

## FINAL OFFICIAL STATEMENT DATED JULY 22, 2015

**New Issue/Refunding Issue: Book-Entry-Only**

**Ratings: Standard & Poor's ..... "AA+"  
Moody's Investors Service ..... "Aa2"**

*In the opinion of Bond Counsel, based on existing statutes and court decisions and assuming continuing compliance with certain covenants and procedures relating to requirements of the Internal Revenue Code of 1986, as amended (the "Code"), interest on the Series 2015 Bonds is excluded from gross income for federal income tax purposes and is not treated as an item of tax preference for purposes of computing the federal alternative minimum tax. Interest on the Series 2015 Bonds may be includable in the calculation of certain taxes under the Code, including the federal alternative minimum tax imposed on certain corporations. In the opinion of Bond Counsel, based on existing statutes, interest on the Series 2015 Bonds is excluded from Connecticut taxable income for purposes of the Connecticut income tax on individuals, trusts and estates, and is excluded from amounts on which the net Connecticut minimum tax is based in the case of individuals, trusts and estates required to pay the federal alternative minimum tax. See "TAX MATTERS" herein.*



### **\$31,070,000** **City of Stamford, Connecticut** **Water Pollution Control System and Facility** **Revenue Bonds, Issue of 2015**

**Dated: Date of Delivery**

**Due: As Shown on Inside Cover**

The City of Stamford, Connecticut Water Pollution Control System and Facility Revenue Bonds, Issue of 2015 (the "Series 2015 Bonds"), will be issued as fully registered bonds, registered in the name of Cede & Co., as nominee for The Depository Trust Company, New York, New York ("DTC"). Purchases of the Series 2015 Bonds will be made in book-entry-only form, in the denominations of \$5,000 or any integral multiple thereof, and no physical delivery of the Series 2015 Bonds will be made to purchasers. So long as Cede & Co. is the registered owner of the Series 2015 Bonds, principal and interest (payable March 15 and September 15 of each year, commencing March 15, 2016) are payable to DTC by U.S. Bank National Association (as successor to Wachovia Bank, National Association), as Trustee and Paying Agent (the "Trustee"). See "BOOK-ENTRY-ONLY SYSTEM" herein. The Series 2015 Bonds are subject to redemption prior to maturity as described herein.

The Series 2015 Bonds are being issued by the City of Stamford, Connecticut (the "City") to finance various capital projects of the Water Pollution Control Authority of the City of Stamford ("SWPCA") and to refund certain maturities of the City's Water Pollution Control System and Facility Revenue Bonds, Issue of 2006, and for financing costs related to the issuance of the Series 2015 Bonds.

**The Series 2015 Bonds are special limited obligations of the City, payable solely from Revenues and other receipts, funds and moneys pledged therefor pursuant to the Indenture, and are secured on a parity basis with other Bonds (as defined herein) and obligations of the City to the State of Connecticut (the "State") issued pursuant to the Clean Water Fund Act, as provided for in the Indenture (see "SECURITY AND PLEDGE OF THE INDENTURE" herein). The Bonds are not general obligations of the City. Neither the full faith and credit nor the taxing power of the City, the State nor any political subdivision or agency of the State is pledged to the payment of the Bonds.**

The Series 2015 Bonds are offered when, as and if issued, subject to the final approving opinion of Robinson & Cole LLP, Bond Counsel, Hartford, Connecticut, and to certain other conditions referred to herein. Certain legal matters will be passed upon for the Underwriter by its counsel, Pullman & Comley, LLC, Hartford, Connecticut. Phoenix Advisors, LLC, Milford, Connecticut has served as financial advisor to the City (the "Financial Advisor") in connection with the issuance of the Series 2015 Bonds. It is anticipated that the Series 2015 Bonds will be available for delivery through the facilities of DTC or its custodial agent on or about August 4, 2015.

**RAYMOND JAMES®**



**\$31,070,000**  
**City of Stamford, Connecticut**  
**Water Pollution Control System and Facility**  
**Revenue Bonds, Issue of 2015**

**Serial Bonds**

**Dated: Date of Delivery**

**Due: March 15, 2016**

<u>Year</u>	<u>Principal</u>	<u>Coupon</u>	<u>Yield</u>	<u>CUSIP</u> <sup>1</sup>
2016	\$ 665,000	3.000%	0.250%	852660DM8

**Dated: Date of Delivery**

**Due: Serially, September 15, as shown below**

<u>Year</u>	<u>Principal</u>	<u>Coupon</u>	<u>Yield</u>	<u>CUSIP</u> <sup>1</sup>	<u>Year</u>	<u>Principal</u>	<u>Coupon</u>	<u>Yield</u>	<u>CUSIP</u> <sup>1</sup>
2016	\$ 695,000	3.000%	0.370%	852660CN7	2027*	\$ 1,175,000	5.000%	2.760%	852660CZ0
2017	720,000	4.000%	0.700%	852660CP2	2028*	1,240,000	5.000%	2.850%	852660DA4
2018	750,000	5.000%	0.970%	852660CQ0	2029*	1,305,000	5.000%	2.920%	852660DB2
2019	785,000	5.000%	1.170%	852660CR8	2030*	1,370,000	5.000%	2.970%	852660DC0
2020	830,000	5.000%	1.410%	852660CS6	2031	1,425,000	3.250%	3.420%	852660DD8
2021	875,000	5.000%	1.700%	852660CT4	2032	1,475,000	3.375%	3.520%	852660DE6
2022	920,000	5.000%	2.020%	852660CU1	2033	1,525,000	3.500%	3.580%	852660DF3
2023	965,000	5.000%	2.200%	852660CV9	2034	1,575,000	3.500%	3.640%	852660DG1
2024	1,015,000	5.000%	2.340%	852660CW7	2035	1,635,000	3.500%	3.680%	852660DH9
2025	1,070,000	5.000%	2.480%	852660CX5	2036	1,690,000	3.625%	3.720%	852660DJ5
2026*	1,120,000	5.000%	2.640%	852660CY3					

\* Priced assuming redemption on September 15, 2025; however any such redemption is at the option of the City.

**Term Bonds**

\$2,890,000 3.750% Term Bond due September 15, 2040 – Yield 3.900% CUSIP: 852660DK2

\$3,355,000 3.750% Term Bond due September 15, 2044 – Yield 3.970% CUSIP: 852660DL0

<sup>1</sup> Copyright, American Bankers Association. CUSIP® is a registered trademark of the American Bankers Association. CUSIP numbers have been assigned by an independent company not affiliated with the City and are included solely for the convenience of the holders of the Series 2015 Bonds. The City is not responsible for the selection or use of these CUSIP numbers, does not undertake any responsibility for their accuracy, and makes no representation as to their correctness on the Series 2015 Bonds or as indicated above. The CUSIP number for a specific maturity is subject to being changed after the issuance of the Series 2015 Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of such maturity or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of certain maturities of the Series 2015 Bonds.

No dealer, broker, salesperson or other person has been authorized by the City, the Financial Advisor or the Underwriter to give any information or to make any representations other than those contained in this Official Statement and, if given or made, such information and representations must not be relied upon as having been authorized by the City, the Financial Advisor or the Underwriter. This Official Statement does not constitute an offer to sell or solicitation of an offer to buy, nor shall there be any sale of the Series 2015 Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information set forth herein has been obtained from the City and other sources which they believe to be reliable, including the information relating to DTC, but neither the City nor the SWPCA makes any representation as to the accuracy or completeness of such information received from other sources. The information and expressions of opinion herein are subject to change without notice, except as described herein under "CONTINUING DISCLOSURE." The delivery of this Official Statement at any time does not imply that the information herein is current as of any time subsequent to its date.

Bond Counsel is not passing upon and does not assume responsibility for the accuracy or adequacy of the statements made in this Official Statement (other than matters expressly set forth as their opinion) and they make no representation that they have independently verified the same.

Raymond James & Associates, Inc. (the "Underwriter") has provided the following sentence for inclusion in this Official Statement. The Underwriter has reviewed the information in this Official Statement in accordance with and as part of its responsibilities to investors under the federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriter does not guarantee the accuracy or completeness of such information.

IN MAKING AN INVESTMENT DECISION, INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF THE SWPCA AND THE TERMS OF THE OFFERING, INCLUDING THE MERITS AND RISKS INVOLVED. THESE SECURITIES HAVE NOT BEEN RECOMMENDED BY ANY FEDERAL OR STATE SECURITIES COMMISSION OR REGULATORY AUTHORITY. FURTHERMORE, THE FOREGOING AUTHORITIES HAVE NOT CONFIRMED THE ACCURACY OR DETERMINED THE ADEQUACY OF THIS DOCUMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

This Official Statement contains forecasts, projections and estimates that are based on current expectations. In light of the important factors that may materially affect the financial condition of the City, the SWPCA and other economic and financial matters, the inclusion in this Official Statement of such forecasts, projections and estimates should not be regarded as a representation by the City, the SWPCA, the Financial Advisor or the Underwriter that such forecasts, projections and estimates will occur. Such forecasts, projections and estimates are not intended as representations of fact or guarantees of results.

If and when included in this Official Statement, the words "expects," "forecasts," "projects," "intends," "anticipates," "estimates" and analogous expressions are intended to identify forward-looking statements as defined in the Securities Act of 1933, as amended, and any such statements inherently are subject to a variety of risks and uncertainties that could cause actual results to differ materially from those projected. Such risks and uncertainties include, among others, general economic and business conditions, factors affecting water consumption rates such as weather, changes in political, social and economic conditions, regulatory initiatives and compliance with governmental regulations, litigation and various other events, many of which are beyond the control of the City and the SWPCA. These forward-looking statements speak only as of the date of this Official Statement. The City and the SWPCA disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained herein to reflect any change in the City's expectations with regard thereto or any changes in events, conditions or circumstances on which any such statement is based.

IN CONNECTION WITH THE OFFERING OF THE SERIES 2015 BONDS, THE UNDERWRITER MAY OVERALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF SUCH SERIES 2015 BONDS AT LEVELS ABOVE THOSE WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

---

*(This page intentionally left blank)*

## **TABLE OF CONTENTS**

	<b>Page</b>		<b>Page</b>
Introduction.....	1	Debt Service .....	22
The City of Stamford.....	1	Tax Matters .....	23
Sewer Charges and Benefit Assessments.....	1	Original Issue Discount .....	23
Security for the Bonds.....	2	Original Issue Premium .....	24
Stamford Water Pollution Control Authority.....	2	Ratings .....	24
Governance and Management .....	2	Underwriting .....	24
The Service Area.....	4	Certain Legal Matters .....	24
Service Contracts and Agreements.....	5	Consulting Engineering .....	25
Sewer Charges and Benefit Assessments.....	6	The Financial Advisor .....	25
Operating Budget.....	7	Litigation .....	25
Historical Financial Results .....	8	Miscellaneous.....	26
Projected Financial Results.....	9	Availability of Continuing Information.....	26
Capital Improvement Program .....	11	Additional Information.....	26
The Series 2015 Bonds.....	13	Concluding Statement .....	26
General.....	13		
Optional Redemption .....	13		
Mandatory Sinking Fund Redemption .....	13		
Notice of Redemption .....	14	<b>APPENDICES</b>	
Use of Series 2015 Bond Proceeds .....	14	<b>Appendix A - Information Concerning the City.....</b>	<b>A-1</b>
Plan of Refunding .....	15	<b>Appendix B - Audited Financial Statements of</b>	
Verification of Mathematical Computations .....	15	The SWPCA for the Year Ended June 30, 2014..	<b>B-1</b>
Sources & Uses of Funds .....	15	<b>Appendix C - Engineer's Report.....</b>	<b>C-1</b>
Book-Entry-Only System.....	16	<b>Appendix D - Summary of Certain Provisions</b>	
DTC Practices .....	17	Of the Indenture.....	<b>D-1</b>
Security and Pledge of the Indenture .....	17	<b>Appendix E - Form of Bond Counsel Opinion.....</b>	<b>E-1</b>
Flow of Funds .....	17	<b>Appendix F - Form of Continuing Disclosure</b>	
Debt Service Reserve Fund .....	18	Agreement.....	<b>F-1</b>
Subordinated Indebtedness Fund .....	19		
Surplus Fund .....	20		
Rate Covenant .....	20		
Additional Bonds Test .....	20		
Other Indebtedness .....	21		

**CITY OF STAMFORD, CONNECTICUT**

**Principal Municipal Officials**

<b>Office</b>	<b>Name</b>	<b>Manner of Selection</b>	<b>Length of Service</b>
Mayor.....	David R. Martin	Elected/4 years	1 year
Chief of Staff .....	Michael E. Pollard	Appointed/4 years	1 year
Director of Administration .....	Michael E. Handler	Appointed/4 years	3 years
Director of Operations .....	Ernest A. Orgera	Appointed/4 years	5 years
Director of Legal Affairs .....	Kathryn Emmett, Esq.	Appointed/4 years	1 year
Director of Public Safety, Health and Welfare.....	Thaddeus K. Jankowski, Sr.	Appointed/4 years	3 years
Director of Economic Development....	Thomas Madden	Appointed/4 years	< 1 year
Controller .....	David A. Yanik	Unclassified/indefin	3 years
Director of Policy & Management .....	James F. Hricay	Civil	1½ year
Superintendent of Schools .....	Dr. Winifred Hamilton	Appointed/3-yr.	2 ½years

Sources: Finance Director's Office.

**WATER POLLUTION CONTROL AUTHORITY**

**Board of Directors**

<b>Name</b>	<b>Title</b>
Michael E. Handler.....	Chairman
Daniel E. Capano.....	Vice Chairman
Ernest Orgera.....	Member
Cristina Andreana.....	Member
Edward Kelly.....	Member
Merritt Nesin.....	Member
Jay Fountain.....	Member
Gerald Bosak, Jr.....	Member
Vacant.....	N/A

**Management and Staff**

<b>Name / Title</b>	<b>Position</b>
William P. Brink, P.E., BCEE.....	Executive Director
Rhudean Bull.....	Administration Manager
William Degnan.....	Plant Supervisor
Prakash Chakravati, P.E. ....	Supervising Engineer
Mark Turndahl.....	Accountant

**BOND COUNSEL**

Robinson & Cole LLP

**FINANCIAL ADVISOR**

Phoenix Advisors, LLC

**Official Statement**  
**\$31,070,000**  
**City of Stamford, Connecticut**  
**Water Pollution Control System and Facility**  
**Revenue Bonds, Issue of 2015**

**Introduction**

The purpose of this Official Statement is to furnish information regarding the City of Stamford, Connecticut (the “City”), the Water Pollution Control Authority of the City of Stamford (the “SWPCA”) and the issuance and security for the \$31,070,000 aggregate principal amount of the City’s Water Pollution Control System and Facility Revenue Bonds, Issue of 2015 (the “Series 2015 Bonds”), issued pursuant to Chapter 103 of the Connecticut General Statutes (the “Bond Act”) and the Indenture of Trust, by and among the City, the SWPCA and U.S. Bank National Association (as successor to Wachovia Bank, National Association), as Trustee and Paying Agent (the “Trustee”), dated as of December 21, 2001 (the “Original Indenture”), as amended and supplemented by the First Supplemental Indenture dated as of October 1, 2003, the Second Supplemental Indenture dated as of February 28, 2006, the Third Supplemental Indenture dated as of September 1, 2006, the Fourth Supplemental Indenture dated as of August 1, 2009, the Fifth Supplemental Indenture dated as of August 1, 2013, each by and among the City, the SWPCA and the Trustee, and the Sixth Supplemental Indenture, dated as of August 1, 2015, to be entered into by and among the City, the SWPCA and the Trustee prior to the issuance of the Series 2015 Bonds. The Original Indenture, as amended and supplemented to the date of issuance of the Series 2015 Bonds, is herein referred to as the “Indenture.”

The Indenture constitutes a contract among the City, the SWPCA, the Trustee and the holders from time to time of the Bonds (as hereinafter defined). The Series 2015 Bonds are the fourth issuance of bonds to the public under the Indenture. In addition to the Series 2015 Bonds, there is \$16,655,000 aggregate principal amount outstanding of Water Pollution Control System and Facility Revenue Bonds, Series 2006 (all of which is expected to be refunded by the proceeds of the Series 2015 Bonds), and \$21,980,000 aggregate principal amount outstanding of Water Pollution Control System and Facility Revenue Bonds, Series 2013. In addition to bonds, the Indenture also secures the City’s obligations issued pursuant to the Clean Water Fund Act. There is approximately \$45,624,528 million aggregate principal amount of Clean Water Fund obligations outstanding under the Indenture. The Series 2015 Bonds and all bonds of the City issued pursuant to the Indenture on a parity basis with the Series 2015 Bonds and obligations issued pursuant to the Clean Water Fund Act are referred to herein as the “Bonds.”

Unless otherwise defined in this Official Statement, all capitalized terms used herein will have the meanings assigned such terms in the Indenture, certain of which are summarized in “Appendix C – SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE” herein.

**The City of Stamford**

The City is located in Fairfield County, Connecticut on Long Island Sound about one hour from New York City by rail or highway transportation. According to the 2013 U.S. Census Bureau statistics, the City has a population of 126,000. The City occupies an area of 39.9 square miles and is governed by a Mayor and a Board of Representatives. See “Appendix A – INFORMATION CONCERNING THE CITY” herein.

**Sewer Charges and Benefit Assessments**

Sewer Charges and Benefit Assessments are determined by the Board of Directors of the SWPCA in accordance with Chapter 103 of the Connecticut General Statutes. See “Sewer Charges and Benefit Assessments” herein.

## **Security for the Bonds**

The Bonds, including the Series 2015 Bonds, are special limited obligations of the City, payable solely from Revenues (as defined in Appendix D) and other receipts, funds and moneys pledged therefor pursuant to the Indenture. Under the Indenture, the City and the SWPCA have covenanted to fix, charge and collect rates, charges, rents, fees and assessments derived or to be derived from or for the operation, use or services of the Sewerage System and to maintain Revenues available for debt service on the Bonds in each fiscal year that will equal or exceed 115% of the required debt service fund deposits. See "SECURITY AND PLEDGE OF THE INDENTURE" herein. As reflected in Table 4 contained under "Projected Financial Results," the projected debt service coverage for the Bonds, including the Series 2015 Bonds, for fiscal years up to and including 2019-20, will not fall below 1.15 times.

**The Bonds are not general obligations of the City. Neither the full faith and credit nor the taxing power of the City, the State nor any political subdivision or agency of the State is pledged to the payment of the Bonds.**

## **Stamford Water Pollution Control Authority**

The SWPCA was established pursuant to Ordinance No. 803 adopted on November 28, 1996, pursuant to statutory authority as set forth in Chapter 103, Sections 7-245 through 7-273a inclusive, of the Connecticut General Statutes, Revision of 1958, as amended (the "Connecticut General Statutes"). Prior to that date, the functions of the SWPCA operated under the Office of Operations of the City. The SWPCA was created to (a) operate the Sewerage System including the treatment plant located at One Harbor View Avenue (the "Treatment Plant") and to (b) use, equip, re-equip, repair, maintain, supervise, manage, operate and perform any act pertinent to the collection, transportation, treatment and disposal of sewage. In addition, the SWPCA manages the City-wide stormwater permit monitoring control and implementation. Currently, the average daily flow at the Treatment Plant is about 18 million gallons per day ("MGD"). The Treatment Plant provides the following unit processes: screenings, raw waste pumping, two 130-foot-diameter primary clarifiers, primary sludge dewatering, 15 million gallon capacity biological reactors, four 130-foot-diameter secondary clarifiers, gravity thickeners, gravity belt thickeners and belt filter presses. The disinfection of the wastewater is provided by ultraviolet light. It provides such services for the City and for certain portions of the Town of Darien. See "STAMFORD WATER POLLUTION CONTROL AUTHORITY" herein.

In 1995, the United States Environmental Protection Agency selected the SWPCA's Treatment Plant as the best large, advanced wastewater treatment plant in the United States.

## **Governance and Management**

### *Board Membership and Responsibilities*

The SWPCA is governed by a nine-member Board of Directors. By ordinance, the Board includes the Director of Operations, Director of Administration, Chairman of the Board of Finance (or his/her designee from the Board of Finance) and the President of the Board of Representatives (or his/her designee from the Board of Representatives) and five at-large members appointed by the Mayor and approved by the Board of Representatives. At least one of the at-large members must be an accountant or financial manager and at least one must be an engineer. City officials who become members of the WPCA Board of Directors shall retain this responsibility throughout their tenures in their non-WPCA positions as City officials. At-large members shall be appointed for three (3) years. The members of the Board of Directors are:



<b>Name / Title</b>	<b>Occupation</b>	<b>Appointed By</b>	<b>Term Expires</b>
Michael E. Handler, Chairman.....	Director of Administration, Stamford	Mayor	11/30/2017
Daniel E. Capano, Vice Chairman...	Consultant	Mayor, subject to approval of Board of Representatives	11/30/2017
Ernest Orgera.....	Director of Operations, Stamford	Mayor	12/1/2016
Cristina Andreana.....	Certified Public Account	Mayor, subject to approval of Board of Representatives	12/1/2015
Edward Kelly.....	Software Implementation Consultant (retired)	Mayor, subject to approval of Board of Representatives	12/1/2015
Merritt Nesin.....	Mechanical Engineer/PE (retired)	Mayor, subject to approval of Board of Representatives	12/1/2016
James Fountain.....	Certified Public Accountant (retired)	Mayor, subject to approval of Board of Representatives	11/30/2017
Gerald Bosak, Jr.....	Member, Board of Finance Chairman, Board of Finance	Mayor, subject to approval of Board of Representatives	11/30/2017
Vacant.....	-	Mayor, subject to approval of Board of Representatives	N/A

### *Management and Staff*

The SWPCA is headed by the Executive Director, who is responsible for all technical and administrative operations of the SWPCA and the implementation of programs, policies and procedures at the direction of the Board. Brief resumes of the senior SWPCA management appear below:

**William P. Brink, P.E., BCEE, Executive Director.** Mr. Brink has more than 30 years' progressive experience in engineering and management of large environmental projects, and has a unique combination of skills in business management (MBA in finance from University of Connecticut) leadership, wastewater utility operations, finance and engineering. He holds a P.E. in Connecticut and received his B.S. in Civil Engineering and M.E. in Sanitary Engineering from Drexel University, Pennsylvania and Cornell University, New York, respectively. Prior to taking his current position and since 1992 he worked for Stearns and Wheler (now GHD Inc. which acquired Stearns and Wheler in 2009) leading multi-disciplinary project teams on large wastewater collection and treatment project including, but not limited to, projects for the Hartford Metropolitan District Commission, Danbury Water Pollution Control Plant, and Bridgeport Water Pollution Control Authority since 1992.

**William R. Degnan, Plant Supervisor.** Mr. Degnan has approximately seventeen years in the wastewater industry, starting in 1995 at the City of New Haven as a mechanic. Throughout this period, he achieved double degrees: a BS in OSHA Technology from University of New Haven, West Haven, Connecticut and an MBA in Global Management from National University in San Diego, California.

He worked at four other Connecticut treatment plants in various positions, before accepting a Superintendent position for the Jomax Water Reclamation Plant in Peoria, Arizona. He spent several years in that position before accepting the position in Stamford in 2012. Mr. Degnan also had the opportunity to work internationally in Israel and Mexico as a Project Manager in both wastewater and telecommunications and holds a Connecticut Wastewater Grade IV license, a Grade IV Arizona Wastewater license, a Grade III Arizona water license, a Grade III Collections license, and a Grade III in Water Distribution.

**Prakash Chakravati, P.E., Supervising Engineer.** Mr. Chakravati assists the Executive Director in directing, planning and managing engineering functions including design, preparation and review of contract plans and specifications, plant and pumping station construction management, sanitary sewer repair and construction management. He also directs and supervises assigned staff and any assigned contractual support personnel. Mr. Chakravati holds a Masters Degree in Civil Engineering from Lehigh University and is a registered professional engineer. Since 1987, he worked as an engineer for the City of Stamford and has compiled and implemented numerous capital projects including water pollution control related projects such as major pump station upgrades, bar screens, pump controls and sanitary sewer projects. He currently supervises the major upgrades at the Treatment Plant and numerous satellite pump stations.

**Rhudean Bull, Administration Manager.** Ms. Bull is responsible for planning, developing, analyzing, evaluating and improving various management control systems, policies, work methods and procedures for the efficient operation of the SWPCA. She assists the Executive Director in identifying its financial, personnel, and material needs and problems and manages various administrative activities for the SWPCA. Ms. Bull received a B.S. Degree from South Carolina State University and a Masters Degree in Public Administration from City University of New York – John Jay College. She is certified by the Society of Human Resources Management since 2001 and has over fifteen years’ experience in management and human resources management fields.

**Mark Turndahl, Accountant.** Mr. Turndahl has over thirty years of diverse financial management positions in town and school governments and major New York metropolitan firms. Mr. Turndahl has experience in accounting management and control, tax, audit as well as administrative and capital budgeting and is fully versed in both small and large computerized accounting systems, GASB standards including numbers 34 and 45 and Excel and Lotus spreadsheets.

**Stephen Pietrzyk, Collection System Supervisor and Regulatory Compliance Officer.** For the past five-years, Mr. Pietrzyk has served as the Collection System Supervisor System Supervisor responsible for the SWPCA’s capacity, management, operation and maintenance (CMOM) program via planning, coordinating, and supervising a 9-member mechanical staff to inspect and maintain the collection system and other environmental policies and procedures including the Fats, Oil and Grease (FOG) abatement program. Prior to this he owned and operated two environmental consulting businesses for over 18-years participating in numerous residential, commercial and industrial development projects. Mr. Pietrzyk received his MS and BS Degrees from the University of Connecticut and AS Degree in Landscape Development from State University of New York Cobleskill.

In addition, certain City personnel are responsible for providing key support services for the SWPCA, as follows:

**Director of Operations.** The Executive Director of the SWPCA reports to the Director of Operations who provides oversight for operating and capital budget, staff assistance for sewer expansion projects and major SWPCA policy decisions.

**Director of Administration.** The Office of Administration provides purchasing, payroll, accounting and debt management services to the SWPCA.

**Director of Legal Affairs.** The Office of Legal Affairs provides legal support and human resource services to the SWPCA. The office writes and reviews contracts and acts as legal advisor to the SWPCA.

The staff of the SWPCA consists of 39 full-time, one permanent part-time, and four seasonal/contract employees, all of whom are employees of the City.

Each of the full-time and part-time employees belongs to one of three collective bargaining units. The collective bargaining contracts are Citywide and are negotiated through the Office of Legal Affairs. The supervisors, including the Executive Director, are members of the Municipal Administrators Association (“MAA”), a division of AFSCME. The operators and mechanics are members of the International Union of Operating Engineers (formerly the Teamsters Union). The laboratory staff, clerical staff and electricians are part of the UAW bargaining unit with the City. The UAW contract was signed on November 9, 2014 and expires June 30, 2017. The IUOE contract was signed on July 7, 2015 and expires June 30, 2017. The MAA contract expired on June 30, 2014 and negotiations are currently underway.

### ***The Service Area***

Pursuant to an Interlocal Agreement between the City, the SWPCA and the Town of Darien (“Darien”) dated December 3, 2013, the SWPCA provides collection and treatment for the City and Darien. The SWPCA serves a population of approximately 100,000 in the City and approximately 12,500 in Darien, including residential, commercial, government and non-profit customers. The Service Area of the SWPCA includes those areas within the City and Darien that presently dispose of wastewater through sewer facilities. Within the City, this area is bounded by the Merritt Parkway to the north, the Noroton River (constituting the border line with Darien) to the east, Old Greenwich to the west and the Long Island Sound to the south. The Service Area boundaries for Darien include all sewered areas within Darien. The physical assets of the SWPCA include 23 wastewater-pumping stations, approximately 275 miles of sanitary sewers, and the Treatment Plant. The wastewater pumping stations range in size from 100,000 gallons per day to 5 MGD.

The customer base served by the SWPCA consists of a diverse mix of residential and commercial customers. In Stamford, approximately 88% of customers are residential (including home owners, condominium owners and renters) and 12% of customers are commercial and industrial in nature. In the recently completed fiscal year ended June 30, 2014, the top ten customers, their total user fees and user fees as a percentage of SWPCA’s total operating revenues are set forth in Table 1 below:

**TABLE 1**  
**Overall Top Ten Customers**

<u>Name</u>	<u>Annual Billed Consumption (100 CCF)</u>	<u>Percent of Total FY 2014 Consumption</u>
City of Stamford.....	\$ 71,642	1.68%
Stamford Hospital.....	54,638	1.28%
Stamford Town Center.....	42,032	0.98%
Hilton Stamford Hotel.....	34,454	0.81%
Saint John's Towers.....	34,100	0.80%
Stamford Housing Authority.....	31,964	0.75%
SLC Operating LLC.....	29,454	0.69%
Fairfield Bedford LLC.....	26,716	0.62%
Continuing Care Retirement.....	24,920	0.58%
Stamford Marriott Hotel.....	24,280	0.57%
<b>Total.....</b>	<b>\$ 374,200</b>	<b>8.75%</b>

<sup>1</sup>Based on the Fiscal Year 2014 Total Consumption of \$4,276,100.

**Service Contracts and Agreements**

**Sludge Processing Agreement with Synagro** – Sludge management costs were budgeted at approximately 17% of the SWPCA’s annual operating costs for FY14-15 (revised) and are currently budgeted at 15.5% of operating costs for FY15-16. Previously, these costs accounted for almost 19% of the SWPCA’s annual operating costs. The SWPCA provides sludge thickening and dewatering. The SWPCA contracts with Synagro for sludge drying, transportation and disposal services. The SWPCA issued a Request for Proposal (RFP) for provision of operations and maintenance services for the drying facility, for a term of five years and executed a new sludge processing contract via a competitive agreement with Synagro on March 3, 2014. With the execution of the new contract, Synagro committed to making a capital contribution in an amount up to \$300,000 toward the cost of one or more capital modifications to be made by the sludge drying facility or the Treatment Plant. Through the contract, the SWPCA is obligated to deliver a maximum 4,560 dry tons of sludge per year to Synagro. Synagro is responsible for processing the sludge received from the facility to produce a marketable product, testing of the product, marketing the product, and disposing of processing residuals.

**Billing and Collection Agreement with Computil** – The SWPCA contracts with Computil to provide billing and collection service assistance as well as consumption data analysis, customer service and reporting. The contract period is from February 10, 2015 through February 9, 2018, with an option extension for two successive period of one year each. According to the terms of the contract, the SWPCA is to pay Computil a lump sum fee of \$405,834 for each contract year for the duration of this agreement (including any extensions).

**Darien Interlocal Agreement** – The City provides wholesale treatment and discharge services to the Darien pursuant to an Interlocal Agreement dated December 3, 2013. The agreement includes both capital reimbursement and operation and maintenance cost share components. The capital reimbursement and operation and maintenance cost share is based primarily on measured wastewater flow contribution (by volume). Under the current agreement, the Darien is limited to an average annual daily flow of not more than 3.0 MGD and a combined peak flow of not more than 7.5 MGD. However, if flows from Darien exceed the allowable maximum, the SWPCA shall be held harmless from liability, cost, or expense resulting from any incurred penalties, cleanup, and repair costs. If a regulatory agency takes action against the SWPCA in connection with flow discharges above the limits, payment of costs, fines, penalties, or damages will be apportioned between the SWPCA and Darien. Additionally, the Town of Darien will share nitrogen trading credits generated through the operation of SWPCA’s treatment plant, based on the greater of 12.5% or the percentage by volume represented by Darien’s flow. The current Darien Interlocal Agreement will expire on June 30, 2018 (subject to mutual renewal for an additional 5 years). Darien contracted revenue (including both capital and operation and maintenance components), accounts for less than 10% of SWPCA’s total income.

**Aquarion Agreement** – The City accepts water treatment plant sludge from the Aquarion Water Company pursuant to the terms and conditions of this agreement. Aquarion’s water treatment plant sludge revenue is in excess of \$300,000 annually to the SWPCA. Historically, this has represented approximately 1% of the SWPCA’s total income.

**City Pooled Cash Arrangement** – Under a long standing agreement with the City, the SWPCA shares in a pooled cash account controlled by, and in the name of, the City. The SWPCA draws from this account to cash fund unexpected or not yet funded capital improvements and to cover operating costs during the periods when its cash on hand balances are not sufficient to meet its operating needs. The SWPCA’s share of this pooled cash account is currently in a deficit and reflected in financial statements as “Due to the City of Stamford”. Pursuant to the Memorandum of Agreement (“MOA”) dated May 13, 2014 between the City and the SWPCA, the SWPCA has agreed to reimburse the City over a five-year period with interest at the Connecticut State Treasurer’s Investment Fund rate. However, the SWPCA has accelerated their repayment schedule to the City and drastically decreased this deficit. In FY2014 the SWPCA paid approximately \$3.3 million to the pooled cash account of which \$1.6 million was applied to operating account and \$1.7 million to capital advances. The total deficiency ending in FY2014 was approximately \$4.7 million down from \$8.0 million in FY2013 (FY2013 - FY2014 Financial Statements). The SWPCA has continued to pay down these advances and currently estimates the FY2015 ending balance to be only \$3.2 million of which \$1.0 million is in the operating account and \$2.2 million in the capital account. The operating account balance is projected to be paid off in FY2016, effectively paying the City back in less than three years vs. the five year period established in the MOA. It is also noted that of the \$2.2 million outstanding in capital advances, approximately \$1.1 million is related to the Carriage Drive sewer extension project and used to pay for stormwater and road improvements. Pursuant to the MOA, the City is to reimburse the SWPCA for these costs, effectively reducing the capital advance due to the City to only \$1.2 million ending FY2015

### ***Sewer Charges and Benefit Assessments***

In addition to the establishment of water pollution control authorities, the Bond Act vests authorities with the power to acquire property by purchase, condemnation or otherwise, to prepare a water pollution control plan, to acquire, construct and operate a sewerage system, and to establish and revise rules and regulations for the supervision, management, control, operation and use of the sewerage system, including regulations regarding discharge into the sewerage system.

The Bond Act also grants water pollution control authorities with the power to levy benefit assessments upon the land and buildings in the community which, in its judgment, are benefited by the sewerage system. Assessments may include a proportionate share of the cost of any part of the sewerage system, including preliminary studies and surveys, the cost of acquiring land, construction costs, interest during construction and related legal and other expenses. Revenues from the assessment of benefits may only be used for the acquisition and construction of the sewerage system providing such benefits or for the payment of principal and interest on bonds or notes issued to finance such acquisition or construction. Assessments may not exceed the value of the special benefit to accrue to the property and are due and payable on the date and at the time fixed by the authority. Assessments may be paid in annual installments, plus interest, not exceeding thirty years. Assessments not paid within thirty days are delinquent and subject to interest at statutory rates applicable to unpaid property taxes. Any unpaid assessment and interest due is considered a lien on the real estate against which it was levied. Each such lien shall take precedence over all other liens and encumbrances except taxes and may be enforced in the same manner as property tax liens. Liens for benefit assessments may be assigned by municipalities to a third party for collection.

Whenever a municipality has pledged revenue to be derived from charges for connection with or for the use of a sewerage system to the payment of principal or interest on bonds or notes, the Bond Act requires the water pollution control authority to establish and revise charges at rates sufficient to produce revenues for the punctual payment of the principal and interest on such bonds or notes. The Bond Act authorizes municipalities to finance the acquisition and construction of any part of a sewerage system through the issuance of bonds, notes or other obligations secured by (a) the full faith and credit of the municipality, (b) revenues derived from the sewerage system use charges and/or benefit assessments, or (c) both. The Bond Act provides for the other terms and particulars for the issuance of bonds, notes or other indebtedness, including a maximum maturity of thirty years.

## **Operating Budget**

The SWPCA operating budget is prepared by the Executive Director and submitted to the SWPCA Board for review and approval. Typically the budget is approved at the February Board meeting. The approved budget is then forwarded to the Board of Finance as part of the City's budget package. Unlike other City departments, the Mayor cannot amend the SWPCA budget. The Board of Finance and the Board of Representatives can approve or reject the SWPCA budget, but cannot cut individual line items. If they choose to reject the budget, it is then sent back to the SWPCA Board with recommendations and comments. The SWPCA can then resubmit an amended or revised budget to the Board of Finance and the Board of Representatives for approval. By ordinance, all budgets must be approved by no later than May.

The SWPCA, through its Board of Directors, is responsible for setting and imposing sewer user rates and charges for all customers in the Service Area (which includes Darien and residential and commercial users directly billed by the SWPCA within Stamford). The Board requires that rates be maintained at levels sufficient to pay operating and maintenance expenses for the collection and treatment system, to pay debt service on bonds and provide for reserves. The primary source of Revenues is from user fees.

*(Remainder of page intentionally left blank.)*

## Historical Financial Results

The SWPCA was established as a Special Revenue Fund of the City of Stamford beginning July 1, 1997, and remained a Special Revenue Fund through fiscal year 2001. Beginning July 1, 2001, the City converted the SWPCA to an Enterprise Fund of the City. As an Enterprise Fund, the financial activity of the SWPCA is accounted for on a full accrual basis of accounting, like a private commercial entity. Revenues are recognized when earned (net of uncollectible allowances), and expenses are recognized when incurred, regardless of when the cash transaction related to the expense occurs. The Indenture became effective December 21, 2001 and provides for the deposit of Revenues into a Revenue Fund held by the City. The Debt Service Reserve Fund and other Funds and Accounts established under the Indenture (except for the Revenue Fund, the Operating Fund and the Rebate Fund) will be held by the Trustee. See “SECURITY AND PLEDGE OF THE INDENTURE – Flow of Funds” herein. Table 2 below presents audited financial results for fiscal year 2010 through fiscal year 2014 summarized from the audited financial statements of the SWPCA.

**TABLE 2**

	<i>Actual</i> 6/30/2014	<i>Actual</i> 6/30/2013	<i>Actual</i> 6/30/2012	<i>Actual</i> 6/30/2011	<i>Actual</i> 6/30/2010
<b>Operating Revenues:</b>					
Charges for Services.....	\$22,346,154	\$19,744,918	\$20,304,604	\$18,503,908	\$18,252,270
Intergovernmental.....	8,368	1,410,338	-	-	-
<b>Total.....</b>	<b>\$22,354,522</b>	<b>\$21,155,256</b>	<b>\$20,304,604</b>	<b>\$18,503,908</b>	<b>\$18,252,270</b>
<b>Operating Expenditures:</b>					
Salaries, Benefits, and Claims.....	\$ 5,476,462	\$ 5,196,225	\$ 4,572,627	\$ 4,398,009	\$ 4,221,364
Operations and Supplies.....	7,227,505	8,209,918	7,014,596	7,175,307	7,070,504
Depreciation.....	5,372,558	5,239,334	5,054,649	5,086,909	6,288,177
<b>Total.....</b>	<b>\$18,076,525</b>	<b>\$18,645,477</b>	<b>\$16,641,872</b>	<b>\$16,660,225</b>	<b>\$17,580,045</b>
<b>Operating Income.....</b>	<b>\$ 4,277,997</b>	<b>\$ 2,509,779</b>	<b>\$ 3,662,732</b>	<b>\$ 1,843,683</b>	<b>\$ 672,225</b>
<b>Nonoperating Revenues (Expenses):</b>					
Interest Income.....	34,167	94,901	97,752	112,844	104,324
Interest Expense.....	(3,148,656)	(2,940,267)	(3,133,293)	(3,181,726)	(3,763,960)
Other Income (Expense).....	-	(500,000)	-	1,067,492	-
Special Assessments.....	2,515,652	2,987,162	2,703,276	3,082,499	2,763,438
<b>Total Nonoperating Revenues (Expenses).....</b>	<b>\$ (598,837)</b>	<b>\$ (358,204)</b>	<b>\$ (332,265)</b>	<b>\$ 1,081,109</b>	<b>\$ (896,198)</b>
Income Before Capital Contributions.....	\$ 3,679,160	\$ 2,151,575	\$ 3,330,467	\$ 2,924,792	\$ (223,973)
Capital Contributions.....	288,238	79,000	-	-	(2,226,167)
Change in Position.....	3,967,398	2,230,575	3,330,467	2,924,792	(2,450,140)
<b>Net Position, Beginning of Year.....</b>	<b>61,723,960</b>	<b>59,493,385</b>	<b>56,162,918</b>	<b>53,238,126</b>	<b>55,688,266</b>
<b>Net Position, End of Year.....</b>	<b>\$65,691,358</b>	<b>\$61,723,960</b>	<b>\$59,493,385</b>	<b>\$56,162,918</b>	<b>\$53,238,126</b>

Operating revenues in fiscal 2014 were \$22.4 million, compared to \$21.2 million in the prior year, primarily reflecting increased sewer use charges. Operating expenses were \$18.1 million versus \$18.6 million the prior year, resulting in operating income of approximately \$4.3 million compared to \$2.5 million in the prior year. The increase in operating income primarily reflects higher revenues from the increase in sewer use charges offset by higher salaries, benefits, and claims expense reduced by lower operations and supplies expense. Unrestricted Net Position was 35% of Operating Revenue, an improvement of approximately 19 percentage points from the prior year.

As of June 30, 2014 the assets (\$175.2 million) of the SWPCA exceeded its liabilities (\$109.8 million), resulting in total net assets at the end of the fiscal year of \$65.7 million. Net assets increased \$4.0 million versus the prior year-end period primarily due to the increase in Restricted Assets (\$7.7 million). Unrestricted net assets total \$7.8 million, and that is an increase of \$4.4 million over the prior year.

Current assets increased by \$1.4 million, primarily reflecting a increase in cash and cash equivalents. Days sales outstanding (“DSO”) for the gross usage charges accounts receivable decreased from 86 days to 76 days as of June 30, 2014; a concerted effort to collect overdue usage charges was in place and will continue going forward.

Current liabilities decreased \$3.0 million, primarily due to decreases in the balances in Due to other Funds.

Table 3 below sets forth the Statement of Net Assets as of June 30 for the fiscal years ended June 30, 2010 through 2014.

**TABLE 3**

<b>Assets:</b>	<b>Actual 6/30/2014</b>	<b>Actual 6/30/2013</b>	<b>Actual 6/30/2012</b>	<b>Actual 6/30/2011</b>	<b>Actual 6/30/2010</b>
<b>Currents Assets</b>					
Cash and Cash Equivalents .....	\$ 2,746,129	\$ 991,721	\$ 515,420	\$ 470,240	\$ 457,031
Accounts Receivable.....	5,039,733	5,431,291	4,817,910	5,813,323	4,342,862
Other.....	9,902	9,902	9,902	10,258	9,902
<b>Total Current Assets</b> .....	<b>7,795,764</b>	<b>6,432,914</b>	<b>5,343,232</b>	<b>6,293,821</b>	<b>4,809,795</b>
<b>Non-Currents Assets</b>					
Capital Assets, Net of Depreciation .....	\$ 139,672,598	\$ 140,010,426	\$ 146,450,180	\$ 150,637,056	\$ 151,399,188
Capital Assets, not being depreciated ....	4,162,787	4,092,397	-	-	-
Restricted Assets .....	15,733,786	7,964,869	7,742,365	7,811,039	7,676,929
Special Assessments, net.....	7,867,615	7,462,643	7,218,567	6,600,182	5,363,449
Deferred Charges, net.....	-	227,240	184,890	210,540	236,190
<b>Total Non-Current Assets</b> .....	<b>\$ 167,436,786</b>	<b>\$ 159,757,575</b>	<b>\$ 161,596,002</b>	<b>\$ 165,258,817</b>	<b>\$ 164,675,756</b>
<b>Total Assets</b> .....	<b>\$ 175,232,550</b>	<b>\$ 166,190,489</b>	<b>\$ 166,939,234</b>	<b>\$ 171,552,638</b>	<b>\$ 169,485,551</b>
<b>Deferred Inflows of Resources</b>					
Deferred Amounts on Refunding .....	\$ 237,984	\$ -	\$ -	\$ -	\$ -
<b>Liabilities:</b>					
<b>Currents Liabilities:</b>					
Accounts Payable & Accrued Exp.....	\$ 2,117,920	\$ 1,806,448	\$ 1,421,697	\$ 2,560,271	\$ 2,404,204
Bonds Payable - Current.....	2,423,391	2,552,691	2,458,440	2,377,234	2,115,129
Notes Payable - Current.....	3,864,423	3,869,606	3,796,603	3,725,044	3,654,901
Due to Other Funds.....	4,681,577	7,969,902	5,576,469	6,273,695	1,490,099
Compensated Absences.....	30,960	31,000	32,000	30,000	30,841
Unearned Revenue.....	152,139	88,343	-	-	-
<b>Total Current Assets</b> .....	<b>13,270,410</b>	<b>16,317,990</b>	<b>13,285,209</b>	<b>14,966,244</b>	<b>9,695,174</b>
<b>Non-Currents Liabilities:</b>					
Bonds Payable.....	\$ 53,832,327	\$ 41,823,619	\$ 44,383,159	\$ 46,864,631	\$ 49,258,897
Notes Payable.....	41,760,105	45,624,528	49,494,134	53,290,738	57,015,781
Compensated Absences.....	254,634	275,392	283,347	268,107	277,573
OPEB Obligations payable.....	661,700	425,000	-	-	-
<b>Total Non-Current Liabilities</b> .....	<b>\$ 96,508,766</b>	<b>\$ 88,148,539</b>	<b>\$ 94,160,640</b>	<b>\$ 100,423,476</b>	<b>\$ 106,552,251</b>
<b>Total Liabilities</b> .....	<b>\$ 109,779,176</b>	<b>\$ 104,466,529</b>	<b>\$ 107,445,849</b>	<b>\$ 115,389,720</b>	<b>\$ 116,247,425</b>
<b>Net Position:</b>					
Net Investment in Capital Assets.....	\$ 48,395,278	\$ 50,459,619	\$ 46,502,734	\$ 45,823,417	\$ 44,538,229
Restricted for Debt Service.....	9,531,631	7,964,869	7,742,365	7,811,039	7,676,929
Unrestricted.....	7,764,449	3,299,472	5,248,286	2,528,462	1,022,968
<b>Total Net Position</b> .....	<b>\$ 65,691,358</b>	<b>\$ 61,723,960</b>	<b>\$ 59,493,385</b>	<b>\$ 56,162,918</b>	<b>\$ 53,238,126</b>
<b>Total Liabilities and Net Position</b> .....	<b>\$ 175,470,534</b>	<b>\$ 166,190,489</b>	<b>\$ 166,939,234</b>	<b>\$ 171,552,638</b>	<b>\$ 169,485,551</b>

**Projected Financial Results**

While the City and the SWPCA believe that the assumptions that underlie its projections are appropriate, achieving the amounts projected are dependent on the occurrence of future events which cannot be assured. Thus actual results achieved may vary from the projections, and such variances may be materially adverse. *The amounts presented below, including projected Revenues and Expenses, have not been audited or reviewed by McGladrey & Pullen, LLP the independent auditors for the City and the SWPCA.*

**TABLE 4**

<b>I. SYSTEM REVENUES:</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>
<b>A. BILLING REVENUES</b>							
1. Number of Customers	19,382	19,500	19,500	19,500	19,500	19,500	19,500
2. Billable Metered Water Use (CCF)	4,434,522	4,461,129	4,461,129	4,461,129	4,461,129	4,461,129	4,461,129
3. Wastewater User Charge - Sewer Rate (\$ / CCF)	\$4.55	\$4.63	\$4.75	\$4.87	\$4.99	\$5.11	\$5.24
Rate Increase %	3.4%	2.0%	2.5%	2.5%	2.5%	2.5%	2.5%
<b>TOTAL BILLING REVENUES</b>	<b>20,177,075</b>	<b>20,662,367</b>	<b>21,178,927</b>	<b>21,708,400</b>	<b>22,251,110</b>	<b>22,807,387</b>	<b>23,377,572</b>
<b>B. MISCELLANEOUS REVENUES</b>							
4. Interest Income	50,000	35,000	99,154	124,408	145,444	165,418	190,104
5. Special Assessments	1,802,313	1,477,928	1,384,044	1,516,197	1,638,905	1,638,480	1,634,275
6. Interlocal Agreement User Charges	1,400,000	1,429,478	1,481,537	1,530,342	1,580,717	1,632,715	1,632,715
7. Darien Capital Reimbursement	750,000	835,062	868,429	954,522	975,883	977,418	977,418
8. Septic Tank Revenues	290,000	261,050	263,661	266,297	268,960	271,650	274,366
9. Regional Lab Revenues	55,000	40,000	40,000	40,000	40,000	40,000	40,000
10. Sewer Use - Lien Fees	200,000	190,000	191,900	193,819	195,757	197,715	199,692
11. Sewer Use - Delinquent Interest	550,000	550,000	555,500	561,055	566,666	572,332	578,056
12. Aquarion User Charges	350,000	314,112	317,253	320,426	323,630	326,866	330,135
13. Rebates - B.A.B.'s	148,701	128,815	123,265	116,965	110,221	103,023	95,402
14. City Reimbursement / Other	416,520	686,741	697,566	708,578	719,781	731,179	742,774
15. Nitrogen Trading Exchange Credit Revenues	945,980	1,038,159	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
<b>TOTAL MISCELLANEOUS REVENUES</b>	<b>6,958,514</b>	<b>6,986,345</b>	<b>7,022,309</b>	<b>7,332,609</b>	<b>7,565,964</b>	<b>7,656,796</b>	<b>7,694,938</b>
<b>D. RECEIVABLE MANAGEMENT COSTS</b>							
16. Billing Collection Rate	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
<b>TOTAL SYSTEM REVENUES</b>	<b>\$ 26,330,149</b>	<b>\$ 26,615,594</b>	<b>\$ 27,142,289</b>	<b>\$ 27,955,588</b>	<b>\$ 28,704,518</b>	<b>\$ 29,323,814</b>	<b>\$ 29,903,631</b>
<b>II. SYSTEM EXPENSES:</b>							
<b>E. OPERATIONS AND MAINTENANCE</b>							
17. WPCA Admin (Less depreciation & interest)	\$ 4,480,783	\$ 4,873,664	\$ 5,033,206	\$ 5,198,437	\$ 5,369,574	\$ 5,546,842	\$ 5,730,476
18. Process Control	3,090,240	3,100,644	3,195,649	3,293,883	3,395,467	3,500,528	3,609,197
19. Laboratories	417,344	429,051	438,022	447,182	456,536	466,086	475,839
20. Sludge Process	2,344,170	2,446,994	2,507,756	2,570,046	2,633,903	2,699,366	2,766,477
21. Compliance	101,775	116,633	119,166	121,754	124,399	127,103	129,865
22. Building Maintenance	265,500	277,500	285,263	293,244	301,450	309,888	318,564
23. Equipment Maintenance	1,058,399	1,068,863	1,093,970	1,119,673	1,145,985	1,172,922	1,200,497
24. Pump Station Maintenance	763,911	763,382	781,721	800,513	819,770	839,504	859,727
25. Sewer Maintenance	414,940	439,155	448,672	458,399	468,340	478,500	488,885
26. Barrier Maintenance	260,000	260,000	267,350	274,909	282,684	290,680	298,903
27. Billing Services	472,955	472,939	474,122	475,335	476,579	477,854	479,162
<b>TOTAL SYSTEM EXPENSES</b>	<b>\$ 13,670,017</b>	<b>\$ 14,248,825</b>	<b>\$ 14,644,896</b>	<b>\$ 15,053,375</b>	<b>\$ 15,474,686</b>	<b>\$ 15,909,272</b>	<b>\$ 16,357,592</b>
<b>TOTAL NET REVENUES FOR DEBT SERVICE</b>	<b>\$ 12,660,132</b>	<b>\$ 12,366,769</b>	<b>\$ 12,497,393</b>	<b>\$ 12,902,214</b>	<b>\$ 13,229,833</b>	<b>\$ 13,414,542</b>	<b>\$ 13,546,039</b>
<b>III. DEBT SERVICE PAYMENTS:</b>							
28. Existing 2006 Revenue Bonds	\$ 1,203,220	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
29. Existing 2013 Revenue Bonds	1,357,950	1,630,700	1,635,850	1,634,050	1,635,300	1,634,450	1,631,500
30. Proposed 2015 Revenue Bonds:							
A. New Money	-	485,069	912,900	913,500	913,700	913,500	912,900
B. Refunding of 2006 Bonds	-	646,050	705,800	1,141,900	1,143,700	1,139,800	1,145,100
31. New Revenue Bonds	-	-	314,082	628,163	931,398	1,234,632	1,238,849
32. Existing CWF Loans	4,741,282	4,683,233	4,664,423	4,639,047	4,639,047	4,639,047	4,424,089
33. New CWF Loans	-	-	135,384	135,384	671,078	671,078	727,668
Subtotal - Senior Lien Debt	\$ 7,302,452	\$ 7,445,053	\$ 8,368,439	\$ 9,092,045	\$ 9,934,223	\$ 10,232,507	\$ 10,080,106
34. Existing GO Bonds (Subordinate)	2,437,395	1,820,997	1,747,325	1,801,725	1,751,800	1,377,173	1,267,583
<b>TOTAL DEBT SERVICE</b>	<b>\$ 9,739,847</b>	<b>\$ 9,266,050</b>	<b>\$ 10,115,764</b>	<b>\$ 10,893,769</b>	<b>\$ 11,686,023</b>	<b>\$ 11,609,680</b>	<b>\$ 11,347,689</b>
<b>SENIOR LIEN DS COVERAGE</b>	<b>1.74</b>	<b>1.67</b>	<b>1.50</b>	<b>1.42</b>	<b>1.34</b>	<b>1.32</b>	<b>1.35</b>
<b>TOTAL DS COVERAGE FROM NET REVENUE</b>	<b>1.30</b>	<b>1.34</b>	<b>1.24</b>	<b>1.19</b>	<b>1.14</b>	<b>1.16</b>	<b>1.20</b>
<b>IV. SWPCA CASH FUND BALANCE SUMMARY:</b>							
35. Beginning Balance	\$ 2,746,129	\$ 4,125,348	\$ 5,726,066	\$ 7,494,498	\$ 9,093,170	\$ 10,299,327	\$ 11,756,407
36. Transfers In	2,879,219	3,100,719	2,381,629	1,598,672	1,206,157	1,457,080	3,270,694
37. Transfers Out	(1,500,000)	(1,500,000)	(613,197)	-	-	-	-
a) City Pooled Cash Account							
b) Cash Funded Capital				(409,773)	(337,653)	(347,782)	(358,216)
38. Ending Balance - Unrestricted Cash	\$ 4,125,348	\$ 5,726,066	\$ 7,494,498	\$ 9,093,170	\$ 10,299,327	\$ 11,756,407	\$ 15,027,101
<b>DS COVERAGE FROM ALL AVAILABLE FUNDS</b>	<b>1.73</b>	<b>1.96</b>	<b>1.98</b>	<b>2.02</b>	<b>2.02</b>	<b>2.17</b>	<b>2.52</b>
<b>V. CITY POOLED CASH ACCOUNT BALANCE:</b>							
39. Beginning Balance	\$ 4,681,577	\$ 3,181,577	\$ 613,197	\$ -	\$ -	\$ -	\$ -
40. Transfers In	(1,500,000)	(1,500,000)	(613,197)	-	-	-	-
a) SWPCA							
b) City Share (Carriage Drive)	-	(1,068,380)	-	-	-	-	-
41. Transfers Out	-	-	-	-	-	-	-
42. Ending Balance - Due to City of Stamford	\$ 3,181,577	\$ 613,197	\$ -	\$ -	\$ -	\$ -	\$ -



Presented in Table 4 are financial projections for the SWPCA for the period of FY2015 through FY2020. These financial projections were prepared based on a review of historic performance, audited financial statements, budgeted performance for FY2014 and year to date budget for FY2015, and a review of capital financing requirements.

Based on the projection of revenues and expenses and associated assumptions, it is anticipated that the SWPCA will achieve its debt service coverage requirements over the forecast period with the adoption of the identified sewer user rate increases. It is anticipated that the SWPCA will not need to implement sewer rate increases until FY2018, with rate increases thereafter at levels lower than inflation sufficient to provide the net revenues over the forecast period to meet the debt service coverage requirements.

The SWPCA has approved significant rate increases since 2012 in order to build capital and operating reserves and pay-off the balances due to the City for advances from the City's pooled cash account. In addition, water consumption rates have stabilized after having seen a decline from 2008-2011 and significant immediate growth is planned in the service area. When the SWPCA achieves such, it anticipates utilizing the funds historically earmarked to build reserves and pay-off City advance balances to invest in the system through cash funding of certain capital improvements beginning in 2016.

The SWPCA has contracted with Computil to perform the billing, customer service and some collection service. In July of each year, it obtains the water meter readings from the water supply company for the period of the last quarter of the previous year and the first quarter of the current year. This consumption number is used by the SWPCA Board to set the user charge rates for the year. Historically, since the April 2000 billing period the SWPCA collects greater than 61% of all bills within the first 30 days of billing, greater than 79% within 60 days of billing and between 88 and 98% within 150 days of billing. As a budgeting procedure, the SWPCA sets user fees at a level that assumes that 95% of billings are collected within the course of each fiscal year, which is in keeping with historic norms. Typically, on average between 97% and 99% of billings are ultimately collected by the end of the next succeeding fiscal year.

### **Capital Improvement Program**

The SWPCA completed a \$105 million upgrade of the Treatment Plant in 2006. The upgrade was financed primarily by grants and loans under the Clean Water Fund program of the State of Connecticut. Many of the recently-completed and ongoing CIP projects were and are currently being funded through proceeds from the 2013 bond issue. In total, approximately \$12.8 million of proceeds from the 2013 bond issue have been used to fund a variety of completed and ongoing SWPCA CIP projects. Some of the larger, recently-completed CIP projects are highlighted below:

- Soundview Avenue Sewer Relining- About 3,000 linear feet of 36" and 42" diameter sewer trunk line was relined using cured-in-place pipe lining. The project cost approximately \$1.4 million.
- Clarifier and Thicker Rehabilitation- Major upgrades to the mechanical equipment were completed to all three primary sludge gravity thickeners and two secondary clarifiers. The project cost approximately \$1.6 million.
- Carriage Drive Area Sewers- Sewer extensions were completed for a total of 71 homes for approximately \$3.5 million. Proceeds from the 2013 bond issue were used to fund \$1.95 million, or 55% of this project. According to recent SWPCA Board meeting notes, this project currently remains underfunded by \$1.265 million. The SWPCA anticipates that \$1.069 million of this funding will come from the City to pay for the pavement and other non-sewer related project costs. The SWPCA is currently scheduling a meeting with the City and members of the Finance Committee to discuss.
- Vehicle Replacements- A sewer cleaning (vac) truck, a crane truck, four medium-sized trucks, and two passenger vehicles were purchased for a total of approximately \$611,000. Proceeds from the 2013 bond issue were used to completely fund this project.
- Odor Control System Upgrade and Replacement- The odor control system at the WPCF was upgraded and repaired, reducing fugitive odors significantly.

In addition, as discussed above the SWPCA's current CIP includes a number of planned and ongoing projects in various stages of completion. Ongoing CIP projects include the following:

- Citywide computerized mapping of the sanitary sewer systems using GIS - ongoing, sanitary sewers are 80% mapped as of end of calendar year 2014 (\$435,000 funded through 2013 bond proceeds).

- Engineering design for the Wedgemere Road and Perna Lane sewer extension projects - Wedgemere design is complete, Perna Lane design is ongoing (\$249,000 of Perna Lane Area Sewers project funded through 2013 bond proceeds).
- Engineering review and design for the upgrades to the Raw Sewage Pumping Station and flow distribution to the secondary clarifiers – studies are complete, construction to take place in 2019.
- Engineering review and design for upgrades to the computerized SCADA system - upgrade study complete, currently in design with design completion expected by October 2015.
- Implementing a CMOM program, with a variety of initiatives – ongoing (\$1.6 million funded through 2013 bond proceeds).

A summary of the SWPCA’s five-year capital plan is provided in Table 5. The capital plan includes replacement or upgrade of various components of the Treatment Plant including replacement of equipment in the primary clarifiers, and upgrade of the Treatment Plant’s headworks, aeration bowers, UV disinfection, and SCADA (control) system. Collection system projects that are planned include sewer extension projects to serve the Perna Lane and Wedgemere Road areas; sewer system Capacity Management, Operation and Maintenance Program and sewer rehabilitation. The capital plan includes relatively minor rehabilitation of the pumping stations, except for a major upgrade of the Alvord Lane and Greenwich Avenue pump stations.

**TABLE 5**

**Summary of 5-Year Capital Plan by Category (\$ Millions)\***

Category	Annual Capital Cash Flow Forecast (FY, \$ Millions)						Total (M)	Avg. per FY (M)	% of Total
	FY15	FY16	FY17	FY18	FY19	FY20			
Treatment Plants	\$0.6	\$2.5	\$8.2	\$8.9	\$2.2	\$0.2	\$22.5	\$3.75	46%
Pump Stations	\$0.1	\$0.4	\$0.9	\$0.6	\$0.1	\$0.1	\$2.2	\$0.36	4.5%
Collection System	\$2.7	\$5.1	\$5.2	\$3.9	\$6.5	\$0.6	\$23.9	\$4.0	49%
Total	\$3.4	\$8.0	\$14.3	\$13.4	\$8.7	\$0.8	\$48.6	\$8.1	100%

\*Totals may not add due to rounding.

## **THE SERIES 2015 BONDS**

### **General**

The Series 2015 Bonds will be issued as fully registered bonds in the aggregate principal amounts as set forth on the inside cover page hereof, will be dated and will bear interest from that date to their respective maturities as set forth on the inside cover page hereof, subject to optional redemption prior to maturity as described below. Ownership interests in the Series 2015 Bonds will be available in denominations of \$5,000 and integral multiples thereof. Interest on the Series 2015 Bonds will be payable on March 15, 2016 and on each March 15 and September 15 thereafter until maturity or earlier redemption.

So long as Cede & Co. is the registered owner of the Series 2015 Bonds, all payments of principal and interest on the Series 2015 Bonds are payable by wire transfer by U.S. Bank National Association, as Trustee and Paying Agent (the "Trustee") to Cede & Co. as nominee for The Depository Trust Company ("DTC"), New York, New York, which will, in turn, remit such amounts to the DTC Participants for subsequent disposition to Beneficial Owners. See "BOOK-ENTRY-ONLY METHOD" herein.

### **Optional Redemption**

The Series 2015 Bonds maturing on or after September 15, 2026 are subject to optional redemption prior to maturity commencing September 15, 2025, as a whole or in part, at any time, at the option of the City, at the applicable redemption price (expressed as a percentage of the principal amount redeemed), plus accrued interest to the date of redemption as follows:

<u>Period During Which Redeemed</u>	<u>Redemption Price</u>
September 15, 2025 and thereafter	100%

### **Mandatory Sinking Fund Redemption**

The Series 2015 Bonds maturing on September 15, 2040 and September 15, 2044 are subject to mandatory redemption from moneys in the Debt Service Fund, in the principal amounts specified below, plus accrued interest thereon.

The Trustee shall cause to be deposited in the Debt Service Account, in accordance with the Indenture, an amount sufficient to pay Sinking Fund Installments, and the Trustee shall redeem or pay from the Debt Service Account (subject to any crediting of such Sinking Fund Installments in accordance with the Indenture) the Series 2015 Bonds maturing on September 15, 2040 and September 15, 2044, in the manner therein provided as follows:

<u>Term Bond Due September 15, 2040</u>		<u>Term Bond Due September 15, 2044</u>	
<u>Year</u>	<u>Sinking Fund Installment</u>	<u>Year</u>	<u>Sinking Fund Installment</u>
2037 .....	\$680,000	2041 .....	\$790,000
2038 .....	710,000	2042 .....	825,000
2039 .....	735,000	2043 .....	855,000
2040 <sup>†</sup> .....	765,000	2044 <sup>†</sup> .....	885,000

<sup>†</sup> Final maturity.

**Notice of Redemption**

Notice of redemption shall be given by the City or its agent by mailing a copy of the redemption notice by first-class mail not less than thirty (30) days prior to the redemption date to the registered owner of the Series 2015 Bonds at the address of such registered owner as the same shall last appear on the registration books for the Series 2015 Bonds kept for such purpose. Failure to give such notice by mailing to any registered owner, or any defect therein, shall not affect the validity of the redemption of any other Series 2015 Bonds. Upon the giving of such notice, if sufficient funds available solely for redemption are on deposit with the Paying Agent, the Series 2015 Bonds or portions thereof so called for redemption will cease to bear interest after the specified redemption date.

If less than all of the Series 2015 Bonds of any one maturity shall be called for redemption, the particular Series 2015 Bonds or portions of Series 2015 Bonds of such maturity to be redeemed shall be selected by lot in such manner as the City in its discretion may determine; provided, however, that the portion of any Series 2015 Bonds to be redeemed shall be in the principal amount of \$5,000 or a multiple thereof and that, in selecting Series 2015 Bonds for redemption, each Bond shall be considered as representing that number of Series 2015 Bonds which is obtained by dividing the principal amount of such Series 2015 Bonds by \$5,000.

The City, so long as Cede & Co., as nominee of The Depository Trust Company (“DTC”), is the registered owner of the Series 2015 Bonds, pursuant to a book-entry registration system, will send any notice of redemption only to DTC (or a successor securities depository) or its nominee. Any failure of DTC to advise any DTC Participant, or of any DTC Participant or Indirect Participant to notify any Indirect Participant or Beneficial Owner, of any such notice and its content or effect will not affect the validity of the redemption of such Series 2015 Bonds called for redemption. Redemption of a portion of the Series 2015 Bonds of any maturity by the City will reduce the outstanding principal amount of Series 2015 Bonds of such maturity held by DTC. In such event it is the current practice of DTC to allocate by lot, through its book-entry system, among the interest held by DTC Participants in the Series 2015 Bonds to be redeemed, the interest to be reduced by such redemption in accordance with its own rules or other agreements with DTC Participants. The DTC Participants and Indirect Participants may allocate reductions of the interests in the Series 2015 Bonds to be redeemed held by the Beneficial Owners. Any such allocation of interests in the Series 2015 Bonds to be redeemed will not be governed by the determination of the City authorizing the issuance of the Series 2015 Bonds and will not be conducted by, or be the responsibility of, the City, the Registrar, or Paying Agent.

**Use of Series 2015 Bond Proceeds**

A portion of the proceeds of the Series 2015 Bonds will be used to finance the following projects as well as fund a Debt Service Reserve Fund.

<b>Project</b>	
Wedgemere Road Area Sewers.....	\$ 3,500,000
Perna Lane Area Sewers.....	3,000,000
CMOM (Sewer Capacity Mgt, Operations & Maintenance).....	230,000
Vehicle Replacement & Repair.....	100,000
Sanitary Sewer Rehabilitation.....	700,000
Aeration Blowers Upgrade.....	2,200,000
SCADA System Upgrade.....	1,070,000
WPCA - Major Replacement.....	2,625,000
Pump Station Upgrade.....	1,275,000
<b>Total.....</b>	<b>\$ 14,700,000</b>

**Plan of Refunding**

A portion of the proceeds of the Series 2015 Bonds is being issued to refund at or prior to maturity all of the outstanding maturities of certain of the City’s Water Pollution Control System and Facility Revenue Bonds as set forth below (the “Refunded Bonds”). The refunding is contingent upon delivery of the Series 2015 Bonds.

<b>Issue</b>	<b>Dated Date</b>	<b>Maturity Date</b>	<b>Interest Rate</b>	<b>Par Amount</b>	<b>Redemption Date</b>	<b>Redemption Price</b>	<b>CUSIP</b>
2006	9/28/2006	9/15/2015	4.000%	\$ 465,000	N/A	N/A	852660BF5
		9/15/2016	4.750%	485,000	N/A	N/A	852660BG3
		9/15/2017	3.800%	505,000	9/15/2016	100.00%	852660BH1
		9/15/2018	3.850%	525,000	9/15/2016	100.00	852660BJ7
		9/15/2019	3.900%	545,000	9/15/2016	100.00	852660BK4
		9/15/2020	4.000%	570,000	9/15/2016	100.00	852660BL2
Term Bond 2026		9/15/2026	4.250%	3,975,000	9/15/2016	100.00	852660BM0
Term Bond 2036		9/15/2036	4.750%	9,585,000	9/15/2016	100.00	852660BN8
<b>Total</b>				<b>\$ 16,655,000</b>			

Upon delivery of the Series 2015 Bonds, a portion of the proceeds will be deposited in an irrevocable trust fund (the “Escrow Deposit Fund”) established with U.S. Bank National Association, as escrow agent (the “Escrow Agent”), under an Escrow Agreement dated as of August 4, 2015 between the Escrow Agent and the City. The Escrow Agent will use such proceeds to purchase a portfolio of non-callable direct obligations of, or obligations guaranteed by, the government of the United States of America, obligations of the Federal Home Loan Mortgage Corporation, the Federal National Mortgage Association, the Government National Mortgage Association, the Federal Savings and Loan Insurance Corporation, and any other securities permitted by Section 7-400 of the Connecticut General Statutes, all of which shall not be callable or prepayable at the option of the issuer thereof (the “Escrow Securities”). The City may also enter into an agreement to reinvest receipts from Escrow Securities not immediately required to pay the principal of and redemption premium, if any, and interest on the Refunded Bonds. All investment income on and the maturing principal of the Escrow Securities held in the Escrow Deposit Fund will be irrevocably deposited by the City for payment of the Refunded Bonds. The balance of the proceeds of the Bonds will be used to pay costs of issuance and underwriters’ discount.

