

OFFICIAL STATEMENT DATED JULY 12, 2013

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 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 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 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.



\$22,095,000
CITY OF STAMFORD, CONNECTICUT
WATER POLLUTION CONTROL SYSTEM AND FACILITY
REVENUE BONDS, 2013 SERIES A

Dated: Date of Delivery

Due: As Shown on Inside Cover

The City of Stamford, Connecticut Water Pollution Control System and Facility Revenue Bonds, 2013 Series A (the “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 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 Bonds will be made to purchasers. So long as Cede & Co. is the registered owner of the Bonds, principal and interest (payable February 15 and August 15 of each year, commencing February 15, 2014) 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 Bonds are subject to redemption prior to maturity as described herein.

The Bonds are being issued by the City of Stamford, Connecticut (the “City”) to finance various capital projects of the Water Pollution Control System and Facility and to refund certain maturities of the City’s Water Pollution Control System and Facility Revenue Bonds, 2003 Series A, and for financing costs related to the issuance of the Bonds.

The 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 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 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. Webster Bank, National Association, Hartford, Connecticut has served as financial advisor to the City (the “Financial Advisor”) in connection with the issuance of the Bonds. It is anticipated that the Bonds will be available for delivery through the facilities of DTC or its custodial agent on or about August 20, 2013.

RAYMOND JAMES



\$22,095,000
CITY OF STAMFORD, CONNECTICUT
WATER POLLUTION CONTROL SYSTEM AND FACILITY
REVENUE BONDS, 2013 SERIES A

\$15,510,000 Serial Bonds

Dated: Date of Delivery

Due: February 15, 2014

Year	Amount	Interest Rate	Yield	CUSIP Number
2014	\$115,000	3.00%	0.450%	852660CM9

Dated: Date of Delivery

Due: Serially, August 15, as shown below

Year	Amount	Interest Rate	Yield	CUSIP Number	Year	Amount	Interest Rate	Yield	CUSIP Number
2014	\$190,000	3.000%	0.500%	852660BP3	2024	\$ 825,000	5.000%	3.460% ¹	852660BZ1
2015	480,000	6.000	0.850	852660BQ1	2025	865,000	5.000	3.640 ¹	852660CA5
2016	515,000	6.000	1.240	852660BR9	2026	910,000	5.000	3.790 ¹	852660CB3
2017	545,000	6.000	1.600	852660BS7	2027	960,000	5.000	3.930 ¹	852660CC1
2018	580,000	6.000	1.960	852660BT5	2028	1,005,000	5.000	4.000 ¹	852660CD9
2019	615,000	6.000	2.310	852660BU2	2029	1,055,000	5.000	4.100 ¹	852660CE7
2020	650,000	6.000	2.630	852660BV0	2030	1,110,000	5.000	4.170 ¹	852660CF4
2021	690,000	6.000	2.890	852660BW8	2031	1,170,000	5.000	4.240 ¹	852660CG2
2022	735,000	6.000	3.120	852660BX6	2032	1,230,000	5.000	4.300 ¹	852660CH0
2023	780,000	5.500	3.250	852660BY4	2033	485,000	5.000	4.340 ¹	852660CJ6

\$2,855,000 5.500% Term Bond due August 15, 2038 – Yield 4.350%¹, CUSIP 852660CK3

\$3,730,000 5.250% Term Bond due August 15, 2043 – Yield 4.560%¹, CUSIP 852660CL1

¹ Priced assuming redemption on August 15, 2023; however, any such redemption is at the optional election of the City.

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.

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 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.

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

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CITY OF STAMFORD, CONNECTICUT

Principal Municipal Officials

<u>Office</u>	<u>Name</u>	<u>Manner of Selection/Term</u>	<u>Years of Service</u>
Mayor	Michael A. Pavia	Elected/4 years	3½ years
Director of Administration	Michael E. Handler	Appointed/4 years	1 year
Director of Operations	Ernest A. Orgera	Appointed/4 years	3½ years
Director of Legal Affairs	Joseph J. Capalbo, II, Esq.	Appointed/4 years	9 months
Director of Public Safety, Health and Welfare	Thaddeus K. Jankowski, Sr.	Appointed/4 years	1 year
Director of Economic Development	Laure C. Aubuchon	Appointed/4 years	3½ years
Controller	David A. Yanik	Unclassified/indefinite	1½ years
Director of Policy & Management	Peter F. Privitera	Civil service/indefinite	10½ years
Superintendent of Schools	Dr. Winifred Hamilton	Appointed/3-year contract	1 year ¹

¹ Dr. Hamilton was appointed Superintendent of Schools on July 1, 2012 and was previously appointed Interim Superintendent of Schools on September 28, 2011 and Acting Superintendent on July 1, 2011. Dr. Hamilton had previously been employed by Stamford Public Schools for 42 years.

WATER POLLUTION CONTROL AUTHORITY

Board of Directors

<u>Name/Title</u>	<u>Term Expires</u>
Ernest Orgera, Chair	With Mayor
Michael E. Handler, Vice-Chair	With Mayor
Mitchell Kaufmann	11/30/2013
Timothy M. Abbazia	11/30/2013
Cristina Andreana	01/01/2014
Daniel E. Capano	01/01/2015
Donald A. Huppert	01/01/2014
Daniel Schwartz	09/01/2015
Vacant	N/A

Management and Staff

<u>Name</u>	<u>Position</u>
William P. Brink, P.E., BCEE	Executive Director
Rhudean Bull, MPA, PHR	Administration Manager
William Degnan, MBA	Plant Supervisor
Prakash Chakravati, P.E.	Supervising Engineer

BOND COUNSEL

Robinson & Cole LLP

FINANCIAL ADVISOR

Webster Bank, National Association

OFFICIAL STATEMENT

\$22,095,000

CITY OF STAMFORD, CONNECTICUT WATER POLLUTION CONTROL SYSTEM AND FACILITY REVENUE BONDS, 2013 SERIES A

INTRODUCTION

The purpose of this Official Statement is to furnish information regarding the City of Stamford, Connecticut (the "City"), the Water Pollution Control Authority for the City (the "SWPCA") and the issuance and security for the \$22,095,000 aggregate principal amount of the City's Water Pollution Control System and Facility Revenue Bonds, 2013 Series A (the "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 by and among the City, the SWPCA and the Trustee, the Second Supplemental Indenture dated as of February 28, 2006 by and among the City, the SWPCA and the Trustee, the Third Supplemental Indenture dated as of September 1, 2006 by and among the City, the SWPCA and the Trustee, the Fourth Supplemental Indenture dated as of August 1, 2009 by and among the City, the SWPCA and the Trustee, and the Fifth Supplemental Indenture dated as of August 1, 2013 to be entered into by and among the City, the SWPCA and the Trustee prior to the issuance of the Bonds. The Original Indenture, as amended and supplemented to the date of issuance of the 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 Bonds are the third issuance of bonds to the public under the Indenture. In addition to bonds, the Indenture also secures the City's obligations issued pursuant to the Clean Water Fund Act. The Bonds and all bonds of the City issued pursuant to the Indenture on a parity basis with the 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 2010 U.S. Census, it has a population of 122,643. 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.

The Stamford Water Pollution Control Authority

The SWPCA was established pursuant to the Connecticut General Statutes and an ordinance of the City adopted on November 28, 1996 to operate the Sewerage System, including the treatment plant, and to use, equip, re-equip, repair, maintain, supervise, manage, operate and perform any act pertaining to the collection, transportation, treatment and disposal of sewage.

It provides such services for the City and for certain portions of the Town of Darien. See "STAMFORD WATER POLLUTION CONTROL AUTHORITY" 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 are special limited obligations of the City, payable solely from Revenues 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 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 is an agency of the City municipal government. Ordinance No. 803 established the SWPCA 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.

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 Stamford WPCA 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:

<u>Name/Title</u>	<u>Occupation</u>	<u>Appointed By</u>	<u>Term Expires</u>
Ernest A. Orgera Chair	Director of Operations City of Stamford	Mayor	With Mayor
Michael E. Handler Vice-Chair	Director of Administration City of Stamford	Mayor	With Mayor
Mitchell Kaufman Member, Board of Representatives, City of Stamford	VP, Project Management, Credit Suisse	Elected Official	11/30/13
Timothy Abbazia Chairman, Board of Finance, City of Stamford	Finance Director and Consultant	Elected Official	11/30/13
Cristina Andreana Member	Accountant	Mayor, subject to approval of Board of Representatives	1/1/14
Daniel E. Capano Member	Consultant	Mayor, subject to approval of Board of Representatives	1/1/15
Donald A. Huppert Member	Retired	Mayor, subject to approval of Board of Representatives	1/1/14
Daniel Schwartz Member	Engineer	Mayor, subject to approval of Board of Representatives	9/1/15
VACANCY	-	Mayor, subject to approval of Board of Representatives	-

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 Pennsylvania 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.

William R. Degnan, MBA, 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. 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 and maintenance 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. He is responsible for the upkeep of all the SWPCA's pump stations and sewer lines.

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 as a Professional in Human Resources and has ten years experience in human resources and information systems 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.

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 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 Teamsters Union. The laboratory staff, clerical staff and electricians are part of the UAW bargaining unit with the City. The collective bargaining contracts are Citywide and are negotiated through the Office of Legal Affairs. The MAA and Teamsters contracts expire on June 30, 2014. The UAW contract expired June 30, 2010 and is in arbitration.

The Service Area

Pursuant to an Interlocal Agreement between the City, the SWPCA and the Town of Darien (“Darien”) dated July 11, 2001, the SWPCA provides collection and treatment for the City and Darien. The SWPCA serves a population of approximately 97,000 in the City and approximately 12,400 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 22 wastewater-pumping stations, approximately 300 miles of sanitary sewers, three storm water pumping stations 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, 2012, 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

<u>Name</u>	<u>Annual Billed Consumption (100 CCF)</u>	<u>Percent of Total 2012 Operating Revenues</u>
City of Stamford	60,670	1.41
Stamford Hospital	43,988	1.02
Stamford Housing Authority	41,284	0.96
Rippowam Park Associates LP	38,750	0.90
Saint John’s Towers	37,880	0.88
Hilton Stamford Hotel	32,402	0.75
Fairfield Bedford LLC	28,920	0.67
Stamford Town Center	31,144	0.72
Stamford Marriott Hotel	24,318	0.56
Bayview Towers	<u>23,126</u>	<u>0.54</u>
Total	362,482	8.41

Service Contracts and Agreements

Sludge Processing Agreement with Synagro – Sludge management costs currently account 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 initial term of the contract was for a five year period from the Acceptance Date of the sludge drying facility. The contract was scheduled to expire in February 2013, but is in the process of being extended through August 2013. The SWPCA has issued a Request for Proposal for future sludge management services with the anticipation that it will be able to reduce current sludge management costs by more than 10 percent annually. It is anticipated that a new sludge processing agreement will be executed before the current contract expires on August 31.

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 1, 2011 through January 31, 2014.

Darien Interlocal Agreement – The City and the SWPCA entered into an Interlocal Agreement, dated July 11, 2001 (the “Interlocal Agreement”), with Darien. The Interlocal Agreement expired on November 30, 2010 (subject to mutual renewal for an additional 15 years). The City and Darien are in the process of completing the negotiation of a new contract which is being brought before both parties’ Boards at their July meeting for approval. In the interim, Darien continues to pay its bills in accordance with the terms and conditions of the existing Interlocal Agreement. Darien contracted revenue (including both capital and operation and maintenance components), accounts for less than 10% of SWPCA’s total income. Under the Interlocal Agreement, Darien pumps wastewater to the east side of the City where the wastewater is then conveyed through the SWPCA collection system to the Treatment Plant.

Darien is limited to an average annual daily wastewater flow of not more than 3.0 MGD and a peak flow of not more than 7.5 MGD. Darien is liable for any cost, expense or penalty incurred for exceeding such flow limits. Under the Interlocal Agreement, Darien is responsible for construction costs solely benefiting Darien and the design, construction, maintenance and repair of all sewer mains, pump stations and equipment in Darien are the responsibility of Darien’s Sewer Commission. Darien’s sewer lines and pump stations are required to be available for inspection by the SWPCA. The cost of operating, maintaining and repairing the portion of SWPCA’s treatment system used jointly by SWPCA and Darien is shared in accordance with a formula set forth in the Interlocal Agreement.

Under the Interlocal Agreement, SWPCA is obligated to accept, treat and discharge Darien’s wastewater flow and sludge in the same fashion as that of the City. The SWPCA is responsible for compliance with local, state and federal permits. In the event the Treatment Plant is closed by a federal, state or local authority, the Interlocal Agreement shall terminate and payments shall cease.

The Interlocal Agreement provides that Darien is essentially contracting for a portion of the Treatment Plant’s capacity. As such, operating and maintenance costs and capital costs are shared, with Darien’s portion being the greater of twelve percent (12%) or the percentage of Darien’s wastewater flow volume compared to total volume, as defined in the Interlocal Agreement. Operating costs are paid on a monthly basis based on estimates with a year-end adjustment.

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 \$200,000 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's share of this pooled cash account is currently in a deficit and reflected in the financial statements as "Due to the City of Stamford". The deficiency ending in fiscal year 2012 was approximately \$5.6 million (fiscal year 2012 financial statements). Under the terms of an executed Memorandum of Understanding, the SWPCA has agreed to completely reimburse the City over a five-year period with interest at the Connecticut State Treasurer's Investment Fund rate. The SWPCA has been working closely with Computil and Ackerly & Ward (collection attorneys) to collect aged accounts receivable and has reportedly reduced this negative balance by approximately \$700,000 as of January 2013. The SWPCA has included a payment of \$1,150,000 in its operating budget for fiscal year 2014.

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.

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. In connection with the issuance of the Bonds, 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 2008 through fiscal year 2012 summarized from the audited financial statements of the SWPCA.

TABLE 2

	<u>2011-12</u>	<u>2010-11</u>	<u>2009-10</u>	<u>2008-09</u>	<u>2007-08</u>
Operating Revenues					
Charges for services	\$20,304,604	\$18,503,908	\$18,252,270	\$18,644,768	\$15,996,214
Total operating revenues	20,304,604	18,503,908	18,252,770	18,644,768	15,996,214
Operating Expenditures					
Salaries, benefits and claims	4,572,627	4,398,009	4,221,364	4,067,922	4,060,424
Utilities	1,847,901	2,613,984	2,976,052	2,582,878	3,084,598
Depreciation	5,054,649	5,086,909	6,288,177	7,105,524	6,668,489
Other operating expenditures	<u>5,166,695</u>	<u>4,561,323</u>	<u>4,093,452</u>	<u>3,813,202</u>	<u>1,671,216</u>
Total operating expenses	16,641,872	16,660,225	17,580,045	17,549,526	15,484,727
Operating income	3,662,732	3,182,499	672,225	1,095,242	511,487
Nonoperating Revenues (Expenses)					
Other income	-	1,067,492	-	-	6,464,732
Interest income	97,752	112,844	104,324	182,255	772,533
Interest expense	(3,133,293)	(3,181,726)	(3,763,960)	(4,180,971)	(4,401,176)
Special assessments	<u>2,703,276</u>	<u>3,182,499</u>	<u>2,763,438</u>	<u>1,738,321</u>	<u>2,398,837</u>
Total nonoperating revenues (expenses).....	(332,265)	1,081,109	(896,198)	(2,260,395)	5,234,926
Transfers and special item	-	-	(2,226,167)	(1,566,677)	-
Change in net assets	3,330,467	2,924,792	(2,450,140)	(2,731,830)	5,746,413
Net assets beginning	<u>56,162,918</u>	<u>53,238,126</u>	<u>55,688,266</u>	<u>58,420,096</u>	<u>52,673,683</u>
Net assets ending	\$59,493,385	\$56,162,918	\$53,238,126	\$55,688,266	\$58,420,096

Operating revenues in fiscal 2012 were \$20.3 million, compared to \$18.5 million in the prior year, primarily reflecting increased sewer use charges. Operating expenses were \$16.6 million versus \$16.7 million the prior year, resulting in operating income of approximately \$3.7 million compared to \$3.2 million in the prior year. The increase in operating income primarily reflects the favorable impact of lower utilities expense and operations and supplies expense, partially offset by higher salaries, benefits and claims expense, materials and supplies expense, and an increase in the provision for doubtful accounts (bad debts expense). In fiscal 2011, other non-operating revenue of \$1.1 million reflected over-accruals from 2010 being reversed. Unrestricted Net Assets were 26% of Operating Revenue, an improvement of approximately 12 percentage points from the prior year.

As of June 30, 2012 the assets (\$166.9 million) of the SWPCA exceeded its liabilities (\$107.4 million), resulting in total net assets at the end of the fiscal year of \$59.5 million. Net assets increased \$3.3 million versus the prior year-end period primarily due to the net of a decrease in capital assets, net of depreciation (\$4.2 million) and a decrease in total liabilities of (\$7.9 million). Unrestricted net assets total \$5.2 million, and that is an increase of \$2.7 million over the prior year.

Current assets decreased by \$1.0 million, primarily reflecting a decrease in accounts receivable, net. Days sales outstanding ("DSO") for the gross usage charges accounts receivable decreased from 102 days to 84 days as of June 30, 2012; a concerted effort to collect overdue usage charges was in place and will continue going forward.

Current liabilities decreased \$1.7 million, primarily due to decreases in the balances in Accounts Payable, Accrued Liabilities, and Due to the City of Stamford (advances from the City that support the SWPCA's working capital requirements).

Table 3 below sets forth the Statement of Net Assets as of June 30 for the fiscal years ended June 30, 2008 through 2012.

