. Employment Projections by Cornerstone 2020 Market Area

Market Areas	Projected Households		2020-2030 Change	
	2020	2030	Amount	Percent
Northeast	21,055	22,829	1,774	8.4
West Louisville	35,997	40,795	4,798	13.3
Floyds Fork	19,052	36,277	17,225	90.4
Shelbyville Road	58,434	64,967	6,533	11.2
Highlands	76,560	79,514	2,954	3.9
Central Louisville	164,788	128,638	-36,150	-21.9
Riverport	13,422	17,022	3600	26.8
Southeast	38,521	53,698	15,177	39.4
Iroquois	57,712	68,625	10,913	18.9
Airport	44,430	51,317	6887	15.5
Okolona	73,487	88,699	15212	20.7
Far South	3,132	5,752	2,620	83.7
Forest	8,572	7,726	-846	-9.9
County Totals	615,162	665,859	50,697	8.2

Source: KIPDA

Figure 3-4. Projected Employment Change 2020 to 2030 by Cornerstone 2020 Market Areas



Source: KIPDA and The Corradino Group

3.2.4 Industry and Manufacturing Base

The community employment base has successfully transitioned from a dominant manufacturing component to a balanced economy with a strong service component and a successfully diversified economic base over the past 20 years. Growth in the white collar and professional services industry continues to exceed overall employment growth, and remaining manufacturing jobs tend to be highly skilled and well paid.

The composition of industrial and manufacturing establishments in Jefferson County includes several large nationally-based companies. Table 3-9 shows the top ten entities using MSD's wastewater services. The list shows the revenue contribution of each entity and percentages of MSD's total wastewater services revenues for the 2014 Fiscal Year. Approximately 7.82 percent of MSD's wastewater service revenues were received from these top ten establishments.

Table 3-9. Major MSD Wastewater Customers

	Customer Name	FY 2014 Wastewater Amount Billed	Percent Total Wastewater Revenue
1	Lubrizol Advanced Material (formerly Oxy Vinyls)	$2,403,315	1.45%
2	Early Times Distillery	1,993,992	1.20%
3	Swift & Company	1,671,739	1.01%
4	Heaven Hill Distilleries	1,479,429	0.89%
5	Ford Motor Company	1,322,866	0.80%
6	UPS Air District	1,108,602	0.67%
7	Sunopta Ingredients Group	957,081	0.58%
8	General Electric	824,136	0.50%
9	Jefferson County Board of Education	745,842	0.45%
10	BYK Additives, Inc.	444,961	0.27%
	Total	$12,951,963	7.82%

Source: MSD **Total FY 2014 Wastewater Revenue = $165,599,000**

Table 3-10 shows the top ten entities using MSD's stormwater drainage service. The list shows the revenue contribution of each entity and percentage of MSD's total drainage service revenues for the 2014 Fiscal Year. Approximately 7.1 percent of MSD's stormwater drainage revenues were received from these customers.

Table 3-10. Major MSD Stormwater Drainage Customers

	Customer Name	FY 2014 Drainage Amount Billed	Percent Total Drainage Revenue
1	Regional Airport Authority	$1,101,534	2.27%
2	Jefferson County Board of Education	498,098	1.03%
3	United Parcel Service	476,401	0.98%
4	Ford Motor Company	279,568	0.58%
5	Kentucky State Fair Board	207,307	0.43%
6	LIT Industrial Limited Partnership (formerly Trammell Crow Co.)	200,558	0.41%
7	University of Louisville Belknap Campus	179,562	0.37%
8	Seaboard Syst RR-00822	168,402	0.35%
9	Lou/Jeff City Redevelopment Authority	165,284	0.34%
10	Churchill Downs	161,960	0.33%
	Total	$3,438,674	7.10%

Source: MSD **Total FY 2014 Drainage Revenue = $48,457,000**

3.2.5 Conclusion

Populations and economic conditions indicate a steady increase in customers for MSD. The recent trend of development in and around the Central Business District is good news for MSD, because it means more new customers with less investment in infrastructure. Bullitt and Oldham counties are also expected to increase in population, which could translate to even more MSD customers.

3.3 System Description and Service Area

MSD is empowered to provide wastewater and stormwater drainage (including flood protection) services within Jefferson County. The Wastewater Service Area includes approximately 350 square miles of Jefferson County, and MSD serves approximately 250,000 (2015) wastewater customers. Areas receiving wastewater services are shown on Figure 3-5. Table 3-11 is a list of services currently provided to second-, third-, and fourth-class cities per separate agreements with MSD.

Table 3-11. MSD Services Rendered to Cities

City	Wastewater	Stormwater
Anchorage	Yes	No
Douglass Hills	Yes	Yes
Graymoor-Devondale	Yes	Yes
Hurstbourne	Yes	Yes
Jeffersontown	Yes	No
Lyndon	Yes	Yes
Middletown	Yes	Yes
Prospect	Yes	Yes
St. Matthews	Yes	No
St. Regis Park	Yes	Yes
Shively	Yes	No

3.3.1 Water Quality Treatment Centers Description

3.3.1.1 *Regulatory Framework*

MSD's wastewater facilities and services are regulated and monitored by the following agencies: the Commonwealth of Kentucky Energy and Environment Cabinet (the Cabinet); the United States Environmental Protection Agency (EPA); the Ohio River Valley Water Sanitation Commission (ORSANCO); and, the Louisville Metro Health Department. Requirements of the EPA and the Cabinet are issued in the form of a facility permit.

3.3.1.2 *Size and Extent of Water Quality Treatment System*

As of April 2016, the MSD Wastewater System will consist of five major Water Quality Treatment Centers (WQTCs), approximately 584 miles of combined sewers (sewers which transport both stormwater runoff and sewage), approximately 3,100 miles of wastewater interceptor and collector sewers, and 225 wastewater pumping stations. Over the past 40 years, MSD has eliminated over 200 small-to-intermediate WQTCs. A summary of WQTC closures over the last 20 years can be found in Table 3-12.

Figure 3-5. MSD Wastewater Service Area

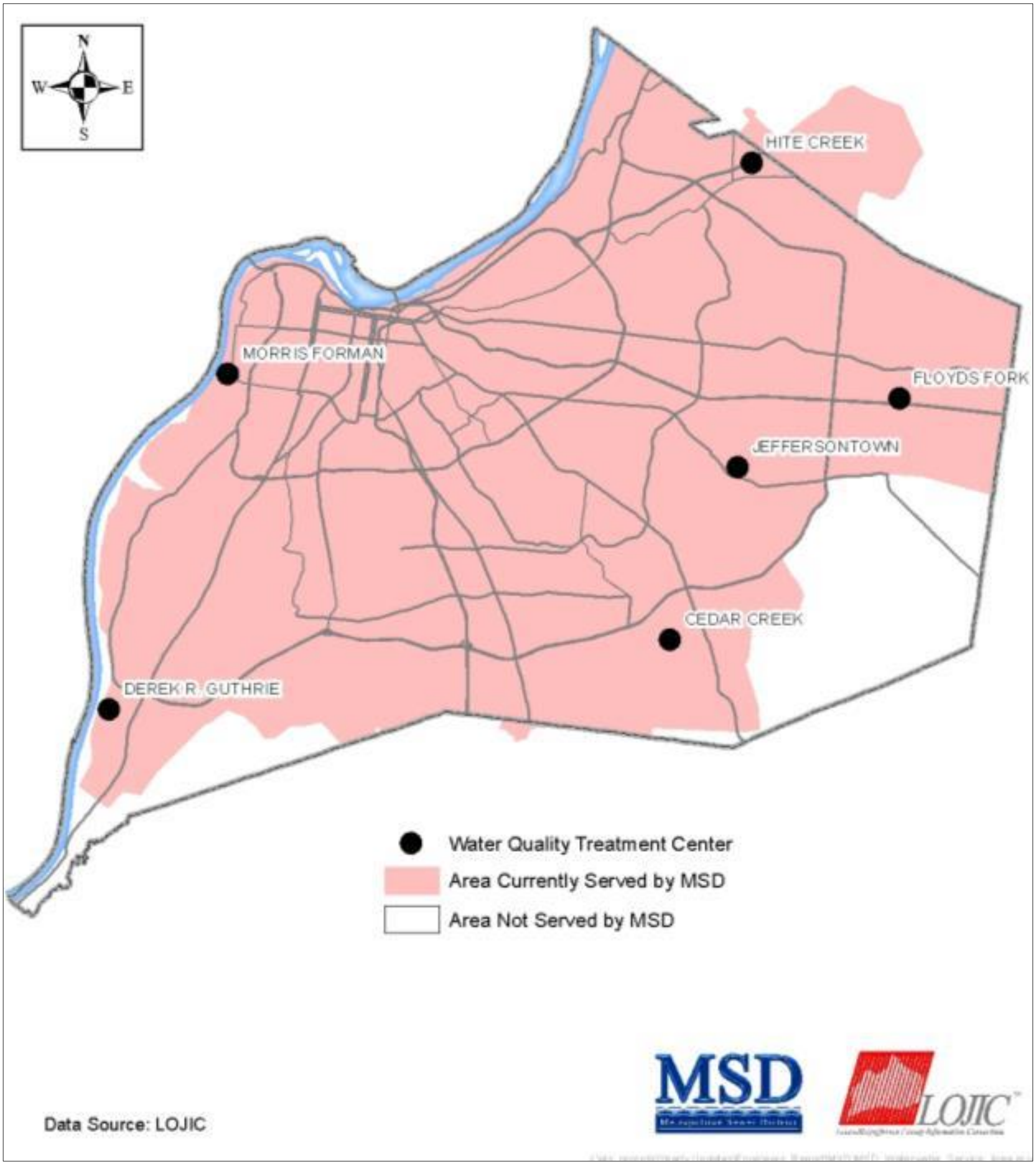


Table 3-12. Small-to-Intermediate WQTC Closures over Last 20 Years

Facility Name	Eliminated	Facility Name	Eliminated
Cinderella	1/19/1995	Pine Tree	9/17/1999
Friendly Hills	2/13/1995	Forest Hills	8/9/2000
Charleswood	3/22/1995	Birchwood	2/14/2001
Whispering Hills	5/12/1995	Copperfield	2/20/2001
Cedar Lake Park	5/26/1995	Fernbrook	3/21/2001
Fern Creek	5/31/1995	Cross Creek	5/30/2001
Poplar Park	6/2/1995	Kirkham	6/21/2001
Idlewood	6/14/1995	Larkgrove	8/6/2001
Treasure Island East	7/10/1995	Ashmoor Woods	10/23/2003
Glen Hill Manor	8/14/1995	English Station	5/20/2004
Shallow Creek	8/15/1995	Running Creek	9/29/2004
Plantation Subd #1	10/31/1996	Fern Hill Wtp	9/27/2005
Plantation Hills #2	11/14/1996	Nottingham Hills	9/30/2006
Glenmary	11/18/1996	Watterson Woods Wtp	12/14/2006
Beulah Land	10/14/1997	Polo Fields	12/18/2006
Gainsboro	2/2/1998	Glenview Acres	9/6/2007
Farmgate	2/19/1998	Yorktown	12/6/2010
Zelma Fields	4/27/1998	Chenoweth Run	9/7/2012
Glencoe	4/27/1998	Hill Ridge	9/14/2012
Kellwood	6/11/1998	Lake of The Woods	5/23/2014
Havalock	8/11/1998	Silver Heights	6/12/2014
Fordhaven	9/24/1998	Chenoweth Hills	9/22/14
West Springfield	9/25/1998	Glenview Bluff	11/20/14
Stone Bluff	10/21/1998	Berrytown	12/31/15 (est)
Winding Falls	1/28/1999	Ken Carla	9/02/15
Old Cedar Creek	1/29/1999	Hunting Creek South	7/22/14
Ramada Inn East	2/15/1999	Hunting Creek North	8/13/15
Old Maple Grove	5/19/1999	Timberlake	7/7/15
Waterfern	7/14/1999	Jeffersontown	12/31/15 (est)
Pines (The)	8/4/1999	McNeely Lake	12/31/15 (est)
Apple Valley	8/4/1999	Middletown	12/31/15 (est)
Maple Grove #5	8/10/1999	Starview Estates	3/31/16 (est)
Pleasant Valley	9/16/1999	Shadow Wood	9/01/15 (est)

The combined sewers generally exist within the boundaries of the former city of Louisville in the downtown and Beargrass Creek areas. Smaller, older combined sewers were unable to convey flow from extreme rainfall events and hence all will be closed by April 2016. MSD's separate wastewater sewers have adequate dry weather capacity because a conservative approach has been used in designing these systems. Although most of these sewers are usually in better condition because of their relatively younger age, MSD has identified sanitary sewer overflows resulting from wet weather conditions in parts of its separate wastewater system. The combined sewer and the sanitary sewer overflow issues are currently being addressed as a part of the Amended Consent Decree MSD has entered into with the KEPPC, the EPA, and the Department of Justice.

The WQTCs, wastewater interceptors, and the pump and lift stations have sufficient capacity to meet the immediate needs of the Wastewater Service Area. MSD has a planned CIP to meet the future needs of this area. All small-to-intermediate capacity water quality treatment centers will be eliminated by April 2016, with flows currently treated by these package plants routed to one of MSD's five remaining WQTCs. The two large WQTCs are the Morris Forman WQTC and the Derek R. Guthrie WQTC. Medium-size WQTCs are Hite Creek, Floyds Fork, and Cedar Creek.

The new Harrods Creek Pumping Station is in service as of August 2015, allowing elimination of five problematic treatment facilities in the Prospect area. Recently, the Hunting Creek South and Timberlake facilities were taken off-line, with flow diverted to the Hite Creek WQTC. The remaining three, Hunting Creek North, Ken Carla and Shadow Wood WQTCs, will be off-line by the end of 2015.

Work continues to install new sewer pipe to divert flow from the Berrytown, Middletown Industrial Park and Starview Estates WQTCs. These conveyance lines will redirect flow to the regional Floyds Fork WQTC. The elimination of these facilities will offer overflow protection to Chenoweth Run and Floyds Fork waterways. The Middletown and Berrytown WQTCs will be off-line by December 31, 2015. Starview Estates WQTC is scheduled to be off-line by March 31, 2016.

A brief description of the five remaining WQTCs follows.

Morris Forman Water Quality Treatment Center (MFWQTC)

This treatment facility is in an industrial area in the western portion of the county near the southwestern corner of the former city of Louisville. This plant began operations in May 1958 and was upgraded in the mid-1970s to a secondary level treatment process that treated organic matter and bacteria. The MFWQTC provides preliminary treatment consisting of screening and grit removal, primary treatment for the removal of solids and floatables, and is designed for bio-roughing prior to secondary activated sludge treatment using high purity oxygen for the removal of the remaining organic and solids pollutants for the entire combined sewered area and a large portion of the separate sewered area in the eastern portion of the county. Final effluent is chlorinated then dechlorinated prior to discharge to the Ohio River. The MFWQTC provides solids treatment for all MSD treatment facilities; it includes a solids handling facility that came on line in 2002. The plant has a dry weather design capacity of 120 million gallons per day (MGD) and treats an annual average daily flow of 92.9 MGD (Table 3-13). The plant has a wet weather maximum capacity of 350 MGD with a longer term sustained capacity of 325 MGD.

The Morris Forman service area is the largest sewershed in the MSD collection system. The collection system contains approximately 1,695 miles of mostly combined sewer pipe. The majority of the land use in the service area is residential, with some smaller areas of commercial, industrial, and parks. There are a total of 87 pump/lift stations in the sewershed area.

This facility, in addition to reducing the need for disposal of bio-solids in the landfill, produces approximately 75 tons per day of dry pellet ("Louisville Green") fertilizer that is sold publicly for additional MSD revenue and reduced landfill costs. In 2005, MFWQTC processed approximately 27,798 dry tons of pellet bio-solids. Of those solids, 46 percent went to beneficial reuse, and the remainder was disposed of in the landfill. In 2006, approximately 87 percent of solids produced went to beneficial reuse, with that quantity increasing to more than 90 percent in 2008. In 2009, almost 26,000 dry tons of Louisville Green were produced and distributed for beneficial reuse. No marketable pellets were sent to the landfill in 2009. Since that time the tons of Louisville Green produced and distributed for beneficial reuse has ranged between 24,000 and 28,000.

Table 3-13. Water Quality Treatment Centers Characteristics

Water Quality Treatment Center	Design Capacity (MGD)	Avg. Daily Flow (MGD) FY 2015	Wet Weather Capacity (MGD)	Eventual Capacity (MGD)	Miles of Sanitary and Combined Sewers	Number of Lift Stations
Morris Forman	120.0	92.9	325	120.0	1,695	87
Derek R. Guthrie	30.0	32.3	200	60.0	899	40
Hite Creek	6.0	4.5	9	9.0	172	45
Jeffersontown	4.0	3.6	NA	NA	NA	NA
Cedar Creek	7.5	3.8	26	7.5	184	27
Floyds Fork	6.5	2.7	12	9.8	166	26
Totals	**170**	**140**	**572**	**206**	3,116	225

Note: MGD means millions of gallons per day
Source: MSD

Derek R. Guthrie Water Quality Treatment Center (DGWQTC)

The DGWQTC (formerly known as the West County Wastewater Treatment Plant) was designed as a 15 MGD preliminary and activated sludge treatment facility. There are no primary sedimentation facilities or sludge processing facilities. In April 1999, the plant's capacity was expanded to 19.5 MGD.

The raw influent wastewater flows through coarse bar screens to the influent pump station. The pumps lift the raw wastewater to an aerated grit chamber. Thereafter flow is by gravity. The secondary treatment facilities can operate in a complete mix mode, utilizing the aeration basins. The wastewater flows from the aeration basins to final settling tanks. Final settling tank effluent flows to chlorine contact basins for disinfection. Following chlorination/dechlorination, final effluent flows to the Ohio River. All solids generated at the DGWQTC are pumped to the MFWQTC for processing.

This plant primarily serves single-family residential customers, commercial, and vacant or undeveloped land. The collection system contains 899 miles of sewer pipe and 40 pump/lift stations.

As the service area and population has grown, treatment capacity has been added to increase the present design capacity to 45 MGD. In 2013, a major wet weather treatment expansion came on-line, increasing the peak wet weather capacity of the plant from 96 MGD to 200 MGD. This expansion allows a diversion of sewage from a portion of separate sanitary sewer service that flows to the Morris Forman WQTC during wet weather. This diversion is part of the wet weather flow management strategy in MSD's Integrated Overflow Abatement Plan. As a result of these wet weather diversions, the plant currently treats an average daily flow of 32.3 MGD, which is within the actual capacity of the plant considering the wet weather treatment expansion. An update to the Derek R. Guthrie Facility Plan is underway to support re-rating the plant for both dry weather and wet weather flows.

Hite Creek Water Quality Treatment Center (HCWQTC)

The HCWQTC plant is located in northeastern Louisville Metro along I-71. The plant, built in 1970 and rated at 2.2 MGD and later expanded to 6 MGD. The plant was primarily built to provide service to the then newly-constructed Ford Motor Company Kentucky Truck Plant and the surrounding suburbs in eastern Jefferson County. The plant effluent passes through grit removal and bar screening prior to settling in primary clarifiers. The secondary treatment is an advanced process, which is designed to perform nitrification. There are rapid sand filters and mixed media filters, which provide tertiary treatment. Disinfection is accomplished using ultraviolet light. The effluent travels over a reoxygenation ladder prior to discharge into Hite Creek. Hite Creek is considered to be a "no-flow" stream by the Kentucky Division of Water. It is a tributary of Harrods Creek discharging into the Ohio River.

The facility operates aerobic digesters for processing of the secondary waste sludge treatment. The digested liquid sludge of approximately two percent solids is hauled by truck to the Morris Forman WQTC where processing to dry pellet fertilizer is completed.

The land use in the service area consists primarily of single-family residential areas with a small number of multi-family residential areas, commercial lots, vacant or undeveloped land, and the Ford Motor Company Kentucky Truck Plant. The collection system contains approximately 172 miles of sewer pipe and 45 lift/pump stations

Expansions have occurred at the treatment plant, along with various upgrades, to increase the present design capacity to 9 MGD. The average daily flow at this plant is 4.5 MGD. The Ford Motor Company Kentucky Truck Plant contributes approximately 1 MGD to the treatment facility.

Jeffersontown Water Quality Treatment Center (JTWQTC)

This treatment facility will be closed by the end of 2015, with wastewater being rerouted to the Morris Foreman and Cedar Creek WQTCs.

Cedar Creek Water Quality Treatment Center (CCWQTC)

This treatment facility is located in the southeastern part of Louisville Metro south of I-265 and west of Bardstown Road on Cedar Creek. The plant was constructed in 1995, and originally rated at 3.25 MGD, to provide sanitary sewer service to the Cedar Creek watershed and a small portion of the Floyds Fork watershed. The plant eliminated existing neighborhood package plants, which had a history of operational problems. The construction of the CCWQTC has greatly improved the water quality in the area.

CCWQTC facilities include raw sewage pumping, a manually cleaned coarse bar screen, two mechanically cleaned base screens, a grit removal basin and grit separator, concentric channel oxidation ditch, two circular final clarifiers, traveling bridge sand filters, ultraviolet light disinfection, post aeration, return/waste sludge pumping, and an aerobic sludge holding basin. Processing of waste sludge is completed at the MFWQTC.

The land use consists primarily of single-family residential with a small amount of multi-family, commercial, industrial, and vacant or undeveloped land. The collection system consists of approximately 184 miles of sewer pipe and 27 pump/lift stations in the service area.

The CCWQTC was expanded to 7.5 MGD in 2003. The plant currently treats an average daily flow of 3.8 MGD

Floyds Fork Water Quality Treatment Center (FFWQTC)

The FFWQTC is located along Floyds Fork creek, north of I-64 in eastern Louisville Metro. The plant began accepting flow in early 2001. This facility has allowed MSD to eliminate existing, neighborhood package plants that have a history of operational problems as infrastructure is expanded in the area east, west, and north of the plant.

The FFWQTC was designed to receive an average daily flow of 6.5 MGD which will be expanded to 12 MGD, with a process design similar to the Cedar Creek WQTC. Plant facilities treat wastewater to a tertiary-level standard, meaning at least 95 percent of its major pollutants are typically removed before being discharged into Floyds Fork creek, a tributary of the Salt River. Processing of waste biosolids into Louisville Green pellets is completed at the MFWQTC.