**Verification of Mathematical Computations**

AMTEC will verify from the information provided to it the mathematical accuracy as of the date of the closing of the Series 2015 Bonds of: (1) the computation that the anticipated receipts from the Escrow Securities and cash deposits set forth in the Underwriter’s schedules will be sufficient to pay, when due, the principal, interest and applicable call premium, if any, payment requirements of the Refunded Bonds, and (2) the computations of yield on the Bonds and the Escrow Securities contained in the provided schedules. AMTEC will express no opinion on the assumptions provided to it.

**Sources and Uses of Funds**

The proceeds of the Series 2015 Bonds are expected to be applied as follows:

<b>Sources:</b>	<b>Total</b>
Par Amount of the Series 2015 Bonds .....	\$ 31,070,000.00
Net Original Issue Premium .....	2,258,214.10
Available Funds from 2006 Bonds .....	1,975,035.43
<b>Total Sources</b> .....	<b>\$ 35,303,249.53</b>

<b>Uses:</b>	
Deposit to Capital Project Fund .....	\$ 14,700,000.00
Deposit to Debt Service Fund .....	559,666.60
Debt Service Reserve Fund .....	1,975,355.94
Deposit to Refunding Escrow Deposit Fund .....	17,682,473.46
Costs of Issuance <sup>1</sup> .....	385,753.53
<b>Total Uses</b> .....	<b>\$ 35,303,249.53</b>

<sup>1</sup> Includes underwriter's discount.

## **Book-Entry-Only System**

The Depository Trust Company (“DTC”), New York, NY, will act as securities depository for the Bonds, including the Series 2015 Bonds. The Bonds 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 bond certificate will be issued for each maturity of the Bonds, 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](http://www.dtcc.com).

Purchases of Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC’s records. The ownership interest of each actual purchaser of each Bond (“Beneficial Owner”) is in turn to be recorded on the Direct and Indirect Participants’ records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of DTC’s partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds; DTC’s records reflect only the identity of the Direct Participants to whose accounts such Bonds are credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

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.

Redemption notices shall be sent to DTC. If less than all of the Bonds within an issue are being redeemed, DTC’s practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Bonds unless authorized by a Direct Participant in accordance with DTC’s MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the City as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.’s consenting or voting rights to those Direct Participants to whose accounts Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payments on, and redemption premium, if any, with respect to the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from City or Paying Agent, on payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, Paying Agent, or the City, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest, and redemption premium, if any, to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the City or Paying Agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

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

The City may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In that event, bond 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 City believes to be reliable, but the City takes no responsibility for the accuracy thereof.

### ***DTC Practices***

The City can make no assurances that DTC, DTC Participants, Indirect Participants or other nominees of the Beneficial Owners of the Bonds will act in a manner described in this Official Statement. DTC is required to act according to rules and procedures established by DTC and its Participants which are on file with the Securities and Exchange Commission.

### ***Security and Pledge of the Indenture***

All Bonds issued pursuant to the Indenture, including the Series 2015 Bonds, shall be special limited obligations of the City. Pursuant to the granting clauses set forth in the Indenture, the City and the SWPCA have pledged the Trust Estate (as defined in Appendix D) as security for the payment of the Bonds and the performance of any other obligation of the City and the SWPCA under the Indenture or any supplemental indenture, in accordance with the terms and the provisions of the Indenture, subject only to the provisions of the Indenture permitting the application thereof for or to the purposes and on the terms and conditions set forth in the Indenture. It is the intention of the City and the SWPCA that, to the fullest extent permitted by law, including, but not limited to, the Clean Water Fund Act and the Uniform Commercial Code, the pledge of the Indenture shall be valid and binding from the time when it is made, that the Revenues, moneys, securities and other funds so pledged and then or thereafter received by the City or the SWPCA shall immediately be subject to the lien of such pledge without physical delivery thereof or further act and the lien of such pledge and obligation to perform the contractual provisions herein contained shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the City or the SWPCA.

### ***Flow of Funds***

All revenues received by the City and the SWPCA shall be deposited in the Revenue Fund. There shall also be deposited in the Revenue Fund all other amounts required by the Indenture to be so deposited. On the third Business Day preceding the end of each month, the Trustee shall, from the amounts in the Revenue Fund, make the following deposits in the following order of priority:

FIRST: to the Operating Fund, the amount set forth in a Certificate of an Authorized Representative of the City or the SWPCA as being deemed necessary to provide for (taking into account amounts on deposit therein and expenses incurred and unpaid for the current month) the payment of the next succeeding month's Operating Expenses;

SECOND: to each Debt Service Account, the amount necessary so that the total on deposit therein at the end of such month equals the Accrued Aggregate Debt Service on the applicable Series of Bonds for such month, and to such payees as are designated in writing to the Trustee by the City, an amount equal to

the Accrued Aggregate Debt Service on all Parity Indebtedness for such month; provided however, if Revenues are insufficient for such purpose, then pro rata to each such Debt Service Account and payee;

THIRD: from the balance, if any, remaining after making the deposits required by paragraphs FIRST and SECOND, to the Debt Service Reserve Fund, first, to the credit of the Common Account therein, the amount, if any, necessary to make the total on deposit in the Common Account equal to the Debt Service Reserve Fund Requirement for the Bonds secured by the Common Account, or the entire balance if less than sufficient, second, from the balance of such deposit, if any, remaining after crediting the Common Account as aforesaid, to the credit of each Special Account, the amount, if any, necessary to make the total amount on deposit in each such Special Account equal to the portion of the Debt Service Reserve Fund Requirement for the Series of Bonds to which such Special Account relates that is required to be funded as of that month as set forth in Section 401(b) of the Indenture; provided, however, that if the balance remaining is less than sufficient to credit in full each Special Account, credit shall be made pro rata among all Special Accounts in the same ratio as the portion of the Debt Service Reserve Fund Requirement related to each Special Account and required to be funded as of that month bears to the sum of the Debt Service Reserve Fund Requirements for all the Bonds related to Special Accounts, and third, from the balance of such deposit, if any, remaining after crediting the Common Account and the Special Accounts as aforesaid, to the credit of each debt service reserve fund as are designated in writing to the Trustee by the City for Parity Indebtedness, the amount, if any, necessary to make the total amount on deposit in each such debt service reserve fund equal to the portion of the debt service reserve fund requirement for the series of Parity Indebtedness to which such debt service reserve fund relates that is required to be funded as of that month; provided, however, that if the balance remaining is less than sufficient to credit in full each debt service reserve fund, credit shall be made pro rata among all debt service reserve funds in the same ratio as the portion of the debt service reserve fund requirement related to each debt service reserve fund and required to be funded as of that month bears to the sum of the debt service reserve fund requirements for all Parity Indebtedness related to such debt service reserve funds;

FOURTH: from the balance, if any, remaining after making the deposits required by paragraphs FIRST, SECOND and THIRD, to the Rebate Fund the amount, if any, set forth in a Certificate of an Authorized Representative of the City as being required to be deposited in such Fund and the Accounts thereunder in accordance with the Indenture or a Tax Regulatory Agreement;

FIFTH: from the balance, if any, remaining after making the deposits required by paragraphs FIRST, SECOND, THIRD and FOURTH, to the Subordinated Indebtedness Fund amounts required to be deposited in such Fund for such month in accordance with the Sewer Budget or the entire balance if less than sufficient; and

SIXTH: from the balance, if any, remaining after making the deposits required by paragraphs FIRST, SECOND, THIRD, FOURTH and FIFTH, to the Surplus Fund, the balance.

### ***Debt Service Reserve Fund***

The Series 2015 Bonds are additionally secured by the Common Account of the Debt Service Reserve Fund. Under the Indenture, if a Supplemental Indenture provides that on the date of issuance of the particular Series of Bonds authorized thereby, the Debt Service Reserve Fund Requirement for such Series of Bonds shall be fully funded on the same basis as all other Series of Bonds secured by the Common Account of the Debt Service Reserve Fund, such Series of Bonds shall also be secured by the Common Account of the Debt Service Reserve Fund once such funding shall have occurred. Amounts on deposit in the Common Account of the Debt Service Reserve Fund shall be applied, to the extent other funds are not available therefor pursuant to the Indenture, to pay the Principal Installments of, and interest on the Bonds secured by the Common Account. Amounts on deposit in Special Accounts in the Debt Service Reserve Fund shall be applied solely to the Bonds for which such Accounts have been established and such Bonds shall not be entitled to amounts on deposit in the Common Account. Amounts on deposit in debt service reserve funds for Parity Indebtedness shall be applied solely to the Parity Indebtedness for which such funds have been established and such Parity Indebtedness shall not be entitled to amounts on deposit in the Common Account.

If, as of January 1 or July 1 of each year or on any date on which the Trustee receives the written direction of the City under the Indenture, the amount in any Account in the Debt Service Reserve Fund exceeds the applicable Debt Service Reserve Fund Requirement, the Trustee shall withdraw from such Account the amount of any excess therein over the applicable Debt Service Reserve Fund Requirement as of the date of such withdrawal and deposit the moneys so withdrawn into the Surplus Fund. If, as of January 1 or July 1 of each year the amount in any Account in the Debt Service Reserve Fund is less than the applicable Debt Service Reserve Fund Requirement and,



to the extent that such deficiency has not been made up by the date of adoption of the Sewer Budget for the next Fiscal Year by deposits pursuant to the Indenture, the SWPCA shall, in its Sewer Budget for the ensuing Fiscal Year, include the amount necessary to fund such deficiency.

In the event of the refunding of any Bonds, the Trustee shall, upon the written direction of the City, withdraw from the Account of the Debt Service Reserve Fund related to the Bonds to be refunded all or any portion of amounts accumulated therein with respect to the Bonds to be refunded and deposit such amounts as provided in such written direction provided that such withdrawal shall not be made unless (i) immediately thereafter the Bonds being refunded shall be deemed to have been paid pursuant to Section 1201 of the Indenture, and (ii), after giving effect to any amounts being simultaneously deposited therein the amount remaining in each Account after such withdrawal shall not be less than the applicable Debt Service Reserve Fund Requirement.

***Pro-Forma Debt Service Reserve Fund Balance as of August 4, 2015***

	<b><i>DSRF Requirement</i></b>	<b><i>DSRF Requirement (\$)</i></b>	<b><i>Current DSRF Balance (\$)</i></b>
Clean Water Fund 414-C	Max P&I	4,424,089	4,424,108
2013 Series A	Max P&I	1,639,600	1,639,787
2015 Series	Max P&I	1,975,356	1,975,356

***Subordinated Indebtedness Fund***

Amounts on deposit in the Subordinated Indebtedness Fund shall be applied by the Trustee solely to the maintenance of reserves for, or the payment of, Subordinated Indebtedness, or as otherwise provided by the resolution of the City authorizing each issue of Subordinated Indebtedness.

If at any time the amounts in any Debt Service Account, any debt service fund for Parity Indebtedness (the deficiency in which is identified in writing to the Trustee by the City) or in any Account in the Debt Service Reserve Fund or any debt service reserve fund for Parity Indebtedness (the deficiency in which is identified in writing to the Trustee by the City) shall be less than the current requirements thereof (after any transfers thereto made pursuant to the Indenture), the Trustee shall withdraw from the Subordinated Indebtedness Fund and deposit in such Debt Service Account, debt service fund for Parity Indebtedness, Account of the Debt Service Reserve Fund or debt service reserve fund for Parity Indebtedness, as the case may be, the amount necessary (or all the moneys in said Fund on a pro rata basis, if less than the amount necessary) to make up such deficiency.

### **Surplus Fund**

The Trustee shall, on each Bond Payment Date, apply moneys credited to the Surplus Fund in the following amounts: (i) on a pro rata basis, to the Debt Service Fund the amount, if any, necessary (or all the moneys in the Surplus Fund if less than the amount necessary) to make up any deficiency in the amount required to be on deposit in such Fund and to any debt service fund for Parity Indebtedness identified in writing to the Trustee by the City the amount, if any, necessary (or all the moneys in the Surplus Fund if less than the amount necessary) to make up any deficiency in the amount required to be on deposit in such fund, as identified in writing to the Trustee by the City, (ii) to the Debt Service Reserve Fund the amount, if any, necessary (or all the moneys in the Surplus Fund if less than the amount necessary) to make up any deficiency in the amount required to be on deposit in any Account in such Fund and (iii) on a pro rata basis, to any debt service reserve funds for Parity Indebtedness identified in writing to the Trustee by the City the amount, if any, necessary (or all the moneys in the Surplus Fund if less than the amount necessary) to make up any deficiency in the amount required to be on deposit in such funds, as identified in writing to the Trustee by the City. Such transfer shall be made notwithstanding any other provisions of the Indenture requiring deposits in such Funds. Moneys remaining on deposit in the Surplus Fund after the transfers set forth in Section 511 of the Indenture may also be transferred by the Trustee to the City or the SWPCA, at the direction of the City or the SWPCA, to pay Operating Expenses or for any other lawful purpose related to the SWPCA or the Sewerage System, including but not limited to, the funding of a capital fund from which the City or the SWPCA may pay for capital improvements to the Sewerage System or to reimburse the City for expenses relating to the SWPCA; following any such transfer, the moneys transferred shall not be considered pledged moneys hereunder.

### **Rate Covenant**

Pursuant to the Indenture, the SWPCA covenants that it will fix, charge and collect rates, charges, rents, fees and assessments, including but not limited to use and connection charges and benefit assessments, which shall produce Revenues which, together with amounts capitalized from proceeds of Bonds or otherwise made available and reserved and not already taken into account hereunder by reduction of the obligations which are to be paid from Revenues, and the amount to be withdrawn from the Surplus Fund other than to pay Capital Costs for such Fiscal Year, shall be sufficient in each Fiscal Year to provide for:

- (A) a Debt Service Coverage Ratio at least equal to the Debt Service Coverage Ratio Requirement (115%);
- (B) any amount necessary to restore any Account within the Debt Service Reserve Fund to its required deposit level; and
- (C) any amount necessary to restore any debt service reserve fund for Parity Indebtedness to its required deposit level.

The SWPCA covenants that each Fiscal Year, it will budget for rates, charges, rents, fees and assessments, including but not limited to use and connection charges and benefit assessments, which shall produce Revenues which, together with amounts capitalized from proceeds of Bonds or otherwise made available and reserved and not already taken into account hereunder by reduction of the obligations which are to be paid from Revenues and the amount to be withdrawn from the Surplus Fund other than to pay Capital Costs for such Fiscal Year, shall be sufficient in each Fiscal Year to provide for an amount equal to 100% of the aggregate debt service for such Fiscal Year with respect to Subordinated Indebtedness, which aggregate debt service shall be computed on the same basis and with the same assumptions as "Aggregate Debt Service" for Bonds hereunder; provided however, that failure to collect such Revenues and other amounts under this clause shall under no circumstances be treated as an Event of Default.

### **Additional Bonds Test**

In order to issue additional Bonds secured on a parity with other Bonds, the Indenture requires a Certificate of an Authorized Representative of the City and the SWPCA setting forth for the last full Fiscal Year immediately preceding the Fiscal Year in which such Bonds are to be issued, (i) the Revenues, adjusted as hereinafter provided, (ii) the Aggregate Debt Service on the Bonds then Outstanding and all Parity Indebtedness then outstanding and the maximum Aggregate Debt Service on the additional Bonds then proposed to be issued, (iii) the total Operating Expenses, (iv) the amount withdrawn from the Surplus Fund other than to pay Capital Costs, and (v) showing that the Debt Service Coverage Ratio is at least equal to the Debt Service Coverage Ratio Requirement (115%); provided that (A) if an increase in the rates, fees and charges for services of the Sewerage System shall have been approved

prior to the delivery of such Certificate, such that no further legal requirements need to be met to effectuate such increase, the Revenues shall be adjusted to the amount of Revenues which would have been derived from the Sewerage System for said full Fiscal Year if such increased rates, fees and charges for services of the Sewerage System had been in effect for the full Fiscal Year, and (B) if the SWPCA shall have obtained one or more new customers after such Fiscal Year but before the delivery of such certificate, such that the Revenues for the last full Fiscal Year should, in the opinion of the SWPCA, be adjusted to reflect such additional customer or customers, then the Revenues of the Sewerage System for the full Fiscal Year immediately preceding the issuance of said additional Bonds shall be increased by the least amount which said customer or customers are legally obligated to pay in any one year for the furnishing of said services by the Sewerage System, after deducting therefrom the Operating Expenses estimated by the SWPCA as attributable in such year to such customer or customers.

In addition, except in the case of any Series of Refunding Bonds, in order to issue a new Series of Bonds, the Indenture also requires a Certificate of an Authorized Representative of the City and the SWPCA setting forth for each of the five (5) Fiscal Years following the issuance of such Series of Bonds, plus the Fiscal Year in which such Bonds are issued, (i) the estimated Revenues after giving effect to any increases or decreases in rates, fees and charges projected, (ii) the estimated Operating Expenses, (iii) the estimated amount to be withdrawn from the Surplus Fund other than to pay Capital Costs, (iv) the projected Aggregate Debt Service on the Bonds then Outstanding, all Parity Indebtedness then outstanding and the additional Bonds then proposed to be issued, and (v) showing that the Debt Service Coverage Ratio will be at least equal to the Debt Service Coverage Ratio Requirement (115%).

Refunding Bonds may be issued pursuant to the Indenture at any time to refund any Outstanding Bonds or outstanding Parity Indebtedness provided that (i) average annual Debt Service on such Series of Refunding Bonds or outstanding Parity Indebtedness shall not exceed the average annual Debt Service on the Bonds to be refunded and (ii) the maximum Debt Service in any Fiscal Year on such Series of Refunding Bonds or Parity Indebtedness (excluding any one-twentieth (1/20th) principal payment required by the Project Loan and Grant Agreement), shall not exceed the maximum Debt Service in any Fiscal Year on the Bonds or Parity Indebtedness to be refunded, (excluding any one-twentieth (1/20th) principal payment on Clean Water Obligations required by the Project Loan and Grant Agreement all as shown in a Certificate signed by an Authorized Representative of the Municipality and delivered to the Trustee prior to the authentication and delivery of such Series of Refunding Bonds. Refunding Bonds shall be issued in a principal amount sufficient, together with other moneys available therefor, to accomplish such refunding and to make the deposits in the Funds and Accounts required by the provisions of the Supplemental Indenture authorizing such Bonds. Refunding Bonds that do not meet the requirements of the Indenture for Refunding Bonds may be issued by meeting the requirements of Bonds.

### ***Other Indebtedness***

Under the Indenture, the City shall not issue any bonds, notes or other evidences of indebtedness, other than the Bonds, Parity Bond Anticipation Notes, Parity Reimbursement Obligations and Parity Indebtedness, secured by a pledge of or other lien or charge on the Revenues and shall not create or cause to be created any lien or charge on such Revenues or on any amounts held by any Fiduciary, under the Indenture. However, the Indenture shall not prevent the City or the SWPCA from issuing bonds or notes or other obligations for the corporate purposes of the City or the SWPCA payable out of, or secured by a pledge of, Revenues to be derived on and after such date as the pledge of the Revenues provided in the Indenture shall be discharged and satisfied as provided in Section 1201 of the Indenture, or from issuing Subordinated Indebtedness for the corporate purposes of the City or the SWPCA which are payable out of or secured by the pledge of amounts available therefor in the Subordinate Indebtedness Fund and which recite on their face that such pledge of said amounts is and shall be in all respects subordinate to the provisions of the Indenture and the lien and pledge created by the Indenture.

## Debt Service <sup>1</sup>

The following table sets forth the debt service requirements as of August 4, 2015 for each fiscal year ending June 30 for the Bonds and Parity Indebtedness of the City incurred on behalf of the SWPCA to make capital improvements to the Sewerage System. The payment of debt service on general obligation bonds of the City, which proceeds were used for Sewerage System improvements, is subordinate to the payment of debt service on the Bonds and the Parity Indebtedness and is not included in this table.

<b>Fiscal Year Ended</b>	<b>Parity Indebtedness <sup>2</sup></b>		<b>This Issue</b>	<b>Total</b>	<b>Cumulative Principal Retired</b>
	<b>Principal</b>	<b>Interest</b>	<b>Principal</b>	<b>Principal</b>	
2016	\$ 6,051,692	\$ 3,288,259	\$ 665,000	\$ 6,716,692	6.22%
2017	5,656,688	2,390,910	695,000	6,351,688	12.10%
2018	5,852,915	2,221,906	720,000	6,572,915	18.18%
2019	5,981,186	2,044,960	750,000	6,731,186	24.41%
2020	5,778,531	1,872,140	785,000	6,563,531	30.49%
2021	5,616,483	1,706,689	830,000	6,446,483	36.45%
2022	5,469,163	1,546,366	875,000	6,344,163	42.33%
2023	5,612,084	1,387,643	920,000	6,532,084	48.37%
2024	5,710,678	1,226,771	965,000	6,675,678	54.55%
2025	5,906,980	1,065,024	1,015,000	6,921,980	60.96%
2026	2,200,509	929,609	1,070,000	3,270,509	63.98%
2027	1,530,000	851,670	1,120,000	2,650,000	66.44%
2028	1,605,000	771,391	1,175,000	2,780,000	69.01%
2029	1,670,000	686,891	1,240,000	2,910,000	71.70%
2030	1,745,000	598,123	1,305,000	3,050,000	74.53%
2031	1,110,000	524,850	1,370,000	2,480,000	76.82%
2032	1,170,000	467,850	1,425,000	2,595,000	79.22%
2033	1,230,000	407,850	1,475,000	2,705,000	81.73%
2034	485,000	364,975	1,525,000	2,010,000	83.59%
2035	510,000	338,825	1,575,000	2,085,000	85.52%
2036	540,000	309,950	1,635,000	2,175,000	87.53%
2037	570,000	279,425	1,690,000	2,260,000	89.62%
2038	600,000	247,250	680,000	1,280,000	90.81%
2039	635,000	213,288	710,000	1,345,000	92.05%
2040	670,000	178,238	735,000	1,405,000	93.35%
2041	705,000	142,144	765,000	1,470,000	94.71%
2042	745,000	104,081	790,000	1,535,000	96.14%
2043	785,000	63,919	825,000	1,610,000	97.63%
2044	825,000	21,656	855,000	1,680,000	99.18%
2045	-	-	885,000	885,000	100.00%
<b>Total.....</b>	<b>\$ 76,966,908</b>	<b>\$ 26,252,653</b>	<b>\$ 31,070,000</b>	<b>\$ 108,036,908</b>	

<sup>1</sup> Excludes Refunded Bonds.

<sup>2</sup> Excludes principal and interest payments on the \$19,765,000 Revenue Bonds, 2006 Series, dated September 28, 2006, expected to be refunded by the Series 2015 Bonds, and four Project Loan Obligations ("PLOs") between the City and the State of Connecticut, as follows: PLO 177-C (original amount of loan \$2,731,211.01 and current principal amount outstanding \$182,081); PLO 375-C (original amount of loan \$852,229.32 and current principal amount outstanding \$151,249); PLO 414-D (original amount of loan \$3,574,208.37 and current principal amount outstanding \$1,387,460); a second PLO 414-D (original amount of loan \$73,561,480.55 and current principal amount outstanding \$47,453,686). Each PLO bears interest at the rate of 2% per annum, with payments of principal and interest made on a monthly basis.

## **Tax Matters**

The Internal Revenue Code of 1986, as amended (the "Code"), imposes certain requirements which must be met at and subsequent to delivery of the Series 2015 Bonds in order that interest on the Series 2015 Bonds be and remains excluded from gross income for federal income tax purposes. Noncompliance with such requirements could cause interest on the Series 2015 Bonds to be included in gross income retroactive to the date of issuance of the Series 2015 Bonds. The Tax Regulatory Agreement, which will be executed and delivered by the City concurrently with the Series 2015 Bonds, contains representations, covenants and procedures relating to the use, expenditure and investment of proceeds of the Series 2015 Bonds in order to comply with such requirements of the Code. Pursuant to the Tax Regulatory Agreement, the City also covenants and agrees that it shall perform all things necessary or appropriate under any valid provision of law to ensure interest on the Series 2015 Bonds shall be excluded from gross income for federal income tax purposes under the Code.

In the opinion of Bond Counsel, based on existing statutes and court decisions and assuming continuing compliance by the City with its covenants and the procedures contained in the Tax Regulatory Agreement, interest on the Series 2015 Bonds is excluded from gross income for federal income tax purposes and is not treated as an item of tax preference for purposes of computing the federal alternative minimum tax. Interest on the Series 2015 Bonds is, however, includable in adjusted current earnings for purposes of computing the federal alternative minimum tax imposed on certain corporations.

Ownership of the Series 2015 Bonds may also result in certain collateral federal income tax consequences to certain taxpayers, including, without limitation, financial institutions, property and casualty insurance companies, certain foreign corporations doing business in the United States, certain S corporations with excess passive income, individual recipients of Social Security and Railroad Retirement benefits, taxpayers utilizing the earned income credit and taxpayers who have or are deemed to have incurred indebtedness to purchase or carry tax exempt obligations, such as the Series 2015 Bonds. Prospective purchasers of the Series 2015 Bonds, particularly those who may be subject to special rules, are advised to consult their own tax advisors regarding the federal tax consequences of ownership and disposition of, or receipt of interest on, the Series 2015 Bonds.

In the opinion of Bond Counsel, based on existing statutes, interest on the Series 2015 Bonds is excluded from Connecticut taxable income for purposes of the Connecticut income tax on individuals, trusts and estates, and is excluded from amounts on which the net Connecticut minimum tax is based in the case of individuals, trusts and estates required to pay the federal alternative minimum tax.

Legislation affecting the exclusion from gross income of interest on State or local bonds, such as the Series 2015 Bonds, is regularly under consideration by the United States Congress. There can be no assurance that legislation enacted or proposed after the date of issuance of the Series 2015 Bonds will not reduce or eliminate the benefit of the exclusion from gross income of interest on the Series 2015 Bonds or adversely affect the market price of the Series 2015 Bonds.

The opinions of Bond Counsel are rendered as of their date and are based on existing law, which is subject to change. Bond Counsel assumes no obligation to update or supplement its opinions to reflect any facts or circumstances that may come to their attention, or to reflect any changes in law that may thereafter occur or become effective.

Prospective purchasers of the Series 2015 Bonds are advised to consult their own tax advisors regarding other State and local tax consequences of ownership and disposition of and receipt of interest on the Series 2015 Bonds.

## **Original Issue Discount**

The initial public offering price of certain maturities of the Series 2015 Bonds may be less than the principal amount payable on such Series 2015 Bonds at maturity. The excess of the principal amount payable at maturity over the initial public offering price at which a substantial amount of these Series 2015 Bonds are sold constitutes original issue discount. The prices set forth on the inside cover page of the Official Statement may or may not reflect the prices at which a substantial amount of the Series 2015 Bonds were ultimately sold to the public.

Under Section 1288 of the Code, the amount of original issue discount treated as having accrued with respect to any Bond during each day it is owned by a taxpayer is added to the owner's adjusted basis for purposes of determining gain or loss upon the sale or other disposition of such Series 2015 Bonds by such owner. Accrued original issue discount on the Series 2015 Bonds is excluded from gross income for federal income tax purposes. Original issue discount on any bond is treated as accruing on the basis of economic accrual for such purposes,

computed by a constant semiannual compounding method using the yield to maturity on such bond. The original issue discount attributable to any bond for any particular semiannual period is equal to the excess of the product of (i) one-half of the yield to maturity of such bond, and (ii) the amount which would be the adjusted basis of the bond at the beginning of such semiannual period if held by the original owner and purchased by such owner at the initial public offering price, over the interest paid during such period. The amount so treated as accruing during each semiannual period is apportioned in equal amounts among the days in that period to determine the amount of original issue discount accruing for such purposes during each such day. Prospective purchasers of the Series 2015 Bonds should consult their own tax advisors with respect to the federal, state and local income tax consequences of the disposition of and receipt of interest on the Series 2015 Bonds.

### ***Original Issue Premium***

The initial public offering price of certain maturities of the Series 2015 Bonds may be greater than the principal amount payable on such Series 2015 Bonds at maturity. The excess of the initial public offering price at which a substantial amount of these Series 2015 Bonds are sold over the principal amount payable at maturity or on earlier call date constitutes original issue premium. The prices set forth on the inside cover page of the Official Statement may or may not reflect the prices at which a substantial amount of the Series 2015 Bonds were ultimately sold to the public.

Under Sections 1016 and 171 of the Code, the amount of original issue premium treated as amortizing with respect to any bond during each day it is owned by a taxpayer is subtracted from the owner's adjusted basis for purposes of determining gain or loss upon the sale or other disposition of such bonds by such owner. Amortized original issue premium on the Series 2015 Bonds is not treated as a deduction from gross income for federal income tax purposes. Original issue premium on any bond is treated as amortizing on the basis of the taxpayer's yield to maturity using the taxpayer's cost basis and a constant semiannual compounding method. Prospective purchasers of the Series 2015 Bonds should consult their own tax advisors with respect to the federal income tax consequences of the disposition of and receipt of interest on the Series 2015 Bonds.

### ***Ratings***

Standard & Poor's, a division of the McGraw-Hill Companies, has assigned a rating of "AA+" to the Series 2015 Bonds. Moody's Investors Service has assigned a rating of "Aa2" to the Series 2015 Bonds. The City furnished to the rating agencies certain information and materials, some of which may not have been included in this Official Statement. The ratings reflect only the view of each rating agency and are subject to revision or withdrawal, which could affect the market price of the Series 2015 Bonds. Each rating agency should be contacted directly for its rating on the Series 2015 Bonds and the explanation of such rating.

### ***Underwriting***

Subject to the terms and conditions of the Bond Purchase Agreement, the City has agreed to sell to Raymond James & Associates, Inc. (the "Underwriter"), and the Underwriter has agreed to purchase, the Series 2015 Bonds at the net aggregate purchase price of \$33,154,607.85 (consisting of the principal amount of \$31,070,000.00, plus original issue premium of \$2,258,214.10, less underwriter's discount of \$173,606.25). The Underwriter will be obliged to purchase all such Series 2015 Bonds, if any such Series 2015 Bonds are purchased. The Underwriter intends to offer the Series 2015 Bonds to the public initially at the offering prices or yields set forth on the inside cover page of this Official Statement, which may subsequently change without any requirement of prior notice. The Series 2015 Bonds may be offered and sold to certain dealers (including unit investment trusts and other affiliated portfolios of certain underwriters and other dealers depositing the Series 2015 Bonds into investment trusts) at prices lower than such public offering prices, and such public offering prices may be changed, from time to time, by the Underwriter.

### ***Certain Legal Matters***

The unqualified approving opinion of Robinson & Cole LLP, Hartford, Connecticut, Bond Counsel to the City, will be furnished upon delivery of the Series 2015 Bonds; the proposed form of such opinion is set forth in Appendix E. Certain legal matters will be passed on for the Underwriter by its counsel, Pullman & Comley, LLC, Hartford, Connecticut. Pullman & Comley, LLC has served as special counsel to the City of Stamford and SWPCA in connection with other matters.

**Consulting Engineering**

ARCADIS U.S., Inc. (the “Consulting Engineer”), has prepared the Consulting Engineer’s Report for the Bonds, dated June 2015, a copy of which is included in Appendix C hereto. The Consulting Engineer’s Report provides an overview of the history of and financial projections for the Wastewater System. The Consulting Engineer has performed its services to the level customary for competent and prudent engineers performing such services at the time and place where the services were provided, as described in the Report. The Consulting Engineer makes or intends no other warranty, expressed or implied. The Consulting Engineer’s Report contains information not set forth elsewhere in the Official Statement and should be read in its entirety.

**The Financial Advisor**

Phoenix Advisors LLC, Milford, Connecticut, is serving as financial advisor to the City for the issuance of the Series 2015 Bonds. The financial advisor has assisted in the preparation of this Official Statement and in other matters relating to the planning, structuring and issuance of the Series 2015 Bonds and has provided other advice. It, however, does not assume responsibility for the adequacy of the statements made herein and makes no representation that it has independently verified the same.

**Litigation**

In the opinion of the City’s Director of Legal Affairs, as of the date of this Official Statement, there are no claims or litigation pending or to his knowledge threatened, which would individually or in the aggregate result in final judgments against the City or the SWPCA which would have a material adverse effect on the finances of the SWPCA or which would impact the validity of the Series 2015 Bonds or the power of the SWPCA to assess and collect revenues to pay them.

*(Remainder of page intentionally left blank)*

## MISCELLANEOUS

### **Availability of Continuing Information**

The City prepares, in accordance with State law, annual audited financial statements and files such annual audits with the State Office of Policy and Management within six months of the end of its fiscal year. In accordance with the requirements of Rule 15c2-12(b)(5) promulgated by the Securities and Exchange Commission, the City will agree to provide or cause to be provided annual financial information and operating data and notices of certain events with respect to the Series 2015 Bonds pursuant to a Continuing Disclosure Agreement substantially in the form attached as Appendix F to this Official Statement.

The City has previously undertaken in continuing disclosure agreements entered into for the benefit of holders of certain of its general obligation bonds and notes to provide certain annual financial information and event notices pursuant to Rule 15c2-12(b)(5). In the past five years, the City has not failed in any material respects to meet any of its undertakings under such agreements.

### **Additional Information**

Additional information may be obtained upon request from Michael E. Handler, Director of Administration, City of Stamford, Government Center, 888 Washington Boulevard, Stamford, Connecticut 06904-2152, telephone (203) 977-4183 or from Barry J. Bernabe, Managing Director, Phoenix Advisors LLC, 53 River Street, Milford, Connecticut 06460, telephone (203) 283-1110.

The Official Statement is submitted in connection with the sale of the Series 2015 Bonds and may not be reproduced or used in whole or in part for any other purpose. This Official Statement has been duly authorized and approved by the City and the SWPCA and duly executed and delivered on their behalf.

This Official Statement is not to be construed as a contract or agreement between the City and the purchasers or holders of any of the Series 2015 Bonds.

### **Concluding Statement**

To the extent that any statements made in this Official Statement involve matters of opinion or estimates, such statements are made as such and not as representations of fact or certainty, and no representation is made that any of such statements will be realized. Information herein has been derived by the City from official and other sources and is believed by the City to be reliable, but such information other than that obtained from official records of the City has not been independently confirmed or verified by the City and its accuracy is not guaranteed.

This Official Statement has been duly prepared and delivered by the City and executed for and on behalf of the City by the following officials.

## CITY OF STAMFORD, CONNECTICUT

By */s/ David Martin*

---

David Martin  
Mayor

By */s/ Michael E. Handler*

---

Michael E. Handler  
Director of Administration

## WATER POLLUTION CONTROL AUTHORITY OF THE CITY OF STAMFORD

By */s/ William P. Brink*

---

William P. Brink, P.E., BCEE  
Executive Director

Dated: July 22, 2015



## **APPENDIX A – INFORMATION CONCERNING THE CITY**

### ***History, Location and Other Information***

Stamford, first settled in 1641, is Connecticut's third largest city by population. It was named the Town of Stamford in 1642 and was admitted to Connecticut in October 1662. In 1893, the City of Stamford, comprising the central portion of the Town of Stamford, was incorporated. Thereafter, the City of Stamford became a composite part of the Town of Stamford resulting in two separate governments. On April 15, 1949, the Town and City were consolidated and named the City of Stamford. Stamford covers an area of approximately 40 square miles located on Long Island Sound between Greenwich to the west and New Canaan and Darien to the east.

The City is less than one hour from New York City by rail or highway transportation. It is on the New Haven line of the Metro-North commuter railroad and also receives service from Shoreline East, Amtrak, and Conrail which provide daily passenger and freight service. It is served by interstate, intrastate, and local bus lines. The Connecticut Turnpike (I-95), the Boston Post Road (U.S. Route 1), and the Merritt Parkway (CT Route 15), traverse the City.

The City has a high concentration of national and international corporate headquarters, and it is the major retail trade center of Fairfield County, yet it maintains its suburban character and residential areas. The City offers its residents a high quality of life including good schools, a broad array of public services, attractive parks and recreational activities, and a safe living environment. Through sound urban planning the City has strengthened its downtown retail core, increased its housing and cultural facilities, and attracted major office development.

Restoration of the Mill River, which includes the creation of a new 28-acre urban park along its banks and a greenway leading from downtown Stamford to Long Island Sound, continues. The Mill River Park is spurring development and real estate tax revenues. Over 1,000 new residential units have been built or are in development around the perimeter of the park.

A new Transit-Oriented Development ("TOD") project planned for the Stamford Transportation Center includes a new parking garage, hotel, and retail space. The second and final construction phase of the Stamford Urban Transitway (SUT), which provides automobile and enhanced bus, bike, and pedestrian connections between the Stamford Transportation Center and the City's East Side, commenced in the first quarter of 2013.

The 82-acre Harbor Point development in the South End continues under active construction. To date, more than 2,000 apartment units have been completed, are under construction, or have received approval to commence construction. The project includes 4,000 residential units of which ten percent are affordable housing; commercial space including office buildings, a grocery store, a waterfront hotel, restaurants, and a marina; more than 11 acres of parks and public spaces; a community school; and publicly accessible waterfront areas.

NBC Sports has completed its \$100 million relocation to Stamford from multiple locations across the U.S. and employs nearly 600 people. Chelsea Piers of New York City has opened its 240,000-square-foot facility following a \$40 million retrofit of the former Clairol site and created 240 jobs.

The University of Connecticut (UCONN) Stamford Branch is planning an expansion which will include 400 units of residential housing. Stamford Hospital has begun construction of a \$450 million development that will include a new five-story hospital building and a central utility plant.

The City is an important residential suburb in one of the highest per capita income areas of the United States. The 2009–2011 American Community Survey reports Stamford's per capita income as \$41,762 with a 2010 Census population of 122,643.

### ***Description of Government***

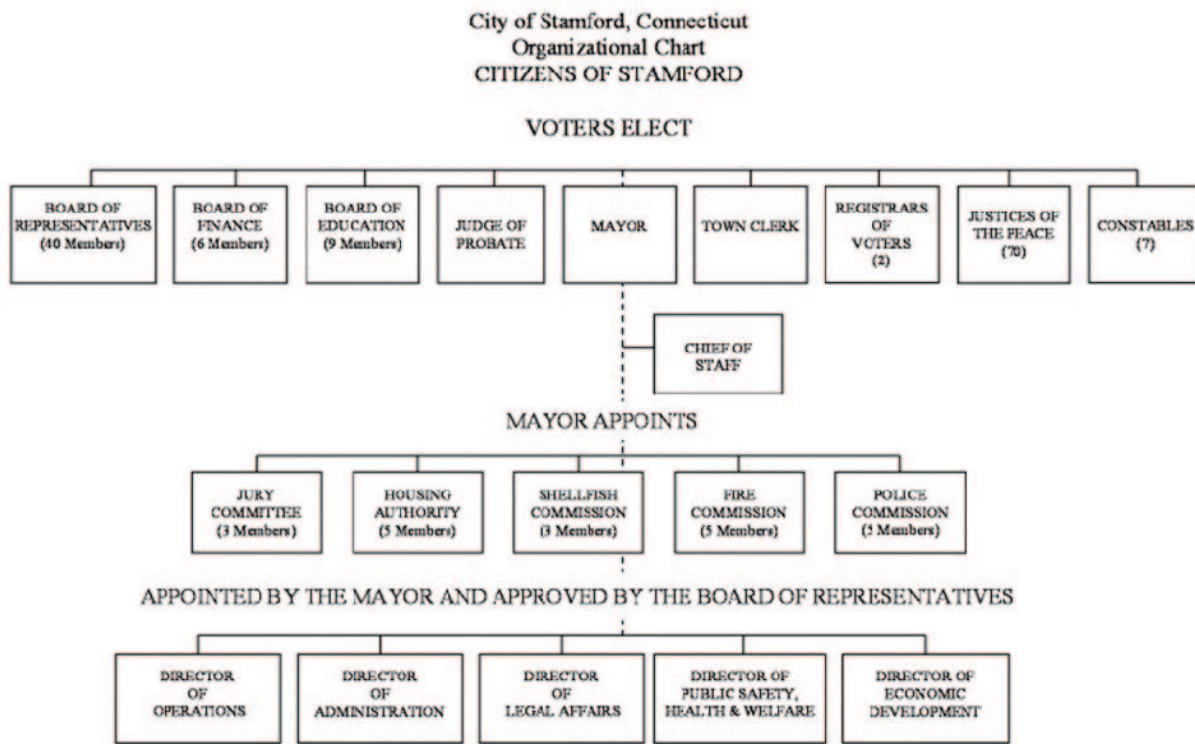
The City of Stamford operates under a Charter adopted in 1949 and most recently revised in November 2012. The 2012 revisions created a single Fire Department consisting of career and volunteer firefighters, created a Board of Ethics and Code of Ethics, and clarified the authority of the Board of Finance.

The chief executive officer of the City is the Mayor, who is elected for a four-year term of office. The legislative function is performed by a forty-member Board of Representatives whose members are elected, two from each of twenty districts, for four-year terms. The Board of Representatives adopts ordinances and resolutions and must approve all expenditures

of funds. A six-member Board of Finance, elected to staggered four-year terms with provisions for representation of the two major political parties, establishes fiscal policy and must approve all expenditures of funds.

The Director of Administration is appointed by the Mayor and confirmed by the Board of Representatives. Under the direction of the Mayor, the Director of Administration has supervision over the Controller's Office, Office of Policy and Management, Purchasing, Central Services, Assessment and Taxation, Community Development, Intergovernmental Grants, Technology Management Services and Risk Management. The Director of Administration is the Chief Fiscal Officer of the City and performs accounting of all funds showing all financial transactions for all commissions, boards, departments, offices, agencies, authorities and other entities of the City. The Office of Administration provides certain support services for the Board of Education.

The Director of Administration has the powers and duties conferred on town treasurers, to issue and market all bonds and to invest funds of the City. The Director of Administration is also responsible for the preparation of the operating and capital budgets of the City. In addition, in accordance with Section 8-20-3 of the City Charter, the Director of Administration submits an opinion to the Mayor and Board of Finance in December of each year setting forth the amount and nature of capital expenditures that the City may incur safely for each of the six succeeding years.



**Administration**

The Mayor, subject to the approval of the Board of Representatives, appoints five Directors to his cabinet: the Director of Operations, Director of Administration, Director of Legal Affairs, Director of Public Safety, Health and Welfare, and Director of Economic Development. The Directors serve at the Mayor's pleasure, and their terms are coterminous with the Mayor's term of office. The Mayor's Executive Aide also serves as a member of the cabinet.

## DEMOGRAPHIC AND ECONOMIC DATA

### Population Trends and Densities

Year	Actual		
	Population <sup>1</sup>	% Increase	Density <sup>2</sup>
2013 <sup>3</sup>	123,995	1.1%	3,107.6
2010	122,643	4.7%	3,073.8
2000	117,083	8.4%	2,934.4
1990	108,056	5.5%	2,708.2
1980	102,453	-5.8%	2,567.7
1970	108,798	17.3%	2,726.8
1960	92,713	--	2,323.6

<sup>1</sup> U.S. Department of Commerce, Bureau of Census.

<sup>2</sup> Per square mile: 39.9 square miles.

<sup>3</sup> American Community Survey 2009-2013

### Age Distribution of the Population

Age	City of Stamford		State of Connecticut	
	Number	Percent	Number	Percent
Under 5 years .....	9,253	7.5%	197,395	5.5%
5 to 9 years .....	6,482	5.2	220,139	6.1
10 to 14 years .....	7,414	6.0	236,742	6.6
15 to 19 years .....	6,692	5.4	255,816	7.1
20 to 24 years .....	7,585	6.1	229,708	6.4
25 to 34 years .....	21,816	17.6	428,258	12.0
35 to 44 years .....	19,025	15.3	469,746	13.1
45 to 54 years .....	17,361	14.0	568,510	15.9
55 to 59 years .....	6,887	5.6	246,210	6.9
60 to 64 years .....	5,654	4.6	210,753	5.9
65 to 74 years .....	7,715	6.2	269,422	7.5
75 to 84 years .....	5,440	4.4	164,260	4.6
85 years and over .....	2,671	2.2	86,602	2.4
<b>Total.....</b>	<b>123,995</b>	<b>100%</b>	<b>3,583,561</b>	<b>100%</b>

Median Age (Years) 2013..... 36.3 40.0

Median Age (Years) 2010..... 37.1 40.0

<sup>1</sup> U.S. Department of Commerce, Bureau of Census, 2010.

Source: American Community Survey 2009-2013

### Income Distribution

<b>Income</b>	<b>City of Stamford</b>		<b>State of Connecticut</b>	
	<b>Families</b>	<b>Percent</b>	<b>Families</b>	<b>Percent</b>
\$ 0 - \$ 9,999.....	814	2.7%	29,895	3.3%
10,000 - 14,999.....	680	2.3	19,176	2.1
15,000 - 24,999.....	2,001	6.7	47,319	5.2
25,000 - 34,999.....	2,266	7.6	56,997	6.3
35,000 - 49,999.....	2,560	8.6	86,025	9.5
50,000 - 74,999.....	4,309	14.5	143,989	15.9
75,000 - 99,999.....	3,758	12.7	131,874	14.6
100,000 - 149,999.....	4,956	16.7	187,718	20.8
150,000 - 199,999.....	2,488	8.4	90,602	10.0
200,000 and over.....	5,835	19.7	109,982	12.2
<b>Total.....</b>	<b>29,667</b>	<b>100.0%</b>	<b>903,577</b>	<b>100.0%</b>

Source: American Community Survey 2009-2013

### Comparative Income Measures

	<b>City of Stamford</b>	<b>State of Connecticut</b>
Per Capita Income, 2013.....	\$ 43,647	\$ 37,892
Per Capita Income, 2010.....	\$ 41,227	\$ 36,775
Median Family Income, 2013.....	\$ 87,865	\$ 87,245
Median Family Income, 2010.....	\$ 84,190	\$ 84,170

Source: American Community Survey 2009-2013

### Educational Attainment

	<b>City of Stamford</b>		<b>State of Connecticut</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
Less than 9th grade.....	6,606	7.6%	109,133	4.5%
9th to 12th grade.....	5,209	6.0	155,272	6.4
High School graduate.....	19,365	22.4	678,370	27.8
Some college, no degree.....	13,030	15.1	431,469	17.7
Associate's degree.....	4,632	5.4	178,597	7.3
Bachelor's degree.....	21,440	24.8	498,124	20.4
Graduate or professional degree.....	16,287	18.8	392,796	16.1
<b>Total.....</b>	<b>86,569</b>	<b>100.0%</b>	<b>2,443,761</b>	<b>100.0%</b>
Total high school graduate or higher (%).....		86.4%		89.6%
Total bachelor's degree or higher (%).....		43.6%		36.9%

Source: American Community Survey 2009-2013

### Employment Data

Period	Percentage Unemployed				
	City of Stamford		City of Stamford	Bridgeport/ Stamford	
	Employed	Unemployed		Labor Market	State of Connecticut
April 2015.....	65,793	3,204	4.6	5.6	5.8
<b>Annual Average</b>					
2014.....	65,088	3,828	5.6	6.2	6.7
2013.....	63,290	4,329	6.4	7.3	7.9
2012.....	63,362	4,764	7.0	8.2	8.3
2011.....	63,868	7,974	7.2	8.2	8.8
2010.....	63,017	5,224	7.7	8.4	9.0
2009.....	62,721	4,972	7.3	7.8	8.2
2008.....	63,710	3,143	4.7	5.3	5.7
2007.....	63,761	2,459	3.7	4.1	4.6
2006.....	63,446	2,367	3.6	3.9	4.4
2005.....	62,435	2,751	4.2	4.5	4.9

Source: State of Connecticut, Department of Labor.

### Industry Classification

Sector	City of Stamford		State of Connecticut	
	Number	Percent	Number	Percent
Agriculture, forestry, fishing and hunting, and mining.....	186	0.3%	6,945	0.4%
Construction.....	4,692	7.3	99,444	5.7
Manufacturing.....	3,797	5.9	193,945	11.0
Wholesale trade.....	1,385	2.2	43,550	2.5
Retail trade.....	6,053	9.4	191,841	10.9
Transportation warehousing, and utilities.....	2,112	3.3	65,630	3.7
Information.....	1,648	2.6	41,588	2.4
Finance, insurance, real estate, and leasing.....	8,734	13.6	160,976	9.1
Professional, scientific, management, administrative, and waste management.....	12,536	19.5	194,959	11.1
Education, health and social services.....	12,007	18.7	464,177	26.4
Arts, entertainment, recreation, accommodation and food services.....	6,108	9.5	148,097	8.4
Other services (except public admin.).....	3,482	5.4	81,443	4.6
Public Administration.....	1,410	2.2	66,817	3.8
<b>Total Labor Force, Employed.....</b>	<b>64,150</b>	<b>100.0%</b>	<b>1,759,412</b>	<b>100.0%</b>

Source: American Community Survey 2009-2013

### Commute to Work

	City of Stamford		State of Connecticut	
	Number	Percent	Number	Percent
Drove alone .....	42,131	67.1%	1,359,050	78.7%
Car pools .....	6,777	10.8	144,497	8.4
Used public transportation .....	7,455	11.9	80,574	4.7
Walked .....	3,213	5.1	52,155	3.0
Used other means .....	689	1.1	19,955	1.2
Worked at home .....	2,527	4.0	71,055	4.1
<b>Total .....</b>	<b>62,792</b>	<b>100.0%</b>	<b>1,727,286</b>	<b>100.0%</b>
Mean travel to work (minutes)	24.8	—	24.8	

Source: American Community Survey 2009-2013

## **Major Employers**

There are over 6,000 businesses located in Stamford. Its major employers include the following:

<b>Employer</b>	<b>Type of Business</b>
AC Nielsen .....	Computer and Data Services
Affinion Group .....	Marketing
Asbury Automotive Group Inc. ....	New and Used Car Dealers
Ascent Media .....	Programming
AT&T .....	Telephone and Communications
Bank of America .....	Finance/Banking
Bank of Ireland .....	Finance
Carolee .....	Jewelry Manufacturing
Charter Communications .....	Telecommunications
Chartwell Re Corp. ....	Reinsurance
Chelsea Piers .....	Leisure/Sports
Chirex Inc. ....	R&D for Pharmaceutical Company
Circum/ACMI .....	Medical Instruments (HQ and Mfg.)
Citizen Communications .....	Utility
City of Stamford .....	Government and Education
Conair .....	Beauty Products (HQ)
Crane .....	Industrial
Crompton & Knowles .....	Chemicals
CYTEC .....	Chemicals (Research Laboratories)
Daymon Worldwide .....	Financial
Design Within Reach .....	Retail furniture (HQ)
Digitas .....	Digital Media
Deloitte .....	Public Accounting/Consulting
Elizabeth Arden .....	Cosmetics
Ernst & Young .....	Public Accounting/Consulting
Fairway Market .....	Retail Food
Fuji Photo Film .....	Manufacturing
Gantos .....	Women's Apparel and Accessories
Gartner, Inc. ....	Information Technology Advisory Services
GE Money .....	Finance
Guardian Life .....	Insurance
GE Money .....	Finance
GE Commercial Finance .....	Finance (HQ)
General Re Corporation .....	Insurance (HQ)
General Signal .....	Transportation
Graph Network .....	Cable Television
Harmon International .....	Electronic Manufacturing (HQ)
Hexcel Corp. ....	Carbon Fiber Industrial Products Manufacturer
Indeed.Com .....	Internet Search (HQ)
Independence Holding Co. ....	Life and Health Insurer
International Telecomm Data .....	Billing Management Systems and Support Services
Intrepid Aviation .....	Aviation Services (HQ)
ITDS .....	Computer Software
Jefferies & Co. ....	Investment Advisors
KPMG .....	Accounting, Audit

**Major Employers (continued)**

<b>Employer</b>	<b>Type of Business</b>
Legg Mason .....	Finance
Lone Star Industry .....	Manufacturing and Distribution of Cement
Louis Dreyfus Highbridge .....	Energy Trading (HQ)
META Group .....	Consumer Services
Moore Corporation .....	Printed Forms
NacRe Insurance .....	Insurance
NBC Sports Group .....	Media (HQ)
NBC Universal .....	Media
Nestle Waters North America .....	Consumer Products (HQ)
Omega Engineering .....	Temperature Control Devices (HQ and Mfg.)
Oracle .....	Computer Software
Pitney Bowes, Inc. ....	Office Equipment (HQ)
Point 72 Asset Management, LP .....	Investment Banking (HQ)
Price Waterhouse Coopers .....	Public Accounting/Consulting
Purdue Pharma .....	Pharmaceuticals (HQ)
Rochdale Securities .....	Finance
Rockefeller & Co. ....	Wealth Management
Royal Bank of Scotland (RBS) .....	Investment Banking (N. American HQ)
Sempra Energy Trading .....	Trading
Shamrock Maintenance Inc. ....	Building Cleaning Services
Silgan Holdings .....	Metal Products
Stamford Health Systems .....	Medical Care
Stamford Town Center .....	Retail Stores
Star Gas Partners .....	Liquefied Petroleum Gas Dealers
Starwood Hotels and Resorts Worldwide, Inc. ....	Leisure (HQ)
Synapse .....	Marketing
Synchrony Financial .....	Financial Services
Tastey Bites .....	Food Manufacturing (HQ)
The Stamford Hospital .....	Medical Services
Thomson-Reuters .....	Publishing, Business Information
TIG Reinsurance .....	Insurance
Titan Sports WWE .....	Professional Wrestling
Tosco .....	Petroleum Refining
Tronox .....	Manufacturing (HQ)
Tweedy Browne .....	Financial Services (HQ)
U.S. Postal Service .....	Local and Regional Mail Service
UBS .....	Investment Banking (HQ)
Unilever Home & Personal Care .....	Home Care Products
United Distillers & Vintners .....	Beverages (HQ)
Versus .....	Communications/Programming
Vineyard Vines .....	Clothing Manufacturing (HQ)
Wachovia Bank, National Association .....	Banking
XL America .....	Financial, Info Tech, Insurance

**Office Vacancy Rates**

<b>Calendar Year</b>	<b>Stamford Central Business District</b>		<b>Stamford Non-Central Business District</b>		<b>Fairfield County</b>	
	<b>Square Feet Existing<sup>1</sup></b>	<b>Vacancy Percent</b>	<b>Square Feet Existing<sup>1</sup></b>	<b>Vacancy Percent</b>	<b>Square Feet Existing<sup>1</sup></b>	<b>Vacancy Percent</b>
2014	6,822,182	24.2%	9,201,361	23.6%	41,081,786	21.2%
2013	6,745,182	26.5	8,809,933	23.5	40,266,524	20.8
2012	6,776,181	21.2	8,873,350	22.4	41,881,271	18.3
2011	6,832,948	23.1	8,405,596	22.7	40,890,889	19.1
2010	6,832,948	23.4	8,027,525	25.1	40,412,871	18.9
2009	6,741,182	16.9	8,061,946	19.1	40,041,515	14.7
2008	6,308,281	14.2	8,243,247	15.8	39,581,321	12.5
2007	6,308,281	13.7	8,174,740	15.7	38,774,641	14.7
2006	6,308,281	15.7	8,174,740	19.0	38,774,641	16.9
2005	6,307,898	16.0	8,279,388	18.2	38,236,387	18.1
2004	6,307,898	18.0	8,265,861	16.1	38,345,381	17.4

<sup>1</sup> Included in residential values

**Value of Building Permits**

<b>Fiscal Year Ended 6/30</b>	<b>Residential</b>	<b>Commercial/ Industrial</b>	<b>Apartments/ Condominiums</b>	<b>Total</b>
2014.....	\$65,995,312	\$135,532,057	\$150,156,105	\$351,653,474
2013.....	59,554,447	380,202,667	N/A <sup>1</sup>	439,757,114
2012.....	60,861,801	203,491,861	N/A <sup>1</sup>	264,353,662
2011.....	52,586,486	261,632,862	N/A <sup>1</sup>	314,219,348
2010.....	48,768,097	143,898,869	N/A <sup>1</sup>	192,666,966
2009.....	53,124,017	329,541,802	N/A <sup>1</sup>	382,665,819
2008.....	76,143,181	357,865,859	N/A <sup>1</sup>	434,009,040
2007.....	50,778,452	412,070,047	N/A <sup>1</sup>	462,848,499
2006.....	129,419,254	260,684,635	15,113,989	390,103,889
2005.....	131,175,576	110,859,988	4,311,000	257,149,553
2004.....	138,432,128	196,867,884	4,487,000	339,611,012

**Age Distribution of Housing**

<b>Year Built</b>	<b>City of Stamford</b>		<b>State of Connecticut</b>	
	<b>Units</b>	<b>Percent</b>	<b>Units</b>	<b>Percent</b>
1939 or earlier.....	8,077	16.4%	336,587	22.6%
1940 to 1969.....	19,055	38.6	538,727	36.2
1970 to 1979.....	7,203	14.6	200,576	13.5
1980 to 1989.....	7,505	15.2	192,185	12.9
1990 to 1999.....	3,319	6.7	111,295	7.5
2000 or 2009.....	3,811	7.7	102,666	6.9
2010 or later.....	369	0.7	4,959	0.3
<b>Total Housing Units, 2000.....</b>	<b>49,339</b>	<b>100.0%</b>	<b>1,486,995</b>	<b>100.0%</b>

Source: American Community Survey 2009-2013



### Housing Units by Type of Structure

<b>Housing Units</b>	<b>City of Stamford</b>		<b>State of Connecticut</b>	
	<b>Units</b>	<b>Percent</b>	<b>Units</b>	<b>Percent</b>
1-unit, detached.....	18,838	38.2%	882,026	59.3%
1-unit, attached.....	3,098	6.3	80,070	5.4
2 units.....	4,721	9.6	119,386	8.0
3 or 4 units.....	5,374	10.9	132,699	8.9
5 to 9 units.....	2,774	5.6	80,615	5.4
10 to 19 units.....	2,285	4.6	54,993	3.7
20 or more units.....	12,226	24.8	124,355	8.4
Mobile home.....	23	0.0	12,427	0.8
Boat, RV, van, etc.....	-	-	424	0.0
<b>Total Inventory.....</b>	<b>49,339</b>	<b>100.0%</b>	<b>1,486,995</b>	<b>100.0%</b>

Source: American Community Survey 2009-2013

### Housing Vacancy Rates

<b>Housing Units</b>	<b>City of Stamford</b>		<b>State of Connecticut</b>	
	<b>Units</b>	<b>Percent</b>	<b>Units</b>	<b>Percent</b>
Occupied housing units.....	45,458	92.1%	1,355,849	91.2%
Vacant housing units.....	3,881	7.9%	131,146	8.8%
<b>Total units.....</b>	<b>49,339</b>	<b>100.0%</b>	<b>1,486,995</b>	<b>100.0%</b>
Homeowner vacancy rate.....	-	3.4	-	1.6
Rental vacancy rate.....	-	3.8	-	7.1

Source: American Community Survey 2009-2013

### Owner-Occupied Housing Units

<b>Specified Owner-Occupied Units</b>	<b>City of Stamford</b>		<b>State of Connecticut</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
Less than \$50,000.....	204	0.8%	20,800	2.3%
\$50,000 to \$99,000.....	155	0.6	24,638	2.7
\$100,000 to \$149,999.....	334	1.3	66,934	7.3
\$150,000 to \$199,000.....	791	3.2	135,714	14.8
\$200,000 to \$299,999.....	2,848	11.4	264,832	28.8
\$300,000 to \$499,999.....	7,646	30.7	250,076	27.2
\$500,000 or more.....	11,012	44.2	114,622	12.5
\$1,000,000 or more.....	1,930	7.7	41,872	4.6
<b>Total.....</b>	<b>24,920</b>	<b>100.0%</b>	<b>919,488</b>	<b>100.0%</b>
<b>Median Value.....</b>	\$515,400		\$278,900	

Source: American Community Survey 2009-2013

**Number and Size of Households**

<b>Household Characteristics</b>	<b>City of Stamford</b>		<b>State of Connecticut</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>
Persons in households .....	122,536	—	3,464,102	—
Persons per household (average) ...	2.70	—	2.55	—
Persons per family (average) .....	3.28	—	3.14	—
Family households .....	29,667	65.3%	903,577	66.6%
Non-family households .....	15,791	34.7%	452,272	33.4%
<b>All households</b> .....	<b>45,458</b>	<b>100.0%</b>	<b>1,355,849</b>	<b>100.0%</b>
Family households by type				
Married couple .....	21,700	73.1%	669,883	74.1%
Female householders, no spouse ...	5,915	19.9%	176,295	19.5%
Other .....	2,052	6.9%	57,399	6.4%
<b>Total family households</b> .....	<b>29,667</b>	<b>100.0%</b>	<b>903,577</b>	<b>100.0%</b>
Non-family households by type				
Householders living alone .....	12,628	80.0%	374,214	82.7%
Other .....	3,163	20.0%	78,058	17.3%
<b>Total non-family households</b> .....	<b>15,791</b>	<b>100.0%</b>	<b>452,272</b>	<b>100.0%</b>

Source: American Community Survey 2009-2013

**Land Use Summary**

<b>Land Use Category</b>	<b>Total Area</b>	
	<b>Acres</b>	<b>Percent</b>
Zoned for single family .....	19,665	80.0%
Zoned for multi-family .....	1,947	7.9%
Zoned for mixed use.....	418	1.7%
Zoned for business .....	691	2.8%
Zoned for industry.....	1,005	4.1%
Zoned for open space.....	864	3.5%
<b>Total.....</b>	<b>24,590</b>	<b>100.0%</b>

***APPENDIX B – AUDITED FINANCIAL STATEMENTS OF THE SWPCA  
FOR THE YEAR ENDED JUNE 30, 2014***

*(This page intentionally left blank)*

# BlumShapiro

Accounting | Tax | Business Consulting

## Independent Auditors' Report

The City of Stamford  
Board of Finance  
Stamford Water Pollution Control Authority  
Stamford, Connecticut

We have audited the accompanying financial statements of the Stamford Water Pollution Control Authority (SWPCA) (an Enterprise Fund of the City of Stamford, Connecticut) as of and for the year ended June 30, 2014 and the related notes to the financial statements, which collectively comprise the SWPCA's basic financial statements as listed in the table of contents.

### Management's Responsibility for the Financial Statements

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

### Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' 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 auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

## **Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the SWPCA as of June 30, 2014 and the changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

## **Emphasis of Matter**

As discussed in Note 1, the financial statements present only the SWPCA and do not purport to, and do not, present fairly the financial position of the City of Stamford, Connecticut, as of June 30, 2014 and the changes in its financial position and its cash flows, where applicable, for the year then ended, in conformity 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 management's discussion and analysis on pages 4 through 13, the schedule of funding progress for other post employment benefits on page 33 and the schedule of employer contributions for other post employment benefits on page 34 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### *Supplementary and Other Information*

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the SWPCA's basic financial statements. The budgetary comparison information on pages 35 and 36, the letter of transmittal and statistical section are presented for purposes of additional analysis and are not a required part of the financial statements.

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

The transmittal letter and statistical section 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.

In accordance with auditing standards generally accepted in the United States of America, the basic financial statements of the SWPCA as of and for the year ended June 30, 2013 were audited by other auditors who have issued their report thereon dated February 20, 2014, which contained an unmodified opinion on the SWPCA's basic financial statements and emphasized the fact that those financial statements presented only the financial position of the SWPCA and not that of the City of Stamford. The accompanying basic financial statements as of and for the year ended June 30, 2013 are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the 2013 financial statements. The SWPCA's basic financial statements as of and for the year ended June 30, 2013 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.

*Blum, Shapiro & Company, P.C.*

West Hartford, Connecticut  
January 20, 2015

**Stamford Water Pollution Control Authority  
Management's Discussion and Analysis  
For the Year Ended June 30, 2014**

This discussion and analysis of the Stamford Water Pollution Control Authority ("SWPCA") is intended to provide an overview of the SWPCA's financial activities for the fiscal year ended June 30, 2014. Please read it in conjunction with the letter of transmittal and the financial statements that follow this section.

**Financial Highlights**

- ◆ As of June 30, 2014, the SWPCA's total assets and deferred inflows of resources (\$175.4 million) exceeded its total liabilities (\$109.7 million), resulting in total net position of \$65.7 million. Net position increased \$4.0 million versus the prior year-end period primarily due to the net decrease in net investment in capital assets (\$2.1 million) offset by an increase in assets restricted for debt service (\$1.6 million) and an increase in unrestricted net position (\$4.5 million) to \$7.8 million.
- ◆ Operating revenues in fiscal 2014 were \$22.4 million, compared to \$21.2 million in the prior year, primarily reflecting increased sewer use charges. Operating expenses were \$18.1 million versus \$18.6 million the prior year. Operating income was \$4.3 million as compared to \$2.6 million in the prior year. Unrestricted net position of \$7.8 million was 34.7% of Operating Revenue, compared to 15.6% in the prior year.
- ◆ Current assets increased by \$1.4 million, primarily reflecting an increase in unrestricted cash (\$1.8 million) offset by a decrease in accounts receivable from sewer use charges, new sewer connection fees and other receivables (\$.4 million). Days sales outstanding ("DSO") for the gross usage charges accounts receivable decreased from 86 days to 76 days as of June 30, 2014. The decrease reflects the continuing effort to collect overdue sewer use charges.
- ◆ Current liabilities decreased by \$3.0 million, primarily due to a decrease in due to other funds (the City of Stamford) of \$3.3 million for operating advances (\$1.6 million) and capital expenditure related advances (\$1.7 million) and a decrease in the current portion of debt and notes payable (\$.1 million) offset by an increase accrued liabilities and unearned income of \$.4 million.
- ◆ Total debt outstanding – including current and long-term general obligation bonds, revenue bonds, and notes payable – increased by \$8.0 million to \$101.9 million as of June 30, 2014. This reflects the issuance of \$24.4 million of new revenue bonds, the refunding of \$10.2 million of the 2003 revenue bond issue, the repayment of \$1.8 million of general obligation bonds and \$3.9 million of notes payable, and other items netting to \$.5 million. The SWPCA's outstanding debt is rated Aa2 by Moody's Investors Service and AA+ by Standard & Poor's.
- ◆ As noted above, total net position increased \$4.0 million (approximately 6%), to \$65.7 million.
- ◆ The SWPCA's capital assets, net of accumulated depreciation, decreased by about \$.3 million to \$143.8 million versus the prior period. Depreciation expense of \$5.4 million was offset by capital asset additions of \$5.1 million during the fiscal year. The SWPCA's capital assets and available operating capacity are considered sufficient to meet the City of Stamford's (the "City's") currently foreseeable needs for the SWPCA's services. \$6.2 million of unexpended bond proceeds from the 2013 debt issuance is available to fund authorized capital projects.
- ◆ The SWPCA continues to use the City for certain back-office support services such as payroll, accounts payable, procurement, IT tech support, etc., which would not be cost efficient to implement internally at the present time. The City is reimbursed for the cost of these support services.



## **Overview of the Financial Statements**

The SWPCA's financial statements are comprised of: 1) basic financial statements, including a Statement of Net Position; a Statement of Revenues, Expenses and Changes in Net Position; and a Statement of Cash Flows; 2) Notes to Financial Statements; and 3) Required Supplementary Information. The Schedule of Revenues and Expenses on a Budgetary Basis, transmittal letter and statistical section are presented for purposes of additional analysis. The accompanying statistical section provides trend comparisons of selected financial and non-financial information over a number of years.