TABLE 3

	<u>Audited 6/30/12</u>	<u>Audited 6/30/11</u>	<u>Audited 6/30/10</u>	<u>Audited 6/30/09</u>	<u>Audited 6/30/08</u>
Assets					
Current Assets					
Cash and cash equivalents	\$ 515,420	\$ 470,240	\$ 457,031	\$ 457,031	\$ 3,664,534
Accounts receivable	4,817,910	5,813,323	4,342,862	4,354,662	3,823,309
Other	<u>9,902</u>	<u>10,258</u>	<u>9,902</u>	<u>97,424</u>	<u>256,382</u>
Total Current Assets	5,343,232	6,293,821	4,809,795	4,909,117	774,225
Non-Current Assets					
Capital assets, net of depreciation	146,450,180	150,637,056	151,399,188	155,132,932	161,964,361
Restricted assets – cash and cash equivalents	7,742,365	7,811,039	7,676,929	7,540,166	3,672,144
Special assessments, net	7,218,567	6,600,182	5,363,449	4,156,751	4,522,912
Deferred charges, net	<u>184,890</u>	<u>210,540</u>	<u>236,190</u>	<u>261,840</u>	<u>-</u>
Total Non-Current assets	161,596,002	165,258,817	164,675,756	167,091,689	170,159,417
Total Assets	\$166,939,234	\$171,552,638	\$169,485,551	\$172,000,806	\$177,903,642
Liabilities					
Current Liabilities					
Accounts payable and accrued expenses	\$ 6,998,166	\$ 8,833,966	\$ 3,894,303	\$ 7,913,762	\$ 1,497,242
Bonds payable – current	2,458,440	2,377,234	2,115,129	2,115,129	2,367,179
Notes payable – current	3,796,603	3,725,044	3,654,901	3,586,146	3,518,750
Due to other funds	-	-	-	-	4,014,318
Compensated absences	<u>32,000</u>	<u>30,000</u>	<u>30,841</u>	<u>-</u>	<u>-</u>
Total Current Liabilities	13,285,209	14,966,244	9,695,174	13,662,583	11,397,489
Non-Current Liabilities					
Bonds payable	44,383,159	46,864,631	49,258,897	41,686,409	43,829,361
Notes payable	49,494,134	53,290,738	57,015,781	60,670,682	64,256,696
Compensated absences	<u>283,347</u>	<u>268,107</u>	<u>277,573</u>	<u>292,866</u>	<u>-</u>
Total Non-Current Liabilities	94,160,640	100,423,476	106,552,251	102,649,957	108,086,057
Total Liabilities	107,445,849	115,389,720	116,247,425	116,312,540	119,483,546
Net Assets					
Invested in capital assets, net of related debt					
Restricted	46,502,734	45,823,417	44,538,229	47,027,020	48,992,332
Unrestricted	<u>7,742,365</u>	<u>7,811,039</u>	<u>7,676,929</u>	<u>7,540,166</u>	<u>3,672,144</u>
Total Net Assets	<u>5,248,286</u>	<u>2,528,462</u>	<u>1,022,968</u>	<u>1,121,080</u>	<u>5,755,620</u>
Total Net Assets	<u>59,493,385</u>	<u>56,162,918</u>	<u>53,238,126</u>	<u>55,688,266</u>	<u>58,420,096</u>
Total Liabilities and Net Assets	\$166,939,234	\$171,552,638	\$169,485,551	\$172,000,806	\$177,903,742

Projected Financial Results

Set forth below in Table 4 are projected revenues and expenses for the current fiscal year and four succeeding fiscal years. The table has been prepared by the City and the SWPCA and Revenues and Operating Expenses are based on various assumptions, some of which are set forth in the footnotes below. 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

Summary of Projected Results – FY2013 through FY2018

<u>Revenues</u>	FY2013 (1)	FY2014	FY2015	FY2016	FY2017	FY2018
Billing Revenues (2)	\$17,414,481	\$18,827,120	\$18,827,120	\$18,827,120	\$18,827,120	\$18,830,777
Other Revenue (3)	6,263,551	7,027,626	6,874,654	7,192,014	7,434,277	7,720,442
Total Revenue	\$23,678,032	\$25,854,746	\$25,701,774	\$26,019,134	\$26,261,397	\$26,551,220
<u>Expenditures</u>	FY2013 (1)	FY2014	FY2015	FY2016	FY2017	FY2018
Operation & Maintenance (4)	\$12,600,199	\$13,264,759	\$13,542,032	\$13,886,356	\$14,194,117	\$14,509,568
Receivables Management (5)	871,000	941,000	941,000	941,000	941,000	942,000
Total Expenses	\$13,471,199	\$14,205,759	\$14,483,032	\$14,827,356	\$15,135,117	\$15,451,568
Senior Lien DS Coverage (6)	1.69	1.93	1.89	1.74	1.66	1.55
DS Coverage from Current Net Revenues (7)	1.09	1.26	1.16	1.16	1.14	1.05
DS Coverage from all Available Funds(8)	1.19	1.49	1.41	1.44	1.44	1.35
<u>User Fee Calculation</u>	FY2013 (1)	FY2014	FY2015	FY2016	FY2017	FY2018
Annual Consumption (ccf) (9)	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000
Number of Billing Customers (9)	19,548	19,743	19,941	20,140	20,342	20,545
User Fee Per ccf (9)	\$4.05	\$4.38	\$4.38	\$4.38	\$4.38	\$4.38
Annual Percent Increase	5%	8%	0%	0%	0%	0%

- (1) Based on SWPCA FY2013 and FY2014 Annual Operating Budgets.
- (2) User charge to Stamford customers based on estimated billable metered water use.
- (3) Includes special assessment revenue, Town of Darien revenue, Aquarion Revenue, nitrogen credits, interest income and other miscellaneous revenue.
- (4) Includes personnel, contracted services and other such expenses associated with the operation and maintenance of the System.
- (5) Based on an assumed collection rate of 95%.
- (6) Debt service coverage ratio for all revenue bonds and clean water fund loans measured by dividing net revenues by the debt service for the revenue bonds and clean water fund loans. City loans and general obligation debt remain subordinate.
- (7) Debt service coverage ratio for all debt based on current net revenues divided by the total debt service.
- (8) Debt service coverage ratio that includes current net revenues and additional general fund balances available for debt service prior to dividing by the total debt service. See Table 8-6 for additional information on general fund balances. SWPCA cash available ending FY2012 was \$515,420.
- (9) Based on the SWPCAs projections.

The Board has voted to implement an overall 8% rate increase effective for bills levied during fiscal year 2014. The Board had adopted a multi-year projection of rates for five years beginning in fiscal year 2002 to account for the increasing debt service due to a \$105 million upgrade to the Treatment Plant (see below). The projection proved to be an accurate prediction of user charges during that period. The purpose was to provide to the ratepayers relatively level and reasonable annual increases of less than 8% through fiscal year 2006/07 and rate increases thereafter at a lower rate.

The SWPCA has contracted with the City 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

There are two essential components to the SWPCA’s efforts to expand, upgrade and improve the quality of its physical plant. First, the SWPCA has a five-year capital improvement program focused on the installation of new sewers, upgrading of pumping stations, the repair of sewers and the installation of a state-of-the-art sludge drying system. The second component was the major upgrade and expansion of the Treatment Plant, which was completed in 2006 and was financed by State of Connecticut grant and loans and City general obligation bonds secured under the Indenture as Subordinated Indebtedness.

Other recent capital projects include the following:

- Intervale Road sewer extension and East Cross Road area sewers are two of the recently completed projects during the past year. These projects have benefited approximately 70 properties in the Intervale Road area and 17 properties at East Cross Road that will connect to the City of Stamford sewer system. These two projects cost approximately \$7.6 million.
- Piping for the odor control system at the plant which was recently retrofitted.
- Hurricane barrier recertification, which included tree and stump removal, pump station switchgear upgrades and other activities required for recertification. This project cost approximately \$295,000 and was done in fiscal year 2011.

A summary of the SWPCA’s six-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 secondary clarifiers and gravity thickeners, and upgrade of the Treatment Plant’s headworks, aeration bowers, UV disinfection, and SCADA (control) system. Major rehabilitation of the sludge dryer equipment at the Treatment Plant is planned for fiscal year 2018. Collection system projects that are planned include sewer extension projects to serve the Carriage Drive, 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.

TABLE 5

Summary of 6-Year Capital Plan by Category (\$ Millions)*

Category	Annual Capital Cash Flow Forecast (FY)						Total	Avg.	% of
	2013	2014	2015	2016	2017	2018		per FY	Total
Treatment Plants	\$1.8	\$1.7	\$4.6	\$3.1	\$3.2	\$5.1	\$19.3	\$3.9	50%
Pump Stations	\$0.0	\$0.3	\$0.2	\$0.2	\$0.2	\$0.0	\$0.8	\$0.2	2%
Collection System	\$0.5	\$6.2	\$4.0	\$1.3	\$4.2	\$2.5	\$18.7	\$3.7	48%
Total	\$2.3	\$8.2	\$8.8	\$4.5	\$7.5	\$7.6	\$38.8	\$7.8	100%

*Totals may not add due to rounding.

THE BONDS

General

The 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 Bonds will be available in denominations of \$5,000 and integral multiples thereof. Interest on the Bonds will be payable on February 15, 2014 and on each August 15 and February 15 thereafter.

So long as Cede & Co. is the registered owner of the Bonds, all payments of principal and interest on the 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.

Redemption Provisions

Optional Redemption

The Bonds maturing on or after August 15, 2024 are subject to optional redemption prior to maturity commencing August 15, 2023, 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>
August 15, 2023 and thereafter	100%

Mandatory Redemption

The Bonds maturing on August 15, 2038 and August 15, 2043 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) Bonds maturing on August 15, 2038 and August 15, 2043, in the manner therein provided as follows:

<u>Term Bond Due August 15, 2038</u>		<u>Term Bond Due August 15, 2043</u>	
<u>Year</u>	<u>Sinking Fund Installment</u>	<u>Year</u>	<u>Sinking Fund Installment</u>
2034	\$510,000	2039	\$670,000
2035	540,000	2040	705,000
2036	570,000	2041	745,000
2037	600,000	2042	785,000
2038 [†]	635,000	2043 [†]	825,000

[†] 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 Bonds at the address of such registered owner as the same shall last appear on the registration books for the 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 Bonds. Upon the giving of such notice, if sufficient funds available solely for redemption are on deposit with the Paying Agent, the Bonds or portions thereof so called for redemption will cease to bear interest after the specified redemption date.

If less than all of the Bonds of any one maturity shall be called for redemption, the particular Bonds or portions of 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 Bonds to be redeemed shall be in the principal amount of \$5,000 or a multiple thereof and that, in selecting Bonds for redemption, each Bond shall be considered as representing that number of Bonds which is obtained by dividing the principal amount of such 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 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 Bonds called for redemption. Redemption of a portion of the Bonds of any maturity by the City will reduce the outstanding principal amount of 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 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 Bonds to be redeemed held by the Beneficial Owners. Any such allocation of interests in the Bonds to be redeemed will not be governed by the determination of the City authorizing the issuance of the Bonds and will not be conducted by, or be the responsibility of, the City, the Registrar, or Paying Agent.

USE OF BOND PROCEEDS

A portion of the proceeds of the Bonds will be used to finance the following projects:

Project

Carriage Drive Sewers	\$ 1,946,051
Perna Lane Area Sewers	103,486
Repair/Replace Magee Avenue Wall	237,000
Sewer Capacity Management, Operation & Maintenance	1,550,000
Upgrade of Ultra-Violet Disinfection System	1,050,000
Vehicle Replacement & Repair	600,000
Project GIS	735,000
Laboratory Analytical Equipment	39,020
Sanitary Sewer Rehabilitation	2,365,802
Intervale Area	263,628
WPCA – Major Repairs	3,661,309
Pumping Station Upgrade	<u>218,704</u>
Total	<u>\$12,770,000</u>

SOURCES AND USES OF FUNDS

The proceeds of the Bonds excluding accrued interest are expected to be applied as follows:

Sources:

Par Amount of the Bonds	\$22,095,000.00
Net Original Issue Premium	2,307,940.80
Funds on hand	<u>789,250.00</u>
Total Sources	\$25,192,190.80

Uses:

Deposit to Capital Projects Fund	\$12,770,000.00
Deposit to Debt Service Fund	111,007.46
Deposit to Debt Service Reserve Fund	1,639,600.00
Deposit to Escrow Deposit Fund	10,277,983.75
Costs of Issuance ¹	393,187.50
Additional Proceeds	<u>412.09</u>
Total Uses	\$25,192,190.80

¹ Represents Underwriter's discount, legal and consulting fees and expenses, rating agency fees, and other miscellaneous costs and expenses incurred related to the issuance of the Bonds.

PLAN OF REFUNDING

A portion of the proceeds of the Bonds is being issued to refund at or prior to maturity all or any portion 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 Bonds.

<u>Dated Date</u>	<u>Maturity/ Sinking Fund Date</u>	<u>Interest Rate</u>	<u>Par Amount</u>	<u>Redemption Date</u>	<u>Redemption Price</u>	<u>CUSIP Number</u>
10/01/03:	11/15/13	3.500%	\$ 315,000	N/A	N/A	852660AK5
	11/15/14	3.625	330,000	11/15/13	100.0%	852660AL3
	11/15/15	3.750	340,000	11/15/13	100.0	852660AM1
	11/15/16	4.000	355,000	11/15/13	100.0	852660AN9
	11/15/17	4.000	370,000	11/15/13	100.0	852660AP4
	11/15/18	5.000	385,000	11/15/13	100.0	852660AQ2
	11/15/19	5.000	405,000	11/15/13	100.0	852660AR0
	11/15/20	5.000	425,000	11/15/13	100.0	852660AS8
	11/15/21	5.000	445,000	11/15/13	100.0	852660AT6
	11/15/22	4.400	470,000	11/15/13	100.0	852660AU3
	11/15/23	4.500	490,000	11/15/13	100.0	852660AV1
	11/15/32	5.000	<u>5,710,000</u>	11/15/13	100.0	852660AW9
			<u>\$10,040,000</u>			

Upon delivery of the Bonds, a portion of the Bond 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 20, 2013 between the Escrow Agent and the City. In lieu of purchasing Governmental Obligations with the proceeds from the sale of the Bonds, the City will deposit the proceeds from the sale of the Bonds into the Escrow Deposit Fund in an amount sufficient to pay the principal of, interest on,

redemption premium, if any, and cost of redemption of the Refunded Bonds on the date of redemption and pay costs of issuance relating to the issuance of the Bonds.

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 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.

BOOK-ENTRY-ONLY SYSTEM

The Depository Trust Company ("DTC"), New York, NY, will act as securities depository for the 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.

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

Security and Pledge

All Bonds issued pursuant to the Indenture 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 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 Bonds are additionally secured by the Debt Service Reserve Account. Under the Indenture, the Debt Service Reserve Account is a Special 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 the Common Account of the Debt Service Reserve Fund, if and when established, shall be applied solely to pay the principal of and interest on Bonds secured by the Common Fund. 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.

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 the 2006 Series 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 2006 Series 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 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%).

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 REQUIREMENTS¹

The following table sets forth the debt service requirements as of August 20, 2013 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.

<u>Year</u>	<u>This Issue</u>	<u>Parity Indebtedness²</u>		<u>Total</u>	<u>Principal %</u>
	<u>Principal</u>	<u>Principal</u>	<u>Interest</u>	<u>Principal</u>	<u>Retired</u>
2014 ³	\$ 115,000	\$ 3,979,948	\$ 1,647,763	\$ 4,094,948	4.61
2015	190,000	4,309,423	1,635,079	4,499,423	9.68
2016	480,000	4,348,503	1,539,750	4,828,503	15.12
2017	515,000	4,428,011	1,440,614	4,943,011	20.68
2018	545,000	4,501,881	1,340,253	5,046,881	26.37
2019	580,000	4,602,555	1,239,878	5,182,555	32.20
2020	615,000	4,704,858	1,136,841	5,319,858	38.19
2021	650,000	4,596,883	1,032,831	5,246,883	44.10
2022	690,000	4,703,163	927,507	5,393,163	50.18
2023	735,000	4,811,084	818,768	5,546,084	56.42
2024	780,000	4,920,678	707,292	5,700,678	62.84
2025	825,000	5,036,980	592,940	5,861,980	69.44
2026	865,000	1,440,509	503,346	2,305,509	72.04
2027	910,000	735,000	470,906	1,645,000	73.89
2028	960,000	765,000	437,119	1,725,000	75.83
2029	1,005,000	805,000	399,831	1,810,000	77.87
2030	1,055,000	845,000	360,644	1,900,000	80.01
2031	1,110,000	885,000	319,556	1,995,000	82.26
2032	1,170,000	925,000	276,569	2,095,000	84.62
2033	1,230,000	975,000	231,444	2,205,000	87.10
2034	485,000	1,020,000	184,063	1,505,000	88.79
2035	510,000	1,070,000	134,425	1,580,000	90.57
2036	540,000	1,120,000	82,413	1,660,000	92.44
2037	570,000	1,175,000	27,906	1,745,000	94.41
2038	600,000	-	-	600,000	95.08
2039	635,000	-	-	635,000	95.80
2040	670,000	-	-	670,000	96.55
2041	705,000	-	-	705,000	97.35
2042	745,000	-	-	745,000	98.19
2043	785,000	-	-	785,000	99.07
2044	<u>825,000</u>	<u>-</u>	<u>-</u>	<u>825,000</u>	100.00
Total	\$22,095,000	\$66,704,476	\$17,487,738	\$88,799,476	

¹ Excludes the Refunded Bonds.

² Principal and interest payments reflect outstanding payments on the \$19,765,000 Revenue Bonds, 2006 Series, dated September 28, 2006, 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.

³ Excludes \$319,659 principal payments and \$82,490 interest payments made from July 1, 2013 through August 20, 2013.

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 Bonds in order that interest on the Bonds be and remains 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 retroactive to the date of issuance of the Bonds. The Tax Regulatory Agreement, which will be executed and delivered by the City concurrently with the Bonds, contains representations, covenants and procedures relating to the use, expenditure and investment of proceeds of the 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 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 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, includable in adjusted current earnings for purposes of computing the federal alternative minimum tax imposed on certain corporations.

Ownership of the 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 Bonds. Prospective purchasers of the 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 Bonds.

In the opinion of Bond Counsel, based on 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.

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.

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 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 Bonds.

Original Issue Premium

The initial public offering price of certain maturities of the Bonds may be greater than the principal amount payable on such Bonds at maturity. The excess of the initial public offering price at which a substantial amount of these 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 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 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 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 Bonds.

RATINGS

Standard & Poor's, a division of the McGraw-Hill Companies, has assigned a rating of AA+ to the Bonds. Moody's Investors Service has assigned a rating of Aa2 to the 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 Bonds. Each rating agency should be contacted directly for its rating on the 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 Bonds at the net aggregate purchase price of \$24,264,753.30 (consisting of the principal amount of \$22,095,000.00, plus original issue premium of \$2,307,940.80, less underwriter's discount of \$138,187.50). The Underwriter will be obliged to purchase all such Bonds, if any such Bonds are purchased. The Underwriter intends to offer the 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 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 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 Bonds; the proposed form of such opinion is set forth in Appendix D. 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 ENGINEER

Malcolm Pirnie, Inc. Malcolm Pirnie, the Water Division of ARCADIS U.S., Inc. (the "Consulting Engineer"), has prepared the Consulting Engineer's Bond Feasibility Report for the Bonds, dated June 2013, a copy of which is included as Appendix B hereto. The Consulting Engineer's Bond Feasibility Report provides an overview of the history of and financial projections for the Regional Wastewater System. The Consulting Engineer's Bond Feasibility Report has been included in this Official Statement in reliance on the reputation of the Consulting Engineer as an expert in wastewater engineering. The Consulting Engineer's Bond Feasibility Report contains information not set forth elsewhere in this Official Statement and should be read in its entirety.

THE FINANCIAL ADVISOR

Webster Bank, National Association, Hartford, Connecticut, is serving as financial advisor to the City for the issuance of the 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 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 which would have a material adverse effect on the finances of the SWPCA or which would impact the validity of the Bonds or the power of the City to assess and collect revenues to pay them.