The land use consists primarily of single-family residential with a small amount of multi-family residential, commercial, industrial, and vacant or undeveloped land. The collection system consists of approximately 166 miles of sewer pipe and 26 pump/lift stations in the service area. The average daily flow at this plant is 2.7 MGD.

Treatment Capacity Summary

Based on the annual average daily flows for each of the five WQTCs, additional wastewater flows can be accommodated at all five. The available capacity for additional flows at Hite Creek is 4.5 MGD, at Floyds Fork 7.1 MGD, and Cedar Creek 3.7 MGD. The total additional available capacity for these WQTCs is approximately 15.3 MGD, sufficient to serve approximately 75,000 additional residential customers on the east side of Louisville Metro in the next five years, based on MSD design criteria. The expanded capacity of the Derek R. Guthrie WQTC and the proposed expansion of the Hite Creek WQTC to MGD will add daily flow capacity for service to approximately 165,000 additional residential customers throughout Louisville Metro in the next five years and beyond. Table 3-13 lists treatment plant treatment capacity and average daily flows.

3.3.2 Stormwater Drainage System

3.3.2.1 *Regulatory Framework*

The Kentucky Pollutant Discharge Elimination System (KPDES) Branch of the Kentucky Department of Environmental Protection, Division of Water (DOW), is the regulatory authority for the system-wide municipal stormwater discharge permit for Louisville Metro. The DOW oversees and regulates MSD's program to comply with its system-wide permit and to manage stormwater quality in Louisville Metro. Discharges from separate storm sewers into waters of the Commonwealth are permitted through the MS4 (Municipal Stormwater Discharge Permits) program. The DOW issued an MS4 permit to MSD on June 7, 2011. The permit applies not only to MSD as the permittee but also to designated co-permittees: Louisville Metro Government, including those cities that do not participate in MSD's drainage service: Shively, Anchorage, St. Matthews, and Jeffersontown. Also, MSD must adhere to rules and regulations relating to water quality, as promulgated by EPA, which enforces the MS4 permit program in Kentucky and throughout the U.S. Plans for drainage improvements must be coordinated with the U.S. Army Corps of Engineers, if they affect waters of the United States and the Federal Emergency

Management Agency (FEMA), as a part of the Federal Insurance Agency (FIA). All floodplain regulations must meet FEMA requirements as administered by the FIA. Furthermore, the U.S. Army Corps of Engineers has inspection responsibilities relating to the Ohio River Flood Protection Works, which MSD is responsible for maintaining and operating. In its most recent review, the Corps gave MSD a "positive" levee system evaluation.[11]

The MS4 permit requirements for water quality management of stormwater runoff demands an increase in the level of service associated with drainage. This situation affects both the existing service area and any proposed expansion area. The immediate effects of the permit requirements will be initiation or enhancement of nonstructural programs and approaches to stormwater quality control, including public education, outreach programs, expansion of MSD's illicit discharge detection and elimination (IDDE) program to the entire service area, and added requirements to MSD's industrial stormwater program. Eventually, though, programs involving structural changes and solutions will require implementation.

3.3.2.2 *Size and Extent of Stormwater Drainage System*

MSD's stormwater drainage system is comprised of various types of facilities to collect, convey, retain, and discharge stormwater runoff into sewers, rivers, streams, and creeks that eventually drain into the Ohio River. These facilities include approximately 1,500 miles of major and secondary drainage channels, 16 pump stations, including the Riverfront station (used in connection with the Ohio River flood protection wall), and six combined stormwater/wastewater major pumping stations. Other associated drainage facilities include: ditches, culverts, conduits, ponds, detention basins, and retention basins. Essentially, all public facilities within the Drainage Service Area are operated and maintained by MSD by virtue of the consolidation of drainage services in accordance with the Agreements for Interlocal Cooperation, effective January 1, 1987, established between MSD, the former city of Louisville, Jefferson County, and several second-, third- and fourth-class cities (identified earlier, Table 3-11).

Included in MSD's responsibility is operation and maintenance of the approximately 30-mile-long Ohio River flood protection system. Seventeen miles of the flood protection system were built between 1947 and 1956, and a 13-mile extension of the flood protection system was completed to the southwestern border of Jefferson County in the 1980s. The flood wall joints are being repaired as a part of maintenance effort, which also includes removal of a significant number of trees. The flood protection system consists of earthen levees, concrete walls, 16 pumping stations (including the Riverfront station), 185 street closures, and drainage control gate closures that protect Louisville Metro. Prior to the Interlocal Cooperation Agreement, the responsibility for the flood protection system belonged to the city of Louisville and the U.S. Army Corps of Engineers. The Corps provided operation and maintenance and annual inspections of the southwest Jefferson County flood protection system that was partially funded by Jefferson County. The Corps continues to conduct periodic inspections.

With the preparation of the *Stormwater Drainage Master Plan* and the *Watershed Master Plan*, adopted in 1988, MSD started developing specific strategies for managing and improving drainage facilities in all of the designated natural watersheds in the county. This program continues today with refinement of procedures developed for GIS-based master planning. As revised master plans are produced for all watersheds, drainage and floodplain conditions can be taken into account as development plans are reviewed. MSD verified floodplain elevations throughout the county during the flood of March 1997. Well-planned drainage systems in newly

[11] *Louisville Levee System Evaluation Study Report / Delivery No. 3143267.*

developing areas will minimize the impact on drainage systems in established neighborhoods. This will keep maintenance and repair costs down, and the entire community will benefit.

MSD also publishes a *Design Manual* to provide a consistent set of standards for the design and construction of drainage facilities. Comments from MSD, engineering consultants, and other entities were reviewed and incorporated into an updated *Design Manual* completed in 1996. A companion document, *Standard Drawings*, was published in 1997. Updates are made on a regular basis to the *Standard Drawings* document. Currently, all of the updates are provided through the MSD website. MSD also issues a *Project Checklist Binder* and in 2000 implemented an Erosion Prevention and Sediment Control Ordinance. Finally, construction inspection by MSD helps ensure facilities are built as designed.

MSD initiated its 1993-1997 Drainage Improvement Program to provide for the planning, design, and construction of more than 200 stormwater drainage projects over a five-year period. A comprehensive plan for the 200 projects was developed in December 1992 by MSD's Consulting Engineer (The Corradino Group) and was presented to and approved by the MSD Board, city of Louisville Board of Aldermen, and Jefferson County Fiscal Court in early 1993. MSD then moved aggressively to implement the 1993-1997 Drainage Improvement Program to completion in 1998. MSD and Corradino aggressively monitored the program for budgets and schedules.

MSD initiated a Drainage Review Action Plan (DRAP) in 1996 to initiate action on all outstanding customer service requests relative to drainage. The DRAP program was initiated to address each customer request by initial review, field investigations, and evaluation by MSD's Customer Response Team (CRT).

MSD is also well into a comprehensive program to implement specific strategies relative to the Stormwater Drainage Master Plan. The objective of MSD's watershed pilot studies was to integrate basin-wide stormwater planning, floodplain delineation, standard design criteria, water quality planning, and stormwater facility maintenance. These concepts are being applied to other watersheds in a systematic manner.

MSD's management approach, utilizing the results of the Drainage Basin Pilot Studies, has provided a means for MSD to evaluate drainage issues on a regional and neighborhood basis in order to ascertain how/whether proposed land use and system modifications can be implemented without exacerbating the frequency of flooding.

In January 2003, MSD and then-Mayor Jerry Abramson outlined a plan to tackle Louisville's most pressing drainage problems. This plan initiated a 30-month program – designated Project DRI (Drainage Response Initiative) – to review customer service requests, develop solutions, and allocate resources to achieve the solutions in a streamlined manner. The first phase of Project DRI identified 380 worst drainage problems (DRI-1 projects) in the Louisville Metro area. These DRI-1 Projects were completed in FY 2006, DRI-2 Projects in FY 2007, and DRI-3 Projects in July 2013. A fourth phase of Project DRI (DRI-4 Projects) will include $4.6 million in neighborhood drainage projects over the next several years.

3.4 Potential Service Areas

3.4.1 <u>Wastewater Services</u>

The expansion of the MSD Wastewater Service Area and customer base is accomplished in two basic ways: (1) by constructing large regional interceptor sewers, pump stations, and force main facilities to eliminate individual on-site disposal systems and small water quality treatment centers and to provide service to developing areas; and, (2) by the acquisition and/or transfer of ownership of private water quality treatment centers which are outside the current contiguous Wastewater Service Area boundary. MSD has expanded water quality service to portions of adjacent Oldham County through interlocal agreements that resulted from the Oldham County Action Plan.

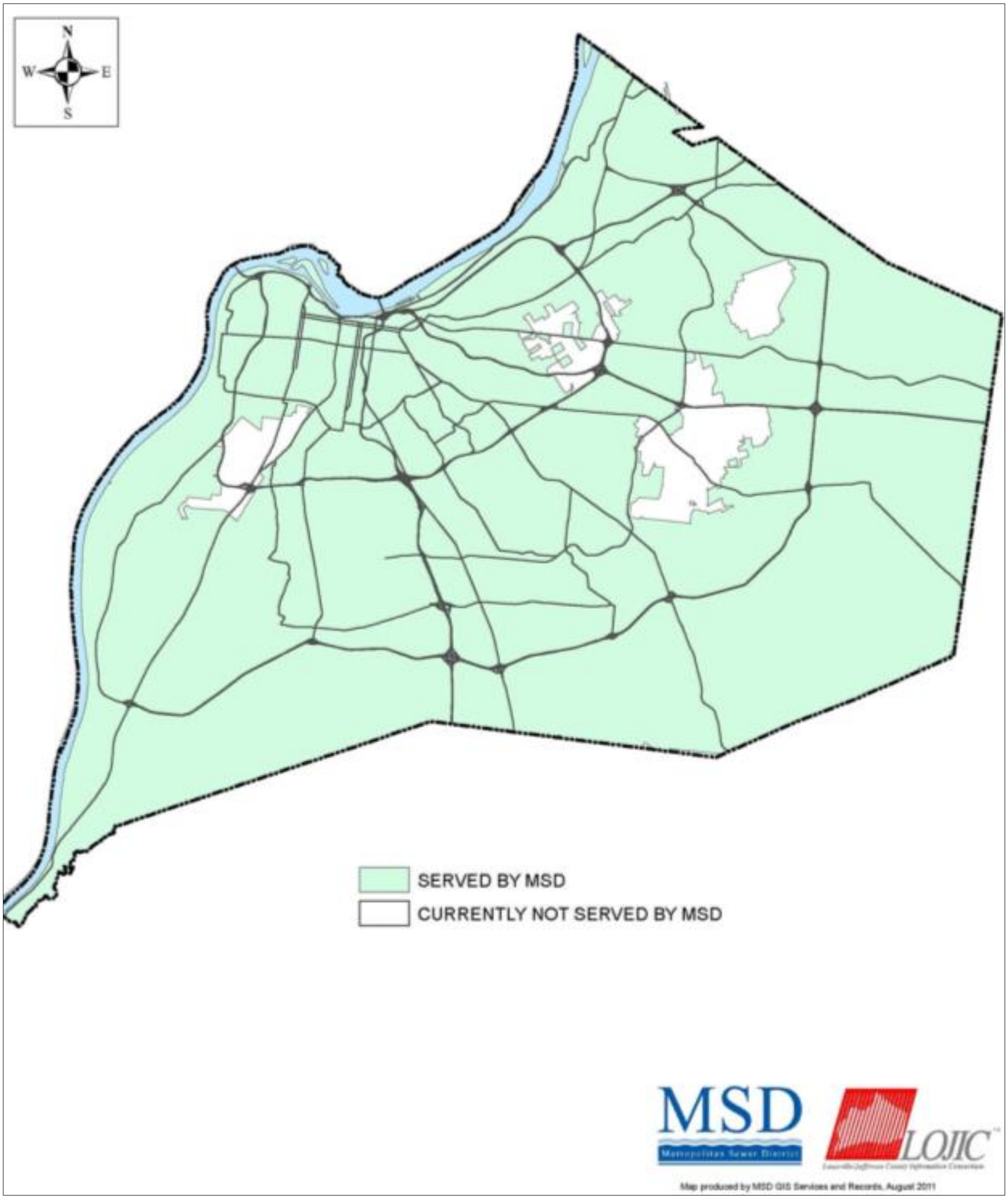
Expansion projects to extend interceptor sewers into previously unserved areas are administered by the MSD Neighborhood Collector Sewer Projects. These watershed programs support the construction of local collector sewers or direct connection of adjacent property owners to the regional interceptor sewers or pump station and force main facilities. In accordance with KRS 76.090 and 76.172, MSD recovers a significant portion of its cost of constructing neighborhood collector systems through property owner assessments, which constitute real property liens, superior to all others, and which run with the land. MSD's policy is to meet with each neighborhood group of property owners to present the planned improvements and estimated assessment costs for proposed neighborhood assessment projects in the respective areas. Each neighborhood then is allowed to vote on the proposal. To date, MSD has been very successful in obtaining neighborhood approvals.

MSD instituted a policy to negotiate and execute agreements with individuals and/or entities (developers) whereby developers may construct and pay for regional sanitary sewer facilities that serve the developer's property and other property located within a region (sewershed) determined by MSD. The developer submits and receives approval from MSD on plans for the proposed regional sanitary sewer facilities and is required to transfer rights, title, and interest in the facilities to MSD. When other properties within the sewershed are developed, MSD will collect Recapture Fees and, after retaining a reasonable administrative fee, remit the balance of the Recapture Fees to the developer in accordance with the terms of the agreement. This results in MSD's expanding its sanitary sewer facilities to areas that were previously considered cost prohibitive. The net result is an increase in customer base without initial construction costs being borne by MSD. Currently, MSD has seven outstanding agreements with developers.

3.4.2 Stormwater Drainage Services

Stormwater drainage services currently are provided essentially to all developed areas in Louisville Metro including some of the second-, third- and fourth-class cities (refer to Table 3-11). MSD bills for stormwater using equivalent service units (ESUs). The ESU is defined by MSD as measured impervious areas with one equivalent service unit assigned for each 2,500 square feet of impervious area (an average residential unit). The estimated number of class A ESUs is 225,000. The estimated impervious area represents 557,000 ESUs. The greatest potential for expansion of the Drainage Service Area is through agreements with the four non-participating cities and by the addition of newly developed areas. The stormwater service area is shown on Figure 3-6.

Figure 3-6. MSD Stormwater Service Area



4. Capital Improvement Program

4.1 Capital Improvement Projects

The MSD Capital Improvement Program (CIP) responds to MSD's charge to improve and expand wastewater and stormwater drainage services to the developed and future developing areas in Louisville Metro. The CIP is implemented through the Capital Planning Process that consists of the Capital Plan, the Capital Budget, and the Implementation Plan. Additional capital needs will be funded from future bond issuances and from increases to the MSD rate structure and user fees. Implementation of improvement projects identified within the framework of the CIP has been accomplished through proceeds from past revenue bond issues, bond anticipation notes, loans, and other long-term debt. The Bond Resolution permits MSD significant latitude in responding to internal financial (i.e., cash flow) conditions, community needs, and external influences (i.e., regulatory guidelines and emergency situations).

MSD has identified more than 1,000 projects, including action plans, facility plans, planning studies, projects related to the Amended Consent Decree, and general services watershed programs in the CIP. The majority of these projects or programs are in the CIP for implementation over the next five years (2016-2020). The Amended Consent Decree is a 19-year program (scheduled for completion December 31, 2024) that requires Louisville to minimize combined sewer overflows and eliminate sanitary sewer overflows, while rehabilitating Louisville's aging sewer system. The capital planning process includes compliance with the Amended Consent Decree.

The general description of the projects/programs includes:

- Combined sewer overflow abatement projects, per the Amended Consent Decree;
- Sanitary sewer overflow abatement projects, per the Amended Consent Decree;
- Wastewater and drainage system expansion and improvements;
- Water quality treatment centers upgrades to improve performance, per the Amended Consent Decree;
- Small water quality treatment centers elimination, per the Amended Consent Decree;
- Improvements to flood control and drainage facilities;
- Drainage and other MSD improvements;
- Collector sewers construction;
- Detention basins construction and improvements;
- Interceptor sewers construction;
- Force mains construction and improvements;
- Pumping stations repairs and improvements;
- Regional storage facilities construction;
- Comprehensive facilities review;
- Miscellaneous improvements and acquisition of equipment and mapping hardware and software; and,
- Sewer system rehabilitations.

4.2 MSD's Five-year Capital Plan

MSD's capital financing and implementation horizon is a rolling five-year period. Five-year capital plan projects identified for design and construction for FY 2016 through FY 2020 have an estimated aggregate cost for that period of $660 million. Some projects will be implemented over periods beyond the five-year planning period. Table 4-1 presents MSD's current five-year CIP, with projected capital outlays.

Table 4-1. Projected Capital Expenses, MSD Five-year Capital Improvement Plan

Investment Category	Projected Capital Investments Budget FY 2016-FY 2020
Total Engineering	$501,591,603
Total Operations	$90,026,800
Total IT and Other	$69,071,320

Source: MSD August 2015

4.3 Capital Improvement Planning

MSD has initiated and refined a comprehensive capital planning process to meet the needs of the community and constraints on its fiscal capacity. MSD's CIP has consolidated initial action plans into watershed service areas that include the action plans as a planning basis. These action plans generally consist of wastewater expansion action plans, stormwater action plans, and operations action plans. The capital planning process produces in essence MSD's overall master plan for the future from the physical infrastructure perspective.

A drainage study is MSD's way of thoroughly reviewing the drainage facilities and problems throughout a large area, generally one-half square mile, so that MSD can determine what can be done to improve the area's drainage service. MSD evaluates the problems and identifies the most effective way of addressing the drainage service requests.

A Watershed Master Plan is a drainage study over an entire watershed. The major watersheds in MSD's service area are Cedar Creek, Floyds Fork, Goose Creek, Harrods Creek, Mill Creek, Middle Fork Beargrass Creek, Muddy Fork Beargrass Creek, Pennsylvania Run, Pond Creek, South Fork Beargrass Creek, and the Ohio River.

Capital Construction Projects are generally large drainage improvement projects that require detailed engineering and other resources to create, install, or significantly improve drainage systems. They are currently planned five years in advance.

There are eight wastewater expansion action plans in Jefferson County: North County, Pond Creek, Mill Creek, Floyds Fork, Jeffersontown, Cedar Creek, Derek R. Guthrie WQTP, and Morris Forman. In addition, there are two action plans outside Jefferson County: Oldham County and North Central Bullitt County.

The service area includes ongoing wastewater expansion action plans, wastewater projects, Amended Consent Decree projects, and drainage projects.

4.3.1 Amended Consent Decree

On April 10, 2009, the United States District Court for the Western District of Kentucky, Louisville Division (the "Court"), entered an Amended Consent Decree, in Civil Action No. 3:08-CV-00608-CRS (the "Amended Consent Decree"). The Amended Consent Decree amended, superseded, and replaced the original Consent Decree entered by the Court on August 12, 2005, between the Commonwealth of Kentucky, the United States of America, and MSD. The Amended Consent Decree resolved all pending claims of violations of the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1972, and the Water Quality Act of 1987 (hereinafter "Clean Water Act" or "the Act") pursuant to 33 U.S.C. 1251 et seq. and the Regulations promulgated pursuant thereto. To date, MSD has complied with all submittals and reporting requirements contained in the Amended Consent Decree. MSD will perform all Capital Improvement Programs and other requirements contained in the Amended Consent Decree. The cost of the projects required to be completed under the Amended Consent Decree was estimated to be approximately $850 million.

The Amended Consent Decree addresses Sanitary Sewer Overflows (SSOs) and unauthorized discharges from MSD's sanitary sewer system (SSS), combined sewer system (CSS), water quality treatment centers, and discharges from MSD's Combined Sewer Overflow (CSO) locations identified in the KPDES permit for the Morris Forman WQTC. The Amended Consent Decree outlines the compliance program and schedules for achieving specific objectives. The process requires efforts that include, but are not limited to, characterizations, modeling, assessments, engineering design studies, implementation and compliance measures, and construction projects that will adequately insure MSD's compliance with permit conditions under applicable law.

For the purposes of this Engineer's Report, except where specifically noted otherwise, the term "Consent Decree" (CD) will be understood to also mean the Amended Consent Decree (ACD).

MSD has implemented measures to date to achieve compliance under its KPDES permits, including abatement of many SSOs and establishing controls on certain CSOs. The ACD includes lists of those items completed and additional projects planned for the near future.

A directorship-level position that reports directly to MSD's Executive Director and the MSD Board was created and filled as required by the CD. Additionally, the Director was required to organize a Wet Weather Team regarding CSOs, SSOs, and Unauthorized Discharges; establish communications, coordination, and control procedures for team members and other participants; and, identify and schedule tasks and associated resource needs.

The Director has assembled a Wet Weather team that includes all entities that have a stake in the program outcome and is sufficiently multidisciplinary to address the myriad of engineering, economic, environmental, and institutional issues that will be raised during the implementation of the remedial measures under the CD.

To address the challenges of improving water quality and proactively meeting the requirements of the original CD, MSD has embarked on a comprehensive sewer improvement program to eliminate major sources of water pollution throughout Louisville Metro. The initiative includes planned upgrades which allow the community to comply with Clean Water Act regulation. Project WIN (Waterways Improvements Now) was developed to address problems with combined and sanitary sewer overflows

MSD has developed and provided internal and external training related to the original CD to its employees and consultants. A public outreach program aimed at updating the public on MSD's primary business functions with emphasis on wastewater, stormwater, and flood protection has been presented to more than 230 community groups. A portion of the presentation includes information related to the CD, including potential program direction and anticipated costs.

Even before Project WIN was initiated, MSD had taken steps to improve its aging sewer system. A preventive maintenance program was established to identify and correct portions of the sewer system that require repetitive inspection, cleaning, and repair.

MSD's Preventive Maintenance Department and Metro Operational Division annually completes thousands of work orders including television inspection of sewers, sewer flushing and lining, root cutting, grease removal, CSO inspection and cleaning, and pumping station and WQTC maintenance. Since 2009, MSD has cleaned and inspected 2,418 miles of its sewers, and is ahead of schedule to clean and inspect all 3,418 miles by the end of 2019, thereby meeting the CD commitment as stated in the Capacity, Management, Operations, and Maintenance (CMOM) plan.