The SWPCA's financial statements are designed to provide readers with a general understanding of the SWPCA's finances in a manner similar to those for a private-sector business. All the resources which the SWPCA has at its disposal are reported, including major capital assets such as buildings, equipment and infrastructure. In addition, a thorough accounting of the costs of the SWPCA's operations is provided.

**Statement of Net Position.** The Statement of Net Position presents information on all of the SWPCA's assets, deferred inflows of resources and liabilities, with the difference reported as net position.

**Statement of Revenues, Expenses and Changes in Net Position.** The Statement of Revenues, Expenses and Changes in Net Position presents information regarding the SWPCA's changes in net position during the most recent fiscal year on an accrual basis.

**Statement of Cash Flows.** The Statement of Cash Flows presents information on where cash came from and how it was used.

The financial statements (Statement of Net Position, Statement of Revenues, Expenses and Changes in Net Position and the Statement of Cash Flows) are presented on pages 14-16 of this report.

**Notes to the Financial Statements.** The notes provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes to the financial statements are presented on pages 17-32 of this report.

## **Annual Revenue and Expense Budgets**

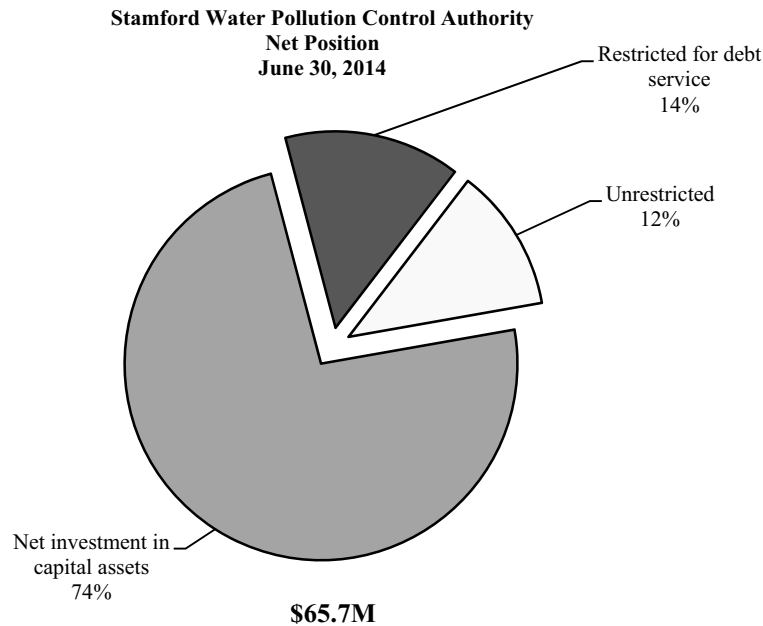
The Board of Directors of SWPCA and the City's Board of Finance and Board of Representatives review and approve annual revenue and expense budgets for the SWPCA. From a reporting standpoint, the SWPCA is reported as an Enterprise Fund. Budgetary comparison statements are provided to demonstrate compliance with the authorized budget and are presented on pages 35-36 of this report.

## **Financial Analysis**

The SWPCA's total net position (excess of assets over liabilities) was \$65.7 million at June 30, 2014. The SWPCA's unrestricted net position increased by approximately \$4.5 million to approximately \$7.8 million at June 30, 2014 and provided additional financial flexibility to meet the needs of the SWPCA's customers and creditors. The \$1.7 million increase in operating income over the prior fiscal year primarily reflects the favorable impact of a sewer use charges billing rate increase (\$1.2 million) and lower legal claims expense (\$.7 million) offset by higher salaries (\$.2 million due to filling open positions).

### **Stamford Water Pollution Control Authority Net Position (in Thousands)**

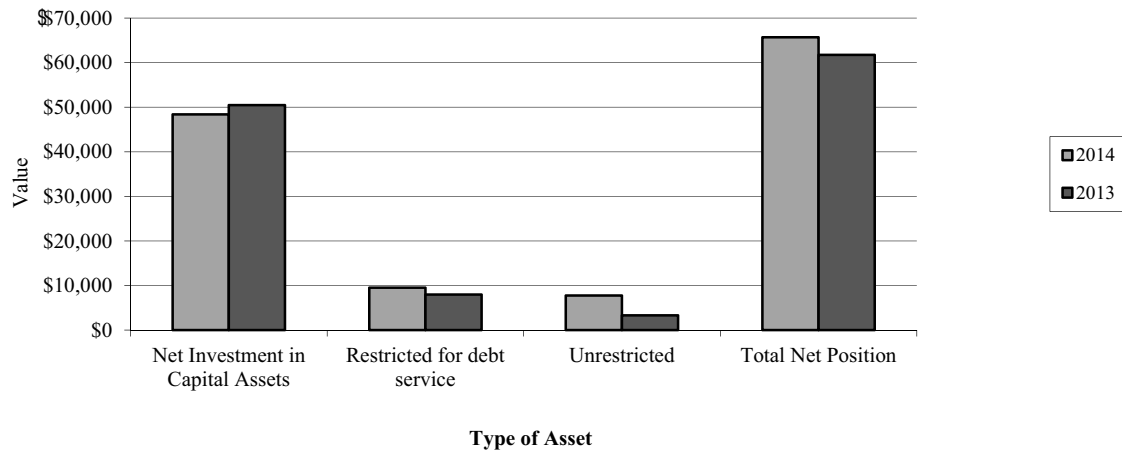
	<b><u>June 30, 2014</u></b>	<b><u>June 30, 2013</u></b>	<b><u>\$ Change</u></b>
Current assets (cash and accounts receivable)	\$ 7,796	\$ 6,433	\$ 1,363
Restricted cash and investments	15,734	7,965	7,769
Noncurrent assets (special assessments and deferred)	7,868	7,690	178
Capital assets (net of depreciation)	143,835	144,103	(268)
<b>Total Assets</b>	<b><u>175,233</u></b>	<b><u>166,191</u></b>	<b><u>9,042</u></b>
Deferred amounts on refunding	238		238
<b>Deferred Inflows of Resources</b>	<b><u>238</u></b>	<b><u>-</u></b>	<b><u>238</u></b>
Current liabilities	13,270	16,318	(3,048)
Long-term liabilities	96,509	88,149	8,360
<b>Total Liabilities</b>	<b><u>109,779</u></b>	<b><u>104,467</u></b>	<b><u>5,312</u></b>
Net Position:			
Net investment in capital assets	48,395	50,460	(2,065)
Restricted for debt service	9,532	7,965	1,567
Unrestricted	7,764	3,299	4,465
<b>Total Net Position</b>	<b><u>\$ 65,691</u></b>	<b><u>\$ 61,724</u></b>	<b><u>\$ 3,967</u></b>



A common measure of liquidity is the current ratio (current assets divided by current liabilities); it helps determine whether, over the next year, the SWPCA will have sufficient cash and readily liquid assets on hand to finance its short term cash requirements. As of June 30, 2014 the SWPCA's current ratio was 0.60 to 1 as compared to 0.39 to 1 at the prior year-end. In fiscal year 2014, net working capital (current assets minus current liabilities) improved from a negative \$9.9 to a negative \$5.3 million, primarily reflecting a decrease in the balance due to the other funds of \$3.3 million and an increase of \$1.8 million in unrestricted cash. During the period between the billing cycles for sewer use charges and connection charges / special assessments (e.g. April and October), the SWPCA funds any short term cash needs with cash advances from the City and repays them with its cash receipts (similar to a revolving credit agreement). Under a long standing pooled cash arrangement, the SWPCA pays the City interest to cover such short-term cash needs. Nevertheless, it is the SWPCA's goal to improve its financial position and generate cash flows that are sufficient to meet its infrastructure repair and replacement needs. Steps taken have included:

- Increasing the sewer use charge billing rate for the October 2013 and April 2014 billing cycles
- Budgeting for an increase in cash reserves of \$1.5 million and for a \$1.15 million reduction in the operating balance due the City in fiscal year 2015
- Issuing \$24.4 million in new revenue bonds to fund authorized capital projects and a refunding (i.e., refinancing) of \$10.2 million of the 2003 revenue bonds during fiscal year 2015

**Stamford Water Pollution Control Authority  
Net Position (in Thousands)  
FYE 2014 vs. 2013 (at June 30)**



**Net Position – Net Investment in Capital Assets.** At June 30, 2014 the largest portion of the SWPCA’s \$65.7 million in net position (74%) relates to its investment in capital assets (land, buildings, machinery, equipment, etc.), net of accumulated depreciation, unexpended bond proceeds, and any other outstanding debt used to acquire those assets. The SWPCA uses these capital assets to provide services to its customers; consequently, these assets cannot be readily liquidated and are not available to fund future spending needs and the resources needed to repay this debt must be provided from other sources (sewer use charges, fees and other income).

**Net Position – Restricted.** A portion of the SWPCA net position is restricted for debt service. Cash balances are held in restricted trust accounts in accordance with the indenture requirements related to the 2006 and 2013 Revenue Bond issuances. Of the SWPCA’s \$65.7 million in total net position as of June 30, 2014, \$9.5 million (14% of the total), was restricted and may not be used to fund the SWPCA’s day-to-day operations.

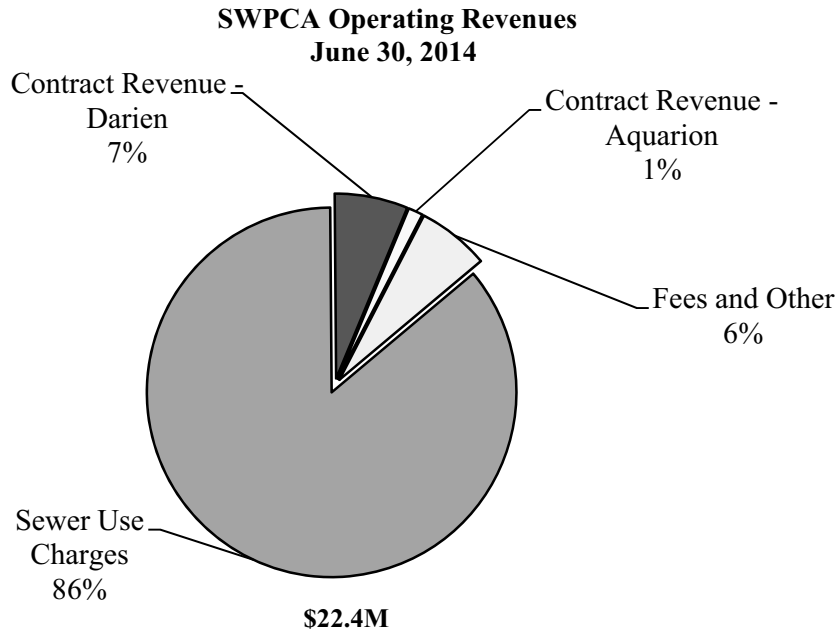
**Net Position – Unrestricted.** Of the SWPCA’s total net position at June 30, 2014, \$7.8 million, or approximately 12%, was unrestricted and available to be used to meet the SWPCA’s obligations to customers, creditors, and day-to-day operations.

**Statement of Revenues  
Expenses and Other Changes  
in Net Position (in Thousands)**

	<u>Fiscal 2014</u>	<u>Fiscal 2013</u>	<u>\$ Change</u>
Operating revenues	\$ 22,355	\$ 21,155	\$ 1,199
Operating expenses	18,077	18,566	(490)
<b>Net Operating Income</b>	<u>4,278</u>	<u>2,589</u>	<u>1,689</u>
Nonoperating revenue (expenses)	<u>(311)</u>	<u>(358)</u>	<u>48</u>
<b>Change in Net Assets</b>	3,967	2,231	1,737
Net position - beginning of year	<u>61,724</u>	<u>59,493</u>	<u>2,231</u>
Net Position - End of Year	<u><u>\$ 65,691</u></u>	<u><u>\$ 61,724</u></u>	<u><u>\$ 3,967</u></u>

## Operating Revenues and Expenses

**Revenues.** In fiscal year 2014 the SWPCA’s operating revenue included sewer use charges for both City and Town of Darien customers (approximately 86% of total operating revenue) and contract revenue, fees and other income (approximately 14% of total operating revenue).



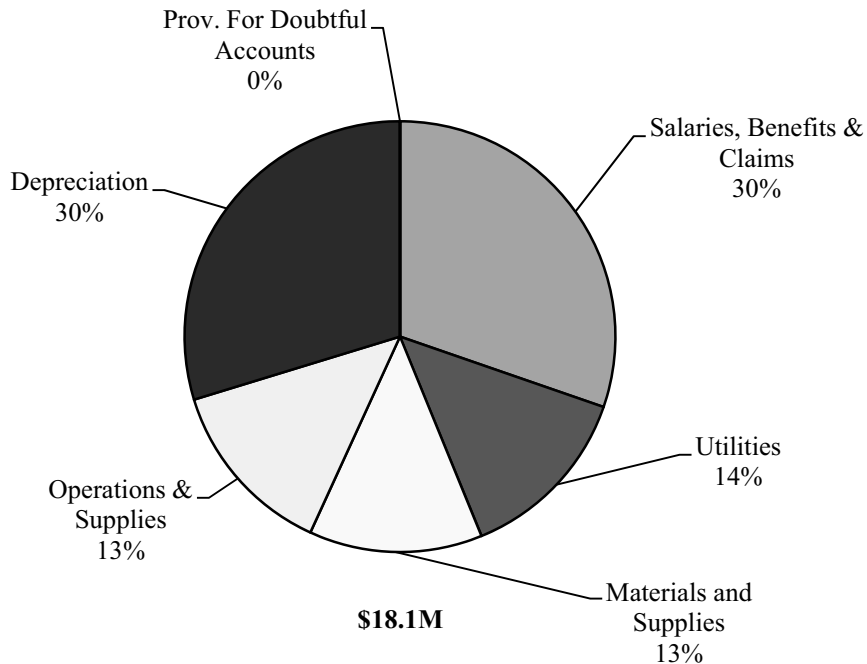
The original fiscal year 2014 revenue estimate for sewer use charges was \$18.2 million prior to actual consumption data being available. At the annual rate setting meeting, adjustments were made to account for collection rate assumptions, estimates of other revenue, and indenture requirements for debt service coverage. Based on these adjustments, the sewer use charge billing rate was set at \$4.40 per CCF, resulting in an annual billing, and an adjusted original budget, of \$18.9 million (based on assumed consumption of 4.29 million CCFs).

After adjustments (e.g., off-cycle charges, cancel/rebill charges), the amount of revenue billed in fiscal year 2014 based on actual consumption of 4.3 million CCFs was \$18.5 million. Fiscal year 2014 revenues totaled \$22.4 million. Despite the challenging economic environment, the collection rate for sewer use charges during fiscal year 2014 was approximately 96% (vs. approximately 95% in the prior year).

In fiscal year 2014 the SWPCA’s actual operating revenue of \$22.4 million (as compared to \$21.2 million the prior year) included sewer use charges (\$19.2 million), contract revenues (\$1.4 million and \$0.3 million, from Darien and Aquarion, respectively), and fees and other income (\$1.6 million, with the largest portion of this amount being attributable to revenue from the State of Connecticut’s nitrogen credit trading program).

**Expenses.** In fiscal year 2014 the SWPCA’s operating expenses, which totaled \$18.1 million (as compared to \$18.6 million the prior year), consisted of salaries, employee benefits and claims (\$5.5 million), utilities costs (\$2.4 million), materials and supplies (\$2.4 million), operations and supplies (\$2.4 million) and depreciation (\$5.4 million). Lower legal claims expense (\$.7 million) was offset by higher salaries, employee benefits and claims expense.

**SWPCA Operating Expenses  
June 30, 2014**



The SWPCA's fiscal year 2014 non-operating revenue of \$2.8 million included special assessments and connection charges (\$2.5 million) and capital contributions from the City (\$.3 million); non-operating expense was primarily interest expense (\$3.1 million). Additional information on revenue and expense budgetary information is contained in the Supplementary and Other Information section of the financial statements.

**Capital Assets**

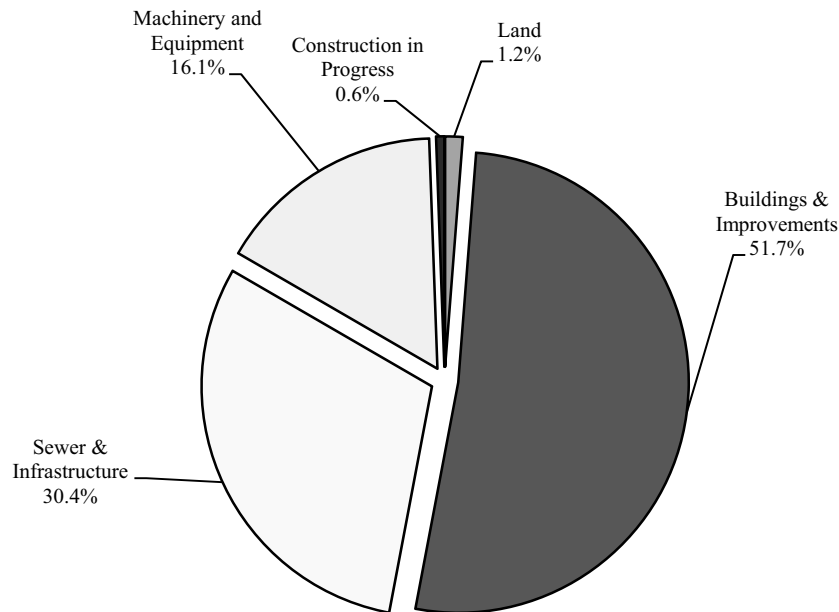
As of June 30, 2014, the SWPCA had total capital assets, net of accumulated depreciation, of approximately \$143.8 million, as follows:

**Stamford Water Pollution Control Authority  
Capital Assets (in Thousands)**

	<u>June 30, 2014</u>	<u>June 30, 2013</u>	<u>\$ Change</u>
Land	\$ 2,833	\$ 2,833	\$ -
Buildings and improvements	119,212	118,227	985
Sewer and infrastructure	69,979	66,535	3,444
Machinery and equipment	36,998	36,392	606
Construction in progress	1,330	1,259	71
Subtotal	<u>230,352</u>	<u>225,246</u>	5,106
Less accumulated depreciation	<u>(86,517)</u>	<u>(81,144)</u>	(5,373)
Total	<u>\$ 143,835</u>	<u>\$ 144,102</u>	<u>\$ (267)</u>

Additional information on capital assets is presented in Note 4 on page 22 of this report.

**SWPCA Capital Assets  
June 30, 2014**



**SWPCA Capital Projects.** The SWPCA typically manages multiple concurrent capital projects. The projects are categorized as engineering studies, engineering design, building construction and equipment replacement (or upgrades), and sanitary sewer systems repairs or extensions. Capital projects completed or ongoing during the fiscal year ended June 30, 2014 were as follows:

- Citywide computerized mapping of the sanitary sewer systems (using GIS) continued and is ongoing.
- Evaluation and assessment of the existing sanitary sewer systems and pumping stations is ongoing. Sanitary sewer lines identified as needing repairs were either relined or rebuilt, replacing any deteriorating or misaligned sewer segments.
  - In the Wedgemere Road and Perna Lane areas, engineering design of sanitary sewer systems is continuing and is about 80% percent complete for both areas.
  - In the Soundview Avenue area, larger sanitary sewer interceptor lines (36 and 42 inches in diameter) were lined as a result of the above mentioned evaluation and assessment.
  - In the Carriage Drive area, sanitary sewer lines were extended and a pumping station installed that provided access to public sewers for 71 residential properties that were previously using septic systems.
- Engineering firms were selected to review and design the upgrade of the Water Pollution Control Facility's (WPCF) raw sewage pumping station, the flow distribution to the secondary clarifiers, and the computerized Supervisory Control and Data Acquisition (SCADA) process monitoring system.
- Replacement vehicles were purchased including a new vacuum truck for sewer and manhole cleaning.
- Very importantly, the upgrade and repair of the Odor Control systems at the WPCF were completed and fugitive odors have been significantly reduced.

- Other capital projects that are ongoing include:
  - Replacement of pipe supports in the WPCF raw sewage pumping station.
  - Replacement of sludge transfer pumps.
  - Replacement of deteriorated walkways in the UV disinfection and effluent pumping facility.

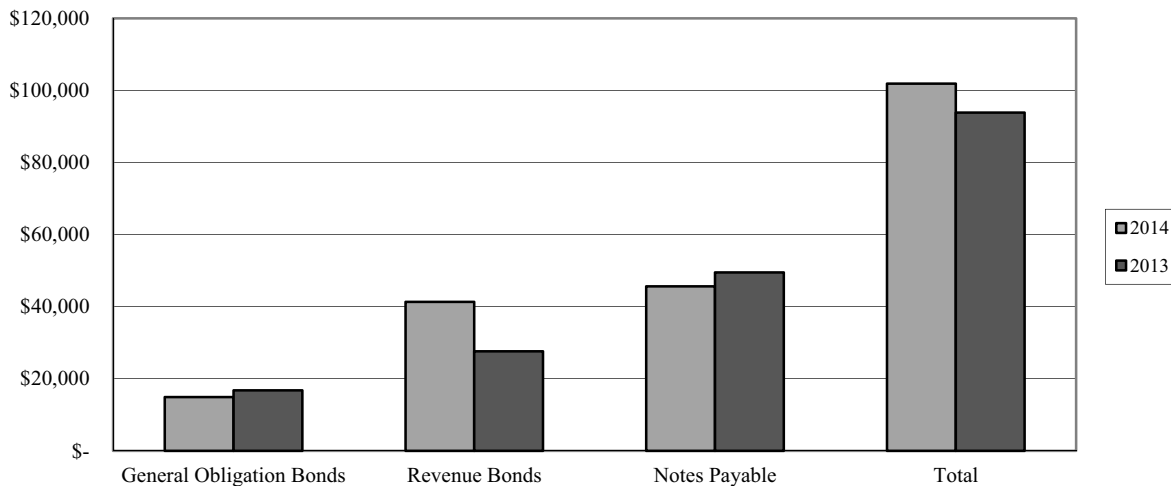
**Debt Outstanding**

As of June 30, 2014, the SWPCA had bonds and notes payable outstanding of approximately \$101.9 million, as follows:

**Stamford Water Pollution Control Authority  
Debt Outstanding (in Thousands)**

	<u>2014</u>	<u>% of Total</u>	<u>2013</u>	<u>% of Total</u>
General obligation bonds	\$ 14,919	15%	\$ 16,762	18%
Revenue bonds	41,337	41%	27,614	29%
Notes payable	45,625	45%	49,494	53%
<b>Total</b>	<b><u>\$ 101,880</u></b>	<b><u>100%</u></b>	<b><u>\$ 93,870</u></b>	<b><u>100%</u></b>

**SWPCA Long-Term Debt (in Thousands)  
FYE 2014 vs. 2013 (at June 30)**



The SWPCA’s total debt outstanding increased by approximately \$8 million in fiscal year 2014, reflecting the net impact of principal repayments of \$1.8 million for general obligation bonds, \$3.9 million for notes payable as well as the issuance of new revenue bonds of \$24.4 million and the refunding of \$10.2 million from the 2003 revenue bond issue, and other items netting \$.5 million.

Additional information on debt outstanding is presented in Note 6 of this report on pages 23-28.



## **Organization of SWPCA Operations**

The SWPCA's organization includes three divisions, as follows:

**Administration:** Responsible for the overall management of the SWPCA, including technical decisions, operational supervision, financial management (including billing and collections), planning, procurement, management of capital projects and various other administrative duties.

**Process:** Responsible for ensuring that the SWPCA's facilities are operated effectively and meet all state and federal requirements. Activities within this division include wastewater treatment, sludge processing and laboratory services.

**Maintenance:** Responsible for the maintenance of the SWPCA's facilities, including property and equipment, pumping stations and sanitary sewer maintenance.

As of June 30, 2014 the SWPCA had 41 full time equivalent employees; an increase of 5 from the prior year from filling open positions.

## **Requests for Information**

This financial report is designed to provide a general understanding of the SWPCA's most recent financial statements which will be available on the City web site at [www.stamfordct.gov](http://www.stamfordct.gov). Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to Mr. Michael E. Handler, Chairman of the SWPCA, at 111 Harbor View Ave, Stamford, CT 06902. Mr. Handler is also the City's Director of Administration ([MHandler@stamfordct.gov](mailto:MHandler@stamfordct.gov)), and maintains an office at 888 Washington Boulevard, Stamford, CT 06901.

**BASIC  
FINANCIAL  
STATEMENTS**

## STAMFORD WATER POLLUTION CONTROL AUTHORITY

## COMPARATIVE STATEMENTS OF NET POSITION

JUNE 30, 2014 AND 2013

	<u>2014</u>	<u>2013</u>
Assets:		
Current:		
Cash and cash equivalents	\$ 2,746,129	\$ 991,721
Accounts receivable:		
Usage charges, net of allowance for doubtful accounts of \$2,000,000 in 2014 and \$1,952,359 in 2013	2,346,947	2,647,575
Special assessments and connection charges, net of allowance for doubtful accounts of \$500,000	1,565,728	1,434,424
Other receivables	1,127,058	1,349,292
Other current assets	9,902	9,902
Total current assets	<u>7,795,764</u>	<u>6,432,914</u>
Noncurrent:		
Restricted cash and cash equivalents	9,531,631	7,964,869
Restricted investments	6,202,155	
Special assessments and connection charges, net of allowance for doubtful accounts of \$500,000	7,867,615	7,462,643
Deferred bond issuance costs		227,240
Capital assets not being depreciated	4,162,787	4,092,397
Capital assets being depreciated, net of depreciation	<u>139,672,598</u>	<u>140,010,426</u>
Total noncurrent assets	<u>167,436,786</u>	<u>159,757,575</u>
Total assets	<u>175,232,550</u>	<u>166,190,489</u>
Deferred Inflows of Resources:		
Deferred amounts on refunding	<u>237,984</u>	<u>-</u>
Liabilities:		
Current:		
Accounts payable	1,326,102	574,528
Accrued liabilities	304,304	642,220
Accrued interest payable	487,514	589,700
Due to other funds	4,681,577	7,969,902
Unearned revenue	152,139	88,343
Current portion of bonds payable	2,423,391	2,552,691
Current portion of notes payable	3,864,423	3,869,606
Current portion of compensated absences	30,960	31,000
Total current liabilities	<u>13,270,410</u>	<u>16,317,990</u>
Noncurrent liabilities:		
Bonds payable	53,832,327	41,823,619
Notes payable	41,760,105	45,624,528
Compensated absences	254,634	275,392
Other post employment benefit obligations payable	661,700	425,000
Total noncurrent liabilities	<u>96,508,766</u>	<u>88,148,539</u>
Total liabilities	<u>109,779,176</u>	<u>104,466,529</u>
Net Position:		
Net investment in capital assets	48,395,278	50,459,619
Restricted for debt service	9,531,631	7,964,869
Unrestricted	<u>7,764,449</u>	<u>3,299,472</u>
Total Net Position	<u>\$ 65,691,358</u>	<u>\$ 61,723,960</u>

The accompanying notes are an integral part of the financial statements

## STAMFORD WATER POLLUTION CONTROL AUTHORITY

COMPARATIVE STATEMENTS OF REVENUES, EXPENSES  
AND CHANGES IN NET POSITION

FOR THE YEARS ENDED JUNE 30, 2014 AND 2013

	<u>2014</u>	<u>2013</u>
Operating Revenues:		
Sewer use charges	\$ 20,941,371	\$ 19,744,918
Fees and other income	1,404,783	1,410,338
Intergovernmental	8,368	
Total operating revenues	<u>22,354,522</u>	<u>21,155,256</u>
Operating Expenses:		
Salaries, benefits and claims	5,476,462	5,196,225
Operations and supplies	7,227,505	8,209,918
Depreciation	5,372,558	5,239,334
Total operating expenses	<u>18,076,525</u>	<u>18,645,477</u>
Operating Income	<u>4,277,997</u>	<u>2,509,779</u>
Nonoperating Revenue (Expense):		
Special assessments and connection charges	2,515,652	2,987,162
Provision for doubtful accounts - special assessments and connection charges		(500,000)
Interest income	34,167	94,901
Interest expense	<u>(3,148,656)</u>	<u>(2,940,267)</u>
Net nonoperating expense	<u>(598,837)</u>	<u>(358,204)</u>
Income Before Capital Contributions	3,679,160	2,151,575
Capital Contributions	<u>288,238</u>	<u>79,000</u>
Change in Net Position	3,967,398	2,230,575
Net Position - Beginning of Year	<u>61,723,960</u>	<u>59,493,385</u>
Net Position - End of Year	<u>\$ 65,691,358</u>	<u>\$ 61,723,960</u>

The accompanying notes are an integral part of the financial statements

## STAMFORD WATER POLLUTION CONTROL AUTHORITY

## COMPARATIVE STATEMENTS OF CASH FLOWS

## FOR THE YEARS ENDED JUNE 30, 2014 AND 2013

	<u>2014</u>	<u>2013</u>
Cash Flows from Operating Activities:		
Receipts from customers and users	\$ 22,404,904	\$ 20,651,554
Payments to suppliers	(6,916,033)	(7,574,862)
Payments to employees	(3,502,742)	(3,229,372)
Payments for benefits and claims	(1,737,020)	(1,545,250)
Payments for interfund services used	(3,288,325)	927,787
Net cash provided by operating activities	<u>6,960,784</u>	<u>9,229,857</u>
Cash Flows from Capital and Related Financing Activities:		
Proceeds from note payable, City of Stamford		1,465,646
Proceeds from debt	24,402,941	
Principal payments on debt	(16,393,139)	(6,255,043)
Interest paid on debt	(3,180,198)	(2,999,787)
Future bond issuance costs		(68,000)
Special assessment and connection charges proceeds	2,515,652	2,044,208
Purchase of capital assets	(5,105,120)	(2,891,977)
Capital contributions	288,238	79,000
Net cash provided by (used in) capital and related financing activities	<u>2,528,374</u>	<u>(8,625,953)</u>
Cash Flows from Investing Activities:		
Interest received on investments	34,167	94,901
Purchase of investments	(6,202,155)	
Net cash provided by (used in) investing activities	<u>(6,167,988)</u>	<u>94,901</u>
Net Increase in Cash and Cash Equivalents	3,321,170	698,805
Cash and Cash Equivalents - Beginning of Year (including restricted cash and cash equivalents)	<u>8,956,590</u>	<u>8,257,785</u>
Cash and Cash Equivalents - End of Year (including restricted cash and cash equivalents)	<u>\$ 12,277,760</u>	<u>\$ 8,956,590</u>
Reconciliation of Operating Income to Net Cash Provided by Operating Activities:		
Operating income	\$ 4,277,997	\$ 2,509,779
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation	5,372,558	5,239,334
Changes in assets and liabilities:		
Increase in accounts receivable	(235,648)	(414,495)
Decrease in other receivables	222,234	
Increase in accounts payable and accrued expenses	311,472	631,659
Increase in other post employment benefit obligations payable	236,700	425,000
Increase (decrease) in unearned revenues	63,796	(89,207)
Increase (decrease) in due to City of Stamford	(3,288,325)	927,787
Net Cash Provided by Operating Activities	<u>\$ 6,960,784</u>	<u>\$ 9,229,857</u>

The accompanying notes are an integral part of the financial statements

**STAMFORD WATER POLLUTION CONTROL AUTHORITY  
NOTES TO FINANCIAL STATEMENTS**

**1. NATURE OF BUSINESS AND SIGNIFICANT ACCOUNTING POLICIES**

**A. Financial Reporting Entity**

Ordinance Number 803, adopted November 6, 1996 (the Ordinance), pursuant to Chapter 103, Sections 7-245 through 7-273a, inclusive, of the Connecticut General Statutes created the Stamford Water Pollution Control Authority (the SWPCA) to operate the Water Pollution Control Facility, sanitary sewage system, wastewater pumping stations and hurricane barrier for the City of Stamford, Connecticut (the City). SWPCA operations are financed primarily through direct charges to the users of its services. The SWPCA is exempt from federal, state and local income taxes. The SWPCA relies on the City for certain administrative and financial support as detailed elsewhere in the notes to the financial statements.

The SWPCA is presented as a business-type activity in the City's basic financial statements. The accompanying financial statements present only the SWPCA fund and do not purport to, and do not, present the financial position of the City or the changes in the City's financial position and cash flows.

**B. Basis of Presentation**

The accounts of the SWPCA are organized on the basis of an enterprise fund, which is considered a separate accounting entity. The operations of the fund are accounted for through a separate set of self-balancing accounts that comprise its assets, liabilities, net position, revenues and expenses.

**C. Basis of Accounting**

The SWPCA utilizes the accrual basis of accounting, under which revenues are recognized when earned and expenses are recognized when a liability is incurred.

**D. Accounting Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities 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.

**E. Cash and Cash Equivalents**

For purposes of reporting cash flows, the SWPCA considers all highly liquid investments with an original maturity term of three months or less when purchased to be cash equivalents. Under a long standing arrangement with the City, the SWPCA shares in a pooled cash account controlled by, and in the name of, the City. The SWPCA's share of this pooled cash account was a deficit at both June 30, 2014 and 2013, and is reflected as due to other funds in the accompanying financial statements. The SWPCA's own unrestricted cash balance was \$2,746,129 and \$991,721 at June 30, 2014 and 2013, respectively.

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

**F. Accounts Receivable**

Accounts receivable are carried at the original amount billed less an estimate made for doubtful accounts based on a review of all outstanding amounts on a monthly basis. Management determines the allowance for doubtful accounts by identifying troubled accounts and by using historical experience applied to an aging of accounts. Recoveries of accounts receivable previously written off are recorded when received.

**G. Capital Assets**

Property, plant and equipment are stated at cost. Normal maintenance and repairs that do not add to the value of the asset or materially extend asset lives are not capitalized. Assets being constructed over a period of time are classified as construction in progress. No depreciation is computed on these assets until they are complete and placed into service. Property, plant and equipment are depreciated over the following estimated useful lives:

	<u>Years</u>
Sewer and infrastructure	50-100
Buildings and improvements	25-50
Equipment	5-20

The SWPCA capitalizes interest during the period of construction.

**H. Deferred Outflows/Inflows of Resources**

In addition to assets, the statement of net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net position that applies to a future period and so will not be recognized as an outflow of resources (expense) until then. The SWPCA reports a deferred amount on refunding in the statement of net position. A deferred amount on refunding results from the difference in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt.

In addition to liabilities, the statement of net position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period and so will not be recognized as an inflow of resources (revenue) until that time. As of June 30, 2014, there were no amounts required to be reported as deferred outflows of resources in the statement of net position.

**I. Compensated Absences**

Under terms of the bargaining unit agreements, employees are awarded vacation on July 1 of each year based on years of service, and can accumulate up to 45-60 days of unused vacation, depending upon their specific union contract. Employees are also allowed sick leave, which is earned monthly, and can accumulate up to 150 days. Upon termination of employment without eligibility for retirement, each employee is paid for unused vacation.

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

Vested sick leave and accumulated vacation leave is recognized as an expense and liability as the benefits accrue to employees. Nonvested sick leave is recognized to the extent it is expected to be paid.

**J. Operating Revenues**

Revenues are based on the SWPCA's authorized sewer use charge billing rate per hundred cubic feet of customer consumption of water and other fee and charges. The SWPCA accrues an estimate for services delivered but not billed at the end of each fiscal year. The SWPCA distinguishes operating revenues and expenses from nonoperating. Operating revenues result from charges to customers for sewer treatment and related services. Operating expenses include the cost of operations, maintenance, sales and service, administrative expenses and depreciation. All revenues and expenses not meeting this definition are reported as nonoperating or capital contributions.

Interest is levied on accounts that are 30 days past due. The SWPCA has the authority to and does routinely file liens on past due accounts. The liens are subordinate only to property taxes upon the transfer of the lien properties.

The SWPCA also has an agreement with the Town of Darien (Darien) for certain sewage treatment services it provides. Darien is billed annually for wastewater conveyance and treatment at the SWPCA's treatment facility.

**K. Special Assessments and Connection Charges**

Special assessments are fees assessed by the SWPCA for new sewer lines. Interest is charged on the special assessments outstanding receivable balances at an annual rate set by the SWPCA at the time the special assessments are assessed. Connection charges are fees assessed for new connections to existing sewer lines. No interest is charged on connection charges. Accordingly, connection charges are recorded net of an imputed interest charge. Amounts receivable for special assessments and connection charges are stated net of interest and imputed interest. Interest is recognized as it is earned over the period of collection. The special assessments and the connection charges are generally payable over periods of 10 to 20 years.

**L. Net Position**

Net position represents the difference between assets plus deferred inflows of resources and liabilities plus deferred outflows of resources. Net investment in capital assets consists of capital assets, net of accumulated depreciation, reduced by any outstanding balances of any borrowings used for the acquisition, construction or improvement of those assets. Net position is reported as restricted when there are limitations imposed on its use either through the enabling legislation adopted by the SWPCA or through external restrictions imposed by creditors, grantors or laws or regulation of other governments.

The SWPCA has cash restricted for debt service requirements in accordance with the terms of the outstanding revenue bonds (see Note 2).



**STAMFORD WATER POLLUTION CONTROL AUTHORITY  
NOTES TO FINANCIAL STATEMENTS**

**M. Subsequent Events Evaluation by Management**

Management has evaluated subsequent events for disclosure and/or recognition in the financial statements through January 20, 2015, the date that the financial statements were available to be issued.

**2. CASH, CASH EQUIVALENTS AND INVESTMENTS**

**Cash Equivalents**

As of June 30, 2014 and 2013, cash and cash equivalents, including balances restricted for repayment of principal and interest on state loans and for capital improvements, consist of the following:

	<b>June 30, 2014</b>	<b>June 30, 2013</b>
Cash and cash equivalents	\$ 2,746,129	\$ 991,721
Restricted cash and cash equivalents	9,531,631	7,964,869
	\$ 12,277,760	\$ 8,956,590

Responsibility for custodial credit risks of deposits rests with the City; accordingly, separate disclosure is not possible. Disclosure of the City's custodial credit risk of deposits is contained in the City's basic financial statements.

The restricted cash balance at June 30, 2014 and 2013, was restricted in accordance with the terms of various outstanding debt of the SWPCA (Note 5).

**Investments**

As of June 30, 2014, the SWPCA had the following investments:

<b>Investment Type</b>	<b>Credit Rating</b>	<b>Fair Value</b>	<b>Investment Maturities (Years)</b>		
			<b>Less than 1</b>	<b>1-10</b>	<b>More Than 10</b>
Interest-bearing investments:					
U.S. Treasury bonds	N/A	\$ 6,202,155	\$ 6,202,155	\$ -	\$ -

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

**3. SPECIAL ASSESSMENTS AND CONNECTION CHARGES RECEIVABLE**

The following is a summary of special assessments and connection charges receivable at June 30:

		<b>2014</b>			
		<u>New Sewer Line Charges</u>	<u>Connection Charges</u>	<u>Total</u>	<u>Due Within One Year</u>
Due in the year ending June 30:					
2015 *	\$	414,543	\$ 1,254,198	\$ 1,668,741	\$ 1,668,741
2016		254,542	693,831	948,373	
2017		252,114	693,586	945,700	
2018		249,835	693,586	943,421	
2019		220,636	693,586	914,222	
Thereafter		1,441,298	4,847,026	6,288,324	
		<u>2,832,968</u>	<u>8,875,813</u>	<u>11,708,781</u>	<u>1,668,741</u>
Less imputed interest			<u>(1,672,425)</u>	<u>(1,672,425)</u>	
Receivable Before Interest and Lien Fees Receivable and Allowance for Doubtful Accounts	\$	<u>2,832,968</u>	<u>\$ 7,203,388</u>	10,036,356	1,668,741
Plus related interest and lien fees receivable				396,987	396,987
Less allowance for doubtful accounts				<u>(1,000,000)</u>	<u>(500,000)</u>
Special Assessment and Connection Charges Receivable, Net				<u>\$ 9,433,343</u>	<u>\$ 1,565,728</u>
		<b>2013</b>			
		<u>New Sewer Line Charges</u>	<u>Connection Charges</u>	<u>Total</u>	<u>Due Within One Year</u>
Due in the year ending June 30:					
2014 *	\$	381,061	\$ 1,181,403	\$ 1,562,464	\$ 1,562,464
2015		208,934	689,728	898,662	
2016		208,555	659,711	868,266	
2017		205,922	659,366	865,288	
2018		202,810	659,263	862,073	
Thereafter		1,068,944	5,101,248	6,170,192	
		<u>2,276,226</u>	<u>8,950,719</u>	<u>11,226,945</u>	<u>1,562,464</u>
Less imputed interest			<u>(1,701,838)</u>	<u>(1,701,838)</u>	
Receivable Before Interest and Lien Fees Receivable and Allowance for Doubtful Accounts	\$	<u>2,276,226</u>	<u>\$ 7,248,881</u>	9,525,107	1,562,464
Plus related interest and lien fees receivable				371,960	371,960
Less allowance for doubtful accounts				<u>(1,000,000)</u>	<u>(500,000)</u>
Special Assessment and Connection Charges Receivable, Net				<u>\$ 8,897,067</u>	<u>\$ 1,434,424</u>

\* Includes past due amounts from prior years.

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

**4. CAPITAL ASSETS**

A summary of capital assets is as follows as of June 30:

	<b>2014</b>			
	<u>Beginning Balance</u>	<u>Additions</u>	<u>Disposals/ Transfers</u>	<u>Ending Balance</u>
Capital assets not being depreciated:				
Land	\$ 2,833,278	\$	\$	\$ 2,833,278
Construction in progress	1,259,119	70,390		1,329,509
Total capital assets not being depreciated	<u>4,092,397</u>	<u>70,390</u>	<u>-</u>	<u>4,162,787</u>
Capital assets being depreciated:				
Buildings and improvements	118,227,406	985,105		119,212,511
Sewer and infrastructure	66,535,488	3,443,556		69,979,044
Equipment	36,391,965	606,069		36,998,034
Total capital assets being depreciated	<u>221,154,859</u>	<u>5,034,730</u>	<u>-</u>	<u>226,189,589</u>
Less accumulated depreciation for:				
Buildings and improvements	32,842,665	2,951,373		35,794,038
Sewer and infrastructure	22,091,571	1,051,375		23,142,946
Equipment	26,210,197	1,369,810		27,580,007
Total accumulated depreciation	<u>81,144,433</u>	<u>5,372,558</u>	<u>-</u>	<u>86,516,991</u>
Total capital assets being depreciated, net	<u>140,010,426</u>	<u>(337,828)</u>	<u>-</u>	<u>139,672,598</u>
Capital Assets, Net	<u>\$ 144,102,823</u>	<u>\$ (267,438)</u>	<u>\$ -</u>	<u>\$ 143,835,385</u>
	<b>2013</b>			
	<u>Beginning Balance</u>	<u>Additions</u>	<u>Disposals/ Transfers</u>	<u>Ending Balance</u>
Capital assets not being depreciated:				
Land	\$ 2,833,278	\$	\$	\$ 2,833,278
Construction in progress	971,370	287,749		1,259,119
Total capital assets not being depreciated	<u>3,804,648</u>	<u>287,749</u>	<u>-</u>	<u>4,092,397</u>
Capital assets being depreciated:				
Buildings and improvements	116,417,420	1,809,986		118,227,406
Sewer and infrastructure	65,938,070	597,418		66,535,488
Equipment	36,195,141	196,824		36,391,965
Total capital assets being depreciated	<u>218,550,631</u>	<u>2,604,228</u>	<u>-</u>	<u>221,154,859</u>
Less accumulated depreciation for:				
Buildings and improvements	29,953,504	2,889,161		32,842,665
Sewer and infrastructure	21,075,237	1,016,334		22,091,571
Equipment	24,876,358	1,333,839		26,210,197
Total accumulated depreciation	<u>75,905,099</u>	<u>5,239,334</u>	<u>-</u>	<u>81,144,433</u>
Total capital assets being depreciated, net	<u>142,645,532</u>	<u>(2,635,106)</u>	<u>-</u>	<u>140,010,426</u>
Capital Assets, Net	<u>\$ 146,450,180</u>	<u>\$ (2,347,357)</u>	<u>\$ -</u>	<u>\$ 144,102,823</u>

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

**5. RESTRICTED ASSETS**

Pursuant to the Revenue Bond Indenture, certain funds are required to be maintained for purposes specified in the applicable agreement. The SWPCA's restricted assets were being maintained for the following purposes as of June 30:

	<b>2014</b>	<b>2013</b>
Clean Water Fund - Debt Service Reserve	\$ 4,641,207	\$ 4,724,655
2003 Debt Service Reserve Fund		893,561
2006 Debt Service Reserve Fund	1,207,648	1,207,546
2003 and 2006 Debt Service Funding Accrual	2,043,095	1,139,107
2012 Debt Service Reserve Fund	1,639,681	
2013 Debt - unspent bond proceeds	6,202,155	
	\$ 15,733,786	\$ 7,964,869

**6. LONG-TERM OBLIGATIONS**

Long-term liability activity was as follows for the years ended June 30:

	<b>2014</b>				
	<b>Beginning Balance</b>	<b>Additions</b>	<b>Reductions</b>	<b>Ending Balance</b>	<b>Due Within One Year</b>
Bonds payable:					
General obligation bonds	\$ 16,547,885	\$	\$ 1,807,691	\$ 14,740,194	\$ 1,788,391
Unamortized premium	214,540		35,768	178,772	
Revenue bonds	27,570,000	22,095,000	10,585,000	39,080,000	635,000
Unamortized premium	43,885	2,307,941	95,074	2,256,752	
Total bonds payable	44,376,310	24,402,941	12,523,533	56,255,718	2,423,391
Notes payable:	49,494,134		3,869,606	45,624,528	3,864,423
Total bonds and notes payable	93,870,444	24,402,941	16,393,139	101,880,246	6,287,814
Compensated absences	306,392		20,798	285,594	30,960
Net OPEB obligation	425,000	236,700		661,700	
Long-Term Liabilities	\$ 94,601,836	\$ 24,639,641	\$ 16,413,937	\$ 102,827,540	\$ 6,318,774

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

	2013				
	Beginning Balance	Additions	Reductions	Ending Balance	Due Within One Year
Bonds payable:					
General obligation bonds	\$ 18,449,154	\$ 1,778,834	\$ 3,680,103	\$ 16,547,885	\$ 1,807,691
Unamortized premium	47,293	174,013	6,766	214,540	
Revenue bonds	28,285,000		715,000	27,570,000	745,000
Unamortized premium	60,152		16,267	43,885	
Total bonds payable	46,841,599	1,952,847	4,418,136	44,376,310	2,552,691
Notes payable:	53,290,737		3,796,603	49,494,134	3,869,606
Total bonds and notes payable	100,132,336	1,952,847	8,214,739	93,870,444	6,422,297
Compensated absences	315,347		8,955	306,392	31,000
Net OPEB obligation		425,000		425,000	
Long-Term Liabilities	\$ 100,447,683	\$ 2,377,847	\$ 8,223,694	\$ 94,601,836	\$ 6,453,297

**General Obligation Bonds**

Per Connecticut state law, the SWPCA does not have the authority to directly issue general obligation bonds. General obligation bonds issued on behalf of the SWPCA are considered general obligation debt of the City. The SWPCA pays the principal and interest due on its allocable portion of any City general obligation bonds.

The SWPCA's allocable portion of the City's general obligation bonds outstanding as of June 30, 2014 consisted of the following:

Description	Year of Issue	Interest Rate (%)	Original Issue	Outstanding 6/30/2014	Outstanding 6/30/2013
Refunding bonds	2003	5.25 %	\$ 3,982,952	\$	\$ 907,836
Refunding bonds	2004	3.60 - 5.25	1,268,429	476,693	479,696
Refunding bonds	2005	4.00 - 5.00	2,247,600	2,144,600	2,144,800
Refunding bonds	2008	3.25 - 5.00	1,817,639	226,609	285,288
Refunding bonds	2009	3.25 - 5.00	1,073,431	961,873	1,073,431
Public improvement	2010	2.80 - 5.45	10,000,000	8,735,000	9,165,000
Refunding bonds	2010	4.00 - 5.00	408,000	408,000	408,000
Refunding bonds	2011	2.00 - 4.00	430,000	300,000	305,000
Refunding bonds	2013	1.00 - 2.00	435,990	171,452	435,990
Refunding bonds	2013	2.00 - 5.00	1,342,884	1,315,967	1,342,844
Total				\$ 14,740,194	\$ 16,547,885

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

Aggregate debt service requirements subsequent to June 30, 2014 are as follows:

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ 1,788,391	\$ 649,004	\$ 2,437,395
2016	1,223,189	597,808	1,820,997
2017	1,198,677	548,648	1,747,325
2018	1,311,034	490,691	1,801,725
2019	1,323,631	428,169	1,751,800
2020-2024	3,955,272	1,470,021	5,425,293
2025-2029	3,250,000	620,513	3,870,513
2030	690,000	19,148	709,148
Debt service requirement	<u>14,740,194</u>	<u>4,824,002</u>	<u>19,564,196</u>
Plus unamortized premium	<u>178,772</u>		<u>178,772</u>
Total	<u>\$ 14,918,966</u>	<u>\$ 4,824,002</u>	<u>\$ 19,742,968</u>

The SWPCA's share of interest expense incurred on general obligation bonds was \$755,382 and \$647,802 for the years ended June 30, 2014 and 2013, respectively.

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

**Revenue Bonds**

Revenue bonds are special limited obligations of the City payable solely from revenues and other receipts of the SWPCA.

Revenue bonds outstanding consisted of the following as of June 30:

	<b>2014</b>	<b>2013</b>
<p>Stamford Water Pollution Control System and Facility Revenue Bonds - 2003. Issued in the aggregate amount of \$12,480,000 revenue bonds in October 2003 at interest rates ranging from 2.0% to 5.0%, due annually, on November 1. Debt service was paid to the trustee monthly, with principal maturity paid from July 2002 through July 2032. The issued bonds were refunded in August 2013 with the 2013 issuance noted below. The aggregate included unamortized premiums of \$-0- and \$19,343 at June 30, 2014 and 2013, respectively.</p>	\$	\$ 10,059,343
<p>Stamford Water Pollution Control System and Facility Revenue Bonds - 2006. Issued in the aggregate amount of \$19,765,000 revenue bonds in September 2006 at interest rates ranging from 3.4% to 4.75%, due annually, on March 15 and September 15. Debt service is paid to the trustee monthly, with principal maturity paid from September 2007 through September 2036. The aggregate includes unamortized premiums of \$19,331 and \$24,542 at June 30, 2014 and 2013, respectively.</p>	17,119,331	17,554,542
<p>Stamford Water Pollution Control System and Facility Revenue and Revenue Refunding Bonds - 2013. Issued in the aggregate amount of \$22,095,000, consisting of \$12,770,000 of revenue bonds and \$9,325,000 of Refunding Revenue Bonds, in August 2013 at interest rates ranging from 3.0% to 6.0%, due annually, on August 15. Debt service is paid to the trustee monthly, with principal maturity paid from August 2013 through August 2044. The issued bonds were refunded with the 2013 issuance noted below. The aggregate includes unamortized premiums of \$2,237,421 at June 30, 2014.</p>	24,217,421	
<p>Less current portion</p>	41,336,752 635,000	27,613,885 745,000
	\$ <u>40,701,752</u>	\$ <u>26,868,885</u>

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

The 2013 refunding net proceeds of \$10,277,984 (including a premium of \$974,046 and issuance costs of \$21,062, net of underwriter's discounts) will reduce total debt service payments over the next 31 years by approximately \$970,000. The refunded bonds are considered partially defeased, and all future interest and principal on the partially defeased bonds will be paid from the proceeds of the refunding issue, which were placed into an irrevocable escrow account until all the partially defeased bonds have been called. The outstanding balance of the defeased bonds was called during the year.

Aggregate debt service requirements subsequent to June 30, 2014 are as follows:

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ 635,000	\$ 1,926,170	\$ 2,561,170
2016	945,000	1,890,720	2,835,720
2017	1,000,000	1,840,051	2,840,051
2018	1,050,000	1,787,138	2,837,138
2019	1,105,000	1,733,686	2,838,686
2020-2024	6,445,000	7,745,353	14,190,353
2025-2029	8,250,000	5,960,319	14,210,319
2030-2034	9,700,000	3,716,775	13,416,775
2035-2039	6,220,000	1,633,481	7,853,481
2040-2044	3,730,000	510,038	4,240,038
Debt service requirement	<u>39,080,000</u>	<u>28,743,731</u>	<u>67,823,731</u>
Plus bond premium	<u>2,256,752</u>		<u>2,256,752</u>
Total	<u>\$ 41,336,752</u>	<u>\$ 28,743,731</u>	<u>\$ 70,080,483</u>

Interest incurred on revenue bonds was \$1,346,536 and \$1,251,440 for the years ended June 30, 2014 and 2013, respectively.

**Notes Payable**

The City obtained in fiscal years 1996, 1998 and 2001 project loan obligations from the State of Connecticut for various sewer projects of \$2,731,211, \$864,280 and \$3,574,208, respectively, of which \$56,900, \$111,636 and \$1,214,415 was outstanding as of June 30, 2014 and \$193,461, \$154,850 and \$1,403,035 was outstanding as of June 30, 2013. The repayment on these three loans is not restricted to the funds of the SWPCA. Currently, the SWPCA is repaying these notes on behalf of the City.

The SWPCA completed a \$105 million upgrade of the waste water treatment facility in 2006. To fund the upgrade project, the City obtained a Project Loan Obligation from the State of Connecticut for \$73,561,481. This loan is a special limited obligation loan of the City that is to be repaid solely from revenues, funds, accounts, moneys and securities of the SWPCA. The project was also funded through grants and a local share. At June 30, 2014 and 2013, the outstanding balance on the loan was \$44,241,577 and \$47,742,788, respectively.



**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

The loans bear interest at 2%. The loans are payable in monthly installments ranging from approximately \$3,601 to \$368,000 through August 2025, plus accrued interest. The combined loan balances were \$45,624,528 and \$49,494,134 as of June 30, 2014 and 2013, respectively.

Interest expense incurred on these notes payables was \$954,533 and \$1,031,132 for the years ended June 30, 2014 and 2013, respectively.

Aggregate debt service requirements subsequent to June 30, 2014 are as follows:

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ 3,864,423	\$ 876,859	\$ 4,741,282
2016	3,883,503	799,730	4,683,233
2017	3,943,011	721,412	4,664,423
2018	3,996,881	642,166	4,639,047
2019	4,077,555	561,491	4,639,046
2020-2024	20,761,666	1,573,737	22,335,403
2025-2026	<u>5,097,489</u>	<u>63,949</u>	<u>5,161,438</u>
Debt Service Requirement	\$ <u>45,624,528</u>	\$ <u>5,239,344</u>	\$ <u>50,863,872</u>

**7. REVENUE**

Sewer use charges are comprised of the following for the years ended June 30:

	<u>2014</u>	<u>2013</u>
Sewer use fees	\$ 18,521,507	\$ 17,278,581
Contract revenue - Town of Darien, CT	1,433,211	1,354,377
Contract revenue - Aquarion	287,150	315,742
Interest	511,393	586,811
Lien fees	<u>188,110</u>	<u>209,407</u>
	<u>\$ 20,941,371</u>	<u>\$ 19,744,918</u>

Special assessments and connection charges are comprised of the following for the years ended June 30:

	<u>2014</u>	<u>2013</u>
Special assessments	\$ 901,173	\$ (55,571)
Connection charges	500,211	1,876,923
Capital reimbursement - Town of Darien, CT	728,481	887,131
Interest	273,022	214,787
Delinquent interest and lien fees	<u>112,765</u>	<u>63,892</u>
	<u>\$ 2,515,652</u>	<u>\$ 2,987,162</u>

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

**8. COMMITMENTS AND CONTINGENCIES**

**General Contingencies**

The SWPCA is a defendant in a lawsuit. In the opinion of the City's General Counsel and SWPCA's management, the resolution of this matter is not expected to have a material adverse effect on the future financial condition of the SWPCA.

**9. RISK MANAGEMENT**

The SWPCA is exposed to various risks of loss related to torts, theft or impairment to assets, errors and omissions, injury to employees, employee health insurance and natural disasters.

The SWPCA is insured through the City's internal service insurance fund. The City's self-insurance fund covers the City, including the SWPCA, per claim for up to \$1,000,000 for general and auto liability, \$1,500,000 for workers' compensation, \$100,000 for public officials' liability and \$250,000 for property losses. The City purchases commercial insurance for claims in excess of these retentions. Costs associated with these risks are reported in the City's insurance internal service fund in addition to claims incurred but not reported. The SWPCA is charged by the City for its share of premium cost and claims. Settled claims have not exceeded commercial coverage in any of the past three years. For the years ended June 30, 2014 and 2013, the SWPCA paid the City approximately \$380,000 and \$286,000, respectively, to the City's internal service insurance fund.

**10. EMPLOYEE RETIREMENT PLAN**

Nearly all full-time City employees are covered by a pension plan. The employees of the SWPCA are covered under the City's Classified Employees' Retirement Fund. Eligibility begins at date of hire and vesting occurs in full after 5 years of service. Benefits are payable to an employee who retires at age 60 with a minimum of 10 years of service or an employee who has reached age 58 with at least 15 years of service. Certain contracts allow employees with 25 years of service to retire. Annual benefits equal 2% per year of service with maximums up to 70% of final salary for each year of credited service. Employees contribute 3% of their annual salary until they have reached 33 years of credited service. Some union contracts allow employees to exchange sick or vacation leave for up to 4% additional pension credit (1% for each 25 days exchanged). Interest of 5% is credited to the employees' contribution.

The City uses an independent actuary to determine the allocation of contributions required for the various departments and groups that participate in the retirement plans, including the SWPCA, for budget purposes only. The City does not account for net pension obligation or assets at the fund level. The City's basic financial statements contain Classified Employees' Retirement Fund (CERF) activity and funding information as of June 30, 2014 and 2013. At June 30, 2014 and 2013, the CERF had \$209.3 million and \$184.4 million in net position, respectively. The actuarial accrued liability at July 1, 2013 was \$227.3 million and the CERF was approximately 86% funded. For the years ended June 30, 2014 and 2013, the SWPCA's contribution to the retirement fund was \$341,460 and \$315,000, representing approximately 5% of total contributions to the CERF for each year.

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

**11. TRANSACTIONS WITH THE CITY**

In the fiscal years 2014 and 2013, the City paid approximately \$297,000 and \$274,000, respectively, in sewer use charges to the SWPCA. The City reimbursed the SWPCA approximately \$288,000 and \$79,000 for the City's share of the hurricane barrier maintenance and operations for the years ended June 30, 2014 and 2013, respectively.

For the fiscal years 2014 and 2013, the SWPCA paid the City approximately \$357,000 and \$306,000, for an allocation of central services costs, respectively, \$-0- and \$72,500 for services provided by the City's finance department, respectively, and approximately \$858,000 and \$799,000 to the City's internal service medical insurance fund for health insurance coverage of active and retired employees, respectively.

In connection with the pooled cash arrangement with the City, the SWPCA incurred interest expense of approximately \$7,400 and \$9,900 on deficit balances during the years ended June 30, 2014 and 2013, respectively.

**12. OTHER POST EMPLOYMENT BENEFITS**

The City provides certain health care benefits for retired employees through a single employer defined benefit plan in which the SWPCA participates. The various collective bargaining agreements stipulate the employees' covered and the percentage of contribution, if any, to the cost of health care benefits. Contributions by the City may vary according to length of service. The cost of providing post employment health care benefits is shared between the City and the retired employee. Substantially all of the City's employees may become eligible for these benefits if they reach normal retirement age while working for the City. The cost of retiree health care benefits is recognized as an expense as claims are paid.

The City's annual other post employment benefit (OPEB) cost (expense) is calculated based on the annual required contribution (ARC), an amount actuarially determined in accordance with the parameters of GASB Statement No. 45. GASB Statement No. 45 establishes standards for the measurement, recognition and display of the expenses and liabilities for retirees' medical insurance. As a result, reporting of expenses and liabilities will no longer be done under the "pay-as-you-go" approach. Instead of expensing the current year premiums paid, a per capita claims cost will be determined, which will be used to determine a "normal cost," an "actuarial accrued liability," and ultimately the ARC. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost each year and amortize any unfunded actuarial liabilities over a period not to exceed thirty years.

Actuarial valuations for OPEB plans involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. These amounts are subject to continual revision as results are compared to past expectations and new estimates are made about the future. Calculations are based on the OPEB benefits provided under the terms of the substantive plan in effect at the time of each valuation and on the pattern of sharing of costs between the employer and plan members to that point. In addition, the assumptions and projections utilized do not explicitly incorporate the potential effects of legal or contractual funding limitations on the pattern of cost sharing between the employer and plan members in the future.

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

The actuarial calculations of the OPEB plan reflect a long-term perspective.

For financial reporting purposes, the City is required to accrue the amounts necessary to finance the plan as actuarially determined, which is equal to the balance not paid by plan members. The contribution requirements of plan members and the City are established and may be amended by the City. The assumed health care cost trend rates, representative of the future expected increases in net medical premiums are as follows:

<u>Year Ended June 30,</u>	<u>Assumed Increase</u>
2015	7.0%
2016	6.5
2017	6.0
2018	5.5
2019	5.0
2020	4.5

The amortization basis is the level percentage of payroll method with an open amortization approach with 20 years in the amortization period. The actuarial assumptions included a 7.5% investment rate of return, 3.5% payroll growth assumption and an inflation rate assumption of 3.0%. The actuarial cost method utilized was the projected unit credit method. Separate financial statements have not been prepared for the post employment benefit plan.

The number of SWPCA participants as of June 30, 2014 was as follows:

Active employees	34
Retired employees	<u>8</u>
Total	<u><u>42</u></u>

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**  
**NOTES TO FINANCIAL STATEMENTS**

SWPCA's Share of Amortization Component	
Actuarial Accrued Liability as of July 1, 2013	\$ 3,029,000
Assets at Market Value	<u>307,000</u>
Unfunded Actuarial Accrued Liability (UAAL)	<u><u>\$ 2,722,000</u></u>
Funded Ratio	<u><u>10.14%</u></u>
Covered Payroll	<u><u>\$ 2,455,000</u></u>
UAAL as a Percentage of Covered Payroll	<u><u>110.88%</u></u>
Annual required contribution	\$ 162,000
Interest on net OPEB obligation	2,000
Adjustment to annual required contribution	<u>198,000</u>
Annual OPEB cost	362,000
Contributions made	<u>125,300</u>
Increase in net OPEB obligation	236,700
Net OPEB obligation - beginning of year	<u>425,000</u>
Net OPEB Obligation - End of Year	<u><u>\$ 661,700</u></u>

The latest actuarial valuation was made July 1, 2013. Information with respect to the entire OPEB valuation is contained in the City's basic financial statements.

**REQUIRED  
SUPPLEMENTARY  
INFORMATION**

## STAMFORD WATER POLLUTION CONTROL AUTHORITY

**SCHEDULE OF FUNDING PROGRESS  
OTHER POST EMPLOYMENT BENEFITS TRUST FUNDS**

**LAST THREE FISCAL YEARS**

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets</b>	<b>Actuarial Accrued Liability (AAL)</b>	<b>Excess (Unfunded) AAL (UAAL)</b>	<b>Funded Ratio</b>	<b>Covered Payroll</b>	<b>UAAL as a Percentage of Covered Payroll</b>
July 1, 2013	\$ 307,000	\$ 3,029,000	\$ (2,722,000)	10.14%	\$ 2,455,000	(110.88%)
July 1, 2012	193,000	2,893,000	(2,700,000)	6.67%	2,220,000	(121.62%)

Note - Information not available prior to July 1, 2012 valuation

**STAMFORD WATER POLLUTION CONTROL AUTHORITY**

**SCHEDULE OF EMPLOYER CONTRIBUTIONS  
OTHER POST EMPLOYMENT BENEFITS TRUST FUNDS**

**LAST THREE FISCAL YEARS**

<b>Year Ended June 30,</b>	<b>Annual Required Contribution</b>	<b>Actual Contribution</b>	<b>Percentage Contributed</b>
2014	\$ 162,000	\$ 125,300	75.19%
2013	462,000	343,000	74.24%

Note - Information not available prior to fiscal year ended June 30, 2013



***APPENDIX C – ENGINEER’S REPORT***

*(This page intentionally left blank)*



## City of Stamford, Connecticut

888 Washington Blvd.  
Stamford, CT 06901

---

# Engineer's Report

June 2015

Report Prepared By:

**ARCADIS-US, Inc.**  
44 S. Broadway, 15<sup>th</sup> Floor  
White Plains, NY 10602



---

## Contents

---

<b>1. Introduction and Purpose</b>	<b>1-1</b>
1.1. Introduction and Purpose .....	1-1
1.2. Purpose of Engineer's Report .....	1-2
<b>2. Organization and Management</b>	<b>2-1</b>
2.1. Water Pollution Control Authority .....	2-1
2.2. Organizational Structure .....	2-1
2.3. Board of Directors .....	2-4
2.4. Management and Operational Staff .....	2-4
2.5. Interactions with the City .....	2-6
2.6. Overview of Service Contracts and Agreements .....	2-8
<b>3. System Description</b>	<b>3-1</b>
3.1. Service Area .....	3-1
3.2. Wastewater Treatment Plant .....	3-2
3.3. Sewage Pump Stations .....	3-4
3.4. Sewage Collection System .....	3-4
<b>4. Condition of System</b>	<b>4-1</b>
4.1. Condition Assessment Approach .....	4-1
4.2. Condition of Water Pollution Control Facility .....	4-2
4.2.1. Flows .....	4-2
4.2.2. Treatment Performance .....	4-3
4.2.3. Condition Assessment .....	4-8
4.2.4. Wet Stream .....	4-8
4.2.5. Solids Handling .....	4-11
4.2.6. Support Systems .....	4-12
4.2.7. WPCF Condition Summary .....	4-13
4.3. Condition of Wastewater Pumping Stations .....	4-14
4.4. Condition of Wastewater Collection System .....	4-17
4.5. Conclusions and Recommendations .....	4-20
<b>5. Capital Improvement Program</b>	<b>5-1</b>
5.1. Past Capital Improvements .....	5-1
5.2. Current and Future Capital Improvement Planning .....	5-2
5.2.1. Treatment Plant .....	5-3
5.2.2. Pump Stations .....	5-4
5.2.3. Collection System .....	5-5
5.3. Conclusions and Recommendations .....	5-5

<b>6. Regulatory Status</b>	<b>6-1</b>
6.1. Existing Regulations .....	6-1
6.2. Administrative Orders .....	6-3
6.3. Notices of Violation .....	6-3
6.4. Future Regulations.....	6-4
6.5. Conclusions.....	6-5
<b>7. Customer Statistics and Sewer Use Rates</b>	<b>7-1</b>
7.1. Customer Base .....	7-1
7.2. User Rates and Charges .....	7-3
7.3. Billing and Collection.....	7-4
7.4. Rate Comparison .....	7-5
<b>8. Financial Feasibility</b>	<b>8-1</b>
8.1. Overview .....	8-1
8.2. Historical and Projected Revenues.....	8-1
8.3. Historical and Projected O&M Expenses.....	8-3
8.4. Historical and Projected Non-Operating Expenses .....	8-3
8.5. Capital Improvement Plan Funding .....	8-5
8.6. Historic and Projected Debt Service .....	8-6
8.6.1. Debt Service Coverage Requirements.....	8-9
8.6.2. SWPCA Fiscal Policies .....	8-11
8.7. Cash Flow Projection and Conclusions .....	8-11
<b>9. Conclusion</b>	<b>9-1</b>
9.1. Considerations and Assumptions .....	9-1
9.2. Conclusions.....	9-2

## List of Tables

Table 4-1. Summary of Rating System .....	4-2
Table 4-2. Stamford WPCF Average Annual Flow.....	4-3
Table 4-3. Stamford WPCF Performance .....	4-4
Table 4-4. Total Nitrogen Limits from General Permit.....	4-8
Table 4-5. Summary of Condition Assessment Ratings for Major Equipment and Unit Processes	4-13
Table 4-6. Summary of Pumping Station Condition Assessments.....	4-16
Table 5-1: Summary of Six-Year Capital Plan by Category (\$ Millions)* .....	5-3
Table 6-1. NPDES Permit Requirements .....	6-2
Table 6-2. Regulations Governing Residuals Disposal.....	6-2
Table 7-1. Historical Customer Accounts and Consumption.....	7-1
Table 7-2. Projected Customer Accounts and Consumption .....	7-2
Table 7-3. Overall Top Ten Customers in FY2014.....	7-3
Table 7-4. Sewer Rate Structure.....	7-4
Table 7-5. Sewer Service Rate Comparisons <sup>1</sup> .....	7-6

---

Table 8-1. Historical Financial Performance .....	8-2
Table 8-2. O&M Expense Projection Assumptions .....	8-3
Table 8-3. Existing Bond Debt and Clean Water Fund Obligations as of June 30, 2014 .....	8-4
Table 8-4. Debt Service Reserve Levels .....	8-5
Table 8-5. Summary of Capital Plan Sources of Funding (\$ Millions)* .....	8-6
Table 8-6. Existing Debt Service .....	8-7
Table 8-7. Projected 2015 Revenue Bond Debt Service.....	8-8
Table 8-8. Cash Flow Projection (FY2015 through FY2020) .....	8-13

## List of Figures

---

Figure 2-1: City of Stamford Office of Operations Organization Chart.....	2-2
Figure 3-1: SWPCA Service Area .....	3-1
Figure 7-1: Sewer Bill Comparison (2013-2014).....	7-7

## Appendices

---

- A. 5 Year Capital Plan
- B. Significant Assumptions

# 1. Introduction and Purpose

---

## 1.1. Introduction and Purpose

ARCADIS U.S., Inc. (ARCADIS) has been retained by the City of Stamford, Connecticut (“City”) to provide Consulting Services for an Engineer’s Report for the planned issuance of 2015 Revenue Bonds and refinancing of Stamford Water Pollution Control Authority (SWPCA) debt. The Engineer's Report includes:

- A description and condition summary of the City's wastewater system.
- An overview of the SWPCA's organization and management.
- A summary of the status of current and proposed capital projects and improvements.
- Review of regulatory compliance.
- A summary of historical and projected customer statistics.
- A review of current and projected financial information.
- Conclusions regarding the technical, organizational and financial aspects of the SWPCA.