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 Bonds pursuant to a Continuing Disclosure Agreement substantially in the form attached as Appendix E 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 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, Senior Vice President, Webster Bank, 185 Asylum Street, Hartford, Connecticut 06103, telephone (203) 578-2203.

The Official Statement is submitted in connection with the sale of the 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 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/ Michael A. Pavia
Michael A. Pavia
Mayor

By /s/ Michael E. Handler
Michael E. Handler
Director of Administration

WATER POLLUTION CONTROL AUTHORITY

By /s/ William P. Brink
William P. Brink, P.E., BCEE
Executive Director

Dated: July 12, 2013

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APPENDIX A - INFORMATION CONCERNING THE CITY

History, Location and Other Information

Stamford, first settled in 1641, is Connecticut's fourth 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 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, State Route 15, traverse the City.

Stamford 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. In June 2012, the Stamford Innovation Center ("I-Center") opened in the restored Old Town Hall, occupying 12,500 square feet of space. The I-Center houses very early stage companies and provides educational classes. Sikorsky Aircraft set up a "skunk works" team at the I-Center with the goal of developing new technologies. In July 2012, Chelsea Piers of New York City opened its 240,000-square-foot facility, following a \$40 million retrofit of the former Clairol site, and has created 240 jobs. NBC Sports is in the process of completing its \$100 million relocation to Stamford from multiple locations across the U.S., including New York City. When fully operational it is expected to employ in excess of 750 people.

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.

Restoration of the Mill River, 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.

Stamford Hospital has begun the construction of a \$475 million development that will include a new five-story hospital building and a central utility plant.

The second and final construction phase of the Stamford Urban Transitway, which provides automobile, enhanced bus, bike, and pedestrian connections between the Stamford Transportation Center and the City's East Side, commenced in the first quarter of 2013.

Stamford 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 for 2011 was \$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.

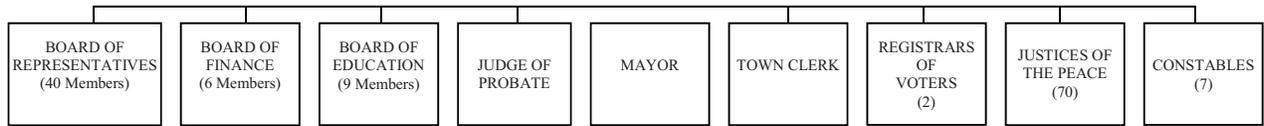
The Director of Administration is appointed by the Mayor and confirmed by the Board of Representatives. Under the direction of the Mayor, the Director of Administration has supervision over the Controller's Office, Office of Policy and Management, Purchasing, Central Services, Assessment and Taxation, 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.

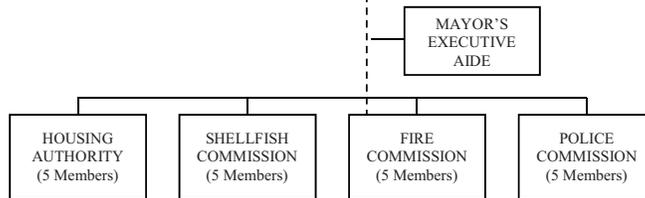
Organizational Chart

CITIZENS OF STAMFORD

VOTERS ELECT



MAYOR APPOINTS



APPOINTED BY THE MAYOR AND APPROVED BY THE BOARD OF REPRESENTATIVES



Administrative Bureau	Controller's Office	Law Department	Emergency Communications	Economic Development
Public Services Bureau	Office of Policy & Management	Human Resources Dept.	Fire & Rescue Department	Government Relations
Engineering Bureau	Purchasing/Central Services	Employee Benefits Dept.	Dept. of Health & Social Services	
Land Use Bureau	Assessment & Taxation		Police Department	
Water Pollution Control Authority	Grants Department		Smith House Skilled Nursing Facility	
Customer Relations Bureau	Technology Management Services			
	Risk Management			

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

<u>Year</u>	<u>Population</u> ¹	<u>Percent Change</u>	<u>Density</u> ²
1960	92,713	-%	2,324
1970	108,798	17.3	2,727
1980	102,453	(5.8)	2,568
1990	108,056	5.5	2,708
2000	117,083	8.4	2,934
2010	122,643	4.7	3,074
2011	123,868	1.0	3,104

Sources: ¹U.S. Department of Commerce, Bureau of Census, Census of Population 1960-2010; State of Connecticut Department of Public Health for 2011.

²Population per square mile: 39.9 square miles.

Age Distribution of the Population

<u>Age</u> ¹	<u>City of Stamford</u>		<u>State of Connecticut</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Under 5 years	8,309	6.8%	202,106	5.7%
5 to 9 years	7,009	5.7	222,571	6.2
10 to 14 years	6,846	5.6	240,265	6.7
15 to 19 years	6,539	5.3	250,834	7.0
20 to 24 years	7,309	6.0	227,898	6.4
25 to 34 years	21,335	17.4	420,377	11.8
35 to 44 years	18,501	15.1	484,438	13.5
45 to 54 years	17,443	14.2	575,597	16.1
55 to 59 years	7,089	5.8	240,157	6.7
60 to 64 years	6,170	5.0	203,295	5.7
65 to 74 years	7,806	6.4	254,944	7.1
75 to 84 years	5,531	4.5	166,717	4.7
85 years and over	<u>2,756</u>	<u>2.2</u>	<u>84,898</u>	<u>2.4</u>
Total	122,643	100.0%	3,574,097	100.0%
2010 median age (years) ¹	37.1	-	40.0	-
2000 median age (years) ²	36.4	-	37.4	-

Sources: ¹U.S. Department of Commerce, Bureau of Census, 2010 Census.

²U.S. Department of Commerce, Bureau of Census, 2000 Census.

Income Distribution

	<u>City of Stamford</u>		<u>State of Connecticut</u>	
	<u>Families</u>	<u>Percent</u>	<u>Families</u>	<u>Percent</u>
\$ 0 - 9,999	958	3.3%	30,321	3.4%
10,000 - 14,999	801	2.7	20,207	2.2
15,000 - 24,999	2,191	7.5	48,201	5.3
25,000 - 34,999	1,781	6.1	58,835	6.5
35,000 - 49,999	2,800	9.6	90,972	10.1
50,000 - 74,999	4,335	14.8	147,948	16.4
75,000 - 99,999	3,697	12.7	134,851	14.9
100,000 - 149,999	4,944	16.9	185,568	20.5
150,000 - 199,999	2,661	9.1	86,104	9.5
200,000 and over	<u>5,042</u>	<u>17.3</u>	<u>100,939</u>	<u>11.2</u>
Total	29,210	100.0%	903,946	100.0%

Source: 2009–2011 American Community Survey.

Comparative Income Measures

	<u>City of Stamford</u>	<u>State of Connecticut</u>
Per capita income	\$41,762	\$36,613
Median family income	\$84,064	\$84,558
Median household income	\$75,815	\$67,427

Source: 2009–2011 American Community Survey.

**Educational Attainment
Years of School Completed - Age 25 and Over**

	<u>City of Stamford</u>		<u>State of Connecticut</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Less than 9 th grade	7,442	8.7%	111,347	4.6%
9 th to 12 th grade, no diploma	6,119	7.2	162,645	6.7
High school graduate	18,578	21.8	680,397	28.0
Some college, no degree	12,164	14.2	429,810	17.6
Associate's degree	4,190	4.9	177,238	7.3
Bachelor's degree	21,725	25.4	491,234	20.2
Graduate or professional degree	<u>15,240</u>	<u>17.8</u>	<u>378,761</u>	<u>15.6</u>
Total	85,458	100.0%	2,431,432	100.0%
Total high school graduate or higher	-	84.1%	-	88.7%
Total bachelor's degree or higher	-	43.2%	-	35.8%

Source: 2009–2011 American Community Survey.

Labor Force Data

<u>Reporting Period</u> <u>Average</u>	<u>Labor</u> <u>Force</u>	<u>Employed</u>	<u>Unemployed</u>	<u>Unemployment Rate (%)</u>		
				<u>City of</u> <u>Stamford</u>	<u>Bridgeport/</u> <u>Stamford</u> <u>Labor Market</u>	<u>State of</u> <u>Connecticut</u>
April 2013	66,313	62,039	4,274	6.4	7.3	7.8
2012	68,126	63,362	4,764	7.0	7.9	8.4
2011	68,842	63,868	4,974	7.2	8.2	8.8
2010	68,241	63,017	5,224	7.7	8.5	9.1
2009	67,693	62,721	4,972	7.3	7.8	8.2
2008	66,853	63,710	3,143	4.7	5.3	5.7
2007	66,220	63,761	2,459	3.7	4.1	4.6
2006	65,813	63,446	2,367	3.6	4.0	4.4
2005	65,186	62,435	2,751	4.2	4.5	4.9
2004	64,787	62,120	2,667	4.1	4.6	4.9

Source: State of Connecticut, Labor Department, Office of Research.

Industry Classification

<u>Sector</u>	<u>City of Stamford</u>		<u>State of Connecticut</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Agriculture, forestry, fishing, hunting, and mining	96	0.2%	6,539	0.4%
Construction	4,891	7.8	101,094	5.8
Manufacturing	3,475	5.6	193,152	11.0
Wholesale trade	1,651	2.6	43,227	2.5
Retail trade	5,482	8.8	189,948	10.9
Transportation, warehousing and utilities	2,109	3.4	66,665	3.8
Information	1,544	2.5	42,113	2.4
Finance, insurance, real estate and leasing	8,901	14.2	162,400	9.3
Professional, scientific, management, administrative and waste management ...	11,873	19.0	189,609	10.8
Educational, health and social services	11,578	18.5	459,714	26.3
Arts, entertainment, recreation, accommodation and food services	5,762	9.2	144,326	8.3
Other services	3,612	5.8	80,265	4.6
Public administration	<u>1,511</u>	<u>2.4</u>	<u>67,741</u>	<u>3.9</u>
Total	62,485	100.0%	1,746,793	100.0%

Source: 2009–2011 American Community Survey.

**Commute to Work
16 years of age and over**

	<u>City of Stamford</u>		<u>State of Connecticut</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Drove alone	41,880	68.5%	1,352,476	78.8%
Car pools	6,388	10.4	144,197	8.4
Using public transportation	6,898	11.3	78,733	4.6
Walked	3,234	5.3	51,070	3.0
Using other means	423	0.7	20,107	1.1
Worked at home	<u>2,330</u>	<u>3.8</u>	<u>69,934</u>	<u>4.1</u>
Total	61,153	100.0%	1,716,517	100.0%
Mean travel to work (minutes)	24.4	-	24.7	-

Source: 2009-2011 American Community Survey.

Major Employers

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

<u>Name</u>	<u>Nature of Business</u>
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
Bank of Ireland	Finance
Carolee	Jewelry Manufacturing
Charter Communications	Telecommunications
Chartwell Re Corp.	Reinsurance
Chelsea Piers	Leisure/Sports
Chirex Inc.	Contract Research and Development 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
Guardian Life	Insurance

Major Employers (continued)

<u>Name</u>	<u>Nature of Business</u>
GE Commercial Finance	Finance (HQ)
GE Money	Finance
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 Information Systems and Support Services
Intrepid Aviation	Aviation Services (HQ)
ITDS	Computer Software
Jeffries & Co.	Investment Advisors
KPMG	Accounting, Audit
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)
Price Waterhouse Coopers	Public Accounting/Consulting
Purdue Pharma	Pharmaceuticals (HQ)
Rochdale Securities	Finance
Rockefeller & Co.	Wealth Management
Royal Bank of Scotland	Investment Banking (N. American HQ)
SAC	Investment Banking (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
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)

Major Employers (continued)

<u>Name</u>	<u>Nature of Business</u>
Versus	Communications/Programming
Vineyard Vines	Clothing Manufacturing (HQ)
Wachovia Bank, National Association	Banking
XL America	Financial, Info Tech, Insurance

HQ — Headquarters/Offices
Mfg — Manufacturing Facilities

Source: City of Stamford Department of Economic Development.

Office Vacancy Rates

<u>Calendar Year</u>	<u>Stamford Central Business District</u>		<u>Stamford Non-Central Business District</u>		<u>Fairfield County</u>	
	<u>Square Feet Existing</u>	<u>Vacancy Percent</u>	<u>Square Feet Existing</u>	<u>Vacancy Percent</u>	<u>Square Feet Existing</u>	<u>Vacancy Percent</u>
December						
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

Source: Cushman & Wakefield.

The relatively high vacancy rate in Stamford is due to several factors. Historically, Stamford has had double digit vacancy rates, even during the mid-2000's when rates were in the mid-teens. From 2009 to 2010 there was a major uptick in occupancy from approximately 18% to 24%. In December 2009, Gen Re Insurance relocated from their 550,000 square foot building to a 310,000 square foot building. Both buildings are located in Stamford. Their former building now sits empty and represents 4% of the total commercial office space. That contraction, along with the addition of 1 million square feet of office space in the South End, of which only 40% is occupied, plus the relocation of many businesses into smaller space (including UBS which has reduced their workforce by some 2,000 employees) have all contributed to the mid-20% vacancy rate.

Value of Building Permits

<u>Fiscal Year Ended 6/30</u>	<u>Residential</u>	<u>Commercial/ Industrial</u>	<u>Apartments/ Condominiums</u>	<u>Total</u>
2012	\$ 60,861,801	\$ 203,491,861	N/A ¹	\$264,353,662
2011	52,586,486	261,632,862	N/A ¹	314,219,348
2010	48,768,097	143,898,869	N/A ¹	192,666,966
2009.....	53,124,017	329,541,802	N/A ¹	382,665,819
2008.....	76,143,181	357,865,859	N/A ¹	434,009,040
2007.....	50,778,452	412,070,047	N/A ¹	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
2003	76,738,245	117,209,684	16,057,715	198,434,929

¹Included in residential values.

Age Distribution of Housing

<u>Household Characteristics</u>	<u>City of Stamford</u>		<u>State of Connecticut</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Built in 1939 or earlier	7,914	16.4%	342,759	23.0%
Built in 1940-1949	3,018	6.2	104,220	7.0
Built in 1950-1959	8,588	17.8	229,476	15.4
Built in 1960-1969	6,738	14.0	201,661	13.6
Built in 1970-1979	7,693	15.9	201,264	13.5
Built in 1980-1989	7,215	14.9	195,577	13.1
Built in 1990-1999	3,222	6.7	108,904	7.3
Built in 2000-2004	2,113	4.4	61,616	4.1
Built in 2005 or later	<u>1,772</u>	<u>3.7</u>	<u>43,798</u>	<u>3.0</u>
Total	48,273	100.0%	1,489,275	100.0%

Source: 2009-2011 American Community Survey.

Housing Units by Type of Structure

<u>Household Characteristics</u>	<u>City of Stamford</u>		<u>State of Connecticut</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Single-family detached	17,980	37.3%	882,011	59.2%
Single-family attached	2,820	5.8	77,291	5.2
Multifamily	27,442	56.8	516,605	34.7
Mobile home, trailer, or other	<u>31</u>	<u>0.1</u>	<u>13,368</u>	<u>0.9</u>
Total	48,273	100.0%	1,489,275	100.0%

Source: 2009-2011 American Community Survey.

Housing Unit Vacancy Rates

<u>Housing Units</u>	<u>City of Stamford</u>		<u>State of Connecticut</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Occupied housing units	47,357	93.6%	1,371,087	92.1%
Vacant housing units	<u>3,216</u>	<u>6.4</u>	<u>116,804</u>	<u>7.9</u>
Total units	50,573	100.0%	1,487,891	100.0%
Homeowner vacancy rate	-	2.1%	-	1.6%
Rental vacancy rate	-	6.3%	-	8.2%

Source: U.S. Department of Commerce, Bureau of Census, 2010 Census.

Owner-Occupied Housing Units

<u>Specified Owner-occupied Units</u>	<u>City of Stamford</u>		<u>State of Connecticut</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Total owner-occupied units	24,511		927,793	
Persons per unit	2.75		2.66	
Less than \$50,000	147	0.6%	17,014	1.8%
\$ 50,000 to \$ 99,999	167	0.7	21,317	2.3
\$100,000 to \$149,999	169	0.7	58,439	6.3
\$150,000 to \$199,999	612	2.5	129,744	14.0
\$200,000 to \$299,999	2,645	10.8	274,604	29.6
\$300,000 to \$499,999	7,129	29.1	262,712	28.3
\$500,000 to \$999,999	11,541	47.1	120,493	13.0
\$1,000,000 or more	<u>2,101</u>	<u>8.5</u>	<u>43,470</u>	<u>4.7</u>
Total	24,511	100.0%	927,793	100.0%
Median value	\$540,900	-	\$285,800	-

Source: 2009–2011 American Community Survey.

Number and Size of Households

<u>Household Characteristics</u>	<u>City of Stamford</u>		<u>State of Connecticut</u>	
	<u>Number</u>	<u>Percent</u>	<u>Number</u>	<u>Percent</u>
Persons in households	121,363	-	3,455,945	-
Persons per household (average)	2.56	-	2.52	-
Persons per family (average)	3.15	-	3.08	-
Family households	30,019	63.4%	908,661	66.3%
Non-family households	<u>17,338</u>	<u>36.6</u>	<u>462,426</u>	<u>33.7</u>
All households	47,357	100.0%	1,371,087	100.0%
Family households by type				
Married couple	22,178	73.9%	672,013	73.9%
Female householders, no spouse	5,765	19.2	176,973	19.5
Other	<u>2,076</u>	<u>6.9</u>	<u>59,675</u>	<u>6.6</u>
Total family households	30,019	100.0%	908,661	100.0%
Non-family households by type				
Householders living alone	13,698	79.0%	373,648	80.8%
Other	<u>3,640</u>	<u>21.0</u>	<u>88,778</u>	<u>19.2</u>
Total non-family households	17,338	100.0%	462,426	100.0%

Source: U.S. Department of Commerce, Bureau of Census, 2010 Census.

Land Use Summary

<u>Land Use Category</u>	<u>Acres</u>	<u>Percent</u>
Zoned for single family	19,688	80.0%
Zoned for multi-family	1,965	8.0
Zoned for mixed use	336	1.4
Zoned for business	754	3.1
Zoned for industry	982	4.0
Zoned for open space	<u>863</u>	<u>3.5</u>
Total	24,588	100.0%

Source: City of Stamford, Land Use Bureau, 2008 GIS data.

**APPENDIX B - AUDITED FINANCIAL STATEMENTS OF THE SWPCA
FOR THE YEAR ENDED JUNE 30, 2012**

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To 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 years ended June 30, 2012 and 2011 as listed in the table of contents. These financial statements are the responsibility of the SWPCA's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audits 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 includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the SWPCA's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 2, 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, 2012 and 2011, and the changes in its financial position and its cash flows, where applicable, for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

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, 2012 and 2011 and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Accounting principles generally accepted in the United States of America require that management's discussion and analysis and budgetary comparison information on pages 3 through 13 and 31 through 32 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.