Over 58 percent of the CD projects have been completed, 18 percent are under construction and the remainder are either in advanced planning or design.

Some of the Compliance Program and Schedules under the original Consent Decree and the Amended Consent Decree are discussed in the following sections.

4.3.1.1 *Early Action Plan*

In accordance with the original CD, MSD prepared and submitted an Early Action Plan which the Kentucky Natural Resources and Environmental Protection Cabinet (Cabinet)/EPA reviewed and jointly approved. The Early Action Plan included the following components:

Nine Minimum Controls Compliance

The Early Action Plan contained documentation demonstrating the status of MSD's compliance with the Nine Minimum Controls (NMC) requirements within the combined sewer systems as set forth in the CSO Control Policy.

NMC's are technology-based activities designed to reduce CSOs and their effects on water quality, do not require significant engineering studies or major construction, and can be implemented in a relatively short period. Furthermore, minimum controls are not temporary measures and are considered part of long-term efforts to control CSOs.

Consistent with the NMC's objectives to minimize the impact of CSOs through a reduction of the frequency, duration, or pollutant loading that is associated with overflows, MSD also characterized the sewersheds to determine the location of CSO points, estimated frequency of overflows under specific rainfall and runoff conditions, and the estimated duration of such overflows. To accomplish this characterization, MSD has modeled the CSS area under a wide variety of precipitation conditions, performed many field investigations and surveys, reviewed current Louisville/Jefferson County Information Consortium (LOJIC) information and aerial photography, performed water body inspections, and reviewed previously available information. The characterization of the system provided data about the site-specific nature of CSOs in Louisville and Jefferson County which led to the development of alternatives and choices for NMCs.

MSD prepared a report to document its compliance status and proposed activities in accordance with the "Guidance for Nine Minimum Controls." The report was submitted to the KDEP and EPA in September 2006. The NMC Compliance portion of the Early Action Plan was approved by the Cabinet/EPA on February 22, 2007.

Capital Improvement Project List

The Early Action Plan includes a list that identified projects that have been completed by MSD prior to the implementation of the Sanitary Sewer Discharge Plan (SSDP) or Long Term Control Plan (LTCP). Projects that have been certified in FY 2014 are listed below. Figure 4-1 shows the Consent Decree projects.

- H09136 Shawnee Flood Pump Station Dry Weather Overflow Elimination;
- H09126 27th Street Flood Pump Station Dry Weather Overflow Elimination;
- H09131 CSO 206 Sewer Separation;
- H09220 Camp Taylor #2 - Replace Sewers;
- H07288 UMF #1 - Buechel Basin;
- H09199 Klondike Interceptor;
- H09168 St. Rene Rd. Pump Station Inline Storage;
- H09238 Chenoweth Hills WQTC Elimination and Pump Station Improvements;
- H09175 Riding Ridge Pump Station Improvements;
- H09138 17th Flood Pump Station Dry Weather Overflow Elimination; and,
- H09177 Fairway View Pump Station Improvements.

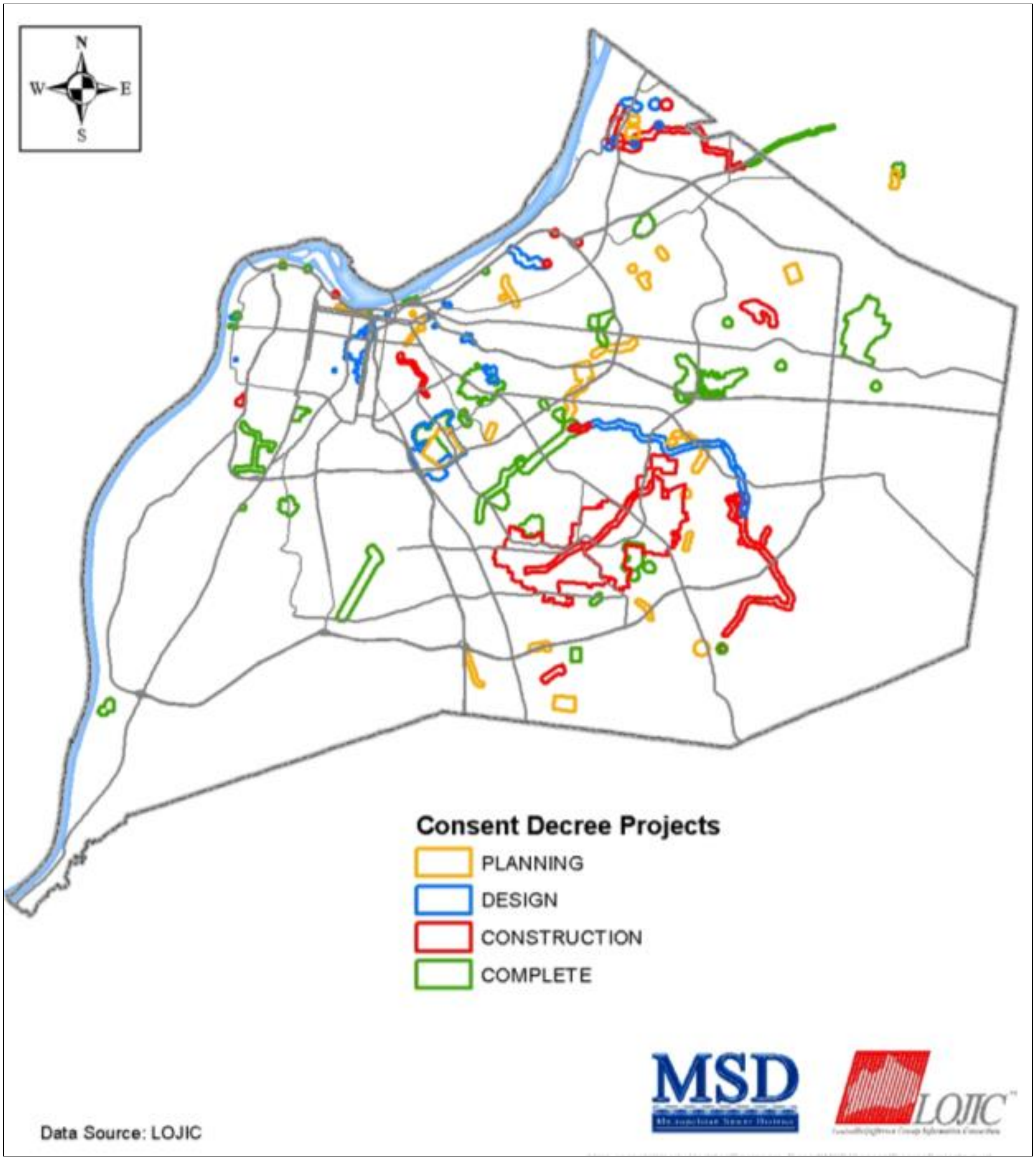
Initiatives adopted by MSD in the wake of the CD include:

Real Time Control: This allows MSD operations staff to route and store a combination of sewage and stormwater runoff throughout hundreds of miles of combined sewer pipes using an automated reporting and gate control system. During intense storm events, the runoff can be diverted and stored within the combined sewer system to decrease the frequency of overflows. In FY 2014, more than 1,151,220,000 gallons of combined sewage and stormwater runoff was stored and treated after the passing of the storms. Phases I & II of Real Time Control have been completed and Phase III is currently in the planning/early design phase.

Public education and outreach is a primary goal of Project WIN. Educating the public about potential health risks associated with sewer overflows and MSD's efforts to eliminate or reduce the overflow volume is the key to the program's success.

MSD has installed signs near and downstream of sewer overflow locations, produced annual mailings to inform residents within the combined sewer system, developed door hangers for homeowners at risk for sewer backups and overflows, distributed a letter and bill insert to all customers providing information on MSD's wet weather program and new initiatives, and developed overflow alert messages displayed on MSD's web page and distributed by email.

Figure 4-1. Consent Decree Projects



Capacity, Management, Operation and Maintenance (CMOM) Programs

The original CD required that the Early Action Plan include a CMOM Programs Self-Assessment of MSD's combined and separate sewer collection and treatment systems.

The overall goal of the CMOM Self-Assessment Report is to determine if there are MSD programs or program activities that should be recommended for improvement to enhance service or compliance performance and to recommend specific actions and implementation schedules to complete the recommended improvements. A specific goal of the CMOM report is that MSD meets the requirements of the negotiated original CD.

To ensure that the CMOM Self-Assessment process is dealing with the programs and activities that have the most impact on SSOs and unauthorized discharges, MSD conducted an evaluation of SSOs and unauthorized discharge causes for the time period of January 2001 through March 2006.

The MSD self-assessment was conducted in an approach that exceeded the requirements of the Consent Decree. MSD's organizational programs were assessed against the EPA guidance program outlines. The staged process resulted in an overall assessment of MSD's programs and activities. The report provided MSD with a planning tool for identifying programs and activities that are performing well and those that can be improved. It served as a basis for action on a number of immediate action items and to identify further the road map for continued improvement.

The self-assessment process revealed that MSD had many activities that were performed well and did not need improvement. The process also revealed program areas and activities that needed improvement. Implementation of some of these improvements was integrated with the formalization of the Sanitary Sewer Discharge Plan, the Long Term Control Plan, and the integrated Wet Weather Plan.

The CMOM report was completed and submitted to the KDEP and EPA in May 2006. This document was approved by the Cabinet/EPA on August 21, 2006.

MSD has completed the implementation of the recommendations from the CMOM Self-Assessment report. The activities were performed using a combination of in-house resources and consultants. MSD continues to operate in accordance with the recommendations in an effort to continuously improve operational effectiveness.

Sewer Overflow Response Protocol (SORP)

The Early Action Plan includes a SORP in compliance with 401 KAR 5:015. The purpose of the SORP is to provide guidance to MSD personnel regarding response, mitigation, public notification, and reporting of overflows, including unauthorized discharges.

A SORP plan was developed that details how MSD will accomplish the following:

- Respond to, clean up, and/or minimize the impacts of overflows, including unauthorized discharges;
- Document and report to the Division of Water (DOW) and EPA the location, volume, cause and impact of overflows, including unauthorized discharges;
- Provide notification to potentially impacted members of the public; and,
- Train all MSD staff and maintenance crews how to react to overflow events.

Potential overflows are communicated through notification by others, system alarms, and field reconnaissance reports. MSD field personnel are trained to inspect for and report overflows during day-to-day activities. MSD also utilizes a Supervisory Control and Data Acquisition (SCADA) system to identify possible overflows in the system. Some locations are in extremely remote areas that are very difficult to access, and/or considerations of employee safety prevent regular, frequent, or continuous monitoring by personnel. MSD response personnel are provided portable laptop computers with wireless modems that allow access to SCADA to observe conditions at pump stations and other facilities virtually anywhere a cellular signal is available.

MSD Customer Relations Call Center (CRCC) personnel are trained to answer questions from the public wanting to report an overflow or request additional information about the overflow abatement programs. Calls received from customers are entered into MSD's Hansen software system as Customer Service Requests (CSR). Hansen software products are used to monitor a variety of municipal functions, one of these being the tracking of customer service information. CRCC personnel are trained to provide prompt, accurate, and current information regarding overflows and to quickly dispatch service personnel to investigate and address situations. Calls are processed and routed to the appropriate department based on the nature and severity of the problem conveyed by the customer.

Procedures describing the process used to enter CSRs into Hansen and other pertinent information is detailed in the SORP report submitted to the Cabinet and EPA in May 2006. The SORP was approved by the Cabinet/EPA on August 21, 2006, and MSD began to implement the SORP within 15 days of receiving the Cabinet/EPA approval.

The following activities were performed during the July 1, 2014, through June 30, 2015, reporting period.

- Overflow Management and Field Documentation;
- Public Notification and Communication;
- Regulatory Reporting and Data Management;
- Staff Training and Communication; and,
- Annual SORP review.

4.3.1.2 *Discharge Abatement Plans*

A sanitary sewer discharge plan (SSDP), designed to eliminate unauthorized discharges in the sanitary sewer systems, and an updated Long Term Control Plan (LTCP) were required to be submitted to the Cabinet and EPA under the original CD.

Interim Sanitary Sewer Discharge Plan (SSDP)

The interim SSDP was to include a plan for eliminating targeted unauthorized discharges in MSD's wastewater collection system. Specifically, the plan called for accomplishing the following objectives:

- Eliminate the use of pumps in the Beechwood Village Area;
- Eliminate the use of pumps in the Hikes Point Area;
- Eliminate the Highgate Springs Pump Station; and,
- Eliminate the constructed overflow at the Southeast Diversion Structure.

MSD developed an integrated design concept to eliminate the targeted unauthorized discharges for these locations as outlined in the CD. The interim SSDP detailed the history of the problem areas and presented final solutions for eliminating the unauthorized discharges. The solution elements included the following:

- Reconstruction of the Beechwood Village sanitary sewer system;
- Elimination of a flow restriction in the Sinking Fork Interceptor;
- Decommissioning of the Highgate Springs Pump Station;
- Increased conveyance between the Southeast Diversion Structure and the Northern Ditch Interceptor;
- Diversion of wet weather flows from the Northern Ditch Interceptor to the Pond Creek Interceptor; and,
- Flow equalization and high-rate secondary treatment facilities at the Derek R. Guthrie Water Quality Treatment Center.

MSD was required to implement the corrective measures necessary for remediating the unauthorized discharges in the Beechwood Village area and at the Southeast Diversion Structure by December 31, 2011, which were completed on schedule. Similarly, the unauthorized discharges at Hikes Point and Highgate Springs Pump Station were required to be eliminated by December 31, 2013. These projects were also completed on schedule.

The interim SSDP described above was submitted to the KDEP and EPA on September 30, 2007. Comments were received on January 8, 2008. MSD resubmitted the revised interim SSDP on March 7, 2008, and received an approval letter for the interim SSDP on July 24, 2008.

All projects required by the ISSDP have been completed and are in service.

<u>Interim Long Term Control Plan (LTCP)</u>

The interim LTCP includes the past history of MSD's CSO control efforts and demonstrates MSD's efforts to date to achieve compliance with the following goals:

- Ensure that if CSOs occur, they are only as a result of wet weather (including activities to address those discharges resulting from compliance with the requirements of the United States Army Corps of Engineers (USACE) Ohio River Flood Protection System Pumping Operations Manual dated 1954 and revised 1988;
- Bring all wet weather CSO discharge points into compliance with the technology-based and water quality-based requirements of the Clean Water Act;
- Minimize the impacts of CSOs on water quality, aquatic life, and human health; and,
- Bring stakeholders into the planning, prioritization, and project selection process.

The interim LTCP, as required by the CD, was initially submitted to the KDEP and EPA on February 10, 2006. MSD received an approval letter dated February 22, 2007, for the interim LTCP.

The proposed improvements identified in the interim LTCP were to be accomplished by December 31, 2008. All activities required under the interim CSO Long Term Control Plan have been completed.

Integrated Overflow Abatement Plan (IOAP)

The Final Sanitary Sewer Discharge Plan and the CSO Long Term Control Plan were submitted and certified on December 19, 2008, concurrently, under the title of the Integrated Overflow Abatement Plan (IOAP). In response to questions from EPA and KDEP, MSD revised and clarified portions of the IOAP and resubmitted all three volumes with a revision date of June 19, 2009. The Final IOAP was submitted with a date of September 30, 2009. Approval was received on October 23, 2009.

In a letter dated June 6, 2014, MSD requested approval from the KDEP and EPA for the Integrated Overflow Abatement Plan 2012 Modification (IOAP 2012 Modification), dated May 2014. The IOAP 2012 Modification represents a revision to 28 separate projects set forth in the original IOAP, dated September 30, 2009 (2009 IOAP). The titles of these projects are listed below:

1. Adams Street Sewer Separation;
2. CSO058 Sewer Separation;
3. CSO093 Structural Modification and Green Infrastructure Controls;
4. CSO140 In-Line Storage & Green Infrastructure Controls;
5. CSO160 In-Line Storage & Green Infrastructure;
6. Derek R. Guthrie WQTC – Wet Weather Facility;
7. I-64 and Grinstead Drive Storage Basin;
8. Meadow Stream Pump Station & Force Main Upgrade;
9. Paddy's Run Wet Weather Treatment Facility (job title changed to Bells Lane Wet Weather Treatment & Inline Storage);
10. Story Avenue and Main Street Storage Basin;
11. Story Avenue and Spring Street Green Infrastructure & Distributed Storage;
12. 13th Street and Rowan Street Storage Basin;
13. Algonquin Parkway Storage Basin;
14. Beargrass Creek Parallel Interceptor;
15. Calvary Creekside Storage Basin;
16. Camp Taylor System Improvements;
17. Caven Avenue Pump Station Elimination;
18. Central Relief Drain CSO, Green Infrastructure & Distributed Storage;
19. Clifton Heights Storage Basin;
20. Eden Care Pump Station In-Line Storage;
21. Fairmont Road Pump Station Off-Line Storage;
22. Lea Ann Way System Improvements;
23. Leland Road Relief Sewer;
24. Lexington Road and Payne Street Storage Basin;
25. Logan and Breckinridge Street Storage Basin;
26. Nightingale Pump Station Basin Elimination;
27. Outer Loop Storage Basin Elimination; and,
28. Southwestern Parkway Storage Basin.

The IOAP Modification was approved and supersedes and replaces the 2009 IOAP.

The IOAP is a major part of MSD's response to the Consent Decree and is the federally enforceable action plan for sewer overflow abatement. The scope of the IOAP is limited to commitments that directly relate to MSD programs and activities to address CSO and SSO issues. The IOAP is a long term plan to control CSOs and eliminate sanitary sewer overflows (SSOs) and other unauthorized discharges from the MSD's sewer system. The IOAP is expected to improve water quality in both Beargrass Creek and the Ohio River through and downstream of Jefferson County. The expected water quality benefits of the IOAP include: (1) reductions in the peak levels of bacteria in the Ohio River and Beargrass Creek; and, (2) a substantial (greater than 95 percent) reduction in the amount of time that CSOs may cause bacteria levels to exceed water quality standards.

The IOAP specifically addresses the following:

- CSO Benefits: A 96 percent capture and treatment of wet weather CSOs during an average year, which equates to an 85 percent reduction in CSO volume compared to the conditions in 2008.
- SSO Benefits: Elimination of an average of 145 SSO events per year. In terms of water quality, this equates to elimination of 100 tons of 5-day biochemical oxygen demand (BOD5) and approximately 200 tons of suspended solids annually.
- Integration with Other Water Quality Programs: Coordinating IOAP implementation with water quality improvement initiatives of Louisville Metro Government and other public and private entities.

Values-Based Performance Evaluation Framework: In accordance with the Consent Decree, MSD established a Wet Weather Team (WWT) comprised of a broad range of community stakeholders, MSD staff, and consultants. Through a series of meetings over two years, the WWT developed a values-based performance framework to use in evaluating, selecting, and prioritizing alternative approaches to overflow abatement. Using the structured decision-making process as framed by the WWT, MSD developed and evaluated overflow abatement control options for the IOAP centered on managing risks to these community values. Projects were analyzed by technical teams in terms of benefits (quantified using the anticipated reduction in risks to the community values) and costs (quantified as total capital and operational costs).

Components of the IOAP include the following:

- Green Infrastructure Program;
- Source Control and Gray Solutions;
- Control of Private Sources of Infiltration/Inflow (I/I);
- Public Information, Education, and Involvement Program;
- Post-Construction Compliance Monitoring;
- Future Development Considerations; and,
- IOAP Funding Plan.

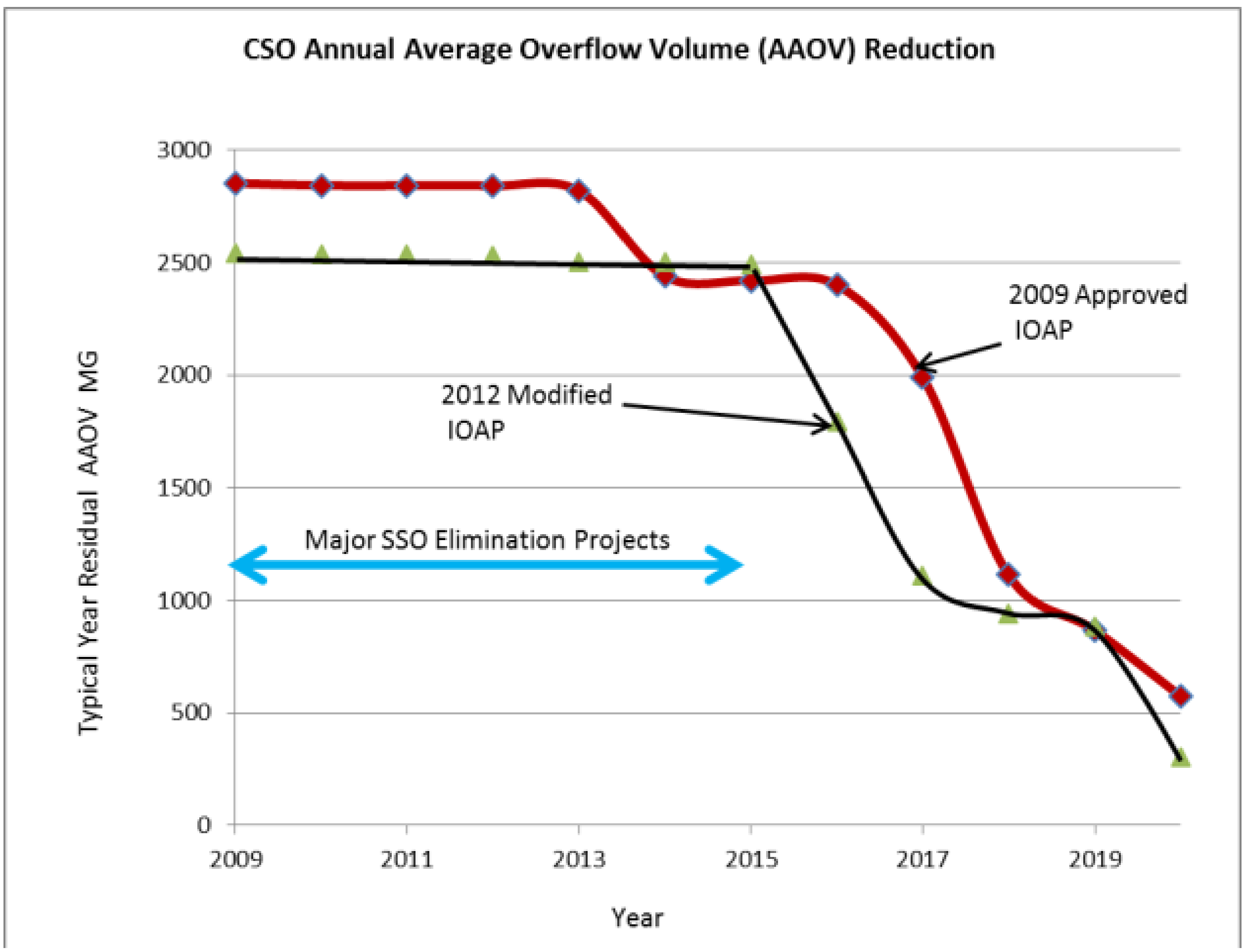
MSD has developed the IOAP in conformance with the ACD, the CSO Control Policy, and other applicable regulations.