The technical and financial data reviewed in preparing this Engineer’s Report includes existing records and documents provided by the City and SWPCA. The Report summarizes the work completed up to the date of the issuance of the Engineer’s Report. Changed conditions occurring or becoming known after such date could affect the material presented and the conclusions reached herein to the extent of such changes.

ARCADIS has not independently verified the accuracy of the information provided by the City, the SWPCA and others. However, we believe such sources are reliable and the information obtained to be appropriate for the analysis undertaken and the conclusions reached herein. To the extent that the information provided to ARCADIS by the City and SWPCA is not accurate, the conclusions and recommendations contained in this Report may vary and are subject to change. In addition, the scope of the ARCADIS review did not include any pending or threatened litigation against the SWPCA. The SWPCA has stated that there is no significant litigation which they believe would have any material impact on the SWPCA’s operations.

In completing this Engineer’s Report for the SWPCA, ARCADIS is not serving in the role of a “municipal advisor” under the regulations of the Securities and Exchange Commission. As such, ARCADIS is not: (a) recommending any action regarding municipal financial products or the issuance of municipal securities; and (b) is not acting as a registered municipal advisor to the City and does not owe a fiduciary duty to the City pursuant to Section 15B of the Securities Exchange Act of 1934, as amended by the Dodd-Frank Wall

Street Reform and Consumer Protection Act, with respect to the information and material prepared in connection with this Engineer's Report. The City and SWPCA should discuss any information and material prepared in connection with this Engineer's Report with any and all internal and external financial and other advisors that they may deem appropriate before acting on this information and material.

Accordingly, since ARCADIS is not a municipal advisor registered with the Securities and Exchange Commission, SWPCA acknowledges that: (a) it has retained the services of an independent registered municipal advisor, which, during the past two years, was not associated with ARCADIS, and that (b) ARCADIS has complied with the requirements set forth in the federal Exchange Act, Municipal Advisor Rule (17 CFR 200, 240, 249), which requires that the engineering company: (i) receive from the municipal entity a representation in writing that it is represented by, and will rely on the advice of, an independent registered municipal advisor; (ii) provide written disclosure to the municipal entity that ARCADIS is not serving as a municipal advisor and, with respect to the municipal entity, is not subject to the statutory fiduciary duty applicable to municipal advisors under the federal Exchange Act, and (iii) provide a copy of such disclosure to the municipal entity's independent registered municipal advisor. ARCADIS provided such disclosures to SWPCA and its registered municipal advisor. ARCADIS does not provide opinions on or advocate for using a financial product (issuing debt) or the choice of financial products employed. As such, ARCADIS submitted its work products to SWPCA's independent registered municipal advisor for review and approval.

## **1.2. Purpose of Engineer's Report**

The Engineer's Report is prepared to support the refinancing of the wastewater system debt and the planned issuance of 2015 Revenue Bonds. In preparing this Report, ARCADIS has reviewed information and documents prepared by or on behalf of the SWPCA. The purpose of ARCADIS review of such documents is to understand and report on the technical and financial information contained therein as it relates to the refinancing of SWPCA debt and the 2015 bond issuance.



## 2. Organization and Management

---

### 2.1. Water Pollution Control Authority

The SWPCA is an enterprise fund / agency of the City that provides retail wastewater collection and treatment services to customers in the City and wholesale treatment services to the Town of Darien via an Interlocal Agreement dated December 2013, which supersedes the previous agreement dated July 2001. The SWPCA was established by the City on November 28, 1996, by Ordinance No. 803, pursuant to statutory authority as set forth in Chapter 103, Sections 7-245 through 7-273a inclusive, of the Connecticut General Statutes (“CGS”). Prior to that date, the functions of the SWPCA operated under the Office of Operations of the City.

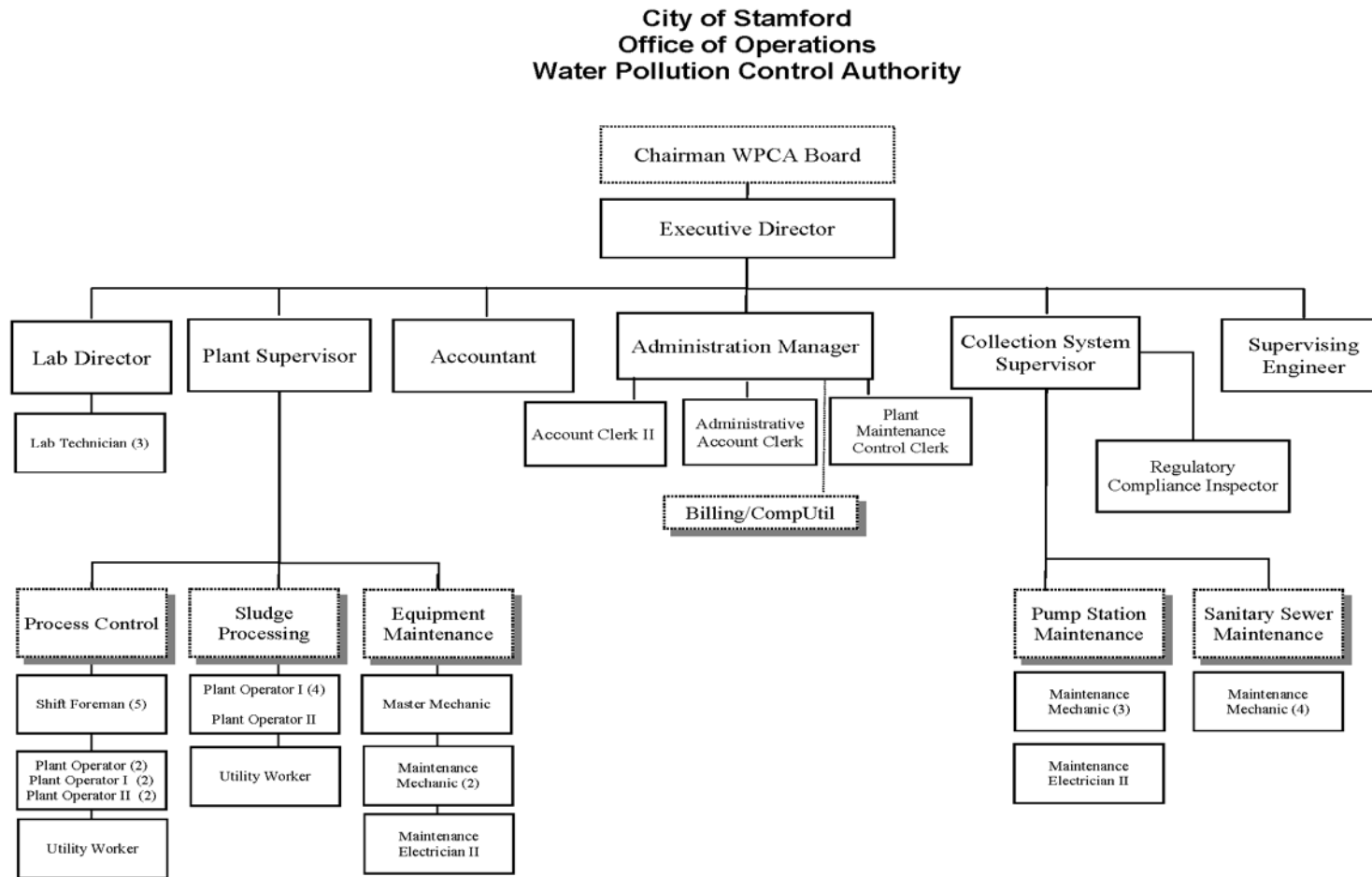
In accordance with its governing ordinance, the purpose of the SWPCA is to operate the Water Pollution Control Facility, sanitary sewage collection system, pumping stations and hurricane barrier pumping stations for the City; to repair, maintain, upgrade/replace any component of the system related to the collection, treatment, and disposal of sewage and resulting byproducts, and to assess fees and charges in connection with the operation, maintenance and management of the system. The City provides the SWPCA with administrative, financial management and bond financing support. The SWPCA helps support the City’s stormwater management program by providing flood control barrier operation and maintenance for the City and other related services, however, responsibility for stormwater control and management remains with the City.

### 2.2. Organizational Structure

An overview of the current organization structure of the SWPCA is shown on Figure 2-1. The SWPCA is governed by a nine-member Board of Directors, all of whom are voting members. By ordinance, the Board includes the following City personnel: Director of Operations, Director of Administration, Chairman of the Board of Finance or designee from the Board of Finance, President of the Board of Representatives or designee from Board of Representatives, and five at-large members appointed by the Mayor and approved by the Board of Representatives. One of the at-large Board members must be an accountant or financial manager and another engineer. At-large Board members are appointed for three-year terms and can serve multiple terms as there is no term limit. In addition, by ordinance no more than three at-large members can be of the same political party.

Figure 2-1 shows the SWPCA organization chart for FY2015-2016.

Figure 2-1: City of Stamford Office of Operations Organization Chart



Source: Stamford Water Pollution Control Authority. FY2014-2015 Proposed Operating Budget.

The SWPCA is headed by an Executive Director, who is responsible for all technical and administrative operations of the SWPCA and the implementation of programs, policies and procedures at the direction of the Board. Mr. William Brink, P.E., currently serves as the Executive Director of the SWPCA and has served in this position since March 2013.

The SWPCA FY2015-2016 budget includes 44 employees; 43 full-time, and 1 permanent part-time, all of whom are employees of the SWPCA. Each of the full-time and part-time employees belongs to one of three collective bargaining units represented within the City. The supervisors, including the Executive Director, are members of the Municipal Administrators Association (“MAA”), a division of the American Federation of State, County, and Municipal Employees, AFL-CIO (AFSCME). The operators and mechanics are members of the Teamsters Union. The laboratory staff, clerical staff and electricians are part of the United Automobile, Aerospace, and Agricultural Implement Workers of America (UAW) bargaining unit with the City. The collective bargaining contracts are Citywide and are negotiated through the Office of Legal Affairs. The FY2015 budget of 45 full-time equivalent employees represents an increase of one (1) employee over the previous year’s budget.

The collective bargaining agreement between the City and Teamsters Union Local #145 representing the SWPCA operators, mechanics and utility workers expired on June 30, 2014. The SWPCA membership changed their bargaining unit to the International Union of Operating Engineers (UOE) Local 30. The City has been in negotiations with the UOE for a new three year contract. The SWPCA and UOE representatives have come to a tentative agreement and the agreement is being finalized for approval by the City and union membership. The changes in the tentative agreement will not have a significant impact on SWPCA’s operations or operating expenses.

The collective bargaining agreement between the City and the United Auto Workers who represent the SWPCA laboratory staff and electricians was renewed in 2014 and does not expire until June 30, 2017. The new agreement does not have a significant impact on SWPCA’s operations or operating expenses.

The collective bargaining agreement between the City and the Stamford Municipal Supervisory Employees Union Local #2657 of Council #4 of the American Federation of State, County and Municipal Employees, AFL-CIO representing SWPCA administrators and supervisors expired on June 30, 2014 and is currently in negotiations. It is not anticipated that the new contract will have a significant impact on SWPCA’s operations or operating expenses.

In FY2013 the SWPCA hired a full-time Accountant to assist in managing the SWPCA’s financial matters. Historically, the City has managed the majority of the financial

management services for the SWPCA. Currently, the Administration Division of the SWPCA is responsible for the Authority’s financial management. However, the SWPCA continues to use the City for certain administrative support services such as payroll, accounts payable, procurement, and IT tech support, which would not be cost efficient to implement internally at the present time. The City is reimbursed for the cost of these support services.

The organizational structure of the SWPCA is generally consistent with similar-sized wastewater utilities and, it appears that all required functions of the SWPCA are adequately staffed. Currently, there are two open positions at the SWPCA, the shift foreman and the regulatory compliance inspector. There are no observed shortcomings in the operation and maintenance of the system due to the shortfalls in staffing of the required positions.

### 2.3. Board of Directors

The SWPCA Board of Directors currently consists of the following members.

Michael Handler	Chairman
Daniel Capano	Vice Chairman
Ernie Orgera	Member, City of Stamford Director of Operations
Cristina Andreana	Member (Accountant)
Edward Kelly	Member
Merritt Nesin	Member (Engineer)
Jay Fountain	Member, City of Stamford Board of Representatives
Gerald Bosak, Jr.	Member, City of Stamford Board of Finance
Vacant	

### 2.4. Management and Operational Staff

Biographies of key management and operational staff are provided below.

**William P. Brink, P.E., BCEE, Executive Director.** Mr. Brink has more than 30 years progressive experience in engineering and management of large environmental projects, and having a unique combination of skills in business management (MBA in finance from University of Connecticut) leadership, wastewater utility operations, finance and engineering. He holds a P.E. in Connecticut and received his B.S. in Civil Engineering and M.E. in Sanitary Engineering from Drexel University, PA and Cornell University, NY respectively. Prior to the SWPCA, Mr. Brink worked for Stearns and Wheeler (now GHD Inc. which acquired Stearns and Wheeler in 2009) leading multi-disciplinary project teams on large wastewater collection and treatment project including, but not limited to, projects for the Hartford Metropolitan District Commission, Danbury Water Pollution Control Plant, and Bridgeport Water Pollution Control Authority since 1992.

**William R. Degnan, Plant Supervisor.** Mr. Degnan has approximately twenty years in the wastewater industry, starting in 1995 at the City of New Haven as a mechanic. Throughout this period, he achieved double degrees: a BS in OSHA Technology from University of New Haven, West Haven, CT and an MBA in Global Management from National University in San Diego, CA.

He worked at four other CT treatment plants in various positions, before accepting a Superintendent position for the Jomax Water Reclamation Plant in Peoria, Arizona. He spent several years in that position before accepting the Plant Supervisor position in Stamford in 2012. Mr. Degnan also had the opportunity to work internationally in Israel and Mexico as a Project Manager in both wastewater and telecommunications and holds a Connecticut Wastewater Grade IV license, a Grade IV Arizona Wastewater license, a Grade III Arizona Water license, a Grade III Collections license, and a Grade III license in Water Distribution.

**Prakash Chakravati, P.E., Supervising Engineer.** Mr. Chakravati assists the Executive Director in planning and managing engineering and capital projects including design, preparation and review of contract plans and specifications, plant and pumping station construction management, sanitary sewer repair and construction management. He also supervises staff and contractual support personnel assigned to the construction function. Mr. Chakravati holds a Master's Degree in Civil Engineering from Lehigh University and is a registered professional engineer. Since 1987, he worked as an engineer for the City and has compiled and implemented numerous capital projects including water pollution control related projects such as major pump station upgrades, bar screens, pump controls and sanitary sewer projects. He currently supervises the major upgrades at the WPCF and numerous satellite pump stations.

**Rhudean Bull, Administration Manager.** Ms. Bull is responsible for planning, developing, analyzing, evaluating and improving various management control systems, policies, work methods and procedures for the efficient operation of the SWPCA as well as day-to-day Plant Management. She assists the Executive Director in identifying its financial, personnel, and material needs and problems. She manages various administrative activities and human resources functions as well as the Billing function for the SWPCA. Ms. Bull received a B.S. Degree from South Carolina State University and a Master Degree in Public Administration with a concentration in Human Resources Management from City University of New York – John Jay College. She has been certified as a Professional in Human Resources by the Society of Human Resources Management since 2001 and has over fifteen years' experience in management and human resources management fields.

**Mark Turndahl, Accountant.** Mr. Turndahl has over thirty years of diverse financial management positions in Town and School governments and major New York

metropolitan firms. Mr. Turndahl has experience in accounting management and control, tax, audit as well as administrative and capital budgeting and is fully versed in both small and large computerized accounting systems, GASB standards including numbers 34 and 45 and Excel and Lotus spreadsheets.

**Stephen Pietrzyk, Collection System Supervisor.** For the past five-years, Mr. Pietrzyk has served as Regulatory Compliance Officer and most recently as the Collection System Supervisor responsible for the SWPCA’s capacity, management, operation and maintenance (CMOM) program via planning, coordinating, and supervising a 9-member mechanical staff to inspect and maintain the collection system and other environmental policies and procedures including the Fats, Oil and Grease (FOG) abatement program. Prior to this he owned and operated two environmental consulting businesses for over 18-years participating in numerous residential, commercial and industrial development projects. Mr. Pietrzyk received his MS and BS Degrees from the University of Connecticut and AS Degree in Landscape Development from State University of New York Cobleskill.

## **2.5. Interactions with the City**

The SWPCA is currently an agency within the Office of Operations of the City of Stamford municipal government. The City provides key administrative and support services to the SWPCA, and the SWPCA is responsible for operating and maintaining the Water Pollution Control Facility (WPCF), sanitary sewage system, wastewater pumping stations, and the City’s hurricane barrier. The costs of these services are back-charged to the City, as SWPCA operations are financed primarily through direct charges to the users of its services. The City commissions the firm of Maximus to conduct an annual study that identifies the SWPCA’s allocation share of City support services costs.

Additionally, the City advances funds to the SWPCA to meet operating cash flow requirements and capital expenditures prior to capital improvement bond increases. The City of Stamford specifically provides the following:

- Procurement, accounts payable, and payroll services;
- Budget and capital improvement bond issuance related support;
- Technology Management Services (IT) support for e-mail, voicemail, network services, PC support services, MS Office applications, accounting software including general ledger and fixed asset modules, and SWPCA-specific software applications,
- Human Resources support for hiring, terminations, and retirements;
- Risk Management support for employee safety and workers’ compensation claims;

- Legal support for agreements by the SWPCA and claims for and against the SWPCA;<sup>1</sup>
- Revenue Services Department support for billing and collection of sewer assessment and sewer connection charges

Historically, the City also provided accounting and financial reporting services including reconciliation of all SWPCA related accounts and reports for auditors, City-elected officials and management, and SWPCA board and management. These services were provided prior to FY2013-2014, but subsequent to FY2013-2014, the SWPCA's accountant assumed the majority of these responsibilities.

As noted, the City also provides financial support to the SWPCA from the City's pool cash account. The SWPCA can access this account to fund unexpected or not yet funded but approved capital improvements (capital account) and during periods when its cash on hand balances are not sufficient to meet its operating needs (operating account). The SWPCA reimburses the City from its cash reserves as required, with any unpaid balance subject to interest charges at the City's current quarterly interest earnings rate for its Short Term Investment Fund (STIF) account.

In conjunction with the SWPCA's sewer extension projects, the City can request that the SWPCA make other infrastructure improvements as well, including those related to stormwater and drainage, road widening and alignment, and other curb and sidewalk improvements. The costs of these improvements are paid for by the City or reimbursed to the SWPCA by the City. For example, the cost of the Carriage Drive project was approximately \$3.4 million of which \$2.3 million were sewer related where the SWPCA had cost responsibility and \$1.1 million was stormwater and road improvements with the City having the cost responsibility.

Based on the audited financial statements, in FY2013 and FY2014, the City paid approximately \$274,000 and \$297,000, respectively in sewer use charges to the SWPCA. The City also reimbursed the SWPCA approximately \$79,000 and \$288,000 for the City's share of the hurricane barrier maintenance and operations for the years ended June, 2013 and 2014, respectively.

In FY2013 and FY2014, the SWPCA paid the City approximately \$306,000 and \$357,000 for an allocation of central services costs, respectively, \$72,500 and \$0 for services provided by the City's finance department, respectively, and approximately \$799,000 and \$858,000 to the City's internal service medical insurance fund for health insurance coverage of active and retired employees, respectively. The total amount due from the SWPCA to the City under the pooled cash account for FY2013 and FY2014 was \$7.97

---

<sup>1</sup> The SWPCA is currently a defendant in a lawsuit. In the opinion of the City's General Counsel and SWPCA's management, the resolution of this matter is not expected to have a material adverse effect on the future financial condition of the SWPCA.

million and \$4.68 million, respectively. These amounts include both capital and operating funds.

On May 15, 2013, the City and the SWPCA executed a Memorandum of Agreement (MOA) that clearly defines the relationship between the City and the SWPCA in order to further realize mutual benefits of working more closely with one another and clarify repayment provisions for operating and capital improvement loans.

## **2.6. Overview of Service Contracts and Agreements**

The City and the SWPCA have numerous contracts in place for the management and operation of the system. There are several key or major agreements to support delivery of services and to secure revenues, which are pertinent to the financial review summarized in this Report. A summary of these is provided below:

- **Sludge Processing Agreement with Synagro** – Sludge management costs were budgeted at approximately 17 percent of the SWPCA’s annual operating costs for FY2014-2015 (revised) and are currently budgeted at 15.5 percent of operating costs for FY2015-2016. Previously, these costs accounted for almost 19 percent of the SWPCA’s annual operating costs. The SWPCA provides sludge thickening and dewatering. The SWPCA contracts with Synagro for sludge drying, transportation and disposal services. The initial contract was scheduled to expire in February 2013, but the SWPCA Board approved an extension through August 2013. The SWPCA issued a Request for Proposal (RFP) for provision of operations and maintenance services for the drying facility, for a term of five years and executed a new sludge processing contract via a competitive agreement with Synagro on March 3, 2014. With the execution of the new contract, Synagro committed to making a Capital contribution in an amount up to \$300,000 toward the cost of one or more capital modifications to be made by the sludge drying facility or the wastewater treatment plant. Through the contract, the SWPCA is obligated to deliver a maximum 4,560 dry tons of sludge per year to Synagro. Synagro is responsible for processing the sludge received from the WPCF to produce a marketable product, testing of the product, marketing the product, and disposing of processing residuals.
- **Billing and Collection Agreement with Computil** – The SWPCA contracted with Computil to provide billing and collection service assistance as well as consumption data analysis, customer service and reporting. The initial contract period was from February 1, 2011 through January 31, 2014. A new contract was executed on February 10, 2015 for a term of three years with an option extension for two successive period of one year each. According to the terms of the contract, the SWPCA is to pay Computil a lump sum fee of \$405,834 for each contract year for the duration of this agreement (including any extensions).
- **Darien Interlocal Agreement** – The City provides wholesale treatment and discharge services to the Town of Darien via an Interlocal Agreement dated December 3, 2013. The agreement includes both capital reimbursement and operation and maintenance



cost share components. The capital reimbursement and operation and maintenance cost share is based primarily on measured wastewater flow contribution (by volume). Under the current agreement, the Town of Darien is limited to an average annual daily flow of not more than 3.0 MGD and a combined peak flow of not more than 7.5 MGD. However, if flows from Darien exceed the allowable maximum, the WPCA shall be held harmless from liability, cost, or expense resulting from any incurred penalties, cleanup, and repair costs. If a regulatory agency takes action against the SWPCA in connection with flow discharges above the limits, payment of costs, fines, penalties, or damages will be apportioned between the SWPCA and Darien. Additionally, the Town of Darien will share nitrogen trading credits generated through the operation of SWPCA's treatment plant, based on the greater of 12.5 percent or the percentage by volume represented by Darien's flow. The current Darien Interlocal Agreement will expire on June 30, 2018 (subject to mutual renewal for an additional 5 years). Darien contracted revenue (including both capital and operation and maintenance components), accounts for less than 10 percent of SWPCA's total income.

- Aquarion Agreement – The City accepts water treatment plant sludge from the Aquarion Water Company pursuant to the terms and conditions of this agreement. Aquarion's water treatment plant sludge revenue is in excess of \$300,000 annually to the SWPCA. Historically, this has represented approximately 1 percent of the SWPCA's total income.
- City Pooled Cash Arrangement – Under a long standing agreement with the City, the SWPCA shares in a pooled cash account controlled by, and in the name of, the City. The SWPCA draws from this account to fund unexpected or not yet funded capital improvements and to cover operating costs during the periods when its on hand cash balances are not sufficient to meet its operating needs. The SWPCA's share of this pooled cash account is currently in a deficit and reflected in financial statements as "Due to the City of Stamford". Pursuant to the MOA dated May 13, 2014 between the City and the SWPCA, the SWPCA has agreed to repay the City over a five-year period with interest at the Connecticut State Treasurer's Investment Fund rate. However, the SWPCA has accelerated their repayment schedule to the City and drastically decreased this deficit. In FY2014 the SWPCA paid approximately \$3.3 million to the pooled cash account of which \$1.6 million was applied to operating account and \$1.7 million to capital advances. The total deficiency ending in FY2014 was approximately \$4.7 million down from approximately \$8.0 million in FY2013 (FY2013 - FY2014 Financial Statements). The SWPCA has continued to pay down these advances and currently estimates the FY2015 ending balance to be only \$3.2 million of which \$1.0 million is in the operating account and \$2.2 million in the capital account. The operating account balance is projected to be paid off in FY2016 based on SWPCA financial projections, effectively paying the City back in less than three years vs. the five year period established in the MOA. It is also noted that of the \$2.2 million outstanding in capital advances, approximately \$1.1 million is related to the Carriage Drive sewer extension project and used to pay for stormwater and road improvements. Pursuant to the MOA, the City is to reimburse the SWPCA for these costs, effectively reducing the capital advance due to the City to only \$1.2 million ending FY2015.

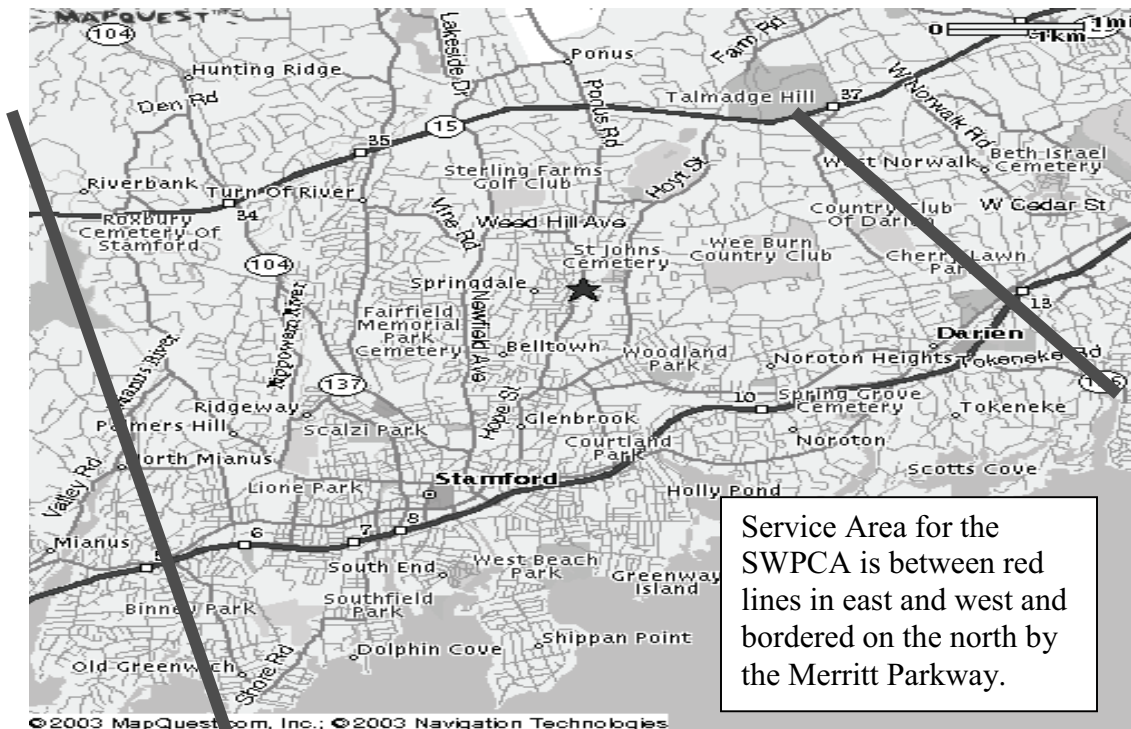
# 3. System Description

## 3.1. Service Area

The City of Stamford is divided into four geographic taxing districts, based upon municipal services furnished to the jurisdiction. As the City extends sanitary sewer lines into previously unsewered areas, municipal garbage collection is also extended, and the tax district classification is changed accordingly.

The service area of the SWPCA includes the two City taxing districts that are served by sanitary sewer lines, namely taxing districts A (1) and C/S (4). Within the City, the service area is bounded by the Merritt Parkway to the north, the Noroton River (constituting the border line with Darien) to the east, Old Greenwich to the west, and the Long Island Sound to the south. The service area includes residential, commercial, government and non-profit customers. The service area boundaries are shown in Figure 3-1.

Figure 3-1: SWPCA Service Area



Source: SWPCA

The SWPCA also provides transmission and treatment services to those areas within the Town of Darien that presently dispose of wastewater through sewer facilities. Pump

stations owned and operated by the Town of Darien convey wastewater to the east side of the City where the wastewater is then conveyed through the SWPCA's collection system to Stamford's wastewater treatment plant.

The areas north of the Merritt Parkway are served by septic systems. The City's previous Master Plan does not anticipate the installation of sanitary sewers in these areas, and it should be noted that the City's current (2015-2025) master plan focuses on encouraging new housing units and developments to utilize existing sewer main. Although the current master plan makes no mention of extending the sanitary sewer system into areas currently not served by public sewers, the discussions with SWPCA executive staff and a review of the SWPCA CIP (as discussed in Section 5) indicate that a number of sewer extension projects have recently been completed, are currently underway, or are planned for the relatively near future.

The recently-completed \$3.4 million Carriage Drive Area Sewers extended public sewerage to 71 homes. Design is complete for the \$3.5 million Wedgemere Road Sewers project, which will extend the public sewer system to an additional 66 homes. Design is 95 percent complete for the \$5 million Perna Lane Area Sewers project, which will extend the sewer to serve a total of 210 homes. According to SWPCA staff, once these sewer extension projects are complete, almost all of the service area will be sewered.

### **3.2. Wastewater Treatment Plant**

At the core of the SWPCA operations is the wastewater treatment plant, located at 111 Harbor View Avenue. There has been wastewater treatment at this site since 1900. The first plant was built in 1943, followed by an upgrade in 1976, and the latest upgrade in 2006.

The WPCF's operation is regulated by the U.S. Water Pollution Control Act ("Clean Water Act") under the direction of the U.S. Environmental Protection Agency ("EPA"). The EPA has delegated permitting authority to the Connecticut Department of Energy and Environmental Protection ("CTDEEP") which administers the National Pollution Discharge Elimination System ("NPDES"). A new final NPDES permit for the Stamford WPCF (NPDES No. CT0101087) was issued by the CTDEEP on June 25, 2013 and will expire on June 24, 2018.

The WPCF has a permitted capacity of 24 million gallons per day ("MGD") monthly average flow and provides the following unit processes: screenings, raw waste pumping, primary clarification, primary sludge dewatering, biological treatment, secondary clarification, gravity thickening and belt filter pressing. The thickened solids are conveyed to the solids drying facility, where they are converted to Class A biosolids, which are currently being used in the fertilizer industry. The plant uses ultraviolet disinfection and a supervisory control and data acquisition ("SCADA") systems. The plant discharges treated

effluent to Stamford Harbor, which is an inlet from Long Island Sound. As a discharger into Long Island Sound, the plant is subject to nutrient limitations imposed by the Sound's Total Maximum Daily Load ("TMDL"), which is discussed in further detail later in this Report.

All sanitary sewage collected by the City and the Town of Darien sewer systems passes through the influent collecting well. Stamford has two separate sewer systems; one for wastewater and one for stormwater. From the collecting well, flow enters the Raw Sewage Pumping Station for preliminary treatment which consists of three bar screens with 3/4-inch clear bar spacing that are designed to remove large solids. After the bar screens, flow is pumped by five main sewage pumps to two circular primary settling tanks (PSTs) to remove settleable and floatable solids by gravity settling and flotation. Primary effluent is directed to the suspended growth activated sludge system which consists of three rectangular aeration tanks, or trains, in which microorganisms biologically transform dissolved, colloidal, and non-settleable biodegradable organic materials into energy and settleable solids. Primary sludge is dewatered and sent directly to gravity thickeners.

There are two reactor trains, Train 1 and Train 2. Each train has a primary anoxic zone followed by an aerobic zone. Primary effluent, return activated sludge (RAS) and recycled mixed liquor enter the first anoxic zone. In this anoxic zone, nitrogen removal begins. The mixture, called mixed liquor, then flows to the aerobic zones. At the discharge end of each of the primary aerobic zones, there are four recycle pumps which return nitrate-rich mixed liquor to the primary anoxic zone for additional denitrification. Some of the activated sludge is wasted as mixed liquor from the end of the first aerobic zone and proceeds to the gravity belt thickeners. The remaining mixed liquor proceeds on to Train 3, where methanol is then added into the secondary anoxic zone to enhance nitrogen removal. Denitrified mixed liquor continues to the final re-aeration zone and exits the biological reactors to be divided equally among four secondary clarifiers.

Aeration tank effluent is directed to four circular final settling tanks that provide final clarification of the wastewater. Settled solids are returned to the aeration tanks with a portion of the excess solids wasted. Finally, disinfection is accomplished via ultraviolet (UV) light, that provides inactivation of pathogens. There are two UV channels, each with two banks of lamps. Each bank has 16 modules, and each module has 18 lamps, for a total of 432 UV lamps. During high tide conditions, the effluent is pumped via three effluent pumps before discharged to Stamford Harbor. During low tide conditions, the flow is discharged directly by gravity to the Harbor.

Waste mixed liquor from the aeration tanks is thickened via gravity belt thickeners (GBTs) that reduce the volume of the sludge. In addition, waste activated sludge from the final clarifiers is also directed to the gravity thickeners, where it is combined with primary sludge. Thickened primary sludge from the gravity thickeners and GBTs is combined in

two sludge blend tanks prior to delivery to belt filter presses for dewatering. The dewatered sludge is then pumped to the on-site pelletizing facility where it is heat dried to achieve Class A EQ biosolids status and is made into small sludge pellets for beneficial reuse via land application [as a fertilizer]. The sludge pelletizing operation is managed by Synagro, under contract to the SWPCA. The pelletizer was originally constructed in hopes of also developing an on-site waste-to-energy facility which would use the pellets as a fuel source. The waste-to-energy project, however, was never implemented due to concerns regarding economic viability.

Currently, the average daily flow at the WPCF is about 17 MGD, or 70 percent of design capacity. Hydraulically, the plant has been designed to take up to 68 MGD under peak conditions.

### **3.3. Sewage Pump Stations**

The City owns, operates and maintains 23 sewage pump stations, which are utilized to transport sanitary wastes where gravity is not a viable transport option. The wastewater pump stations range in design capacity from approximately 100,000 gallons per day to 5 MGD. SWPCA mechanics and utility workers operate and maintain the pump station structures and equipment, and perform landscaping activities.

A full listing of the wastewater pump stations is included in Section 4 of this Report. The conditions of the pump stations are also discussed in Section 4.

### **3.4. Sewage Collection System**

The City's wastewater collection system comprises approximately 275 miles of sanitary sewers (ranging in size from 6 to 60 inches in diameter) and 8 miles of sanitary force mains. The SWPCA's is responsible for the management and operation of this collection system, which is a completely separate sanitary sewer system. The City's storm sewers are not the responsibility of the SWPCA and are not part of the sewage collection system.

## 4. Condition of System

---

### 4.1. Condition Assessment Approach

ARCADIS conducted a condition assessment of the SWPCA system in late 2012 as part of the 2013 Series A Bonds issuance, including site visits to the WPCF and 14 of the SWPCA's pump stations. In May 2015, a condition review was performed based on the compilation of existing information provided by the SWPCA, discussions with SWPCA staff, and visual observations during limited field visits of the facilities. The key purpose of this condition review was to confirm current anticipated conditions and assess any key changes which may have occurred since the 2012 inspections. In performing this assessment, the following key documents and information were reviewed:

- Regulatory compliance records
- Operations records and staff accounts
- Renewal and replacement programs
- Capital improvement plans
- Separate asset-specific condition assessment reports
- 2012 condition assessment findings

Based on the type of facilities, available documents related to the facilities and our experience with these facilities, a representative sample of facilities was inspected in 2015 on a limited basis. Such field investigations included the following facilities:

- Stamford WPCF visited on May 20, 2015
- 7 of the 9 sewage pump stations that were not visited in 2012 were visited on May 20, 2015

During the May 20, 2015 visits to the WPCF and pump stations, issues faced by the SWPCA at the time the 2012 inspections took place were discussed, including the steps taken to address these issues. The condition of the pump stations and treatment plant equipment was also discussed. Key findings are discussed in the subsequent sections.

For buried infrastructure (i.e., sewer interceptors, laterals, force mains, manholes, etc.), the condition assessment relies on existing information provided by the SWPCA. This includes preliminary GIS information such as age and materials of sewer pipes to extent the information is available as well as reports generated during sewer inspection and cleaning activities. No field investigations were conducted of the buried infrastructure.

The condition assessment of the critical assets at each of the above-ground assets was based on numerical ratings within the following categories.

- Reliability
- Operations and maintenance (O&M) performance
- Capacity
- Regulatory Compliance

Based on the evaluations using the above categories, an overall risk rating was assigned to each of the critical assets. The risk ratings for each of the above four categories are outlined in Table 4-1.

**Table 4-1.  
Summary of Rating System**

Numerical Rating	Interpretation Of Rating	Description
1	Little to no risk	Relatively new and in good physical and operating condition
2	Some risk	Good condition, no known capital requirements
3	Moderate risk	Aged or worn but generally in good operating condition may require capital investment within 5-years
4	Significant risk	Operational but nearing end of life and/or requires investment to bring to full operating condition
5	High risk	Should be on high priority for renewal and/or replacement

When considering the rating assigned to a critical asset, the criticality of that asset was also considered. For assets that are critical to the overall operation and regulatory compliance of the facility, the allowable risk is small. Thus, highly critical assets would tend to be given more stringent ratings.

## **4.2. Condition of Water Pollution Control Facility**

The WPCF is an advanced wastewater treatment plant with a rated capacity of 24 MGD monthly average flow that provides preliminary screening, primary settling, biological treatment through the activated sludge process, secondary settling, and disinfection using ultraviolet light. Waste activated sludge is thickened via gravity belt thickeners and combined with primary sludge which is thickened via gravity thickeners to be dewatered via belt filter presses. The dewatered sludge is then sent to an on-site pelletizing facility from which sludge pellets are transported off-site for land application.

### **4.2.1. Flows**

Over the last few years, the SWPCA’s customer base has been experiencing some moderate growth. Despite this growth, treatment plant flows have generally been trending downwards, as summarized in Table 4-2. This trend in plant flows is most likely

attributable to water conservation measures and increased public awareness of water usage, which eventually leads to less wastewater generation.

**Table 4-2.  
Stamford WPCF Average Annual Flow**

Year	Average Flow (MGD)
2006	18.3
2007	17.5
2008	17.2
2009	16.4
2010	16.4
2011	18.5
2012	15.6
2013	14.0
2014	16.0
2015 <sup>1</sup>	17.5

Notes:

- 1) Represents the average flow for the period January 1, 2015 through December 2015.

As can be seen from this table, the plant has been well under its rated capacity of 24 MGD, and there is ample capacity for growth in the service area.

#### **4.2.2. Treatment Performance**

For the purposes of this Report, ARCADIS reviewed Discharge Monitoring Reports (DMRs) and Monthly Operating Reports (MORs) for the Stamford WPCF from July 2013 to April 2015. Data from 2010 to June 2013 were reviewed for the Engineer's Report in support of the 2013 Series A Bonds and are shown in Table 4-3 for comparison purposes. Plant operational performance from 2010 through April 2015 is summarized in Table 4-3.



**Table 4-3.  
Stamford WPCF Performance**

Parameter	Limit Type	NPDES Limit	Average Value					
			2010 <sup>1</sup>	2011	2012	2013 <sup>5,6</sup>	2014	2015 <sup>13</sup>
Average Daily Flow (MGD)	Monthly Average	--	15.1	18.5	15.6	14.0	16.0	17.5
BOD <sub>5</sub> – Influent (mg/L)	--	--	228	187	222	243	222	181
BOD <sub>5</sub> – Effluent (mg/L)	Monthly Average	20	9.6	5.9	4.04	3.08	5.0	2.8
BOD <sub>5</sub> – % Removal	Daily	85	96	96	98	99	98	98.5
TSS – Influent (mg/L)	-	--	319	254	319	366	311	260
TSS – Effluent (mg/L)	Monthly Average	20	7.5	16.0	13.6	8.5	7.8	5.5
TSS - % Removal	Daily	85	97	93	98	98	97	97.9
Ammonia (as N) – Effluent (mg/L) November - May	Monthly Average	--	0	0.04	0.06	0.16	0.35	0.2
Ammonia (as N) – Effluent (mg/L) June - October	Monthly Average	2	0	0.02	0.02	0.1	0.06	N/A
Fecal Coliform (CFU/100 mL)	30-day geometric mean	200 <sup>11</sup>	15.6	18.5	17.0	16.3	5.5	4.5 <sup>12</sup>
Fecal Coliform (CFU/100 mL)	7-day geometric mean	400	79.1	116.5 <sup>3</sup>	42.1	70.5	12.7	CND <sup>7</sup>
Enterococcus (CFU/100 mL)	30-day geometric mean	35	CND <sup>7</sup>	CND <sup>7</sup>	CND <sup>7</sup>	15.7	5.8 <sup>9</sup>	25.8
UV Dose <sup>(2)</sup> (mW, s/cm <sup>2</sup> )	Instantaneous Limit	>30	38	38	51	44	59 <sup>10</sup>	47
Number of Exceedances	--	--	1	22	3	1 <sup>8</sup>	3 <sup>11</sup>	3

Notes:

- 1) Data from April, 2010 through December 2010
- 2) UV Dose is not reported on DMRs. Data is obtained from MORs and includes data from UV Channel Nos. 1 and 2 Low Dose. Average values rounded to nearest whole number.
- 3) The 7-day geometric mean data point of 200,000 MPN/mL that occurred during May 2010 is excluded from the Average Value.
- 4) The 7-day geometric mean data point of 8,095 MPN/mL that occurred during October 2011 is excluded from the Average Value.
- 5) Subject to change based on receipt of additional data.
- 6) Data only available for January, 2013 and July-December, 2013.
- 7) Data not available.
- 8) Exceedance related to effluent quality (TSS), however 57 occurrences noted for low UV dosage.
- 9) Data only available for September-December, 2014.
- 10) Data only available for July-December, 2014. Exceedance details provided in DMR supplementary reports.
- 11) Three exceedances related to effluent quality (1 total coliform, 1 TSS, 1 BOD). However, 56 occurrences were noted for low UV dosage.
- 12) Standard decreased from 200 CFU/100 mL to 88 CFU/100 mL
- 13) Data only available from January, 2015-April, 2015.

In general, the plant is performing very well in comparison to its NPDES permit limits. Both biochemical oxygen demand (BOD) and total suspended solids (TSS) removals are, on average, exceeding permit requirements. In addition, the plant is almost completely removing ammonia under most circumstances via its biological nutrient removal (BNR) process. In fact, the plant's BNR process allows the SWPCA to be the leading seller of nitrogen credits in the State of Connecticut, earning over \$1.2 million in revenues from this source alone in 2014.

The following summarizes observations from 2013 to 2015 plant performance.

- The average daily flows fall well within the design flow of the treatment plant. As discussed later, the SWPCA's current NPDES permit does not include limits on flow. However, for most of the reporting period, the SWPCA was operating under the old permit which had a permit limit of 24 MGD on a monthly average basis. During this time, the Stamford WPCF had no reported exceedances for flow. However, during wet weather, flows to the plant increase significantly. When high flows occur at the treatment plant, it is reported by SWPCA staff that the main sewage pumps cannot achieve the 68 mgd peak wet weather design flow, even with all pumps in service. This is also an issue because there is no redundancy under this situation. A study to evaluate the RSPS was conducted in February, 2015 and improvements have been recommended. There is currently \$8.2 million budgeted in the FY2016-FY2020 CIP to upgrade the headworks, the majority of which will go to improvements at the RSPS.
- From April 30, 2014 to May 1, 2014, record flow levels were registered at the plant due to heavy rain. Flows peaked at approximately 73 MGD for a few hours, causing effluent TSS and UV minimum dosage exceedances. This event resulted in the SWPCA receiving a Notice of Violation (NOV), which is discussed in greater detail in Section 6.4., "Notices of Violation."
- BOD – Effluent BOD and percent BOD removal is well within the NPDES limits. . There were no exceedances recorded during 2013 and 2015, and furthermore, average percent removal of BOD has increased each year since 2011 while effluent BOD concentration has remained steady at 98-99 percent. There was one BOD daily concentration exceedance in May 2014, which was caused by a heavy rain event. An effluent concentration of 153 mg/L was measured, which exceeds the daily permitted maximum of 40 mg/L. This noncompliance event resulted in the issuance of a NOV, which is currently still open and is discussed in detail in Section 6.4.
- TSS – Effluent TSS and percent TSS removal are well within the NPDES limits. The removal percentages have remained steady at 97-98 percent from 2013-2015, however, effluent TSS concentrations have steadily decreased since 2011 due to improved plant operations and a reduction in high flow events.. Only one exceedance occurred in 2013 (January) for the months for which data was available and only one exceedance occurred in 2014 (May). The exceedances were as follows:
  - The daily TSS maximum of 40 mg/L was exceeded in January 2013, as an effluent concentration of 50 mg/L TSS was measured. The TSS exceedance was due to a

- release of solids from the secondary clarifiers. Immediate actions were taken to decrease the effluent TSS concentration, including adjusting gates, pumps, and returns to balance the solids concentration while repairs to the clarifiers were underway. It is expected that the repairs to the secondary clarifiers have alleviated this issue and will prevent recurrence of noncompliance.
- The daily TSS maximum concentration of 40 mg/L was exceeded in May, 2014, as an effluent concentration of 375 mg/L was measured. This was the result of a heavy rain event and the DEEP was informed accordingly. This noncompliance event resulted in the issuance of a NOV, which is currently still open and is discussed in detail in Section 6.4.
  - Ammonia—Although the effluent ammonia concentration is higher in 2013, 2014, and 2015 than in previous years, effluent ammonia is consistently well below the NPDES limits. There are no exceedances for this data set.
  - Fecal Coliform – Fecal coliform was generally well within the NPDES limits. There were no fecal coliform exceedances recorded in this dataset. Although there is no daily limit for fecal coliform effluent concentration specified the NPDES permit, it is important to note that in January 2013, the daily fecal coliform concentration was recorded at 1000 CFU/mL. This high fecal coliform measurement occurred only two days after the previously mentioned high TSS reading of 50 mg/L. There was also one recording of fecal coliform concentrations exceeding 2420 CFU/mL for the 7-day geometric average in January, 2015, according to the DMR. The 30-day geometric average was recorded at 5 CFU/mL, indicating the likelihood that the 7-day geometric average result was an error. This high reading was not discussed in the January, 2014 DMR supplementary report to DEEP. There have been no known exceedances recorded since the high 7-day geometric average reading in January 2014.

As noted above, most of the exceedances reported are a result of high flow events. Such exceedances during extreme wet weather are not unusual, and can be expected at many wastewater treatment plants. However, the SWPCA's collection system is a separated system, with separate collection lines for sanitary and storm flow. Thus, high flow events during wet weather appear to be an indication of a large amount of inflow/infiltration, which is also not unusual amongst collection systems in aging cities such as Stamford. To respond to this issue, the SWPCA has retained a contractor to conduct an extensive infiltration and inflow (I/I) study, which will include flow and rainfall monitoring in each of 44 delineated sewersheds.

It should be noted that although the plant's NPDES permit requires that the SWPCA to maintain a UV dose of at least 30 mW, s/cm<sup>2</sup> at all times, UV dose is not reported on the SWPCA's DMRs. UV data, however, has been analyzed from the MORs obtained for this time period and is summarized in Table 4-3. The MORs indicate that the UV dose frequently dropped below the 30 mW, s/cm<sup>2</sup> permit limit up until February 2014 when controls issues were addressed with the UV vendor. The exception is May 2014, when 12 exceedance readings were measured for low UV dosage; however the majority of these are not due to a UV system failure. During 2013, there were fifty-seven incidences in which

the dose dropped below this value at some point for the seven months for which data was analyzed. Twelve and fourteen such occurrences alone were recorded in August, 2013 and September, 2013, respectively. All of these incidences have been recorded and communicated to the CTDEEP along with the DMRs. In January, 2014, there were 16 low UV dose exceedances recorded. However, the number of recorded exceedances has decreased greatly since January, 2014. Although 45 exceedances were measured between February 2014 and April 2015, 12 of those occurred in May 2015 and were not caused by failures of the UV system directly.

Plant staff are well aware of this UV issue, and have discussed it with the UV system vendor and the CTDEEP. Many of the issues were believed to be related to UV system controls and may have not been actual low dose events. These controls issues have been addressed with the UV system vendor. In addition, the SWPCA recently contracted Hazen and Sawyer Engineers to evaluate the ongoing issues with the UV system. In addition to the UV system shutting down due to low water levels in the channels, there is also frequent algae growth in the channels and basin. Plant staff are working to troubleshoot and implement strategies to alleviate these issues. It is understood that cleaning the algae involves removing the screen from the channel, which can cause a drop in the channel's water level. When the water level is drawn down as a result of this process, the low water alarm is triggered, causing the UV system to reset. During the three minutes it takes to reset, the UV system is not active. The SWPCA has increased the cleaning frequency for the UV screens and have installed a brush cleaning system for the weirs, scum baffles, and effluent launders for Final Clarifiers #1, #2, and #4 to better control the algae growth. Discussions with operations staff also indicate that the SWPCA is considering adding effluent trough and weir covers to Final Clarifier #3 to control algae from this clarifier. With only 3 exceedances in UV dosage measured in the first four months of 2015 (two of which were not due to a system failure and were due only to an inaccurate recording), the data indicates that improvements made to the UV system have been successful in reducing noncompliance events.

In addition to the NPDES limits described above, the SWPCA is also subject to the General Permit for Discharge of Nitrogen from Publicly Owned Treatment Works (POTWs) in Connecticut. As is the case with all POTWs in Connecticut, the limits for total nitrogen discharge decrease each year until the year 2014. Stamford's total nitrogen limits as dictated by the General Permit are summarized in Table 4-4. Based on these limits, the SWPCA will either pay or receive money from the Nitrogen Credit Exchange that is managed by the CTDEEP. CTDEEP evaluated the Nitrogen Credit Exchange Program in 2013 and has determined that the program should be continued. CTDEEP is in the process of reviewing the Nitrogen General Permit and has requested that authorities continue the same trading process that was previously implemented for the current trading year.

**Table 4-4.**  
**Total Nitrogen Limits from General Permit**

Year	Total Nitrogen Discharge Limit (lbs/day)
2011	1017
2012	970
2013	947
2014	926
2015	926

In 2014, the SWPCA discharged an annual average of just 408 lbs/day of total nitrogen, making them the largest seller of nitrogen credits among all participating treatment facilities in 2014 with revenues from credit sales exceeding \$1.2 million. It is important to note that, while other POTWs in Connecticut likely require major capital investments to remove nitrogen, or are faced with large expenditures to purchase nitrogen credits, the recent WPCF upgrades have placed Stamford in an excellent position whereby no major upgrades are likely to be necessary to meet the General Permit requirements.

#### **4.2.3. Condition Assessment**

A major plant upgrade was completed in 2006. This upgrade included new aeration tanks with provisions for biological nutrient removal, a fourth final clarifier, a new UV disinfection facility, solids handling facilities, a new standby generator capable of serving all plant needs, and other miscellaneous improvements. Facilities constructed under this upgrade are generally in excellent condition. However, as discussed further in this report, there have been on-going issues with the effluent pumps that may need to be addressed under the SWPCA's capital budget. In addition, many of the facilities not upgraded during the 2006 plant upgrade are aging and/or have some operational issues. SWPCA has reviewed the results of several recently-completed condition assessments on several portions of the treatment plant and pump stations and are incorporating recommendations into their CIP. For more details on current CIP projects, refer to Section 5.

#### **4.2.4. Wet Stream**

In general, the preliminary treatment equipment, which includes the bar screens and raw sewage pumps, is old and has some operating issues but provides ample capacity. There is no grit removal from the headworks, which causes grit to travel to downstream processes, causing pre-mature wear on piping and equipment. The three bar screens have significant signs of corrosion but are functional and have sufficient capacity. However, plant staff report that rags and other large debris pass through the bar screens, which create significant issues in downstream processes. Consequently, a StrainPress® coarse material separator was installed on the primary sludge force main to protect downstream sludge processing

equipment. In addition, the plant receives approximately 250,000 gallons of septage per month from septage haulers that make approximately 12 to 15 deliveries to the treatment plant per day. There is no screening or grit removal of the septage, which flows directly into the influent channel upstream of the bar screens from the haulers' discharge location. This lack of screening is a cause of downstream issues, and the discharge site is a location for potential odor release as well. However, recent modifications including an automatic closing septage discharge connection and a granular activated carbon-based air treatment system at a manhole near the plant entrance gate have significantly reduced odors. The downstream issues are largely around added maintenance and operational challenges, however, such issues have not adversely impacted meeting discharge regulations. A study was completed to address the screenings issues. According to SWPCA staff, this study recommends new fine screens at the headworks and separate screening for septage.

The raw sewage pumps are approximately 30 years old. These pumps continue to function but have increased repair needs and are worn such that their capacity has been reduced, according to a Raw Sewage Condition Assessment, prepared for the SWPCA in 2015. All five raw sewage pumps are used under peak flow conditions, leaving no redundancy. There are currently two smaller constant speed pumps and three larger variable speed pumps. It has been recommended that all pumps be replaced in the near future, and that all pumps should have VFDs. The SWPCA is also interested in improving the energy efficiency of the raw sewage pumping system. A recent project was completed under which large pipe supports in the main sewage pump area were replaced.

The two primary clarifiers are in fair condition and provide ample capacity, even if one is taken out of service. The SWPCA's 5-year capital plan reflects upgrades to Clarifier #1 to improve the condition that clarifier as a \$400,000 job with the status of "pending". However, upgrades to Clarifier #2's scraper arms, as well as general upgrades to that clarifier, may be required as well in the near future, and are not currently part of the 5-year capital plan.

There are five aeration blowers that are reaching the ends of their useful lives, but are generally reliable, and there is excess capacity in the system, such that only one or two are normally needed. These blowers are inefficient, however, and should be replaced with more energy efficient units employing newer technologies. The blowers have limited turn-down, resulting in over aeration of the process, wasting energy and resulting in excess methanol consumption. The SWPCA is currently in the process of optimizing methanol usage and hopes to nearly eliminate this chemical.

Further, due to the configuration of the air header piping, two blowers must always be in service, even when the capacity of only one blower would be adequate. This piping configuration also results in inefficient operation. Air header piping modifications which would allow only one blower to be in service under low-demand scenarios have been

recommended. These modifications could result in significant energy savings. Further energy savings may be realized by enlarging the pre-anoxic zones in each of the Aeration Tanks, which is currently being evaluated. There is currently \$3.3 million budgeted in the 5-year CIP to upgrade the aeration blowers.

Additionally, back-up power to three of the blowers is provided by a 900 kw standby generator, which is the original generator for the plant and is aged. A recently completed study recommends the replacement of this generator and the blowers as well.

Two of the three aeration tanks are new to the 2006 upgrade and are in excellent condition and functioning quite well. However, there are issues with influent flow distribution to the two aeration basins. Specifically, there are potential RAS flow distribution issues, potential influent weir submergence, disturbances caused by nutrient recycle (NRCY) flow, and poor arrangement of flow distribution weirs. A study has been recently conducted of these flow distribution issues and recommendations include addition of a distribution box to distribute mixed liquor more evenly to each of the Aeration Tanks. In addition, flow metering of the return activated sludge (RAS) is recommended under this study to assist in even RAS distribution. The large size of the two aeration tanks also causes potential process issues when removing these tanks for maintenance and cleaning, as such a large aeration volume must be taken out of service at one time.

Supporting systems for the plant's biological nutrient removal system are generally also in very good condition. Three of the nutrient recycle (NRCY) pumps have had failures in the past. However, discussions with plant staff indicate that two new NRCY pumps have been procured, there are plenty of spare units, and that issues with the NRCY pumps have been resolved. The return activated sludge (RAS) pumps are in good condition.

There are four final settling tanks (secondary clarifiers). Three of the tanks are older tanks and one was added as part of the 2006 upgrade. Two of the older tanks were recently upgraded. Additionally, all three of the gravity sludge thickeners were replaced as part of the same CIP project.

Disinfection is accomplished in two UV channels. While the UV system is operational and serviceable, it has experienced periodic problems, and it remains vulnerable to flooding of its electrical components due to its below grade location and the possible failure of the final effluent pumps. SWPCA staff note that prior issues with the level sensors erroneously reading the level and lowering gates, causing the UV equipment to shut off have been corrected. Despite major programming changes and other improvements that have been made recently and have resulted in significant improvements overall, there are still sometimes dose spikes and issues with algae in the basin. SWPCA staff note that UV dosage is intentionally kept at 50, above the minimum of 30 so that the minimum required dose can be achieved despite some of these issues. This results in increased energy consumption but has allowed for compliance with permit limits. An algae control wiper

system was recently installed on the final clarifier effluent weirs and has been effective at controlling algae but has not completely eliminated the issue. In addition, covers for the effluent trough and weirs in Final Clarifier #3 are being considered to control algae in that clarifier. The SWPCA is continuing to work with the UV system vendor to make improvements to this system. There is currently \$4.3 million budgeted in the 5-year CIP (FY2017-FY2019) to replace the system.

The plant effluent pumps have experienced certain operational issues and have become overloaded under peak wet-weather conditions, but they are generally functional. These pumps are critical for the proper functioning of the plant during daily high tides, as treated effluent cannot flow by gravity to the outfall during these events. A study completed by Stantec on behalf of the SWPCA in March 2013 has identified that the effluent pump motors and VFDs are undersized for operation at full speed. The study recommends upgrading the effluent pump motors and VFDs and notes that this may also require larger diameter pump tube wells, electrical conduit and feed cables. SWPCA staff noted that these pumps are currently capable of delivering approximately 90 percent of their design capacity. In lieu of major changes to the motors and VFDs, it was determined that a relatively simple modification can be made to the effluent pump discharge piping to reduce the head that these pumps are required to achieve. It is anticipated that with this change, the pumps will be able to achieve additional capacity that can approach their design capacity. As a result, there is currently no project to address issues with these pumps in the CIP, as upgrades may not be necessary at this time.

#### **4.2.5. Solids Handling**

Sludge from the primary clarifiers is pumped to cyclone degritters and grit classifiers for grit removal. However, this system is reported to be under-capacity and is not maximizing grit removal, causing grit to travel to downstream processes that leads to premature wear on piping and equipment. Additionally, the primary sludge pumps are near the end of their useful lives and there are mechanical issues with the grit classifiers. The SWPCA is currently in the process of contracting with an engineering firm to study the primary sludge degritting system and recommend improvements. The three gravity thickeners original to the plant (1970s) were upgraded in 2012 as part of a \$1.6 million CIP project. The thickened sludge pumps (gravity thickener underflow) are also from the 1970s and are near the end of their useful lives. All four sludge transfer pumps are currently being replaced as part of a \$167,000 CIP project with an expected completion date of September 2015. These pumps were on-site, awaiting installment, during ARCADIS's May 2015 inspection.

The sludge blend tanks have had issues with corrosion. Repairs to both tanks were completed in September 2012. Both the gravity belt thickeners and belt filter presses are in very good condition, although some of the support equipment for them (polymer feed skids, feed pumps) is showing signs of deterioration, which is typical of chemical feed systems.



The sludge pelletization facility is relatively new, and is functioning as intended. The anticipated accompanying on-site waste-to-energy facility capable of using the sludge pellets as fuel, however, was never constructed. The SWPCA has determined that dewatered sludge and screenings/grit truck trailers parked on-site for significant periods of time are a major cause of odor issues. In order to address these issues, a granular activated carbon (GAC)-based odor control system has been installed in this area. When trucks are parked, a flexible hose duct is placed in the cargo compartment of the truck and a ventilation fan creates a vacuum to pull odorous air from the vehicles through the GAC vessel.

In addition, the wet scrubber system was previously being operated with no chemicals and was not effectively removing odors. Upgrades to the sodium hypochlorite system, which feeds all plant scrubber systems, were recently made and the scrubbers are now being run with sodium hypochlorite, but not with caustic soda for pH adjustment. The addition of sodium hypochlorite has made a significant difference, according to SWPCA staff, but the pH of such a system needs to be raised in order to optimize effectiveness. Odor complaints are still occasionally being received regarding sludge hauling vehicles sitting overnight from customers driving on the roadway outside of the plant. As a result, the SWPCA is currently evaluating constructing a building to hold the trailers loaded with sludge, screenings, and/or grit as part of their CIP.

#### **4.2.6. Support Systems**

The plant has two standby generators. One is new with the 2006 upgrade and is in excellent condition. This generator is rated for 2,000 kW and can power most plant needs. The plant also maintains a second older and smaller generator (900 kW) that is used to power the aeration blowers. This generator is aging and plans are being considered for its replacement.

Improvements to the plant water system were made recently to address debris in this system, which was fouling downstream equipment. A strainer system was installed, which is reported to be effective at minimizing debris in the system. During ARCADIS's 2012 visit, the odor control systems were being operated as "flow-through" with no chemicals being added. However, as discussed above, sodium hypochlorite (but not caustic soda) are now able to be added to the scrubber systems.

Since the 2013 Engineer's Report was issued, according to operations staff, a sodium permanganate odor control system was also added to the belt press room such that the chemical addition occurs before the sludge reaches the belt presses. This system has improved the atmosphere for staff working in this area.

#### 4.2.7. WPCF Condition Summary

During the May 20, 2015 site visit to the Stamford WPCF, major unit processes were observed and compared to the condition assessment ratings from the 2012 visual inspections. A comparison of the ratings and summaries for the major equipment and unit processes is provided in Table 4-5.

**Table 4-5.  
Summary of Condition Assessment Ratings for Major Equipment and Unit Processes**

Process Area	Rating	
	September 2012 Inspection	May 2015 Review
Headworks	3	3
Main Sewage Pumps	3	3
Primary Settling Tanks	3	3
Primary Sludge Pumps	3	3
Degritting System	4	4
Aeration Tanks	1	1
Process Air Blowers	3	3
Secondary Clarifiers	3	1
UV Disinfection System	2	2 <sup>1</sup>
Plant Effluent Pumps	4	4
Waste Sludge Pumps	3	2
Return Sludge Pumps	2	2
Gravity Thickeners	4	1
Thickened Sludge Pumps	3	3
Sludge Blend Tanks	3	3
Gravity Belt Thickener	2	2
Polymer Feed Skids	4	1
Belt Filter Press Feed Pumps	3	3
Belt Filter Press	3	3
Pelletizer System	2	2
Plant Water System	4	2
Odor Control Systems	4	1
Standby Power Generation	2	2

Notes:

- 1) The UV System is in good condition, however, it is noted that it is located in an area that could be subject to flooding. This flooding potential, if not controlled, represents significant risk to the system.

Key:

Numerical Rating	Interpretation Of Rating	Description
1	Little to no risk	Relatively new and in good physical and operating condition
2	Some risk	Good condition, no known capital requirements
3	Moderate risk	Aged or worn but generally in good operating condition may require capital investment within 5-years
4	Significant risk	Operational but nearing end of life and/or requires investment to bring to full operating condition
5	High risk	Should be on high priority for renewal and/or replacement

A number of capital projects have recently been completed including improvements to the gravity thickener system, secondary clarifiers, UV disinfection system, plant water system, waste sludge pumps, polymer feed skids and odor control systems. In addition, a number of studies have been completed and capital projects identified in the SWPCA CIP related to the WPCF systems that received a rating of 3 or 4 (moderate to significant risk). Certain WPCF systems that received ratings of 3 or 4 are not critical plant system for permit compliance (i.e., dewatering system). Such systems will require capital improvement but would not necessarily be required in the SWPCA five-year planning period. Other systems such as the aging headworks and main sewage pumps are more critical for permit compliance but also require improvements, as is reflected in the current SWPCA 5-year CIP. As of the end of FY2014, engineers were selected to review and design upgrades to the raw sewage pump station, flow distribution to the secondary clarifiers, and the computerized SCADA process monitoring system. Review and preliminary design reports in the aforementioned three areas were all completed in FY2015. Details on the various planned and ongoing SWPCA CIP projects are included in Section 5.

The above ratings reflect an indication of the condition of each of the mentioned systems. It does not represent any statistical analysis for failure probability. It would be necessary to perform a more detailed criticality review and advanced equipment testing, which is beyond the scope of this report. Nonetheless, the ratings serve to provide an overview of where capital projects should be prioritized in the coming years.

### 4.3. Condition of Wastewater Pumping Stations

A field visit to fourteen remote sewage pump stations was conducted on October 1, 2012. In addition to the 14 pump stations that were visited as part of this work, seven of the other nine pump stations were visited on May 20, 2015 as part of the preparation for this report.

In general, based on our October 1, 2012 and May 20, 2015 site visits, it appears that most of the SWPCA's pumping stations are in good physical condition, are reliable, and have adequate capacity.

The SWPCA has a variety of different pumping station styles, including fully submersible stations, pre-fabricated "can" stations, which include dry pit pumps, and above-grade

“custom” stations. Most of the SWPCA’s stations are of relatively recent construction and are within the expected design lives for the facilities. These stations are generally reliable and no major issues have been reported with any of the stations. One new sanitary pump station was added during 2014 as part of the Carriage Drive sewer extension project. ARCADIS expects that as a new pump station is likely in “like new” condition and has few, if any issues. More details on this pump station will be incorporated upon receipt. Of the older stations, most have had significant upgrades within the last 10 to 20 years. Of notable exception is the Alvord Lane Pump Station which has reached the typical end of its useful life. However, this station has no reported reliability issues, and thus is likely to continue to function well for the next few years. In addition, the Cove Island Pump Station, which is the largest pump station in the SWPCA’s system, recently underwent an extensive upgrade and renovation, and thus is expected to not require any major capital expenditures for many years to come.

Most of the SWPCA’s pumping stations have two pumps, only one of which is required for peak conditions. However, a few pumping stations, due to excessive inflow and infiltration and/or inadequate design capacity, require both pumps to handle peak conditions. These stations do not have any redundancy under peak flow conditions. However, the vast majority of pumping stations have adequate, and even excess, capacity and thus run infrequently.

A large number of the pumping stations have permanently installed standby generators. However, all of the other stations have connection locations for a portable generator and have a manual transfer switch to allow them to run on generator power. While the SWPCA has a number of portable generators that can be deployed to those stations that are without power, the SWPCA would be vulnerable in the case of a wide-spread power outage. The SWPCA is well equipped to handle typical power outages which would only affect a portion of the City. The SWPCA normally has a maintenance contract in place to provide service and repair on all of their generators, and this service contract appears to be effective at maintaining the generators in good working condition. During the time of our site visit, the existing maintenance contract had expired and was in the process of being renewed.