Our audits were conducted for the purpose of forming opinions on the financial statements that collectively comprise the SWPCA's financial statements as a whole. 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 transmittal letter and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

O'Connor Davies, LLP

Stamford, Connecticut
January 30, 2013

Stamford Water Pollution Control Authority Management's Discussion and Analysis June 30, 2012

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, 2012. Please read it in conjunction with the letter of transmittal and the financial statements that follow this section.

Financial Highlights

- ◆ As of June 30, 2012 the assets (\$166.9 million) of the SWPCA exceeded its liabilities (\$107.4 million), resulting in total net assets at the end of the fiscal year of \$59.5 million. Net assets increased \$3.3 million versus the prior year-end period primarily due to the net of a decrease in capital assets, net of depreciation (\$4.2 million) and a decrease in total liabilities of (\$7.9 million). Unrestricted net assets total \$5.2 million, and that is an increase of \$2.7 million over the prior year.
- ◆ Operating revenues in fiscal 2012 were \$20.3 million, compared to \$18.5 million in the prior year, primarily reflecting increased sewer use charges. Operating expenses were \$16.6 million versus \$16.7 million the prior year, resulting in operating income of approximately \$3.7 million compared to \$1.8 million in the prior year. The increase in operating income primarily reflects the favorable impact of lower utilities expense and operations and supplies expense, partially offset by higher salaries, benefits and claims expense, materials and supplies expense, and an increase in the provision for doubtful accounts (bad debts expense). In fiscal 2011, other non-operating revenue of \$1.1 million reflected over-accruals from 2010 being reversed. Unrestricted Net Assets were 26% of Operating Revenue, an improvement of approximately 12 percentage points from the prior year.
- ◆ Current assets decreased by \$1.0 million, primarily reflecting a decrease in accounts receivable, net. Days sales outstanding ("DSO") for the gross usage charges accounts receivable decreased from 102 days to 84 days as of June 30, 2012; a concerted effort to collect overdue usage charges was in place and will continue going forward.
- ◆ Current liabilities decreased \$1.7 million, primarily due to decreases in the balances in Accounts Payable, Accrued Liabilities, and Due to the City of Stamford (advances from the City that support the SWPCA's working capital requirements).
- ◆ Total indebtedness – including current and long-term general obligation bonds, revenue bonds, and notes payable -- decreased by \$6.1 million to \$100.1 million as of June 30, 2012. This reflects the repayment of \$1.7 million of general obligation bonds, \$0.7 million of revenue bonds, and \$3.7 million of notes payable. The SWPCA's outstanding debt is rated Aa2 by Moody's Investors Service and AA+ by Standard & Poor's.
- ◆ As noted above, net assets increased \$3.3 million (approximately 6%), to \$59.5 million. Net assets invested in capital assets, does not include any unexpended bond proceeds from previous debt issuances as of June 30, 2012 because all proceeds have been expended on capital projects.
- ◆ The SWPCA's capital assets, net of accumulated depreciation, decreased by about \$4.2 million to \$146.5 million versus the prior period. Depreciation expense of \$5.1 million was more than the capital asset additions (\$.9 million) during the fiscal year. The SWPCA's capital assets and available operating capacity are considered sufficient to meet the City of Stamford's currently foreseeable needs.

- ◆ The SWPCA continues to rely on the City for certain back-office service functions such as payroll, accounts payable, procurement, IT tech support, etc. which would not be cost efficient to try to implement internally.
- ◆ Finally, the SWPCA was issued a Notice of Violation (“NOV”) dated September 10, 2012 by the Connecticut Department of Energy & Environmental Protection (“DEEP”) stating that the SWPCA failed to meet regulatory requirements for effluent permit limits, the operation of secondary clarifier and nitrified recycle pumps, bypass prevention, and maintaining a system of user charges that supported the maintenance and replacement of critical components. No failure dates or time periods were specified and no penalties have been levied to date in conjunction with this NOV. The SWPCA is in continuing communication with DEEP regarding the corrective actions required to address these issues.

Overview of the Financial Statements

The SWPCA’s financial statements are comprised of: 1) basic financial statements, including a Statement of Net Assets; a Statement of Revenues, Expenses and Changes in Net Assets; and a Statement of Cash Flows; 2) Notes to Financial Statements; and 3) Schedule of Revenues and Expenses on a Budgetary Basis. The accompanying statistical section provides trend comparisons of selected financial and non-financial information over a number of years.

SWPCA Financial Statements

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 Assets. The Statement of Net Assets presents information on all of the SWPCA’s assets and liabilities, with the difference reported as net assets. Evaluating the amount and composition of the SWPCA’s net assets – the difference between assets and liabilities – is one way to measure the SWPCA’s financial health and financial position. Over time, increases or decreases in net assets may serve as an indicator of whether the financial condition of the SWPCA is improving or deteriorating. However, other non-financial factors need to be considered as well, including changes in the SWPCA’s customer base and the condition of the SWPCA’s facilities, to assess the overall financial health of the SWPCA.

Statement of Revenues, Expenses and Changes in Net Assets. The Statement of Revenues, Expenses and Changes in Net Assets presents information regarding how the SWPCA’s net assets changed during the most recent fiscal year. All of the fiscal year’s revenues and expenses are taken into account regardless of when cash was received or paid. Thus, certain revenues and expenses are reported in this statement for some items that may result in cash flows in a future fiscal period. Uncollected water usage charges and earned but unused vacation leave expense are examples of these types of items.

Statement of Cash Flows. The Statement of Cash Flows presents information on where cash came from and how it was used. The Statement of Cash Flows is important because it helps to determine if the SWPCA met its cash needs during the year and how it met them. It is important to understand financial activity measured on the accrual basis of accounting (as reflected in the Statement of Revenues, Expenses and Changes in Net Assets) as well as on the cash basis of accounting.

The financial statements (Statement of Net Assets, Statement of Revenue, Expenses and Changes in Net Assets and the Statement of Cash Flows) are presented on pages 14-17 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 18-30 of this report.

Budgetary Information. The Board of Directors of SWPCA and the City of Stamford adopt an annual revenue and expenditure budget 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 31-32 of this report.

Financial Analysis

Net Assets

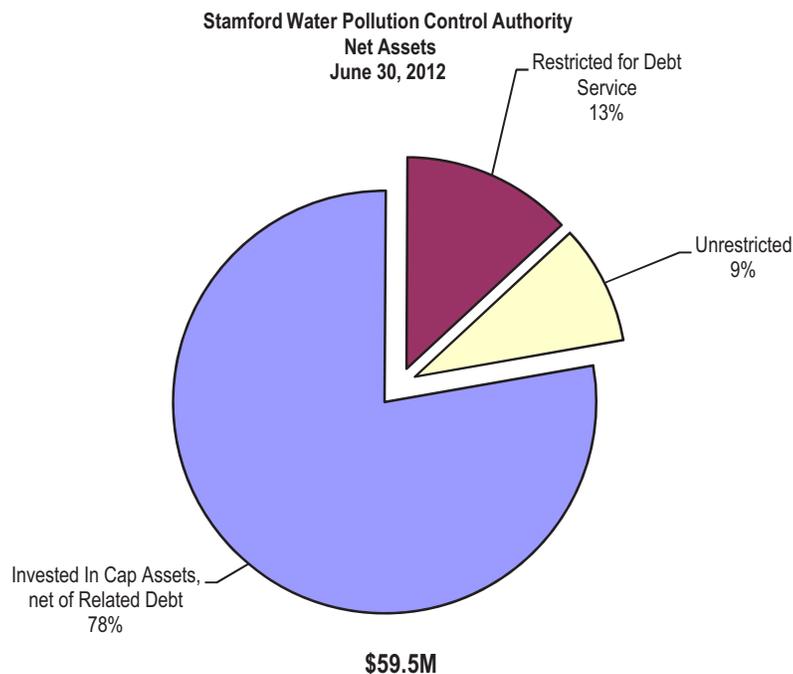
As noted earlier, net assets may serve over time as a useful indicator of the SWPCA's financial condition and an important determinant of the SWPCA's ability to finance its future cash needs. The SWPCA's assets exceeded its liabilities by \$59.5 million at June 30, 2012. The SWPCA's net assets increased by \$3.3 million or approximately 6% from the prior year-end period, primarily reflecting the increase in sewer use charges. Unrestricted net assets increased by approximately \$2.7 million to approximately \$5.2 million at June 30, 2012. Unrestricted net assets provide financial flexibility to meet the needs of the SWPCA's customers and creditors.

**Stamford Water Pollution Control Authority
Net Assets (000's omitted)**

	<u>June 30, 2012</u>	<u>June 30, 2011</u>	<u>Change</u>	<u>% Change</u>
Assets:				
Current Assets (Cash & Accounts Receivable)	\$5,343	\$6,294	(\$951)	
Restricted Cash	7,742	7,811	(69)	
Non-Current Assets (special assessments and deferred)	7,404	6,811	593	
Capital Assets (net of depreciation)	146,450	150,637	(4,187)	
Total Assets	<u>\$166,939</u>	<u>\$171,553</u>	<u>(\$4,614)</u>	
Current Liabilities	13,285	14,966	(1,681)	
Long-term Liabilities	94,161	100,424	(6,263)	
Total Liabilities	<u>107,446</u>	<u>115,390</u>	<u>(7,944)</u>	

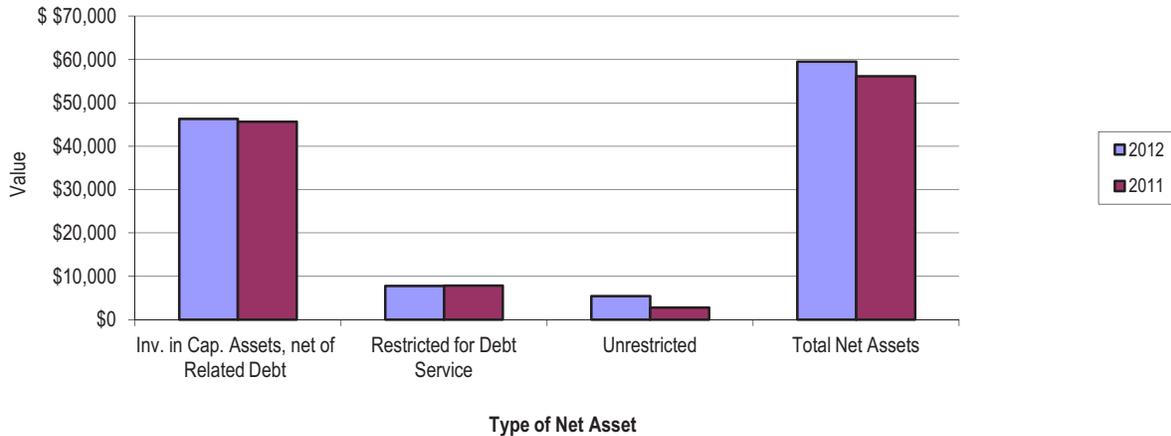
Net Assets:

Invested In Cap Assets, net of Related Debt	46,503	45,823	680	
Restricted for Debt Service	7,742	7,811	(69)	
Unrestricted	5,248	2,529	2,719	
Total Net Assets	<u>\$59,493</u>	<u>\$56,163</u>	<u>\$3,330</u>	6.0%



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, 2012 the SWPCA's current ratio was 0.4 to 1 as compared to 0.4 to 1 at the prior year-end. In Fiscal 2012, net working capital (current assets minus current liabilities) changed from a negative \$8.7 to a negative \$8.0 million, primarily reflecting a decrease in the balance due to the City. During the period between the billing cycles for usage and connections/special assessments (e.g. April and October), the SWPCA funds any interim short term cash needs through advances from the City of Stamford 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, the SWPCA's recent liquidity trend, including increased debt service requirements being driven by infrastructure repairs and replacement and the exhaustion of its unexpended bond proceeds, is unfavorable and requires corrective action.

Stamford Water Pollution Control Authority
Net Assets (000's omitted)
FYE 2012 vs. 2011 (at June 30)



Net Assets – Invested in Capital Assets (Net of Related Debt). As of June 30, 2012 the largest portion 78% of the SWPCA’s \$59.5 million in net assets relates to its investment in capital assets (land, buildings, machinery, equipment, etc.), net of accumulated depreciation, unexpended bond proceeds, deferred charges, and any related 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. Although the SWPCA’s investment in capital assets is reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from other sources (sewer use charges, fees and other income), since the capital assets themselves are not readily available as a source of funds to liquidate these liabilities.

Net Assets – Restricted. The SWPCA has net assets that are restricted for debt service. These assets are maintained in restricted trust accounts due to indenture requirements related to the 2003 and 2006 Revenue Bond issuances. Of the SWPCA’s \$59.5 million in total net assets as of June 30, 2012, \$7.7 million or 13%, was restricted and may not be used to fund the SWPCA’s ongoing obligations (with the exception of debt service under certain restricted circumstances).

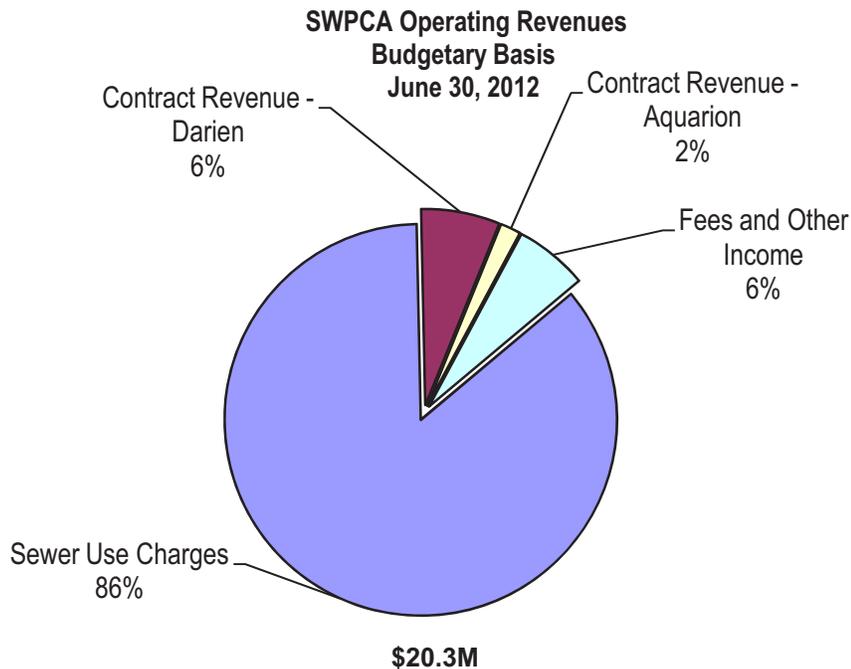
Net Assets – Unrestricted. Of the SWPCA’s total net assets at June 30, 2012, \$5.4 million or 9% was unrestricted and available to be used to meet the SWPCA’s obligations to customers, creditors and for capital projects.

**Statement of Revenues,
Expenses and Other Changes
in Net Assets (000's omitted)**

	Fiscal 2012	Fiscal 2011	Change
Operating Revenues	\$20,305	\$18,504	\$1,801
Operating Expenses	16,642	16,660	(18)
Net Operating Income	3,663	1,844	1,819
Non-Operating Revenue (Expenses)	(333)	1,081	(1,414)
Change in Net Assets	3,330	2,925	405
Net Assets, beginning (6/30/11)	56,163	53,238	2,925
Net Assets, ending (6/30/12)	<u>\$59,493</u>	<u>\$56,163</u>	<u>\$3,330</u>

Budgetary Information

Revenues. In fiscal 2012 the SWPCA's operating revenue sources consisted of sewer use charges for Stamford customers and Darien customers (86% in total), and contract revenue, fees and other income (14% in total).

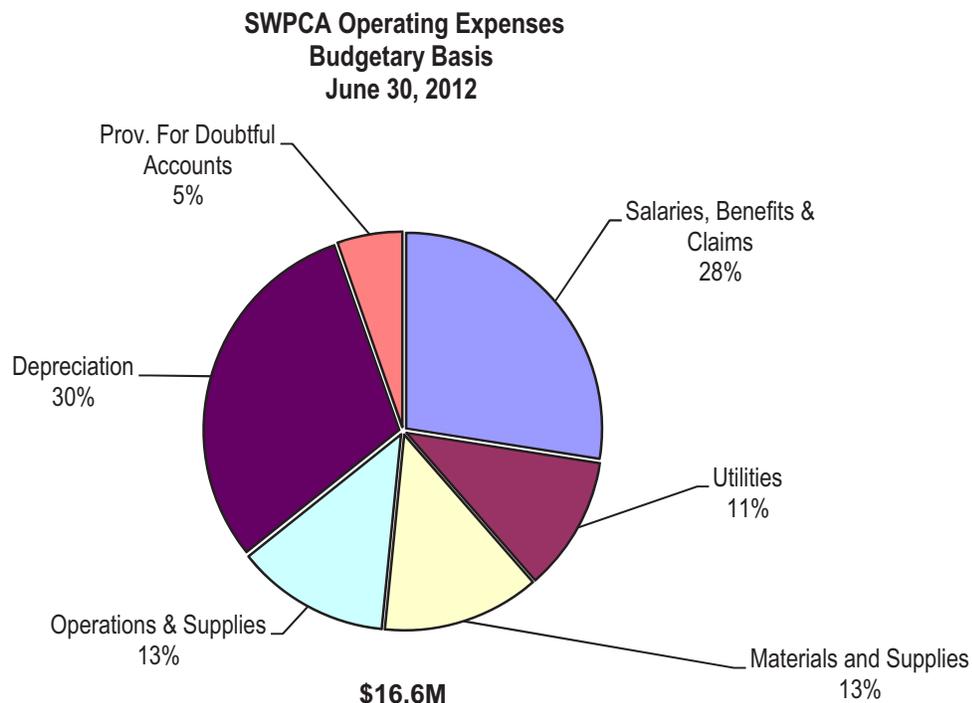


The original fiscal 2012 revenue estimate for sewer use charges was set at approximately \$16.9 million prior to the actual consumption data being available. At the annual rate setting meeting, adjustments were made to account for estimates of other revenue, collection rate assumptions and indenture requirements for debt service coverage. Based on these adjustments, the user charge rate was set at \$3.86 per CCF, resulting in an annual billing of \$16.9 million (based on assumed consumption of 4.4 million CCFs).

After adjustments (e.g., off-cycle charges, cancel/rebill charges), the amount of revenue billed in fiscal 2012 based on actual consumption of 4.3 million CCFs was \$16.7 million. Fiscal 2012 revenues totaled \$20.3 million. Despite the challenging economic environment, the collection rate within twelve months on sewer use charges in fiscal 2012 was approximately 92.0% (vs. 89.0% in the prior year).