Recognizing the long-term nature of the IOAP, MSD committed to an approach of adaptive management, intending to make mid-course corrections as MSD learns more about the performance of its projects and the related response of our sewerage system. In 2011, MSD took advantage of four more years of flow monitoring data to perform a planned recalibration of the hydraulic models used to develop, evaluate, and design overflow abatement projects. As a result of this recalibration, MSD found opportunities to revise the proposed suite of projects, providing increased levels of overflow abatement, faster, and for approximately the same cost. The 2012 IOAP Modification describes the project changes in technology, size, and schedule, and the resultant benefits of making those changes.

MSD developed a programmatic justification for the 2012 IOAP Modification utilizing the same benefit/cost methodology defined by the Wet Weather Team for the 2009 approved plan, as outlined in Volume 1, Chapter 2. This justification demonstrates that the proposed modifications achieve a higher overall benefit to the community through earlier overflow reduction, increased use of green infrastructure, and acknowledgement of pertinent public input.

MSD evaluated the impacts of the proposed modifications on the overflow reduction timing and overall overflow reduction performance as compared to the 2009 IOAP. Figure 4-2 below illustrates the effect of the proposed modifications on the timing of CSO elimination. The curve labeled "2009 Approved IOAP" shows the timing of average annual overflow volume (AAOV) reductions for the approved plan. The curve labeled "2012 Modified IOAP" shows that the proposed modifications achieved AAOV reductions earlier than were projected in the 2009 approved IOAP. In addition, residual AAOV is significantly lower in the 2012 Modified IOAP, reflecting a higher overall level of CSO control. Note that the apparent delay in achieving significant AAOV reductions is due to the need to focus initially on major SSO reductions required by the ACD and described in the Interim Sanitary Sewer Discharge Plan. Significant AAOV reductions were achieved prior to 2009 through the implementation of the first two phases of the Real Time Control (RTC) project, early action sewer separations, and the like.

Figure 4-2. CSO AAOV Reduction through 2020

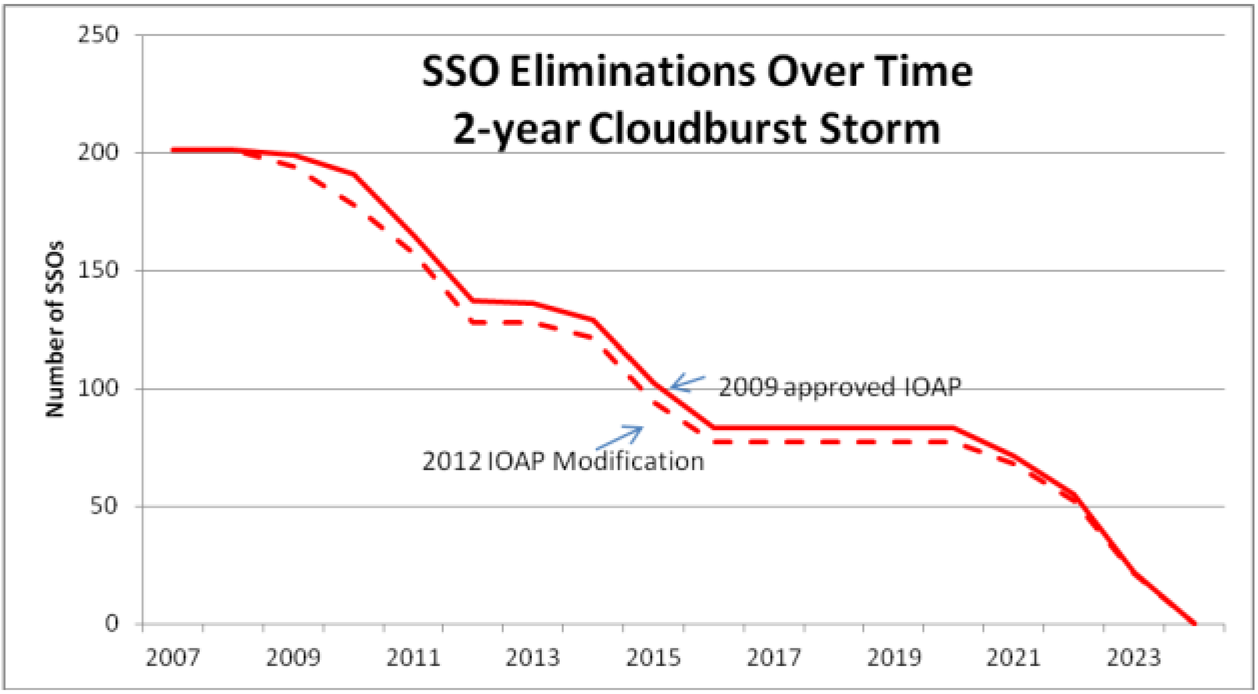


Source: MSD

MSD has similarly evaluated the impacts of the proposed modifications on the SSO overflow reduction timing and overall overflow reduction performance as compared to the 2009 IOAP. Figure 4-3 illustrates the effect of the proposed modifications on the timing of SSO elimination for the 1.82-inch cloudburst storm. Figure 4-3 shows that the number of SSO locations eliminated is the same, and the SSO eliminations occur quicker than originally proposed. In addition, more SSOs are eliminated to a higher level of control than proposed in 2009.

Figures 4-2 and 4-3 demonstrate that the proposed changes result in a more effective overflow abatement program with higher community benefit and more expeditious overflow reduction as a program.

Figure 4-3. SSO Location Reduction through 2024



Source: MSD

CSO Benefits

The suite of projects selected for the Final CSO Long-Term Control Plan (LTCP) will result in approximately 98 percent capture and treatment of wet weather combined sewage during an average year. This benefit represents an 89 percent reduction in CSO volume compared to conditions in 2008. As a point of reference, the presumptive approach for compliance with water quality standards in EPA's CSO Control Policy is based on a minimum of 85 percent capture and treatment of wet weather combined sewage. Of the wet weather combined sewage captured and treated, approximately 70 percent receives secondary treatment at either the Morris Forman WQTC or the Derek R. Guthrie WQTC. The remainder of the wet weather flow receives primary treatment only.

Remaining CSO loads will no longer cause fecal coliform water quality standards violations in the Ohio River. Downstream from Morris Forman WQTC, peak fecal coliform counts are modeled to be reduced by 54 percent, from 100,000 colony-forming units (cfu) per 100 milliliter (cfu/100mL) to 46,000 cfu/100 mL. If CSOs were eliminated, background sources (e.g. upstream Ohio River, stormwater runoff, and other sources) would continue to cause standards to be exceeded 33 percent of the recreation contact season (May to October).

Remaining CSO loads (after removing background) will result in 100 percent compliance with fecal coliform water quality standards in Beargrass Creek. At the mouth of Beargrass Creek, peak fecal coliform counts are modeled to be reduced by 18 percent, from 44,300 cfu/100mL to 37,400 cfu/100 mL. Reducing fecal coliform loads from CSO sources by 85 percent (compared to 2008 levels) results in a reduction of total loads on Beargrass Creek of approximately 30 percent. This is reflective of the preponderance of loads from stormwater runoff and other sources unrelated to CSOs.

SSO Benefits

The suite of projects selected for the Final Sanitary Sewer Discharge Plan (SSDP) for SSO control will result in the elimination of capacity-related SSOs up to the site-specific level of protection. The SSO projects are anticipated to eliminate an average of 145 SSO events per year (290 million gallons {MG} of overflow volume), based on 2005–2007 data normalized for rainfall. In terms of water quality, SSO projects will eliminate 100 tons of five-day biochemical oxygen demand (BOD5) and approximately 200 tons of suspended solids annually.

Along with delivering water quality improvements from sewer overflow control, MSD participates in other community water quality improvement efforts. Sewer overflow control is essential to improving water quality, but overflow control alone is not sufficient to meet water quality standards. In light of this challenge, MSD continues to leverage its role in supporting broader water quality improvement efforts in the community. The IOAP will be one of the key elements of MSD's participation in those water quality improvement efforts.

Integration with Other Water Quality Programs

The IOAP is a part of MSD's Consent Decree response and will be a federally enforceable action plan for sewer overflow abatement. Although many IOAP projects and programs will provide multiple benefits to the community, the scope of the IOAP is limited to commitments that directly relate to MSD programs and activities to address CSO and SSO issues. Other community water quality programs, which may be partly or completely out of MSD's control, can provide synergistic benefits with the IOAP, but they do not fall under the same federal enforcement. These programs may, however, have different enforcement mechanisms. As noted above, MSD anticipates coordinating IOAP implementation with the water quality improvement initiatives of Louisville Metro Government and other public and private entities, even though these broader initiatives may not explicitly be part of the IOAP.

The ancillary information provided by MSD that is not related to overflow abatement projects or the specific requirements of the Consent Decree is being provided and should be considered as supplemental, background information. It is not being submitted in response to any requirements, obligations or commitments to any specific actions or time frames that are required under the provisions of the Consent Decree. This supplemental information should not be considered as a commitment by MSD to any project not required by the Consent Decree.

Final CSO Long-Term Control Plan (LTCP)

Volume 2 of the IOAP is the Final CSO LTCP. Volume 2 presents the proposed plan for compliance in reducing wet weather CSO frequency and volume to levels required by the 1972 Clean Water Act (CWA) and the 1994 CSO control policy. The Final CSO LTCP, when implemented, will accomplish the following objectives:

- Provide that if CSOs occur, they are only the result of wet weather events;
- Perform modifications to the Ohio River Flood Protection System Infrastructure to provide that discharges only occur during wet weather events;
- Bring wet weather CSO discharge points into compliance with the technology-based and water-quality based requirements of the CWA; and,
- Minimize the impacts of wet weather CSOs on water quality, aquatic biota, and human health.

The Final CSO LTCP details the history of problem areas and presents solutions to bring the combined sewer system into compliance. The Final LTCP is organized to present a comprehensive overview of MSD, its history of CSS operations, characteristics of CSS, development of control alternatives, and final recommended programs and projects.

The following activities were performed during the July 1, 2014, through June 30, 2015, reporting period and will continue into the next reporting period.

Green Demonstration Projects

As part of the Final CSO LTCP, MSD is to construct at least $46 million of green infrastructure projects around Jefferson County. These projects help reduce flooding and unpermitted discharge events by absorbing rainfall and slowly discharging it into the ground rather than allowing it to enter MSD's collection system. It is anticipated that the implementation of these green projects will save MSD tens of millions of dollars by reducing the need to construct gray infrastructure such as pipes, storage tanks, and detention basins. These projects also have environmental benefits, such as improving air quality, improving tree canopy, and saving energy. MSD is partnering with private property owners to implement green infrastructure on a wide scale within Louisville Metro. A copy of the articles related to the green infrastructure at Homearama, and the Preston Highway American Council of Engineering Companies Award can be found in Figure 4-4.

The Final CSO LTCP identified a number of green infrastructure demonstration projects throughout the combined sewer service areas. Some of the proposed demonstration projects could not be implemented as originally identified due to permitting or other issues. Other green infrastructure projects were substituted for the projects that could not be implemented. All the demonstration projects have been completed and performance assessed, including maintenance requirements and sustainable stormwater capture and infiltration.

Based on information gathered from the demonstration projects MSD has developed an approach to implementing green infrastructure that includes both MSD-constructed projects in the public right-of-way or on public lands and partnership projects through an incentive program that provides construction funding and stormwater fee credits for green infrastructure installed on private property.

MSD has also partnered with the EPA Office of Research and Development to study the long term effectiveness of the green infrastructure practices installed in selected MSD projects. This partnership is providing valuable information relative to the maintenance practices required to sustain the performance of green infrastructure practices in Louisville.

Figure 4-4. Green Infrastructure Articles

StreamLine

NEWS AND EVENTS AT MSD · AUGUST 2015

MSD brings message of achieving clean, safe waterways to Homearama

MSD employees brought the vision for clean, safe waterways for our community to Homearama in July. The booth featured a rain garden, rain barrels and downspout disconnection information to educate the public on the importance of reducing the volume of stormwater in our combined system, as well as the role stormwater runoff plays in the quality of our local waterways. There was also a backflow prevention model on display, sewer overflow safety tips and information concerning flood safety. More than 60 MSD employees volunteered for this public education event, which attracted 35,000 visitors in a span of 16 days.

Thank you to the employees who volunteered for Homearama

Jill Allen
Joey Ashby
Jordan Basham
Sheila Beard
Joe Bentley
Brian Bingham
Julie Blanford
Jim Bobbitt
Whitney Boles
Brian Bradley
JP Carsone
Vicki Coombs
Gina Davis
Tamika Davis
Gerald Dunlap
Glenn Eilers
June Embers
Zonetta English
Brandon Flaherty
Lynne Fleming
Horace Gaither
Tony Glore
Lanita Grimes
Lisa Hardley
Lamont Hawkins
Greg Heitzman
Ron Henderson
Lopez High
Sharise Horne
David Johnson
Debra Johnson
Sharlie Khan
Tim Kraus
Sheryl Lauder
Loren Levitz
Christal Lewis
Nelson Little
Tom Luckett
Tony Marconi
Eldra McWhorter
Christian Miller
Tony Morrison
Caryn Mulligan
David Mulloy
Alex Novak
Tori Perkins
Julie Potempa
Dana Price
Paula Purifoy
Lori Rafferty
Steve Riley
Angela Sanchez
Mike Scott
Robin Shaw
Sonja Smith
Wes Sydnor
Steve Tedder
Rene´ Thomas
Dennis Thomasson
Daren Thompson
Erin Wagoner
Mike Wharton
Charlotte Whitfield-Baker
Stacey Witten

MSD's Mike Scott, Tony Marconi and Rene´ Thomas stand ready to greet Homearama visitors.

When Robin Shaw, Sharise Horne and Eldra McWhorter arrived Saturday morning July 12, they discovered the MSD tent dangling from a tree, as a result of the storms the night before. Within minutes, this crew had rescued the displays and were spreading the word about the many benefits MSD provides to the community.

Figure 4-4. Green Infrastructure Articles (continued)

StreamLine

NEWS AND EVENTS AT MSD · FEBRUARY 2015

Preston Highway Green Infrastructure Project receives state ACEC award

ABOVE: The American Council of Engineering Companies of Kentucky recognized the green infrastructure project located along Preston Highway, close to the City of Parkway Village, with its 2015 Engineering Excellence Award.

MSD, Louisville Metro and the Corradino Group joined together for a public-private partnership to improve drainage and safety along a corridor of Preston Highway near the City of Parkway Village. The site is in the combined sewer area, making it eligible for green infrastructure incentive funds. The improvements include infiltration trenches, pervious pavers, rain gardens and tree boxes to keep stormwater out of the sewer system and allow its absorption into the ground. These features installed in the CSO185 area capture more than 3.5 million gallons of rainwater in a typical rainfall year and provide overflow protection to the South Fork of Beargrass Creek. The project was recently honored with the 2015 Engineering Excellence Award from the American Council of Engineering Companies of Kentucky (ACEC KY).

The CSO190 plan in Portland called for a storage basin, but green infrastructure will substitute at a cost saving of $1.2 million capital costs. MSD is to maintain the green infrastructure.

Gray Infrastructure Projects

The Final CSO LTCP defines 43 gray infrastructure projects for CSO control. Two of those projects, the Story Avenue and Spring Street Storage Basin and the 18th and Northwestern Parkway Storage Basin, have been reconfigured as green infrastructure projects. Two other projects have been eliminated or consolidated with another project. Twenty-five projects have been completed, seven are under construction, and eight are in design. The remainder of the projects are expected to be in design within one to three years. Implementation of the gray infrastructure projects is on schedule for a December 2020 completion.

Flood Pump Station Projects

The LTCP also defines five projects at flood pump stations to eliminate dry weather overflows (DWO) caused by water trapped between the pump station and the isolation gates following a flood pumping event.

- 34th Street Flood Pump Station DWO Elimination;
- 4th Street Flood Pump Station DWO Elimination;
- 27th Street Flood Pump Station DWO Elimination;
- Shawnee Flood Pump Station DWO Elimination; and,
- 17th Street Flood Pump Station DWO Elimination.

All five of the DWO projects have been certified as complete.

Final Sanitary Sewer Discharge Plan (SSDP)

Volume 3 of the IOAP is the Final Sanitary Sewer Discharge Plan (SSDP). Volume 3 contains the long-term projects, including schedules, milestones, and deadlines as required by the Consent Decree. The Final SSDP also includes the results of an evaluation of WWTP peak flow treatment capacity.

The following plans and programs are used in developing the Final SSDP:

- Updated Sanitary Sewer Overflow Program;
- Capacity, Management, Operations and Maintenance Programs;
- Sewer Overflow Response Protocol; and,
- Interim Sanitary Sewer Discharge Plan.

Also included in the plan is an extensive analysis of MSD's SSO areas, flow monitoring, WQTCs, and modeling process. This is followed by the approach for developing alternative solutions to SSOs, and the process to evaluate both the costs and benefits of each alternative. The MSD Benefit-Cost Value, as described earlier under IOAP, was used to consistently calculate benefits for all solution alternatives. The final projects selected to address SSOs include a mixture of source control (including I/I reduction efforts), wet weather storage, system diversion, and conveyance/transport. The Final SSDP project alternatives are designed to be built around MSD's existing infrastructure and draw on synergistic benefits from other MSD projects.

Finally, the success of the Final SSDP in meeting the CD compliance requirements are proposed to be measured incrementally as the plan is implemented and also at plan completion in December 2024. The four performance goals to be tracked under the Final SSDP include:

- No wet weather capacity-related SSOs from the system within the selected level of protection;
- No wet weather capacity-related system surcharges causing basement back-ups within the selected level of protection and within the pre-remediation zone of influence;
- Secondary treatment of all flow within the selected level of protection; and,
- Project flow monitoring performed and documented.

The following activities were performed through the June 30, 2014, reporting period. Projects noted as "underway" will continue into the next reporting period:

Cedar Creek Area
- Tertiary filter replacement study completed; and,
- Design of repairs to the Influent Pump Station Gate.

Hite Creek Area
- Completed an alternative solids and tertiary filter replacement study; and
- Construction on the Hite Creek WQTC Hydraulic Improvements Project (anticipated to be complete late spring 2016.

Floyds Fork Area
- Enhanced Biological Phosphorus Removal study.

Jeffersontown Area
- Jeffersontown WQTC Elimination continuing (several projects).

Prospect WQTC Elimination Projects Easement Status
- 54 easements have been identified, and all have been acquired..

Small WQTCs
- A number of WQTCs have been closed per Table 3-12.

Jeffersontown Water Quality Treatment Center
- The JWQTC will close by the end of 2015.

Comprehensive Performance Evaluation; Comprehensive Correction Plan & Elimination Plan for Certain WQTCs

<u>Comprehensive Performance Evaluation (CPE)</u>: As a part of the CD, MSD prepared a CPE for the Cabinet/EPA review and approval for the following WQTCs:

- Lake Forest WQTC;
- Timberlake WQTC; and,
- WQTCs receiving flow from Jeffersontown WQTC (excluding dry weather flow sent to MFWQTC and wet weather flow sent to DGWQTC).

MSD voluntarily chose to complete CPEs for all treatment plants except for those undergoing expansion or which had been recently studied. The excluded plants were the MFWQTC, DRG WQTC and Floyd's Fork WQTC. The purpose of the CPE was to identify any flow and/or loading rate restricted treatment process unit(s) at the WQTC which limit the plant's ability to comply with the KPDES permit requirements, including those necessary to provide the required application of Secondary Treatment to all flows into the WQTC. The CPE also evaluates the cause of any effluent limit violation occurring at the WQTC within the last three years.

<u>Composite Correction Plan (CCP)</u>: MSD was required to prepare and submit for the Cabinet/EPA approval a Composite Correction Plan for each of the WQTCs identified above. The purpose of the CCP is to identify alternatives for the elimination of the WQTC or specific remedial actions, including capital improvements and other upgrades to the WQTC to address the problems in the CPE plan, except for the Timberlake WQTC. For the Timberlake WQTC, the CCP shall only include a plan for complete elimination of the WQTC. The CCP shall also include expeditious implementation and completion schedules not extending past December 31, 2015.

Elimination Plan: MSD is required to prepare and submit for the Cabinet/EPA review and approval an Elimination Plan for the complete elimination of the following WQTCs:

- Hunting Creek North WQTC;
- Hunting Creek South WQTC;
- Shadow Wood WQTC; and,
- Ken Carla WQTC.

The Elimination Plan is also to include expeditious implementation and completion schedules not extending past December 31, 2015. Closures are on schedule.

In accordance with paragraphs 26.b and 26.c of the Amended Consent Decree, MSD submitted the required Comprehensive Performance Evaluations and Composite Correction Plans as part of the IOAP on December 19, 2008. Based on comments MSD received from EPA/KDEP, these plans were re-submitted as part of the IOAP Volume 1 on June 19, 2009. Oral approval of the CPEs was received on September 23, 2009. The CPEs and CCPs were accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into the public record February 15, 2010.