All of the stations are equipped with radio telemetry and hard-wired phone lines to transmit critical signals and alarms to the SWPCA’s SCADA system. In this way, the SWPCA is fully modernized and normally has an excellent system for monitoring its remote pumping stations. However, during our site visits, there were radio telemetry issues with a number of the stations that the SWPCA was attempting to resolve.

While many of the pumping stations are in residential neighborhoods, the SWPCA does not report any significant issue with odors. This is likely due to the fact that the stations’ wetwells are reported to have little turbulence (and hence little release of odorous gases) and are well sealed.

A summary of ratings for each pump station is provided in Table 4-6.

**Table 4-6.  
Summary of Pumping Station Condition Assessments**

Pump Station		Capacity (GPM)	Original Installation Date	Rating	
				September 2012	May 2015 Review
1.	Bennett Street	125	1966	2	*
2.	Knapp Street	220	1967	3	*
3.	Clay Hill Road	110	1999	2	*
4.	Arden Lane	95	1999	2	*
5.	Timber Lane	62	1999	2	*
6.	Cedar Heights	58	1999	2	*
7.	Maltbie	83	1999	2	*
8.	Berry Place	100	1940	3	*
9.	Dee Lane	100	1971	2	*
10.	Soundview Farms 1	100	1972	3	*
11.	Soundview Farms 2	150	1972	3	*
12.	Pulaski St	43	1988	3	*
13.	Hobson St.	350	1970	2	*
14.	Saddle Rock Road	500	1975	3	*
15.	Burwood Avenue	800	1962	*	*
16.	Carter Drive	450	1960	*	2
17.	Cove Island	2800	2001	*	2
18.	Alvord Lane	2200	1941	*	3
19.	Commerce Road	852	1951	*	3
20.	West Avenue	350	1985	*	2
21.	Bonner Street	250	1961	*	2
22.	Greenwich Avenue	410	1986	*	3
23.	Carriage Drive	56	2014	*	*

\*Not inspected

Key:

Numerical Rating	Interpretation Of Rating	Description
1	Little to no risk	Relatively new and in good physical and operating condition
2	Some risk	Good condition, no known capital requirements
3	Moderate risk	Aged or worn but generally in good operating condition. May require capital investment within next five-years
4	Significant risk	Operational but near end of life or requires investment to bring to full operating condition.
5	High risk	Should be on high priority for renewal and/or replacement.

As noted, the above ratings reflect the general condition of the pump stations. For the most part, the pump stations appear to be highly reliable and in good physical condition, but many of them are aging.

The discussions provided regarding the plant ratings (see Section 4.2) also apply to the ratings for the pumping stations.

#### **4.4. Condition of Wastewater Collection System**

In accordance with their consent order, the SWPCA has implemented a Capacity, Management, Operations and Maintenance (CMOM) program with a number of initiatives. These initiatives are reported on yearly and include the following:

- Documenting sewer complaints and reporting sewer bypass incidences
- City line preventative maintenance and reduction of extraneous flow activities
- Sanitary sewer pump station maintenance activities
- Sanitary sewer rehabilitation and pump station evaluation activities
- Responses to emergency sanitary sewer overflow (SSO) incidences
- Fats, oils, and grease (FOG) abatement program
- Sanitary sewer GIS mapping system and computer maintenance management system (CMMS)
- 2015 I/I removal program

These initiatives are reported on in the following paragraphs.

In 2014, approximately 75 sewer complaints were recorded and investigated by the SWPCA. Sewer flow issues accounted for 64 complaints, and odor issues accounted for 4 complaints. The remainder of the complaints were sewer back-up and flooding related. Among the 64 flow issue complaints, 16 were attributed to poor City sewer conditions, while 48 complaints were attributed to poor private lateral conditions. Table 4-7 details the number and type of complaints received from 2010-2014. As indicated in the table, the number of complaints is roughly constant from year to year, but the number of complaints did decrease from 2013 to 2014.

**Table 4-7.  
Summary of Sanitary Sewer Complaints Received and Investigated**

<b>Complaints Received and Investigated</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Sewer flow	50	50	44	56	64
Unrelated sewer flow, i.e. odor, flooding, etc.	23	13	9	38	11
Total received and investigated	73	63	53	94	75

During January 2012, a consultant was retained by the SWPCA to update the SWPCA’s Geographic Information System (GIS) sanitary sewer and stormwater collection system mapping. This work began in June 2012 and is currently underway. As of December, 2014, the consultant has mapped approximately 221 miles of sanitary sewer lines, 6,781 manholes, 11,361 service connections, 16 pump stations, and 8 miles of force mains. Based on information provided for the preparation of the 2013 Engineer’s Report, approximately one-quarter of the sanitary sewer system is less than 28 years old, and nearly 90 percent of the system is less than 50 years old. For an old, northeast city such as Stamford, the available data indicate that the collection system is relatively new. Thus, based on age alone, it would appear that the system should be in satisfactory condition with some required improvements typical of a sewer collection system.

The SWPCA has a sanitary sewer maintenance crew which regularly implements preventative maintenance activities and measures to reduce extraneous flows from sanitary sewer lines. The SWPCA has developed an interim electronic database to track cleaning and closed-circuit television (CCTV) monitoring progress as well as to record information about the piping being cleaned (such as line condition, manhole evaluation rating and pipe diameter. Deficiencies observed in the field are reviewed with maintenance staff and supervising engineer to plan and coordinate corrective action. This interim database was integrated into SWPCA's web-based computerized maintenance management system (CMMS) for monitoring these features, while helping to forecast short and/or long-term sewer line rehabilitation needs. As of August 2013, the SWPCA began using the ICOM3 Asset Management Software linked to their GIS mapping as the CMMS for collection system and pump station operations monitoring. ICOM3 hosted software provides a suite of integrated inspection, maintenance, and asset management solutions using advanced planning, prioritizing, and management tools for all inspection, maintenance, and refurbishment activities. However, because this database is new to the SWPCA no historical information on sewer cleaning or CCTV efforts is available.

Inspection results from 2013 activities indicated that rehabilitation was necessary for approximately 3,500 linear feet of 36” and 42” reinforced concrete pipe (RCP). These sewers were bundled as a \$1.4 million sewer lining rehabilitation CIP project that was

completed in November 2014. In 2014, approximately 4,774 linear feet of 8", 10", and 12" sewer pipelines were relined.

Additionally, in 2014, 22 sanitary sewer pump stations were inspected and assessed according to several metrics (flow capacity, operation, and condition) and preliminary capital and operations and maintenance (O&M) needs were determined for each station as appropriate. Based on this information, the SWPCA is increasing their inspection and rehabilitation frequency each year. As of the end of calendar year 2014, the SWPAC has inspected and assessed 144,158 linear feet of larger diameter sewer line as part of their CMOM initiatives.

During 2014, all pump stations were inspected and maintained regularly, and logs of the daily, weekly, and/or monthly inspections and maintenance activities are kept at each pump station. Mechanics conducted their bi-annual assessment of each pump station's mechanical, electrical, and structural components. Additionally, a consultant was retained to conduct separate condition assessments of the Raw Sewage Pump Station and all of the sanitary pump stations. The SWPCA plans to incorporate all of this information into the CMMS.

The SWPCA maintains an emergency sanitary sewer overflow (SSO) response plan and has trained maintenance crews, foremen, administrators, and associated staff to use this plan. Periodic refresher training is conducted, and SSO details are reported as part of the SWPCA's annual CMOM report.

The SWPCA also implements a FOG program at approximately 500 Class III and Class IV food preparation establishments (FPEs) in Stamford and maintains a FOG Abatement Policies and Procedures Manual. Most FPEs have received the initial program overview and inspection, which consists of a walk-through of the kitchen operations and photo-documentation of FOG removal units. In 2014 approximately 26 FPEs received spot inspections from the SWPCA to help ensure continued implementation of the prescribed FOG maintenance program. The SWPCA also reviews FOG removal design systems for existing or proposed FPEs; 12 total were reviewed in 2014. The SWPCA is active in enforcement of the FOG program, as 12 FPEs were found to be in non-compliance with the FOG abatement ordinance in 2014. These FPEs were issued notices of violation (NOVs) and fined accordingly. Other FPEs that did not receive the initial in-person FOG abatement training program were instructed to remove FOG materials and warned of potential non-compliance NOVs and/or fines.

The SWPCA has engaged a consultant to complete an I/I study of the sanitary sewer collection system. The study will be partially funded through a Clean Water Fund planning grant (55 percent of study cost). The study began in February, 2015 and has several objectives to complete during FY2015-2016. These objectives include:



- Dividing the collection system into a total of 44 sewersheds, each containing approximately 33,000 linear feet of sanitary sewer.
- Identifying locations with excessive I/I through installing 44 flow meters and 3 to 4 rainfall meters at key locations within the collection system to continuously monitor sewer flows and rainfall. Flow meters will monitor and record flows for 12 months.
- Perform a Sewer System Evaluation Survey (SSES) of a pilot area consisting of a subarea of approximately 30,000 linear feet of sewer pipeline identified from the flow monitoring program as having the greatest amount of I/I.
- Develop a recommended rehabilitation program for the pilot area.
- Design the recommended system rehabilitation for the pilot area.

#### **4.5. Conclusions and Recommendations**

While the 2006 upgrade to the Stamford WPCF was substantial, much of the WPCF dates to the 1970s and still has key equipment components which are reaching the end of their useful life. These components include the headworks and raw sewage pumps. Many of these major areas have recently been addressed by capital projects or are in the process of being addressed through initial planning studies. Upgrades were completed for the gravity thickeners and secondary clarifiers, with the systems currently on-line as of May 2015. Additionally, an upgrade of the odor control systems at the WPCF was completed, resulting in a significant reduction of fugitive odors. Refer to Section 5 for details on the recently-completed and ongoing CIP projects.

Based on May 2015 visual inspections, ARCADIS has made some observations of the system that if addressed could further improve facility performance and operations. Many of these are already addressed in the SWPCA's five-year capital plan. They include:

- Debris from the headworks and septage receiving facilities is not effectively removed in the headworks, causing issues with downstream equipment and processes. It is recommended that fine screens be installed at the headworks, as well as a separate screen for the septage influent pipe.
- Grit is not removed in the headworks and is poorly removed from the primary sludge. Thus, grit travels throughout the plant, causing pre-mature wear on equipment. As discussed in Section 5, a capital project to upgrade the degritting (\$700,000) is currently budgeted in the CIP with a status of "pending."
- All five main sewage pumps are required to run during peak flow events, with no redundancy. This could create a regulatory issue with significant bypasses if a pump were to fail during a peak flow event. Because these pumps are generally quite reliable, no such issues have occurred to date. A capital project is included to address capacity issues with the main sewage pumps. Alternatively, projects aimed at limiting I/I should be considered, as such projects could reduce the need to utilize all five pumps during wet weather conditions.

- The existing aeration blowers are oversized and inefficient. Two or three of the blowers should be replaced with more efficient units appropriately sized to meet diurnal process air requirements, while providing enough system capacity to meet peak demand. In addition, piping should be modified to allow only one blower to run during low demand conditions. A capital project is currently included in the 5-year capital plan to upgrade the blower system.
- The UV system has not functioned as intended throughout its life, and it remains prone to flooding of its electrical components due to its location in a former chlorine contact tank. If the UV system were to fail, chlorine cannot be used, as there are no facilities for dechlorination of the effluent. The SWPCA has been steadily making improvements to this system over the last few years and is continuing to study necessary improvements. The current 5-year CIP includes significant funding for the UV system.
- The plant relies on effluent pumps to pump water out of the plant during daily high-tide events. These pumps are critical, but have had issues with VFDs. Recent studies confirm a need to upgrade the effluent pumps. We believe that future capital funding should be allocated for upgrades to these critical pumps. However, based on recent upgrades that have been made and a proposed plan to modify piping in order to increase the capacity of these pumps, we believe that such projects are not immediately pressing.

Overall, the wastewater treatment plant appears to have sufficient capacity to meet current and projected future wastewater treatment needs of the service area. Based on the limited visual observations and review of information, the plant appears to be in good condition and functioning well. Plant performance data indicate that the WPCA is operating well within its permit limits except for some isolated incidents related to high flow events. Based on our observations, discussions with plant staff, and a review of the DMRs and MORs, treatment plant performance continues to show improvement since 2011.

With respect to the pump stations, the SWPCA's pump stations appear to be reliable and have sufficient capacity. Most of the SWPCA's stations are of relatively recent construction and are within the expected design lives for the facilities. Of the older stations, most have had significant upgrades within the last 10 to 20 years. Of notable exception is the Alvord Lane Pump Station which has reached the typical end of its useful life. This station, however, does not seem to have reliability issues, and thus is likely to continue to function well in the next five years.

While it is difficult to assess the condition of the collection system, the SWPCA has reported that 90 percent of the collection system is less 50 years old, with 25 percent of it being less than 26 years old. The average age of the collection system therefore appears to be younger than those of other well established major Northeast cities. Many of these cities have pipes in excess of 75 years in age. The SWPCA has reported that the collection system is in generally good condition for its age. The SWPCA now has an active system of cleaning and videotaping the collection system.

## 5. Capital Improvement Program

---

ARCADIS was provided with the 5-year capital plan for the SWPCA, which covers the fiscal years 2016 through 2020. The fiscal year 2015 plan was also provided for reference. This plan is provided as **Appendix A**. Planned expenditures have been organized into three major categories, as follows:

- Treatment plants
- Pump stations
- Sewer collection system

### 5.1. Past Capital Improvements

The SWPCA completed a \$105 million upgrade of the Treatment Plant in 2006. The upgrade was financed primarily by grants and loans under the Clean Water Fund program of the State of Connecticut.

Many of the recently-completed and ongoing CIP projects were and are currently being funded through proceeds from the 2013 bond issue. In total, approximately \$12.8 million of proceeds from the 2013 bond issue have been used to fund a variety of completed and ongoing SWPCA CIP projects. On average, over the past five-years the SWPCA had been investing approximately \$5 million annually into the system. The 2015-2020 CIP increases the level of investment to almost \$8 million annually, on average. Some of the larger, recently-completed CIP projects are highlighted below.

- Soundview Avenue Sewer Relining- About 3,000 linear feet of 36” and 42” diameter sewer trunk line was relined using cured-in-place pipe lining. The project cost approximately \$1.4 million.
- Clarifier and Thicker Rehabilitation- Major upgrades to the mechanical equipment were completed to all three primary sludge gravity thickeners and two secondary clarifiers. The project cost approximately \$1.6 million.
- Carriage Drive Area Sewers- Sewer extensions were completed for a total of 71 homes for approximately \$3.4 million. Proceeds from the 2013 bond issue were used to fund approximately \$2 million of the project with the remainder funded from the City’s pooled cash account. According to the SWPCA, it is anticipated that the City will reimburse the SWPCA for the pavement and other non-sewer costs related to the Carriage Drive project which will serve to pay off this pooled cash account loan. The SWPCA is currently scheduling a meeting with the City and members of the Finance Committee to discuss.
- Vehicle Replacements- A sewer cleaning (vac) truck, a crane truck, four medium-sized trucks, and two passenger vehicles were purchased for a total of approximately

\$611,000. Proceeds from the 2013 bond issue were used to completely fund this project.

- Odor Control System Upgrade and Replacement- The odor control system at the WPCF was upgraded and repaired, reducing fugitive odors significantly.

In addition, as discussed above the SWPCA's current CIP includes a number of planned and ongoing projects in various stages of completion. Ongoing CIP projects are discussed in detail in Section 5.2. and include the following:

- Citywide computerized mapping of the sanitary sewer systems using GIS – *ongoing, sanitary sewers are reported 80 percent mapped as of end of calendar year 2014* (\$435,000 funded through 2013 bond proceeds).
- Engineering design for the Wedgemere Road and Perna Lane sewer extension projects - *Wedgemere design is complete, Perna Lane design is ongoing* (\$249,000 of Perna Lane Area Sewers project funded through 2013 bond proceeds).
- Engineering review and design for the upgrades to the Raw Sewage Pumping Station and flow distribution to the secondary clarifiers – *studies are complete, construction to take place in 2017.*
- Engineering study for the upgrades to the Aeration Blowers – *scheduled to be completed June 2015.*
- Engineering review and design for upgrades to the computerized SCADA system - *upgrade study complete, currently in design with design completion expected by October 2015.*
- Implementing a CMOM program, with a variety of initiatives as discussed in Section 4.4. – *ongoing* (\$1.6 million funded through 2013 bond proceeds).

The SWPCA has also recently complete studies on its pump stations and UV systems.

## **5.2. Current and Future Capital Improvement Planning**

A summary of the SWPCA's 5-year capital plan is provided in Table 5-1. The full plan is included in Appendix A. In general, a vast majority of the plan is dedicated to the treatment plant and collection system, and only a small proportion is provided for the pump stations.

**Table 5-1:  
Summary of Six-Year Capital Plan by Category (\$ Millions)\***

Category	Annual Capital Cash Flow Forecast (FY, \$ Millions)						Total (M)	Avg. per FY (M)	% of Total
	FY15	FY16	FY17	FY18	FY19	FY20			
Treatment Plants	\$0.6	\$2.5	\$8.2	\$8.9	\$2.2	\$0.2	\$22.5	\$3.75	46%
Pump Stations	\$0.1	\$0.4	\$0.9	\$0.6	\$0.1	\$0.1	\$2.2	\$0.36	4.5%
Collection System	\$2.7	\$5.1	\$5.2	\$3.9	\$6.5	\$0.6	\$23.9	\$4.0	49%
<b>Total</b>	<b>\$3.4</b>	<b>\$8.0</b>	<b>\$14.3</b>	<b>\$13.4</b>	<b>\$8.7</b>	<b>\$0.8</b>	<b>\$48.6</b>	<b>\$8.1</b>	<b>100%</b>

\*Totals may not add due to rounding.

It should be noted that ARCADIS also obtained the City of Stamford’s Capital Budget for Fiscal Year 2015-2016, which we understand has been adopted. It is our understanding that the SWPCA has discussed requirements for additional projects with the City and is in the process of securing such approvals from the City. The 5-year capital plan represents the SWPCA’s anticipated plan based on the information available as of May 2015, and is subject to change as additional information becomes available.

### 5.2.1. Treatment Plant

A total of \$22.5 million is dedicated to treatment plant capital projects from FY2015 through FY2020. This is an average of \$3.75 million per year over a six-year period. While a large portion of the plant was recently upgraded and should not require additional capital expenditures for many years, there are also many portions of the plant that are reaching the ends of their useful lives.

Of this \$22.5 million, \$8 million is dedicated to a proposed headworks project to provide new coarse and fine screening, as well as new raw sewage pumps. An additional \$4.3 million is dedicated to UV disinfection and another \$3.3 million to aeration blowers. The SWPCA completed the \$1.6 million project that was dedicated to upgrades to two secondary clarifiers and to the gravity thickeners. The SWPCA expects to fund approximately \$5.9 million, or 26 percent of the treatment plant projects done as part of the current CIP through proceeds from the 2015 revenue bond issue. The remainder is to be funded with either capital reserves, CWF grants and loans or future bond issues.

The following additional observations are made regarding the capital plan for the Stamford WPCF:

- The primary sludge degritter system functions poorly, creating grit issues throughout the entire plant. There is \$700,000 budgeted in the current CIP for this work, and it is expected that this project will be funded entirely by proceeds from the 2015 revenue bond issue. It is likely that a complete upgrade needs to be done for the entire system,

including upgrades to the primary sludge pumps, hydroclones, and grit classifiers. Such needs are being addressed by an on-going study. If such a complete system upgrade is required, the currently \$700,000 budget may be inadequate.

- While the SWPCA and Synagro are in process of completing pelletizer odor control improvements and upgrades to the chemical feed system, there is no future funding allocated for upgrades to other odor control systems. Such funding should be allocated in the near future due to reported odor issues. SWPCA staff have indicated that funding for the other odor control systems will be obtained from operating budgets, as they do not believe a capital project is necessary for such improvements. There is, however, an odor control-related project currently in the CIP. There is \$300,000 estimated to construct a storage shed for screenings, grit, and sludge trailers to control odors from the trailers that are loaded with sludge, screenings, and grit. This project currently has a status of pending.
- Currently the SWPCA's CIP budget includes \$4.3 million of capital funding for UV disinfection improvements for years FY2017 and FY2018. There is also currently \$50,000 from the 2013 bond issue proceeds earmarked for upgrades to this system. However, it is not expected that this project will be funded from 2015 bond issue proceeds. Based on the results of a recent study, it appears that the existing UV system is capable of treating effluent to achieve the recently-promulgated permit limits. However, there continue to be operational issues with this UV system. Thus, this level of funding should be updated (may be revised up or down) as further planning for the future of this system is completed.
- The effluent pumps are required every day during high tide. The plant was never designed for this use, and the pumps are aging. Recent studies confirmed the potential need for effluent pump upgrades. The SWPCA has not yet included any upgrades in its capital plan. Although piping modifications are proposed which would improve the capacity of these pumps, a complete upgrade to this system should be considered within the next several years.

### **5.2.2. Pump Stations**

A total of \$2.2 million is budgeted for pump station upgrades over the next six years. Of this budget, \$250,000 is budgeted to procure portable standby generators. An additional \$600,000 is dedicated to miscellaneous pump station upgrades between FY2015 and FY2020.

As mentioned, most of the pump stations are in good to very good condition. Many are relatively new or recently upgraded. Only Alvord Lane is older and has not received significant upgrades recently, and thus in need of an upgrade. However, this station is currently reliable. There is \$825,000 budgeted for Alvord Lane pump station upgrades in 2016 and 2017. Additionally, there is \$500,000 budgeted for upgrades to Greenwich Avenue pump station in 2018. The level of upgrade at Alvord Lane should be evaluated and this estimate potentially modified based on that evaluation.

As the wastewater pump stations are generally in good condition, we believe that the \$100,000 currently earmarked each year in capital funding over the next five years for miscellaneous pump station equipment replacements is reasonable. However, additional funds should be budgeted for major upgrades to specific pump stations in the near future. The SWPCA expects that \$200,000 from the 2015 revenue bond proceeds will be used to fund the miscellaneous pump station improvements in FY2016 and FY2017. Additionally, the SWPCA intends to fund the entire upgrade of the Alvord Lane pump station through 2015 revenue bond proceeds. The Greenwich Avenue pump station upgrades will not be funded through 2015 bond proceeds, but will be funded with a future bond issuance.

### **5.2.3. Collection System**

The collection system has almost an equal proportion of capital funding as the treatment plant. Of the \$23.9 million dedicated over the next six years, \$14.2 million, or 59 percent of the total funding for the collection system is dedicated to the construction of new sewers. This funding is comprised of four projects, Wedgemere Road, Perna Lane, West View Lane, and McGregor area sewers projects. Additionally, \$3 million, or 13 percent of the collection system capital plan is dedicated to CMOM programs that are a result of the current consent order (which is discussed further in Section 6). Excluding these projects, there is \$6.6 million remaining for the maintenance and upgrade of existing sewers. This is a significant increase over historic amounts. Based on the information received previously, while the vast majority (74 percent) of the system is over 26 years old, 9 percent is over 51 years old, and 16 percent is either old cast iron or tile. Additional funding for collection system maintenance should be considered based on findings of the TV inspections and information compiled from the CMOM program.

The SWPCA intends to fund the entire Wedgemere Road sewers project through 2015 bond proceeds and \$3 million, or 60 percent of the Perna Lane Area Sewers project through the same bond issue. The remaining \$2 million of the Perna Lane Area Sewers will be funded with available capital reserves and/or future bond issues as required.

The SWPCA has recently awarded contracts for the study and improvement of its collection system (i.e., GIS, (RFP No. 586 Evaluation of the Sanitary Sewer System and Pump Stations)). It is anticipated that the study would identify recommended improvements to the collection system. As a result, SWPCA may need to adjust and prioritize its project CIP to reflect the resulting recommendations of this study. SWPCA's share of the cost of the I/I and the SSES studies will be funded through proceeds from the 2015 bond issue (estimated to be \$230,000), with the remainder funded by a CWF grant.

## **5.3. Conclusions and Recommendations**

As illustrated in Table 5-1, the SWPCA has identified a capital program for the continued improvement of its wastewater infrastructure and many of the proposed capital projects are in alignment with our observations.

It appears that the SWPCA is currently aware of the condition of the system and capital projects needed to address shortcomings. As with any large wastewater utility, there is a need to prioritize capital projects given limited funds. It may be necessary for the SWPCA to further analyze underperforming systems to best determine how to maximize existing available funds and properly identify future funding needs. It is recommended that the SWPCA update its 5-year capital plan as soon as the results of the numerous currently ongoing studies are completed and in no event less than once per year. Changes to the capital plan should be readily communicated to the City so as to not delay the acquisition of funding to support the required capital projects.



## 6. Regulatory Status

---

The following section describes the review of federal and state wastewater and water quality requirements as they relate to current and potential future operation of the SWPCA's wastewater system.

### 6.1. Existing Regulations

Regulations affecting the discharge of wastewater from the Stamford WPCF are reflected in its NPDES permit (NPDES No. CT0101087) and the General Permit for Discharge of Nitrogen from Publicly-Owned Treatment Works (POTWs).

Currently, the NPDES permit regulates fecal coliform, total suspended solids (TSS), biochemical oxygen demand (BOD), ammonia-nitrogen and UV dose, in addition to other parameters such as inorganic compound concentrations. The new final permit dated June 25, 2013 eliminates the limit on the average monthly flow rate of 24 mgd but adds the following additional requirements:

- Testing for chronic aquatic toxicity
- Instantaneous limit for enterococci of 500 colonies per 100 ml
- Instantaneous limit for fecal coliform (no more than 10 percent of samples can have more than 260 colonies per 100 ml)
- Fecal coliform limits ramp down by October 31, 2016 as follows:
  - Monthly geometric mean from limit of 200 colonies per 100 ml to 88 per 100 ml
  - Weekly geometric mean from limit of 400 colonies per 100 ml to 260 per 100 ml
- Additional compliance schedules for studies to determine how to comply with new fecal coliform and enterococci limits

Table 6-1 highlights the current permit limits of the major parameters evaluated in the preparation of this report.

**Table 6-1.  
NPDES Permit Requirements**

Parameter	Limit Type	NPDES Limit Current Permit
BOD <sub>5</sub> – Effluent (mg/L)	Monthly Average	20
BOD <sub>5</sub> – % Removal	Daily	85
TSS – Effluent (mg/L)	Monthly Average	20
TSS - % Removal	Daily	85
Ammonia (as N) – Effluent (mg/L) June – October	Monthly Average	2
Fecal Coliform (CFU/100 mL)	30-day geometric mean	88 <sup>1</sup>
Fecal Coliform (CFU/100 mL)	7-day geometric mean	260 <sup>1</sup>
Fecal Coliform (CFU/100 mL)	Instantaneous Limit (for no more than 10% of samples)	260 (10% of samples)
Enterococci (CFU/100 mL)	30-day geometric mean	35
Enterococci (CFU/100 mL)	Instantaneous Limit	500
UV Dose (mW, s/cm <sup>2</sup> )	Instantaneous Limit	>30

Note:

- 1) New fecal coliform limits take effect by October 31, 2016

Discharge of total nitrogen is regulated by the General Permit for Discharge of Nitrogen from POTWs in Connecticut. As discussed in Section 4, the limits for total nitrogen discharge for the SWPCA is currently 926 lbs/day (calendar year 2015). A new General Permit has not yet been issued. As such, it is unclear how the limits may change over the next five years. It is anticipated, however, that the WPCF will continue to perform well and receive nitrogen credit revenues under the State program.

Regulations affecting the disposal of residuals from influent screening, grit removal, primary clarification, and secondary treatment are listed in Table 6-3.

**Table 6-2.  
Regulations Governing Residuals Disposal**

Waste Stream	Governing Regulation
Screenings and Grit (nonhazardous sludge)	RCRA 40 CFR 258 "Subtitle D"
Primary and Secondary Sludges	40 CFR Part 503

There is currently no Title V Operating Permit, which would govern air emissions, for the Stamford WPCF.

## 6.2. Administrative Orders

Currently, the SWPCA is under a USEPA Region-I issued consent agreement and final order (CAFO) dated August 18, 2011 related to a failure to report collection system bypasses and a failure to submit annual CMOM reports in accordance with USEPA guidelines.

The CAFO identified a number of infractions with necessary corrections to be made; all of which are CMOM-focused and/or would serve to enhance CMOM-readiness. As part of their response, the SWPCA has undertaken the following:

- Implemented a FOG abatement program (refer to Section 4.4 for details).
- Initiated a GIS collection system inventory and mapping program, which has mapped and digitized the following as of the end of calendar year 2014:
  - 221 miles of sanitary sewer pipe;
  - 6,781 manholes;
  - 16 pump stations;
  - 8 miles of force mains;
  - 22-junction & diversion chambers; and
  - 11,361 service connections
- Initiated a program to logs areas of sewer cleaning, CCTV investigation and any sewer complaints, such as backups.
- Implemented a program to regularly inspect, clean, and assess the sanitary collection system using industry-standard CCTV inspection practices.
- Acquired and implemented a CMMS.
- Established a goal of inspecting (and cleaning as appropriate) thirty to forty miles of collection system sanitary sewer per year.

More details on the response to this CAFO are located in Section 4.4.

## 6.3. Notices of Violation

The SWPCA has received Notices of Violation (NOVs) issued by the CTDEEP. The following provides a summary of the NOVs which are either presently open or have been closed within the past year:

- Failure to prevent bypass of the UV system, and failure to operate the final effluent pumps and UV system for continuous disinfection issued November 9, 2011 (NOV #11-010). This NOV was a result of failure of the variable frequency drives (VFDs) on two of the three effluent pumps. As a result of two of the three pumps being rendered inoperable, the plant could not handle high flows and had to bypass the UV disinfection system. As part of this NOV, the SWPCA was required to perform a

comprehensive evaluation of the UV system and the effluent pump system. The UV system report was completed and transmitted to the CTDEEP in February 2012. The VFDs that caused the issue were replaced in November 2011. This NOV was officially closed on May 4, 2015.

- Failure to prevent a bypass and failure to provide continuous disinfection to protect shellfish resources resulted in a violation of the SWPCA's NPDES permit. Consequently, NOV #14-002 was issued on March 10, 2014. The SWPCA responded to this NOV in an acceptable manner and it was officially closed on April 17, 2014.
- Several failures at the treatment plant resulted in a violation of the SWPCA's NPDES permit, and NOV #14-003 was issued on May 13, 2014. Issues that caused the NOV include:
  - Failure to prevent a bypass
  - Failure to meet final effluent requirements for TSS and minimum UV dosage
  - Failure to provide continuous disinfection to protect shellfish resources

The CTDEEP has mandated that the SWPCA retain a consultant to oversee the required actions for this NOV. That consultant in turn must utilize a qualified Connecticut-licensed professional engineer to develop a scope of work for a comprehensive I/I evaluation of the city's wastewater collection system, including a timeline for the completion of the I/I evaluation. Additionally, the SWPCA and the consultant shall initiate the I/I evaluation in accordance with the DEEP-approved SOW at the earliest opportunity possible and when conditions are deemed most conducive for yielding acceptable I/I evaluation results. The SWPCA and consultant are also required to submit semiannual status reports describing actions taken to fulfill the NOV mandates.

The SWPCA responded to this NOV on 5/21/2014 and advertised their RFQ for the I/I study on 7/1/2014. The consultant selection was made, and the I/I study commenced in February 2015. More details on the I/I Removal Program are located in Section 4.4. The SWPCA also developed a written Standard Operating Procedure (SOP) for WPCF operations during wet-weather, high flow events.

## 6.4. Future Regulations

There are no other regulations forecasted to be promulgated in the near future which would have a significant impact on the plant's processes or would require significant capital expenditures.

More stringent limits that have been set-forth in the SWPCA's most recent NPDES permit may require significant capital investment to the SWPCA's UV system. The SWPCA believes that the UV system is capable of meeting these more stringent limits but is evaluating options for its replacement. The estimated capital costs for a new UV system

will vary based on the system selected. The SWPCA has included \$4.3 million in its current CIP for the UV system project and plans to initiate improvements in FY2017.

Although not necessarily related to new regulations, it is recommended that resiliency studies, especially with regards to flooding, be conducted. As the City already has a hurricane barrier in place and was affected by several recent storms hurricanes, the SWPCA and the City would greatly benefit from a greater understanding of the ability of their systems to respond to a 100-year or worse flood. The SWPCA can then take appropriate actions to improve collection system and treatment plant resiliency and thus decrease the effects of future hurricanes and floods.

The United States government has made natural disaster resiliency a priority. As such, the U.S. Department of Housing and Urban Development (HUD), in collaboration with the Rockefeller Foundation, is competitively awarding nearly \$1 billion in HUD Disaster Recovery funds to eligible communities, including those in Connecticut. Although first-round selections for this competition have already been made, other Federal resiliency funding is available.

## **6.5. Conclusions**

The SWPCA is currently under a consent order to address CMOM-related issues in its collection system. Based on progress reports provided by and representation made by the SWPCA, it is evident that the SWPCA is making significant strides towards achieving the requirements of this consent order. The SWPCA has invested significant funds in increasing its CMOM-readiness and has continued significant investment in CMOM activities through its current CIP. The SWPCA will also need to address the more stringent requirements of its new permit.

As part of its current CIP, the SWPCA is continuing to evaluate options for its UV system to address recurring exceedance issues and potential needs due to increasingly stringent permit limits. The SWPCA will need to update its capital improvement plan based on the findings of the ongoing studies. The SWPCA has represented that it is committed to meeting all regulatory requirements and implementing system improvements.

Treatment performance at the Stamford WPCF has generally been quite good and well within permit limits, A few recent incidences have resulted in NOVs. These issues have generally been related to high flow events, which are not unusual for treatment plants such as the WPCF and indicate I/I issues in the system, or equipment failures. The high flow event exceedances are being addressed through initiating preventative activities at the WPCF, implementing a flow and rainfall program, and initiating an I/I study of the collection system. The equipment failures that led to exceedances have since been addressed. Additional improvements to the WPCF are both ongoing and have been incorporated in the current CIP. The number of such exceedances has decreased in the last

couple of years as the SWPCA has been pro-actively addressing issues based on its ongoing and planned capital investment.

# 7. Customer Statistics and Sewer Use Rates

## 7.1. Customer Base

According to 2013 U.S. Census Bureau statistics, the City has a population of approximately 126,000 and Darien has a population of 21,000 (based on 2010 Census Bureau statistics). The SWPCA provides services to approximately 19,500 customer accounts which represent a population of approximately 100,000 in the City and approximately 12,500 in Darien, including residential, commercial, and industrial, government and non-profit customers. The remaining 20 percent of City population and 40 percent of Darien population are served by septic systems.

Similar to most municipalities, the largest percentage of SWPCA customers are residential (including home owners, condominium owners and renters) at approximately 88 percent, while the remaining 12 percent of customers are primarily commercial (10 percent) and governmental, well users and industrial accounts (2 percent). Table 7-1 illustrates the historic trend in number of customers and consumption over the past five years. As illustrated in this table, the values have varied from year to year but overall have generally increased over the past five years.

For FY2015, the number of billed customer accounts decreased which appears contrary to the growth that the City is experiencing. The likely reason is because of redevelopment in the downtown area where new multifamily housing (homeowner’s associations and apartment buildings) which count as one customer have replaced a number of single family homes. Consistent with this growth, however, the amount of billed water consumption increased significantly in FY2015.

The FY2015 growth in billed consumption was likely due in part to 460 new residential units that were opened in 2014. Continued growth is anticipated with another 853 units currently under construction and 1615 proposed with land use approvals. All of these units are located in the downtown sewer service area and consist largely of apartment building units, where the SWPCA typically bills the owner of the apartment building and not the individual apartment units.

**Table 7-1.  
Historical Customer Accounts and Consumption**

Description	FY2011	FY2012	FY2013 <sup>3</sup>	FY2014 <sup>3</sup>	FY2015 <sup>1</sup>
Customer Accounts <sup>1</sup>	19,360	19,381	19,378	19,447	19,382
Annual Increase in Customers	1.5%	0.1%	0%	0.4%	-0.3%
Consumption (CCF) <sup>2</sup>	4,278,000	4,313,364	4,270,274	4,276,100	4,434,522
Annual Consumption Change	-6.50%	0.8%	-1.0%	0.1%	3.7%

Notes:

- 1) Source: Stamford Water Pollution Control Authority
- 2) CCF represents hundred cubic feet (equivalent to 748 gallons).
- 3) Source: Financial Statements and Supplementary Information for the Years Ended June 30, 2013 and 2014.

For FY2016, the SWPCA projects an increase in customer accounts from 19,382 to 19,500 and in billed consumption from 4,434,522 to 4,461,129 ccf. For the purposes of projections beyond FY2016, however, customer counts and billed consumption were assumed to remain generally flat over the remainder of the forecast period. The actual number of billing customers may not increase significantly because most of the anticipated growth is in apartments and homeowner's association with multiple units billed under a single account. In addition, while consumption will likely increase with the addition of new units, it remains unknown how much this increase may be offset by future water conservation efforts. A summary of the projected customer accounts and consumption forecast is shown in Table 7-2.

**Table 7-2.  
Projected Customer Accounts and Consumption**

Description	FY2015	FY2016	FY2017	FY2018	FY2019
Customer Accounts	19,382	19,500	19,500	19,500	19,500
Annual Increase in Customers	-0.3%	0.6%	0%	0%	0%
Consumption (CCF)	4,434,522	4,461,129	4,460,129	4,460,129	4,460,129
Annual Consumption Change	0%	0%	0%	0%	0%

Table 7-3 illustrates the top ten customers, not including Darien and Aquarion whose revenue is contracted.



**Table 7-3.  
Overall Top Ten Customers in FY2014**

Property Owner	Billed Water Consumption (CCF)	Percent of Total Consumption
City of Stamford	71,642	1.68%
Stamford Hospital	54,638	1.28%
Stamford Town Center	42,032	0.98%
Hilton Stamford Hotel	34,454	0.81%
Saint Johns Towers	34,100	0.80%
Stamford Housing Authority	31,964	0.75%
SLC Operating LLC	29,454	0.69%
Fairfield Bedford LLC	26,716	0.62%
Continuing Care Retirement	24,920	0.58%
Stamford Marriott Hotel	24,280	0.57%
Total	374,200	8.76%

As illustrated in Table 7-3, the largest single customer, not including the City of Stamford, is Stamford Hospital, which represents approximately 1.3 percent of the total billable consumption. The top ten customers represent only approximately 8.8 percent of the total billable consumption. As a result of this analysis, the SWPCA was found to have a strong and diverse customer base. Furthermore, Stamford has the lowest unemployment rate in the State at 5.4 percent and has seen an increase in its FY2016 Grand List due to growth of 1.7 percent. The median household income of \$76,800 per household also remains significantly higher than State average of \$69,500 per household (US Census Bureau Average 2009-2013).

## 7.2. User Rates and Charges

The SWPCA Board of Directors is responsible for setting and imposing sewer rates and other fees and charges for its customers. The Board requires that the rates are at sufficient levels to pay for operating and maintenance costs of the collection and treatment system, debt service on outstanding debt, and to provide for appropriate reserves. The Board of Directors sets the user charge rates after accounting for other revenue, collection rate assumptions, and indenture requirements for debt service coverage.

According to SWPCA's FY2014 audited financial statements, approximately 86 percent of the sewer operating revenues are from usage charges from Stamford customers, 7 percent are from usage charges and capital reimbursement fees from customers located in Darien, 6 percent are from fees and other operating income, and 1 percent is from contracted revenue from Aquarion.

Table 7-4 shows the adopted user rate for the SWPCA for FY2011 through FY2015. As shown in the table, unit sewer rates have increased by more approximately 27 percent since FY2011, however, due to reduced consumption the average annual residential bill has only increased by 19 percent over this same time period.

**Table 7-4.  
Sewer Rate Structure**

Description	FY2011 <sup>2</sup>	FY2012 <sup>2</sup>	FY2013 <sup>2,3</sup>	FY2014 <sup>2</sup>	FY2015 <sup>4</sup>
Rate per ccf of Billed Water Use	\$3.56	\$3.86	\$3.89/\$4.21 (\$4.05)	\$4.40	\$4.55
Annual Rate Increase	2.89%	8.43%	9.07%	8.6%	3.4%
Average Residential Bill	\$391.60	\$393.72	\$429.42	\$448.80	\$464.10
Average Residential CCF	110	102	106	102	102

Notes:

- 1) Bills are issued twice per year once in October and once in May.
- 2) Source: Stamford Water Pollution Control Authority Financial Statements and Supplementary Information for the Years Ended June 30, 2012 and 2011.
- 3) In its original FY2013 Budget, the SWPCA adopted a \$3.89/ccf rate. The October 2012 billing cycle was based on this rate. In April 2013 the SWPCA implemented a mid-year increase, adopting a new rate of \$4.21/ccf. The May 2013 bills are based on this new rate. The resulting effective rate for FY2013 is \$4.05/ccf which is the simple average of the October and May rates.
- 4) Source: Stamford Water Pollution Control Authority Approved Operating Budgets.

### 7.3. Billing and Collection

In accordance with the SWPCA’s billing policies, customers are billed semi-annually. Bills are issued once in October and once in April, based on winter water consumption data (six months of usage during the winter season). During July of each year, the SWPCA obtains water meter readings measured by a private water company (Aqurion Water Company) for the period of the last quarter of the previous year and the first quarter of the current year. Computil is under contract to provided billing and accounts receivable services for the SWPCA. The SWPCA typically anticipates a billing collection rate of 95 percent. The FY2014 audited financial statements reported a collection rate of 96 percent for FY2014 and 95 percent for FY2013.

The SWPCA bills the Town of Darien annually and the Town of Darien is allowed to pay the bill in 12 monthly installments. The SWPCA bills Aqurion based on the terms and conditions of the agreement with Aqurion.

Computil has been assisting the SWPCA with a more aggressive campaign to collect aged accounts. This campaign includes, but is not limited to, automatic mailing of late payment notification letters, referral of delinquent accounts owing more than \$500 to Ackerly & Ward for collections, notifying mortgage companies of liens, and charging the maximum allowed by law for incurred interest and collection fees of delinquent accounts.

Computil manages the initial collections process. Thirty days after each bill is mailed, Computil automatically mails late payment notification and assesses a penalty interest (1.5 percent) and late interest (1.5 percent). At the 45 day and 60 day intervals, Computil mails Demand Letters in addition to periodic reminder telephone calls. An *Intent to Lien* letter is mailed when bills reach the 90 day aging and liens are filed with the addition of a \$60.00 Lien Fee. It should be noted that liens and lien fees are issued for each individual 6 month billing. Unpaid balances in excess of \$500 and over 120 days old are referred to Ackerly and Ward for further collection efforts. Ackerly and Ward then mail a series of “Demand Letters”. Foreclosure proceedings begin when outstanding balances reach \$8,500. Intent to Foreclose letters are mailed to the property owner and the mortgagee. After all other collection efforts fail, Ackerly and Ward produces a list of owners they intend to foreclose on. Ackerly and Wards charges for services are charged back to the delinquent customer.

After the Board reviews and approves this list, the foreclosure process begins. Often, before the foreclosure is finalized, this effort results in payment coming from the mortgagee, the owner, or the owner agrees to a payment plan. Another very effective collection process is initiated by the SWPCA at the Government Center. To secure any Building Permit, the owner is required to get a “Sign Off” from the SWPCA verifying all unpaid sewer use balances less than 30 days old are paid in full.

#### **7.4. Rate Comparison**

A comparison of sewer rates and rate structure with other sewer service providers in Connecticut is provided in Table 7-5 and Figure 7-1. As illustrated in Table 7-5 and Figure 7-1, the SWPCA rates are comparable and within the range of the sewer rates charged by the other utilities that were surveyed. It is also important to note that the SWPCA has recently completed major plant upgrades, which has placed upward pressure on sewer rates, whereas several of the regional communities listed still require significant investment to meet regulatory requirements, including nitrogen reduction and combined sewer overflows.

**Table 7-5.  
Sewer Service Rate Comparisons<sup>1</sup>**

City	Fixed Rate	Usage Rate (per CCF)	Estimated Annual Bill (based on 102 CCF )
Torrington (2)	\$196.00	-	\$196.00
Bristol (3)	\$14.39	\$1.883	\$249.63
Norwalk (4)	\$300.00	-	\$300.00
Milford (5)	\$309.72	-	\$309.72
New London (6)	\$31.64	\$3.31	\$329.66
Waterbury	-	\$3.39	\$345.37
New Haven (7)	\$13.00	\$3.55	\$388.60
Danbury (8)	\$28.95	\$3.05	\$426.90
Meriden (9)	\$14.05	\$3.70	\$433.60
Stamford (10)	-	\$4.40	\$448.80
Hartford MDC (11)	\$190.00	\$2.90	\$485.80
Bridgeport	-	\$5.95	\$606.49

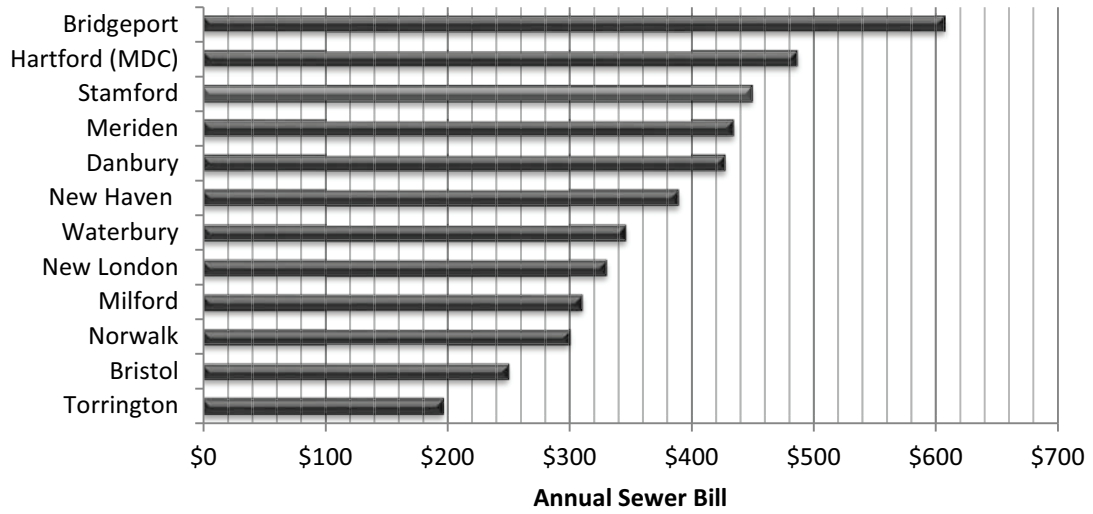
Notes:

- 1) Based on Tighe & Bond 2013 Connecticut Sewer Rate Survey.
- 2) Annual Sewer Fee for a Residential Customer.
- 3) Fixed Rate represents Quarterly Meter Charge for a 5/8" Meter.
- 4) Annual Sewer Fee for a Residential Customer for FY2014/2015 reported by Norwalk WPCA.
- 5) Annual Cost per ERU (Equivalent Residential Unit) as of 2012.
- 6) Fixed Rate for Quarterly 5/8" Meter, plus usage rate minimum charge of \$6.65 for first 5 CCF or less, \$3.31/CCF thereafter.
- 7) Fixed Rate for Quarterly Administration Fee plus usage rate and minimum bill of 15 ccf.
- 8) Based on FY2014 rate to maintain consistency with Tighe & Bond 2013 Rate Survey.
- 9) Fixed Rate represents Quarterly Meter Charge for a 5/8" Meter.
- 10) Sewer bills are based on 90 percent of water consumption. Quarterly Minimum Charges of \$23.25.
- 11) Prior to 2013, sewer cost included in ad valorem tax. Rate includes surcharge that is on water bill for CSO of \$190 per year.

Furthermore, the SWPCA has already completed its nitrogen reduction improvements and does not have any combined sewer overflows. Therefore, the SWPCA will not be subject to the significant capital upgrade reinvestment requirements that other combined systems in Connecticut currently face. Many of the other sewer service providers that were surveyed have just begun, or are in the process of embarking on, much needed capital improvements, which are anticipated to place additional upward pressure on their sewer rates in the future.

**Figure 7-1: Sewer Bill Comparison (2013-2014)**

(Residential Customer with a 5/8" Water Meter with 102 ccf annual billed flow)



## 8. Financial Feasibility

---

### 8.1. Overview

As part of this engineer's report, a financial plan and forecast were prepared for the SWPCA for FY2015 through FY2020. The SWPCA's Fiscal Year ("FY") runs from July 1 to June 30. The purpose of this section is to present the financial plan and forecast, the projection of revenues and expenses, and debt service coverage, and document the assumptions used in the preparation of the forecast in order to provide an engineer's opinion as to the financial feasibility of the Series 2015 Revenue Bonds.

The financial forecast represents an estimate of the probable results of operations and reflects SWPCA's judgment as to the most likely set of conditions and course of action based upon present circumstances. ARCADIS worked closely with the SWPCA to obtain the information necessary to prepare the financial forecast, and various financial and system information was provided by the SWPCA to support its development.

### 8.2. Historical and Projected Revenues

Historical billed consumption, customer accounts, and sewer revenues from FY2011 through FY2014 were reviewed along with budget projections prepared and provided by the SWPCA for FY2015 to develop projections of revenues for the period FY2016 to FY2020. The System revenues include revenues derived from user charges, special assessments, contract customers and other miscellaneous revenue sources.

**User Charges:** User charges are primarily based on a unit rate per CCF of billable water consumption as metered by the Aquarion Water Company. Residential and commercial customers are generally billed semi-annually. There is no minimum bill charge or administrative fee per bill.

**Special Assessments:** The SWPCA is continuing to expand its collection system. Customers that benefit from the expansion pay for the expansion through a special assessment. The special assessment revenues also include connection charges associated with customers that increase discharges to the system as determined through upgrades to water service lines and in the case of residential customers, through a review of the number of lavatory fixtures.

**Contract Customers:** As previously discussed, the SWPCA has an interlocal agreement with the Town of Darien for provision of wastewater transport and treatment services. In addition, the SWPCA has an agreement with Aquarion Water Company for water treatment plant sludge processing.

**Other Revenue:** Other revenue includes interest income, nitrogen credits, load shedding revenue, reimbursements from the City of Stamford, and other miscellaneous revenue.

Table 8-1 presents historical financial results, including historical revenues, for FY2011 through FY2014. As illustrated in Table 8-1, SWPCA revenues have been sufficient to meet its debt obligations and trust indenture requirements over the past five years. The significant increase in sewer use charges in FY2012 was attributable to several factors including a rate increase, stabilization of billable metered water use volumes, and an increase in the receipt of aged accounts. The decrease in other revenue in FY2012 was due primarily to a reduction in nitrogen credit revenues, load shedding revenues and Darien capital reimbursement charges.

**Table 8-1.  
Historical Financial Performance**

	FY2011 <sup>(1)</sup>	FY2012 <sup>(1)</sup>	FY2013 <sup>(2)</sup>	FY2014 <sup>(2)</sup>
<b>Revenues</b>				
Sewer Use Charges	\$15,663,871	\$19,073,000	\$19,744,918	\$20,941,371
Other Revenue	4,282,124	3,934,000	3,897,500	3,928,803
Interest Income	112,844	98,000	94,901	34,167
<b>Total Revenue</b>	<b>\$20,058,839</b>	<b>\$23,105,000</b>	<b>\$23,660,973</b>	<b>\$24,904,341</b>
<b>Expenses</b>				
Operation & Maintenance	10,955,553	11,444,000	13,406,143	\$12,703,967
Total Debt Service	9,231,422	9,399,000	9,254,830	\$9,318,043
<b>Total Expenses</b>	<b>\$20,186,975</b>	<b>\$20,843,000</b>	<b>\$22,660,973</b>	<b>\$22,022,010</b>
Senior Lien DS Coverage <sup>(3)</sup>	1.35	1.68	1.61	1.67
Total Debt Service Coverage <sup>(4)</sup>	0.99	1.10	1.12	1.31

Notes:

- 1) FY2011 and FY2012 based on audited financial statements prepared by O'Conner Davies Munns & Dobbins, LLP.
- 2) FY2013 and FY2014 based on audited financial statements prepared by Blum Shapiro & Company, P.C.
- 3) Measured as the ratio of net operating revenues (operating revenues less operating expenses) divided by debt service. The senior lien debt service includes all revenue bonds and CWF notes and the total debt includes both the senior lien debt service plus the general obligation bond debt service. The Debt Service Coverage requirement pursuant to the Indenture of Trust is 1.15.
- 4) The revenues and expenses presented above do not include depreciation expense, provision for bad debts or prior year revenues that may have been used for rate stabilization.

Projections of future revenues were made based upon historical information, discussions of revenue trends with SWPCA, and the projection of customer growth rates. Customer growth rates and growth rate assumptions were discussed in Section 7. The projected sewer rate revenue over the forecast period is provided at the end of this section in Table 8-8.

### 8.3. Historical and Projected O&M Expenses

SWPCA operation and maintenance (“O&M”) expenses are expenses incurred through the functions of operating and maintaining the SWPCA, which include personnel (includes salaries, fringe benefits, including overtime), supplies (general office miscellaneous supplies and sewer material supplies), utilities, equipment and vehicles, travel, contracted sludge handling and disposal, other contracted services (i.e., billing services, auditing services, legal services, insurance, collection fees, etc.), and administrative expenses. The projection of O&M expenses are based on historical expense levels and changes thereto.

The O&M expense projections are summarized in Table 8-2. These projections were developed based on discussions with the SWPCA regarding system operational changes, historical cost trends, and anticipated future wastewater flows and billed consumption trends.

**Table 8-2.  
O&M Expense Projection Assumptions**

Expense Category	Annual Percent Increase	Basis / Rationale
Personnel	2.0%	Historical changes in salaries and wages for state and local government workers as published by the U.S. Department of Labor's Bureau of Labor Statistics.
Fringe Benefits	4.0%	Historical changes in benefit costs for state and local government workers as published by the U.S. Department of Labor's Bureau of Labor Statistics.
Insurance	5.0%	Projected cost inflation.
Legal	3.0%	Projected cost inflation.
Utilities	3.0%	Historical price trends as published by the U.S. Energy Information Administration.
Chemicals	5.0%	Projected cost inflation.
All Other	2.5%	Historical changes in prices as published by the U.S. Department of Labor's Bureau of Labor Statistics.

### 8.4. Historical and Projected Non-Operating Expenses

The SWPCA has historically funded its capital program through the issuance of revenue bonds, general obligation bonds and State Clean Water Fund (CWF) grants and loans. Table 8-3 summarizes the principal amount of debt outstanding in FY2014.



**Table 8-3.  
Existing Bond Debt and Clean Water Fund Obligations as of June 30, 2014**

Revenue Bond Debt		General Obligation Bond Debt		Clean Water Fund Obligations	
Issue	Balance	Issue	Balance	Issue	Balance
2006 Series A	\$17,119,331	GO	\$6,005,199	CWF 117-C	\$56,900
2013 Series A	24,217,421	2009 BABs	8,735,000	CWF 375-C	111,636
				CWF 414-D	1,214,415
				CWF 414-C	44,241,577
Total Revenue Fund	\$41,336,752		\$14,740,194	Total Clean Water Fund	\$45,624,528
Total Amount of Principal Outstanding as of 6-30-14					<b>\$101,701,474</b>

Notes:

- 1) Source: Phoenix Advisors, LLC.
- 2) Does not include funds owed to City for borrowings from the City's pooled cash account or self-supporting debt fund.

In addition to the amounts identified in Table 8-3, the SWPCA separately owes the City funds to reimburse borrowings from the City's pooled cash account. The SWPCA estimates that the amount outstanding at the end of FY2015 will be \$3.2 million of which \$1 million is associated with operating advances and \$2.2 million in capital advances. It is also reported that the City is responsible for reimbursing the SWPCA for its share of the stormwater and road improvement costs for the Carriage Drive sewer extension in the amount of \$1.1 million, thereby effectively reducing the total outstanding capital amount to only \$1 million. These balances are anticipated to be paid off in full by FY2017 based on information provided by or reported by SWPCA.

A detailed projection of non-operating expenses was developed based on a review of existing debt obligations, discussions with the SWPCA regarding anticipated capital outlay requirements, repayment of amounts owed to the City's pooled cash account, and historical cost trends. These expense projections are shown at the end of this section in Table 8-8. Based on an analysis of this information, the following non-operating expense projections were made:

- Existing debt repayment obligations over the forecast period consist of principal and interest payments associated with the outstanding loans and bonds. In addition, it is anticipated that the SWPCA will issue new revenue bonds in FY2015 to finance a portion of the anticipated capital improvement program and refund a portion of its existing debt.
- Future capital project expenditures are projected to increase at an inflationary rate of approximately 3.0 percent per year over the forecast period.
- The amount owed to the City's pooled cash account based on the SWPCA's borrowings in prior years was approximately \$4.7 million ending in FY2014. In FY2015,

\$1,150,000 was budgeted to be transferred to the General Fund to pay back a portion of this amount and the remaining portion to be paid back over the next five years, depending on the amount of excess revenues received and available unrestricted cash balances. However, current estimates indicate that the balance due ending FY2015 has been reduced to only \$2 million when taking into account the anticipated \$1.1 million in reimbursement from the City for the Carriage Drive sewer extension project. Furthermore, based on current budget projections the SWPCA plans on paying off the remaining balance in FY2017.

According to the Indenture of Trust Among the City of Stamford, Connecticut and the Water Pollution Control Authority of the City of Stamford and Wachovia Bank, National Association as Trustee, dated December 21, 2001 and amended by the First through Fifth Supplemental Indentures, dated as of October 1, 2003, February 28, 2006, September 1, 2006, August 1, 2009, August 1, 2013, respectively, (the “Indenture”), the SWPCA is required to maintain a debt service reserve fund for the 2006 and 2013 Revenue Bonds and the Clean Water Fund obligations. The monies maintained in these funds as of FY2014 is shown in Table 8-4 as required pursuant to the Indenture. There are no debt service reserve requirements for the General Obligation (GO) Bonds payable from the subordinated indebtedness fund established pursuant to the Indenture (which includes the SWPCA’s 2009 Taxable Build America Bonds). The GO Bonds are subordinated debt.

**Table 8-4.  
Debt Service Reserve Levels**

	<b>FY2014 Balance</b>
Clean Water Fund – Debt Service Reserve	\$ 4,641,207
2006 Debt Service Reserve Fund	1,207,648
2006 Revenue Bond Funding Accrual	2,043,095
2013 Revenue Bond, Series A	1,639,681
Total	\$ 9,531,631

Source: SWPCA “Financial Statements and Supplementary Information for the Years Ended June 30, 2011 and 2010” and preliminary information for SWPCA’s financial statements for year ending June 30, 2012.

## 8.5. Capital Improvement Plan Funding

The SWPCA plans to fund approximately \$14.7 million in sewer utility projects with the proceeds of the Series 2015 Revenue Bonds. This represents approximately 80 percent of the total amount of the sewer CIP in FY2016. The remaining amount of planned capital improvements in FY2016 are anticipated to be funded with existing bond proceeds from the Series 2013 Revenue Bonds, CWF grants or available cash.

In FY2017 through FY2020, the SWPCA anticipates funding the majority of the sewer CIP with remaining funds from the 2015 Revenue Bonds, CWF grants and loans and additional debt issuances. To the extent the SWPCA can secure CWF grants and loans this will offset

the need to issue additional revenue bonds. The SWPCA also plans on funding certain renewal and replacement projects on a pay-as-you-go basis with available cash in excess of their capital and operating reserve goals. Table 8-5 provides a summary of the annual capital expenditure and anticipated sources of funding.

**Table 8-5:  
Summary of Capital Plan Sources of Funding (\$ Millions)\***

Source of Funding	Annual Capital Cash Flow Forecast (FY, \$ Millions)						Total	% of Total
	FY15	FY16	FY17	FY18	FY19	FY20		
CWF Grant	0.7	0.5	1.3	1.2	0.4	0.1	4.1	8.6%
CWF Loan	1.3	0.9	4.2	3.8	0.4	0.4	11.0	22.6%
Cash/Reserves <sup>1</sup>	1.3	0.2	0	2.4	0.3	0.3	4.5	9.2%
2015 Bonds	0.2	6.4	8.1	0	0	0	14.7	30.3%
Future Bonds	0	0	0.6	6.0	7.6	0	14.2	29.3%
<b>Total</b>	<b>\$3.4</b>	<b>\$8.0</b>	<b>\$14.3</b>	<b>\$13.4</b>	<b>\$8.7</b>	<b>\$0.8</b>	<b>\$48.6</b>	<b>100%</b>

\*Totals may not add due to rounding.

As illustrated in Table 8-5, it is expected that approximately \$15.1 million (31.2 percent) in funding will be provided by the State CWF program including \$4.1 million in grants. Another \$4.5 million is expected to be funded with capital reserves including excess cash and fund remaining from the 2013 Bond. The remaining \$28.9 million or 59.6 percent of the CIP in these years will be funded with revenue bonds including the anticipated Series 2015 Revenue Bonds (30.3 percent) and future revenue bonds (29.3 percent).

## 8.6. Historic and Projected Debt Service

The proceeds of the Series 2015 Sewer Revenue Bonds will be used to (1) fund a portion of the cost of the FY2016-2017 capital plan, and (2) refund a portion of the existing and outstanding debt. For more information, refer to the sources and uses section of the Official Statement.

Table 8-6 provides a summary of the schedule of payments associated with the existing outstanding debt obligations and Table 8-7 provides the projected schedule of payments associated with the 2015 Revenue Bonds. The outstanding debt service information was provided by the SWPCA and the estimated debt service associated with the Series 2015 Sewer Revenue Bonds was provided by SWPCA's financial advisor, Phoenix Advisors, LLC.

**Table 8-6.  
Existing Debt Service**

Period Ending	Parity Debt			Subordinate Debt <sup>(2)</sup>	Aggregate Debt
	Existing Revenue Bond Debt Service (2006) <sup>(1)</sup>	Existing Revenue Bond Debt Service (2013)	Existing CWF Debt Service (117-C, 375-C, 414-C, 414-D)	Existing General Obligation Bond Debt Service	Subtotal Existing Debt
6/30/2015	\$1,203,220	\$1,357,950	\$4,741,282	\$2,437,395	\$9,739,847
6/30/2016	\$1,205,020	\$1,630,700	\$4,683,233	\$1,820,997	\$9,339,951
6/30/2017	\$1,204,201	\$1,635,850	\$4,664,423	\$1,747,325	\$9,251,799
6/30/2018	\$1,203,088	\$1,634,050	\$4,639,047	\$1,801,725	\$9,277,909
6/30/2019	\$1,203,386	\$1,635,300	\$4,639,047	\$1,751,800	\$9,229,533
6/30/2020	\$1,202,653	\$1,634,450	\$4,639,047	\$1,377,173	\$8,853,323
6/30/2021	\$1,205,625	\$1,631,500	\$4,424,089	\$1,267,583	\$8,528,797
6/30/2022	\$1,206,581	\$1,631,300	\$4,424,089	\$960,140	\$8,222,110
6/30/2023	\$1,205,763	\$1,633,550	\$4,424,089	\$942,088	\$8,205,490
6/30/2024	\$1,203,881	\$1,635,050	\$4,424,089	\$878,310	\$8,141,330
6/30/2025	\$1,205,831	\$1,637,975	\$4,424,089	\$909,940	\$8,177,835
6/30/2026	\$1,206,506	\$1,635,725	\$737,348	\$757,045	\$4,336,624
6/30/2027	\$1,205,906	\$1,636,350	-	\$745,320	\$3,587,576
6/30/2028	\$1,202,119	\$1,639,600	-	\$736,791	\$3,578,510
6/30/2029	\$1,204,831	\$1,635,475	-	\$721,416	\$3,561,722
6/30/2030	\$1,205,644	\$1,633,975	-	\$709,148	\$3,548,767
6/30/2031	\$1,204,556	\$1,634,850	-	-	\$2,839,406
6/30/2032	\$1,201,569	\$1,637,850	-	-	\$2,839,419
6/30/2033	\$1,206,444	\$1,637,850	-	-	\$2,844,294
6/30/2034	\$1,204,063	\$849,975	-	-	\$2,054,038
6/30/2035	\$1,204,425	\$848,825	-	-	\$2,053,250
6/30/2036	\$1,202,413	\$849,950	-	-	\$2,052,363
6/30/2037	\$1,202,906	\$849,425	-	-	\$2,052,331
6/30/2038	-	\$847,250	-	-	\$847,250
6/30/2039	-	\$848,288	-	-	\$848,288
6/30/2040	-	\$848,238	-	-	\$848,238
6/30/2041	-	\$847,144	-	-	\$847,144
6/30/2042	-	\$849,081	-	-	\$849,081
6/30/2043	-	\$848,919	-	-	\$848,919
6/30/2044	-	\$846,656	-	-	\$846,656
<b>TOTAL</b>	\$27,700,631	\$40,123,101	\$50,863,873	\$19,564,195	\$138,251,800

Notes:

- 1) The 2006 Revenue Bonds are expected to be refunded by the 2015 Revenue Bonds. Therefore, the debt service payments for the 2006 Revenue Bonds were not projected in FY2016 and remaining years of the forecast period.
- 2) Includes the 2009 Taxable Build America Bonds.

**Table 8-7.**  
**Projected 2015 Revenue Bond Debt Service**

[Based on Raymond James Preliminary Schedule Dated June 1, 2015]

New Money		Refunding				Total 2015 Series A	
Date	New Debt Service	Prior Debt Service	Refunding Net Debt Service	Savings	Present Value to 7/01/15 @ 3.08%	Total Net Debt Service	
6/30/2016	\$485,069	\$707,683	\$646,050	\$61,632	\$65,647	6/30/2016	\$1,131,120
6/30/2017	912,900	707,683	705,800	1,883	1,801	6/30/2017	1,618,700
6/30/2018	913,500	1,203,088	1,141,900	61,188	57,198	6/30/2018	2,055,400
6/30/2019	913,700	1,203,386	1,143,700	59,686	54,128	6/30/2019	2,057,400
6/30/2020	913,500	1,202,653	1,139,800	62,853	55,298	6/30/2020	2,053,300
6/30/2021	912,900	1,205,625	1,145,100	60,525	51,666	6/30/2021	2,058,000
6/30/2022	910,500	1,206,581	1,146,750	59,831	49,530	6/30/2022	2,057,250
6/30/2023	911,125	1,205,763	1,144,625	61,138	49,080	6/30/2023	2,055,750
6/30/2024	911,000	1,203,881	1,141,250	62,631	48,757	6/30/2024	2,052,250
6/30/2025	915,000	1,205,831	1,146,375	59,456	44,882	6/30/2025	2,061,375
6/30/2026	913,125	1,206,506	1,144,875	61,631	45,112	6/30/2026	2,058,000
6/30/2027	910,500	1,205,906	1,146,750	59,156	41,982	6/30/2027	2,057,250
6/30/2028	912,000	1,202,119	1,142,000	60,119	41,387	6/30/2028	2,054,000
6/30/2029	912,500	1,204,831	1,145,500	59,331	39,619	6/30/2029	2,058,000
6/30/2030	912,000	1,205,644	1,142,125	63,519	41,145	6/30/2030	2,054,125
6/30/2031	910,500	1,204,556	1,141,875	62,681	39,385	6/30/2031	2,052,375
6/30/2032	912,875	1,201,569	1,139,625	61,944	37,754	6/30/2032	2,052,500
6/30/2033	914,000	1,206,444	1,145,125	61,319	36,251	6/30/2033	2,059,125
6/30/2034	913,875	1,204,063	1,143,250	60,813	34,873	6/30/2034	2,057,125
6/30/2035	912,500	1,204,425	1,144,000	60,425	33,610	6/30/2035	2,056,500
6/30/2036	914,750	1,202,413	1,142,250	60,163	32,458	6/30/2036	2,057,000
6/30/2037	910,625	1,202,906	1,142,875	60,031	31,413	6/30/2037	2,053,500
6/30/2038	910,125	-	-	-	-	6/30/2038	910,125
6/30/2039	913,000	-	-	-	-	6/30/2039	913,000
6/30/2040	914,125	-	-	-	-	6/30/2040	914,125
6/30/2041	913,500	-	-	-	-	6/30/2041	913,500
6/30/2042	911,125	-	-	-	-	6/30/2042	911,125
6/30/2043	911,875	-	-	-	-	6/30/2043	911,875
6/30/2044	910,625	-	-	-	-	6/30/2044	910,625
6/30/2045	912,250	-	-	-	-	6/30/2045	912,250
	\$ 26,945,069	\$ 25,503,554	\$ 24,221,600	\$ 1,281,953	\$ 932,974		\$ 51,166,670

The 2015 Revenue Bonds provide funding for capital improvements and for refunding the 2006 Revenue Bonds. As illustrated in Table 8-8 which is provided at the end of this section the projected debt service obligations over the forecast period includes the debt associated with the 2015 Revenue Bonds and eliminates the debt associated with the 2006 Revenue Bonds.