In fiscal 2012 the SWPCA's primary operating revenues of \$20.3 million (as compared to \$18.5 million the prior year) included sewer use charges (\$17.4 million), contract revenues (\$1.3 million and \$0.3 million, from Darien and Aquarion, respectively), and fees and other income (\$1.2 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 2012 the SWPCA's operating expenses, which totaled \$16.6 million (as compared to \$16.7 million the prior year), consisted of salaries, employee benefits and claims (\$4.6 million), utilities costs (\$1.8 million), materials and supplies (\$2.2 million), operations and supplies (\$2.1 million), depreciation (\$5.1 million), and the provision for doubtful accounts (\$0.9 million). The favorable impact of lower utilities expense and operations and supplies expense, was partially offset by higher salaries, benefits and claims expense, materials and supplies expense, and an increase in the provision for doubtful accounts (bad debts expense).



The SWPCA's non-operating revenue of \$2.8 million included special assessments and connection charges (\$2.7 million) and interest income (\$0.1 million); non-operating expense of \$3.1 million consisted entirely of interest expense.

Additional information on revenue and expense budgetary information is contained in the supplemental information section.

Organization of SWPCA Operations

The SWPCA's organization includes three primary Divisions, as follows:

Administration Division: 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 Division: responsible to ensure that the SWPCA's facilities are operated effectively and meet all state and federal requirements. Activities within this Division include sludge processing, storm water discharge and management, and laboratory services.

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

As of June 30, 2012 the SWPCA had 39 full time equivalent employees a decrease of 2 from the prior year.

SWPCA's Major Recent Capital Projects

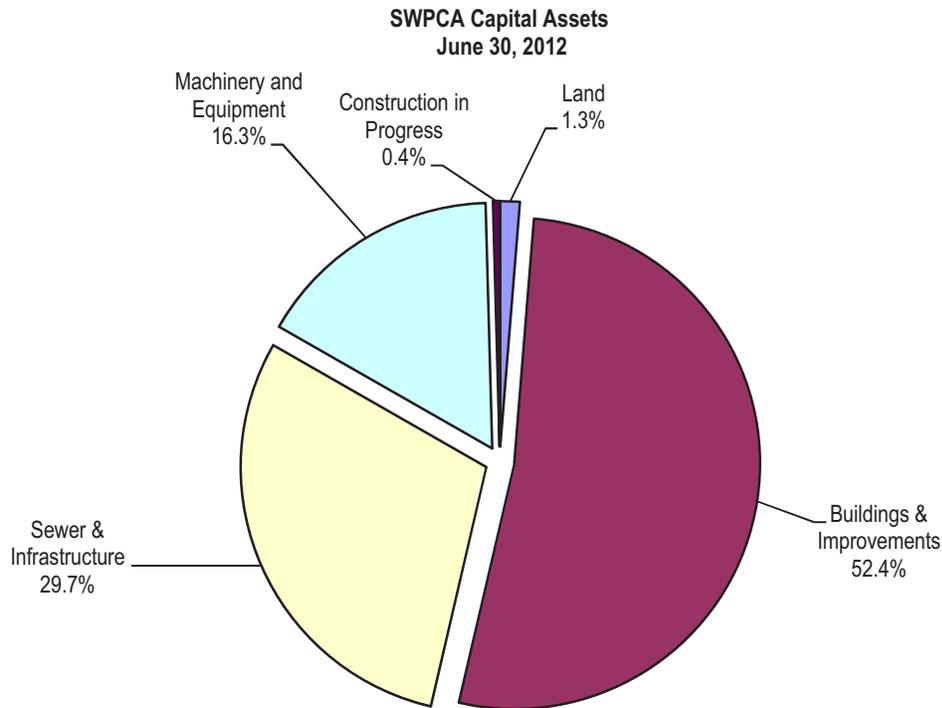
The SWPCA's major recent projects included:

- Bids were solicited for complete rehabilitation of the mechanicals for two of the secondary clarifiers and three primary sludge thickeners.
- City wide computerized sewer mapping was initiated to comply with the EPA administrative order.
- Engineering design was undertaken for Carriage Drive area sewers, and proposals were solicited for Wedgemere Road area sewers, and Perna Lane sewers.
 - ◆ The design for Carriage Drive area sewers project is ninety nine (99%) percent complete and is likely to go into construction early 2013.
 - ◆ The design Wedgemere Road sewers are about seventy (70%) percent complete and Perna Lane sewers are about fifty (50%) percent in design.
- Sanitary sewers were rebuilt at various locations to replace old deteriorating and misaligned pipes and odor control systems were upgraded, re-piped, and insulated, as needed.
- Also, all the parking areas at the satellite pump stations were reconstructed.

Capital Assets. As of June 30, 2012, the SWPCA had total capital assets, net of accumulated depreciation, of approximately \$146.5 million, as follows:

**Stamford Water Pollution Control Authority
Capital Assets (000's omitted)**

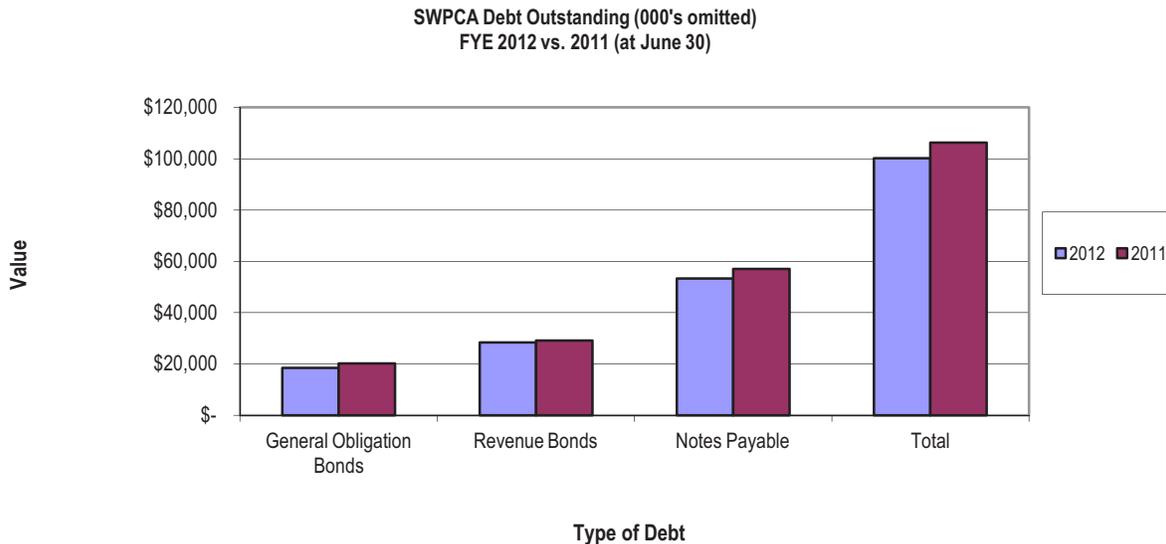
	June 30, 2012	June 30, 2011	Change
Land	\$2,833	\$2,833	\$0
Buildings & Improvements	116,418	116,080	338
Sewer & Infrastructure	65,938	65,638	300
Machinery and Equipment	36,195	36,111	84
Construction in Progress	971	825	146
Subtotal	\$222,355	\$221,487	\$868
Less Accumulated Depreciation	(\$75,905)	(\$70,850)	(\$5,055)
Total	\$146,450	\$150,637	(\$4,187)



Additional information on capital assets is presented in Note 5 on pages 22-23 of this report.

Debt Outstanding. As of June 30, 2012, the Stamford Water Pollution Control Authority had bonds and notes payable outstanding of approximately \$100.1 million, as follows:

Stamford Water Pollution Control Authority Debt Outstanding			
	June 30, 2012	June 30, 2011	Change
General Obligation Bonds	\$18,496,447	\$20,190,447	(\$1,694,000)
Revenue Bonds	28,345,152	29,051,418	(706,266)
Notes Payable	53,290,737	57,015,782	(3,725,045)
Totals	<u>\$100,132,336</u>	<u>\$106,257,647</u>	<u>(\$6,125,311)</u>



The Stamford Water Pollution Control Authority's total debt outstanding decreased by approximately \$6.1 million in fiscal 2012, reflecting the net impact of principal payments of \$1.7 million in general obligation debt, \$0.7 million in revenue bonds, and \$3.7 million in note payables. The Stamford Water Pollution Control Authority currently has its debt rated Aa2 by Moody's Investors Service and AA+ by Standard & Poor's.

Additional information on debt outstanding is presented in Note 7 of this report on pages 24-28.

Requests for Information

This financial report is designed to provide a general financial overview of the Stamford Water Pollution Control Authority for those with an interest in its finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to Mr. Ernest A. Orgera, Chairman of the SWPCA, at 111 Harbor View Ave, Stamford, CT 06902. Mr. Orgera is also the City's Director of Operations (EOrgera@ci.stamford.ct.us), and maintains an office at 888 Washington Boulevard, Stamford, CT 06901.

STAMFORD WATER POLLUTION CONTROL AUTHORITY

COMPARATIVE STATEMENTS OF NET ASSETS

JUNE 30, 2012 AND 2011

	<u>2012</u>	<u>2011</u>
ASSETS		
Current Assets		
Cash and cash equivalents	\$ 515,420	\$ 470,240
Accounts receivable:		
Usage charges, net of allowance for doubtful accounts of \$2,000,000 and \$1,200,000	2,406,372	3,627,796
Special assessments and connection charges, net of allowance for doubtful accounts of \$500,000 and \$500,000	1,235,538	996,094
Other	1,176,000	1,189,433
Other current assets	<u>9,902</u>	<u>10,258</u>
Total Current Assets	<u>5,343,232</u>	<u>6,293,821</u>
Non-current Assets		
Capital assets		
Land	2,833,278	2,833,278
Sewer and infrastructure	65,938,070	65,637,806
Building and improvements	116,417,420	116,080,368
Equipment	36,195,141	36,111,047
Construction in progress	971,370	825,007
Less accumulated depreciation	<u>(75,905,099)</u>	<u>(70,850,450)</u>
Total Capital Assets, Net	146,450,180	150,637,056
Restricted assets - cash and cash equivalents	7,742,365	7,811,039
Special assessments and connection charges receivable, net of current portion	7,218,567	6,600,182
Deferred charges	<u>184,890</u>	<u>210,540</u>
Total Non-current Assets	<u>161,596,002</u>	<u>165,258,817</u>
Total Assets	<u>\$166,939,234</u>	<u>\$171,552,638</u>

See notes to financial statements

STAMFORD WATER POLLUTION CONTROL AUTHORITY

COMPARATIVE STATEMENTS OF NET ASSETS (Continued)

JUNE 30, 2012 AND 2011

	<u>2012</u>	<u>2011</u>
LIABILITIES AND NET ASSETS		
Current Liabilities		
Accounts payable	\$ 475,305	\$ 948,857
Accrued liabilities	100,829	763,262
Accrued interest payable	668,021	694,090
Unearned revenue	177,542	154,062
Due to the City of Stamford	5,576,469	6,273,695
Current portion of general obligation bonds	1,743,440	1,687,234
Current portion of revenue bonds payable	715,000	690,000
Current portion of notes payable	3,796,603	3,725,044
Current portion of compensated absences	<u>32,000</u>	<u>30,000</u>
Total Current Liabilities	13,285,209	14,966,244
General Obligation Bonds, net	16,753,007	18,503,213
Revenue Bonds Payable, net	27,630,152	28,361,418
Notes Payable, net	49,494,134	53,290,738
Compensated Absences, net	<u>283,347</u>	<u>268,107</u>
Total Liabilities	<u>107,445,849</u>	<u>115,389,720</u>
Net Assets		
Invested in capital assets, net of related debt (including unexpended bond funds of \$0 and \$1,233,468)	46,502,734	45,823,417
Restricted for debt service	7,742,365	7,811,039
Unrestricted	<u>5,248,286</u>	<u>2,528,462</u>
Total Net Assets	<u>59,493,385</u>	<u>56,162,918</u>
Total Liabilities and Net Assets	<u>\$ 166,939,234</u>	<u>\$ 171,552,638</u>

See notes to financial statements

STAMFORD WATER POLLUTION CONTROL AUTHORITY

COMPARATIVE STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET ASSETS
 JUNE 30, 2012 AND 2011

	<u>2012</u>	<u>2011</u>
OPERATING REVENUES		
Sewer use charges	\$ 19,073,267	\$ 17,261,841
Fees and other income	<u>1,231,337</u>	<u>1,242,067</u>
Total Operating Revenues	<u>20,304,604</u>	<u>18,503,908</u>
OPERATING EXPENSES		
Salaries, benefits and claims	4,572,627	4,398,009
Utilities	1,847,901	2,613,984
Materials and supplies	2,164,289	2,030,557
Operations and supplies	2,107,500	2,155,766
Depreciation	5,054,649	5,086,909
Provision for doubtful accounts	<u>894,906</u>	<u>375,000</u>
Total Operating Expenses	<u>16,641,872</u>	<u>16,660,225</u>
Operating Income	<u>3,662,732</u>	<u>1,843,683</u>
NON-OPERATING REVENUES (EXPENSES)		
Special assessments and connection charges	2,703,276	3,182,499
Provision for doubtful accounts - special assessments and connection charges	-	(100,000)
Other non-operating revenue	-	1,067,492
Interest income	97,752	112,844
Interest expense	<u>(3,133,293)</u>	<u>(3,181,726)</u>
Total Non-Operating Revenues (Expenses)	<u>(332,265)</u>	<u>1,081,109</u>
Change in Net Assets	3,330,467	2,924,792
NET ASSETS		
Beginning of year	<u>56,162,918</u>	<u>53,238,126</u>
End of year	<u>\$ 59,493,385</u>	<u>\$ 56,162,918</u>

See notes to financial statements

STAMFORD WATER POLLUTION CONTROL AUTHORITY

COMPARATIVE STATEMENTS OF CASH FLOWS
JUNE 30, 2012 AND 2011

	2012	2011
CASH FLOWS FROM OPERATING ACTIVITIES		
Cash received from customers and users	\$ 20,681,199	\$ 17,011,166
Cash payments to employees	(2,944,249)	(3,254,784)
Cash payments to suppliers	(7,212,220)	(6,095,510)
Cash payments for benefits and claims	<u>(1,596,146)</u>	<u>(1,201,092)</u>
Net Cash from Operating Activities	<u>8,928,584</u>	<u>6,459,780</u>
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES		
Net change in due to the City of Stamford	(697,226)	4,783,596
Principal payments on debt	(6,125,311)	(5,787,061)
Interest paid on debt	(3,133,712)	(3,293,902)
Purchase of property and equipment	(925,864)	(4,637,517)
Other non-operating revenue	-	1,067,492
Special assessment and connection charges proceeds	<u>1,832,283</u>	<u>1,442,087</u>
Net Cash from Capital and Related Financing Activities	<u>(9,049,830)</u>	<u>(6,425,305)</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Interest received on investments	<u>97,752</u>	<u>112,844</u>
Net Change in Cash and Cash Equivalents	(23,494)	147,319
CASH AND CASH EQUIVALENTS		
Beginning of year	<u>8,281,279</u>	<u>8,133,960</u>
End of year	<u>\$ 8,257,785</u>	<u>\$ 8,281,279</u>
Cash and cash equivalents	\$ 515,420	\$ 470,240
Restricted cash	<u>7,742,365</u>	<u>7,811,039</u>
Total Cash and Cash Equivalents	<u>\$ 8,257,785</u>	<u>\$ 8,281,279</u>
RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES		
Operating income	\$ 3,662,732	\$ 1,843,683
Adjustments to reconcile operating income to net cash provided by operating activities		
Provision for doubtful accounts	894,906	375,000
Depreciation	5,054,649	5,086,909
Changes in operating assets and liabilities		
Decrease (increase) in accounts receivable	339,951	(1,428,715)
Decrease (increase) in other assets	356	(356)
(Decrease) increase in accounts payable and accrued liabilities	(1,060,654)	647,286
Increase (decrease) in unearned revenue	<u>36,644</u>	<u>(64,027)</u>
Net Cash from Operating Activities	<u>\$ 8,928,584</u>	<u>\$ 6,459,780</u>
SUPPLEMENTAL CASH FLOW INFORMATION		
Cash paid for interest	\$ 3,133,712	\$ 3,293,902
SUPPLEMENTAL NON-CASH CAPITAL ACTIVITIES		
Capital acquisition financed with debt and accounts payable	\$ -	\$ 58,091
Bond refunding, \$424,000 refunded and an additional \$6,000 in debt assumed	-	430,000

See notes to financial statements

Note 1 – Organization

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, 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.

Note 2 – Summary of Significant Accounting Policies

Financial Reporting Entity

In accordance with criteria enumerated in Governmental Accounting Standards Board (“GASB”) Statement No. 14, the SWPCA has been identified as a blended component unit of the City and 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.

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.

The SWPCA follows GASB Statement No. 20 “Accounting and Financial Reporting for Proprietary Funds and Other Governmental Entities That Use Proprietary Fund Accounting.” This Statement provides guidance on the applicability of accounting pronouncements from other standard setting organizations. Under the SWPCA’s election, it must apply all GASB pronouncements and the following pronouncements issued before November 30, 1989 unless they contradict GASB pronouncements: Statements and Interpretations of the Financial Accounting Standards Board, Accounting Principles Board Opinions, and Accounting Research Bulletins of the Committee on Accounting Procedures.

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.

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.

Note 2 – Summary of Significant Accounting Policies (Continued)**Cash and Cash Equivalents (continued)**

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, 2012 and the prior year period and is reflected as "Due to the City of Stamford" in the accompanying financial statements. The SWPCA's own unrestricted cash balance was \$515,420 and \$470,240 at June 30, 2012 and the prior year period.

Accounts Receivable

Accounts receivable are stated net of an estimate made for doubtful accounts. Management determines the allowance for doubtful accounts by identifying troubled accounts and by using historical experience applied to an aging of accounts. Accounts receivable are written off when deemed uncollectible. Recoveries of accounts receivable previously written off are recorded when received.

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. Depreciation is computed on a straight-line basis over the estimated useful lives of the respective assets as follows:

	<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.

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.

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

Operating Revenue

Operating revenues are based on the SWPCA's authorized rates applied to customer consumption of water. The SWPCA accrues amounts earned at the end of each accounting period.

Note 2 – Summary of Significant Accounting Policies (Continued)**Operating Revenue (continued)**

The SWPCA has the authority to and does routinely file liens on past due accounts. The lien amounts are payable, subject to unpaid property taxes and any superior claims, i.e. first mortgages, upon transfer of the respective properties.

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 in residences and commercial businesses. 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 charge fees are stated net of interest and imputed interest. Interest is recognized as it is earned over the period of collection. The special assessment and the connection charge fees are generally payable over periods of 10 to 20 years.

Net Assets

Net assets represent the difference between assets and liabilities. Net assets invested in capital assets, net of related debt, 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 assets are reported as restricted when there are limitations imposed on their use either through the enabling legislation adopted by the SWPCA or through external restrictions imposed by creditors, grantors or laws or regulations of other governments. The SWPCA has cash restricted for debt service requirements in accordance with the terms of the outstanding revenue bonds (see Note 3).