Type 1 (operational changes) and Type 2 (minor repair or rehabilitation construction) activities required in the approved CPEs occurred between July 1, 2014, and June 30, 2015, at the following WQTCs:

- Jeffersontown WQTC;
- Timberlake WQTC;
- North Hunting Creek WQTC;
- South Hunting Creek WQTC;
- Starview WQTC;
- Berrytown WQTC;
- Ken Carla WQTC;
- Shadow Wood;
- Starview; and,
- Middletown Industrial Park.

Monitoring Recordkeeping and Reporting at WQTCs

Continuous Flow Monitoring: As a part of the Amended Consent Decree, MSD is to provide continuous flow monitoring at its WQTCs where required by its KPDES permits and to maintain records of such flow monitoring for a minimum of three years.

Bypass Monitoring: MSD is to report in the quarterly reports submitted to the EPA and the Cabinet all Bypasses at MSD's WQTCs prohibited pursuant to the Code of Federal Regulations (CFR). In addition, MSD is required to comply with the advance notice requirements of any anticipated Bypass and with the 24-hour notice requirements of unanticipated Bypass.

Effluent Sampling: MSD is required to sample the effluent at the Jeffersontown WWTP seven days a week for the parameters listed in the current KPDES permit in accordance with the sample type and location indicated in the permit. MSD is to maintain all documentation regarding these sampling events for a minimum period of three years.

Siphon Monitoring and Inspection: Beginning July 1, 2008, MSD began to electronically monitor the water surface elevation in the siphon head box upstream of the headworks of the Jeffersontown WQTC. Based on a given elevation within the siphon head box indicating that SSO is likely to occur, MSD is to inspect the siphon head box and manholes on the gravity interceptor within 2,000 feet of the headworks of the Jeffersontown WQTC. When theses inspections identify an SSO, the occurrence is to be reported and documented in accordance with the approved SORP.

4.3.1.3 *Reporting Requirement*

Quarterly Reports

MSD is required to submit a quarterly report that describes its progress in complying with the Consent Decree, including a description of projects and activities, reductions in volumes and in the number of occurrences of unauthorized discharges, anticipated projects for the upcoming quarter, and other pertinent information.

The reports are structured as follows:

- Significant Accomplishments: Summarizes the high-level milestones achieved during the quarter and other important information.

- Current Activities Review: Describes the project scope, schedule, and status for past projects and activities that demonstrates the efforts conducted to comply with the CD.

- Performance Review: Gives an accounting of the current quarter and the cumulative reductions in volume and in the number of occurrences of unauthorized discharges from the SSS, CSS, WQTCs, and the discharges from MSD's CSO locations identified in the MFWQTC KPDES permit.

- Planned Activities: Describes the anticipated projects and activities that are scheduled to be performed for continued compliance with the CD.

The following quarterly reports have been submitted to date:

- Quarterly Report #1 January 31, 2006;
- Quarterly Report #2 April 28, 2006;
- Quarterly Report #3 July 28, 2006;
- Quarterly Report #4 October 30, 2006;
- Quarterly Report #5 January 30, 2007;
- Quarterly Report #6 April 30, 2007;
- Quarterly Report #7 July 30, 2007;
- Quarterly Report #8 October 30, 2007;
- Quarterly Report #9 January 30, 2008;
- Quarterly Report #10 April 30, 2008;
- Quarterly Report #11 July 30, 2008;
- Quarterly Report #12 October 30, 2008;
- Quarterly Report #13 January 30, 2009;
- Quarterly Report #14 April 30, 2009;
- Quarterly Report #15 July 30, 2009;
- Quarterly Report #16 October 30, 2009;

- Quarterly Report #17 January 30, 2010;
- Quarterly Report #18 April 30, 2010;
- Quarterly Report #19 July 30, 2010;
- Quarterly Report $20 October 30, 2010;
- Quarterly Report #21 January 30, 2011;
- Quarterly Report #22 April 30, 2011;
- Quarterly Report #23 July 29, 2011;
- Quarterly Report #24 October 28, 2011;
- Quarterly Report #25 January 30, 2012;
- Quarterly Report #26 April 27, 2012;
- Quarterly Report #27 July 31, 2012;
- Quarterly Report #28 October 30, 2012;
- Quarterly Report #29 January 30, 2013;
- Quarterly Report #30 April 29, 2013;
- Quarterly Report #31 July 30, 2013;
- Quarterly Report #32 October 30, 2013;
- Quarterly Report #33 January 30, 2014;
- Quarterly Report #34 April 27, 2014;
- Quarterly Report #35 July 30, 2014;
- Quarterly Report #32 September 30, 2014;
- Quarterly Report #33 December 31, 2014;
- Quarterly Report #34 March 31, 2015; and,
- Quarterly Report #35 June 30, 2015.

The reports are in conformance with the structure outlined above, and each of the reports has a comprehensive overview of the program elements, issues, and accomplishments relating to the CD.

Annual Reports

MSD is required to submit an annual report for its previous fiscal year with a summary CMOM Programs implementation pursuant to the CD, including a comparison of actual performance with any performance measures that have been established.

The report is structured to include the following sections:

- Program Activities Performed During the Reporting Period: This section describes the scope, schedule, and status of projects and other activities during the reporting period of July 1 through June 30 of the following year. The projects and activities described are those that demonstrate the efforts conducted to comply with the CD.

- Performance Overview: This section provides an accounting of the number of occurrences of overflows, including unauthorized discharges from the separate sanitary sewer and combined sanitary sewer systems, and the estimated volumes of each. A discussion of the probable reductions in both unauthorized discharge points and the discharges from MSD's CSO locations identified in the MFWQTC KPDES permit that are expected to result from MSD's projects and activities during the period is also included in this section.

- <u>Program Activities for the Next Reporting Period</u>: This section describes the anticipated projects and activities that are scheduled to be performed during the next reporting period for continued compliance with the CD.

- <u>CMOM Program Implementation</u>: This section describes the CMOM-specific projects and programmatic initiatives active during the reporting period, as well as those to be performed during the next reporting period.

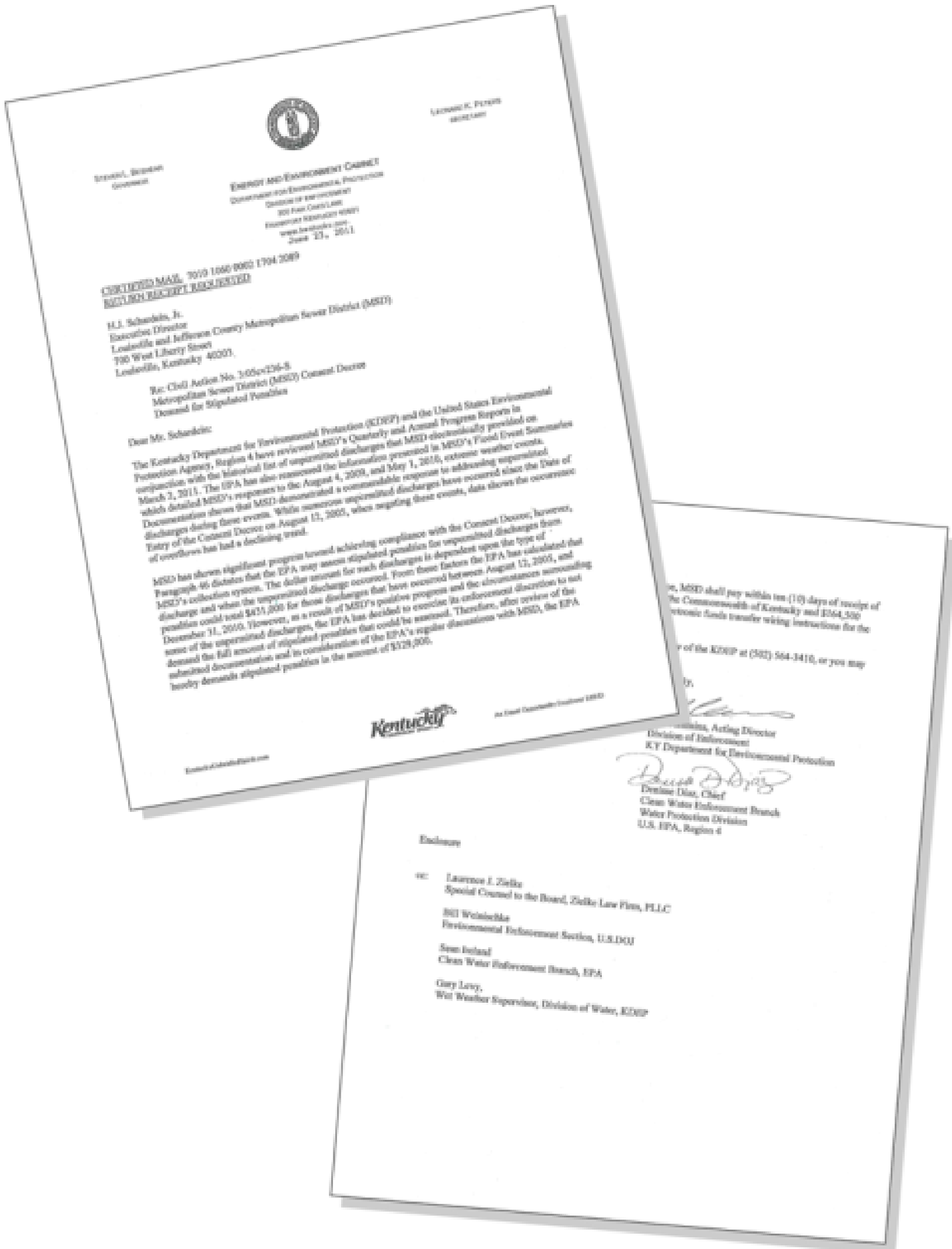
The following Annual Reports have been submitted to the Cabinet and EPA:

- First Annual Report dated December 31, 2006;
- Second Annual Report dated December 21, 2007;
- Third Annual Report dated December 18, 2008;
- Fourth Annual Report dated December 22, 2009;
- Fifth Annual Report dated December 30, 2010;
- Sixth Annual Report dated December 22, 2011;
- Seventh Annual Report dated December 28, 2012;
- Eighth Annual Report dated December 13, 2013; and,
- Ninth Annual Report dated December 26, 2014.

Through the implementation of the CD, MSD has developed an excellent working relationship with the Kentucky DEP and EPA. According to a letter from KDEP and EPA to MSD dated June 23, 2011, MSD has shown significant progress toward achieving compliance with the CD by reducing the amount of unpermitted discharges from MSD's collection system since the Date of Entry of the Consent Decree on August 12, 2005. In addition, the EPA commended MSD on its responses to the August 4, 2009 and May 1, 2010, extreme weather events, as presented in MSD's Flood Event Summaries. As a result of MSD's positive progress, the EPA has exercised its enforcement discretion to reduce the stipulated penalties for unpermitted discharges that occurred between August 12, 2005 and December 31, 2010 from $431,000 to $329,000. A copy of the KDEP/EPA letter can be found in Figure 4-5.

Similarly, in a letter received April 19, 2013, USEPA and KDEP recognize MSD's significant progress. Stipulated penalties of $161,000 were assessed for the time period June 27, 2011 through December 31, 2012. While the letter does not state the maximum amount of penalties that could have been assessed, MSD's understanding is that the penalties have been substantially reduced in recognition of MSD's progress. A copy of this letter is included as Figure 4-6.

Figure 4-5. KDEP/EPA Letter



Steven L. Beshear
Governor

Leonard K. Peters
Secretary

Energy and Environment Cabinet
Department for Environmental Protection
Division of Enforcement
300 Fair Oaks Lane
Frankfort, Kentucky 40601
www.kentucky.gov

June 23, 2011

CERTIFIED MAIL 7010 1060 0002 1704 2089
RETURN RECEIPT REQUESTED

H.J. Schardein, Jr.
Executive Director
Louisville and Jefferson County Metropolitan Sewer District (MSD)
700 West Liberty Street
Louisville, Kentucky 40203

Re: Civil Action No. 3:05cv236-S
Metropolitan Sewer District (MSD) Consent Decree
Demand for Stipulated Penalties

Dear Mr. Schardein:

The Kentucky Department for Environmental Protection (KDEP) and the United States Environmental Protection Agency, Region 4 have reviewed MSD's Quarterly and Annual Progress Reports in conjunction with the historical list of unpermitted discharges that MSD electronically provided on March 2, 2011. The EPA has also reassessed the information presented in MSD's Flood Event Summaries which detailed MSD's responses to the August 4, 2009, and May 1, 2010, extreme weather events. Documentation shows that MSD demonstrated a commendable response to addressing unpermitted discharges during these events. While numerous unpermitted discharges have occurred since the Date of Entry of the Consent Decree on August 12, 2005, when negating these events, data shows the occurrence of overflows has had a declining trend.

MSD has shown significant progress toward achieving compliance with the Consent Decree; however, Paragraph 46 dictates that the EPA may assess stipulated penalties for unpermitted discharges from MSD's collection system. The dollar amount for each discharge is dependent upon the type of discharge and when the unpermitted discharge occurred. From these factors the EPA has calculated that penalties could total $431,000 for those discharges that have occurred between August 12, 2005, and December 31, 2010. However, as a result of MSD's positive progress and the circumstances surrounding some of the unpermitted discharges, the EPA has decided to exercise its enforcement discretion to not demand the full amount of stipulated penalties that could be assessed. Therefore, after review of the submitted documentation and in consideration of the EPA's regular discussions with MSD, the EPA hereby demands stipulated penalties in the amount of $129,000.

Kentucky

...e, MSD shall pay within ten (10) days of receipt of ... the Commonwealth of Kentucky and $64,500 ... ectronic funds transfer wiring instructions for the

...y of the KDEP at (502) 564-3410, or you may

...y,

...mins, Acting Director
Division of Enforcement
KY Department for Environmental Protection

Denise Diaz, Chief
Clean Water Enforcement Branch
Water Protection Division
U.S. EPA, Region 4

Enclosure

cc: Laurence J. Zielke
Special Counsel to the Board, Zielke Law Firm, PLLC

Bill Weinischke
Environmental Enforcement Section, U.S.DOJ

Sean Ireland
Clean Water Enforcement Branch, EPA

Gary Levy,
Wet Weather Supervisor, Division of Water, KDEP

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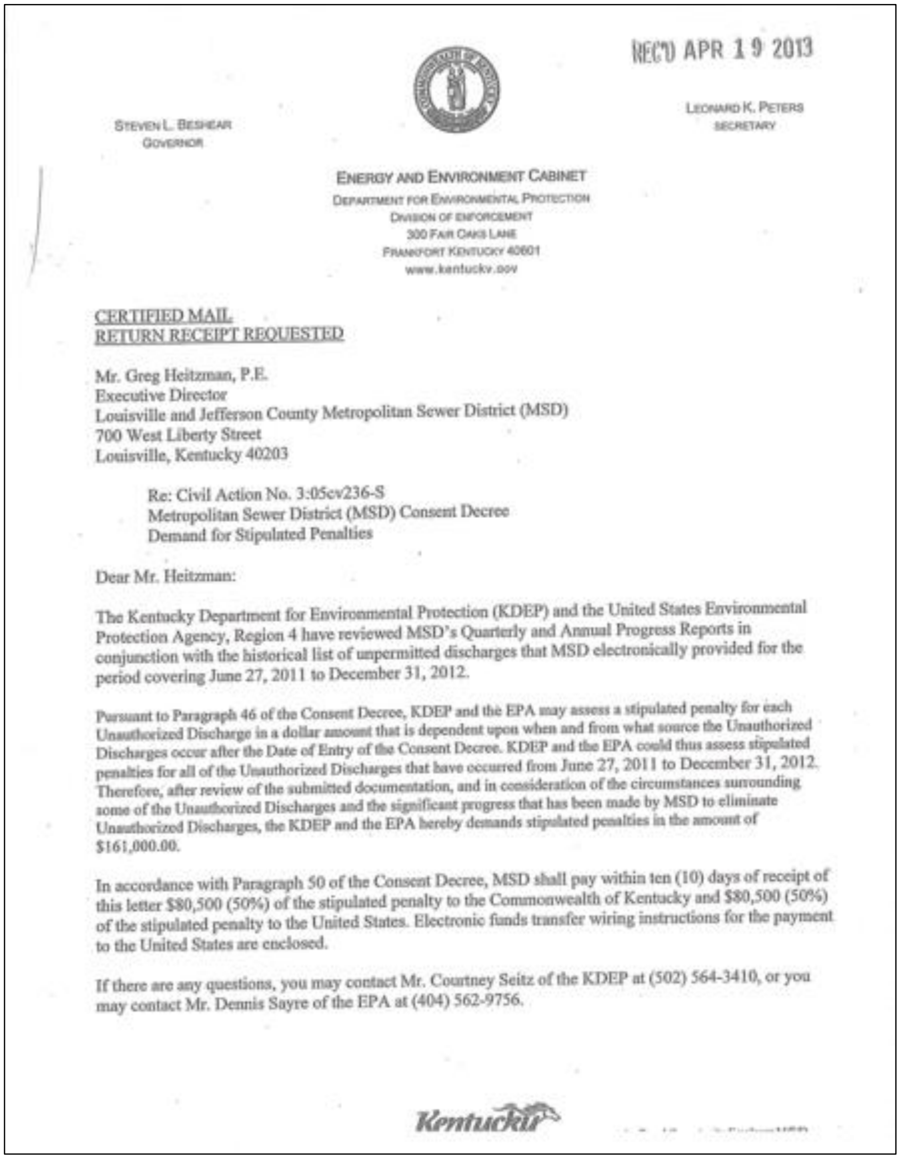
Figure 4-6 KDEP/EPA 2013 Letter



REC'D APR 19 2013

STEVEN L. BESHEAR
GOVERNOR

LEONARD K. PETERS
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF ENFORCEMENT
300 FAIR OAKS LANE
FRANKFORT KENTUCKY 40601
www.kentucky.gov

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Greg Heitzman, P.E.
Executive Director
Louisville and Jefferson County Metropolitan Sewer District (MSD)
700 West Liberty Street
Louisville, Kentucky 40203

Re: Civil Action No. 3:05cv236-S
Metropolitan Sewer District (MSD) Consent Decree
Demand for Stipulated Penalties

Dear Mr. Heitzman:

The Kentucky Department for Environmental Protection (KDEP) and the United States Environmental Protection Agency, Region 4 have reviewed MSD's Quarterly and Annual Progress Reports in conjunction with the historical list of unpermitted discharges that MSD electronically provided for the period covering June 27, 2011 to December 31, 2012.

Pursuant to Paragraph 46 of the Consent Decree, KDEP and the EPA may assess a stipulated penalty for each Unauthorized Discharge in a dollar amount that is dependent upon when and from what source the Unauthorized Discharges occur after the Date of Entry of the Consent Decree. KDEP and the EPA could thus assess stipulated penalties for all of the Unauthorized Discharges that have occurred from June 27, 2011 to December 31, 2012. Therefore, after review of the submitted documentation, and in consideration of the circumstances surrounding some of the Unauthorized Discharges and the significant progress that has been made by MSD to eliminate Unauthorized Discharges, the KDEP and the EPA hereby demands stipulated penalties in the amount of $161,000.00.

In accordance with Paragraph 50 of the Consent Decree, MSD shall pay within ten (10) days of receipt of this letter $80,500 (50%) of the stipulated penalty to the Commonwealth of Kentucky and $80,500 (50%) of the stipulated penalty to the United States. Electronic funds transfer wiring instructions for the payment to the United States are enclosed.

If there are any questions, you may contact Mr. Courtney Seitz of the KDEP at (502) 564-3410, or you may contact Mr. Dennis Sayre of the EPA at (404) 562-9756.

Kentucky

4.3.1.4 *Civil Penalties and Supplemental Environmental Projects*

The ACD contains stipulated penalties for MSD's failure to comply with provisions contained in the ACD, and MSD has agreed to the payment of an additional civil penalty in the amount of $230,000, as well as making total expenditure under the original CD and the ACD for Supplemental Environmental Projects in an amount not less than $2,250,000.

As a part of this program for supplemental environmental projects, MSD is installing rain barrels, rain gardens, riparian buffers, and sustainable landscapes and is implementing environmental programs in conjunction with schools and neighborhood communities.

Examples of Supplemental Environmental Projects

- Riparian Buffer - $75,000
  - $15,000 University of Louisville, Biology Dept., Research on groundwater movement through riparian systems.
  - $35,000 Olmsted Conservancy Woodlands Restoration Project, partnering with MSD for stormwater management.
  - $25,000 Metro Parks for Grinstead/Lexington Road Riparian Buffer, revegetation along Beargrass Creek.

- Watershed Education - $250,000
  - $50,000 Jefferson County Soil Conservation, for elementary school watershed education.
  - $150,000 Living Lands & Waters, for month-long Clean Sweeps and workshops.
  - $50,000 Metro Parks, for Louisville and Jefferson County Environment Trust monitoring of conservation easements.

- Sustainable Landscapes - $100,000
  - $45,000 Youthbuild, for Summer 2007 E-Corps Program.
  - $30,000 Active Louisville, for Robert Wood Johnson grant support for nutrition education and Farmers Markets for Portland and Liberty Green neighborhoods.
  - $25,000 Farm Literacy program at Oxmoor Farm.

- Environmental Certification - $50,000

- Outdoor Classrooms - $70,000
  - $65,000 Farnsley Middle School RESTORE Program.
  - $5,000 Kennedy Montessori School Outdoor Classroom.

- K&I Pedestrian Bridge Restoration
  - $100,000 Waterfront Development Corporation for K&I bridge restoration.

- PRIDE Kentucky
  - $200,000 These funds were submitted to the state of KY for its use.

- Louisville Metro Department of Public Health and Wellness
  - $1,200,000 These funds were used to coordinate and provide community health screenings.

4.3.2 Engineering Division

There are 208 projects listed in this category over the next five years with a projected budget of $870 million. Engineering Division projects fall under one of the following six categories: General/Miscellaneous; Regulatory Services; Design & Construction; Drainage; Treatment Plant; or Collection Systems. More detailed information on these Engineering Division projects is provided below.

4.3.2.1 *General/Miscellaneous*

There are seven projects listed under this category over the next five years with a projected budget of $3.3 million.

4.3.2.2 *Regulatory Services*

There are 113 projects listed under this category over the next five years with a projected budget of $110 million.