It was assumed that, in addition to the Series 2015 Revenue Bonds, the SWPCA will secure CWF grants and loans for eligible projects (refer to Table 8-5). It is anticipated that the SWPCA's upgrade of the plant head works and certain CMOM projects will qualify for 20 percent grant and 80 percent loan at a 2 percent annual interest rate. The closing of such loans do not occur until after construction is complete. It is anticipated that projects not

funded by the capital reserves, the State CWF program or the 2015 Bonds will be financed by future revenue bonds that SWPCA anticipates to be issued every two years. For the purposes of projecting new debt service in FY2018 through FY2020, an interest rate of 5.0 percent and an amortization period of 30 years were assumed.

### **8.6.1. Debt Service Coverage Requirements**

The Indenture contains specific debt service coverage requirements that must be met by the SWPCA. The provisions related to debt service coverage are included in Rate Covenant (Section 713) included in the Indenture. Specifically, the Rate Covenant requires a minimum level of coverage equal to or greater than 115 percent of the annual debt service associated with the SWPCA's outstanding parity debt. For the SWPCA, parity debt includes the 2006 and 2013 Revenue Bond issues and all outstanding Clean Water Fund obligations. The Rate Covenant also includes a debt service coverage required for subordinated debt of at least 100 percent of the debt service associated with this type of debt. The SWPCA's subordinated debt includes its share of the City's general obligation bonds.

The specific provisions associated with the debt service requirements under the Rate Covenant included in the Indenture are included below.

#### *Section 713. Rate Covenant*

*“(a) (i) The Authority covenants that it will fix, charge and collect rates, charges, rents, fees and assessments, including but not limited to use and connection charges and benefit assessments, which shall produce Revenues which, together with amounts capitalized from proceeds of Bonds or otherwise made available and reserved and not already taken into account hereunder by reduction of the obligations which are to be paid from Revenues, and the amount to be withdrawn from the Surplus Fund other than to pay Capital Costs for such Fiscal Year, shall be sufficient in each Fiscal Year to provide for:*

*(A) a Debt Service Coverage Ratio at least equal to the Debt Service Coverage Ratio Requirement;*

*(B) any amount necessary to restore any Account within the Debt Service Reserve Fund to its required deposit level; and*

*(C) any amount necessary to restore any debt service reserve fund for Parity Indebtedness to its required deposit level; and*

*(ii) The Authority covenants that each Fiscal Year, it will budget rates, charges, rents, fees and assessments, including but not limited to use and connection charges and benefit assessments, which shall produce Revenues which, together with amounts capitalized from proceeds of*

*Bonds or otherwise made available and reserved and not already taken into account hereunder by reduction of the obligations which are to be paid from Revenues and the amount to be withdrawn from the Surplus Fund other than to pay Capital Costs for such Fiscal Year, to provide for an amount equal to 100% of aggregate debt service for such Fiscal Year with respect to Subordinated Indebtedness, which aggregate debt service shall be computed on the same basis and with the same assumptions as "Aggregate Debt Service" for Bonds hereunder; provided however, that failure to collect such Revenues and other amounts under this clause (ii) shall under no circumstances be treated as an Event of Default."*

According to the Indenture, the following definitions apply:

*Aggregate Debt Service shall mean for any Fiscal Year as of any date of calculation, the sum of the Debt Service for all Bonds Outstanding and Parity Indebtedness outstanding during such Fiscal Year.*

*Debt Service Coverage Ratio shall mean, for the Fiscal Year specified, the ratio of (a) the Revenues for such Fiscal Year (adjusted as provided in Section 206(d)), plus the amount withdrawn from the Surplus Fund (or to be withdrawn from the Surplus Fund in a subsequent Fiscal Year as certified by an Authorized Representative of the Municipality) other than to pay Capital Costs for such Fiscal Year, less the total Operating Expenses for such Fiscal Year; compared to (b) the Aggregate Debt Service on the Bonds then Outstanding and all Parity Indebtedness then outstanding and, for the purposes of Section 206(d), the maximum Aggregate Debt Service on the additional Bonds then proposed to be issued.*

*Debt Service Coverage Ratio Requirement shall mean a Debt Service Coverage Ratio of one hundred and fifteen percent (115%).*

The issuance of future debt (revenue bonds and Clean Water Fund borrowings) is subject to a condition prior to the delivery of a series of additional bonds as per the Indenture. This provision requires that the SWPCA produce a five-year forecast showing the system is capable of producing annual net revenues of at least 115 percent of the annual debt service associated with all parity indebtedness, including the additional revenue bonds expected to be issued by the SWPCA.

Specifically, the Indenture requires the following, as included under Section 206:

*"(e) except in the case of any Series of Refunding Bonds issued pursuant to Section 207, a Certificate of an Authorized Representative of the Municipality and the Authority setting forth for each of the five ( 5) Fiscal Years following the issuance of such Series of Bonds, plus the Fiscal Year in which such Bonds are issued, (i) the estimated Revenues after giving effect to any increases or decreases*

*in rates, fees and charges projected, (ii) the estimated Operating Expenses, (iii) the estimated amount to be withdrawn from the Surplus Fund other than to pay Capital Costs, (iv) the projected Aggregate Debt Service on the Bonds then Outstanding, all Parity Indebtedness then outstanding and the additional Bonds then proposed to be issued, and (v) showing that the Debt Service Coverage Ratio will be at least equal to the Debt Service Coverage Ratio Requirement;”*

The projections provided in Table 8-8 as part of this report serve to satisfy the requirements of Section 206 (e) and assume the SWPCA will implement the annual rate increases shown in this table at the beginning of each fiscal year.

### **8.6.2. SWPCA Fiscal Policies**

Utilities often implement fiscal policies to meet specific financial goals, establish a secure financial position, or to meet required legal covenants. Fiscal policies may include, but are not limited to, capital project financing, liquidity, and debt service coverage.

The SWPCA does not have a formalized fiscal policy related to liquidity. Within the industry, utilities typically establish operating reserves to address liquidity concerns. These reserves are used to improve the ability of the utility to pay its short-term obligations, given timing differences in cash inflows and outflows, and to absorb short-term operating deficits in months when billed consumption may decline and where fixed costs are high. For the purpose of projections included in Table 8-8, a minimum operating reserve target equal to 90 days of annual O&M expenses was assumed with a goal of continuing to increase reserves based on reasonable annual rate increases. Annual rate increases of 2.5 percent were assumed. These reserves are in addition to funds available from the City’s pooled cash account. In addition to continuing to build reserves, the SWPCA plans on increasing cash funding of certain capital projects to reduce the need to issue future bonds.

Fiscal policies related to debt service coverage were discussed in Section 8.6.1 of this report. The SWPCA is required to maintain net revenues at 115 percent of the debt service associated with all outstanding parity debt and 100 percent of the debt service associated with all subordinate debt.

## **8.7. Cash Flow Projection and Conclusions**

Presented in Table 8-8 are financial projections for the SWPCA for the period of FY2015 through FY2021. These financial projections were prepared based on a review of historic performance, audited financial statements, budgeted performance for FY2014 and year to date budget for FY2015, and a review of capital financing requirements.

Based on the projection of revenues and expenses and associated assumptions, it is anticipated that the SWPCA will achieve its debt service coverage requirements over the forecast period with the adoption of the identified sewer user rate increases. It is anticipated



that the SWPCA will not need to implement sewer rate increases until FY2018 to meet its minimum revenue and expense and debt service requirements, however, based on the proposed fiscal policies it plans on instituting annual rate increases at levels generally consistent with historical cost inflation over the forecast period to build its operating reserves and cash fund certain capital projects.. These projections reflect the SWPCA's views and assumptions with respect to future events as of the date of this report and are subject to future economic conditions and other risks and uncertainties. However, actual and future results and trends could differ materially from those presented herein. Accordingly, ARCADIS makes no warranty or representation that any of the projected values or results contained in this document will actually be achieved. In the event that the anticipated costs and funding levels differ from the projections presented herein, the SWPCA will need to adjust the rates accordingly.

The SWPCA has approved significant rate increases since 2012 in order to build capital and operating reserves and pay-off the balances due to the City for advances from the City's pooled cash account. In addition, water consumption rates have stabilized after having seen a decline from 2008-2011 and significant immediate growth is planned in the service area. As a result, the SWPCA appears to be in a strong financial position. Furthermore, when the SWPCA achieves the original goals of building in excess of 3 months in operating reserves and paying off the balances due to the City for historic operating advances in 2016, it anticipates utilizing the funds previously earmarked for this to invest in the system through cash funding of certain capital improvements.

**Table 8-8.**  
**Cash Flow Projection (FY2015 through FY2021)**

<b>I. SYSTEM REVENUES:</b>	<b>FY15</b>	<b>FY16</b>	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>
<b>A. BILLING REVENUES</b>							
1. Number of Customers	19,382	19,500	19,500	19,500	19,500	19,500	19,500
2. Billable Metered Water Use (CCF)	4,434,522	4,461,129	4,461,129	4,461,129	4,461,129	4,461,129	4,461,129
3. Wastewater User Charge - Sewer Rate (\$ / CCF)	\$4.55	\$4.63	\$4.75	\$4.87	\$4.99	\$5.11	\$5.24
Rate Increase %	3.4%	2.0%	2.5%	2.5%	2.5%	2.5%	2.5%
<b>TOTAL BILLING REVENUES</b>	<b>20,177,075</b>	<b>20,662,367</b>	<b>21,178,927</b>	<b>21,708,400</b>	<b>22,251,110</b>	<b>22,807,387</b>	<b>23,377,572</b>
<b>B. MISCELLANEOUS REVENUES</b>							
4. Interest Income	50,000	35,000	99,154	124,408	145,444	165,418	190,104
5. Special Assessments	1,802,313	1,477,928	1,384,044	1,516,197	1,638,905	1,638,480	1,634,275
6. Interlocal Agreement User Charges	1,400,000	1,429,478	1,481,537	1,530,342	1,580,717	1,632,715	1,632,715
7. Darien Capital Reimbursement	750,000	835,062	868,429	954,522	975,883	977,418	977,418
8. Septic Tank Revenues	290,000	261,050	263,661	266,297	268,960	271,650	274,366
9. Regional Lab Revenues	55,000	40,000	40,000	40,000	40,000	40,000	40,000
10. Sewer Use - Lien Fees	200,000	190,000	191,900	193,819	195,757	197,715	199,692
11. Sewer Use - Delinquent Interest	550,000	550,000	555,500	561,055	566,666	572,332	578,056
12. Aquarion User Charges	350,000	314,112	317,253	320,426	323,630	326,866	330,135
13. Rebates - B.A.B.'s	148,701	128,815	123,265	116,965	110,221	103,023	95,402
14. City Reimbursement / Other	416,520	686,741	697,566	708,578	719,781	731,179	742,774
15. Nitrogen Trading Exchange Credit Revenues	945,980	1,038,159	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
<b>TOTAL MISCELLANEOUS REVENUES</b>	<b>6,958,514</b>	<b>6,986,345</b>	<b>7,022,309</b>	<b>7,332,609</b>	<b>7,565,964</b>	<b>7,656,796</b>	<b>7,694,938</b>
<b>D. RECEIVABLE MANAGEMENT COSTS</b>							
16. Billing Collection Rate	(805,440)	(1,033,118)	(1,058,946)	(1,085,420)	(1,112,555)	(1,140,369)	(1,168,879)
	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
<b>TOTAL SYSTEM REVENUES</b>	<b>\$ 26,330,149</b>	<b>\$ 26,615,594</b>	<b>\$ 27,142,289</b>	<b>\$ 27,955,588</b>	<b>\$ 28,704,518</b>	<b>\$ 29,323,814</b>	<b>\$ 29,903,631</b>
<b>II. SYSTEM EXPENSES:</b>							
<b>E. OPERATIONS AND MAINTENANCE</b>							
17. WPCA Admin (Less depreciation & interest)	\$ 4,480,783	\$ 4,873,664	\$ 5,033,206	\$ 5,198,437	\$ 5,369,574	\$ 5,546,842	\$ 5,730,476
18. Process Control	3,090,240	3,100,644	3,195,649	3,293,883	3,395,467	3,500,528	3,609,197
19. Laboratories	417,344	429,051	438,022	447,182	456,536	466,086	475,839
20. Sludge Process	2,344,170	2,446,994	2,507,756	2,570,046	2,633,903	2,699,366	2,766,477
21. Compliance	101,775	116,633	119,166	121,754	124,399	127,103	129,865
22. Building Maintenance	265,500	277,500	285,263	293,244	301,450	309,888	318,564
23. Equipment Maintenance	1,058,399	1,068,863	1,093,970	1,119,673	1,145,985	1,172,922	1,200,497
24. Pump Station Maintenance	763,911	763,382	781,721	800,513	819,770	839,504	859,727
25. Sewer Maintenance	414,940	439,155	448,672	458,399	468,340	478,500	488,885
26. Barrier Maintenance	260,000	260,000	267,350	274,909	282,684	290,680	298,903
27. Billing Services	472,955	472,939	474,122	475,335	476,579	477,854	479,162
<b>TOTAL SYSTEM EXPENSES</b>	<b>\$ 13,670,017</b>	<b>\$ 14,248,825</b>	<b>\$ 14,644,896</b>	<b>\$ 15,053,375</b>	<b>\$ 15,474,686</b>	<b>\$ 15,909,272</b>	<b>\$ 16,357,592</b>
<b>TOTAL NET REVENUES FOR DEBT SERVICE</b>	<b>\$ 12,660,132</b>	<b>\$ 12,366,769</b>	<b>\$ 12,497,393</b>	<b>\$ 12,902,214</b>	<b>\$ 13,229,833</b>	<b>\$ 13,414,542</b>	<b>\$ 13,546,039</b>
<b>III. DEBT SERVICE PAYMENTS:</b>							
28. Existing 2006 Revenue Bonds	\$ 1,203,220	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
29. Existing 2013 Revenue Bonds	1,357,950	1,630,700	1,635,850	1,634,050	1,635,300	1,634,450	1,631,500
30. Proposed 2015 Revenue Bonds:							
A. New Money	-	485,069	912,900	913,500	913,700	913,500	912,900
B. Refunding of 2006 Bonds	-	646,050	705,800	1,141,900	1,143,700	1,139,800	1,145,100
31. New Revenue Bonds	-	-	314,082	628,163	931,398	1,234,632	1,238,849
32. Existing CWF Loans	4,741,282	4,683,233	4,664,423	4,639,047	4,639,047	4,639,047	4,424,089
33. New CWF Loans	-	-	135,384	135,384	671,078	671,078	727,668
Subtotal - Senior Lien Debt	\$ 7,302,452	\$ 7,445,053	\$ 8,368,439	\$ 9,092,045	\$ 9,934,223	\$ 10,232,507	\$ 10,080,106
34. Existing GO Bonds (Subordinate)	2,437,395	1,820,997	1,747,325	1,801,725	1,751,800	1,377,173	1,267,583
<b>TOTAL DEBT SERVICE</b>	<b>\$ 9,739,847</b>	<b>\$ 9,266,050</b>	<b>\$ 10,115,764</b>	<b>\$ 10,893,769</b>	<b>\$ 11,686,023</b>	<b>\$ 11,609,680</b>	<b>\$ 11,347,689</b>
<b>SENIOR LIEN D/S COVERAGE</b>	<b>1.74</b>	<b>1.67</b>	<b>1.50</b>	<b>1.42</b>	<b>1.34</b>	<b>1.32</b>	<b>1.35</b>
<b>TOTAL D/S COVERAGE FROM NET REVENUE</b>	<b>1.30</b>	<b>1.34</b>	<b>1.24</b>	<b>1.19</b>	<b>1.14</b>	<b>1.16</b>	<b>1.20</b>
<b>IV. SWPCA CA SH FUND BALANCE SUMMARY:</b>							
35. Beginning Balance	\$ 2,746,129	\$ 4,125,348	\$ 5,726,066	\$ 7,494,498	\$ 9,093,170	\$ 10,299,327	\$ 11,756,407
36. Transfers In	2,879,219	3,100,719	2,381,629	1,598,672	1,206,157	1,457,080	3,270,694
37. Transfers Out	(1,500,000)	(1,500,000)	(613,197)	-	-	-	-
a) City Pooled Cash Account							
b) Cash Funded Capital				(409,773)	(337,653)	(347,782)	(358,216)
38. Ending Balance - Unrestricted Cash	\$ 4,125,348	\$ 5,726,066	\$ 7,494,498	\$ 9,093,170	\$ 10,299,327	\$ 11,756,407	\$ 15,027,101
<b>D/S COVERAGE FROM ALL AVAILABLE FUNDS</b>	<b>1.73</b>	<b>1.96</b>	<b>1.98</b>	<b>2.02</b>	<b>2.02</b>	<b>2.17</b>	<b>2.52</b>
<b>V. CITY POOLED CA SH ACCOUNT BALANCE:</b>							
39. Beginning Balance	\$ 4,681,577	\$ 3,181,577	\$ 613,197	\$ -	\$ -	\$ -	\$ -
40. Transfers In	(1,500,000)	(1,500,000)	(613,197)	-	-	-	-
a) SWPCA							
b) City Share (Carriage Drive)	-	(1,068,380)	-	-	-	-	-
41. Transfers Out	-	-	-	-	-	-	-
42. Ending Balance - Due to City of Stamford	\$ 3,181,577	\$ 613,197	\$ -	\$ -	\$ -	\$ -	\$ -

## 9. Conclusion

---

### 9.1. Considerations and Assumptions

In preparation of this Engineer's Report, ARCADIS has relied upon financial, engineering and operational data and assumptions prepared by and/or provided by the City and the SWPCA. In addition, information and projections have been provided by other entities working on behalf of the SWPCA. We believe such sources are reliable and the information obtained to be appropriate for the review undertaken and the conclusions reached in this Report. To the best of our knowledge, information and belief, the information does not omit material facts necessary to make the statements herein. However, ARCADIS has not independently verified the accuracy of the information provided by the City, SWPCA and others. In addition, the scope of the ARCADIS review did not include any pending or threatened litigation against the SWPCA. To the extent that the information is not accurate, the findings and conclusions contained in this Report and in particular the results shown on Table 8-8, may vary and are subject to change.

The principal considerations and assumptions are provided throughout this Report, some of which are as follows:

- We have made no determination as to the validity and enforceability of any contracts, agreement, existing law, rule, or regulation applicable to the SWPCA and its operations. However, for purposes of this Engineer's Report, we have assumed that all such contracts, agreements, laws, rules and regulations will be fully enforceable and complied with in accordance with their terms.
- The City/SWPCA will continue its policies of employing qualified and competent personnel; properly operate and maintain the System in accordance with generally accepted engineering practices; and operate the System in a prudent and sound businesslike manner.
- The proposed CIP reflects the immediate requirements of the System and the CIP is expected to be largely implemented by the SWPCA as planned. Additional capital projects have been identified and may be implemented after completion of the existing five-year plan or could be implemented sooner if additional capital funding is made available. If required, the SWPCA can accelerate the implementation of such improvements and fund such improvements through potentially available reserves or through the City via the self-supporting debt fund or pooled cash account.
- In the event that unforeseen expenses occur, which may include items such as O&M expenses and capital expenditures to address a change in law, increased priority or uninsured catastrophic event, the SWPCA would embark upon internally driven actions such as reducing non-essential programs and implementing cost reduction measures to cover costs associated with these expenses.

- The City will continue to provide access to the City’s pooled cash account as well as provide capital improvement funding to the SWPCA as may be required and consistent with past practices.

In completing this Engineer’s Report for the SWPCA, ARCADIS is not serving in the role of a “municipal advisor” under the regulations of the Securities and Exchange Commission. As such, ARCADIS is not: (a) recommending any action regarding municipal financial products or the issuance of municipal securities; and (b) is not acting as a registered municipal advisor to the City and does not owe a fiduciary duty to the City pursuant to Section 15B of the Securities Exchange Act of 1934, as amended by the Dodd-Frank Wall Street Reform and Consumer Protection Act, with respect to the information and material prepared in connection with this Engineer’s Report. The City and SWPCA should discuss any information and material prepared in connection with this Engineer’s Report with any and all internal and external financial and other advisors that they may deem appropriate before acting on this information and material.

Accordingly, since ARCADIS is not a municipal advisor registered with the Securities and Exchange Commission, SWPCA acknowledges that: (a) it has retained the services of an independent registered municipal advisor, which, during the past two years, was not associated with ARCADIS, and that (b) ARCADIS has complied with the requirements set forth in the federal Exchange Act, Municipal Advisor Rule (17 CFR 200, 240, 249), which requires that the engineering company: (i) receive from the municipal entity a representation in writing that it is represented by, and will rely on the advice of, an independent registered municipal advisor; (ii) provide written disclosure to the municipal entity that ARCADIS is not serving as a municipal advisor and, with respect to the municipal entity, is not subject to the statutory fiduciary duty applicable to municipal advisors under the federal Exchange Act, and (iii) provide a copy of such disclosure to the municipal entity’s independent registered municipal advisor. ARCADIS provided such disclosures to SWPCA and its registered municipal advisor. ARCADIS does not provide opinions on or advocate for using a financial product (issuing debt) or the choice of financial products employed. As such, ARCADIS submitted its work products to SWPCA’s independent registered municipal advisor for review and approval.

## 9.2. Conclusions

Set forth below are the principal opinions which ARCADIS has reached regarding our review of the System and the SWPCA-prepared budget forecasts. For a complete understanding of these opinions, the Report should be read in its entirety.

1. The System is being maintained and operated in accordance with generally accepted utility standards, and overall the System is in good repair and operating condition. The SWPCA has taken a number of steps and is working diligently to improve the condition of the collection system and the treatment plant and the results evident in improved treatment plant performance. Additionally, the SWPCA

- has made significant efforts to both conduct studies in-house and retain consultants to conduct studies to better understand the condition of the treatment plant and collection system. The recommendations made by these studies are carefully considered and the majority of them are incorporated into the CIP or the operations budget.
2. The System has experienced some Notice of Violations primarily as a result of high flow events. The NOV's appear to be taken seriously and responses are initiated in a timely manner. The SWPCA is under an USEPA order related to reporting collection system bypasses and submitting CMOM reports and has implemented a variety of programs and initiatives to enhance and facilitate CMOM readiness which are also serving to address the majority of these violations.
  3. The estimated costs of the CIP developed by the SWPCA have been prepared using sound estimating practices and methods. The identified capital projects are in general alignment with many of our observed requirements for the system. It appears that the SWPCA has a good understanding of additional capital projects needed and it should endeavor to refine the list of projects based on ongoing engineering analysis.
  4. The financial forecasts are based upon revenue and expense projections that appear to be reasonable. The SWPCA has implemented fiscal policies that have significantly improved the SWPCA's financial position including paying down historic borrowings from the City's pooled cash account and building its own cash reserves.
  5. The forecasts indicates that debt service coverage ratios are expected to be achieved over the Forecast Period that meet or exceed those required by the Indenture, i.e., the 115 percent Debt Service Coverage Ratio Requirement.

ARCADIS devoted effort in making such opinions consistent with (i) that degree of care and skill ordinarily exercised by members of the same profession currently practicing under same or similar circumstances and (ii) the time and budget available for its work in its efforts to endeavor to provide such opinions. The opinions are based on information provided by and consultations with the SWPCA. No responsibility was assumed for inaccuracies in reporting by the SWPCA or any third party data source used in preparing such opinions. ARCADIS' opinions represent its professional judgment. Neither ARCADIS-US nor its parent corporation, or their respective subsidiaries and affiliates, makes any warranty, expressed or implied, with respect to such opinions.

# Appendix A

## SWPCA Capital Improvement Program FY2015-FY2020

Source of Funding						Capital Project Description	FY15	FY16	FY17	FY18	FY19	FY20	ESTIMATED COST	SCHEDULE
CWF		Bonds												
Grant	Loan	Cash Resv	2015	Future										
0%	0%	0%	100%	0%	WPCF MAJOR REPAIRS		\$ 150,000						\$ 150,000	6 MONTHS
0%	0%	100%	0%	0%	CONCRETE REPAIRS AT PLANT SITE								\$ 167,000	1 YEAR
0%	0%	100%	0%	0%	REPLACE THICKENED SLUDGE TRANSFER PUMPS	\$ 167,000							\$ 167,000	3 MONTHS
0%	0%	100%	0%	0%	REPLACE PIPE SUPPORTS IN RAW SEWAGE PUMP STATION	\$ 110,000							\$ 110,000	3 MONTHS
0%	0%	12%	35%	53%	MISC WPCF EQUIPMENT REPLACEMENTS	\$ 100,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000		\$ 850,000	15 MONTHS
0%	0%	0%	100%	0%	# 1 PRIMARY CLARIFIER REHABILITATION		\$ 400,000						\$ 400,000	6 MONTHS
0%	0%	0%	100%	0%	# 3 SEC CLARIFIER REHABILITATION		\$ 150,000						\$ 150,000	12 MONTHS
0%	0%	0%	100%	0%	SLUICE GATES AND VALVES AT THE PLANT	\$ 50,000	\$ 125,000						\$ 175,000	15 MONTHS
0%	0%	0%	100%	0%	UPGRADE SLUDGE DEGRITTING SYSTEM	\$ -	\$ 50,000	\$ 650,000	\$ -	\$ -	\$ -	\$ -	\$ 700,000	24 MONTHS
0%	0%	0%	100%	0%	SECONDARY CLARIFIER FLOW DISTRIBUTION	\$ -	\$ 100,000	\$ 700,000	\$ -	\$ -	\$ -	\$ -	\$ 800,000	
<b>UPGRADE PLANT HEADWORKS</b>														
20%	80%	0%	0%	0%	a Design phase engineering services		\$ 600,000						\$ 600,000	18 MONTHS
20%	80%	0%	0%	0%	b Construction costs			\$ 3,600,000	\$ 3,600,000				\$ 7,200,000	30 MONTHS
20%	80%	0%	0%	0%	c Legal/administrative/financing			\$ 175,000	\$ 175,000				\$ 350,000	
<b>AERATION BLOWERS</b>														
0%	0%	0%	100%	0%	a Modify Aeration Tanks, Aeration Piping and Provide DO Control		\$ 200,000	\$ 2,000,000					\$ 2,200,000	18 MONTHS
0%	0%	0%	0%	100%	b Upgrade Aeration Blowers			\$ 300,000	\$ 3,000,000				\$ 3,300,000	24 MONTHS
<b>SCADA SYSTEM UPGRADE</b>														
0%	0%	0%	100%	0%	a Design phase engineering services	\$ 160,000							\$ 160,000	6 MONTHS
0%	0%	0%	100%	0%	b Programming, software and hardware installation		\$ 570,000	\$ 340,000					\$ 910,000	15 MONTHS
<b>REPLACE UV SYSTEM</b>														
0%	0%	0%	0%	100%	a Design and Pre Select equipment			\$ 300,000					\$ 300,000	16 MONTHS
0%	0%	0%	0%	100%	b Construction costs				\$ 2,000,000	\$ 2,000,000			\$ 4,000,000	18 MONTHS
<b>Pump Station Upgrades</b>														
0%	0%	0%	100%	0%	EMERGENCY POWER GENERATORS		\$ 250,000						\$ 250,000	6 MONTHS
0%	0%	0%	100%	0%	ALVORD LANE PUMP STATIONS UPGRADE		\$ 75,000	\$ 750,000					\$ 825,000	12 MONTHS
0%	0%	0%	0%	100%	GREENWICH AVE PUMP STATION UPGRADE				\$ 500,000				\$ 500,000	10 MONTHS
0%	0%	67%	33%	0%	MISC PUMP STATION EQUIP REPLACEMENTS	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000		\$ 600,000	
0%	0%	43%	57%	0%	VEHICAL REPLACEMENTS		\$ 100,000		\$ 75,000				\$ 175,000	
<b>Sewer Rehabilitation</b>														
0%	0%	0%	100%	0%	CCTV EQUIPMENT FOR SEWER TRUNK LINES			\$ 300,000					\$ 300,000	
0%	0%	0%	100%	0%	MISC SEWER REPLACEMENT AND REPAIRS			\$ 150,000	\$ 150,000				\$ 300,000	
0%	0%	71%	29%	0%	MANHOLE COVERS	\$ 100,000	\$ 50,000	\$ 50,000		\$ 50,000	\$ 50,000	\$ 50,000	\$ 350,000	
20%	80%	0%	0%	0%	SEWER LINING, JOINT SEALING AND POINT REPAIRS	\$ 1,600,000	\$ 500,000	\$ 1,500,000	\$ 1,000,000	\$ 500,000	\$ 500,000		\$ 5,600,000	
<b>New Sewer Extension</b>														
0%	0%	0%	100%	0%	WEDGEMERE ROAD SEWERS(\$ 3,500,000)		\$ 3,500,000						\$ 3,500,000	FALL 2015
0%	0%	40%	60%	0%	PERNA LANE AREA SEWERS (\$ 5,000,000)			\$ 3,000,000	\$ 2,000,000				\$ 5,000,000	FALL 2016
0%	0%	0%	0%	100%	WEST VIEW LANE				\$ 100,000	\$ 2,400,000			\$ 2,500,000	FALL 2017
0%	0%	0%	0%	100%	MCGREGOR AREA SEWERS				\$ 150,000	\$ 3,000,000			\$ 3,150,000	FALL 2017
0%	0%	56%	15%	29%	CMOM (I/I Study and SSES funded by rev bonds)	\$ 650,000	\$ 230,000	\$ 230,000	\$ 230,000	\$ 230,000			\$ 1,570,000	
100%	0%	0%	0%	0%	CMOM ( I/I Study and SSES funded by CWF grant)	\$ 350,000	\$ 270,000	\$ 270,000	\$ 270,000	\$ 270,000	\$ -		\$ 1,430,000	ONGOING
<b>TOTAL</b>						\$ 3,387,000	\$ 8,020,000	\$ 14,265,000	\$ 13,400,000	\$ 8,700,000	\$ 800,000		\$ 48,572,000	Percentage
<b>Summary of Funding Sources</b>														
CWF Grant						\$ 670,000	\$ 490,000	\$ 1,325,000	\$ 1,225,000	\$ 370,000	\$ 100,000		\$ 4,180,000	8.6%
CWF Loan						\$ 1,280,000	\$ 880,000	\$ 4,220,000	\$ 3,820,000	\$ 400,000	\$ 400,000		\$ 11,000,000	22.6%
Existing Capital Reserves						\$ 1,277,000	\$ 230,000	\$ -	\$ 2,375,000	\$ 300,000	\$ 300,000		\$ 4,482,000	9.2%
2015 Series A						\$ 160,000	\$ 6,420,000	\$ 8,120,000	\$ -	\$ -	\$ -		\$ 14,700,000	30.3%
Future Revenue Bonds						\$ -	\$ -	\$ 600,000	\$ 5,980,000	\$ 7,630,000	\$ 0		\$ 14,210,000	29.3%
<b>Summary of Payment Responsibility</b>						\$ 3,387,000	\$ 8,020,000	\$ 14,265,000	\$ 13,400,000	\$ 8,700,000	\$ 800,000		\$ 48,572,000	100%
Paid Through Sewer Assessments (40% of capital cost)						\$ 1,400,000	\$ 1,200,000	\$ 100,000	\$ -	\$ 2,160,000			\$ 4,860,000	10.0%
CWF Grant						\$ 670,000	\$ 490,000	\$ 1,325,000	\$ 1,225,000	\$ 370,000	\$ 100,000		\$ 4,180,000	8.6%
To Be Recovered By Sewer Rates						\$ 2,717,000	\$ 6,130,000	\$ 11,740,000	\$ 12,075,000	\$ 6,170,000	\$ 700,000		\$ 39,532,000	81.4%
<b>TOTAL</b>						\$ 3,387,000	\$ 8,020,000	\$ 14,265,000	\$ 13,400,000	\$ 8,700,000	\$ 800,000		\$ 48,572,000	100%

# Appendix B

## Significant Assumptions

---

### ***Summary of Significant Forecast Assumptions and Notes to the SWPCA Financial Forecast***

The accompanying Forecast, consisting of Table 8-8, “Cash Flow Projection (FY2015 through FY2020)”, presents the SWPCA’s calculations of the Debt Service Coverage Ratio Requirement and the financial results of operations on a cash basis for FY2016 and the subsequent four fiscal years ending June 30, 2020 (collectively referred to as the Forecast Period). It should be noted that projected revenues and expenses for FY2016 were based on amounts included in the SWPCA’s Proposed Operating Budget for FY2016, dated March 8, 2015.

This summary of significant assumptions provides information regarding the basis of the Forecast and support for the underlying assumptions. ARCADIS has reviewed these underlying assumptions for purposes of providing an opinion and making certain conclusions regarding the reasonableness of the Forecast, as shown in Section 9.2 of this Report. The Forecast has been prepared based on assumptions concerning future events and circumstances and the SWPCA’s most likely courses of action and best estimate of the financial results of operations during the Forecast Period.

### ***Significant Assumptions SWPCA***

#### **I. System Revenues:**

##### **A. Billing Revenues**

1. Number of Customers – Based on historical trends in customer accounts, as shown in the statistical section of the SWPCA’s audited financial statements, and information provided by the City in regard to account growth in future years. For the purposes of these projections, the net number of billing customers was projected to remain constant over the Forecast Period.
2. Billable Metered Water Use – Based on historical trends in total annual billed consumption, as shown in the statistical section of the SWPCA’s FY2014 audited financial statements, and guidance received by the SWPCA in regard to future changes in billed consumption. For the purpose of these projections, the billed metered water use was conservatively projected to remain flat over the Forecast Period, which accounts for continued water conservation efforts that serve to offset projected customer growth.

3. Wastewater User Charge Total Billing Revenues – Based on the estimated unit Wastewater User Charge rate in dollars per hundred cubic feet (ccf) multiplied by the estimated Billable Metered Water Use.

**B. Miscellaneous Revenues**

4. Interest Income – Interest earnings were calculated based on the average annual available cash balance within the enterprise fund multiplied by an interest earnings rate of 1.5 percent per year.

5. The Special Assessments include both Connection Fees and New Line Charges:

A) Special Assessment Connection Fees – These fees were projected based on information provided by the SWPCA regarding connection fee payments receivable in future years from existing customers. The SWPCA noted that a significant portion of connection fees receivable in future years is undergoing litigation. However, the full amount of the fees undergoing litigation was assumed to be receivable in future years and was incorporated into the projection of this revenue item. In addition, it was assumed that \$50,000 in fees from new customers would be received each fiscal year, beginning in FY2017 and continuing over the Forecast Period.

B) Special Assessment New Line Charges – Existing revenues received from special assessments were based on FY2016 budget estimates provided by the SWPCA. Additional revenues collected from these charges in future years was calculated based on 40 percent of the debt service associated with future line extension projects, as provided in the SWPCA’s capital plan, as the SWPCA plans to reimburse 40 percent of the cost of these projects with special assessments and the remainder from user charges.

6. Interlocal Agreement (Darien) User Charges – Based on the provisions included within the latest agreement between the SWPCA and the Town of Darien, dated December 3, 2013. The projected revenue amount includes 12.5 percent of the operating costs incurred by the SWPCA in connection with providing wastewater treatment, conveyance, or disposal services to the Town of Darien, less facility related operating revenues.
7. Darien Capital Reimbursement – Based on provisions included in the latest agreement between the SWPCA and the Town of Darien, dated December 3, 2013, Darien has agreed to pay its share of the cost for capital improvements to the SWPCA wastewater facilities. Therefore, future



payments were assumed to equal 12.5 percent of the SWPCA's annual debt service payment for capital improvements associated with the wastewater treatment plant.

8. Septic Tank Revenues – Based on FY2016 budget estimates prepared by the SWPCA. These revenues were projected to increase at a rate of 1.0 percent per year over the remaining years of the Forecast Period.
9. Regional Lab Revenues – Based on FY2016 budget estimates prepared by the SWPCA. These revenues were projected to remain constant over the remaining years of the Forecast Period.
10. Sewer Use - Lien Fees - Based on FY2016 budget estimates prepared by the SWPCA. Revenues from these fees were projected to increase at a rate of 1.0 percent per year over the remaining years of the Forecast Period.
11. Sewer Use – Delinquent Interest - Based on FY2016 budget estimates prepared by the SWPCA. These revenues were projected to increase at a rate of 1.0 percent per year over the remaining years of the Forecast Period.
12. Aquarian User Charges - Based on FY2016 budget estimates prepared by the SWPCA. Revenues from these charges were projected to increase at a rate of 1.0 percent per year over the remaining years of the Forecast Period.
13. Rebates – B.A.B.s – Based on the schedule of annual interest subsidies to be received by the SWPCA for the 2009 Build America Bonds.
14. City Reimbursement / Other – Based on FY2016 budget estimates prepared by the SWPCA. Revenues in future years were projected to increase at a rate of 1.0 percent per year over the remaining years of the Forecast Period.
15. Nitrogen Trading Exchange Credit Revenues – In FY2016, revenue from Nitrogen Credits was based on FY2016 budget estimate. In the remaining years of the Forecast Period, these revenues were projected to be \$1,000,000 per year.

### **C. Receivable Management Costs**

16. Billing and Collection Rate - Receivable Management Costs represent the cost of unpaid account balances. Although the SWPCA achieved 96 percent in FY2014, a collection rate of 95 percent was assumed in each year of the Forecast Period based on historic averages. As such, Receivable Management Costs are projected at 5.0 percent of Total Billing Revenues.

## II. System Expenses:

### E. Operations & Maintenance (Items 17. through 27.)

Operating and maintenance expenses were grouped as personnel, fringe benefit, insurance, legal, utilities, chemicals, and other general costs and projected based on the SWPCA's Proposed Operating Budget for FY2016 and the escalation rate associated with each specific group. Escalation rates for the various expense groups was based on discussions with the SWPCA regarding system operational changes, historical cost trends, and anticipated future wastewater flows and billed consumption trends.

## III. Debt Service Payments:

28. Repayment of 2006 Revenue Bonds – The schedule for the repayment of the Series 2006 Bonds was provided by Phoenix Advisors, LLC, on behalf of the SWPCA. However, it was anticipated that these bonds would be refunded by the 2015 Revenue Bonds. Therefore, no debt service payments beyond FY2016 were projected for these bonds.
29. Repayment of the 2013 Revenue Bonds – The schedule for the repayment of the 2013 Revenue Bonds was provided by Phoenix Advisors, LLC, on behalf of the SWPCA.
30. Repayment of 2015 Revenue Bonds – The schedule for the repayment of the 2015 Revenue Bonds was provided by Phoenix Advisors, LLC on behalf of the SWPCA. The projected debt service payments associated with these bonds was based on \$14 million in new money, a refunding portion of approximately \$14.6 million, and market interest rates as of May 18, 2015.
31. New Debt Service for Capital Improvements – New Debt Service represents anticipated debt service payments required to fund planned capital project costs not funded by remaining proceeds from the 2013 Revenue Bonds or new money received as part of the anticipated 2015 Revenue Bonds. New revenue bonds were assumed to be issued over a term of 30-years at an interest rate of 5.0 percent per year. New debt was assumed to be issued in two-year bundles, when used to fund capital project expenditures.
32. Repayment of Existing CWF loans – Outstanding CWF obligations were provided by the SWPCA and include the CWF 117-C, CWF 375- C, CWF 414-C, and CWF 414-D.
33. New CWF Loans for Capital Improvements – New Debt Service represents anticipated debt service payments required to fund planned capital project costs

not funded by remaining proceeds from the 2013 Revenue Bonds or new money received as part of the anticipated 2015 Revenue Bonds. New CWF loans were assumed to be issued over a term of 20 years at an interest rate of 2.0 percent per year. In addition, debt service associated with new CWF loans was assumed to be incurred two years subsequent to the origination of the new loan.

34. Existing GO Bonds (Subordinate) – The schedule for repayment of the General Obligation Debt, including the 2009 Build America Bonds, was provided by Phoenix Advisors, LLC, on behalf of the SWPCA.

#### **IV. SWPCA Cash Fund Balance Summary:**

35. Beginning Balance – The beginning cash balance of the enterprise fund was based on the ending unrestricted cash balance within the fund based on the SWPCA’s FY2014 audited financial statements.
36. Transfers In – Transfers into the fund based on SWPCA surplus revenues available after payment of debt service. Surplus revenues are net of amounts paid in cash from current revenues to fund capital project expenditures in each year.
37. Transfers Out – Previous year excess revenues and unrestricted reserves transferred out to reimburse the City for past borrowings by the SWPCA from the City’s pooled cash account and transfers out for cash funding of capital projects.
38. Ending Balance – Sum of Items 35 through 37. In FY2015, it was assumed that the ending balance would provide the SWPCA with a minimum operating reserve target equal to at least 90 days of annual O&M expenses. The minimum operating reserve target is increased to at least 120 days in FY2016 and remains at this level over the course of the Forecast Period.

#### **V. City Pooled Cash Account Balance:**

39. Beginning Balance – The beginning balance of funds due to City from SWPCA for both operating account and capital account reimbursements to the pooled cash account. The FY2015 starting balance is based on the SWPCA’s FY2014 audited financial statements ending balance.
40. Transfers In – Transfers into the fund based on SWPCA budget for FY2015 and FY2016 and thereafter an estimate of surplus revenues available to reimburse any cash advance balances and any funds owed to the SWPCA by the City for City’s share of storm and road improvements included in the SWPCA’s sewer extension projects.

41. Transfers Out – Projected future borrowings by the SWPCA from the City’s pooled cash account as may be required to fund operating shortfalls or advance fund capital improvements.

42. Ending Balance – Sum of Items 39 through 41.

**Other Assumptions / Calculations:**

- Net Revenues – Calculated as the Total System Revenues less Total System Expenses.
- Senior Lien Debt Service Coverage – Calculated by dividing Net Revenues by the sum of the Debt Service associated with the 2006 Revenue Bonds (including only the debt service paid prior to the anticipated refunding of these bonds), the 2013 Revenue Bonds, the anticipated 2015 Revenue Bonds, and the Clean Water Fund loans.
- Debt Service Coverage – Calculated by dividing Net Revenues by Total Debt Service.
- Debt Service Coverage From All Available Funds – Calculated as the sum of Net Revenues and Ending Balance, divided by Total Debt Service.

## **APPENDIX D – SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE**

The following is a brief summary of certain provisions of the Indenture of Trust, dated as of December 21, 2001 (the "Original Indenture") among the City of Stamford (the "City") and the Water Pollution Control Authority of the City of Stamford (the "Authority") and U.S. Bank National Association (successor to Wachovia Bank, National Association), as trustee (the "Trustee"), as amended by the First Supplemental Indenture, dated as of October 1, 2003 (the "First Supplemental Indenture"), the Second Supplemental Indenture, dated as of February 28, 2006 (the "Second Supplemental Indenture"), the Third Supplemental Indenture, dated as of September 1, 2006 (the "Third Supplemental Indenture"), the Fourth Supplemental Indenture, dated as of August 1, 2009, (the "Fourth Supplemental Indenture"), the Fifth Supplemental Indenture, dated as of August 1, 2013 (the "Fifth Supplemental Indenture"), and the Sixth Supplemental Indenture, dated as of August 1, 2015 (the "Sixth Supplemental Indenture"), all by and among the City, the Authority and the Trustee (the Original Indenture, as amended and supplemented is herein referred to the "Indenture"), including certain terms used in the Indenture and used but not elsewhere defined in the Official Statement. This summary does not purport to be complete and reference is made to the Indenture for full and complete statements of their terms and provisions.

### **Definitions (Section 101)**

The following terms shall have the following meanings unless the context otherwise requires:

"2001 Series A Bonds" shall mean the 2001 Series A IFO, the Series 2001 PLO and any other Bond issued pursuant to the terms of the Indenture to finance the 2001 Series A Project.

"2001 Series A IFO" shall mean the Municipality's Interim Funding Obligation in the principal amount of \$74,121,115 issued on December 21, 2001, pursuant to the terms of Sections 211 and 212 of the Indenture and the Clean Water Fund Act, to finance the 2001 Series A Project.

"2001 Series A PLO" shall mean the Municipality's Project Loan Obligation to be issued pursuant to the terms of a Supplemental Indenture and the Clean Water Fund Act to finance the 2001 Series A Project.

"2001 Series A Project" shall have the meaning set forth in the recitals to the Indenture.

"2001 Series A Special Account" shall mean the 2001 Series A Special Account established pursuant to Section 502(a) of the Indenture.

"2001 Series A Special Account Deposit Amounts" shall mean the amounts set forth on Schedule B hereto.

"Account" shall mean one of the special accounts created and established pursuant to the Indenture.

"Accountant" shall mean an independent certified public accountant (or a firm thereof) of recognized standing, selected by the Municipality and satisfactory to the Trustee and may be the accountant regularly auditing the books of the Municipality or the Authority or both.

"Accreted Value" shall mean, with respect to any Capital Appreciation Bond, the initial principal amount at which such Capital Appreciation Bond is sold to the initial purchaser by the Municipality without reduction to reflect underwriter's discount, plus interest accrued thereon at the rate and compounded at the times set forth in a Supplemental Indenture authorizing the issuance of such Capital Appreciation Bonds.

"Accrued Aggregate Debt Service" shall mean, as of any time, Aggregate Debt Service accrued or to accrue and unpaid through the end of the month.

"Affiliate" shall mean as to any person, any other person which directly or indirectly controls, or is under common control with, or is controlled by, such person. As used in this definition, "control" (and the correlative terms, "controlled by" and "under common control with") shall mean possession, directly or indirectly, of power to direct or cause the direction of management or policies (whether through ownership of securities or partnership or other ownership interests, by contract or otherwise).

"Aggregate Debt Service" shall mean for any Fiscal Year as of any date of calculation, the sum of the Debt Service for all Bonds Outstanding and Parity Indebtedness outstanding during such Fiscal Year.

“Authority” shall mean the Water Pollution Control Authority of the City of Stamford, acting in its capacity as the manager and operator of the Sewerage System pursuant to the Charter.

“Authorized Newspaper” shall mean “The Bond Buyer” or such other newspaper or financial journal which is customarily published (except in the case of legal holidays) at least once a day for at least five days in each calendar week, printed in the English language, containing financial news, and of general circulation in the Borough of Manhattan, City and State of New York.

“Authorized Representative” shall mean (i) in the case of the Authority, the Executive Director or such other person or persons so designated by resolution of the Authority, and (ii) in the case of the Municipality, the Mayor, the Director of Administration or the Controller, unless a different municipal official is designated in the Indenture or in a Supplemental Indenture to perform the act or sign the document in question.

“Authorizing Resolution” shall have the meaning given to it in the Recitals of the Indenture.

“Bond” or “Bonds” shall mean any Clean Water Fund Obligations and Other Sewerage System Indebtedness, including the 2001 Series A Bonds.

“Bond Act” shall mean Chapter 103 of the Connecticut General Statutes.

“Bond Anticipation Notes” shall mean any of the notes issued pursuant to Section 208 of the Indenture.

“Bond Counsel’s Opinion” shall mean an opinion signed by Robinson & Cole LLP or by any other attorney or firm of attorneys of nationally recognized standing in the field of law relating to revenue bonds of municipalities and public agencies, selected by the Municipality and satisfactory to the State and the Trustee.

“Bond Payment Date” shall mean with respect to the 2001 Series A PLO, the first day of each calendar month, and with respect to the other Bonds issued hereunder, such date on which interest or both a Principal Installment and interest shall be due and payable on any of the Outstanding Bonds according to their respective terms as provided in a Supplemental Indenture.

“Bondholder”, “owner” or “holder” or words of similar import shall mean, when used with reference to an Bond, the person in whose name the Bond is registered.

“Capital Appreciation Bonds” shall mean Bonds which provide for the addition of all or any part of accrued and unpaid interest thereon to the principal due thereon upon such terms and for such periods of time as may be determined by the applicable Supplemental Indenture.

“Capital Costs” shall mean and include all costs of acquisition, construction or completion of any part of the Sewerage System, including Costs of Issuance of any Bonds issued to provide funds to pay the cost thereof, the costs of any demolitions or relocations necessary in connection therewith and any extensions, renewals, replacements, equipment, alterations, improvements, additions, machinery and equipment, betterments, paving, grading, excavation, blasting or removals and of all or any property, rights, easements and franchises deemed by the Authority to be necessary or useful or convenient therefor and may include, to the extent properly attributable to such acquisition, construction and completion:

(a) obligations incurred for labor and materials and payments made to contractors, builders and materialmen in connection with construction or acquisition of any part of the Sewerage System, and for the restoration of property damaged or destroyed in connection with such construction;

(b) fees and expenses of any Fiduciary or of the issuer of any Credit Facility during construction, payments, taxes or other governmental charges lawfully levied or assessed during construction or on any property acquired, and premiums for insurance (if any) during such construction or acquisition;

(c) fees and expenses for studies, surveys and reports, engineering, borings, testings, estimates of costs and revenues, preparation of plans and specifications and inspecting or supervising construction or acquisition, as well as for the performance of all other duties of engineers or architects in connection with the acquisition, construction, extension, renewal or improvement of the Sewerage System or required by the Indenture;

(d) expenses of administration properly chargeable to the acquisition, construction, reconstruction, renewal, extension, or improvement of the Sewerage System, including legal expenses and fees, financing charges, costs of audits and fiscal advice and all other items of expense not elsewhere in this definition specified, incident to the

acquisition, construction, reconstruction, renewal, extension or improvement of the Sewerage System, including the acquisition of real estate, franchises and rights-of-way therefor, including abstracts of title and title insurance, and including interest accruing on any Series of Bonds to and including the date of scheduled completion of any improvement of the Sewerage System financed by such Series of Bonds, if so provided in the Indenture or in the Supplemental Indenture authorizing such Series, and any charges of the Trustee and Paying Agents with respect to the payment of such interest;

(e) the cost and expense of acquiring by purchase or condemnations or by leasing such property, lands, rights-of-way, franchises, easements, and other interest in land as may be deemed necessary or convenient for the acquisition, construction or completion of any part of the Sewerage System and options and partial payments thereon, and the amount of any damages incident to or consequent upon the same; and

(f) any obligation or expense heretofore or hereafter expended or incurred by the Municipality or the Authority and any amounts heretofore or hereafter advanced by the Municipality or the Authority for any of the foregoing purposes.

“Capitalized Interest” shall mean, for any particular Series of Bonds, that portion of the proceeds of the Bonds of such Series, if any, which (i) in the case of Other Sewerage System Indebtedness, is required by the Supplemental Indenture authorizing such Series of Bonds to be deposited in a sub-account established for such Series of Bonds in the Capitalized Interest Account in the Debt Service Fund, for the purpose of funding the payment of a portion of the interest on the Bonds of such Series and (ii) in the case of Clean Water Fund Obligations, is to be applied for the purpose of funding the payment of a portion of the interest on the Bonds of such Series pursuant to a Project Loan and Grant Agreement.

“Capitalized Interest Account” shall mean the Account by that name established in the Debt Service Fund pursuant to 502(c) of the Indenture.

“Certificate” shall mean, as the context indicates, either (i) a signed document attesting to or acknowledging the matters therein stated or setting forth matters to be determined pursuant to the Indenture, (ii) the report of an Accountant as to an audit or compliance called for by the Indenture, or (iii) any report of the Consulting Engineer as to any matter called for by the Indenture.

“Charter” shall mean the Charter of the City of Stamford, as amended from time to time.

“Chief Financial Officer” shall mean, as of any date, the duly appointed and acting chief financial officer of the Municipality, or of the Authority, as the context indicates, or such other person duly appointed and authorized to act on behalf of the chief financial officer, or, if there shall no longer be a chief financial officer, the duly appointed official succeeding to the duties and functions of the chief financial officer.

“Clean Water Fund” shall mean the clean water fund created under Section 22a-477 of the Clean Water Fund Act.

“Clean Water Fund Act” shall mean Sections 22a-475 to 22a-483 inclusive of the Connecticut General Statutes, as amended.

“Clean Water Fund Obligations” shall mean any Interim Funding Obligation or Project Loan Obligation, and any other obligation of the Municipality issued by the Municipality evidencing an obligation to repay money to the State pursuant to the Clean Water Fund Act, in each case authenticated and delivered pursuant to the Indenture.

“Code” shall mean the Internal Revenue Code of 1986, as amended.

“Common Account” shall mean the Common Account established in the Debt Service Reserve Fund pursuant to Section 502(b) of the Indenture.

“Connecticut General Statutes” shall mean the General Statutes of Connecticut, Revision of 1958, as amended.

“Construction Fund” shall mean the Construction Fund established pursuant to Section 502(a) of the Indenture.

“Consulting Engineer” shall mean such independent licensed professional engineer or firm of engineers of recognized standing selected by the Authority or the Municipality and may include an independent engineer or firm of engineers retained by the Municipality or the Authority in one or more other capacities.

“Continuing Disclosure Agreements” means the agreements of the Municipality and the Authority executed in connection with the issuance of Bonds in order to comply with the Rule.

“Controller” shall mean the Controller of the Municipality.

“Costs of Issuance” shall mean all items of expense, directly or indirectly payable or reimbursable and related to authorization, sale and issuance of Bonds, including but not limited to printing costs, costs of preparation and reproduction of documents, filing and recording fees, initial fees and charges of any Fiduciary or issuer of any Credit Facility, legal fees and charges, fees and disbursements of consultants and professionals, costs of credit ratings, fees and charges for preparation, execution, transportation and safekeeping of Bonds, costs and expenses of refunding, premiums for the insurance of the payment of the Bonds and any other cost, charge or fee in connection with the original issuance of Bonds.

“Credit Facility” shall mean a letter of credit, revolving credit agreement, standby purchase agreement, surety bond, insurance policy or similar obligation, arrangement or instrument issued by a bank, insurance company or other financial institution which provides for payment of all or a portion of the Principal Installments or interest due on any Bonds or Series of Bonds or provides funds for the purchase of such Bonds or portions thereof.

“Debt Service” for any Fiscal Year or part thereof shall mean, as of any date of calculation and with respect to any Series of Bonds, an amount equal to the sum of (i) interest payable during such Fiscal Year or part thereof on Bonds of such Series (including interest on Parity Bond Anticipation Notes), except to the extent that such interest is to be paid from amounts representing Capitalized Interest, and provided that for purposes of this definition interest shall not include any portion of the Accreted Value of Capital Appreciation Bonds, (ii) the Principal Installments of the Bonds of such Series payable during such Fiscal Year or part thereof (but excluding principal of Parity Bond Anticipation Notes), and provided that for purposes of this definition the Accreted Value of Capital Appreciation Bonds (including the portion constituting interest) shall be treated as principal, and (iii) any Parity Reimbursement Obligation. Such interest and Principal Installment for such Series shall be calculated on the assumption that (x) no Bonds of such Series Outstanding at the date of calculation will cease to be Outstanding except by reason of the payment thereof upon stated maturity or upon mandatory redemption by application of Sinking Fund Installments, (y) Variable Rate Bonds will bear interest at the greater of (A) the rate or rates which were assumed by the Authority in the Authority Budget for such Fiscal Year to be borne by Variable Rate Bonds during such Fiscal Year or (B) the actual rate or rates borne by such Variable Rate Bonds on such date of calculation and (z) the Principal Installment of the Bonds of any such Series which constitutes an Interim Funding Obligation or Bond Anticipation Notes shall be due and payable in equal debt service installments over a period of 20 years, commencing on the date on which payment of the Interim Funding Obligation or Bond Anticipation Notes must begin to be repaid. Debt Service on Parity Indebtedness shall be calculated in accordance with the foregoing definition.

“Debt Service Coverage Ratio” shall mean, for the Fiscal Year specified, the ratio of: (a) the Revenues for such Fiscal Year (adjusted as provided in Section 206(d)), plus the amount withdrawn from the Surplus Fund (or to be withdrawn from the Surplus Fund in a subsequent Fiscal Year as certified by an Authorized Representative of the Municipality) other than to pay Capital Costs for such Fiscal Year, less the total Operating Expenses for such Fiscal Year; compared to (b) the Aggregate Debt Service on the Bonds then Outstanding and all Parity Indebtedness then outstanding and, for purposes of Section 206(d), the maximum Aggregate Debt Service on the additional Bonds then proposed to be issued.

“Debt Service Coverage Ratio Certificate” shall have the meaning set forth in Section 713(a) of the Indenture.

“Debt Service Coverage Ratio Requirement” shall mean a Debt Service Coverage Ratio of one hundred and fifteen percent (115%).

“Debt Service Fund” shall mean the Debt Service Fund established pursuant to Section 502(a) of the Indenture.

“Debt Service Reserve Fund” shall mean the Debt Service Reserve Fund, and the Accounts therein established pursuant to Section 502(a) of the Indenture.

“Debt Service Reserve Fund Requirement” shall mean, as of any date of calculation, and for any Fiscal Year, the aggregate of: (a) with respect to the 2001 Series A Bonds, the aggregate of the 2001 Series A Special Account Deposit Amounts scheduled to have deposited to the 2001 Series A Special Account as of the date of calculation; provided that, as of the date of issuance of the 2001 Series A PLO, the Debt Service Reserve Fund Requirement shall mean the lesser of: (i) the maximum annual Debt Service on the 2001 Series A PLO (excluding any one-twentieth (1/20th) principal payment required by the Project Loan and Grant Agreement), or (ii) ten percent (10%) of the Stated Principal Amount of the 2001 Series A PLO; (b) with respect to any other Clean Water Fund Obligations issued pursuant to the Indenture, the lesser of: (i) the maximum annual Debt Service on such other Clean Water Fund Obligations (excluding any one-twentieth (1/20th) principal payment required by the Project Loan and Grant



Agreement, or (ii) ten percent (10%) of the Stated Principal Amount of such other Clean Water Fund Obligations; and (c) with respect to any other Bonds issued pursuant to the Indenture which are not Clean Water Fund Obligations, either: (A) the lesser of: (i) the maximum annual Debt Service on such Bonds; (ii) ten percent (10%) of the Stated Principal Amount of such Bonds; or (iii) 125% of the average annual Debt Service on such Bonds, or (B) an amount specified for such Bonds pursuant to a Supplemental Indenture adopted hereunder; provided, however, if pursuant to such Supplemental Indenture, the Debt Service Reserve Fund for any other Bonds which are not Clean Water Fund Obligations, is anticipated to be less than the Minimum Reserve, the Municipality shall provide the State with Notice of such fact at least 120 days prior to the issuance of such other Bonds and the State, if it objects to the funding level of the Debt Service Reserve Fund for such other Bonds, shall provide the Municipality and the Authority with Notice of such objection within 30 days of the date of the Municipality's Notice. Failure to receive Notice of such objection within such 30 day period shall constitute consent by the State to the proposed funding level of the Debt Service Reserve Fund for such other Bonds. Upon receipt of Notice of objection from the State, the Municipality and the State shall meet in a timely fashion to resolve the objection for such other Bonds to their mutual agreement, and in any event at least 90 days prior to the issuance of such other Bonds. Debt Service Reserve Fund Requirements may be satisfied in whole or in part by a Reserve Fund Credit Facility meeting the requirements of Section 509 of the Indenture. For the purpose of calculating the Debt Service Reserve Fund Requirement for any Series of Variable Rate Bonds, the maximum Debt Service on such Series shall be determined by reference to the Pro Forma Bond Issue for such Series as set forth in the Supplemental Indenture authorizing such Series.

"Defeasance Obligations" shall mean (A) any bonds or other obligations which as to principal and interest constitute direct obligations of, or are guaranteed by, the United States of America, including obligations of any agency thereof or corporation which has been or may hereafter be created pursuant to an act of Congress as an agency or instrumentality of the United States of America to the extent unconditionally guaranteed as to timely payment of principal and interest by the United States of America or (B) any other receipt, certificate or other evidence of an ownership interest in obligations or in specified portions thereof (which may consist of specified portions of the interest thereon) of the character described in subclause (A).

"Depository" shall mean any Qualified Public Depository as defined in Section 36a-330 of the Connecticut General Statutes, or a bank or trust company which otherwise meets the requirements of Section 7-402 of the Connecticut General Statutes with respect to the deposit of public funds, as selected by the Municipality as a depository of moneys to be held under the provisions of the Indenture.

"Depository Institution" shall mean The Depository Trust Company, a limited purpose trust company organized under the laws of the State of New York or any other depository institution appointed by the Municipality to act as depository for Bonds in connection with a book-entry-only system of distributing Bonds.

"Disbursement Request" shall mean the written request signed by an Authorized Representative of the Municipality and required to be delivered pursuant to a Project Loan and Grant Agreement to effect disbursements thereunder or required to be delivered pursuant to Section 503 of the Indenture to effect disbursements from the Construction Fund and (i) if such disbursement is for proceeds of Clean Water Fund Obligations shall be in substantially the form required under the applicable Project Loan and Grant Agreement and (ii) if such disbursement is for proceeds of Other Sewerage System Indebtedness, shall be in substantially the form set forth in Exhibit A hereto.

"Event of Default" shall mean any event specified in Section 1001 of the Indenture.

"Executive Director" shall mean the Executive Director of the Authority appointed in accordance with the Authority's bylaws.

"Fiduciary" shall mean the Trustee or any Paying Agent or Depository.

"Fiscal Year" shall mean the fiscal year of the Municipality.

"Fixed Rate Bond" shall mean, as of any date of determination, any Bond bearing interest at a fixed rate for the remainder of its term.

"Fund" shall mean any fund established pursuant to Section 502 of the Indenture.

"Indenture" shall mean the Indenture of Trust, authorized to be entered into by the Municipality pursuant to the terms of the Authorizing Resolution, as the same may be amended or supplemented by a Supplemental Indenture.

"Independent Consultant" shall mean any person with a favorable reputation for skill and experience in the determination of the economic feasibility, and the operation, maintenance and supervision of sewerage facilities, who is independent (although such person may be regularly retained by the Municipality and/or the Authority) and who is appointed by the Authority, with the

consent of the Municipality. If such Independent Consultant is an individual, such person shall not be a member of the Authority or a member of the Municipality's Board of Representatives or Board of Finance or an employee of the Authority or a member of the Municipality or related to a member of the Authority or a member of the Municipality's Board of Representatives or Board of Finance or an employee of the Authority or the Municipality. If the Independent Consultant is other than an individual, such person shall not have as an owner, director, officer or employee a member of the Authority or the Municipality's Board of Representatives or Board of Finance or a relative who is a member of the Authority or a member of the Municipality's Board of Representatives or Board of Finance.

"Interim Funding Obligation" shall have the meaning set forth in the Clean Water Fund Act.

"Interest Payment Date" shall mean the date interest payment is due on Bonds.

"Investment Securities" shall mean and include any of the securities and investments permitted under Section 7-400 of the Connecticut General Statutes and any other investment permitted by any provision of the Connecticut General Statutes for the Municipality; provided that if said securities and investments are not also at the time legal investments of the State under Section 3-20 of the Connecticut General Statutes, the Controller on behalf of the Municipality, shall obtain the written consent of the State prior to making or directing the Trustee to make any such investment, as long as the State owns any Bonds. The State shall respond to the Municipality as soon as practicable following receipt of a written request to consent to any such investment for which consent is required. Notwithstanding the foregoing, Investment Securities shall mean and include the securities and investments permitted under Section 7-400 of the Connecticut General Statutes on the date of adoption of the Indenture without any requirement that the State consent thereto, as long as the Municipality can invest in such securities and investments under the Connecticut General Statutes on the date such investment will be made.

"Issue Price" means the first price at which at least ten percent (10%) of Bonds are sold to the public (not including bond houses or brokers, or similar persons or organizations acting in the capacity of underwriters or wholesalers), or if privately placed, the price paid by the first buyer of such Bonds. The Issue Price of Bonds which are not substantially identical is determined separately.

"Minimum Reserve" means the lesser of (i) the maximum annual Debt Service on such Bonds, (ii) ten percent (10%) of the Stated Principal Amount of such Bonds or (iii) 125% of the average annual Debt Service on such Bonds.

"Municipality" shall mean the City of Stamford, Connecticut.

"NRMSIR" means any nationally recognized municipal securities information repository recognized by the SEC pursuant to the Rule.

"Notice" shall mean, pursuant to the definition of Debt Service Reserve Fund Requirement, written notice given by the State, the Municipality, the Authority or its legal counsel, and shall be deemed sufficient and properly given (i) when personally delivered, or (ii) upon delivery by United States Express Mail or similar overnight courier service which provides evidence of delivery, or if refused upon the first date of attempted delivery, or (iii) when three (3) days have elapsed after its transmittal by registered or certified mail, postage prepaid, return receipt requested. If to the State, such notice shall be addressed to the Office of the Treasurer, 55 Elm Street, 6<sup>th</sup> Floor, Hartford, Connecticut 06106, Attn: Clean Water Fund Financial Administrator. If to the Municipality or the Authority, such notice shall be addressed to the City of Stamford, 888 Washington Boulevard, 10<sup>th</sup> Floor, Government Center, Stamford, Connecticut 06901, Attn: Director of Administration. Such addresses may be amended by the State and the Municipality from time to time by delivery of a notice to the other party.

"Operating Expenses" shall mean all reasonable or necessary current expenses of maintaining, repairing, operating and managing the Sewerage System, including all salaries, administrative, general, commercial, architectural, engineering, advertising, auditing and legal expenses, insurance and surety bond premiums, consultants' fees and charges, payments to pension, retirement, health and hospitalization funds or in connection with any other employee benefit program, any taxes which may lawfully be imposed on the Sewerage System or the income or operation thereof, payments by the Municipality in lieu of taxes, payments required by the Charter, costs of public hearings, ordinary and current rentals of equipment or other property, ordinary lease payments for real property or interest therein, usual expenses of maintenance and repair (including replacements), total aggregate capital lease payments per year not exceeding ten percent (10%) of the Authority's total Operating Expenses for said year as shown on the Authority's budget for such year, customary and ordinary personnel and overhead expenses incurred by the Municipality for the benefit of the Authority, the amount of which is not determined to be unreasonable by the State in accordance with the foregoing standard, expenses, liabilities and compensation of any Fiduciary or of any issuer of a Credit Facility or fiduciary for any obligation issued by the Municipality other than under the Indenture, reasonable reserves for maintenance and repair, and all other expenses necessary, incidental or convenient for the efficient operation of the Sewerage System, but only to the extent properly attributable to the Sewerage System.

“Operating Fund” shall mean the Operating Fund established pursuant to Section 502(a) of the Indenture.

“Other Sewerage System Indebtedness” shall mean any bonds, notes, or other evidences of indebtedness, as the case may be, other than Clean Water Fund Obligations, authenticated and delivered pursuant to the Indenture or a Supplemental Indenture, including any Parity Reimbursement Obligation.

“Outstanding”, when used with reference to Bonds, shall mean, as of any date, all Bonds theretofore or thereupon being authenticated and delivered under the Indenture except:

(a) any Bonds cancelled by the Trustee at or prior to such date;

(b) any Bond (or portion thereof) for the payment or redemption of which there shall be set aside and held in trust hereunder either:

(i) moneys in an amount sufficient to pay when due the Principal Installments or Redemption Price thereof, together with all interest accrued or to accrue on each Interest Payment Date to the maturity or redemption date,

(ii) Defeasance Obligations in such principal amounts, of such maturities, bearing such interest and otherwise having such terms and qualifications, as are necessary to provide moneys (whether as principal or interest) in an amount sufficient to pay when due the Principal Installments or Redemption Price thereof, together with all interest accrued or to accrue on each Interest Payment Date to the maturity or redemption date, or

(iii) any combination of (i) and (ii) above,

and, if such Bond or portion thereof is to be redeemed, for which notice of redemption has been given as provided in Article VI of the Indenture, or the applicable Supplemental Indenture, or provision satisfactory to the Trustee has been made for the giving of such notice;

(c) any bond in lieu of or in substitution for which other Bonds have been authenticated and delivered; and

(d) any Bond deemed to have been paid as provided in Section 1201(b).

“Parity Bond Anticipation Notes” shall mean Bond Anticipation Notes the interest on which is payable from and secured by a pledge of the Revenues on a parity with all other Bonds.