Non-operating Revenue

For the year ended June 30, 2011, non-operating revenue represents the reversal of estimated accruals from years prior to July 1, 2010.

Reclassifications

Certain reclassifications have been made to the prior years' financial statements to conform to the current year presentation. These reclassifications had no effect on previously reported results of operations or net assets.

Subsequent Events Evaluation by Management

Management has evaluated subsequent events for disclosure and/or recognition in the financial statements through the date that the financial statements were available to be issued, which date is January 30, 2013.

NOTES TO FINANCIAL STATEMENTS (Continued)

Note 3 – Cash and Cash Equivalents

Responsibility for custodial credit risk of deposits rests with the City; accordingly, separate disclosure is not possible. The notes of the City's Comprehensive Annual Financial Report should be read to determine the City's custodial credit risk of deposits. The restricted cash balance at June 30, 2012 and June 30, 2011 was restricted in accordance with the terms of various outstanding debt of the SWPCA (see Note 6).

The following is a summary of cash and cash equivalents at June 30:

	<u>Carrying and Fair Values</u>	
	<u>2012</u>	<u>2011</u>
Cash	\$ 515,420	\$ 470,240
Restricted cash	<u>7,742,365</u>	<u>7,811,039</u>
	<u>\$ 8,257,785</u>	<u>\$ 8,281,279</u>

Note 4 - Special Assessments and Connection Charges Receivable

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

	<u>2012</u>			
	<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:				
2013	\$ 365,538	\$ 1,038,747	\$ 1,404,285	\$ 1,404,285
2014	209,358	571,095	780,453	-
2015	211,318	552,237	763,555	-
2016	211,780	519,068	730,848	-
2017	212,874	519,085	731,959	-
Thereafter	<u>1,354,617</u>	<u>4,165,331</u>	<u>5,519,947</u>	<u>-</u>
	2,565,486	7,365,562	9,931,048	1,404,285
Less imputed interest	<u>-</u>	<u>(1,308,196)</u>	<u>(1,308,196)</u>	<u>-</u>
Receivable Before Interest and Lien Fees Receivables and Allowance for Doubtful Accounts	<u>\$ 2,565,486</u>	<u>\$ 6,057,366</u>	8,622,852	1,404,285
Plus related interest and lien fees receivable			331,253	331,253
Less allowance for doubtful accounts			<u>(500,000)</u>	<u>(500,000)</u>
Net Special Assessments and Connection Charges Receivable			<u>\$ 8,454,105</u>	<u>\$ 1,235,538</u>

STAMFORD WATER POLLUTION CONTROL AUTHORITY

NOTES TO FINANCIAL STATEMENTS (Continued)

Note 4 - Special Assessments and Connection Charges Receivable (Continued)

	2011			
	New Sewer Line Charges	Connection Charges	Total	Due Within One Year
Due in the year ending June 30:				
2012	\$ 361,171	\$ 917,177	\$ 1,278,348	\$ 1,278,348
2013	218,245	531,570	749,815	
2014	214,874	452,371	667,245	-
2015	217,184	430,872	648,056	-
2016	218,274	396,589	614,863	-
Thereafter	<u>1,509,802</u>	<u>3,237,942</u>	<u>4,747,744</u>	<u>-</u>
	2,739,550	5,966,521	8,706,071	1,278,348
Less imputed interest	<u>-</u>	<u>(827,541)</u>	<u>(827,541)</u>	<u>-</u>
Receivable Before Interest and Lien Fees Receivables and Allowance for Doubtful Accounts	<u>\$ 2,739,550</u>	<u>\$ 5,138,980</u>	7,878,530	1,278,348
Plus related interest and lien fees receivable			217,746	217,746
Less allowance for doubtful accounts			<u>(500,000)</u>	<u>(500,000)</u>
Net Special Assessments and Connection Charges Receivable			<u>\$ 7,596,276</u>	<u>\$ 996,094</u>

Note 5 – Capital Assets

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

	2012			
	Beginning Balance	Additions/ Transfers	Deletions/ Transfers	Ending Balance
Capital assets, not being depreciated				
Land	\$ 2,833,278	\$ -	\$ -	\$ 2,833,278
Construction in process	<u>825,007</u>	<u>146,363</u>	<u>-</u>	<u>971,370</u>
Total capital assets, not being depreciated	<u>3,658,285</u>	<u>146,363</u>	<u>-</u>	<u>3,804,648</u>
Capital assets being depreciated				
Sewer and infrastructure	65,637,806	300,264	-	65,938,070
Building and improvements	116,080,368	337,052	-	116,417,420
Equipment	<u>36,111,047</u>	<u>84,094</u>	<u>-</u>	<u>36,195,141</u>
Total capital assets being depreciated	<u>217,829,221</u>	<u>721,410</u>	<u>-</u>	<u>218,550,631</u>
Less accumulated depreciation	<u>70,850,450</u>	<u>5,054,649</u>	<u>-</u>	<u>75,905,099</u>
Total capital assets being depreciated, net	<u>146,978,771</u>	<u>(4,333,239)</u>	<u>-</u>	<u>142,645,532</u>
Capital assets, net	<u>\$ 150,637,056</u>	<u>\$ (4,186,876)</u>	<u>\$ -</u>	<u>\$ 146,450,180</u>

STAMFORD WATER POLLUTION CONTROL AUTHORITY

NOTES TO FINANCIAL STATEMENTS (Continued)

Note 5 – Capital Assets (Continued)

	2011			
	Beginning Balance	Additions/ Transfers	Deletions/ Transfers	Ending Balance
Capital assets, not being depreciated				
Land	\$ 2,833,278	\$ -	\$ -	\$ 2,833,278
Construction in process	<u>2,813,917</u>	<u>2,319,424</u>	<u>4,308,334</u>	<u>825,007</u>
Total capital assets, not being depreciated	<u>5,647,195</u>	<u>2,319,424</u>	<u>4,308,334</u>	<u>3,658,285</u>
Capital assets being depreciated				
Sewer and infrastructure	59,934,349	5,703,457	-	65,637,806
Building and improvements	115,470,138	610,230	-	116,080,368
Equipment	<u>36,111,047</u>	<u>-</u>	<u>-</u>	<u>36,111,047</u>
Total capital assets being depreciated	<u>211,515,534</u>	<u>6,313,687</u>	<u>-</u>	<u>217,829,221</u>
Less accumulated depreciation	<u>65,763,541</u>	<u>5,086,909</u>	<u>-</u>	<u>70,850,450</u>
Total capital assets being depreciated, net	<u>145,751,993</u>	<u>1,226,778</u>	<u>-</u>	<u>146,978,771</u>
Capital assets, net	<u>\$ 151,399,188</u>	<u>\$ 3,546,202</u>	<u>\$ 4,308,334</u>	<u>\$ 150,637,056</u>

Note 6 – Restricted Assets

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

	2012	2011
Clean Water Fund - Debt Service Reserve	\$ 4,711,889	\$ 4,652,364
2003 Debt Service Reserve Fund	866,908	840,609
2006 Debt Service Reserve Fund	1,207,352	1,207,299
2003 and 2006 Debt Service Funding Accrual	<u>956,216</u>	<u>1,110,767</u>
	<u>\$ 7,742,365</u>	<u>\$ 7,811,039</u>

STAMFORD WATER POLLUTION CONTROL AUTHORITY

NOTES TO FINANCIAL STATEMENTS (Continued)

Note 7 – Long-Term Obligations

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

	2012				
	July 1, 2011	Increases	Decreases	June 30, 2012	Due Within One Year
Bonds payable					
General obligation bonds	\$ 20,136,388	\$ -	\$ 1,687,234	\$ 18,449,154	\$ 1,743,440
Unamortized premium	54,059	-	6,766	47,293	-
	<u>20,190,447</u>	<u>-</u>	<u>1,694,000</u>	<u>18,496,447</u>	<u>1,743,440</u>
Revenue bonds	28,975,000	-	690,000	28,285,000	715,000
Unamortized premium	76,418	-	16,266	60,152	-
	<u>29,051,418</u>	<u>-</u>	<u>706,266</u>	<u>28,345,152</u>	<u>715,000</u>
Notes payable	<u>57,015,782</u>	<u>-</u>	<u>3,725,045</u>	<u>53,290,737</u>	<u>3,796,603</u>
Total bonds and notes payable	<u>106,257,647</u>	<u>-</u>	<u>6,125,311</u>	<u>100,132,336</u>	<u>6,255,043</u>
Compensated absences	<u>298,107</u>	<u>17,240</u>	<u>-</u>	<u>315,347</u>	<u>32,000</u>
Total	<u>\$ 106,555,754</u>	<u>\$ 17,240</u>	<u>\$ 6,125,311</u>	<u>\$ 100,447,683</u>	<u>\$ 6,287,043</u>
	2011				
	July 1, 2010	Increases	Decreases	June 30, 2011	Due Within One Year
Bonds payable					
General obligation bonds	\$ 21,580,517	\$ 430,000	\$ 1,874,129	\$ 20,136,388	\$ 1,687,234
Unamortized premium	60,825	-	6,766	54,059	-
	<u>21,641,342</u>	<u>430,000</u>	<u>1,880,895</u>	<u>20,190,447</u>	<u>1,687,234</u>
Revenue bonds	29,640,000	-	665,000	28,975,000	690,000
Unamortized premium	92,684	-	16,266	76,418	-
	<u>29,732,684</u>	<u>-</u>	<u>681,266</u>	<u>29,051,418</u>	<u>690,000</u>
Notes payable	<u>60,670,682</u>	<u>-</u>	<u>3,654,900</u>	<u>57,015,782</u>	<u>3,725,044</u>
Total bonds and notes payable	<u>112,044,708</u>	<u>430,000</u>	<u>6,217,061</u>	<u>106,257,647</u>	<u>6,102,278</u>
Compensated absences	<u>308,414</u>	<u>-</u>	<u>10,307</u>	<u>298,107</u>	<u>30,000</u>
Total	<u>\$ 112,353,122</u>	<u>\$ 430,000</u>	<u>\$ 6,227,368</u>	<u>\$ 106,555,754</u>	<u>\$ 6,132,278</u>

Note 7 – Long-Term Obligations (Continued)

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 the City's debt.

The SWPCA's allocable portion of the City's general obligation bonds outstanding as of June 30, 2012 consisted of the following:

Purpose	Year of Issue	Original Issue Amounts	Final Maturity	Interest Rates	Balance June 30, 2012	Balance June 30, 2011
Public Improvements	2001	\$ 3,640,000	2012	4.625 %	\$ -	\$ 113,134
Refunding Bonds	2002	2,718,590	2015	5.250 - 5.500	789,565	1,032,027
Refunding Bonds	2003	3,982,952	2016	5.000	2,385,439	2,607,853
Refunding Bonds	2004	1,268,429	2019	3.400 - 5.250	972,654	1,107,529
Public Improvements	2005	3,136,000	2012	3.250 - 4.000	-	179,600
Refunding Bonds	2005	2,247,600	2021	3.750 - 5.000	2,144,800	2,144,800
Refunding Bonds	2008	1,817,639	2015	3.000 - 5.000	660,265	1,040,014
Refunding Bonds	2009	1,073,431	2020	2.500 - 5.000	1,073,431	1,073,431
Public Improvements	2010	10,000,000	2030	2.300 - 5.550	9,585,000	10,000,000
Refunding Bonds	2010	408,000	2023	3.000 - 5.000	408,000	408,000
Refunding Bonds	2011	430,000	2025	2.000 - 4.000	<u>430,000</u>	<u>430,000</u>
Debt Service Requirement					18,449,154	20,136,388
Plus unamortized premium					<u>47,293</u>	<u>54,059</u>
Net Debt Service Requirement					<u>\$ 18,496,447</u>	<u>\$ 20,190,447</u>

Aggregate debt service requirements subsequent to June 30, 2012 are as follows:

	Principal	Interest	Total
2013	\$ 1,743,440	\$ 830,750	\$ 2,574,190
2014	1,771,784	755,382	2,527,166
2015	1,790,158	675,096	2,465,254
2016	1,372,117	606,289	1,978,406
2017	1,212,440	549,318	1,761,758
2018-2022	5,278,215	1,909,495	7,187,710
2023-2027	3,281,000	951,703	4,232,703
2028-2030	<u>2,000,000</u>	<u>167,355</u>	<u>2,167,355</u>
Debt Service Requirement	18,449,154	6,445,388	24,894,542
Plus unamortized premium	<u>47,293</u>	-	<u>47,293</u>
Net Debt Service Requirement	<u>\$ 18,496,447</u>	<u>\$ 6,445,388</u>	<u>\$ 24,941,835</u>

The SWPCA's share of Interest expense incurred on general obligation bonds was \$739,326 and \$689,945 for the years ended June 30, 2012 and 2011.

Note 7 – Long-Term Obligations (Continued)**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:

	<u>2012</u>	<u>2011</u>
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. Interest is payable monthly, with principal maturity paid from July 2002 through July 2032. The aggregate new amount includes unamortized premiums of \$30,395 and \$41,448 at June 30, 2012 and 2011.	\$10,375,395	\$10,681,448
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. Interest is payable monthly, with principal maturity paid from September 2007 through September 2036. The aggregate new amount includes unamortized premiums of \$29,757 and \$34,970 at June 30, 2012 and 2011.	<u>17,969,757</u>	<u>18,369,970</u>
Total revenue bonds payable	28,345,152	29,051,418
Less: current portion	<u>715,000</u>	<u>690,000</u>
Total revenue bonds payable - non-current	<u>\$27,630,152</u>	<u>\$28,361,418</u>

Interest incurred on revenue bonds was \$1,277,984 and \$1,303,252 for the years ended June 30, 2012 and 2011.

Note 7 – Long-Term Obligations (Continued)**Revenue Bonds (Continued)**

Aggregate debt service requirements subsequent to June 30, 2012 are as follows:

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2013	\$ 715,000	\$ 1,273,825	\$ 1,988,825
2014	745,000	1,246,175	1,991,175
2015	775,000	1,217,181	1,992,181
2016	805,000	1,186,625	1,991,625
2017	840,000	1,152,331	1,992,331
2018-2022	4,770,000	5,183,883	9,953,883
2023-2027	5,965,000	3,999,677	9,964,677
2028-2032	7,540,000	2,416,844	9,956,844
2033-2037	<u>6,130,000</u>	<u>679,501</u>	<u>6,809,501</u>
Debt Service Requirement	28,285,000	18,356,042	46,641,042
Plus bond premium	<u>60,152</u>	-	<u>60,152</u>
Net Debt Service Requirement	<u>\$ 28,345,152</u>	<u>\$ 18,356,042</u>	<u>\$ 46,701,194</u>

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, \$3,574,208 of which \$330,021, \$198,064, and \$1,587,923 is outstanding as of June 30, 2012. 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 which 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, 2012, the outstanding balance on the loan was \$51,174,729

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. As of June 30, 2012 and 2011 the combined loan balances were \$53,290,737 and \$57,015,782.

Interest expense incurred on these notes payables was \$1,106,287 and \$1,180,025 for the years ended June 30, 2012 and 2011.

STAMFORD WATER POLLUTION CONTROL AUTHORITY

NOTES TO FINANCIAL STATEMENTS (Continued)

Note 7 – Long-Term Obligations (Continued)

Notes Payable (continued)

Aggregate debt service requirements subsequent to June 30, 2012 are as follows:

	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2013	\$ 3,796,603	\$ 1,031,132	\$ 4,827,735
2014	3,869,606	954,533	4,824,139
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
2018-2022	20,369,341	2,395,978	22,765,319
2023-2026	<u>13,564,250</u>	<u>445,365</u>	<u>14,009,615</u>
Net Debt Service requirement	<u>\$53,290,737</u>	<u>\$ 7,225,009</u>	<u>\$60,515,746</u>

Note 8 – Revenue

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

	<u>2012</u>	<u>2011</u>
Sewer use fees	\$ 16,704,578	\$ 15,312,415
Sewer use fees, Town of Darien, CT	1,317,500	1,335,401
Sewer use fees, Aquarion	339,445	262,569
Interest	528,324	332,102
Lien fees	180,420	14,730
Miscellaneous fees	<u>3,000</u>	<u>4,624</u>
	<u>\$ 19,073,267</u>	<u>\$ 17,261,841</u>

Sewer assessments and connection charges is comprised of the following for the years ended June 30:

	<u>2012</u>	<u>2011</u>
Connection charges	\$ 1,877,219	\$ 956,597
Sewer assessments	18,411	1,233,306
Capital reimbursement, Town of Darien, CT	458,716	694,854
Interest	195,832	242,655
Delinquent interest and lien fees	<u>153,098</u>	<u>55,087</u>
	<u>\$ 2,703,276</u>	<u>\$ 3,182,499</u>

Note 9 – 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.

Note 10 – 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 worker's 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, 2012 and 2011, the SWPCA paid the City approximately \$319,000 and \$328,000 to the City's internal service insurance fund.

Note 11 – 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. Employees become eligible at date of hire and can contribute from 0% to 5% until they have reached 33 years of service. Full benefits are payable to an employee who retires at age 60 with a minimum of 10 years of service or a vested employee who is age 58 and has reached at least 15 years of service.

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 Employee's Retirement Fund activity and funding information as of June 30, 2012 and 2011.

Note 12 – Other Post-Employment Benefits (OPEB)

The City provides post-employment benefits for certain employees for current and future health and life insurance benefit expenses through a single-employer defined benefit plan. Prior to fiscal year 2008, these benefits were provided on a pay-as-you-go basis. An annual actuarial valuation is made to determine whether the contributions are sufficient to meet the plan obligations. The latest actuarial valuation was made July 1, 2011. The post-retirement plan does not issue stand-alone financial reports.

The contribution requirements of plan members and the City are established and may be amended by the City. The City determines the required contribution using the projected unit credit method. The SWPCA's share of the contribution was \$198,000 and \$75,121 for the fiscal years 2012 and 2011, respectively.

Information with respect to the OPEB valuation is contained in the City's basic financial statements.

Note 13 – Transactions with the City of Stamford

In the fiscal years 2012 and 2011, the City paid approximately \$221,000 and \$195,000, respectively, in sewer use charges to the SWPCA, and the SWPCA paid the City approximately \$73,000 and \$75,000 for administrative services and approximately \$789,000 and \$760,000 to the City's internal service medical insurance fund.

The City reimbursed the SWPCA \$72,000 and \$71,000 for the City's share of the hurricane barrier maintenance and operations in 2012 and 2011.

In connection with the pooled cash arrangement with the City, the SWPCA incurred interest expense of approximately \$9,700 and \$8,500 on deficit balances during the years ended June 30, 2012 and 2011.