4.3.2.3 *Design & Construction*

There are 79 projects listed under this category over the next five years with a projected budget of $680 million.

4.3.2.4 *Drainage*

There are nine projects listed under this category over the next five years with a projected budget of $3 million.

4.3.3 Operations Division

There are 106 projects listed in this category over the next five years with a projected budget of $150.2 million. Operations Division projects fall under one of the following two categories: Drainage & Flood Protection; or Equipment. More detailed information on these Operations Division projects is provided below.

4.3.3.1 *Drainage and Flood Protection*

There are 39 projects listed under this category over the next five years with a projected budget of $33.5 million.

4.3.3.2 *Treatment Plant*

There are 41 projects listed under this category over the next five years with a projected budget of $89.3 million.

4.3.3.3 *Collection Systems*

There are 13 projects listed under this category over the next five years with a projected budget of $9.6 million.

4.3.3.4 *Equipment*

There are 13 projects listed under this category over the next five years with a projected budget of $17.9 million.

4.3.4 IT Division

There are 31 projects listed in this category over the next five years with a projected budget of $412.6 million. IT Division projects fall under one of the following two categories: LOJIC; or Information Technology. More detailed information on these IT Division projects is provided below.

4.3.4.1 *LOJIC*

There are nine projects listed under this category over the next five years with a projected budget of $1.7 million.

4.3.4.2 *Information Technology*

There are 22 projects listed under this category over the next five years with a projected budget of $10.9 million.

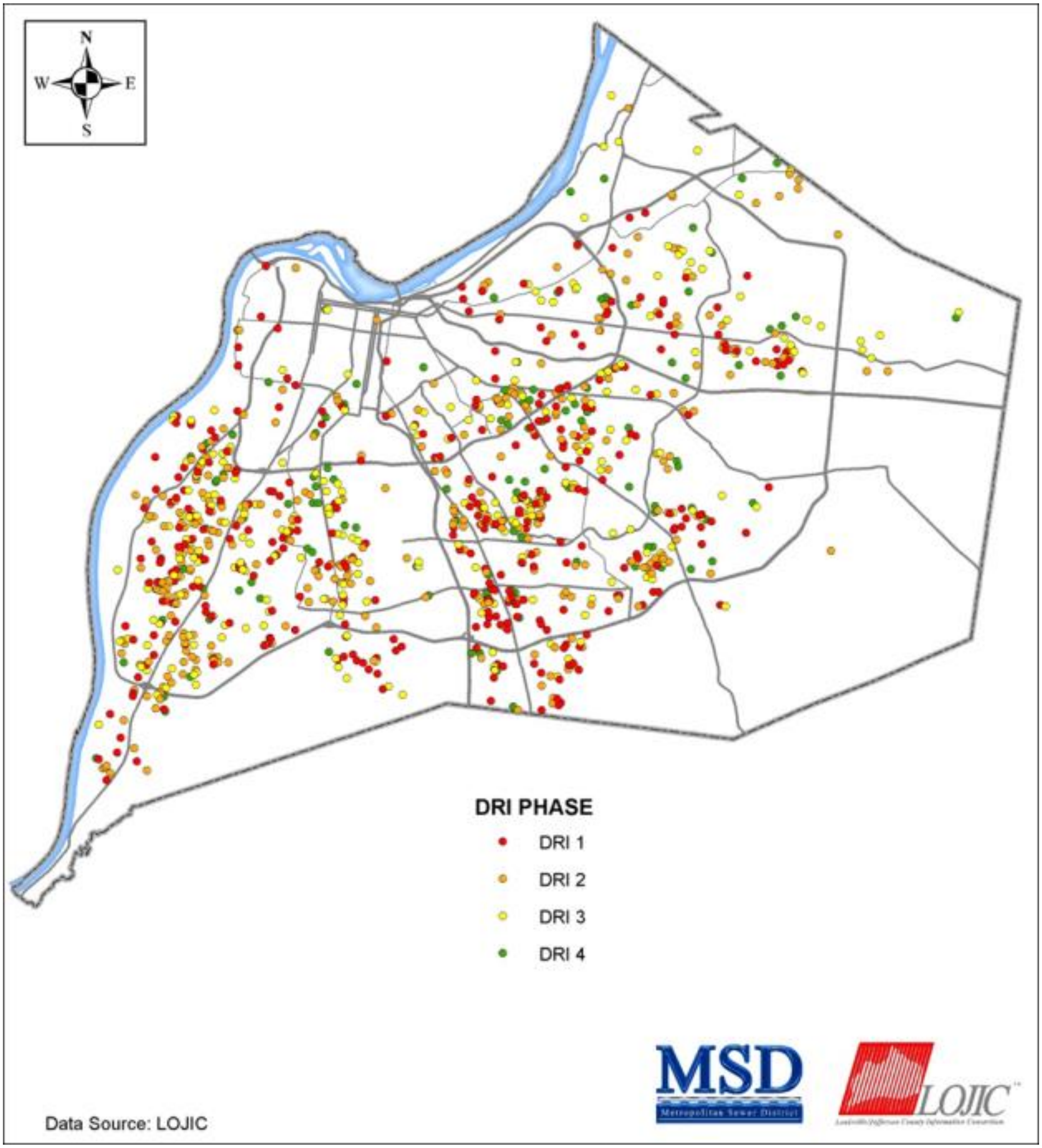
4.4 Drainage

MSD's stormwater drainage system is comprised of various types of facilities to collect, convey, retain, and discharge stormwater runoff into sewers, rivers, streams, and creeks that eventually drain into the Ohio River. These facilities include approximately 1,500 miles of major and secondary drainage channels, 16 pumping stations, including the Riverfront station (used in connection with the Ohio River flood protection wall), and six combined stormwater/wastewater major pumping stations. Other associated drainage facilities include: ditches, culverts, conduits, ponds, detention basins, and retention basins. Essentially, all public facilities within the Drainage Service Area are operated and maintained by MSD by virtue of the consolidation of drainage services in accordance with the Agreements for Interlocal Cooperation, effective January 1, 1987, established between MSD, the city of Louisville, Jefferson County, and several third- and fourth-class cities (identified earlier, Table 3-11).

Included in MSD's responsibility are operation and maintenance of the approximately 30-mile-long Ohio River flood protection system. Seventeen miles of the flood protection system were built between 1947 and 1956, and a 13-mile extension of the flood protection system was completed to the southwestern border of Jefferson County in the 1980s. The flood protection system consists of earthen levees, concrete walls, pumping stations (including the Riverfront station), street closures, and drainage control gate closures that protect Louisville Metro. In order to maintain the integrity of the flood protection along the Ohio River, MSD has been upgrading the flood wall, improving electrical systems and repairing/replacing flood gates. Additionally, MSD monitors the major pumping stations along the Ohio River.

In January 2003, MSD and then-Mayor Jerry Abramson outlined a plan to tackle Louisville's most pressing drainage problems. This plan initiated a 30-month program – dubbed Project DRI (Drainage Response Initiative) – to review customer service requests, develop solutions, and allocate resources to achieve the solutions in a streamlined manner (Figure 4-7). The first phase of Project DRI identified 380 worst drainage problems (DRI-1 projects) in the Louisville Metro area. These DRI-1 Projects were completed in FY 2006, DRI-2 Projects in FY 2007, and DRI-3 Projects in July 2013. A fourth phase of Project DRI (DRI-4 Projects) will include $4.6 million in neighborhood drainage projects over the next several years.

Figure 4-7. Completed DRI Phase 1, 2, 3, and 4 Projects



4.4.1 ***Flood Zone Buyout Program***

The significant rainfall events occurring during March, April and July of 2015, lead to widespread flooding in Metro Louisville, damaging homes. An ordinance requires that if a certain amount of damage occurs to a home, before rebuilding, one must apply for a floodplain permit through MSD.

MSD put forward $1 million to buy out some homes. Meanwhile, over time, MSD's efforts have reduced the cost of Floodplain insurance in the metro area (Figure 4-8).

Figure 4-8. Flooding in Metro Louisville

StreamLine

NEWS AND EVENTS AT MSD · JULY 2015

MSD earns flood insurance discount for our community

The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that encourages community floodplain management activities that exceed the minimum NFIP requirements. Communities taking part in this program are awarded points for participating in public information; mapping and regulation; flood damage reduction; and flood preparedness.

Through MSD's participation in the program, Louisville Metro was moved from a CRS Class 4, to a Class 3 community. This earns an additional 5 percent in flood insurance savings, granting our community a 35 percent discount on flood insurance premiums. This new level of discount is effective October 2015.

4.5 MSD Comprehensive 20-year Facility Master Plan

MSD currently provides three core services to its customer base – flood protection, wastewater collection and treatment, and stormwater management. MSD is responsible for operating and maintaining each of these systems and the assets that they include. The intent of the Comprehensive Facility Master Plan (Plan) is to identify and prioritize the future capital program and rate structures of the organization over the next 20-year period. A public outreach and external stakeholder involvement component is included to help shape the values-based risk management approach, gain insight on community needs, and provide information to MSD customers on the relationship between the level of protection needs that MSD faces and corresponding cost of service that is acceptable. The Plan aids MSD in defining the extent of utility-wide infrastructure needs, the schedule for which they should be accomplished to achieve the desired level of protection, and the associated cost of service for short and long-term budgeting purposes.

4.6 MSD Strategic Business Plan

In 2014, MSD completed a new Strategic Business Plan for 2014 -2018. The Strategic Business Plan resulted in new MSD vision and mission statements, as well as eight strategies that "are the road map of the future."

Vision

Achieving Clean, Safe Waterways for a Healthy and Vibrant Community

Mission

Providing Exceptional Wastewater, Drainage, and Flood Protection Services for Our Community

Strategies

1. Build MSD's Brand Promise
2. Provide Premium Customer Care and Service
3. Improve Information Technology Systems
4. Invest in Infrastructure and Ensure Compliance with Amended Consent Decree
5. Develop Disaster Response and Business Continuity Plan
6. Develop and Invest in Employees
7. Implement Partnerships
8. Ensure Financial Viability

MSD takes leadership seriously and has instituted two programs toward that end, "Aspire" is designed to improved leadership skills throughout the organization. The "Management Development Program" emphasizes day-to-day management skills to improve the functioning of MSD. Each internal program is designed to advance leadership qualities of staff.

5. Financial Structure

5.1 Bond Resolution

Under the 1993 Bond Resolution, MSD moved to consolidate its numerous operating, capital, and debt service funds into three on-going funds:

1. The Revenue Fund, which receives and disposes of all Revenues as defined in the Resolution;
2. The Bond Fund, which consists of Debt Service and Debt Service Reserve Accounts; and,
3. The Construction & Acquisition (C&A) Fund which receives all construction bond proceeds, contributed capital, and MSD net income designated by its Board for capital construction.

Revenues deposited in the Revenue Fund are applied to pay the debt service coverage on all outstanding bonds, operation and maintenance expenses of the System, and for the renewal and replacement of capital assets. This structure greatly facilitates the flow of funds to capital investment. MSD anticipates that it will maintain a minimum working capital balance of approximately $60 million with an average of $65 million in net available revenues in its Revenue Fund during the five-year planning period 2016 through 2020. During the five-year planning period, MSD will increase its working capital from $63 million in the beginning of FY 2016 to $69 million at the end of FY 2020. This increase may be used to partly fund the five-year CIP. The issuance of the previous bond issues under the 1993 Bond Resolution provided MSD with a 30-year level debt service structure for all MSD long-term debt.

5.2 The 2011 MSD CIP Financing Plan

Chapter 76 of the Kentucky Revised Statutes charters MSD to expand its sewer and drainage system to a potential customer base that includes all of the residents of Louisville Metro.

Chapter 76 provides MSD with four basic means by which to finance its CIP. First, it permits MSD to generate net revenues from service charges and other operating income with which to fund renewal, replacement, and new construction and acquisition. Second, Chapter 76 permits MSD to pledge all or a portion of revenues of the system to provide coverage, including excess coverage, of debt service on bonds issued and loans negotiated by MSD. (Louisville Metro Government has facilitated the exercise of this statutory authority by permitting MSD to increase its revenue by up to seven percent annually, by unilaterally increasing base service charge rates, in order to maintain 110 percent debt service coverage on MSD's revenue bonds prospectively). Third, Chapter 76 permits MSD to accept capital contributed by governments (monetary grants), property owners, and developers (usually in-kind). Fourth, Chapter 76 permits MSD to assess property owners for all or a portion of costs incurred by MSD to construct collector systems serving their properties. The sources of funds referred to in Table 5-1 will be available to construct $523.8 million of projects identified as having first priority in the next five years, among other things.

As of June 30, 2015, MSD will have capital funds available in the amount of $63 million to partially finance the long-term CIP. It is reasonable to assume that the balance of the CIP projects will be financed through net revenues, available funds, contributed capital, and financing proceeds from future bond issues.

Table 5-1. Sources of Funds FY 2016 through 2020 MSD Five-year Capital Improvement Plan ($ Thousands)

Funding Source	Projected Funding Budget
From Bond Issues	$420,017
From Contributed Capital	$2,000
Available Revenues	$447,161
Capitalized Interest and Issuance Costs	($99,050)
Working Capital	$63,047
Total Five-year CIP Funding Sources	**$833,175**

Source: MSD

MSD's comprehensive plan is for financing the CIP projects in annual increments averaging $104.8 million of gross capital project design/construction expenses and $27.9 million of MSD capital project management expenses. The projects are sourced from an average of $42.9 million in net financing proceeds and $89.8 million in annual available net revenue and contributed capital.

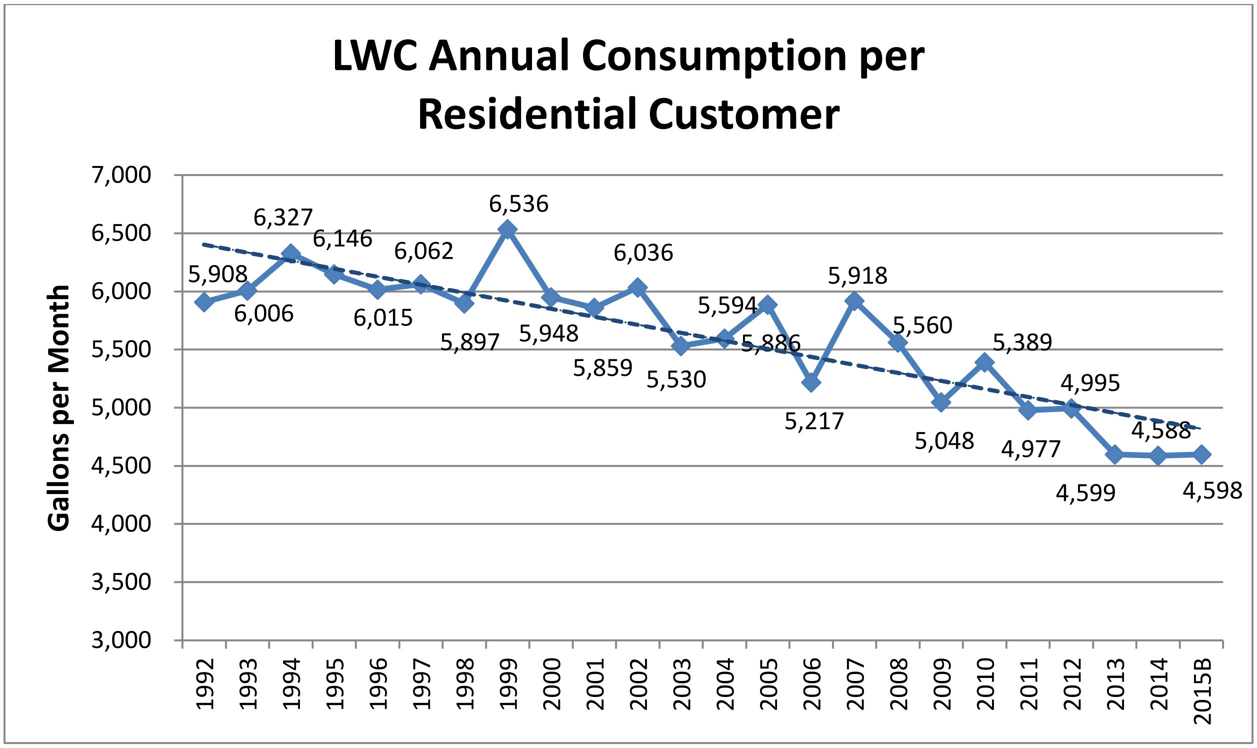
5.3 MSD Revenues

Approximately 90 percent of MSD's total available revenues in FY 2015 were derived from wastewater and stormwater service charges, which are collected from residential, commercial and industrial customers. This percentage is expected to increase to 91 percent by FY 2020. Approximately 59 percent of the service charge is fixed, not volume based. Having a higher fixed component is prudent given the trend toward reduced water usage and its impact on revenue. Figure 5-1 illustrates the trend in reducing water usage by Louisville Water Company customers. This decline reinforces MSD's goal to have about 60 percent of its revenue come from fixed charges.

One of MSD's principal customer service goals is to provide service at reasonable rates, with predictable annual rate increases. For the past 23 years, MSD has strategically approached revenue generation to meet its financial obligations. One forward-thinking revenue generation strategy has been implementation of annual scheduled rate increases (Table 5-2). Except for 2007, MSD implemented rate increases every year from 1988 through 2015. MSD is permitted to increase revenue by up to seven percent annually from service charge rate increases alone. Table 5-2 presents an overview of rate increases from 1987 through 2015. The rate increases for 2013 were reduced to 5.8 percent from the 6.5 percent increases implemented since 2008. For 2014 and 2015 the rate increase has been 5.5 percent.

To finance projects associated with the Consent Decree, a Consent Decree Surcharge was introduced in August 2007. The Consent Decree Surcharge generated nearly $28.9 million during FY 2008. MSD conducted a public outreach campaign to educate customers on the Consent Decree and to explain the need for the surcharge. The public and the Louisville Metro Council reacted favorably to the surcharge and were active participants in prioritizing how the funds were spent.

Figure 5-1. Annual Decline of Average Monthly Water Consumption by Louisville Water Company Customers



Source: MSD

Table 5-2. Annual Rate and Revenue Increase

	Wastewater			Stormwater		
Date of Rate Increase	% Rate Increase		Annual Additional Revenue From Rate Increase	% Rate Increase		Annual Additional Revenue From Rate Increase
1/1/87				N/A	1	$8,165,000
7/1/88	4.3%	(A)	$1,496,000			
1/1/91	6.5%	(A)	$2,731,000			
1/1/92	4.5%	(A)	$1,973,000			
12/1/92				57.1%	(A)	$4,879,000
8/1/94	5.0%	(B)	$2,337,000			
8/1/95	7.0%	(B)	$3,516,000			
8/1/96	5.0%	(B)	$2,703,000	4.4%	(A)	$604,000
8/1/97	5.0%	(B)	$2,772,000	4.5%	(A)	$663,000
8/1/98	5.0%	(B)	$2,900,000	5.0%	(A)	$800,000
8/1/99	5.0%	(B)	$3,150,000	5.0%	(A)	$850,000
8/1/00	5.0%	(B)	$3,101,000	5.0%	(A)	$861,000
8/1/01	5.0%	(B)	$3,314,000	5.0%	(A)	$921,000
8/1/02	6.5%	(B)	$4,540,000	6.5%	(A)	$1,326,000
8/1/03	6.5%	(B)	$5,012,659	6.5%	(A)	$1,407,505
8/1/04	6.5%	(B)	$5,184,032	6.5%	(A)	$1,526,281
8/1/05	6.5%	(B)	$5,655,634	6.5%	(A)	$1,671,724
8/1/06	6.9%	(B)	$6,414,405	6.9%	(A)	$1,957,887
8/15/07			$28,875,000[2]			
8/1/08	6.5%	(B)	$8,017,688	6.5%	(A)	$2,015,401
8/1/09	6.5%	(B)	$8,466,545	6.5%	(A)	$2,095,583
8/1/10	6.5%	(B)	$8,683,175	6.5%	(A)	$2,246,123
8/1/11	6.5%	(B)	$9,395,795	6.5%	(A)	$2,417,718
8/1/12	6.5%	(B)	$9,705,399	6.5%	(A)	$2,417,697
8/1/13	5.8%	(B)	$9,320,500	5.8%	(A)	$2,710,500
8/1/14	5.5%	(B)	$9,833,128	5.5%	(A)	$2,859,578
8/1/15	5.5%	(B)	$10,373,950	5.5%	(A)	$3,016,855

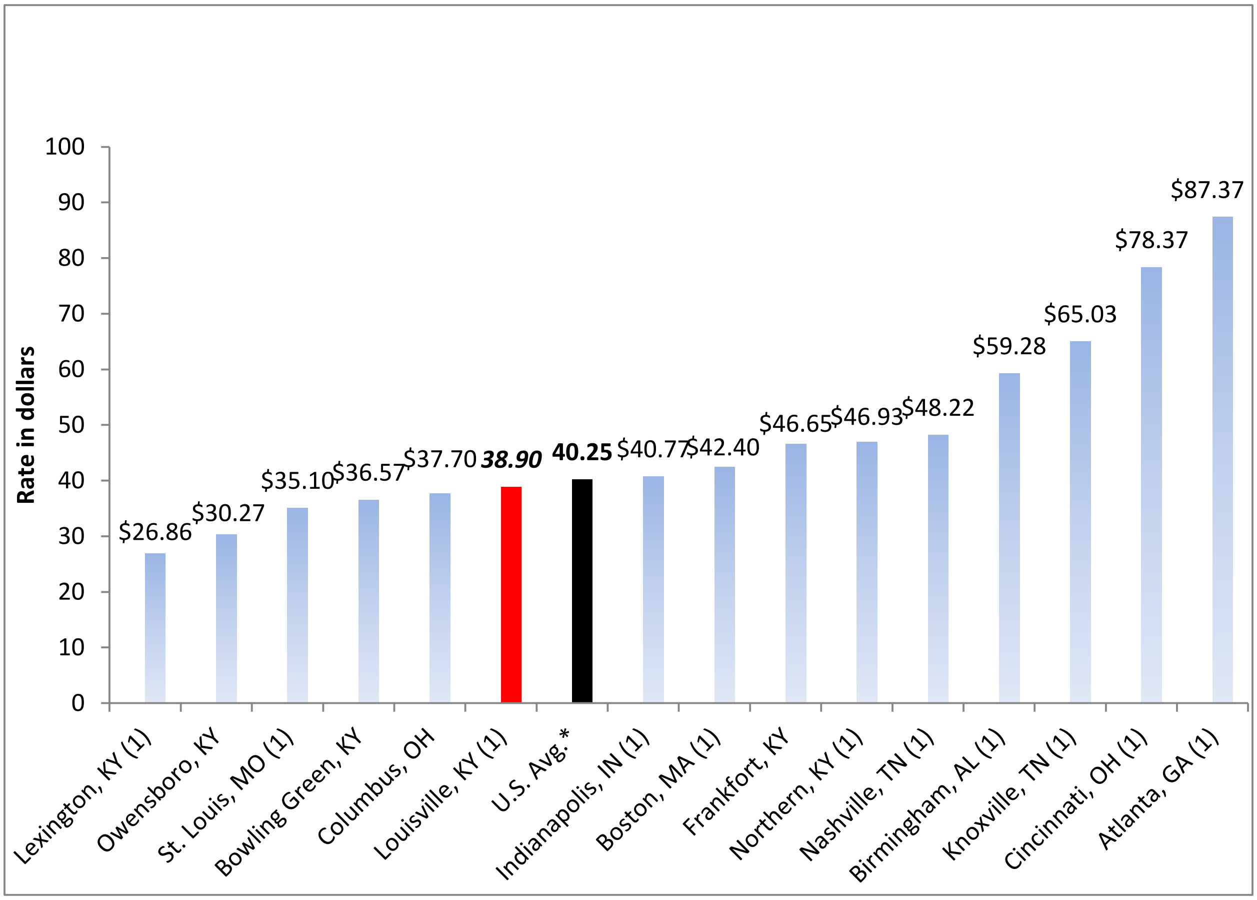
[1] Initial stormwater rate: $1.75 per equivalent service unit.
[2] MSD adopted a surcharge to help fund the EPA Consent Decree effective August 15, 2007. Residential customers will pay $6.95 per month and Commercial & Industrial customers will pay the greater of $6.95 per month or a volume charge ranging from $.49 to $.93 per thousand gallons of water used or sewage discharged depending on their billing classification. This amount does not reflect a full year of surcharge collections. It only reflects the amount collected from August 15, 2007, through the end of FY 2008.
(A) Across-the-board adjustment of all rates.
(B) Composite yield of a variety of rate adjustments.
Source: MSD

5.3.1 <u>Comparison of Rates and Consent Decrees with Other Cities</u>

MSD has annually increased rates as noted above. Furthermore, MSD added a Consent Decree Surcharge in 2007 with the support of its customers. Both these revenue generating methods have been implemented to satisfy system and regulatory requirements while maintaining MSD's principal customer service goal to provide service at reasonable rates.