“Parity Indebtedness” shall mean (a) indebtedness of the Municipality or (b) indebtedness incurred by a person other than the Municipality or any portion thereof for which debt service is a direct or indirect obligation of the Municipality; provided that such indebtedness set forth in (a) and (b) is incurred other than as Bonds, Parity Bond Anticipation Notes or Parity Reimbursement Obligations, and the payment of which is secured by a pledge of all or any portion of the Revenues on a parity with the Bonds, including the Project Loan Obligations set forth in Schedule C to the Indenture. For purposes of the preceding sentence “any portion of the Revenues” means without limitation, any specific assessment, service charge, connection charge, user fee, supplemental fee or other charge levied on Sewerage System users or property and pledged to secure Parity Indebtedness.

“Parity Reimbursement Obligation” shall mean a Reimbursement Obligation, the payment of which is secured by a pledge of, and a lien on, the Trust Estate created by the Indenture.

“Paying Agent” shall mean any paying agent for the Bonds of any Series, and its successor or successors and any other person which may at any time be substituted in its place pursuant to the Indenture.

“Pre-Issuance Accrued Interest” means amounts representing interest that accrues on Bonds for a period not greater than one year before the issue date of such Bonds and is paid within one year after the issue date.

“Principal Installment” shall mean, as of any date of calculation and with respect to any Series, so long as any Bonds thereof are Outstanding, (i) the principal amount of Bonds (including (x) any amount designated in, or determined pursuant to, the applicable Supplemental Indenture, as the “principal amount” with respect to any Bonds which do not pay full current interest for all or any part of their term, and (y) the principal amount of any Parity Reimbursement Obligation) of such Series due (or so tendered for purchase or payment) on a certain future date for which no Sinking Fund Installments have been established,

or (ii) the unsatisfied balance of any Sinking Fund Installments due on a certain future date for Bonds of such Series, or (iii) if such future dates coincide as to different Bonds of such Series, the sum of such principal amount of Bonds and of such unsatisfied balance of Sinking Fund Installments due on such future date; provided, however, that Principal Installment shall not include the principal of Parity Bond Anticipation Notes.

“Pro Forma Bond Issue” shall mean, when used with reference to the Debt Service Reserve Fund Requirement for a Series of Variable Rate Bonds, the hypothetical fixed rate long term bond issue set forth in the Supplemental Indenture authorizing such Series, having (i) the same maturities (and sinking fund provisions, if any) as the Series of Variable Rate Bonds to which it relates and (ii) such interest rate or rates as the Municipality shall reasonably deem to be the equivalent of the rates which would have been borne by such Series of Variable Rate Bonds if such Series had been issued as a Series of Fixed Rate Bonds.

“Project” have the meaning set forth in the recitals of the Indenture, including the 2001 Series A Project.

“Project Loan and Grant Agreement” shall mean any Project Loan and Project Grant Agreement entered into by the Municipality pursuant to the Clean Water Fund Act pursuant to which Bonds have been issued and are outstanding under the Indenture.

“Project Loan Obligation” shall have the meaning set forth in the Clean Water Fund Act.

“Rating Agency” shall mean Moody's Investors Service Inc., Standard & Poor's Corporation or any other rating agency nationally recognized for rating municipal debt and their respective successors and assigns.

“Rebate Amount” shall mean Rebate Amounts calculated pursuant to a Tax Regulatory Agreement.

“Rebate Fund” shall mean any Rebate Fund and the Accounts therein established pursuant to the Indenture.

“Record Date” shall mean, unless otherwise determined by a Supplemental Indenture for a particular Series of Bonds or by the Trustee upon the occurrence of an Event of Default, the first day of any calendar month in which there occurs a Bond Payment Date.

“Redemption Price” shall mean, when used with respect to a Bond or portion thereof, the principal amount thereof plus the applicable premium, if any, payable upon either optional or mandatory redemption thereof pursuant to the terms of the Indenture or a Supplemental Indenture.

“Refunding Bond” shall mean any Bond authenticated and delivered on original issuance pursuant to Section 206 or Section 207 for the purpose of refunding any Outstanding Bonds, or thereafter authenticated and delivered in lieu of or substitution for such Bond pursuant to the Indenture.

“Reimbursement Obligation” shall mean the obligation of the Municipality described in Section 209(b) of the Indenture to directly reimburse the issuer of a Credit Facility for amounts paid by such issuer thereunder, whether or not such obligation to so reimburse is evidenced by a promissory note or other similar instrument.

“Reserve Fund Credit Facility” shall mean a Credit Facility meeting the requirements of Section 509 of the Indenture.

“Revenue Fund” shall mean the Revenue Fund established pursuant to Section 502(a).

“Revenues” shall mean all rates, charges, rents, fees, assessments and other realized income derived or to be derived from or for the ownership, operation, use or services of the Sewerage System, including but not limited to all Sewerage System connection and use charges and benefit assessments pertaining to the Sewerage System, including all investment proceeds and proceeds of insurance received by the Municipality or the Authority (other than the proceeds of insurance with respect to damage or destruction of all or any portion of the Sewerage System), but does not include (i) any amounts received or receivable from the State or United States (or any agency of either thereof) or from any source as or on account of a grant or contribution for or with respect to the (a) construction, acquisition, improvement, extension, renewal, or other development of any part of the Sewerage System or (b) the financing of any of the foregoing, (ii) any amounts received by or paid by the Municipality or the Authority under the terms of any grant agreement with the State or the United States (or any agency of either thereof) and which are received by or paid to the Municipality in an agency capacity under such grant agreement in relation to the Sewerage System, or (iii) any property taxes levied by a special taxing district or the Municipality for the purpose of financing the acquisition or construction of Sewerage System improvements, which financing is not secured by a pledge of Revenues.

“Rule” means Section 15c2-12(b)(5) of the Securities Exchange Act of 1934, as amended from time to time.

“SEC” means the Securities and Exchange Commission.

“Series” or “Series of Bonds” shall mean all of the Bonds authenticated and delivered on original issuance identified pursuant to Section 211 of the Indenture and any Supplemental Indenture authorizing such Bonds as a separate Series of Bonds and any Bonds thereafter authenticated and delivered in lieu of or in substitution therefor pursuant to the Indenture regardless of variations in maturity, interest rate or other provisions.

“Sewer Budget” shall mean the annual budget of the Authority, as amended or supplemented, adopted or in effect for a particular Fiscal Year, as provided in Section 712 of the Indenture, as separately accounted for pursuant to Chapter 98 of the Charter.

“Sewerage System” shall mean the “sewerage system” serving the Municipality as such term is defined in Section 7-245 of the Connecticut General Statutes, including without limitation, all other assets utilized by the Municipality or the Authority for the storage, collection, reduction, recycling, reclamation, disposal, separation or treatment of water, wastes or sewage.

“SID” means any state information depository established or designated by the State and recognized by the Securities and Exchange Commission.

“Sinking Fund Installment” shall mean, as of any particular date of calculation, the amount required by the Indenture or a Supplemental Indenture to be paid on a future date for the retirement of Outstanding Bonds which are stated to mature subsequent to such future date, but does not include any amount payable by reason only of the maturity of a Bond.

“Special Account” shall mean one or more of the Special Accounts established in the Debt Service Reserve Fund pursuant to Section 502(b), including the 2001 Series A Special Account.

“Special Credit Facility” shall mean, with respect to any Series of Bonds or portion thereof, a Credit Facility (a) which provides funds for (i) the direct payment of the Principal Installments of and interest on or purchase price of such Bonds when due or (ii) the payment of the Principal Installments of and interest on or purchase price of such Bonds in the event amounts otherwise pledged to the payment thereof are not available when due and (b) which (i) requires the Municipality or the Authority to directly reimburse the issuer of such Credit Facility for amounts paid thereunder and (ii) provides that such obligation pursuant to a Parity Reimbursement Obligation.

“Start of Project Operation” shall mean the date upon which the planning, design and construction phases of the facility enterprise or other undertaking which constitutes the Project or any phase thereof shall have been completed and normal operation thereof begun as certified by the Consulting Engineer.

“State” shall mean the State of Connecticut.

“Stated Principal Amount” means par amount, unless the Bonds are issued with original issue discount or premium of more than two percent (2%) of such par amount, in which case Stated Principal Amount shall mean Issue Price excluding Pre-Issuance Accrued Interest.

“Subordinated Indebtedness” shall mean any bond, note or other evidence of indebtedness issued by the Municipality or the Authority in furtherance of the Municipality's or the Authority's corporate purposes under the Connecticut General Statutes and payable from the Subordinated Indebtedness Fund, including but not limited to any borrowings entered into between the Municipality and the Authority and the Municipality's general obligation bonds set forth on Schedule D of the Indenture.

“Subordinated Indebtedness Fund” shall mean the Subordinated Indebtedness Fund established pursuant to Section 502.

“Subordinated Indebtedness Requirement” shall mean any amount required to be deposited in the Subordinated Indebtedness Fund by resolution of the Municipality and/or the Authority including all payments with respect to Subordinated Indebtedness payable out of, or secured by a pledge of, amounts held in the Subordinated Indebtedness Fund.

“Supplemental Indenture” shall mean a written agreement of the Municipality and the Authority authorizing the issuance of a Series of Bonds and/or otherwise amending or supplementing the Indenture, adopted in accordance with Article VIII of the Indenture.

“Surplus Fund” shall mean the Surplus Fund established pursuant to Section 502.

“Tax Regulatory Agreement” shall mean an agreement, certificate or other document entered into by the issuer of a Bond for purposes of maintaining the exemption of the interest on such Series of Bonds from gross income for purposes of the Code.

“Trust Estate” shall mean all Revenues, Funds, Accounts, moneys, securities and any other collateral pledged pursuant to Section 501 of the Indenture (other than the Rebate Fund and the Operating Fund) and subject to the continuing lien of the Indenture.

“Trustee” shall mean Wachovia Bank, National Association (as successor to First Union National Bank) and its successor or successors and any other person which may at any time be substituted in its place pursuant to the Indenture.

“Variable Rate Bond” shall mean, as of any date of determination, any Bond on which the interest rate borne thereby may vary during any part of its remaining term.

### **Interpretation (Section 102)**

(a) Unless the context otherwise requires:

(1) Articles and Sections referred to by number shall mean the corresponding Articles and Sections of the Indenture.

(2) The terms “hereby”, “hereof”, “herein”, “hereunder” and any similar terms, as used in the Indenture, refer to the Indenture, and the term “hereafter” shall mean after, and the term “heretofore” shall mean before, the date of the Indenture.

(3) Words of the masculine gender shall mean and include correlative words of the feminine and neuter genders and words importing the singular number shall mean and include the plural number and vice versa.

(4) Words importing persons shall include firms, associations, partnerships (including limited partnerships), trusts, corporations and other legal entities, including public bodies, as well as natural persons.

(5) Words importing the redemption or redeeming or calling of a Bond for redemption do not include or connote the payment of such Bonds at its stated maturity or the purchase of such Bond.

(6) Any headings preceding the texts of the several Articles and Sections of the Indenture, and any table of contents or marginal notes appended to copies of the Indenture, shall be solely for convenience of reference, and shall not constitute a part of the Indenture, nor shall they affect its meaning, construction or effect.

(7) The Indenture shall be governed by and construed in accordance with the applicable laws of the State.

(8) Any publication to be made under the provisions of the Indenture in successive weeks or on successive dates may be made in each instance upon any business day of the week and need not be made in the same Authorized Newspaper for any or all of the successive publications but may be made in different Authorized Newspapers. If, because of the temporary or permanent suspension of the publication or general circulation of any of the Authorized Newspapers or for any other reason, it is impossible or impractical to publish any notice pursuant to the Indenture in the manner provided, then such publication in lieu thereof as shall be made by or with the approval of the Trustee shall constitute a sufficient publication of such notice.

(9) The date upon which any Sinking Fund Installment is required to be made pursuant to the Indenture or a Supplemental Indenture authorizing the issuance and delivery of Bonds shall be deemed to be the date upon which such Sinking Fund Installment is payable and the Outstanding Bonds to be retired by application of such Sinking Fund Installment shall be deemed to be the Bonds entitled to such Sinking Fund Installment.

(10) Wherever in the Indenture reference is made to Bonds being “tendered for purchase or payment” such reference shall also include Bonds tendered to any person designated in a Supplemental Indenture to receive such tenders.

(11) Any reference to the payment of a Bond shall be a reference to the payment of the Principal Installments or Redemption Price thereof and interest thereon.

(b) Nothing in the Indenture expressed or implied is intended or shall be construed to confer upon, or to give to, any person, other than the Municipality, the Authority, the Fiduciaries, the Bondholders and, to the extent set forth in a Supplemental Indenture authorizing the issuance of Bonds secured by a Special Credit Facility, the issuer of such Special Credit Facility, any right, remedy or claim under or by reason of the Indenture of any covenant, condition or stipulation thereof. All the covenants, stipulations, promises and agreements in the Indenture contained by and on behalf of the Municipality or the Authority, shall be for the sole and exclusive benefit of the Municipality, the Authority, the Fiduciaries and the Bondholders.

(c) If any one or more of the covenants or agreements provided in the Indenture on the part of the Municipality, the Authority or any Fiduciary to be performed should be contrary to law, then such covenant or covenants or agreement or agreements, shall be deemed separable from the remaining covenants and agreements of the Indenture and shall in no way affect the validity of the other provisions of the Indenture or of the Bonds.

#### **Authorization of Indenture (Section 201)**

The Indenture is entered into by virtue of the Charter and the Clean Water Fund Act and pursuant to their provisions. The Municipality and the Authority have each ascertained and hereby determine and declare that execution of the Indenture is necessary to carry out its purposes under the Clean Water Fund Act, that each and every act, matter, thing or course of conduct as to which provision is made in the Indenture is necessary in order to carry out and effectuate the corporate purposes of the Municipality and the Authority in accordance with the Clean Water Fund Act and the Charter, respectively, and to exercise the powers given thereby and that each and every covenant or agreement in the Indenture contained and made is necessary, useful or convenient in order to better secure the Bonds and are contracts or agreements necessary, useful and convenient to carry out and effectuate its purposes under the Clean Water Fund Act.

#### **Indenture to Constitute Contract (Section 202)**

In consideration of the purchase and acceptance of the Bonds by those who shall hold the same from time to time, the provisions of the Indenture shall constitute a contract among the Municipality, the Authority, the Trustee, the holders from time to time of the Bonds and, to the extent set forth in a Supplemental Indenture authorizing the issuance of Bonds secured by a Special Credit Facility, the issuer of such Special Credit Facility. The pledge of the Indenture and the provisions, covenants and agreements in the Indenture set forth to be performed by or on behalf of the Municipality and the Authority shall be for the equal benefit, protection and security of the holders of any and all such Bonds each of which, regardless of the time or times of its issue or maturity, shall be of equal rank without preference, priority or distinction over any other thereof except as expressly provided in the Indenture and, to the extent set forth in a Supplemental Indenture authorizing the issuance of Bonds secured by a Special Credit Facility, the issuer of such Special Credit Facility.

#### **Obligation of Bonds (Section 203)**

The Indenture creates an issue of Bonds of the Municipality to be designated as "Clean Water Fund Obligations" and creates a continuing pledge and lien on the Trust Estate to secure the full and final payment of the principal or Redemption Price of and interest on all the Bonds. The aggregate principal amount of the Bonds which may be executed, authenticated and delivered under the Indenture is not limited except as provided in the Indenture or as may be limited by law. It is hereby expressly provided that the Bonds shall be special, limited obligations payable from, and the Municipality hereby grants a security interest in, pledges and assigns to the Trustee and its successors and assigns for the equal and ratable benefit of the holders and all future holders of the Bonds and, to the extent set forth in a Supplemental Indenture authorizing the issuance of Bonds secured by a Special Credit Facility, the issuer of such Special Credit Facility, as their interests may appear, all right, title and interest in and to the Trust Estate.

The Bonds issued hereunder shall be payable solely out of the Revenues and other receipts, funds and moneys pledged therefor pursuant to the Indenture and are secured by the liens created hereby, including the Trust Estate. The Bonds shall not be obligations of the Authority, the Municipality nor the State, except as provided in the Indenture and, to the extent applicable, a Project Loan and Grant Agreement. The Bonds shall not constitute indebtedness of the Municipality or the State within the meaning of any statutory or constitutional provision. Neither the faith and credit nor the taxing power of the Municipality or the State is pledged to pay the Bonds. The Authority has no power to tax.

### **Authorization of Bonds in Series (Section 204)**

In order to provide sufficient funds for the purposes of financing Projects or for the purpose of refunding any Bonds or any bonds, notes or other obligations issued by the Municipality for the purposes of financing Projects, Bonds of the Municipality are hereby authorized to be issued from time to time without limitation as to amount except as provided in the Indenture or as may be limited by law and such Bonds shall be issued subject to the terms, conditions and limitations established in the Indenture and in one or more series as provided in the Indenture.

Bonds issued pursuant to the Indenture shall be special, limited obligations of the Municipality and shall not be payable from nor charged upon any funds other than Revenues or other receipts, funds or moneys pledged therefor pursuant to the Indenture, nor shall the Municipality be subject to any liability thereon except to the extent of such Revenues, or other receipts, fund and moneys pledged therefor pursuant to the Indenture. The issuance of Bonds pursuant hereto shall not directly or contingently obligate the Municipality to levy or to pledge any form of taxation whatever therefor, or to make any additional appropriation for their payment. The Bonds shall not constitute a charge, lien or encumbrance, legal or equitable, upon any property of the Municipality, other than Revenues or other receipts, funds or moneys pledged therefor as provided in the Indenture. The substance of such limitation shall be plainly stated on the face of each Bond.

### **Conditions Precedent to Delivery of a Series of Bonds (Section 206)**

The Bonds of a Series shall be executed by the Municipality for issuance and delivered to the Trustee and thereupon shall be authenticated by the Trustee and delivered to a Depository Institution or upon the Municipality's order, but only upon the receipt by the Trustee of:

(a) a Bond Counsel's opinion to the effect that (i) the Municipality has the right and power to adopt the Indenture under the Connecticut General Statutes, including the Clean Water Fund Act, and the Charter; (ii) the Indenture has been duly and lawfully adopted, by the Municipality and is enforceable against the Municipality except as may be limited by bankruptcy, insolvency or other laws affecting creditors' rights and the unavailability of equitable remedies; (iii) the Indenture creates the valid pledge which it purports to create of the Trust Estate, subject to the application thereof to the purposes and on the conditions permitted by the Indenture, the Clean Water Fund Act and the Charter; (iv) the Bonds of such Series are valid and binding special, limited obligations secured by the Trust Estate and are enforceable in accordance with their terms and the terms of the Indenture except as limited by bankruptcy, insolvency or other laws affecting creditors' rights and the application of equitable principles; and (v) all conditions required by the Indenture precedent to the issuance of the Bonds have been met and upon the execution, authentication and delivery thereof, the Bonds of such Series will have been duly and validly authorized and issued in accordance with the Clean Water Fund Act, if applicable, and the Indenture;

(b) a written order as to the delivery of such Bonds, signed by an Authorized Representative of the Municipality;

(c) a copy of the Indenture or Supplemental Indenture authorizing such Series, certified by an Authorized Representative of the Municipality, which shall specify:

(i) the authorized principal amount and Series designation of such Bonds and the Credit Facility, if any, related thereto, and if such Credit Facility is a Special Credit Facility;

(ii) the purposes for which such Series is being issued, which shall be one or more of the following: (1) the funding of any costs that relate to a Project for which Bonds can be issued under the Connecticut General Statutes, (2) the funding of Capitalized Interest, (3) the making of deposits in the amounts, if any, required by the Indenture or such Supplemental Indenture into any of the Funds and Accounts established pursuant to Article V of the Indenture, or (4) the refunding of any Outstanding Bonds, Bond Anticipation Notes, Subordinated Indebtedness, or outstanding bonds of the Municipality issued to pay Capital Costs of a Project;

(iii) the date, and the maturity date or dates of the Bonds of such Series;

(iv) if such Bonds will pay current interest for all or any part of their term, the interest rate or rates of the Bonds of such Series, or the manner of determining such rate or rates, the Bond Payment Dates therefor and the method of payment thereof and, if such Bonds will not pay full current interest for all or any part of their term, the rate or rates to be borne by, the method of accrual or compounding, if any, and the other terms



and conditions of such Bonds including the designation, or manner of determining, the “principal amount” of such Bonds;

(v) if any Bonds of such Series are Variable Rate Bonds, the limitation, if any, on the numerical rate or rates of interest which such Bonds may bear at any time and the terms of the Pro Forma Bond Issue applicable thereto;

(vi) the minimum denomination of, and the manner of dating, numbering and lettering, the Bonds of such Series, but such Bonds shall be in denominations equal to the minimum denomination or any multiple thereof;

(vii) the place or places of payment of the Bonds of such Series or the manner of appointing and designating the same;

(viii) if any Bonds of such Series are redeemable the Redemption Prices and the redemption terms for the Bonds of such Series;

(ix) the amount and due date of each Sinking Fund Installment, if any, for Bonds of like maturity of such Series;

(x) provisions for the sale of the Bonds of such Series;

(xi) the terms and conditions of the exercise by the owners thereof of any payment options granted thereby and the authorization of the Credit Facility, if any, relating thereto;

(xii) the forms of the Bonds of such Series and of the Trustee's certificate of authentication;

(xiii) the respective amounts, if any, to be deposited from the proceeds of such Series, in the subaccount for such Series established in the Capitalized Interest Account in the Debt Service Fund, and in the Debt Service Reserve Fund, including the Reserve Fund Credit Facility, if any, therefore; and

(xiv) any other provisions deemed advisable by the Municipality as shall not conflict with the provisions of the Indenture;

(d) except in the case of any Series of Bonds issued hereunder prior to the completion of one full Fiscal Year following the execution and delivery of the Indenture and any Series of Refunding Bonds issued pursuant to Section 207, a Certificate of an Authorized Representative of the Municipality and the Authority setting forth for the last full Fiscal Year immediately preceding the Fiscal Year in which such Bonds are to be issued, (i) the Revenues adjusted as provided in the Indenture, (ii) the Aggregate Debt Service on the Bonds then Outstanding and all Parity Indebtedness then outstanding and the maximum Aggregate Debt Service on the additional Bonds then proposed to be issued, (iii) the total Operating Expenses, (iv) the amount withdrawn from the Surplus Fund other than to pay Capital Costs, and (v) showing that the Debt Service Coverage Ratio is at least equal to the Debt Service Coverage Ratio Requirement; provided that (A) if an increase in the rates, fees and charges for services of the Sewerage System shall have been approved prior to the delivery of such Certificate, such that no further legal requirements need be met to effectuate such increase, the Revenues calculated under clause (d)(i) shall be adjusted to the amount of Revenues which would have been derived from the Sewerage System for said full Fiscal Year if such increased rates, fees and charges for services of the Sewerage System had been in effect for the full Fiscal Year, and (B) if the Authority shall have obtained one or more new customers after such Fiscal Year but before the delivery of such certificate, such that the Revenues for the last full Fiscal Year should, in the opinion of the Authority, be adjusted to reflect such additional customer or customers, then the Revenues of the Sewerage System for the full Fiscal Year immediately preceding the issuance of said additional Bonds shall be increased by the least amount which said customer or customers are legally obligated to pay in any one year for the furnishing of said services by the Sewerage System, after deducting therefrom the Operating Expenses estimated by the Authority as attributable in such year to such customer or customers.

(e) except in the case of any Series of Refunding Bonds issued pursuant to Section 207, a Certificate of an Authorized Representative of the Municipality and the Authority setting forth for each of the five (5) Fiscal Years following the issuance of such Series of Bonds, plus the Fiscal Year in which such Bonds are issued, (i) the estimated Revenues after giving effect to any increases or decreases in rates, fees and charges projected, (ii) the estimated Operating Expenses, (iii) the estimated amount to be withdrawn from the Surplus Fund other than to pay Capital Costs, (iv) the projected Aggregate Debt Service on the Bonds then Outstanding, all Parity Indebtedness then outstanding and

the additional Bonds then proposed to be issued, and (v) showing that the Debt Service Coverage Ratio will be at least equal to the Debt Service Coverage Ratio Requirement;

(f) except in the case of Refunding Bonds issued pursuant to Section 207, (i) a Certificate of an Authorized Representative of the Authority, dated as of the date of such delivery, stating that the Authority is not in default in the performance of any of the covenants, conditions, agreements or provisions contained in the Indenture and in any documents pertaining to Parity Indebtedness outstanding and (ii) a Certificate of an Authorized Representative of the Municipality, dated as of the date of such delivery, stating that the Municipality is not in default in the performance of any of the covenants, conditions, agreements or provisions contained in the Indenture and in any documents pertaining to Parity Indebtedness outstanding;

(g) in the case of any Series of Bonds which constitute Other Sewerage System Indebtedness and for which Capitalized Interest has been provided by the Supplemental Indenture authorizing such Series (i) the written direction of an Authorized Representative of the Municipality to establish the sub-account for such Series in the Capitalized Interest Account in the Debt Service Fund and (ii) the amount of the proceeds of such Series to be deposited therein;

(h) such further documents and moneys as are required by the provisions of Article VIII of the Indenture or any Supplemental Indenture adopted pursuant to Article VIII of the Indenture; and

(i) in connection with the delivery of the certificate of an Authorized Representative set forth in clause (e) above, the Authority and the Municipality shall deliver to the State a report containing such assumptions and expectations with respect to projected Revenues and Operating Expenses for the term of any Clean Water Fund Obligations Outstanding and the capital and operating needs of the Authority and the Municipality for such period in such form as the State may reasonably require to assist it in preparing its own projections.

#### **Conditions Precedent to Delivery of Refunding Bonds (Section 207)**

(a) One or more Series of Refunding Bonds may be issued pursuant to Section 207 of the Indenture at any time to refund any Outstanding Bonds or outstanding Parity Indebtedness provided that (i) average annual Debt Service on such Series of Refunding Bonds or outstanding Parity Indebtedness shall not exceed the average annual Debt Service on the Bonds to be refunded and (ii) the maximum Debt Service in any Fiscal Year on such Series of Refunding Bonds or Parity Indebtedness (excluding any one-twentieth (1/20th) principal payment required by the Project Loan and Grant Agreement), shall not exceed the maximum Debt Service in any Fiscal Year on the Bonds or Parity Indebtedness to be refunded, (excluding any one-twentieth (1/20th) principal payment on Clean Water Obligations required by the Project Loan and Grant Agreement and excluding any interest accrued but unpaid pursuant to the provisions of the Clean Water Fund Act from such Debt Service in the case of Clean Water Fund Obligations issued to refund outstanding Clean Water Fund Obligations) all as shown in a Certificate signed by an Authorized Representative of the Municipality and delivered to the Trustee prior to the authentication and delivery of such Series of Refunding Bonds. Refunding Bonds shall be issued in a principal amount sufficient, together with other moneys available therefor, to accomplish such refunding and to make the deposits in the Funds and Accounts required by the provisions of the Supplemental Indenture authorizing such Bonds. Refunding Bonds that do not meet the requirements of Section 207(a) may be issued by meeting the requirements of Section 206.

(b) All Refunding Bonds of a Series issued under Section 207 or Section 206 of the Indenture shall be executed by the Municipality for and delivered to the Trustee and thereupon shall be authenticated by the Trustee and delivered to a Depository Institution or upon the Municipality's order, but only upon the receipt by the Trustee (in addition to the documents required by Section 206(a), (b) and (c) of the Indenture in the case of Refunding Bonds issued under Section 206 or Section 207 of the Indenture and subsection (a) of Section 207 of the Indenture in the case of Refunding Bonds issued under Section 207 of the Indenture) of:

(i) irrevocable instructions to the Trustee, satisfactory to it, to give due notice of redemption of all the Bonds to be redeemed on a redemption date or dates specified in such instructions;

(ii) if the Bonds to be refunded are not to be redeemed within the next succeeding sixty (60) days, irrevocable instructions to the Trustee, satisfactory to it, to give due notice of any refunding of such Bonds on a specified date prior to their maturity, as provided in Article VI of the Indenture and Section 1201 of the Indenture;

(iii) either (A) moneys (which may include all or a portion of the proceeds of the Refunding Bonds to be issued) in an amount sufficient to effect payment of the Principal Installments and the applicable Redemption Price, if any, of the Bonds to be refunded, together with accrued interest on such Bonds to the maturity or redemption date thereof, as the case may be, or (B) Defeasance Obligations in such principal amounts, of such maturities, bearing such

interest and otherwise having such terms and qualifications and any moneys, as shall be necessary to comply with the provisions of Section 1201, which Defeasance Obligations and moneys shall be held in trust and used only as provided in Section 1201; and

(iv) such further documents and moneys as are required by the provisions of Article VIII of the Indenture or any Supplemental Indenture adopted pursuant to Article VIII of the Indenture.

### **Bond Anticipation Notes (Section 208)**

Whenever the Municipality shall authorize the issuance of a Series of Bonds, the Municipality may, by resolution, authorize the issuance of notes (and renewals thereof) in anticipation of such Series. The principal of and interest on such notes and renewals thereof shall be payable from the proceeds of such notes or from the proceeds of the sale of the Series of Bonds in anticipation of which such notes are issued. The proceeds of such Bonds may be pledged for the payment of the principal of and interest on such notes and any such pledge shall have a priority over any other pledge of such proceeds created by the Indenture. The Municipality and the Authority may also pledge the Revenues to the payment of the interest on, and subject to Section 707, the principal of such notes. A copy of the resolution of the Municipality authorizing such notes, certified by an Authorized Representative of the Municipality, shall be delivered to the Trustee following its adoption, together with such other information concerning such notes as the Trustee may reasonably request.

### **Credit Facilities (Section 209)**

(a) In connection with the issuance of any Series of Bonds hereunder, the Municipality may obtain or cause to be obtained one or more Credit Facilities providing for payment of all or a portion of the Principal Installments, or Redemption Price or interest due or to become due on such Bonds, providing for the purchase of such Bonds by the issuer of such Credit Facility or providing funds for the purchase of such Bonds by the Municipality. In connection therewith the Municipality may enter into such agreements with the issuer of such Credit Facility providing for, inter alia: (i) the payment of fees and expenses to such issuer for the issuance of such Credit Facility; (ii) the terms and conditions of such Credit Facility and the Series of Bonds affected thereby; and (iii) the security, if any, to be provided for the issuance of such Credit Facility.

(b) The Municipality may secure such Credit Facility by an agreement providing for the purchase of the Series of Bonds secured thereby with such adjustments to the rate of interest, method of determining interest, maturity, or redemption provisions as specified by the Municipality in the applicable Supplemental Indenture. The Municipality may also in an agreement with the issuer of such Credit Facility agree to directly reimburse such issuer for amounts paid under the terms of such Credit Facility, together with interest thereon (a "Reimbursement Obligation"); provided, however, that no Reimbursement Obligation shall be credited, for purposes of the Indenture, until amounts are paid under such Credit Facility. Any such Reimbursement Obligation (a "Parity Reimbursement Obligation") may be secured by a pledge of, and a lien on the Trust Estate on a parity with the lien created by Section 501 of the Indenture. Any such Parity Reimbursement Obligation shall be deemed to be a part of the Series of Bonds to which the Credit Facility which gave rise to such Parity Reimbursement Obligation relates.

(c) Any such Credit Facility shall be for the benefit of and secure such Series of Bonds or portion thereof as specified in the applicable Supplemental Indenture.

### **Parity Indebtedness (Section 210)**

The Municipality or the Authority may issue or incur Parity Indebtedness for any lawful purpose relating to the Sewerage System; provided that the Parity Indebtedness shall be deemed to be Bonds issued under Section 206 or 207 of the Indenture for the purpose of complying with the requirements of Section 206 or 207. All such Parity Indebtedness and the Bonds shall be secured equally, without preference of priority, by the Revenues pledged hereunder. There shall be included in any agreement for the repayment of Parity Indebtedness provisions that: (1) any Event of Default hereunder shall be an event of default under such agreement; and (2) if the Municipality is in default in respect of such Parity Indebtedness, the holder or holders thereof and/or any trustee therefor shall take no action which shall be inconsistent with any action taken by the Trustee hereunder and that all remedies exercised by the Trustee hereunder and by the holder or holders of such Parity Indebtedness and/or any trustee therefor are to be exercised for the equal and ratable benefit of all Bondholders and holders of Parity Indebtedness. The Trustee and the holders of any Parity Indebtedness and any trustee therefor may enter into any agreement regarding rights and remedies following an Event of Default hereunder and an event of default under any agreement for the repayment of Parity Indebtedness, which is not inconsistent with the foregoing. A listing of Parity Indebtedness outstanding as of the date of the Indenture is set forth on Schedule C of the Indenture.

### **Funding of Debt Service Reserve Fund (Section 213)**

The Debt Service Reserve Fund Requirement for the 2001 Series A Bonds will be met by depositing in the 2001 Series A Special Account the 2001 Series A Special Account Deposit Amounts.

### **Application of Bond Proceeds; Deposits to the Debt Service Reserve Fund (Section 401)**

(a) The proceeds (including accrued interest) from the sale of the Bonds of each Series shall be applied simultaneously with the delivery of such Bonds for the purposes of making deposits in the Funds and Accounts, as shall be provided by the Supplemental Indenture authorizing such Series and all amounts not otherwise deposited shall be deposited in the Construction Fund; provided, however, that (i) in the case of Clean Water Fund Obligations, the proceeds of the sale of such Bonds shall be applied as provided in the Project Loan and Grant Agreement and no proceeds shall be deposited in the Construction Fund and (ii) in the case of Refunding Bonds, all such amounts not otherwise deposited shall be applied to the refunding purposes thereof in the manner provided in such Supplemental Indenture.

(b) Unless otherwise provided in the Supplemental Indenture pertaining to any Series of Bonds, no proceeds of the sale of a Series of Bonds shall be deposited in the Debt Service Reserve Fund. The amount, if any, necessary to make the amount on deposit in the Debt Service Reserve Fund equal to the Debt Service Reserve Fund Requirement, after giving effect to the issuance of a Series of Bonds, shall be funded from Revenues deposited in the applicable Special Account of the Debt Service Reserve Fund. Unless a later date is specifically provided by a Supplemental Indenture and the State consents to such later date and the terms of such funding, the Debt Service Reserve Fund Requirement for a Series of Bonds shall be fully funded not later than: (i) the date of issuance of the Project Loan Obligation for a Project financed by Clean Water Fund Obligations, or (ii) the date of issuance of any other Bond issued pursuant to the terms of the Indenture.

If a Supplemental Indenture shall provide that on the date of issuance of the particular Series of Bonds authorized thereby, the Debt Service Reserve Fund Requirement for such Series of Bonds shall be fully funded on the same basis as all other Series of Bonds secured by the Common Account of the Debt Service Reserve Fund, such Series of Bonds shall also be secured by the Common Account of the Debt Service Reserve Fund once such funding shall have occurred. Unless and until the full funding of such Debt Service Reserve Fund Requirement on the same basis as all other Series of Bonds secured by the Common Account has occurred, each Series of Bonds shall be secured only by the applicable Special Account of the Debt Service Reserve Fund which has been established for such Series.

Any Supplemental Indenture may set forth the amount of the proceeds, if any, of any Series of Bonds to be deposited in a Special Account for such Series or the amount, if any, to be deposited in the Common Account for such Series.

### **The Pledge Effected by the Indenture (Section 501)**

All Bonds issued pursuant to the Indenture shall be special limited obligations of the Municipality. Pursuant to the Granting Clauses set forth in the Indenture, the Municipality and the Authority have pledged the Trust Estate as security for the payment of the Bonds and the performance of any other obligation of the Municipality and the Authority under the Indenture or any Supplemental Indenture, in accordance with the terms and the provisions of the Indenture, subject only to the provisions of the Indenture permitting the application thereof for or to the purposes and on the terms and conditions set forth in the Indenture. It is the intention of the Municipality and the Authority that, to the fullest extent permitted by law, including, but not limited to, the Clean Water Fund Act and the Uniform Commercial Code, this pledge shall be valid and binding from the time when it is made, that the Revenues, moneys, securities and other funds so pledged and then or thereafter received by the Municipality or the Authority shall immediately be subject to the lien of such pledge without physical delivery thereof or further act and the lien of such pledge and obligation to perform the contractual provisions contained in the Indenture shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the Municipality or the Authority, irrespective of whether such parties have notice thereof.

### **Establishment of Funds and Accounts (Section 502)**

- (a) The following Funds are hereby established:
- (1) Construction Fund;
  - (2) Revenue Fund;
  - (3) Debt Service Fund;

- (i) 2001 Series A Debt Service Account;
- (4) Debt Service Reserve Fund;
- (i) 2001 Series A Special Account;
- (5) Operating Fund;
- (6) Subordinated Indebtedness Fund; and
- (7) Surplus Fund.

(b) There is hereby established in the Debt Service Reserve Fund a separate Account to be known as the “Common Account”. In addition, any Supplemental Indenture, which provides for a Credit Facility to secure the payment of the Principal Installments of and interest on a Series of Bonds authorized thereby or to secure the payment of the purchase price of a Series of Bonds authorized thereby, can provide for one or more separate Accounts to be known as “Special Accounts” relating thereto. In addition, unless otherwise established by Supplemental Indenture, Special Accounts shall be established for each Series of Bonds unless and until the Debt Service Reserve Fund Requirement for all Outstanding Bonds shall have been fully funded on the same basis, as provided in Section 401(b). Upon the full funding of the Debt Service Reserve Fund Requirement for a Series of Bonds on the same basis, any moneys and securities deposited in any Special Account for such Series of Bonds which has been established to accommodate any funding of the Debt Service Reserve Fund Requirement over time, shall be transferred to the Common Account of the Debt Service Reserve Fund, and from such time of transfer, the Common Account shall secure all such Series of Bonds.

(c) There is hereby established in the Debt Service Fund a separate account for each Series of Bonds to be known as a “Debt Service Account” with such additional designation as shall identify such Debt Service Account to the Series of Bonds as shall be necessary, and a separate Account to be known as the “Capitalized Interest Account”. The Trustee shall, upon receipt of a written direction signed by an Authorized Representative of the Municipality, establish, in the Capitalized Interest Account, a sub-account for each Series of Bonds (other than Clean Water Fund Obligations) for which Capitalized Interest has been provided by the Supplemental Indenture authorizing such Series.

(d) In addition to the Accounts established in subsections (a), (b) and (c) above, the Trustee shall, at the request of the Municipality, establish within any Fund held by the Trustee such Accounts as shall be designated in the written instructions of an Authorized Representative of the Municipality and shall in like manner establish within any Account such subaccounts for the purposes of such Accounts as shall be so designated.

(e) In addition to the Funds and Accounts established above, the Trustee shall, at the request of the Municipality, establish a Rebate Fund and Accounts therein, to the extent so provided in a Supplemental Indenture, into which Rebate Fund and Accounts the Municipality shall be required to deposit the amount of any earnings under the Indenture required to be rebated to the United States. Amounts on deposit in the Rebate Fund and Accounts therein shall be invested and applied by the Trustee as provided in a Supplemental Indenture.

(f) Unless otherwise expressly provided in the Indenture, including without limitation Section 517, all of the Funds and Accounts except the Operating Fund shall be held by the Trustee.

**Construction Fund (Section 503)**

(a) Subject to the second succeeding sentence, the Municipality shall establish within the Construction Fund a separate Account for each Project for which a Series of Bonds is issued. There shall be deposited from time to time in the applicable Account of the Construction Fund any amount required to be deposited therein pursuant to the Indenture and any Supplemental Indenture and any other amounts received and determined to be deposited therein from time to time which are not otherwise required to be applied in accordance with the Indenture. The Municipality may, pursuant to a Project Loan and Grant Agreement, authorize alternate means of deposit and disbursement of proceeds of Clean Water Fund Obligations, and such means set forth in such Project Loan and Grant Agreement shall be effective as if fully set forth in the Indenture, provided no funds held by the Clean Water Fund prior to disbursement shall be part of the Trust Estate.

(b) Amounts in each separate Account of the Construction Fund shall be expended only (i) to pay Capital Costs of the Project for which such account was established or (ii) to the extent that the amounts in any other Fund or Account are insufficient or unavailable therefor, to pay the principal of and interest on the Bonds when due, but in the case of this clause (ii), only in the event that there shall have been filed with the Trustee (a) a Certificate of an Authorized Representative of the Municipality or the Authority in form and substance satisfactory to the Trustee stating that the Revenues expected to be received

thereafter together with such other specified amounts as are expected to be made available therefor by the Municipality will be sufficient to pay in full all Outstanding Bonds when and as the same shall become due in accordance with their terms and in reasonable detail, the basis for such certification, and (b) an opinion of counsel satisfactory to the Trustee that such payment will not result in a violation of any existing law.

(c) The Municipality or the Authority shall submit on a monthly basis to the Trustee or, with respect to Clean Water Fund Obligations, to the Clean Water Fund Administrator, a Disbursement Request setting forth the amount and, in reasonable detail, itemizing the Capital Costs of any Project expenses to be paid in the following month from the Account in the Construction Fund established for such Project or pursuant to a Project Loan and Grant Agreement, together with a Certificate of an Authorized Representative of the Municipality or the Authority identifying such Disbursement Request and stating that the amount to be withdrawn pursuant to such requisition is a proper charge thereon. The Trustee or the Clean Water Fund Administrator, as applicable, shall thereafter advance to the Municipality at the beginning of each month, or at such other time as is provided in a Project Loan and Grant Agreement with respect to Clean Water Fund Obligations, the amount shown in such Disbursement Request, subject to such rights as the Clean Water Fund Administrator has to withhold disbursements as provided in the Project Loan and Grant Agreement. The Municipality or the Authority may at any time or from time to time as necessary submit to the Trustee or the Clean Water Fund Administrator, as applicable, a supplemental Disbursement Request and Certificate of an Authorized Representative in conformity with the foregoing requirements to revise a previously submitted Disbursement Request, and upon receipt thereof the Trustee or the Clean Water Fund Administrator, as applicable, shall promptly, or at such other time as provided in a Project Loan and Grant Agreement with respect to Clean Water Fund Obligations, advance to the Municipality the amount specified in such supplemental Disbursement Request, subject to such rights as the Clean Water Fund has to withhold disbursements as provided in the Project Loan and Grant Agreement. All moneys so received by the Municipality shall be applied to the payment of the Capital Costs of the Project for which such moneys were disbursed.

(d) The Trustee shall, upon written instruction of an Authorized Representative of the Municipality or the Authority, transfer any amount of the proceeds of Bonds remaining in any Account of the Construction Fund to the Special Account, if any, of the Debt Service Reserve Fund for such Series of Bonds to the extent of any deficiency in the Debt Service Reserve Fund Requirement for such Series of Bonds, or to the Common Account of the Debt Service Reserve Fund to the extent of any deficiency therein for Bonds secured thereby, (provided that any such proceeds from Clean Water Fund Obligations shall be transferred to the Debt Service Fund for payment of Clean Water Fund Obligations), but only upon receipt of the Certificate of an Authorized Representative stating that all Capital Costs theretofore incurred in connection with the Project for which such Account was established have been paid or duly provided for. In lieu of making such transfers, the Municipality or the Authority may, by delivering to the Trustee written instructions of any Authorized Representative, direct the Trustee to apply such amounts to the redemption of Bonds in accordance with the provisions of Article VI of the Indenture.

(e) Notwithstanding anything in the Indenture to the contrary, the disbursement procedure relating to the Construction Fund can be varied for any Project as may be provided in any Supplemental Indenture that relates to the Bonds issued for such Project.

#### **Revenue Fund (section 504)**

Subject to Section 517 of the Indenture, the Municipality and the Authority shall cause all Revenues received by them to be paid to the Trustee who shall promptly upon receipt deposit the same in the Revenue Fund. There shall also be deposited in the Revenue Fund all other amounts required by the Indenture to be so deposited.

#### **Payments Into Certain Funds (Section 505)**

Subject to Section 517 of the Indenture, on the third Business Day preceding the end of each month, the Trustee shall, from the amounts in the Revenue Fund, make the following deposits in the following order of priority:

FIRST: to the Operating Fund, the amount set forth in a Certificate of an Authorized Representative of the Municipality or the Authority as being deemed necessary to provide for (taking into account amounts on deposit therein and expenses incurred and unpaid for the current month) the payment of the next succeeding month's Operating Expenses;

SECOND: to each Debt Service Account, the amount necessary so that the total on deposit therein at the end of such month equals the Accrued Aggregate Debt Service on the applicable Series of Bonds for such month, and to such payees as are designated in writing to the Trustee by the Municipality, an amount equal to the Accrued Aggregate Debt Service on all Parity Indebtedness for such month; provided however, if Revenues are insufficient for such purpose, then pro rata to each such Debt Service Account and payee;

THIRD: from the balance, if any, remaining after making the deposits required by paragraphs FIRST and SECOND, to the Debt Service Reserve Fund, first, to the credit of the Common Account therein, the amount, if any, necessary to make the total on deposit in the Common Account equal to the Debt Service Reserve Fund Requirement for the Bonds secured by the Common Account, or the entire balance if less than sufficient, second, from the balance of such deposit, if any, remaining after crediting the Common Account as aforesaid, to the credit of each Special Account, the amount, if any, necessary to make the total amount on deposit in each such Special Account equal to the portion of the Debt Service Reserve Fund Requirement for the Series of Bonds to which such Special Account relates that is required to be funded as of that month as set forth in Section 401(b); provided, however, that if the balance remaining is less than sufficient to credit in full each Special Account, credit shall be made pro rata among all Special Accounts in the same ratio as the portion of the Debt Service Reserve Fund Requirement related to each Special Account and required to be funded as of that month bears to the sum of the Debt Service Reserve Fund Requirements for all the Bonds related to Special Accounts, and third, from the balance of such deposit, if any, remaining after crediting the Common Account and the Special Accounts as aforesaid, to the credit of each debt service reserve fund as are designated in writing to the Trustee by the Municipality for Parity Indebtedness, the amount, if any, necessary to make the total amount on deposit in each such debt service reserve fund equal to the portion of the debt service reserve fund requirement for the series of Parity Indebtedness to which such debt service reserve fund relates that is required to be funded as of that month; provided, however, that if the balance remaining is less than sufficient to credit in full each debt service reserve fund, credit shall be made pro rata among all debt service reserve funds in the same ratio as the portion of the debt service reserve fund requirement related to each debt service reserve fund and required to be funded as of that month bears to the sum of the debt service reserve fund requirements for all Parity Indebtedness related to such debt service reserve funds;

FOURTH: from the balance, if any, remaining after making the deposits required by paragraphs FIRST, SECOND and THIRD, to the Rebate Fund the amount, if any, set forth in a Certificate of an Authorized Representative of the Municipality as being required to be deposited in such Fund and the Accounts thereunder in accordance with the Indenture or a Tax Regulatory Agreement;

FIFTH: from the balance, if any, remaining after making the deposits required by paragraphs FIRST, SECOND, THIRD and FOURTH, to the Subordinated Indebtedness Fund amounts required to be deposited in such Fund for such month in accordance with the Sewer Budget or the entire balance if less than sufficient;

SIXTH: from the balance, if any, remaining after making the deposits required by paragraphs FIRST, SECOND, THIRD, FOURTH and FIFTH, to the Surplus Fund, the balance.

#### **Debt Service Fund (Section 506)**

Subject to Section 517 of the Indenture:

(a) The Trustee shall for each Series of Bonds Outstanding, pay from the moneys or deposits in the respective Debt Service Account for such Series of Bonds (i) on each Bond Payment Date, (1) the amounts required for the payment of the Principal Installments, if any, due on such date and (2) the amounts required for the payment of interest due on such date, provided that with respect to any Series of Bonds for which amounts have been deposited in a Capitalized Interest Account, the unexpended balance in such account shall be applied to pay interest on such Series of Bonds prior to use of other amounts in the Debt Service Fund for such purpose and (ii) on any redemption date or date of purchase, the amounts required for the payment of accrued interest on Bonds to be redeemed or purchased on such date unless the payment of such accrued interest shall be otherwise provided.

(b) The amounts accumulated in the Debt Service Fund for each Sinking Fund Installment may, and if so directed by an Authorized Representative of the Municipality shall, be applied (together with amounts with respect to interest on the Bonds for which such Sinking Fund Installment was established) by the Trustee prior to the forty-fifth day preceding the due date of such Sinking Fund Installment to the purchase of Bonds of the Series and maturity for which such Sinking Fund Installment was established, at prices (including any brokerage and other charges) not exceeding the Redemption Price payable for such Bonds when such Bonds are redeemable by application of such Sinking Fund Installment plus unpaid interest accrued to the date of purchase, such purchases to be made by the Trustee as directed in writing by an Authorized Representative of the Municipality.

(c) Upon the purchase of any Bond pursuant to subsection (b) of Section 506 of the Indenture, an amount equal to the principal amount of the Bond so purchased or redeemed shall be credited toward the next Sinking Fund Installment thereafter to become due and the amount of any excess of the amounts so credited over the amount of such Sinking Fund Installment shall be credited against future Sinking Fund Installments in direct chronological order.

(d) As soon as practicable after the forty-fifth day preceding the due date of any such Sinking Fund Installment, the Trustee shall proceed to call for redemption, pursuant to Section 603, on such due date, Bonds of the Series and maturity for which such Sinking Fund Installment was established in such amount as shall be necessary to complete the retirement of the principal amount specified for such Sinking Fund Installment of the Bonds of such Series and maturity. The Trustee shall so call such Bonds for redemption whether or not it then has moneys in the Debt Service Fund sufficient to pay the applicable Redemption Price thereof on the redemption date. The Trustee shall apply to the redemption of the Bonds on each such redemption date, the amount required for the redemption of such Bonds.

### **Operating Fund (Section 507)**

Subject to Section 517 of the Indenture:

(a) Amounts credited to the Operating Fund shall be applied by the Authority, from time to time, to the payment of Operating Expenses in accordance with the Sewer Budget.

(b) Amounts credited to the Operating Fund which the Authority at any time determines to be in excess of an amount equal to the unpaid Operating Expenses for such Fiscal Year shall be applied to make up any deficiencies in the following funds and accounts in the order stated: the Debt Service Accounts on a pro rata basis; any debt service funds established for Parity Indebtedness the existence of which and any deficiencies therein which have been identified in writing to the Trustee by the Municipality on a pro rata basis; the Common Account of the Debt Service Reserve Fund; the Special Accounts of the Debt Service Reserve Fund on a pro rata basis; any debt service reserve funds established for Parity Indebtedness the existence of which and any deficiencies therein which have been identified in writing to the Trustee by the Municipality on a pro rata basis; and the Subordinated Indebtedness Fund. Any balance of such excess not so applied shall be transferred by the Municipality to the Trustee for credit to the Surplus Fund.

(c) If and to the extent provided in a Supplemental Indenture authorizing Bonds of a Series, amounts from the proceeds of such Bonds may be credited to the Operating Fund and set aside therein as specified in the Supplemental Indenture for any purpose of such Fund.

(d) Any amount remaining on deposit in the Operating Fund on the last day of each Fiscal Year (except any reserves for Operating Expenses, if any) shall be transferred by the Municipality to the Trustee for deposit in the Revenue Fund.

### **Debt Service Reserve Fund (Section 509)**

Subject to Section 517 of the Indenture:

(a) Amounts on deposit in the Common Account of the Debt Service Reserve Fund shall be applied, to the extent other funds are not available therefor pursuant to the Indenture, to pay the Principal Installments of, and interest on the Bonds secured by the Common Account pursuant to Section 401(b) of the Indenture when due. Amounts on deposit in Special Accounts in the Debt Service Reserve Fund shall be applied solely to the Bonds for which such Accounts have been established and such Bonds shall not be entitled to amounts on deposit in the Common Account. Amounts on deposit in debt service reserve funds for Parity Indebtedness shall be applied solely to the Parity Indebtedness for which such funds have been established and such Parity Indebtedness shall not be entitled to amounts on deposit in the Common Account.

(b) If, as of January 1 or July 1 of each year or on any date on which the Trustee receives the written direction of the Municipality under Section 509(e) of the Indenture, the amount in any Account in the Debt Service Reserve Fund exceeds the applicable Debt Service Reserve Fund Requirement, the Trustee shall withdraw from such Account the amount of any excess therein over the applicable Debt Service Reserve Fund Requirement as of the date of such withdrawal and deposit the moneys so withdrawn into the Surplus Fund. If, as of January 1 or July 1 of each year the amount in any Account in the Debt Service Reserve Fund is less than the applicable Debt Service Reserve Fund Requirement and, to the extent that such deficiency has not been made up by the date of adoption of the Sewer Budget for the next Fiscal Year by deposits pursuant to Section 505, the Authority shall, in its Sewer Budget for the ensuing Fiscal Year, include the amount necessary to fund such deficiency.

(c) Whenever the amount in the Accounts in the Debt Service Reserve Fund and the Debt Service Fund is sufficient to pay the remaining Principal Requirements and interest on any Outstanding Series of Bonds in accordance with their respective terms, the funds on deposit in such Debt Service Reserve Fund shall be transferred to such Debt Service Fund and applied to the redemption or payment of such Bonds.



(d) The Municipality may elect to satisfy in whole or in part the Debt Service Reserve Fund Requirement by means of a Reserve Fund Credit Facility, subject to the following requirements:

(i) The Reserve Fund Credit Facility provider must have a credit rating issued by a Rating Agency in one of the two highest rating categories of such rating agency;

(ii) The Municipality shall not secure any Reimbursement Obligation to the Reserve Fund Credit Facility provider by a lien on the Trust Estate equal or superior to the lien on the Trust Estate granted to the Bondholders;

(iii) Each Reserve Fund Credit Facility shall have a term of at least one (1) year (or, if less, the remaining term of the related Series of Bonds) and shall entitle the Trustee to draw upon or demand payment at such times and for such purposes as the Trustee would be entitled to claim the funds and investments that would be on deposit in the applicable Account of the Debt Service Reserve Fund were there no such Reserve Fund Credit Facility and receive the amount so requested in immediately available funds not later than one (1) business day after such draw or demand;

(iv) The Reserve Fund Credit Facility shall permit a drawing by the Trustee for the full stated amount in the event (1) the Reserve Fund Credit Facility expires or terminates for any reason prior to the final maturity of the related Series of Bonds, and (2) the Municipality fails to satisfy the Debt Service Reserve Fund Requirement by the delivery to the Trustee of cash, obligations, a substitute Reserve Fund Credit Facility, or any combination thereof, for deposit in the Debt Service Reserve Fund on or before the date of such expiration or termination;

(v) The Reserve Fund Credit Facility shall permit a drawing by the Trustee for the full stated amount in the event (i) the rating issued by the Rating Agencies to the Reserve Fund Credit Facility Provider is withdrawn or reduced below the minimum rating permitted in clause (i) above, and (ii) the Municipality has not satisfied the requirements of clause (vi) below;

(vi) If the rating issued by the Rating Agencies to the Reserve Fund Credit Facility provider is withdrawn or reduced below the minimum rating permitted in clause (i) above, the Municipality shall provide a substitute Reserve Fund Credit Facility within sixty (60) days after said rating change, and, if no substitute Reserve Fund Credit Facility is delivered to the Trustee by such date, shall immediately fund the Debt Service Reserve Fund Requirement; and

(vii) If the Reserve Fund Credit Facility provider commences any insolvency proceedings or is determined to be insolvent or fails to make payments when due on its obligations, the Municipality shall provide a substitute Reserve Fund Credit Facility within sixty (60) days thereafter, and, if no substitute Reserve Fund Credit Facility is delivered to the Trustee by such date, shall immediately fund the Debt Service Reserve Fund Requirement. If the events described in either (v) or (vi) above occur, the Trustee shall not relinquish the Reserve Fund Credit Facility at issue until after the Debt Service Reserve Fund Requirement is fully satisfied by the provision of cash, obligations, or a substitute Reserve Fund Credit Facility or any combination thereof. The Trustee is hereby authorized and directed to draw upon or demand payment from any such Reserve Fund Credit Facility in accordance with its terms in the event funds are needed from the Debt Service Reserve Fund. Any amount received from the Reserve Fund Credit Facility shall be deposited directly into the Debt Service Fund and such deposit shall constitute the application of amounts in the Debt Service Reserve Fund.

(e) In the event of the refunding of any Bonds, the Trustee shall, upon the written direction of the Municipality, withdraw from the Account of the Debt Service Reserve Fund related to the Bonds to be refunded all or any portion of amounts accumulated therein with respect to the Bonds to be refunded and deposit such amounts as provided in such written direction provided that such withdrawal shall not be made unless (i) immediately thereafter the Bonds being refunded shall be deemed to have been paid pursuant to Section 1201, and (ii), after giving effect to any amounts being simultaneously deposited therein the amount remaining in each Account after such withdrawal shall not be less than the applicable Debt Service Reserve Fund Requirement.

#### **Subordinated Indebtedness Fund (Section 510)**

(a) Subject to (b) below, amounts on deposit in the Subordinated Indebtedness Fund shall be applied by the Trustee solely to the maintenance of reserves for, or the payment of, Subordinated Indebtedness, or as otherwise provided by the resolution of the Municipality authorizing each issue of Subordinated Indebtedness.

(b) If at any time the amounts in any Debt Service Account, any debt service fund for Parity Indebtedness (the deficiency in which is identified in writing to the Trustee by the Municipality) or in any Account in the Debt Service Reserve Fund or any debt service reserve fund for Parity Indebtedness (the deficiency in which is identified in writing to the Trustee by the Municipality) shall be less than the current requirements thereof (after any transfers thereto made pursuant to Section 511 of the Indenture), the Trustee shall withdraw from the Subordinated Indebtedness Fund and deposit in such Debt Service Account, debt service fund for Parity Indebtedness, Account of the Debt Service Reserve Fund or debt service reserve fund for Parity Indebtedness, as the case may be, the amount necessary (or all the moneys in said Fund on a pro rata basis, if less than the amount necessary) to make up such deficiency.

### **Surplus Fund (Section 511)**

The Trustee shall, on each Bond Payment Date, apply moneys credited to the Surplus Fund in the following amounts: (i) on a pro rata basis, to the Debt Service Fund the amount, if any, necessary (or all the moneys in the Surplus Fund if less than the amount necessary) to make up any deficiency in the amount required to be on deposit in such Fund and to any debt service fund for Parity Indebtedness identified in writing to the Trustee by the Municipality the amount, if any, necessary (or all the moneys in the Surplus Fund if less than the amount necessary) to make up any deficiency in the amount required to be on deposit in such fund, as identified in writing to the Trustee by the Municipality, (ii) to the Debt Service Reserve Fund the amount, if any, necessary (or all the moneys in the Surplus Fund if less than the amount necessary) to make up any deficiency in the amount required to be on deposit in any Account in such Fund and (iii) on a pro rata basis, to any debt service reserve funds for Parity Indebtedness identified in writing to the Trustee by the Municipality the amount, if any, necessary (or all the moneys in the Surplus Fund if less than the amount necessary) to make up any deficiency in the amount required to be on deposit in such funds, as identified in writing to the Trustee by the Municipality. Such transfer shall be made notwithstanding any other provisions of the Indenture requiring deposits in such Funds. Moneys remaining on deposit in the Surplus Fund after the transfers set forth in Section 511 of the Indenture may also be transferred by the Trustee to the Municipality or the Authority, at the direction of the Municipality or the Authority, to pay Operating Expenses or for any other lawful purpose related to the Authority or the Sewerage System, including but not limited to the funding of a capital fund from which the Municipality or the Authority may pay for capital improvements to the Sewerage System, Rebate Amounts pursuant to any Tax Regulatory Agreement to reimburse the Municipality for expenses relating to the Authority; following any such transfer, the moneys transferred shall not be considered pledged moneys hereunder.

### **Subordinated Indebtedness (Section 512)**

The Municipality and/or the Authority may, at any time, or from time to time, issue Subordinated Indebtedness payable out of, and which may be secured by a pledge of and lien on such amounts in the Subordinated Indebtedness Fund as may from time to time be available for the purpose of payment thereof as provided in Section 510; provided, however, that (i) such Subordinated Indebtedness shall be issued only for purposes consistent with the operation and maintenance of the Sewerage System and the proceeds of such Subordinated Indebtedness shall be applied only for such purpose or purposes, and (ii) any pledge of or lien on amounts held by the Trustee shall be, and shall be expressed to be, subordinate in all respects to the pledge created by the Indenture as security for the Bonds and Parity Indebtedness. A listing of Subordinated Indebtedness outstanding as of the date of the Indenture is set forth on Schedule D of the Indenture.

### **Depositories (Section 513)**

(a) All moneys or securities held by the Trustee under the provisions of the Indenture (other than moneys or securities on deposit in the Rebate Fund and the Operating Fund) shall constitute trust funds and the Trustee may, and shall, if directed in writing by an Authorized Representative of the Municipality, deposit such moneys or securities with one or more Depositories in trust for the Trustee. All moneys or securities deposited under the provisions of the Indenture with the Trustee or any Depository shall be held in trust and applied only in accordance with the provisions of the Indenture, and each of such Funds established by the Indenture shall be a trust fund for the purposes thereof. The Municipality and the Trustee shall instruct each Depository that any moneys or securities credited to a Fund or an Account (other than moneys or securities on deposit in the Rebate Fund and the Operating Fund) hereunder which are deposited with such Depository shall be identified to be part of such Fund or Account and subject to the pledge in favor of the Trustee created under the Indenture. Prior to the first deposit of any moneys or securities with each Depository, the Municipality and the Trustee shall obtain from such Depository its agreement to serve as agent of the Trustee in holding such moneys or securities in trust in favor of the Trustee and the contract or other written instrument between the Municipality and such Depository governing the establishment and operation of such account shall provide that the moneys or securities from time to time deposited with such Depository shall be held by such Depository as such agent in trust in favor of the Trustee; provided that, except as otherwise expressly provided in the Indenture, the Municipality shall be permitted at any time to make withdrawals from and write checks or other drafts against any account held by the Municipality and established with such Depository and apply the same for the purposes specified in the Indenture and, subject to Section 515 of the Indenture, the Municipality shall be permitted to invest amounts in any such account in Investment Securities.

(b) Each Depository holding moneys or securities in trust for the Trustee shall be willing and able to accept the office on reasonable and customary terms and authorized by law to act in accordance with the provisions of the Indenture.

(c) (Intentionally left blank.)

(d) Moneys and securities credited to any Fund or Account may be commingled with moneys and securities credited to other Funds or Accounts for the purposes of establishing checking or other bank accounts for purposes of investing funds or otherwise, provided, however, the Trustee, the Municipality and the Authority shall at all times maintain or cause to be maintained accurate books and records reflecting the amounts credited to the respective Funds and Accounts held by them. All withdrawals from any commingled moneys or securities shall be charged against the proper Fund or Account and no moneys shall be withdrawn from commingled moneys if there is not on credit to the Fund or Account to be charged sufficient funds to cover such withdrawal.

#### **Deposits (Section 514)**

(a) All Revenues and other moneys held by any Depository under the Indenture may be invested in demand deposits or time deposits, if and as directed by the Municipality, provided that such deposits shall permit the moneys so held to be available for use at the time when needed. All such moneys deposited with a Fiduciary, acting as a Depository, may be invested by the commercial banking department of any Fiduciary which shall honor checks and drafts on such deposits with the same force and effect as if it were not such Fiduciary. All moneys held by any Fiduciary, as such, may be invested by such Fiduciary by its banking department in deposits demand or, if and to the extent directed by the Municipality and acceptable to such Fiduciary, in time deposits, provided that such moneys on deposit be available for use at the time when needed. Such Fiduciary shall allow and credit on such moneys such interest, if any, as it customarily allows upon similar funds of similar size and under similar condition or as required by law.

(b) All moneys deposited with the Trustee and each Depository shall be credited to the particular Fund or Account to which such moneys belong.

#### **Investment of Certain Funds (Section 515)**

(a) Moneys held in the Funds and Accounts established hereunder shall be invested and reinvested by the Trustee or the Authorized Representative of the Municipality as applicable, to the fullest extent practicable in Investment Securities which mature not later than at such times as shall be necessary to provide moneys when needed for payments to be made from such Funds and Accounts. The Trustee shall make all such investments of moneys held by it in accordance with written instructions from any Authorized Representative of the Municipality. In making any investment in any Investment Securities with moneys in any Fund or Account established under the Indenture, the Controller may, and may instruct the Trustee to, combine such moneys with moneys in any other Fund or Account, but solely for purposes of making such investment in such Investment Securities.

(b) Interest (net of that which represents a return of accrued interest paid in connection with the purchase of any investment) and other investment earnings (but not profits or losses) on any moneys or investments in the Funds and Accounts, other than the Construction Fund and the Debt Service Reserve Fund, shall be paid into the Revenue Fund as and when received. Interest (net of that which represents a return of accrued interest paid in connection with the purchase of any investment) and other investment earnings (but not profits or losses) on any moneys or investments in (i) the Debt Service Reserve Fund shall be paid into the Surplus Fund, as provided in Section 509(b), and (ii) the Construction Fund shall be held in the Construction Fund (unless otherwise specified in the applicable Supplemental Indenture).

(c) All Investment Securities acquired with moneys in any Fund or Account, including the Operating Fund, shall be held by the Trustee in pledge or by a Depository as agent in pledge in favor of the Trustee in accordance with Section 514 of the Indenture.

(d) Nothing in the Indenture shall prevent any Investment Securities acquired as investments for Funds or Accounts held under the Indenture from being issued or held in book-entry form on the books of the United States Treasury.

#### **Valuation and Sale of Investments (Section 516)**

Obligations purchased as an investment of moneys in any Fund or Account created under the provisions of the Indenture shall be deemed at all times to be a part of such Fund or Account and 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 such Fund or Account.

In computing the amount in any Fund or Account created under the provisions of the Indenture for any purpose provided in the Indenture, obligations purchased as an investment of moneys therein shall be valued at the cost of such obligations or the market value thereof, whichever is lower. The accrued interest paid in connection with the purchase of any obligation shall be included in the value thereof until interest on such obligation is paid. Such computation shall be made not less than ten days prior to July 1 of each year and on the date of the refunding of any Bonds and at such other times as the Municipality shall determine or as may be required by the Indenture.

Except as otherwise provided in the Indenture, the Trustee shall sell at the best price obtainable, or present for redemption, any obligation so purchased as an investment whenever it shall be requested in writing by an Authorized Representative of the Municipality so to do. Whenever it shall be necessary in order to provide moneys to meet any payment or transfer from any Fund or Account held by the Trustee, the Trustee shall sell at the best price obtainable or present for redemption such obligation or obligations designated by an Authorized Representative of the Municipality necessary to provide sufficient moneys for such payment or transfer; provided, however, that if the Municipality fails to provide such designation promptly after request thereof by the Trustee, the Trustee may in its discretion select the obligation or obligations to be sold or presented for redemption. The Trustee shall not be liable or responsible for any loss resulting from the making of any such investment or the sale of any obligation in the manner provided above.

#### **Flow of Funds Prior to Event of Default; Financial and Other Reporting (Section 517)**

Notwithstanding the provisions of Sections 504 through and 507 of the Indenture, so long as no Event of Default hereunder shall have occurred and be continuing, the Municipality or Authority may, in lieu of the requirements of Sections 504 through 507, maintain control and possession of the Revenue Fund, the Operating Fund, the Rebate Fund and the Surplus Fund and make the transfers required hereunder. While the Municipality or Authority maintains control of the Revenue Fund, all Revenues shall be transferred to the Revenue Fund as soon as practicable and shall not be used for any purpose prior to their transfer to the Revenue Fund.

(a) While the Municipality or Authority maintains control of the Revenue Fund, the Operating Fund, the Rebate Fund and the Surplus Fund, the Authority shall deliver to the Trustee on or before the last day of each month, an accounting of all Revenues and accounts received by the Authority during the preceding month.

(b) The Authority shall provide before March 1<sup>st</sup> of each year financial statements audited by an independent accounting firm reasonably acceptable to the State of all of its Revenues, expenses and accounts for the preceding Fiscal Year which shall be prepared in accordance with the provisions of generally accepted accounting principles related to accounting, auditing and financial reporting.

(c) The Authority shall deliver to the Trustee on or before the last business day of each month a certificate of an Authorized Representative indicating that it has complied with each of the foregoing conditions for the preceding month.

The Trustee may, upon becoming aware of a failure of the Authority or Municipality to comply with any of the above-referenced conditions, which determination of noncompliance shall be in its sole, absolute discretion, give notice to the Authority and Municipality that each shall comply with the provisions of Section 517 of the Indenture which compliance shall commence as soon as practicable but no later than thirty (30) days after receipt thereof by the Authority and the Municipality.