Note 14 – Connecticut Department of Energy & Environmental Protection Violations

The SWPCA was issued a Notice of Violation ("NOV") dated September 10, 2012 by the Connecticut Department of Energy & Environmental Protection ("DEEP") stating that the SWPCA failed to meet regulatory requirements for effluent permit limits, the operation of secondary clarifier and nitrified recycle pumps, bypass prevention, and maintaining a system of user charges that supported the maintenance and replacement of critical components. No failure dates or time periods were specified and no penalties have been levied to date in conjunction with this NOV. The SWPCA is continuing to communicate with DEEP regarding the corrective actions required to address these issues. No adjustments have been made to these financial statements concerning this matter as of June 30, 2012.

STAMFORD WATER POLLUTION CONTROL AUTHORITY

SCHEDULE OF REVENUES - BUDGETARY BASIS - BUDGET AND ACTUAL

For the Year Ended June 30, 2012

	Budgeted Amounts		Actual Budgetary Basis	Variance with Final Budget Positive (Negative)
	Original	Final		
OPERATING REVENUES				
Sewer use charges	\$ 17,454,308	\$ 17,454,308	\$ 17,416,322	\$ (37,986)
Contract revenue - Town of Darien, Connecticut	1,600,000	1,600,000	1,317,500	(282,500)
Contract revenue - Aquarion Water Company	190,000	190,000	339,445	149,445
Nitrogen Trading Credit	900,000	900,000	840,778	(59,222)
Fees and other income	<u>591,778</u>	<u>591,778</u>	<u>540,050</u>	<u>(51,728)</u>
Total Operating Revenue	<u>20,736,086</u>	<u>20,736,086</u>	<u>20,454,095</u>	<u>(281,991)</u>
NON-OPERATING REVENUE				
Sewer assessments	1,948,139	1,948,139	1,832,283	(115,856)
Interest income	<u>60,000</u>	<u>60,000</u>	<u>97,752</u>	<u>37,752</u>
Total Non-Operating Revenue	<u>2,008,139</u>	<u>2,008,139</u>	<u>1,930,035</u>	<u>(78,104)</u>
Total Revenues	<u>\$ 22,744,225</u>	<u>\$ 22,744,225</u>	22,384,130	<u>\$ (360,095)</u>
Less interest subsidy			(149,491)	
Additional sewer assessment revenue on a GAAP basis			<u>870,993</u>	
Revenues on a GAAP Basis			<u>\$ 23,105,632</u>	

STAMFORD WATER POLLUTION CONTROL AUTHORITY

SCHEDULE OF OPERATING EXPENSES - BUDGETARY BASIS - BUDGET AND ACTUAL

For the Year Ended June 30, 2012

	Budgeted Amounts		Actual Budgetary Basis	Variance with Final Budget Positive (Negative)
	Original	Final		
OPERATING EXPENSES				
Administration	\$ 3,622,517	\$ 3,445,505	\$ 3,201,996	\$ 243,509
Process control	3,666,571	3,414,643	3,074,308	340,335
Laboratory	476,783	476,802	458,937	17,865
Sludge processing - operating	734,759	843,226	826,846	16,380
Sludge processing - contractual	1,583,400	1,583,400	1,573,374	10,026
Storm water management	113,034	113,309	89,936	23,373
Building maintenance	209,450	230,171	206,965	23,206
Equipment maintenance	645,197	809,608	672,920	136,688
Pump station maintenance	574,882	628,617	541,200	87,417
Sanitary sewer maintenance	230,954	232,506	208,371	24,135
Barrier maintenance	213,200	206,960	138,459	68,501
Billing services	368,134	454,134	450,415	3,719
Total Operating Expenses	12,438,881	12,438,881	11,443,727	995,154
Other Non-Operating Expenses				
Debt service	10,305,344	10,305,344	9,248,908	1,056,436
Total Expenses	\$ 22,744,225	\$ 22,744,225	20,692,635	\$ 2,051,590
Net encumbrances included in budgetary basis and not GAAP basis and other adjustments for GAAP basis			(741,714)	
Provision for doubtful accounts			894,906	
Depreciation			5,054,649	
Principal payments on debt			(6,125,311)	
Expenditures on a GAAP basis			\$ 19,775,165	

APPENDIX C - ENGINEER'S REPORT

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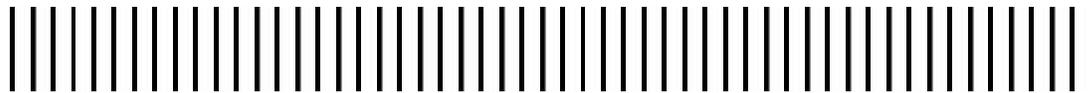


City of Stamford, Connecticut

888 Washington Blvd.
Stamford, CT 06901

Engineer's Report

June 2013



Report Prepared By:

**Malcolm Pirnie, The Water Division of
ARCADIS**

44 S. Broadway, 15th Floor
White Plains, NY 10602



The Water Division of ARCADIS

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- C. 6 Year Capital Plan
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1. Introduction and Purpose

1.1. Introduction and Purpose

Malcolm Pirnie, the Water Division of ARCADIS U.S., Inc. (Pirnie/ARCADIS) has been retained by the City of Stamford, Connecticut (“City”) to provide Consulting Services for an Engineer’s Report for refinancing of the 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. 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.

Pirnie/ARCADIS has not independently verified the accuracy of the information provided by the City 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 Pirnie/ARCADIS by the City is not accurate, the conclusions and recommendations contained in this Report may vary and are subject to change. In addition, the scope of the Pirnie/ARCADIS review did not include any pending or threatened litigation against the SWPCA.

1.2. Purpose of Engineer's Report

The Engineer's Report is prepared to support the refinancing of the 2003 Revenue Bonds and issuance of new bond to fund the SWPCA’s capital program through FY2015. In preparing this Report, Pirnie/ARCADIS has reviewed information and documents prepared by or on behalf of the SWPCA. The purpose of Pirnie/ARCADIS review of such documents is to understand and report on the technical and financial information contained therein as it relates to the City's refinancing of SWPCA debt.

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 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.

The City is responsible for stormwater control and management, however, 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. 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.

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 an 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.

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. The Executive Director reports to the Board and more specifically to the Director of Operations.

The former Executive Director of the SWPCA served as both the Executive Director and Class IV Operator for the SWPCA and retired in June 2011 to pursue other interests. The SWPCA subsequently hired a new Plant Supervisor who now serves as the Class IV Operator for the SWPCA. The SWPCA also initially retained an Interim Executive Director through the engineering firm of Wright-Pierce as they searched for a permanent Executive Director. In March 2013, the Interim Executive Director, Mr. William Brink, P.E., was hired directly and now serves as the Executive Director of the SWPCA.

The SWPCA FY2014 budget includes 44 employees; 39 full-time, 1 permanent part-time and 4 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 represented within the City. 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 Teamsters Union. The laboratory staff, clerical staff and electricians are part of the UAW bargaining unit with the City. The collective bargaining contracts are Citywide and are negotiated through the Office of Legal Affairs. The MAA and Teamsters contracts expire on June 30, 2014. The UAW contract expired June 30, 2010 and is in arbitration. The budget of 44 employees represents an increase of three (3) employees over the FY2013 budget. More specifically, the SWPCA eliminated the assistant chemist position under Laboratory, added one utility worker to Process Control, added two new maintenance mechanics to Sanitary Sewer Maintenance to support its CMOM program and help address USEPA Administrative Order requirements, and added one office support position to Administration Manager to support both administration and finance services of the SWPCA.

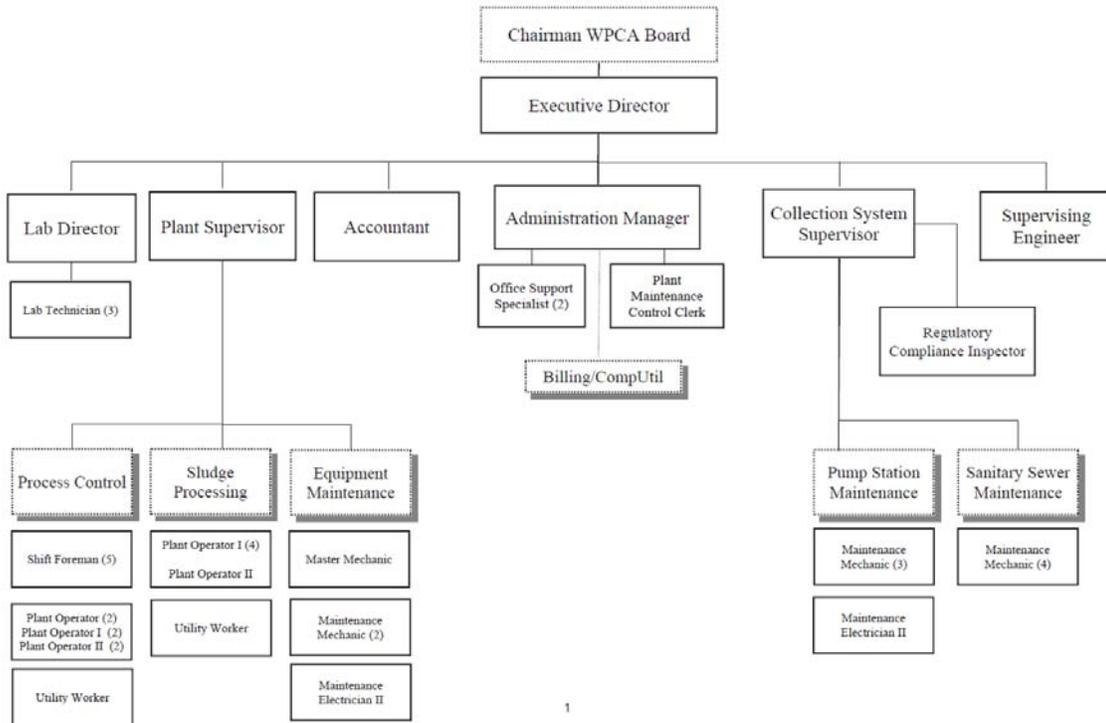
In FY2013 the SWPCA hired a full-time Accountant to assist in managing the SWPCA’s financial matters. Historically, the City has managed the majority of the financial management services for the SWPCA. The City and SWPCA, however, are moving towards developing a finance department within the SWPCA to provide enhanced financial management. The hiring of the full-time Accountant in FY2013 was the first step in this direction. The hiring of the new office support position in FY2014 is another step in this direction and will provide support to the Accountant and the SWPCA’s financial service capabilities.

Currently, there are six open positions. These include the three new positions that have been added for FY2014, plus two Shift Foremen positions (Class III Certification required), and one Plant Operator position. The Plant Operator position will be filled by July 1, 2013. The remaining positions are anticipated to be filled within the next six months.

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. There are no observed shortcomings in the operation and maintenance of the system because of inadequate staffing of the required positions. New positions added in FY2013 and FY2014 to enhance SWPCA's financial management and collection system monitoring programs demonstrate SWPCA understands the organizations requirements.

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



Source: Stamford Water Pollution Control Authority. FY2013-2014 Proposed Operating Budget.

2.3. Board of Directors

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

Ernie Orgera	Chairman, City of Stamford Director of Operations
Michael Handler	Member, City of Stamford Director of Administration
Cristina Andreana	Member, Financial Member
Daniel Capano	Member
Dan Schwartz	Member
Donald Huppert	Member
Mitchell Kaufman	Member, City of Stamford Board of Representatives
Tim Abbazia	Member, City of Stamford Board of Finance
Lou Basel	Member, Engineer Member

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 Pennsylvania 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 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, MBA, Plant Supervisor. Mr. Degnan has a 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, 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 in Water Distribution.

Prakash Chakravati, P.E., Supervising Engineer. Mr. Chakravati assists the Executive Director in planning and managing engineering and maintenance 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 supervises staff and contractual support personnel assigned to the construction function. 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 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. He is responsible for the upkeep of all the SWPCA's pump stations and sewer lines.

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.

2.5. Interactions with the City

While the SWPCA is set up as an independent enterprise within the City, there is substantial management, operational, and financial interaction between the City and the SWPCA. For example, the City provides key support services for the SWPCA through the:

- Director of Operations for budget oversight and staff assistance of sewer expansion projects and policy decisions.
- Director of Administration for budget, payroll, accounting, grants management and debt management.
- Director of Legal Affairs for legal support and human resource 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.

The City also provides financial support to the SWPCA including periodic loans to the SWPCA for unexpected or unplanned capital improvements and access to the City's pooled cash account during the periods when its cash on hand balances are not sufficient

to meet its operating needs. The SWPCA reimburses the City as required, with such reimbursements subject to interest charges at the City's current interest earnings rate for its Short Term Investment Fund (STIF) account.

In turn, the SWPCA also provides support services to the City through assistance in implementing certain stormwater projects such as the Dyke Lane Stormwater Pump Station and provision of flood barrier maintenance services. The costs of these services are back charged to the City.

The SWPCA and City have been requested to further clarify the roles and responsibilities of each of the parties pursuant to the above arrangements and in response have executed a Memorandum of Agreement (MOA) between the City and SWPCA dated May 13, 2013. Key provisions of the MOA include:

- City will annually provide administrative support services as agreed to by the parties including, but not limited to: procurement assistance, accounts payable and payroll services; accounting and financial reporting (until the SWPCA further develops its capabilities and assumes these responsibilities); budget and capital improvement bond issuance support, IT services, human resources and risk management support and legal support.
- City will perform, or arrange to have performed an audit of the administrative support services for purposes of creating an indirect costs allocation plan which costs will be added to the operating budget of the SWPCA.
- SWPCA will annually provide utility support services as agreed to by the parties including, but not limited to: stormwater pump station services, hurricane barrier maintenance, records supporting such services.
- SWPCA will track its costs for providing utility support services to the City, which costs will be reimbursed to the SWPCA by the City.
- SWPCA's financing arrangement with the City shall operate in the same fashion as a revolving credit arrangement until such time as the SWPCA is able to arrange other sources of financing or the balance due to City is paid in full.
- The SWPCA will make annual rearrange payments to the City to pay off any outstanding balance based on equal payments over a five-year period, subject to review and amendment every June 30th based on the amount identified in future CAFRs.
- The SWPCAs agrees to the accrual of interest charges against the outstanding principal balance to be made quarterly based on the average daily balance and the STIF rate as published at the end of each quarter.
- The City will act in accordance with any SWPCA capital improvement bond authorization resolutions enhanced by the Board of Representatives and will fund such approved improvements from the City general fund until such time bonds are sold at which point City shall be reimbursed including interest.

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 currently account 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 initial term of the contract was for a five year period from the Acceptance Date of the sludge drying facility. Under this contract, the SWPCA is responsible for the payment of utilities (electric and gas) up to the specified Maximum Electricity Utilization and Maximum Gas Utilization. All electric and gas costs due to usage in excess of the annual contractual guarantees are the responsibility of Synagro.

Synagro assumes ownership of the sludge generated by the Water Pollution Control Facility (WPCF) at the point of discharge from the WPCF dewatering facilities onto Synagro's dewatered sludge transfer conveyor. Synagro is responsible for processing the sludge received from the WPCF to produce a marketable product, testing of all product, marketing of sludge product and disposition of processing residuals. Through the contract, the SWPCA is obligated to deliver a maximum 4,560 dry tons of sludge per year to Synagro, the SWPCA is also responsible for the costs of any capital improvements.

The contract was scheduled to expire in February 2013, but the Board has approved an extension through August 2013. The SWPCA has issued a Request for Proposal (RFP) for future sludge management services with the anticipation that it will be able to reduce current sludge management costs by more than 10 percent annually. It is anticipated that a new sludge processing agreement will be executed before the current contract expires on August 31.

- **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 1, 2011 through January 31, 2014.
- **Darien Interlocal Agreement** – The City provides wholesale services to the Town of Darien via an Interlocal Agreement dated July 2001. 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. The Darien Interlocal Agreement expired on November 30, 2010 (subject to mutual renewal for an additional 15 years). The City and Darien are in the process of completing the negotiation of new contract, which is being brought before both parties Boards at the July meetings for approval. It is anticipated that under the new contract, Darien will be entitled to receive a

portion of the WPCFs nitrogen credit revenues. In the interim, Darien continues to pay its bills in accordance with the existing agreement terms and conditions. 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 \$200,000 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's share of this pooled cash account is currently in a deficit and reflected in financial statements as “Due to the City of Stamford”. The deficiency ending in FY2012 was approximately \$ 5.6 million (FY2012 Financial Statements). The SWPCA had agreed to reimburse the City over a five-year period with interest at the Connecticut State Treasurer's Investment Fund rate. The SWPCA has been working closely with Computil and Ackerly & Ward (collection attorneys) to collect aged accounts receivables and has reportedly reduced this negative balance by approximately \$700,000 as of January 2013. As discussed in the previous section “Interactions with the City”, the City and the SWPCA have entered into an MOA, dated May 13, 2013 further clarifying the pooled cash arrangement and other interactions with the City.

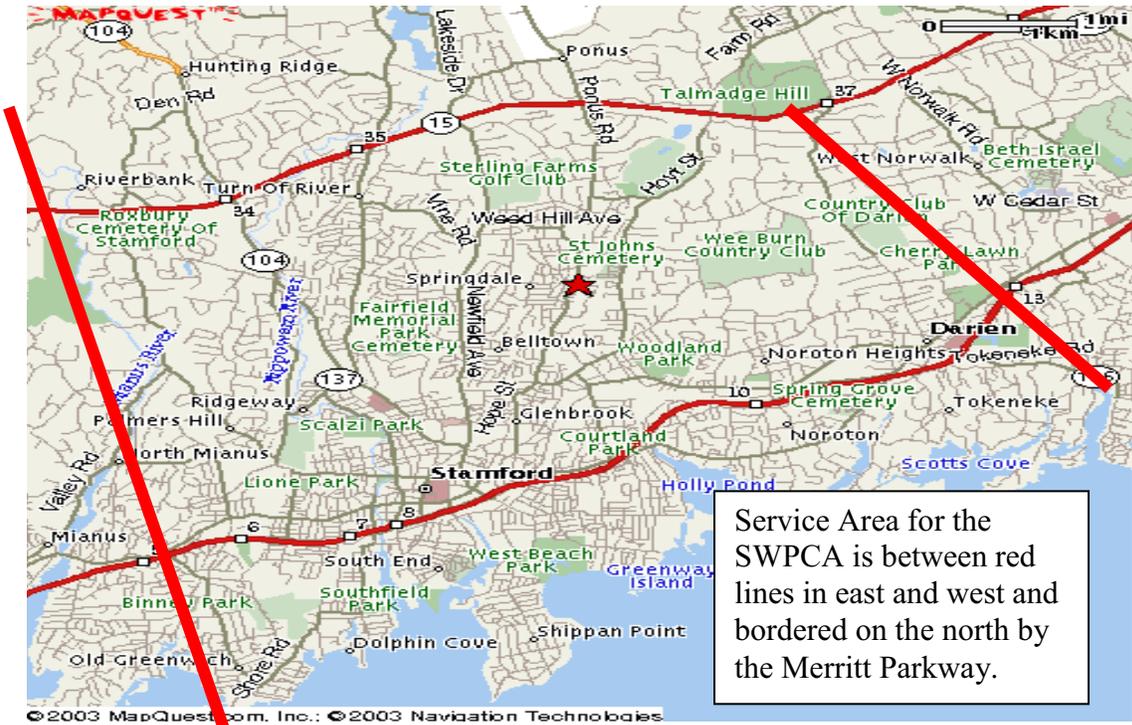
3. System Description

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, 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 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 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 Stamford where the wastewater is then conveyed through the SWPCA's collection system to Stamford's wastewater treatment plant.