Figure 5-2 shows forecasted 2015 average monthly wastewater and drainage bills for 15 cities, including Louisville. In addition to having a monthly rate below the U.S. average (as projected by the 2015 National Association of Clean Water Agencies (NACWA)), Louisville ranks as the sixth lowest average monthly bill amongst cities compared in Figure 5-2.

Figure 5-2. 2015 Average Monthly Residential Wastewater Bill based on 5,000 Gallons



(1) Cities with consent decrees
Source: NACWA 2014

Table 5-3 shows eight cities with Consent Decrees, including Louisville. The estimated cost to implement the Consent Decrees ranges from $650 million to $4.7 billion. Louisville has the second lowest cost to implement of the eight listed. Also note that Louisville has the second lowest average wastewater bill. St. Louis has a lower monthly bill, but has significantly higher estimated Consent Decrees implementation costs and has approval to raise their monthly wastewater and drainage rates in excess of 10% in the next three years to meet their Consent Decrees implementation costs.

The comparison data illustrated in Figure 5-1 and Table 5-3 are evidence of MSD's commitment to its principal customer service goal to provide service at reasonable rates.

Table 5-3. Cities with Consent Decrees, Costs to Implement

City	Year	Estimated Cost to Implement	Average Wastewater Bill
Atlanta	1999	$4 billion	$87.37
Cincinnati	2002	$2 billion	$78.37
Knoxville	2004	$650 million	$65.03
Nashville	2007	$1.5 billion	$48.22
Northern Kentucky	2005	$880 million	$46.93
Indianapolis	2006	$1.7 billion	$40.77
Louisville	2005	$850 million	$38.90
St. Louis	2012	$4.7 billion	$35.10

Source: MSD

5.3.2 Revenue Enhancement

At this time, maintaining its forward-thinking approach to meeting financial obligations, MSD is continuing to implement revenue enhancement strategies. The purpose for implementing revenue enhancement strategies is to compensate for declining revenue associated with reductions in wastewater generation within the MSD service area. Revenue enhancement strategies may include any non-rate-affecting method to adjust revenue.

The initial revenue enhancement activity involved reviewing customer profiles to confirm that the customer wastewater and stormwater billing characteristics were accurate. For those found to be inaccurate, billing adjustments were made and MSD will continue this practice of adjusting inaccurate bills in the future. MSD attributes $3.8 million of additional revenue from this activity.

An example of change seen within the MSD service area is the conversion of single-family homes to apartments (commercial properties). This change to the customer profile will result in proper billing of the multi-unit dwelling and the associated revenue enhancement for MSD.

5.3.3 Customer Increase

The controlled upgrading and expansion of MSD's combined system of services will increase the number of customers. Therefore, there will be an increase in the amount of revenues collected from service fees and other rates and rentals associated with wastewater and stormwater drainage services.

MSD is projecting the number of wastewater customers to increase by approximately 0.5 percent annually from FY 2016 to FY 2020. The projected increase is expected to result in a total of approximately 23,000 new wastewater customers (mostly residential customers) for the five-year planning period FY 2016 through FY 2020. Stormwater revenue increases are projected primarily from service area expansion and expansion of impervious surfaces within MSD's service area.

5.4 Projected Revenue/Expense Position

Table 5-4 presents a financial projection of MSD sewer and drainage system operations through FY 2020, together with data for the five years ending June 30, 2015. All operating results are stated on a basis consistent with the definitions and other provisions of the 1993 Bond Resolution. Actual operating results for the fiscal years 2011 through 2014 are based on MSD's audited financial statements. Results for 2015 are not yet audited. The MSD projections and estimates are deemed by Corradino to be reasonably based on industry standards and in accordance with accepted engineering practice. Using the fiscal year 2016 budget and 2010 through 2015 financial reports as a basis for projection, the five fiscal years 2016 through 2020 were estimated using the assumption that rate increases will continue at 5.5.% a year for 2016 to 2020.

Table 5-4. Ten-year Working Capital Fiscal Years Ended June 2011 – 2020 (in thousands)

	FY 2011 Actual	FY 2012 Actual	FY 2013 Actual	FY 2014 Actual	FY 2015 Budget	FY 2015 Forecast	FY 2016 Budget	FY 2017 Projected	FY 2018 Projected	FY 2019 Projected	FY 2020 Projected
AVAILABLE REVENUES:											
Rates, Fees, Rentals and Charges:											
Wastewater service charges	145,880	149,626	159,791	165,599	171,144	172,000	180,041	188,458	197,268	206,491	216,144
Stormwater service charges	37,417	40,856	45,431	48,457	51,695	52,043	54,860	57,877	61,061	64,419	67,962
Revenue Enhancement Program	-	-	-	-	600	-	350	350	350	350	350
Total Rates, Fees, Rentals and Charges	183,297	190,482	205,222	214,056	223,439	224,043	235,251	246,685	258,679	271,260	284,456
Other Available Revenues:											
Other operating income	2,379	1,756	4,823	2,576	4,250	4,327	4,500	4,250	4,250	4,250	4,250
Current assessment payments	2,740	2,405	2,392	2,129	2,000	1,901	2,000	2,000	2,000	2,000	2,000
BAB interest reimbursement	7,978	10,986	10,987	10,096	10,986	10,986	10,986	10,986	10,986	10,986	10,986
Investment income	25,722	29,701	9,133	10,234	8,000	6,642	8,000	8,400	8,820	9,261	9,724
Less: capitalized investment income	(12,134)	(1,851)	(3,817)	-	(40)	-	-	-	-	-	-
Total Other Available Revenues	26,685	42,997	23,518	25,035	25,196	23,856	25,486	25,636	26,056	26,497	26,960
TOTAL AVAILABLE REVENUES	**209,982**	**233,479**	**228,740**	**239,091**	**248,635**	**247,899**	**260,737**	**272,321**	**284,735**	**297,757**	**311,416**
OPERATING EXPENSES, LESS CAPITALIZED OH:											
Labor	40,300	55,010	55,028	55,356	57,138	53,956	55,668	56,781	57,917	59,365	61,146
Utilities	9,906	14,555	12,821	14,563	13,899	13,817	15,865	16,182	16,506	16,919	17,426
Materials and supplies	6,466	8,972	8,990	8,151	7,946	10,168	7,901	8,059	8,220	8,426	8,678
Contractual Services	12,400	19,167	21,035	19,483	20,044	22,492	21,073	21,494	21,924	22,472	23,147
Bad Debt	1,208	1,703	2,050	1,781	2,000	1,568	2,000	2,040	2,081	2,133	2,197
Chemicals and fuel	4,077	5,713	5,907	5,143	6,407	5,416	5,863	5,980	6,100	6,252	6,440
Insurance premiums/claims	1,242	2,609	1,968	1,948	1,720	422	1,320	1,346	1,373	1,408	1,450
All other operating expenses	1,399	597	242	496	6,821	658	6,330	1,357	1,384	1,418	1,461
		108,326	**108,041**	**106,921**	**115,975**	**108,497**	**116,020**	**113,239**	**115,505**	**118,393**	**121,945**
less: capitalized overhead		(33,200)	(33,110)	(33,568)	(34,793)	(30,964)	(31,906)	(29,442)	(27,721)	(26,046)	(24,389)
TOTAL OPERATING EXPENSES	**76,999**	**75,126**	**74,931**	**73,353**	**81,183**	**77,533**	**84,115**	**83,797**	**87,784**	**92,347**	**97,556**
NET AVAILABLE REVENUES BEFORE DEBT SERVICE & CAPITAL EXPENDITURES	**132,983**	**158,353**	**153,809**	**165,738**	**167,453**	**170,366**	**176,623**	**188,524**	**196,951**	**205,410**	**213,860**
SENIOR BOND DEBT SERVICE											
Current maturities of long-term debt	24,840	25,740	27,035	28,525	28,650	28,650	29,415	31,050	32,790	34,640	36,590
Interest expense (senior lien)	78,954	89,243	92,616	80,613	83,403	83,202	86,124	90,977	94,622	95,798	94,631
Less: Capitalized interest expense	(25,195)	(26,384)	(26,358)	(19,103)	(16,681)	(16,640)	(17,225)	(18,195)	(18,924)	(19,160)	(18,926)
AGGREGATE NET DEBT SERVICE	**78,599**	**88,599**	**93,293**	**90,035**	**95,372**	**95,212**	**98,314**	**103,832**	**108,488**	**111,278**	**112,295**
SENIOR DEBT SERVICE COVERAGE RATIO (1)	**169%**	**179%**	**165%**	**184%**	**176%**	**179%**	**180%**	**182%**	**182%**	**185%**	**190%**
NET AVAILABLE REVENUES BEFORE CAPITAL EXPENDITURES	**54,384**	**69,754**	**60,516**	**75,703**	**72,081**	**75,154**	**78,309**	**84,692**	**88,463**	**94,132**	**101,565**

Table 5-4. Ten-year Working Capital Fiscal Years Ended June 2011 – 2020 (in thousands) (continued)

	FY 2011 Actual	FY 2012 Actual	FY 2013 Actual	FY 2014 Actual	FY 2015 Budget	FY 2015 Forecast	FY 2016 Projected	FY 2017 Projected	FY 2018 Projected	FY 2019 Projected	FY 2020 Projected
SOURCES (USES) OF WORKING CAPITAL:											
From current year available revenues	**54,384**	**69,754**	**60,516**	**75,703**	**72,081**	**75,154**	**78,309**	**84,692**	**88,463**	**94,132**	**101,565**
Contributed capital	374	400	3,100	504	400	400	400	400	400	400	400
Proceeds from bonds	330,000	260,125	235,305	100,000	80,000	80,000	175,000	130,000	100,000	25,000	-
Bond Premium received	2,465	26,928	14,313	4,961	4,500	8,193	9,263	7,463	6,263	2,263	2,263
Proceeds from notes (1)	226,340	226,340	226,340	226,340	226,340	226,340	226,340	226,340	226,340	226,340	226,340
Decrease(increase) in debt service reserve:	-	-	27,139	(13,524)	(5,000)	-	(12,000)	(13,000)	(10,000)	(2,500)	-
Defeasance/retirement of bonds	(15,490)	(293,090)	(264,065)	-	-	(16,770)	-	-	-	-	-
Defeasance/retirement of notes	(452,680)	(226,340)	(226,340)	(226,340)	(226,340)	(226,340)	(226,340)	(226,340)	(226,340)	(226,340)	(226,340)
Interest expense (subordinated debt)	(4,833)	(6,542)	(4,784)	(4,519)	(4,527)	(4,514)	(4,527)	(4,527)	(4,527)	(4,527)	(4,527)
Swap interest expense	(11,626)	(11,235)	(10,200)	(9,733)	(9,506)	(9,735)	(9,764)	(9,764)	(9,764)	(9,764)	(9,764)
Contractual capital project design/constructi	(138,311)	(102,108)	(87,815)	(90,526)	(94,287)	(115,000)	(175,000)	(148,800)	(119,600)	(68,000)	(41,600)
MSD capital project management	(30,472)	(33,200)	(33,110)	(33,568)	(34,793)	(30,964)	(31,906)	(29,442)	(27,721)	(26,046)	(24,389)
Net capitalized interest	(13,061)	(24,533)	(22,541)	(19,103)	(16,641)	(16,641)	(17,225)	(18,195)	(18,924)	(19,160)	(18,926)
Underwriters' discounts and issuance costs	(2,792)	(2,939)	(2,789)	(1,028)	(1,475)	(386)	(1,500)	(2,075)	(1,715)	(815)	(515)
Other sources (uses)	2,232	(1,322)	1,187	(6,753)	-	(3,000)	-	-	-	-	-
Increase(decrease) in working capital	**(53,470)**	**(117,762)**	**(83,744)**	**2,414**	**(9,248)**	**(33,263)**	**11,050**	**(3,248)**	**2,875**	**(9,017)**	**4,507**
BEGINNING WORKING CAPITAL	**348,872**	**295,402**	**177,640**	**93,896**	**96,310**	**96,310**	**63,047**	**74,097**	**70,850**	**73,725**	**64,709**
ENDING WORKING CAPITAL	**295,402**	**177,640**	**93,896**	**96,310**	**87,062**	**63,047**	**74,097**	**70,850**	**73,725**	**64,709**	**69,216**

SUBORDINATED DEBT SERVICE	**(16,459)**	**(17,777)**	**(14,984)**	**(14,227)**	**(14,033)**	**(14,249)**	**(14,291)**	**(14,291)**	**(14,291)**	**(14,291)**	**(14,291)**
DEBT SERVICE COVERAGE RATIO (2)	**140%**	**149%**	**142%**	**159%**	**153%**	**156%**	**157%**	**160%**	**160%**	**164%**	**169%**

(1) - Excludes Subordinated Debt
(2) - Includes Subordinated Debt

Table 5-4. Ten-year Working Capital Fiscal Years Ended June 2011 - 2020 – Notes

(1)

The classification of Revenues and Expenses follows the definitions contained in MSD's *1993 Sewer and Drainage System Revenue Bond Resolution* and its supplements (collectively, *"the Resolution"*). This classification varies in certain material respects from the classifications that would be applied following *generally accepted accounting principles for governmental enterprises ("GAAP"),* as well as from those prescribed in MSD's earlier (1989, 1971 and 1949) Revenue Bond Resolutions.

The Resolution requires MSD to provide *Available Revenues*, as defined in the Resolution, sufficient to pay 110 percent of each fiscal year's *Aggregate Net Debt Service* on Revenue Bonds and 100 percent of *Operating Expenses*.

Available Revenues, as used only for purposes of the Resolution, means all revenues and other amounts received by MSD and pledged as security for payment of Bonds issued pursuant to the Resolution, but excludes any interest income that is capitalized in accordance with GAAP. Available Revenues include, service charges and other operating income (collectively, "operating revenues"), and investment income, as reported in MSD's general purpose financial statements. Most notably, Available Revenues also include property owner assessments and assessment installments which become due during any reporting period.

Operating Expenses include all reasonable, ordinary, usual or necessary current expenses of maintenance, repair and operation of the *System* determined in accordance with GAAP, but exclude reserves for extraordinary maintenance and repair (if any), and do not include administrative and engineering expenses of MSD which are necessary or incident to capital improvements for which debt may be issued pursuant to the Resolution, and which, pursuant to the Resolution, may be paid from the proceeds of such debt as *Costs of Construction and Acquisition*. Operating Expenses are, therefore, identical to service and administrative costs, as reported in MSD's general purpose financial statements, but do not include depreciation, which is a component of operating expenses in those statements.

Aggregate Net Debt Service is aggregate current principal and interest requirements on all Bonds issued pursuant to the Resolution, excluding [i] interest expense which in accordance with GAAP is capitalized and which may be paid from the proceeds of debt issued pursuant to the Resolution as a Cost of Construction and Acquisition, and [ii] other amounts, if any, available, or expected to become available in the ordinary course, for payment of principal and interest and not included in Available Revenues. Thus, the interest expense component of Aggregate Net Debt Service is identical to interest expense as reported in MSD's general purpose statements of revenue, expense and net assets.

(2)

Rates, Fees, Rents and Charges, as defined in the Resolution are identical to MSD's *service charges* for the conveyance and treatment of wastewater and for stormwater drainage and flood protection, as reported in MSD's general purpose financial statements. The revenue enhancement program refers to an initiative that will involve reviewing customer profiles to confirm customer wastewater and stormwater billing characteristics are accurate. Where inaccuracies are found, profiles will be updated and appropriate billing rates will be applied.

For fiscal years prior to FY 2015, the figures in Table 5-4 are actuals.

(3)

Other Available Revenues include other operating income and investment income as reported in MSD's general purpose financial statements, and property owner assessments and assessment installments which become due during any reported period.

Other operating income consists largely of system development charges: wastewater capacity charges, sewer connection fees, stormwater regional facilities fees and LOJIC product sales. The category also includes miscellaneous fines and charges for service incidental to MSD's primary mission and biosolid pellet sales. Biosolid pellet sales began in 2006. For fiscal years prior to FY 2015, the figures in Table 5-4 are actuals.

For FY 2015, revenue from these sources is projected at $4.5 million and is projected to remain constant through 2020. These projections reflect MSD's recent experience and the likelihood under current MSD policy that a number of these fees and charges will be adjusted to reflect the system value added from MSD's investment in increased System capacity. MSD considers the Table 5-4 projection of this category a low-to-middle case conservative forecast, given the other economic and policy assumptions underlying the overall projection.

Assessments are levied by MSD pursuant to the provisions of Chapter 76 of the Kentucky Revised Statutes, which authorizes MSD to issue apportionment warrants which evidence the allocation of liability for collector project costs among benefited property owners, and are negotiable. Property owners may repay MSD in lump sum or in equal monthly installments over 20 years at seven percent interest. Assessments are booked, at the face value of apportionment warrants issued by MSD, as contributed capital in MSD's general purpose financial statements. (Effective in FY 2002, GASB Statement 34 requires all contributed capital to be recorded as revenue, and MSD's financial statements reflect this change.) However, because a significant portion of the assessments is a long-term receivable (in MSD's recent experience, about 40 percent of property owners pay in full within two years of the assessment), MSD records only that portion of assessments, together with accrued interest, becoming due within any reported period as Available Revenues.

For fiscal years prior to FY 2015, the figures in Table 5-4 are actuals. For FY 2015 and subsequent fiscal years, assessments have been projected in accordance with MSD's current project delivery schedule and MSD's experience that approximately 60 percent of assessed property owners will elect MSD's installment payment plan. For the five-year period ending June 30, 2020, MSD projects revenue of $2.0 million annually from existing and future assessment projects.

For fiscal years prior to FY 2015, *investment income* figures (gross and net) are actuals and identical to those reported in MSD's general purpose financial statements. For FY 2015 and subsequent fiscal years, investment income is projected as the product of projected average balances of cash and investments (reserved for authorized construction and unreserved).

(4)

Aggregate Net Debt Service components – current maturities of long-term debt, interest expense and capitalized interest expense – for fiscal years prior to FY 2015 figures are actual, and are identical to those reported in MSD's general purpose financial statements. For FY 2015 and subsequent fiscal years both current maturities of long-term debt and interest expense include scheduled payments on Bonds previously issued pursuant to the Resolution, scheduled payments on the Series 2015 Bonds and payments to be scheduled on *Additional Notes* (at the same yield) projected to be issued during FY 2016 through 2020. For FY 2015 and subsequent fiscal years, capitalized interest expense is projected as the product of expected average balances of construction in progress and of cash and investments reserved for authorized construction.

(5)

Pursuant to Article 7 Section 7.11 A. of the Resolution, MSD covenants to "fix, establish, maintain and collect rates, fees, rents and charges for services of the System, which together with other Available Revenues are expected to produce Available Revenues which will be at least sufficient for each Fiscal Year to pay the sum of: [1] an amount equal to 110 percent of the principal of and interest coming due on Prior Lien Bonds and 110 percent of the Aggregate Net Debt Service for such Fiscal Year...." Table 5-4 exhibits compliance with this covenant requirement for each of the ten actual and projected fiscal years.

(6)

Operating Expenses for FY 2010 through FY 2014 are actuals and are identical to the figures reported in MSD's general purpose financial statements. For FY 2016, expenses, before contingency reserve and capitalized overhead, will increase by one percent and then by two percent in 2017 and 2018 and three percent in FYs 2019 and 2020. Table 5-4 projects changes in operating costs, net of capitalized overhead, based on assumed underlying annual inflation of three percent for all categories except labor and utilities. Labor, the largest expense, and utilities are projected to increase by two percent in 2016, one percent in 2017, two percent in 2018 and 2019, and three percent in 2020.