(d) (i) The Municipality and the Authority shall furnish, in a timely manner, to the Trustee, each NRMSIR approved by the SEC for purposes of the Rule, the Municipal Securities Rulemaking Board and the appropriate SID, if any, (A) notice of any of the events, if material, described in the Rule, and (B) notice of the failure of the Municipality, the Authority or any other “obligated person” to provide the annual financial information in the manner and as described in the next subsection.

(ii) The Municipality and the Authority shall furnish, and shall cause each “obligated person” as defined in the Rule to furnish to the Trustee, each NRMSIR approved by the SEC for purposes of the Rule and the appropriate SID, if any, on or before March 1st after the end of each Fiscal Year, annual financial information (including operating data) of the Municipality and the Authority, of the type included in the final Official Statement for Bonds subject to the Rule, including the financial statements referred to in subsection (b) for the preceding Fiscal Year and the information set forth in the Continuing Disclosure Agreements. The Municipality and the Authority shall take all actions and furnish any other information necessary to comply with the Rule and the Continuing Disclosure Agreements.

### **Payment of Bonds (Section 701)**

The Municipality shall duly and punctually pay or cause to be paid, solely from the Trust Estate pledged hereunder for such payments, the Principal Installment or Redemption Price of every Bond and the interest thereon and the principal of and interest and redemption premium on any Parity Indebtedness, at the dates and places and in the manner stated in the Bonds and such Parity Indebtedness.

### **Power to Issue Bonds and Pledge Revenues (Section 704)**

The Municipality is duly authorized under all applicable laws to authorize and issue the Bonds. The Municipality and the Authority is each duly authorized to execute and enter into the Indenture and to pledge the Revenues and assets purported to be pledged and assigned hereby in the manner and to the extent provided in the Indenture. Except to the extent permitted under the Indenture, the Revenues and assets so pledged and assigned are and will be free and clear of any pledge, lien, charge or encumbrance thereon or with respect thereto prior to, or of equal rank with, the pledge created hereby and all corporate or other action on the part of the Municipality and the Authority to that end has been and will be duly and validly taken. The Bonds are and will be the valid and legally enforceable obligations of the Municipality in accordance with their terms and the terms of the Indenture. The Municipality and the Authority shall at all times, to the extent permitted by law, defend, preserve and protect the pledge of the Revenues and other assets, including rights pledged in the Indenture and assigned under the Indenture and all the rights of the Bondholders under the Indenture against all claims and demands of all persons whomsoever.

### **Tax Covenants (Section 705)**

(a) The Municipality and the Authority shall not permit at any time or times any of the proceeds of the Bonds or any other funds of the Municipality or the Authority to be used directly or indirectly to acquire any securities or obligations the acquisition of which would cause any Bond, the interest on which was intended on the date of issuance thereof to be excluded from gross income for federal income tax purposes, to be an "arbitrage bond" as defined in Section 148 of the Internal Revenue Code of 1986, as amended (in Section 705 of the Indenture called the "Code").

(b) The Municipality and the Authority shall not, except as permitted in a Supplemental Indenture with respect to a Series of Bonds authorized thereby, permit at any time or times any proceeds of any Series of Bonds or any other funds of the Municipality or the Authority to be used, directly or indirectly, in a manner which would result in the loss of the exclusion of interest on any Bond from gross income for federal income tax purposes, the interest on which was intended on the date of issuance of such Bond to be excluded from gross income for federal income purposes.

### **Accounts and Periodical Reports and Certificates (Section 706)**

The Municipality and the Authority 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 under the Indenture and which, together with all other books and papers of the Authority, shall at all reasonable times be subject to the inspection of the Trustee, the State or the representative, duly authorized in writing, of the holder or holders of not less than 25% in principal amount of the Bonds then Outstanding.

### **Indebtedness and Liens (Section 707)**

The Municipality shall not issue any bonds, notes or other evidences of indebtedness, other than the Bonds, Parity Bond Anticipation Notes, Parity Reimbursement Obligations and Parity Indebtedness (issued or incurred in accordance with Section 210 of the Indenture), secured by a pledge of or other lien or charge on the Revenues and shall not create or cause to be created any lien or charge on such Revenues or on any amounts held by any Fiduciary, under the Indenture; but Section 707 of the Indenture shall not prevent the Municipality or the Authority from issuing notes payable from the proceeds of Bonds or bonds or notes or other obligations for the corporate purposes of the Municipality or the Authority payable out of, or secured by a pledge of, Revenues to be derived on and after such date as the pledge of the Revenues provided in the Indenture shall be discharged and satisfied as provided in Section 1201 of the Indenture, or from issuing Subordinated Indebtedness for the corporate purposes of the Municipality or the Authority which are payable out of or secured by the pledge of amounts available therefor in the Subordinate Indebtedness Fund and which recite on their face that such pledge of said amounts is and shall be in all respects subordinate to the provisions of the Indenture and the lien and pledge created by the Indenture.

### **Project Loan and Grant Agreement (Section 709)**

Each and every covenant set forth in any Project Loan and Grant Agreement is incorporated in the Indenture by reference, shall have the same force and effect as if set forth fully in the Indenture and in the event of a conflict between the

covenants contained in the Indenture and in any Project Loan and Grant Agreement, the covenants contained in the Project Loan and Grant Agreement shall control.

### **Municipal Payments (Section 711)**

The Authority shall not make payments to the Municipality from Revenues or any portion of the Trust Estate except: (i) with respect to amounts due on the Municipality's Bonds pursuant to the terms and conditions of the Indenture, (ii) with respect to borrowings between them which constitute Subordinated Indebtedness hereunder, (iii) to reimburse the Municipality for the actual cost of services provided by the Municipality to the Authority with respect to operation of the Sewerage System, (iv) payments constituting Operating Expenses and (v) from the Surplus Fund in accordance with Section 511 of the Indenture.

### **Authority Budget (Section 712)**

(a) The Authority shall, on or before June 30, in each Fiscal Year, adopt and file with the Trustee, a copy of the Sewer Budget, duly certified by an Authorized Representative of the Authority, showing the estimated Operating Expenses (including Aggregate Debt Service), capital requirements and Revenues for the ensuing Fiscal Year, together with any other information required to be set forth therein by the Indenture. Such Sewer Budget may set forth such additional information as the Authority may determine.

(b) If for any reason the Authority shall not have adopted the Sewer Budget before such June 30, the Sewer Budget for the then current Fiscal Year shall be deemed to be the Sewer Budget for the ensuing Fiscal Year until a new Sewer Budget is adopted.

(c) The Authority may at any time adopt an amended Sewer Budget for the then current or ensuing Fiscal Year, but no such amended Sewer Budget shall supersede any prior Sewer Budget until the Authority shall have filed with the Trustee and the Municipality a copy of such amended Sewer Budget.

### **Rate Covenant (Section 713)**

(a) (i) The Authority covenants that it will fix, charge and collect rates, charges, rents, fees and assessments, including but not limited to use and connection charges and benefit assessments, which shall produce Revenues which, together with amounts capitalized from proceeds of Bonds or otherwise made available and reserved and not already taken into account hereunder by reduction of the obligations which are to be paid from Revenues and the amount to be withdrawn from the Surplus Fund other than to pay Capital Costs for such Fiscal Year, shall be sufficient in each Fiscal Year to provide for:

(A) a Debt Service Coverage Ratio at least equal to the Debt Service Coverage Ratio Requirement;

(B) any amount necessary to restore any Account within the Debt Service Reserve Fund to its required deposit level; and

(C) any amount necessary to restore any debt service reserve fund for Parity Indebtedness to its required deposit level; and

(ii) The Authority covenants that each Fiscal Year, it will budget rates, charges, rents, fees and assessments, including but not limited to use and connection charges and benefit assessments, which shall produce Revenues which, together with amounts capitalized from proceeds of Bonds or otherwise made available and reserved and not already taken into account under the Indenture by reduction of the obligations which are to be paid from Revenues and the amount to be withdrawn from the Surplus Fund other than to pay Capital Costs for such Fiscal Year, to provide for an amount equal to 100% of aggregate debt service for such Fiscal Year with respect to Subordinated Indebtedness, which aggregate debt service shall be computed on the same basis and with the same assumptions as "Aggregate Debt Service" for Bonds under the Indenture; provided however, that failure to collect such Revenues and other amounts under this clause (ii) shall under no circumstances be treated as an Event of Default.

(b) The Authority shall provide to the Trustee and any Credit Facility Provider for a Series of Bonds, before March 1st, a Certificate, signed by an Authorized Representative, setting forth: (i) the Revenues, (ii) the amount on hand in the Surplus Fund, (iii) the Operating Expenses, (iv) the Aggregate Debt Service of Bonds and Parity Indebtedness, and (v) the Debt Service Coverage Ratio, for the preceding Fiscal Year (the "Debt Service Coverage Ratio Certificate"). In the event a Debt Service Coverage Ratio Certificate indicates that the Debt Service Coverage Ratio Requirement is not met, the Authority shall retain an

Independent Consultant within ninety (90) days of the delivery of the Debt Service Coverage Ratio Certificate. The Independent Consultant shall prepare a written report, a copy of which shall be delivered to the Authority, the Municipality, the Credit Facility Provider and the Trustee within sixty (60) days of the selection of the Independent Consultant, making recommendations with respect to rates, Operating Expenses and management of the Sewerage System and any other matters so as to generate additional Revenues and/or reduce Operating Expenses in order to meet the Debt Service Coverage Ratio Requirement. The Municipality and the Authority shall adopt such Independent Consultant's report and act promptly and diligently to fully implement all such recommendations except to the extent limited by law or existing contracts. For any recommendations not adopted, the Municipality shall file a written statement with the Credit Facility Provider and the Trustee setting forth the reasons why the Municipality or the Authority have failed to implement such recommendations. Copies of resolutions of the Municipality and the Authority adopting such recommendations shall be filed with the Authority, the Municipality, the Credit Facility Provider and the Trustee immediately after adoption thereof. Subject to subsection (f) below, if the Municipality and the Authority take the actions prescribed in this subsection (b), failure to meet the Debt Service Coverage Ratio Requirement shall not be treated as an Event of Default.

(c) Subject to subsection (f) below, if the Debt Service Coverage Ratio Requirement is not met by the close of the second Fiscal Year after receipt of the Independent Consultant's report specified in subsection (b) above, such event shall be considered an Event of Default under Section 1001 of the Indenture unless the Municipality engages new management for the Authority in accordance with the provisions of subsection (d) below or complies with the requirements of subsection (e) below.

(d) In the event that the Debt Service Coverage Ratio Requirement is not met by the close of the second Fiscal Year after receipt of the report set forth in subsection (b) above, the Municipality shall promptly engage an Independent Consultant who shall, within ten (10) days after being engaged by the Municipality, submit to the Municipality, the Trustee and the Credit Facility Provider a list of three or more persons, each of which shall be (1) experienced in the management of sewerage facilities of a type and size similar to the Sewerage System, (2) approved by the Credit Facility Provider of not less than a majority in aggregate principal amount of Bonds Outstanding or the holders of not less than a majority in aggregate principal amount of Bonds Outstanding with the consent of the Credit Facility Provider thereof, if any, and (3) not an Affiliate of the Municipality, the Authority, any elected official of the Municipality or any member of the Authority. The Municipality shall engage a person on such list as Executive Director of the Authority as soon as practicable but not later than thirty (30) days after the Credit Facility Provider or such holders approve such list of persons. In the event that a new Executive Director is engaged pursuant to this paragraph, the provisions of this paragraph shall not be applied to require the further appointment of a new Executive Director and an Event of Default shall not be declared until the new Executive Director has managed the Sewerage System for at least two (2) full Fiscal Years.

(e) Notwithstanding the provisions of subsection (c) above, the Municipality shall not be required to engage a new Executive Director for the Authority and an Event of Default shall not be declared if the Trustee and the Credit Facility Provider receive: (1) a written report of an Independent Consultant stating that, in the judgment of such Independent Consultant, the present Executive Director of the Authority should be retained; and (2) certified copies of resolutions adopted by the Municipality and the Authority's Board stating that the Executive Director's performance of his/her duties is satisfactory and setting forth the reasons supporting retention of the present Executive Director notwithstanding the failure to meet the Debt Service Coverage Ratio Requirement.

(f) Notwithstanding any provision contained in this Section 7.13 to the contrary, if the Debt Service Coverage Ratio Certificate indicates a Debt Service Coverage Ratio of less than 100%, such event shall be treated as an Event of Default under Section 1001 of the Indenture."

#### **Agreement of Municipality and the Authority (Section 714)**

The Municipality and the Authority agree that they will not in any way impair the rights and remedies of Bondholders, until the Bonds, together with the interest thereon, and all costs and expenses in connection with any action or proceeding by or on behalf of such holders, are fully met and discharged.

#### **Maintenance of Sewerage System (Section 715)**

The Authority covenants that it will establish and enforce reasonable rules and regulations governing the use of the Sewerage System and the operation thereof, that all compensation, salaries, fees and wages paid by it in connection with the maintenance, repair and operation of said Sewerage System will be reasonable, that no more persons will be employed by it than are necessary, that it will operate said Sewerage System or cause the Sewerage System to be operated in an efficient and economical manner, that it will at all times maintain said Sewerage System or cause said Sewerage System to be maintained in good repair and in sound operating condition and will make or cause to be made all necessary repairs, renewals and replacements, and that it will comply and cause compliance with all valid acts, rules, regulations, orders and directions of any legislative, executive, administrative or judicial body applicable to said Sewerage System. Nothing in this Agreement shall

prevent the Municipality or the Authority from transferring, to the extent permitted by law, the day-to-day operations of the Sewerage System to another entity or any program that would be carried out by the Municipality or the Authority; provided that the Authority shall cause such other entity to undertake such operations or programs so that the Authority does not violate the terms of the Indenture and so that the Authority is not rendered unable to observe their covenants under the Indenture.

#### **Payment of Lawful Charges (Section 716)**

The Authority further covenants that, from the Revenues, they will pay all municipal or governmental charges lawfully levied or assessed upon the Sewerage System or any part thereof or upon any Revenues when the same shall become due, that it will duly observe and comply with all valid requirements of any municipal or governmental authority relative to the Sewerage System, and that, from the Revenues, it will pay or cause to be discharged, or will make adequate provisions to satisfy and discharge, within sixty (60) days after the same shall accrue, all lawful claims and demands for labor, materials, supplies or other objects which, if unpaid might by law become a lien upon the Sewerage System or any part thereof or the Revenues; provided, however, that nothing contained in Section 716 of the Indenture shall require the Authority to pay or cause to be discharged, or make provision for, any such lien or charge so long as the validity thereof shall be contested in good faith and by appropriate legal proceedings.

#### **Insurance (Section 717)**

The Authority covenants that it will maintain the Sewerage System fully insured with one or more responsible insurance companies authorized and qualified under the Connecticut General Statutes to assume the risk thereof, and/or through self insurance, all as shall be approved by an independent insurance consultant acceptable to the Trustee and the State (which approval shall be delivered upon the issuance of each Series of Bonds to be owned by the State and thereafter upon the State's or the Trustee's written request (which request shall be made not more than once in any two year period), such insurance to cover such properties belonging to the Sewerage System as are customarily insured, and against loss or damage from such causes as are customarily insured against by other public instrumentalities engaged in similar activities.

All insurance policies shall be to the extent practicable for the benefit of the Municipality and the Authority, the Trustee (on behalf of the State and all other Bond Holders) and other interested parties, as their interests may appear, shall be made payable to the Municipality and the Authority and shall be deposited with the Municipality or Authority. The proceeds of any and all such insurance shall be deposited by the Municipality and the Authority in the name of the Municipality and the Authority with a Depositary.

The Municipality and Authority covenant that, immediately after any loss or damage to any properties of the Sewerage System resulting from any cause, whether or not such loss or damage shall be covered by insurance, the Authority will cause its engineers to prepare plans and specifications for repairing, replacing or reconstructing (either in accordance with the original or a different design) the damaged or destroyed property, and that it will forthwith commence or cause to be commenced and diligently prosecute or cause to be diligently prosecuted the repair, replacement or reconstruction of the damaged or destroyed property unless it shall determine that the repair, replacement or reconstruction of such property is not essential to the efficient operation of the Sewerage System.

Except as provided in the foregoing paragraph, the proceeds of all insurance referred to in Section 717 of the Indenture shall be available for, and shall to the extent necessary be applied to, the repair, replacement or reconstruction of the damaged or destroyed property, and shall be paid out in the same manner provided in the Indenture for payments from the Construction Fund. If such proceeds are more than sufficient for such purpose, the balance remaining shall be deposited to the credit of the Debt Service Fund, the Debt Service Reserve Fund or the Operating Fund as directed by the Municipality. If such proceeds shall be insufficient for such purposes, the deficiency may be supplied out of moneys in the Surplus Fund.



### **Supplemental Indentures Effective Upon Filing with the Trustee (Section 801)**

For any one or more of the following purposes and at any time or from time to time, a Supplemental Indenture may be authorized by the Municipality and the Authority, (and approved by the Mayor and Director of Administration in the case of Supplemental Indentures described in clause (5) of Section 801 of the Indenture) which, upon the filing with the Trustee of a copy thereof certified by an Authorized Representative, and without the consent of the Trustee or any Bondholder shall be fully effective in accordance with its terms:

(1) to close the Indenture against, or provide limitations and restrictions in addition to the limitations and restrictions contained in the Indenture on, the authentication and delivery of Bonds or the issuance of other evidences of indebtedness;

(2) to add to the covenants and agreements of the Municipality and the Authority in the Indenture other covenants and agreements to be observed by the Municipality and/or the Authority which are not contrary to or inconsistent with the Indenture as theretofore in effect;

(3) to add to the limitations and restrictions in the Indenture other limitations and restrictions to be observed by the Municipality and/or the Authority which are not contrary to or inconsistent with the Indenture as theretofore in effect;

(4) to surrender any right, power or privilege reserved to or conferred upon the Municipality and/or the Authority by the terms of the Indenture, but only if the surrender of such right, power or privilege is not contrary to or inconsistent with the covenants and agreements of the Municipality and the Authority contained in the Indenture;

(5) to authorize Bonds of a Series and, in connection therewith specify and determine the matters and things referred to in Section 206, and also any other matters and things relative to such Bonds which are not contrary to or inconsistent with the Indenture as theretofore in effect, or to amend, modify or rescind any such authorization, specification or determination at any time prior to the first authentication and delivery of such Bonds including, without limiting the generality of the foregoing, provisions amending or modifying the Indenture to provide for the issuance of Bonds to the general public or by private placement, in book-entry form or in coupon form payable to bearer, to issue Subordinated Indebtedness, Parity Indebtedness and to implement provisions relating to Parity Reimbursement Obligations;

(6) to confirm, as further assurance, any pledge under, and the subjection to any lien or pledge created or to be created by, the Indenture, of the Revenues or of any other moneys, securities or funds;

(7) to modify any of the provisions of the Indenture to permit compliance with any amendment to the Code if, in the opinion of Bond Counsel failure to so modify the Indenture would adversely affect the ability of the Municipality or the Authority to issue Bonds the interest on which is excluded from gross income for federal income tax purposes; or

(8) to modify any of the provisions of the Indenture in any respect whatsoever, provided that (i) such modification shall be, and be expressed to be, effective only after all Bonds of any Series Outstanding at the date of the adoption of such Supplemental Indenture shall cease to be Outstanding, and (ii) such Supplemental Indenture 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 Indenture and of Bonds issued in exchange therefor or in place thereof.

### **Supplemental Indentures Effective Upon Consent of Trustee (Section 802)**

(a) For any one or more of the following purposes and at any time or from time to time, a Supplemental Indenture may be adopted without the consent of Bondholders, which, upon (i) the filing with the Trustee of a copy thereof certified by an Authorized Representative of the Municipality, and (ii) the filing with the Municipality of an instrument in writing made by the Trustee consenting thereto shall be fully effective in accordance with its terms:

(1) to cure any ambiguity, supply any omission, or cure or correct any defect or inconsistent provision in the Indenture; or

(2) to insert such provisions clarifying matters or questions arising under the Indenture as are necessary or desirable and are not contrary to or inconsistent with the Indenture as theretofore in effect; or

(3) to provide for additional duties of the Trustee.

(b) Any such Supplemental Indenture may also contain one or more of the purposes specified in Section 801, and in that event, the consent of the Trustee required by Section 802 of the Indenture shall be applicable only with respect to those provisions of such Supplemental Indenture as shall contain one or more of the purposes set forth in subsection (a) of Section 802 of the Indenture.

### **Supplemental Indentures Effective With Consent of Bondholders (Section 803)**

At any time or from time to time, a Supplemental Indenture may be adopted subject to consent by Bondholders in accordance with and subject to the provisions of Article IX of the Indenture, which Supplemental Indenture, upon the filing with the Trustee of a copy thereof certified by an Authorized Representative of the Municipality and the Authority and upon compliance with the provisions of Article IX of the Indenture, shall become fully effective in accordance with its terms as provided in said Article.

### **General Provisions (Section 804)**

(a) The Indenture shall not be modified or amended in any respect except as provided in and in accordance with and subject to the provisions of Article VIII and Article IX of the Indenture. Nothing in Article VIII or Article IX of the Indenture contained shall affect or limit the right or obligation of the Municipality and the Authority to adopt, make, do, execute, acknowledge or deliver any Indenture, act or other instrument pursuant to the provisions of Section 703 of the Indenture or the right or obligation of the Municipality or the Authority to execute and deliver to any Fiduciary any instrument which elsewhere in the Indenture it is provided shall be delivered to said Fiduciary.

(b) Any Supplemental Indenture referred to and permitted or authorized by Sections 801 and 802 may be adopted by the Municipality and the Authority without the consent of any of the Bondholders, but shall become effective only on the conditions, to the extent and at the time provided in said Sections, respectively. The copy of every Supplemental Indenture filed with the Trustee shall be accompanied by a Bond Counsel's Opinion stating that such Supplemental Indenture has been duly and lawfully adopted in accordance with the provisions of the Indenture, is authorized or permitted by the Indenture, and is valid and binding upon the Municipality and the Authority.

(c) The Trustee is hereby authorized to accept the delivery of a certified copy of any Supplemental Indenture referred to and permitted or authorized by Section 801, 802 or 803 and to make all further agreements and stipulations which may be therein contained, and the Trustee, in taking such action, shall be fully protected in relying on an opinion of counsel (which may be a Bond Counsel's Opinion) that such Supplemental Indenture is authorized or permitted by the provisions of the Indenture.

(d) No Supplemental Indenture shall change or modify any of the rights or obligations of any Fiduciary without its written consent thereto.

### **Powers of Amendment (Section 902)**

Any modification or amendment of the Indenture or of the rights and obligations of the Municipality or the Authority and of the holders of the Bonds hereunder, in any particular, may be made by a Supplemental Indenture, with the written consent given as provided in Section 903, (i) of the holders of at least a majority in principal amount of the Bonds Outstanding at the time such consent is given and (ii) in case less than all of the several Series of Bonds then Outstanding are affected by the modification or amendment, of the holders of at least a majority in principal amount of the Bonds of such Series so affected and Outstanding at the time such consent is given; except 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 Section 902 of the Indenture. No such modification or amendment shall permit a change in the terms of redemption 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 thereon 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 consent thereto. For the purposes of Section 902 of the Indenture, a Series shall be deemed to be affected by a modification or amendment of the Indenture if the same adversely affects or diminishes the rights of the holders of Bonds of such Series. The Trustee may in its 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 Indenture and any such determination shall be binding and conclusive on the Municipality and all holders of Bonds. For the purposes of Section 902 of the Indenture,

the holders of the Bonds may include the initial holders hereof, regardless of whether such Bonds are being held for immediate resale.

### **Consent of Bondholders (Section 903)**

(a) The Municipality and the Authority may at any time adopt a Supplemental Indenture making a modification or amendment permitted by the provisions of Section 902, to take effect when and as provided in Section 903 of the Indenture. A copy of such Supplemental Indenture (or brief summary thereof or reference thereto in form approved by the Trustee), together with a request to Bondholders for their consent thereto in form satisfactory to the Trustee, shall be mailed by the Municipality and the Authority to Bondholders and shall be published in the Authorized Newspapers at least once a week for two successive weeks (but failure to mail such copy and request shall not affect the validity of the Supplemental Indenture when consented to as in Section 903 of the Indenture). Such Supplemental Indenture shall not be effective unless and until (i) there shall have been filed with the Trustee (a) the written consents of holders of the percentages of Outstanding Bonds specified in Section 902 and (b) a Bond Counsel's Opinion stating that such Supplemental Indenture has been duly and lawfully adopted and filed in accordance with the provisions of the Indenture, is authorized or permitted hereby and is valid and binding upon the Municipality and the Authority, and (ii) a notice shall have been published as provided in Section 903 of the Indenture. The Municipality and the Authority may fix a record date for purposes of determining Bondholders entitled to consent to a proposed Supplemental Indenture.

(b) Any such consent shall be binding upon the holder of the Bonds giving such consent and upon any subsequent holder of such Bond or any Bonds issued in exchange therefor (whether or not such subsequent holder thereof has notice thereof).

(c) At any time after the holders of the required percentages of Bonds shall have filed their consents to the Supplemental Indenture, the Trustee shall mail to the Municipality and the Authority a written statement that holders of such required percentages of Bonds have filed such consents. Such written statements shall be conclusive that such consents have been so filed. At any time thereafter notice, stating in substance that the Supplemental Indenture (which may be referred to as a Supplemental Indenture adopted by the Municipality on a stated date, a copy of which is on file with the Trustee) has been consented to by the holders of the required percentages of Bonds and will be effective as provided in Article IX of the Indenture, shall be given to Bondholders by the Municipality by mailing such notice to Bondholders and, if at the time any of such Bonds are in coupon form payable to bearer, by publishing the same in the Authorized Newspapers at least once not more than ninety days after the holders of the required percentages of Bonds shall have filed their consents to the Supplemental Indenture and the written statement of the Trustee provided for in the Indenture is filed. The Municipality and the Authority shall file with the Trustee proof of the giving of such notice. A record, consisting of the papers required or permitted by Section 903 of the Indenture to be filed with the Trustee, shall be proof of the matters therein stated. Such Supplemental Indenture making such amendment or modification shall be deemed conclusively binding upon the Municipality and the Authority, the Fiduciaries and the holders of all Bonds upon the filing with the Trustee of the proof of the giving of such last mentioned notice.

### **Modifications by Unanimous Consent (Section 904)**

The terms and provisions of the Indenture and the rights and obligations of the Municipality and the Authority and of the holders of the Bonds may be modified or amended in any respect upon the adopting and filing of a Supplemental Indenture and the consent of the holders of all the Bonds then Outstanding, such consent to be given as provided in Section 903 except that no notice to Bondholders either by mailing or publication shall be required; but no such modification or amendment shall change or modify any of the rights or obligations of any Fiduciary without the filing with the Trustee of the written consent thereto of such Fiduciary in addition to the consent of the Bondholders.

### **Exclusion of Bonds (Section 905)**

Bonds owned or held by or for the account of the Municipality or the Authority shall not be deemed Outstanding for the purpose of consent or other action or any calculation of Outstanding Bonds provided for in Article IX of the Indenture, or Article X of the Indenture and the Municipality shall not be entitled with respect to such Bonds to give any consent or take any other action provided for in this Article or Article X. At the time of any consent or other action taken under Article IX or Article X of the Indenture, the Municipality and the Authority shall furnish the Trustee a Certificate of an Authorized Representative, upon which the Trustee may rely, describing all Bonds so to be excluded.

### **Events of Default (Section 1001)**

If one or more of the following events (in the Indenture called "Events of Default") shall occur:

(1) a default in the due and punctual payment of a Principal Installment or the Redemption Price of any Bond when and as the same shall become due and payable, whether at maturity or upon call for redemption, or otherwise; or

(2) a default in the due and punctual payment of any installment of interest on any Bond, when and as such interest installment shall become due and payable; or

(3) an event of default of the Municipality or Authority shall occur on any Parity Indebtedness or under any documents relating to such Parity Indebtedness; or

(4) default by the Municipality or the Authority in the performance or observance of any other of the covenants, agreements or conditions on its part or on the part of the Municipality or the Authority in the Indenture, any Supplemental Indenture, the Bonds or a Project Loan and Grant Agreement, and such default shall continue for a period of thirty days after the giving of written notice thereof stating that such notice is a "Notice of Default" to the Municipality and the Authority by the Trustee or to the Municipality, the Authority and to the Trustee by the State or the holders of not less than a majority in principal amount of the Bonds Outstanding; or

(5) if the Municipality or the Authority shall (i) apply for or consent to the appointment of a receiver, trustee or liquidator of all or a substantial part of the Sewerage System; (ii) be unable, or admit in writing its inability to pay debts as they mature; (iii) file a petition, arrangement, reorganization, or the like under any insolvency or bankruptcy law, or the adjudication as a bankrupt or the making of an assignment for the satisfaction, settlement or delay of debt or the appointment of a receiver of all or any part of its properties; or (iv) take any action for the purpose of effecting any of the foregoing,

then, upon the happening and continuance of any Event of Default, the Trustee may, and upon the written request of the holders of not less than a majority in principal amount of the Bonds Outstanding the Trustee shall, in any such case, unless the principal of all the Bonds then Outstanding shall already have become due and payable, declare the principal of all the Bonds then Outstanding, and the interest accrued thereon, to be due and payable immediately, and upon any such declaration the same shall become and be immediately due and payable, anything in the Indenture or in any of the Bonds contained to the contrary notwithstanding. The right of the Trustee to make any such declaration as aforesaid, however, is subject to the condition that if, at any time after such declaration, but before the Bonds shall have matured by their terms, all overdue installments of principal and interest upon the Bonds, together with the reasonable and proper charges, expenses and liabilities of the Trustee, and all other sums then payable by the Municipality and the Authority under the Indenture (except the interest accrued since the next preceding interest date on, the Bonds due and payable solely by virtue of such declaration) shall either be paid by or for the account of the Municipality or provision satisfactory to the Trustee shall be made for such payment, and all defaults under the Bonds or under the Indenture (other than the payment of principal and interest due and payable solely by reason of such declaration) shall be made good or be secured to the satisfaction of the Trustee or provision deemed by the Trustee to be adequate shall be made therefor, then and in every such case the holders of a majority in principal amount of the Bonds Outstanding, by written notice to the Municipality, the Authority and to the Trustee, may rescind such declaration and annul such default in its entirety, or, if the Trustee shall have acted without a direction from the holders of the Bonds as aforesaid at the time of such request, and if there shall not have been theretofore delivered to the Trustee written direction to the contrary by the holders of a majority in principal amount of the Bonds then Outstanding, then any such declaration shall ipso facto be deemed to be rescinded and any such default and its consequences shall ipso facto be deemed to be annulled, but no such rescission and annulment shall extend to or affect any subsequent default or impair or exhaust any right or power consequent thereon.

#### **Accounting and Examination of Records After Default (Section 1002)**

(a) The Municipality and the Authority covenant that if an Event of Default shall have happened and shall not have been remedied, the books of record and account of the Municipality and the Authority shall at all times be subject to the inspection and use of the Trustee and of its agents and attorneys.

(b) The Municipality and the Authority covenant that if an Event of Default shall happen and shall not have been remedied, the Municipality and the Authority, upon demand of the Trustee, will account, as if they were the trustee of an express trust, for all Revenues and other moneys, securities and funds pledged or held under the Indenture for such period as shall be stated in such demand.

#### **Application of Revenues and Other Moneys After Default (Section 1003)**

(a) The Municipality and the Authority covenant that if an Event of Default shall occur and shall not have been remedied, the Municipality and the Authority, upon demand of the Trustee, shall pay over or cause to be paid over to the Trustee

(i) forthwith, any moneys, securities and funds then held by the Municipality or the Authority or a Depository in any Fund or Account established under the Indenture (other than the Rebate Fund and the Operating Fund), and (ii) as promptly as practicable after receipt thereof, the Revenues. Amounts on deposit in the Special Accounts of the Debt Service Reserve Fund shall be applied solely to the Series of Bonds for which such Special Account was established and such Bonds shall not be entitled to amounts on deposit in the Common Fund of the Debt Service Reserve Fund.

(b) During the continuance of an Event of Default, unless otherwise directed (with respect to order) by the owners of a majority in principal amount of the Bonds at the time Outstanding, the Trustee shall apply such Revenues and the income therefrom as follows and in the following order:

(1) to the payment of the reasonable and proper charges and expenses of the Trustee and any trustee for Parity Indebtedness;

(2) to the payment of the interest and principal or Redemption Price then due on the Bonds and Parity Indebtedness as follows:

(i) unless the principal of all of the Bonds shall be due and payable,

First: To the payment to the persons entitled thereto of all installments of interest then due in the order of the maturity of such installments, and, if the amount available shall not be sufficient to pay in full any installment or installments maturing on the same date, then to the payment thereof ratably, according to the amounts due thereon, to the persons entitled thereto, without any discrimination or preference; and

Second: To the payment to the persons entitled thereto of the unpaid principal or Redemption Price of any Bonds and Parity Indebtedness which shall have become due, whether at maturity or by call for redemption, in the order of their due dates, and, if the amount available shall not be sufficient to pay in full all the Bonds and Parity Indebtedness due on any date, then to the payment thereof ratably, according to the amounts of principal or Redemption Price due on such date, to the persons entitled thereto, without any discrimination or preference.

(ii) If the principal of all of the Bonds and Parity Indebtedness shall be due and payable, to the payment of the principal and interest then due and unpaid upon the Bonds and Parity Indebtedness 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 Bond or Parity Indebtedness over any other Bond or Parity Indebtedness, ratably, according to the amounts due respectively for principal and interest, to the persons entitled thereto, without any discrimination or preference.

(c) if and when all overdue installments of interest on all Bonds and Parity Indebtedness, together with the reasonable and proper charges and expenses of the Trustee and any trustee for Parity Indebtedness, and all other sums payable by the Municipality under the Indenture, including the principal and Redemption Price of and accrued unpaid interest on all Bonds and Parity Indebtedness which shall then be payable by declaration or otherwise, shall either be paid by or for the account of the Municipality, or provision satisfactory to the Trustee shall be made for such payment, and all defaults under the Indenture or the Bonds and Parity Indebtedness shall be made good or secured to the satisfaction of the Trustee or provision deemed by the Trustee to be adequate shall be made therefor, the Trustee shall pay over to the Municipality all such Revenues then remaining unexpended in the hands of the Trustee (except Revenues deposited or pledged, or required by the terms of the Indenture to be deposited or pledged, with the Trustee), and thereupon the Municipality and the Trustee shall be restored, respectively, to their former positions and rights under the Indenture, and all Revenues shall thereafter be applied as provided in Article V of the Indenture. No such payment over to the Municipality by the Trustee or resumption of the application of Revenues as provided in Article V of the Indenture shall extend to or affect any subsequent default under the Indenture or impair any right consequent thereon.

The Trustee shall be entitled to rely conclusively on information and certificates provided by the Municipality or the Authority or the trustee for or holders of Parity Indebtedness in making any payments required by Section 1003 of the Indenture.

#### **Proceedings Brought by Trustee (Section 1004)**

(a) If an Event of Default shall occur and shall not have been remedied, then and in every such case, the Trustee, by its agents and attorneys, if the Trustee shall deem it advisable, may proceed to protect and enforce its rights and the rights of

the holders of the Bonds under the Indenture forthwith by a suit or suits in equity or at law, whether for the specific performance of any covenant contained in the Indenture, or in aid of the execution of any power granted in the Indenture, or for an accounting against the Municipality or the Authority as if it were the trustee of an express trust, or in the enforcement of any other legal or equitable right as the Trustee, being advised by counsel, shall deem most effectual to enforce any of its rights or to perform any of its duties under the Indenture.

(b) All rights of action under the Indenture may be enforced by the Trustee without the possession of any of the Bonds or the production thereof at the trial or other proceedings, and any such suit or proceedings instituted by the Trustee shall be brought in its name.

(c) The holders of a majority in principal amount of the Bonds at the time Outstanding, may direct by instrument in writing the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred upon the Trustee, provided that the Trustee shall have the right to decline to follow any such direction if the Trustee shall be advised by counsel that the action or proceeding so directed may not lawfully be taken, or if the Trustee in good faith shall determine that the action or proceeding so directed would subject the Trustee to personal liability or be unjustly prejudicial to the Bondholders not parties to such direction.

(d) Upon commencing a suit in equity or upon other commencement of judicial proceedings by the Trustee to enforce any right under the Indenture, the Trustee shall be entitled to exercise any and all rights and powers conferred in the Indenture and provided to be exercised by the Trustee upon the occurrence of an Event of Default; and, as a matter of right against the Municipality and the Authority, without notice or demand and without regard to the adequacy of the security for the Bonds, the Trustee shall, to the extent permitted by law, be entitled to the appointment of a receiver of the moneys, securities and funds then held by the Municipality or the Authority in any Fund or Account established under the Indenture (other than the Rebate Fund and the Operating Fund) and, subject to application of the Revenues, with all such powers as the court or courts making such appointment shall confer; but notwithstanding the appointment of any receiver, the Trustee shall be entitled to retain possession and control of and to collect and receive income from, any moneys, securities and funds deposited or pledged with it under the Indenture or agreed or provided to be delivered or pledged with it under the Indenture.

(e) Regardless of the happening of an Event of Default, the Trustee shall have the power to, but (unless requested in writing by the holders of a majority in principal amount of the Bonds then Outstanding, and furnished with reasonable security and indemnity) shall be under no obligation to, institute and maintain such suits and proceedings as it may be advised shall be necessary or expedient to prevent any impairment of the security under the Indenture by any acts which may be unlawful or in violation of the Indenture, and such suits and proceedings as the Trustee may be advised shall be necessary or expedient to preserve or protect its interests and the interests of the Bondholders.

#### **Restriction on Bondholders' Action (Section 1005)**

(a) No holder of any Bond shall have any right to institute any suit, action or proceeding at law or in equity for the enforcement of any provision of the Indenture or the execution of any trust under the Indenture or for any remedy under the Indenture, unless such holder shall have previously given to the Trustee written notice of the happening of an Event of Default, as provided in Article X of the Indenture, and the holders of at least a majority in principal amount of the Bonds then Outstanding shall have filed a written request with the Trustee, and shall have offered it reasonable opportunity, either to exercise the powers granted in Section 1005 of the Indenture or to institute such action, suit or proceeding in its own name, and unless such holders shall have offered to the Trustee adequate security and indemnity against the costs, expenses and liabilities to be incurred therein or thereby, and the Trustee shall have refused to comply with such request within a reasonable time; it being understood and intended that no one or more holders of Bonds shall have any right in any manner whatever by his or their action to affect, disturb or prejudice the pledge created by the Indenture, or to enforce any right under the Indenture, except in the manner therein provided; and that all proceedings at law or in equity to enforce any provision of the Indenture shall be instituted, had and maintained in the manner provided in the Indenture and for the equal benefit of all holders of the Outstanding Bonds.

(b) Nothing in the Indenture or in the Bonds contained shall affect or impair the obligation of the Municipality, which is absolute and unconditional, to pay at the respective dates of maturity and places therein expressed the principal of and interest on the Bonds to the respective holders thereof from the Trust Estate, or affect or impair the right of action, which is also absolute and unconditional, of any holder to enforce such payment of this Bond. Notwithstanding the preceding sentence and anything in the Indenture or in the Bonds contained, the Authority and the Municipality shall not be required to advance any moneys derived from any source other than the Revenues and assets pledged under the Indenture for any of the purposes in the Indenture mentioned whether for the payment of the principal of or the Redemption Price, if any, or interest on the Bonds or for any other purpose of the Indenture.

### **Effect of Waiver and Other Circumstances (Section 1007)**

(a) No delay or omission of the Trustee or of any Bondholder to exercise any right or power arising upon the happening of an Event of Default shall impair any right or power or shall be construed to be a waiver of any such default or to be an acquiescence therein; and every power and remedy given by Article X of the Indenture to the Trustee or to the Bondholders may be exercised from time to time and as often as may be deemed expedient by the Trustee or by the Bondholders.

(b) Prior to the declaration of maturity of the Bonds as provided in Section 1201 of the Indenture, the holders of a majority in principal amount of the Bonds at the time Outstanding, or their attorneys-in-fact duly authorized, may on behalf of the holders of all of the Bonds waive any past default under the Indenture and its consequences, except a default in the payment of interest on or principal or Redemption Price of the Bonds. No such waiver shall extend to any subsequent or other default or impair any right consequent thereon.

### **Defeasance (Section 1201)**

(a) If the Municipality shall pay or cause to be paid to the holders of all Bonds then Outstanding, the Principal Installments and interest and Redemption Price, if any, to become due thereon, at the times and in the manner stipulated therein and in the Indenture, then at the option of the Municipality and the Authority, expressed in an instrument in writing signed by an Authorized Representative of each and delivered to the Trustee, the covenants, agreements and other obligations of the Municipality and the Authority to the Bondholders shall be discharged and satisfied. In such event, the Trustee shall, upon the request of the Municipality, execute and deliver to the Municipality all such instruments as may be desirable to evidence such discharge and satisfaction and the Fiduciaries shall pay over or deliver to the Municipality all moneys, securities and funds held by them pursuant to the Indenture which are not required for the payment or redemption of Bonds not theretofore surrendered for such payment or redemption.

(b) Bonds for the payment or redemption of which moneys shall have been set aside and shall be held in trust by the Trustee (through deposit by the Municipality or the Authority 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 paragraph (a) of Section 1201 of the Indenture. Subject to the provisions of subsection (c) of Section 1201 of the Indenture, all 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 subsection (a) of Section 1201 of the Indenture if (i) in case any of said Bonds are to be redeemed on any date prior to their maturity, the Municipality shall have given to the Trustee irrevocable instructions accepted in writing by the Trustee to publish as provided in Article VI of the Indenture notice of redemption of such Bonds (other than Bonds which have been purchased by the Trustee at the direction of the Municipality as provided in the Indenture prior to the publication of such notice of redemption) on said date, (ii) there shall have been deposited with the Trustee either moneys in an amount which shall be sufficient, or Defeasance Obligations the principal installments of and/or the interest on which when due, without reinvestment, will provide moneys which, together with the moneys, if any, deposited with the Trustee at the same time, shall be sufficient, to pay when due the Principal Installments or Redemption Price, if applicable, and interest due and to become due on said Bonds or prior to the redemption date or maturity date thereof, as the case may be, and (iii) in the event said Bonds are not to be redeemed within the next succeeding 60 days, the Municipality shall have given the Trustee in form satisfactory to it irrevocable instructions to publish, as soon as practicable, at least twice, at an interval of not less than seven days between publications, in the Authorized Newspapers a notice to the holders of such Bonds that the deposit required by (ii) above has been made with the Trustee and that said Bonds are deemed to have been paid in accordance with Section 1201 of the Indenture and stating such maturity or redemption date upon which moneys are to be available for the payment of the Principal Installments or Redemption Price, if applicable, on said Bonds (other than Bonds which have been purchased by the Trustee at the direction of the Municipality as provided in the Indenture prior to the publication of the notice of redemption referred to in clause (i) hereof). The Trustee shall, as and to the extent necessary, apply moneys held by it pursuant to Section 1201 of the Indenture to the retirement of said Bonds in the manner provided in the Indenture.

The Trustee shall, if so directed by the Municipality (x) prior to the maturity date of Bonds deemed to have been paid in accordance with Section 1201 of the Indenture which are not to be redeemed prior to their maturity date or (y) prior to the publication of the notice of redemption referred to in clause (i) above with respect to any Bonds deemed to have been paid in accordance with Section 1201 of the Indenture which are to be redeemed on any date prior to their maturity, apply moneys deposited with the Trustee in respect of such Bonds and redeem or sell Defeasance Obligations so deposited with the Trustee and apply the proceeds thereof to the purchase of such Bonds and the Trustee shall immediately thereafter cancel all such Bonds so purchased; provided, however that the Trustee shall receive an Accountant's Certificate showing that the moneys and Defeasance Obligations remaining on deposit with the Trustee after the purchase and cancellation of such Bonds shall be sufficient to pay when due the Principal Installment or Redemption Price, if applicable, and interest due or to become due on all Bonds, in respect of which such moneys and Defeasance Obligations are being held by the Trustee on or prior to the redemption date or maturity date thereof, as the case may be and a Bond Counsel's Opinion to the effect that such redemption or sale of such Defeasance Obligations will not adversely affect the exclusion of the interest on such Bonds from gross income for federal income tax

purposes and that such redemption or sale otherwise complies with the provisions of the Indenture. The directions given by the Municipality to the Trustee referred to in the preceding sentence shall also specify the portion, if any, of such Bonds so purchased and cancelled to be applied against the obligation of the Trustee to pay Bonds deemed paid in accordance with Section 1201 of the Indenture upon their maturity date or dates and the portion, if any, of such Bonds so purchased and canceled to be applied against the obligation of the Trustee to redeem Bonds deemed paid in accordance with Section 1201 of the Indenture on any date or dates prior to their maturity. In the event that on any date as a result of any purchases and cancellations of Bonds as provided in Section 1201 of the Indenture the total amount of moneys and Defeasance Obligations remaining on deposit with the Trustee under Section 1201 of the Indenture is in excess of the total amount which would have been required to be deposited with the Trustee on such date in respect of the remaining Bonds in order to satisfy clause (ii) of subsection (b) of Section 1201 of the Indenture, the Trustee shall, if requested by the Municipality, pay the amount of such excess to the Municipality free and clear of any lien or pledge securing said Bonds or otherwise existing under the Indenture. Except as otherwise provided in subsection (b) of Section 1201 of the Indenture and subsection (c) of Section 1201 of the Indenture, neither Defeasance Obligations nor moneys deposited with the Trustee pursuant to Section 1201 of the Indenture 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, if applicable, and interest on said Bonds; provided that any cash received from such principal or interest payments on such Defeasance Obligations deposited with the Trustee, (A) to the extent such cash will not be required at any time for such purpose, shall be paid over to the Municipality as received by the Trustee, free and clear of any trust, lien or pledge securing said Bonds or otherwise existing under the Indenture, and (B) to the extent such cash will be required for such purpose at a later date, shall, to the extent practicable, be reinvested at the written direction of an Authorized Representative of the Municipality in Defeasance Obligations maturing at times and in amounts sufficient to pay when due the principal or Redemption Price, if applicable, and interest to become due on said Bonds on or prior to such redemption date or maturity date thereof, as the case may be, and interest earned from such reinvestments shall be paid over to the Municipality, as received by the Trustee, free and clear of any lien or pledge securing said Bonds or otherwise existing under the Indenture.

(c) For purposes of determining whether Variable Rate Bonds shall be deemed to have been paid prior to the maturity or Redemption date thereof, as the case may be, by the deposit of moneys, or Defeasance Obligations and moneys, if any, in accordance with the second sentence of subsection (b) of Section 1201, the interest to come due on such Variable Rate Bonds on or prior to the maturity date or redemption date thereof, as the case may be, shall be calculated at the maximum rate permitted by the terms thereof; provided, however that if on any date, as a result of such Variable Rate Bonds having borne interest at less than such maximum rate for any period, the total amount of moneys and Investment Securities on deposit with the Trustee for the payment of interest on such Variable Rate Bonds is in excess of the total amount which would have been required to be deposited with the Trustee on such date in respect of such Variable Rate Bonds in order to satisfy the second sentence of subsection (b) of Section 1201, the Trustee shall, if requested by the Municipality, pay the amount of such excess to the Municipality free and clear of any lien or pledge securing the Bonds or otherwise existing under the Indenture.

(d) Anything in the Indenture to the contrary notwithstanding, any moneys held by a Fiduciary in trust for the payment and discharge of any of the Bonds which remain unclaimed for two years after the date when such Bonds have become due and payable, either at their stated maturity dates or by call for earlier redemption, if such moneys were held by the Fiduciary at such date, or for two years after the date of deposit of such moneys if deposited with the Fiduciary after the said date when such Bonds become due and payable, shall, at the written request of the Municipality, be repaid by the Fiduciary to the Municipality, as its absolute property and free from trust, and the Fiduciary shall thereupon be released and discharged with respect thereto and the Bondholders shall look only to the Municipality for the payment of such Bonds; provided, however, that before being required to make any such payment to the Municipality, the Fiduciary may, at the expense of the Municipality, cause to be published at least twice, at an interval of not less than 7 days between publications, in the Authorized Newspapers, a notice that said moneys remain unclaimed and that, after a date named in said notice, which date shall be not less than 30 days after the date of the first publication such notice, the balance of such moneys then unclaimed will be returned to the Municipality.

### **Moneys Held for Particular Bonds (Section 1203)**

The amounts held by any Fiduciary for the payment due on any date with respect to particular Bonds shall, on and after such date and pending such payment, be set aside on its books and held in trust by it for the holders of the Bonds entitled thereto.



**APPENDIX E - FORM OF BOND COUNSEL OPINION**

*(This page intentionally left blank)*

**FORM OF OPINION OF BOND COUNSEL**

August 4, 2015

City of Stamford  
Stamford, Connecticut 06901

Water Pollution Control Authority  
for the City of Stamford  
Stamford, Connecticut 06904

U.S. Bank National Association  
Hartford, Connecticut 06103

Ladies and Gentlemen:

We have examined a record of proceedings relating to the issuance by the City of Stamford (the “Municipality”) of \$31,070,000 aggregate principal amount of City of Stamford, Connecticut Water Pollution Control System and Facility Revenue Bonds, Issue of 2015 (the “Bonds”). The Bonds are issued pursuant to Chapter 103 of the General Statutes of Connecticut, Revision of 1958, as amended (the “Bond Act”), the Charter of the Municipality (the “Charter”), resolutions of the Board of Representatives of the Municipality adopted on July 2, 2001, the Board of Finance of the Municipality adopted on June 27, 2001 and by the Water Pollution Control Authority of the City of Stamford (the “Authority”) adopted on October 9, 2001 (the “Authorizing Resolutions”), authorizing the execution and delivery of an Indenture of Trust, dated as of December 21, 2001 (the “Original Indenture”), by and among the Municipality, the Authority, and U.S. Bank National Association (successor to Wachovia Bank, National Association), as Trustee (the “Trustee”), resolutions of the Board of Representatives of the Municipality (the “Project Resolutions”), and resolutions adopted by the Board of Finance of the Municipality, the Board of Representatives of the Municipality and the Authority (the “Financing Resolutions”), authorizing the execution and delivery of the Sixth Supplemental Indenture, dated as of August 1, 2015 (the “Sixth Supplemental Indenture”), by and among the Municipality, the Authority and the Trustee, supplementing the Original Indenture (the Original Indenture, as amended and supplemented, is referred to hereinafter as the “Indenture”). Capitalized terms used herein and not otherwise defined shall have the meaning ascribed to such terms in the Indenture.

The Bonds delivered on the date hereof are dated and bear interest from the date of delivery, payable semiannually on March 15 and September 15 in each year until maturity, or earlier redemption, commencing March 15, 2016. The Bonds are issuable only in fully registered form in denominations of \$5,000 or any integral multiple thereof. The Bonds bear interest at the interest rates per annum and mature on March 15, 2016 and September 15 in each of the years and principal amounts as follows:

<u>Maturity Date</u>	<u>Principal Amount</u>	<u>Interest Rate Per Annum</u>	<u>Maturity Date</u>	<u>Principal Amount</u>	<u>Interest Rate Per Annum</u>
March 15, 2016	\$665,000	3.000%	2027	\$1,175,000	5.000%
2016	695,000	3.000%	2028	1,240,000	5.000%
2017	720,000	4.000%	2029	1,305,000	5.000%
2018	750,000	5.000%	2030	1,370,000	5.000%
2019	785,000	5.000%	2031	1,425,000	3.250%
2020	830,000	5.000%	2032	1,475,000	3.375%
2021	875,000	5.000%	2033	1,525,000	3.500%
2022	920,000	5.000%	2034	1,575,000	3.500%
2023	965,000	5.000%	2035	1,635,000	3.500%
2024	1,015,000	5.000%	2036	1,690,000	3.625%
2025	1,070,000	5.000%	2040	2,890,000	3.750%
2026	1,120,000	5.000%	2044	3,355,000	3.750%

The Bonds are subject to optional and mandatory redemption prior to maturity in the manner and upon the terms and conditions described in the Indenture.

We have examined certified copies of the Authorizing Resolutions, the Project Resolutions, the Financing Resolutions, and executed copies of the Original Indenture and the Sixth Supplemental Indenture. We have also examined an executed copy of the Tax Regulatory Agreement, dated as of the date hereof (the "Tax Regulatory Agreement"), by and among the Municipality, the Authority, and the Trustee, including the appendices, certificates and attachments thereto. We have examined one of the Bonds as executed.

As to questions of fact material to our opinion, we have relied upon representations of the Municipality contained in the Indenture and the Tax Regulatory Agreement, the record of proceedings and other certifications furnished to us, and certifications by officers of the Municipality, the Authority and the Trustee without undertaking to verify the same by independent investigations. In rendering this opinion, we have assumed the power to enter into and perform, and the due authorization, execution and delivery by all parties (other than the Municipality and the Authority) of the documents and agreements to which the Municipality and the Authority are a party.

The Internal Revenue Code of 1986, as amended (the "Code"), establishes certain requirements which must be met at and subsequent to the issuance and delivery of the Bonds in order for interest thereon to be and remain excluded from gross income for federal income tax purposes. Noncompliance with such requirements could cause interest on the Bonds to be included in gross income for federal income tax purposes retroactive to the date of issue of the Bonds. Pursuant to the Indenture and Tax Regulatory Agreement, the Municipality, the Authority and the Trustee have made certain representations and covenants relating to compliance with such requirements of the Code to ensure the exclusion of interest on the Bonds from gross income for federal income tax purposes.

Based upon and subject to the foregoing, we are of the opinion that:

1. The Municipality is a validly existing body politic and corporate of the State of Connecticut and has good right and lawful authority to adopt the Authorizing Resolutions, the Project Resolutions and the Financing Resolutions adopted by it and to issue the Bonds pursuant to the Bond Act and the Indenture.

2. The Authority is a validly existing water pollution control authority pursuant to the Bond Act and has good right and lawful authority to adopt the Authorizing Resolution and the Financing Resolution adopted by it.

3. The Indenture has been duly authorized, executed and delivered by the Municipality and the Authority, is in full force and effect as to the Municipality and the Authority, and constitutes a valid and binding agreement of the Municipality and the Authority, enforceable against the Municipality and the Authority in accordance with its terms, except to the extent that the enforceability thereof may be limited by bankruptcy, insolvency or other laws affecting creditors' rights generally or application of principles of equity or with respect to actions commenced against municipalities or state agencies and authorities.

4. The Bonds have been duly authorized and issued by the Municipality in accordance with law and the terms of the Indenture, and are valid and binding special limited obligations of the Municipality payable solely out of the Revenues and other receipts, funds or moneys pledged therefor pursuant to the Indenture, and from any amounts otherwise available under the Indenture for the payment thereof. The Bonds are enforceable in accordance with their terms and the terms of the Indenture and are entitled to the benefit of the Bond Act and the Indenture, except to the extent that the enforceability thereof may be limited by bankruptcy, insolvency or other laws affecting creditors' rights generally or application of principles of equity or with respect to actions commenced against municipalities or state agencies and authorities.

5. The Indenture creates the valid pledge and assignment which it purports to create of all of the Municipality's right, title and interest in the Revenues and all moneys and securities held by the Trustee in the Funds and Accounts (as defined in the Indenture) under the Indenture (except for moneys and securities held in the Rebate Fund and the Operating Fund created under the Indenture), subject only to the provisions of the Indenture permitting the application thereof for or to the purposes and on the terms and conditions set forth therein. No opinion is rendered herein regarding the perfection or priority of such pledge.

6. The Bonds are not general obligations of the Municipality, and the full faith and credit of the Municipality are not pledged for the payment of the Bonds. Neither the State of Connecticut (the "State"), the Municipality (other than pursuant to the Indenture), the Authority nor any other political subdivision of the State is obligated to pay the principal of, premium or interest on any of the Bonds and neither the faith and credit nor the taxing power of the State, the Municipality or any other political subdivision of the State is pledged to the payment of the principal of or premium or interest on the Bonds. The Authority has no taxing power.

7. Assuming the accuracy of the representations and compliance with the aforementioned tax covenants in the Indenture and the Tax Regulatory Agreement, under existing statutes and court decisions, interest on the Bonds is excluded from gross income for federal income tax purposes and is not treated as an item of tax preference for purposes of computing the federal alternative minimum tax. Interest on the Bonds is, however, included in the determination of adjusted current earnings for purposes of computing the federal alternative minimum tax imposed on certain corporations.

8. Under existing statutes, interest on the Bonds is excluded from Connecticut taxable income for purposes of the Connecticut income tax on individuals, trusts and estates and is excluded from amounts on which the net Connecticut minimum tax is based in the case of individuals, trusts and estates required to pay the federal alternative minimum tax. Interest on the Bonds is included in gross income for purposes of the Connecticut corporation business tax.

Except as stated in the preceding paragraphs, we express no opinion as to any federal, state or local tax consequences with respect to the Bonds or the interest thereon. Furthermore, we express no

opinion as to any federal, state or local tax law consequences with respect to the Bonds or the interest thereon, if any action is taken with respect to the Bonds, or any changes are made in the requirements or procedures contained or referred to in the Indenture, the Tax Regulatory Agreement and other relevant documents, upon the advice or with the approving opinion of other bond counsel.

We express no opinion herein as to the accuracy, adequacy or completeness of the Official Statement related to the Bonds.

Legislation affecting the exclusion from gross income of interest on State or local bonds, such as the Bonds, is regularly under consideration by the United States Congress. There can be no assurance that legislation enacted or proposed after the date of issuance of the Bonds will not reduce or eliminate the benefit of the exclusion from gross income of interest on the Bonds or adversely affect the market price of the Bonds.

These opinions are rendered as of the date hereof and are based on existing law, which is subject to change. We assume no obligation to update or supplement these opinions to reflect any facts or circumstances that may come to our attention, or to reflect any changes in law that may hereafter occur or become effective.

Very truly yours,

**APPENDIX F - FORM OF CONTINUING DISCLOSURE AGREEMENT**

*(This page intentionally left blank)*



**FORM OF CONTINUING DISCLOSURE AGREEMENT**

**CONTINUING DISCLOSURE AGREEMENT**

City of Stamford, Connecticut  
\$31,070,000 Water Pollution Control System and Facility Revenue Bonds, Issue of 2015  
Dated August 4, 2015

August 4, 2015

WHEREAS, the City of Stamford, Connecticut (the “City”) and the Water Pollution Control Authority of the City of Stamford, Connecticut (the “SWPCA”) have heretofore authorized the issuance of \$31,070,000 in aggregate principal amount of their Water Pollution Control System and Facility Revenue Bonds, Issue of 2015, dated August 4, 2015 (the “Bonds”), and to mature on the dates and in the amounts and set forth in the City’s and SWPCA’s Official Statement dated July 22, 2015 describing the Bonds (the “Official Statement”); and

WHEREAS, the Bonds have been sold by a negotiated sale pursuant to a Bond Purchase Agreement, dated July 22, 2015 (the “Bond Purchase Agreement”); and

WHEREAS, in the Bond Purchase Agreement, the City and the SWPCA have heretofore acknowledged that an underwriter may not purchase or sell the Bonds unless it has reasonably determined that the City and the SWPCA have undertaken in a written agreement for the benefit of the beneficial owners of the Bonds to provide certain continuing disclosure information as required by Securities and Exchange Commission Rule 15c2-12(b)(5), as amended from time to time (the “Rule”), and the City and the SWPCA desire to assist the underwriter of the Bonds in complying with the Rule; and

WHEREAS, the City and the SWPCA are authorized pursuant to Section 3-20e of the General Statutes of Connecticut to make such representations and agreements for the benefit of the beneficial owners of the Bonds to meet the requirements of the Rule; and

WHEREAS, in order to assist the underwriter of the Bonds in complying with the Rule, this Continuing Disclosure Agreement (this “Agreement”) is to be made, executed and delivered by the City and the SWPCA in connection with the issuance of the Bonds and to be described in the Official Statement, all for the benefit of the beneficial owners of the Bonds, as they may be from time to time;

NOW, THEREFORE, the City and the SWPCA hereby represent, covenant and agree as follows:

Section 1. Definitions. In addition to the terms defined above, the following capitalized terms shall have the meanings ascribed thereto:

“Annual Report” shall mean any Annual Report provided by the City and the SWPCA pursuant to, and as described in, Sections 2 and 3 of this Agreement.

“Fiscal Year End” shall mean the last day of the City’s and the SWPCA’s fiscal year, currently June 30.

“Listed Events” shall mean any of the events listed in Section 4 of this Agreement.

“MSRB” shall mean the Municipal Securities Rulemaking Board established pursuant to Section 15B(b)(1) of the Securities Exchange Act of 1934, as amended, or any successor thereto.

“Repository” shall mean the Electronic Municipal Market Access system as described in 1934 Act Release No. 57577 for purposes of the Rule, the MSRB or any other nationally recognized municipal securities information repository or organization recognized by the SEC from time to time for purposes of the Rule.

“SEC” shall mean the Securities and Exchange Commission of the United States or any successor thereto.

Section 2. Annual Reports.

(a) The City and the SWPCA shall provide or cause to be provided to the Repository in electronic format, accompanied by identifying information, as prescribed by the MSRB, the following annual financial information and operating data regarding the SWPCA:

(i) Audited financial statements of the SWPCA as of and for the year ending on its Fiscal Year End prepared in accordance with accounting principles generally accepted in the United States, as promulgated by the Governmental Accounting Standards Board from time to time or mandated state statutory principles as in effect from time to time. As of the date of this Agreement, the City is required to prepare audited financial statements of its various funds and accounts. The modified accrual basis of accounting is followed for the SWPCA with major revenues recorded when measurable and available and expenditures recorded when incurred; and

(ii) Financial information and operating data as of and for the year ending on its Fiscal Year End of the following type to the extent not included in the audited financial statements described in (i) above:

(A) number of customers;

(B) Table 1, Overall Top Ten Customers;

(C) any update on service contracts and agreements;

(D) changes in the average annual daily wastewater flow volume;

(E) Table 4, Summary of Projected Results; and

(F) changes in rates.

(b) The above-referenced information is expected to be provided by the filing of and cross reference to the City’s and the SWPCA’s audited financial statements. The information may be provided in whole or in part by cross-reference to other documents previously provided to the Repository, including official statements of the City and the SWPCA which will be available from the MSRB.

(c) Subject to the requirements of Section 8 hereof, the City and the SWPCA reserve the right to modify from time to time the type of financial information and operating data provided or the format of the presentation of such financial information and operating data, to the extent necessary or appropriate; provided that the City and the SWPCA agree that any such modification will be done in a manner consistent with the Rule. The City and the SWPCA also reserve the right to modify the preparation and presentation of financial statements described herein as may be required to conform with changes in Connecticut law applicable to municipalities or any changes in generally accepted accounting principles, as promulgated by the Governmental Accounting Standards Board from time to time.

Section 3. Timing. The City and the SWPCA shall provide the financial information and operating data referenced in Section 2(a) not later than eight months after each Fiscal Year End subsequent to the date of issuance of the Bonds, provided, however, that if such financial information and operating data for the Fiscal Year End preceding the date of issuance of the Bonds is not contained in the Official Statement for the Bonds or has not otherwise been previously provided, the City and the SWPCA shall provide such financial information and operating data no later than eight months after the close of such preceding Fiscal Year End. The City and the SWPCA agree that if audited financial statements are not available eight months after the close of any Fiscal Year End, it shall submit unaudited financial statements by such time and will submit audited financial statements information when and if available.

Section 4. Event Notices. The City and the SWPCA agree to provide, or cause to be provided, in a timely manner not in excess of ten (10) business days after the occurrence of the event, notice to the Repository in electronic format, accompanied by identifying information, as prescribed by the MSRB, of the occurrence of any of the following events:

- (i) principal and interest payment delinquencies;
- (ii) non-payment related defaults, if material;
- (iii) unscheduled draws on debt service reserves reflecting financial difficulties;
- (iv) unscheduled draws on credit enhancements reflecting financial difficulties;
- (v) substitution of credit or liquidity providers, or their failure to perform;
- (vi) adverse tax opinions; the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;
- (vii) modifications to rights of Bondholders, if material;
- (viii) Bond calls, if material, and tender offers;
- (ix) defeasances;
- (x) release, substitution, or sale of property securing repayment of the Bonds, if material;
- (xi) rating changes;
- (xii) bankruptcy, insolvency, receivership, or similar event of any obligated person;
- (xiii) the consummation of a merger, consolidation, or acquisition involving any obligated person or the sale of all or substantially all of the assets of any obligated person, other than in the ordinary course of business, the entry into a definitive agreement to undertake any such an action or the termination of a definitive agreement relating to such actions, other than pursuant to its terms, if material; and
- (xiv) appointment of a successor or additional trustee or the change of name of a trustee, if any, if material.

Section 5. Notice of Failure. The City and the SWPCA agree to provide, or cause to be provided, in a timely manner to the Repository in electronic format, accompanied by identifying information, as prescribed by the MSRB, notice of any failure by the City and the SWPCA to provide the annual financial information described in Section 2(a) of this Agreement on or before the date described in Section 3 of this Agreement.

Section 6. Termination of Reporting Obligation. The City's and the SWPCA's obligations under this Agreement shall terminate upon the defeasance, prior redemption or payment in full of all of the Bonds.

Section 7. Agent. The City and the SWPCA may, from time to time, appoint or engage an agent to assist it in carrying out its obligations under this Agreement, and may discharge any such agent, with or without appointing a successor agent.

Section 8. Amendment; Waiver. Notwithstanding any other provision of this Agreement, the City and the SWPCA may amend this Agreement, and any provision of this Agreement may be waived, if such amendment or waiver is made in connection with a change in circumstances that arises from a change in legal requirements, a change in law, or a change in the identity, nature or status of the City and the SWPCA, and is supported by an opinion of counsel expert in federal securities laws, to the effect that (i) such amendment or waiver would not materially adversely affect the beneficial owners of the Bonds and (ii) this Agreement, as so amended, would have complied with the requirements of the Rule as of the date of this Agreement, taking into account any amendments or interpretations of the Rule as well as any changes in circumstances. A copy of any such amendment will be filed in a timely manner with the Repository in electronic format. The Annual Report provided on the first date following adoption of any such amendment will explain, in narrative form, the reasons for the amendment and the impact of the change in the type of financial information or operating data provided.

Section 9. Additional Information. Nothing in this Agreement shall be deemed to prevent the City and the SWPCA from disseminating any other information, using the means of dissemination set forth in this Agreement or any other means of communication, or including any other information in any Annual Report or providing notice of the occurrence of any other event, in addition to that which is required by this Agreement. If the City and the SWPCA choose to include any other information in any Annual Report or provide notice of the occurrence of any other event in addition to that which is specifically required by this Agreement, the City and the SWPCA shall have no obligation under this Agreement to update such information or include or provide such information or notice of the occurrence of such event in the future.

Section 10. Indemnification. The City and the SWPCA agree, pursuant to applicable law, to indemnify and save its officials, officers and employees harmless against any loss, expense or liability which they may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorney's fees) of defending against any claim of liability hereunder, but excluding any loss, expense or liability due to any such person's malicious, wanton, or willful act. The obligations of the City and the SWPCA under this Section shall survive termination of this Agreement.

Section 11. Enforceability. The City and the SWPCA agree that its undertaking pursuant to the Rule set forth in this Agreement is intended to be for the benefit of and enforceable by the beneficial owners of the Bonds. In the event the City and the SWPCA shall fail to perform its duties hereunder, the City and the SWPCA shall have the option to cure such failure after its receipt of written notice from any beneficial owner of the Bonds of such failure. In the event the City and the SWPCA do not cure such failure, the right of any beneficial owner of the Bonds to enforce the provisions of this undertaking shall be limited to a right to obtain specific performance of the City's and the SWPCA's obligations

hereunder. No monetary damages shall arise or be payable hereunder, nor shall any failure to comply with this Agreement constitute a default of the City and the SWPCA with respect to the Bonds.

**IN WITNESS WHEREOF**, the City and the SWPCA has caused this Continuing Disclosure Agreement to be executed in its name by its undersigned officers, duly authorized, all as of the date first above written.

**CITY OF STAMFORD, CONNECTICUT**

By: \_\_\_\_\_  
Michael E. Handler  
Director of Administration

By: \_\_\_\_\_  
William P. Brink  
Executive Director of the SWPCA

*(This page intentionally left blank)*