(7)

For purposes of Table 5-4, the *Sources (Uses) of Working Capital* analysis provides an accounting of funds held by MSD which, while remaining subject to the pledge effected by the Resolution in Article 5 Section 5.1 for the benefit of Bondholders, are available pursuant to the Resolution to pay Costs of Construction and Acquisition.

Contributed capital consists of cash or in-kind contributions in aid of construction and acquisition from governments, property owners and developers, but excludes assessments. Both the actual figures for years prior to FY 2015 and the projected figures for subsequent years represent principally construction of new lines by developers.

Proceeds from bonds and notes for fiscal years 2010 through 2014 are actual. Table 5-4 includes projected issues of $175 million in FY 2016, $130 million in 2017, $100 million in 2018, $25 million in 2019, and $0 million in 2020.

In the *Defeasance/retirement of debt* Category, approximately $1.1 billion was used to refund Bond Anticipation Notes (BANs) from FY 2011 through FY 2014. The $1.1 billion in FY 2016 through 2020 represent the continued current refunding of subsequently issued bond anticipation notes until such time that market conditions favor long-term financing.

The categories *contractual capital project design/construction, MSD capital project management, net capitalized interest,* and *underwriters' discount and issuance cost* represent collectively the amount (actual for FY 2010 through FY 2014 and projected from MSD's Board-approved five-year capital budget for FY 2016 through FY 2020) of Costs of Construction and Acquisition incurred by MSD for the planning, management, design and construction of improvements and betterments of its sewage collection and treatment and stormwater drainage and flood control facilities.

(8)

Net Revenues is the amount by which Revenues exceed Operating Expenses. Actual Net Revenues are presented for fiscal years preceding FY 2015. For FY 2015 and subsequent fiscal years, Net Revenues are the projected results of operations as measured by the definitions of the Resolution.

(9)

Debt service coverage is the ratio, expressed as a percentage, of Net Revenues to Aggregate Net Debt Service.

Debt service coverage is computed in order to determine MSD's ability to deliver the certificate of its Authorized Officer prior to the authentication and delivery of Additional Bonds pursuant to the provisions of Article 2, Section 2.2 A [6] and[7], and Section 2.6 of the Resolution (collectively, the *Additional Bonds Test*). As used only for this purpose, debt service coverage is measured by subtracting Operating Expenses from Revenues before determining debt service coverage. For all other purposes of the Resolution (including MSD's covenants concerning the establishment and amendment of rates, fees, rents and charges) 110 percent of Aggregate Net Debt Service is subtracted first from Available Revenues to determine net revenues available for other purposes of MSD. Pursuant to these covenants, MSD's budgetary and financial management policies require that, for any period, Revenues available after subtraction of 110 percent coverage of Aggregate Net Debt Service (and 100 percent of Senior Subordinated Debt Service), are the net revenues available for Operating Expenses. There are two debt service coverage ratios presented in Table 5-4, one excluding Subordinated Debt and one including Subordinated Debt.

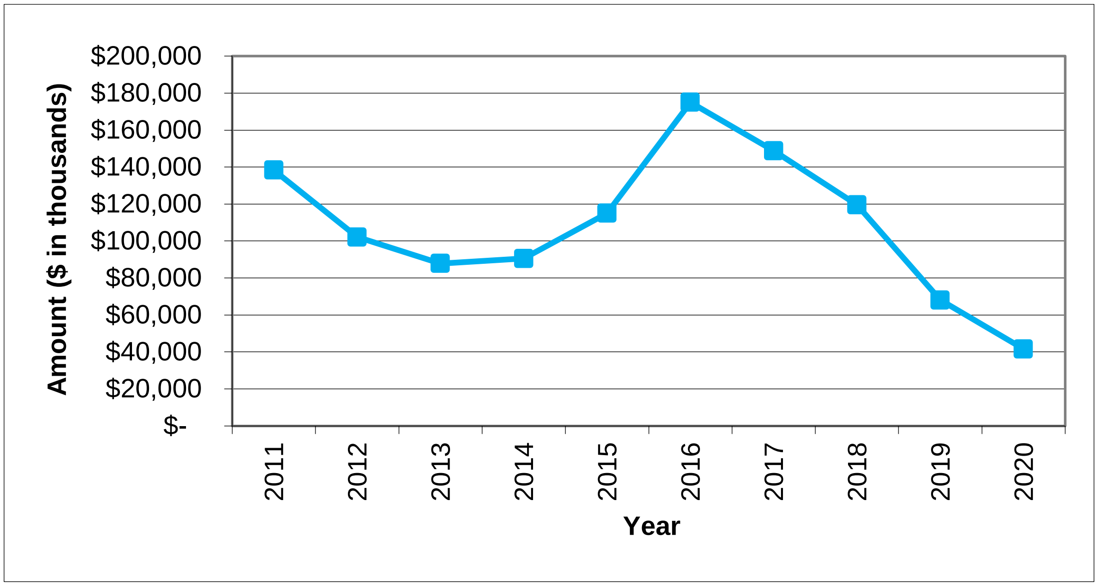
- Revenues from wastewater and stormwater service charges are expected to increase by five percent in FY 2016 though FY 2020. In FY 2015, MSD's Revenue Enhancement Program generated $3.7 million and will increase to $4.2 million in 2020. This results in an increase in total revenues from rates, fees, rentals, and charges from $235 million in FY 2016 to $284 million in FY 2020.

- Labor costs, net of capitalized overhead expenses, are expected to increase by three percent in 2015, one percent in 2016, two percent in 2017, and three percent in 2018 and 2019. All other operating expenses, net of capitalized overhead, with the exception of utilities, are expected to increase by three percent annually in FY 2015 through 2015.

- Working capital is expected to increase from $63.0 million in FY 2015 to $69.7 million in FY 2020.

- Capital Improvement Project (CIP) cost is expected to decrease from $175 million in FY 2016 to $41.6 million in 2020. Figure 5-3 shows the actual (FY 2011 through 2015) and projected (FY 2016 through FY 2020) CIP expenses. During the five-year planning period (FY 2016 through FY 2020), MSD projects $501.6 million in gross capital project design and construction.

Figure 5-3. Annual Contractual Capital Project Design/Construction Expenses (in thousands)

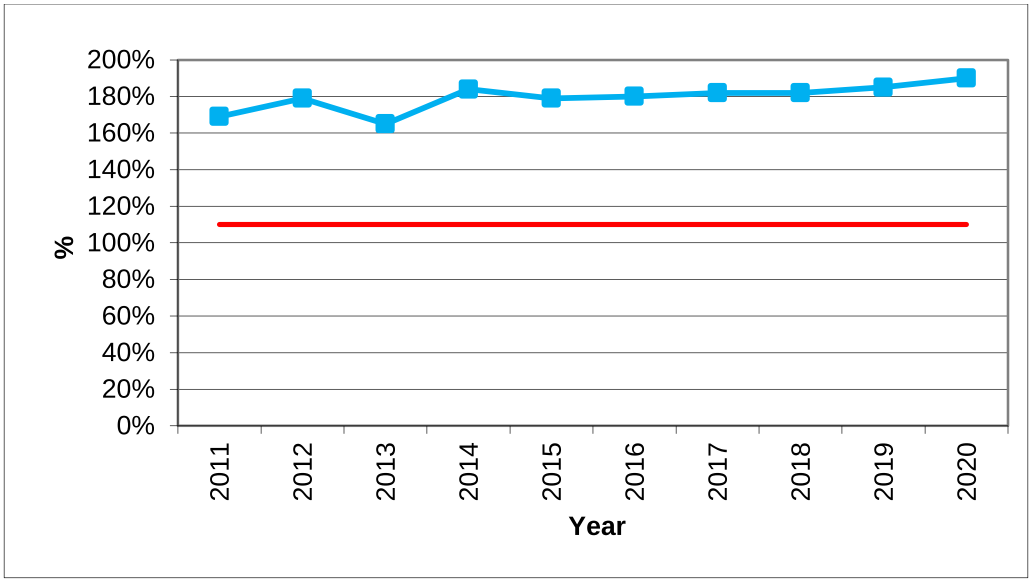


Source: MSD

Based on these assumptions, the net revenues are projected to increase from $177.0 million in FY 2016 to $213.9 million in FY 2020.

During the five-year planning period, MSD will exceed the required 110 percent (shown as horizontal line in Figure 5-4) debt service coverage under the MSD 1993 Bond Resolution. Figure 5-4 shows the actual, estimated, and projected debt service coverage. Debt service coverage is actual through year 2014 and projected for the years 2016 to 2020.

Figure 5-4. Senior Debt Service Coverage Ratio



Source: MSD

6. Findings and Conclusions

6.1 Assumptions and Projections

Certain assumptions and projections were made relative to the financial and engineering issues reviewed and evaluated in the preparation of this report. The assumptions and projections were necessary in order to review, evaluate, and estimate the engineering merits of MSD's CIP, management of the CIP, proposed capital improvement projects, and the financial implications of implementation of CIP projects over the next five years. These assumptions and projections have also been reviewed and evaluated. The assumptions and projections made with regard to reviewing and evaluating the financial and engineering issues associated with the Series 2015 Bonds and the CIP were determined to be reasonable and in accordance with accepted engineering practice.

The assumptions and projections are dependent upon future events and conditions, which may differ from those assumed. To the extent that future conditions differ from those assumed herein, the actual results may vary from those forecast. Actual revenues, expenses, or both could differ materially from those forecasted, and there can be no assurance that such estimates of future results will be achieved. Important factors that could cause actual results to differ materially from the revenues or expenses presently estimated include, but are not limited to, material changes in the size and composition of MSD's service area, unanticipated changes in law or unanticipated material litigation, efficiency of operations, and the capital construction and expenditure plans and results of MSD. The potential variance of the actual from the forecast results would not significantly affect the overall validity of this assessment of financial and engineering feasibility for two reasons. First, MSD can substitute additional (or other) revenue-producing wastewater and stormwater drainage capital improvement projects if constraints arise with any of the proposed projects intended for implementation in the next five years. Second, the MSD ratemaking process can be utilized to increase service charge and fee revenues to meet financial requirements. MSD's relatively low level of charges and fees allows a considerable margin of policy elasticity for raising fees.

The principal assumptions and projections incorporated in this review are as noted below:

- MSD will realize an annual increase in wastewater service charge revenues due to population and activity increase in its service area (including private development and industrial expansion), planned annual rate increases, revenue enhancement efforts, expansion of its service areas through construction of proposed wastewater facilities in the expansion action areas, continuation of the sanitary sewer assessment and collector projects program, and acquisition of small private treatment plants.

- MSD will realize an annual increase in stormwater service revenues due to population growth, planned annual rate increases, household and dwelling unit growth, increase in the measured impervious surface area in the service area, and expansion of its service area. Stormwater rates will be increased annually to fund additional capital drainage projects.

- MSD's ongoing strategic planning process, proposed master plan initiative, action plan implementation, improved management, program and project scheduling and tracking, continued implementation of computerized project scheduling, tracking, and management systems, citizen involvement with programs and projects, and outside management reviews of operations should provide appropriate monitoring of MSD's operating expenses and capital project scheduling and costs.

- MSD will realize an offset in operating expenses through decommissioning of small wastewater treatment plants, more thorough use of automated plant process controls, increased use of remote monitoring of wastewater pump stations, reduction of operating costs, and a continuing gradual reduction of consultant fees.

- MSD is unilaterally authorized annually to implement up to seven percent increases in its primary rates to meet expected increases in operating expenses, material costs, and capital improvement requirements. Larger increases can be approved by the Louisville Metro Council, as was most recently implemented in 2007.

6.2 Financial Capability of MSD

On the basis of previous studies, investigations, and our analysis, it can be concluded that the financial position of MSD continues to remain strong. It is our opinion that MSD can successfully undertake the financial obligations attendant with implementation of its five-year CIP, including wastewater and stormwater drainage capital improvement projects. This conclusion is based on the current service charge rate structure and projections.

MSD has an established customer base that currently is supporting the costs of providing wastewater and stormwater drainage services. Because our analysis was based on conservative growth estimates, it is reasonable to assume MSD's financial position may become even stronger than projected. As MSD continues to grow, it should benefit from economies of scale, which will tend to reduce unit-operating costs.

6.3 Certification of Net Revenues

Given MSD's service charge and fee system, its ability to increase service charges and fees, its authority to operate and expand wastewater and stormwater drainage services throughout Louisville Metro, and its projected revenue and expense position, there should be adequate net revenues to meet Current Bond debt service and operating obligations in Fiscal Years 2016 through 2020.[12] Assuming implementation of future rate increases, as planned, to meet increases in operating expenses and material costs and capital improvement requirements, net revenues will be equal to or greater than 110 percent of the Aggregate Net Debt Service for each such fiscal year.

6.4 Absence of Material Litigation

MSD has advised that there is no litigation or other legal proceeding pending or, to the knowledge of MSD, threatened to restrain or enjoin the issuance, sale, or delivery of the Series 2015 Bonds or the implementation of the plan of financing described herein, or in any way contesting or affecting the validity of the Series 2015 Bonds or the plan of financing described herein or any proceedings of MSD taken with respect to the issuance or sale of the Series 2015 Bonds, the pledge or application of any moneys or securities provided for the payment of the Series 2015 Bonds, or the existence or powers of MSD insofar as they relate to the authorization, sale, and

[12] By Louisville Ordinance No. 86, Series 1971, "Net Revenues" is defined as "gross revenues [or total income] from service charges less operating expenses and debt payments other than debt service payments on MSD's outstanding revenue bonds."

issuance of the Series 2015 Bonds or such pledge or application of moneys and securities or the implementation of the plan of financing described herein.

MSD has further advised that there is no litigation or other legal proceeding pending or, to the knowledge of MSD, threatened which challenges the authority of MSD to operate its System or to collect revenues or which contests the creation, organization, or existence of MSD or the title of any of its Board members or executive staff to their respective offices.

On April 10, 2009, the United States District Court for the Western District of Kentucky, Louisville Division (the "Court"), entered an Amended Consent Decree, in Civil Action No.: 3:08-CV00608-CRS (the "Amended Consent Decree"). The Amended Consent Decree amended, superseded, and replaced the original Consent Decree entered by the Court on August 12, 2005, between the Commonwealth of Kentucky, the United States of America, and MSD. The Amended Consent Decree resolved all pending claims of violations of the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, and the Water Quality Act of 1987 (the "Clean Water Act") pursuant to 33 U.S.C. 1251 et seq., and the regulations promulgated thereunder.

By entering into the Amended Consent Decree, MSD neither admitted nor denied the alleged violations described therein but did acknowledge that sanitary sewer overflows and unauthorized discharges have occurred, and MSD accepted the obligations imposed under the Amended Consent Decree. To date, MSD has complied with all submittals and reporting requirements contained in the Amended Consent Decree. A copy of the Amended Consent Decree is available at the offices of MSD. MSD intends to perform all Capital Improvement Program and other requirements contained in the Amended Consent Decree. The cost of the capital improvements required to be completed under the Amended Consent Decree was estimated to be approximately $850 million of which approximately $390 million has been spent using proceeds of MSD's Sewer and Drainage System Revenue Bonds Series 2008, Series 2009C, Series 2010A, Series 2013C, and Series 2014A. The Amended Consent Decree contains stipulated penalties for MSD's failure to comply with provisions contained in the Amended Consent Decree. MSD has agreed to make total expenditures under the original Consent Decree and the Amended Consent Decree for Supplemental Environmental Projects in an amount not less than $2,250,000.

The Final Sanitary Sewer Discharge Plan and the CSO Long Term Control Plan were submitted concurrently and certified on December 19, 2008, under the title of the Integrated Overflow Abatement Plan (IOAP). The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into the public record February 15, 2010.

On May 17, 2010, two individuals filed, pro se, in Jefferson Circuit Court, Louisville, Kentucky, a Complaint alleging that MSD violated KRS 76.090 by implementing a revised rate schedule effective August 1, 2009, without required approvals. MSD filed a Motion seeking to have the Circuit Court enter Judgment in MSD's favor. On September 16, 2010, the Jefferson Circuit Court granted MSD's Motion for Summary Judgment. The Judgment held that MSD complied with all statutory notice and public disclosure requirements for its rate increase and dismissed with prejudice the Plaintiffs' Complaint. On October 15, 2010, Plaintiffs filed a Notice of Appeal; however, they failed to perfect the appeal as required by the Kentucky Rules of Civil Procedure. On June 9, 2011, MSD filed a Motion to Dismiss for failure to perfect, and on December 9, 2011, the Kentucky Court of Appeals granted MSD's Motion dismissing the Plaintiffs' appeal.

By letter dated October 25, 2013, the United States Department of the Treasury (the "Treasury") notified MSD that it apparently violated regulations governing the use of State and Local

Government ("SLGS") securities by impermissibly using the Treasury's SLGS program to create a cost-free option and invited MSD to respond. MSD responded by letter dated February 13, 2014. On June 6, 2014, the Treasury issued a final agency decision stating, in effect, that the District had violated the regulations. The Treasury suspended the District from participating in the SLGS program for five years, but it left open the possibility of a waiver with respect to the purchase of certain SLGS securities. MSD disagreed with the final agency decision, but elected not to contest the decision in court. By letter dated September 3, 2015, the United States Department of Justice ("DOJ") notified MSD that DOJ "has been investigating whether MSD's violations of the SLGS regulations may give rise to civil monetary liability" and that it "is considering initiating civil litigation against MSD." DOJ invited the District to present its position and to explore the possibility of resolving the matter without litigation. MSD expects to present its position in the near future. At this time MSD cannot predict the outcome, including potential monetary consequences, of the DOJ investigation.

MSD is a defendant in various lawsuits. Although the outcome of these lawsuits is not presently determinable, it is the opinion of MSD that resolution of these matters will not result in a material adverse effect on the operations, properties, or financial condition of MSD.

MSD has further advised that there is no litigation or other legal proceeding (other than that relating to the Amended Consent Decree) pending or, to the knowledge of MSD, threatened against or affecting MSD or its Board wherein an unfavorable decision, ruling, or finding would have a materially adverse effect on the operations, properties, or financial condition of MSD.

6.5 Merits of the Capital Improvement Program

The proposed wastewater and stormwater drainage system capital improvement projects included in the MSD CIP are needed to: (1) upgrade and improve services provided by existing facilities; and, (2) accommodate growth into developed but unserviced areas. MSD is moving forward with implementation of capital drainage projects for Project DRI. MSD is also moving forward with implementation of sanitary sewer system capital projects consistent with the original Consent Decree and the Amended Consent Decree.

MSD has improved the efficiencies in cost and customer support through integration of capital projects planning, design, construction inspection, and administration for all wastewater and drainage projects. The existing combined sewer rehabilitation, infiltration/inflow program, and combined sewer overflow (CSO) abatement program projects are to be implemented to improve the existing sewer infrastructure in existing wastewater service areas. The wastewater capital projects to be implemented are important to enhancement of water quality.

6.6 Future Revenue and Expense Position

6.6.1 <u>Operations and Maintenance Expenses</u>

Revenues from wastewater and stormwater drainage services operated and maintained by MSD are conservatively projected to be adequate to cover expected operations and maintenance costs, payments required for projected outstanding debt service, and the normal renewals and replacements required throughout the System.

Total operating expenses, net of capitalized overhead, and contingency reserve are projected to increase by 2.3 percent in Fiscal Year (FY) 2016, 2.0 percent in 2017 and 2018, 2.5 percent in

2019, and 3.0 percent in 2020 for combined wastewater and stormwater drainage services. This projection anticipates: (1) inflationary effects on operation and maintenance costs; (2) service area growth; and, (3) cost saving through annual productivity gains in operations and services. Because of the rate-making procedures under which MSD operates, it is assumed that MSD will implement rate increases, as required, to meet higher than estimated inflation rates or other related service costs which may exceed revenues and impact the Debt Service Coverage Ratio.

6.6.2 Debt Service

The issuance of the Series 2015 Bonds is considered to be financially feasible; sound from engineering and operations perspectives; and, necessary to allow the System to properly serve the existing and future service areas in an efficient and proper manner. Assuming implementation of future rate increases, as required, to meet increases in operating expenses in response to higher than expected inflationary wage and material cost impacts and/or capital improvement requirements, net revenues will be equal to or greater than 110 percent of the Aggregate Net Debt Service for each of the Fiscal Years 2016 through 2020. MSD is projecting an annual average debt service coverage of approximately 182 percent for FY 2016 through FY 2020, excluding subordinated debt and 162 percent when subordinated debt is included.

Additionally, MSD has outlined a plan to maintain a consistent total debt service payment of about $118 million through 2043. This includes a plan to pay the principal on current subordinated debt in years 2023 through 2033.

6.6.3 New Revenue Generation Sources

The generation of new revenue sources will occur as a result of implementing the MSD CIP and implementation of the Revenue Enhancement Program. Wastewater service projects will increase the customer base by approximately 4,600 customers annually to MSD's system, during the five-year period FY 2016 through FY 2020. Stormwater revenue increases are projected primarily from service area expansion and expansion of impervious surfaces within MSD's service area.

6.7 Conclusion

The issuance of the Series 2015 Bonds is financially feasible and desirable, sound from an engineering and operations perspective, and necessary to allow the system to properly serve the existing and growing service areas in an efficient and proper manner.

On the basis of our analysis in this Engineer's Report, it can be concluded that the financial capability of MSD remains strong and the financial restructuring accomplished through prior debt issuances has enhanced MSD's ability to implement its wastewater infrastructure projects, neighborhood assessment and collector sewer projects, stormwater drainage projects, water quality treatment centers projects, equipment replacement/enhancement programs, and the combined sewer rehabilitation and CSO abatement programs.

As a result of MSD's financial restructuring and ongoing financial strategies, MSD projects an increasing debt service coverage ratio of 180 to 190 percent from FY 2016 through FY 2020, excluding certain defined Subordinated Debt, and 157 to 169 percent when such Subordinated Debt is included. For comparative purposes, the minimum debt service coverage is 110 percent under the applicable bond resolution.

MSD has an established customer base that is supporting current wastewater and stormwater utility rates and charges, which are still comparatively low, with the average monthly residential wastewater bill ranking just slightly below the national average. As MSD continues to grow, it should continue to benefit from economies of scale, tending to reduce unit operating costs.