The City's Master Plan generally calls for providing sanitary sewer service to those areas of the City south of the Merritt Parkway, as described above, which includes the business district and the City's heaviest population density. Currently, approximately 95% of this geographic area is served by sewers. The remainder is primarily served by septic systems. The SWPCA has continued to expand services in this area and customer growth has increased by about 1% per year over the last five-years.

The areas north of the Merritt Parkway are served by septic systems. The City's Master Plan does not anticipate the installation of sanitary sewers in these areas.

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 draft NPDES permit for the Stamford WPCF (NPDES No. CT0101087) was issued by the CTDEEP on May 13, 2013. The permit will be for a term of five-years once finalized.

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, two 130-foot-diameter primary clarifiers, primary sludge dewatering, biological reactors, four 130-foot-diameter secondary clarifiers, gravity thickeners and belt filter presses. The plant uses ultraviolet disinfection and state-of-the-art 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 sewage collected by the Stamford and Darien sewer systems passes through the influent collecting well. Stamford has two separate sewer systems; one for wastewater and one for storm water. From the collecting well, flow enters 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 a nitrification 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 nitrification 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 over adjustable weirs 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 activated sludge from the final clarifiers is thickened via gravity belt thickeners (GBTs) that reduce the volume of the sludge. Some of the waste activated sludge 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 and as a fuel source. 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 Treatment Plant is about 18 MGD, or 75% 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 22 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 100,000 gallons per day to 5 MGD. A dedicated pump station maintenance group operates and maintains the pump station structures and equipment, and performs landscaping activities.

A full listing of the wastewater pump stations is included in Section 4, and the conditions the pump stations are discussed in Section 4.

3.4. Sewage Collection System

The City's wastewater collection system comprises approximately 200 miles of sanitary sewers (ranging in size from 6 to 60 inches in diameter). The SWPCA's collection system is a completely separate system, with individual sanitary and storm sewers.

4. Condition of System

4.1. Condition Assessment Approach

A condition assessment was performed based on the compilation of existing information provided by the SWPCA, discussions with SWPCA staff, visual observations during field visits of the facilities and document reviews. In performing this assessment, the following key documents and information were reviewed:

- Regulatory compliance records
- Operations records
- Renewal and replacement programs
- Capital improvement plans

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. Such field investigations included the following facilities:

- Stamford WPCF visited on September 25, 2012
- 14 sewage pump stations visited on October 1, 2012

In addition to the 14 pump stations that were visited as part of this work, the other eight pump stations were visited by Pirnie/ARCADIS during April 2012 in connection with another project. While the purpose of the visits in April 2012 was not to assess and rate the condition of each facility, general condition observations were made.

For buried infrastructure (i.e., sewer interceptors, laterals, force mains, manholes, etc.), the condition assessment relies on preliminary GIS information on age and materials of sewer pipes to extent the information is available. No field investigations were conducted.

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 ranged are outlined in Table 4-1.

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

Numerical Rating	Interpretation Of Rating
1	Little to no risk
2	Some risk
3	Moderate risk
4	Significant risk
5	High risk

When considering the risk 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

A tour of the Stamford WPCF was conducted on September 25, 2012. 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 trucked off-site for land application.

4.2.1. Flows

Over the last few years, the S WPCA'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

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

4.2.2. Treatment Performance

We reviewed Discharge Monitoring Reports (DMRs) and Monthly Operating Reports (MORs) for the Stamford WPCF from January 2010 to December 2012. Plant operational performance is summarized in Table 4-3 below.

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

Parameter	Limit Type	NPDES Limit	Average Value		
			2010 ¹	2011	2012
Average Daily Flow (MGD)	Monthly Average	--	15.1	18.5	15.6
BOD ₅ – Influent (mg/L)	--	--	228.4	186.5	221.6
BOD ₅ – Effluent (mg/L)	Monthly Average	20	9.6	5.9	4.04
BOD ₅ – % Removal	Daily	85	96	96	98
TSS – Influent (mg/L)	-	--	319.1	253.9	318.9
TSS – Effluent (mg/L)	Monthly Average	20	7.5	16.0	13.6
TSS - % Removal	Daily	85	97	93	98
Ammonia (as N) – Effluent (mg/L) November - May	Monthly Average	--	0	0.04	0.06
Ammonia (as N) – Effluent (mg/L) June - October	Monthly Average	2	0	0.02	0.02
Fecal Coliform (CFU/100 mL)	30-day geometric mean	200	15.6	18.5	17.0
Fecal Coliform (CFU/100 mL)	7-day geometric mean	400	79.1	116.5 ³	42.1
UV Dose ⁽²⁾ (mW, s/cm ²)	Instantaneous Limit	>30	37.9	37.9	51.47
Number of Exceedences	--	--	1	22	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.
- 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.

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, well below 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 allowed the SWPCA to be the leading seller of nitrogen credits in the State of Connecticut in 2011.

The following summarizes observations from 2010 to 2012 plant performance.

- The average daily flows fall generally well within the design flow of the treatment plant. As discussed later, the SWPCA's new NPDES permit no longer includes 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 exceedences. However, it appears that the average monthly limit of 24 mgd may have been reached in March 2011 due to prolonged wet weather periods.
- BOD – Effluent BOD and percent BOD removal is generally well within the NPDES limits. The Stamford WPCF had four daily maximum exceedences; one was during March 2011 and three were during September 2011. The exceedence during March 2011 is believed to be a result of high flow events caused by heavy rains and the exceedences during September 2011 are reported to have been a result of high flow events during Tropical Storm Lee.
- TSS – Effluent TSS and percent TSS removal are generally well within the NPDES limits. The Stamford WPCF had a total of sixteen exceedences for TSS. Fourteen of these exceedences were for daily effluent TSS concentration and two were for failure to achieve the minimum monthly TSS removal of 85%. The exceedences were as follows:
 - Two daily effluent TSS concentration exceedences in February 2011, reported to be caused by a high flow event during heavy rainfall.
 - Three daily effluent TSS concentration exceedences and one percent removal exceedence in March 2011 also reported to be caused by a high flow event during heavy rainfall.
 - One daily effluent TSS concentration exceedence in June 2011, reported to be a result of uneven mixed liquor suspended solids concentrations in the aeration tanks. It was reported that process corrections were made and this situation was rectified.
 - One daily effluent TSS concentration exceedence in August 2011, reported to be caused by a high flow event during Hurricane Irene.
 - Three daily effluent TSS concentration exceedences and one percent removal exceedences in September 2011 also reported to be caused by a high flow event during Tropical Storm Lee.
 - Two monthly TSS minimum monthly removal percentage exceedences and two monthly TSS concentration exceedences; One exceedence each (for removal percentage and concentration) in March, 2011 and one of each type in September, 2011. These monthly exceedences are also expected to be a result of prolonged high flows and rain events which would tend to dilute the influent TSS concentration, making the minimum permit removal percentage more difficult to achieve.

- One daily effluent TSS concentration exceedence in August 2012, reported to be caused by a high flow event during heavy rainfall.
- Two daily effluent TSS concentration exceedences in October 2012, reported to be caused by a high flow event during Hurricane Sandy.
- Ammonia–Effluent ammonia is consistently well below the NPDES limits with no exceedences for this data set.
- Fecal Coliform was generally well within the NPDES limits with the exception of five exceedences. The Stamford WPCF had one exceedence each in April 2010 and September 2011. In addition, one exceedence in October 2011 and two in November 2011 were reported to be a result of electrical issues with the variable frequency drives (VFDs) for the effluent pumps which caused a bypass of UV disinfection. This issue caused a Notice of Violation (NOV), which is discussed later in this report

As noted above, most of the exceedences reported are a result of high flow events. Such exceedences 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 are an indication of a large amount of inflow/infiltration, which is also not unusual amongst collection systems in aging cities such as Stamford.

It should be noted that, although the plant's NPDES permit requires that they maintain a UV dose of at least 30 mW, s/cm² 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. The MORs indicate that UV dose frequently drops below the 30 mW, s/cm² permit limit. During 2010, there were 173 days in which the dose dropped below this value at some point, along with 355 days during 2011 and 95 in 2012.

Plant staff are aware of this UV data issue, and have discussed it with the UV system vendor and the CTDEEP. Both plant staff and the vendor believe that the data are erroneous, and they are working to determine the cause of the data issues. The issue appears to be instrumentation-related and it is believed that the UV system performs as required.

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 will evaluate the Nitrogen Credit Exchange Program in 2013 to determine whether the program should be continued, with or without modification, beyond year 2015.

**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 2011, the SWPCA discharged an average of just 592 lbs/day of total nitrogen, making them the treatment facility selling the most amount of nitrogen credits in 2011 with a revenue from nitrogen credit sales of over \$840,000. As of December, 2012, the 2012 WPCF average day total nitrogen discharge was 506 lbs/day, putting them on track to be a large seller of nitrogen credits once again. It is important to note that, while other POTWs in Connecticut are likely to require major capital investments to remove nitrogen, or will be 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 ever-more stringent General Permit requirements.

4.2.3. Condition Assessment

A major plant upgrade was completed in 2005. 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 2005 plant upgrade are aging and/or have some operational issues, and some future significant capital improvements may be required to address these areas of the WPCF.

4.2.4. Wet Stream

In general, the preliminary treatment equipment, which includes the bar screens and raw sewage pumps, is old but operates well and 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 large amounts of debris pass through the bar screens, which create significant issues in downstream processes. In addition, the plant receives septage from septage haulers. There is no screening of the septage, which also is a cause of downstream issues. The downstream issues are largely around added maintenance and operational challenges, however, such issues have not adversely impacted meeting discharge regulations.

The raw sewage pumps are approximately 20 years old, but have been rebuilt recently. They continue to function reliably. All five raw sewage pumps are used under peak flow conditions, leaving no redundancy. The two primary clarifiers are in fair condition and provide ample capacity, even if one is taken out of service. The SWPCA's 6-year capital plan reflects upgrades to clarifier #1 to improve the condition of clarifier #1. However, upgrades to tank #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 6-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 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.

Two of the three aeration tanks are new to the 2005 upgrade and are in excellent condition and functioning quite well. Supporting systems for the plant's biological nutrient removal system are generally also in very good condition. However, three of the nutrient recycle (NRCY) pumps have had failures and are in the process of being re-built. 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 2005 upgrade. Two of the older tanks are in the process of being upgraded. Tank #1 has been out of service for an extended period of time, causing issues due to the reduced capacity. However, this tank is in the process of being upgraded. As of the May 2013, the upgrades were considered 95% complete with the units on-line, however, several punch list items remained.

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. Improvements to the HVAC system in the UV control area are required to minimize the potential for controls over-heating. However, equipment is well maintained, and the system generally functions well to meet permit requirements.

The plant effluent pumps have experienced certain operational issues, but 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 noted that this may also require larger diameter pump tube wells, electrical conduit and feed cables. Upgrading the VFD's in advance of the motor upgrade was discussed and the cost/benefit is being studied for possible implementation.

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. The three gravity thickeners are original to the plant (1970s) and are currently in the process of being completely overhauled. The thickened sludge pumps (gravity thickener underflow) are also from the 1970s and are near the end of their useful lives. Such equipment may need to be replaced in the future, subject to further analysis. It is not uncommon for pumps to operate reliably well beyond their projected useful life.

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. A log of odor complaints presumed to be related to the pelletization facility has been maintained since 2008 by Synagro. This log indicates a total of nine complaints from March 2008 to September, 2012. The SWPCA understands that the cause of the odors needs to be further investigated and has been working with Synagro to address these issues. The odors associated with the pelletization facility may be attributed to odor control wet scrubber not being operated with the necessary chemicals due to issues with the chemical feed system and to the odor control regenerative thermal oxidation (RTO) system which is bypassed during sludge drier system start-up, and normal and emergency shutdowns. With respect to the RTO system, Synagro is proposing installing a duct from the RTO by-pass to vent through two activated carbon canisters to help minimize odors.

There have been a number of additional odor complaints to the SWPCA which have not been logged until recently, when a process for logging complaints was instituted by the SWPCA.

4.2.6. Support Systems

The plant has two standby generators. One is new with the 2005 upgrade and is in excellent condition. This generator is rated for 2,000 kW and can power all plant needs, with the exception of the NRCY pumps and aeration tank mixers, which are not connected to this generator. We understand that the SWPCA is in the process of connecting these loads as well. The plant also maintains a second order and smaller generator (900 kW) that is used to power the aeration blowers.

The plant water system is in need of upgrade, and this supply is not strained, leading to issues of debris fouling downstream processes. During our visit, the odor control systems were being operated as “flow-through” with no chemicals being added reportedly due to issues with delivery of chemicals. Without the addition of chemicals the odor control systems are ineffective, resulting in the release of odors from various plant operations.

Since the conduct of our inspection, the SWPCA commissioned a study which has identified a number of issues regarding the odor control system, including high ventilation rates and excessive pressure on the spray nozzles within the scrubbers. New chemical feed pumps were sized and are on order to replace the diaphragm pumps which were oversized and had deteriorated. Recommendations also include installing a sheave to reduce the fan ventilation rate on the scrubber for the dewatering building which has excessive misting and to throttle the recirculation pumps to reduce the pressure on the spray nozzles. A long term solution would be to add VFD's for control of the fan speeds. It is expected that the odor control scrubbers will be in full operation with chemical addition before summer, shortly after the ordered chemical feed pumps and fan sheave arrive.

4.2.7. WPCF Condition Summary

During the September 25, 2012 site visit to the Stamford WPCF, major unit processes were observed and condition assessment ratings were given to major equipment and unit processes. Specific observations are provided in Appendix B. A summary of ratings for major equipment and unit processes at that time is provided in Table 4-5.

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

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

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., degritting system, plant water system). Such systems require capital improvement but would not necessarily be required in the SWPCA five-year planning period. Other systems such as the aging headworks, polymer systems, and the UV system are more critical for permit compliance but also require improvements.

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 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 sewage pump stations was conducted on October 1, 2012. In addition to the 14 pump stations that were visited as part of this work, the other eight pump stations were visited in April 2012 as part of another project. While the purpose of the April visit was not to assess and rate the condition of each facility, general condition observations were made.

In general, based on our October 1, 2012 site visit, along with visits made on April 4, 2012, 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. Of the older stations, most have had significant upgrades within the last 10 to 20 years. However, there are a few pumping stations that are older and have reached the typical end of their useful lives. The stations include the Carter Drive and Alvord Lane Pump Stations, which were visited during the April, 2012 pre-proposal site tour for the other project. These stations have no reported reliability issues, and thus are likely to continue to function well in the next five years. In addition, the Cove Island Pump Station was visited in April 2012. This pump station 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.

Only the larger 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 has a maintenance contract 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.

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 has an excellent system for monitoring its remote pumping stations.

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 have little turbulence (and hence little release of odorous gases) and are well sealed.

Specific observations from the site visits to the 14 pump stations are provided in Appendix B. A summary of ratings for each pump station is provided in Table 4-6.

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

Pumping Station	Rating
Bennett Street	2
Knapp Street	3
Clay Hill	2
Arden Lane	2
Timber Lane	2
Cedar Heights	2
Maltbie	2
Berry Place	3
Dee Lane	2
Soundview 1	3
Soundview 2	3
Pulaski St	3
Hobson St.	2
Saddle Rock	3

As noted, the above ratings reflect the general condition of the pump stations. It is assumed that these pump stations are representative of all the pump stations within the SWPCA system. For the most part, the pump stations appear to be highly reliable and in good physical condition.

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

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 is currently underway, and to date, the consultant has mapped approximately half of the SWPCA's system. Based on this mapping, approximately one-quarter of the sanitary sewer system is less than 26 years old, and nearly 90% of the system is less than 50 years old. For an old, northeast city such as Stamford, these 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 will be integrated into SWPCA's web-based Computerized Maintenance Monitoring System (CMMS) for monitoring these features, while helping to forecast short and/or long-term sewer line rehabilitation needs. Because this database is new to the SWPCA as of 2011, no historical information on sewer cleaning or CCTV efforts is available.

During 2011, approximately 11 miles of sanitary sewer line were inspected and cleaned and over 5,500 LF of sanitary sewer lines underwent CCTV inspection. Private development activities also provided the SWPCA with approximately 15,000 LF of additional videotaped sanitary sewer lines in 2011. In addition, 11,800 LF of new or rehabilitated sanitary sewers were installed in 2011. 230 LF of 36-inch gravity sewer was also rehabilitated and 250 LF of concrete piping was replaced with PVC pipe in 2011.

The SWPCA also implements a fats, oils and greases (FOG) program at over 400 Class III and Class IV food preparation establishments (FPEs). This program was active in 2011, as 69 FPEs received an overview of the program and an initial inspection in 2011. Since the second quarter of 2010, 332 FPEs have received this initial program overview and inspection. The SWPCA is active in enforcement of the FOG program, as four FPEs were found to be in non-compliance and most were issued notices of violation (NOVs) and fined accordingly.

A project has been identified which will provide a status update on the collection system and provide a means to "baseline" system condition and operations. As of now, and RFP

was issued for consultant services for this project and a recommendation on consultant selection has been made to the Board.

4.5. Conclusions and Recommendations

While the 2005 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 its useful life. These components include the headworks, primary and secondary clarifiers and gravity thickeners. Upgrades are currently in progress for the gravity thickeners and secondary clarifiers, with the systems currently on-line and the work considered 95% complete as of May 2013.

Based on discussions with plant operations staff, the plant is functioning very well and generally meeting its permit limits. However, we have made some observations of the system that need to be addressed, including the following:

- Debris from the headworks and septage receiving facilities is not effectively removed in the headworks, causing issues with downstream equipment and processes. A capital project is included in the 6-year capital plan (refer to Section 5) to address this issue.
- Grit is not removed in the headworks and is poorly removed from the primary sludge. Thus, grit travels throughout the plant, causing premature wear on equipment. As discussed in Section 5, a small capital project (\$150,000) is currently budgeted in Fiscal Year (FY) 2015. However, this funding will not be adequate to completely address the issues with the degritting system. As with the headworks issues, we believe that future capital funding should be allocated for degritting.
- 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 inflow/infiltrations 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. A capital project is currently included in the 6-year capital plan to upgrade the blower system.
- One of the final clarifiers has been out of service for an extended period of time. Lack of use of that tank has affected plant operations during large storm events. The tank is currently being repaired, which should address this problem.
- 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 is conducting several studies regarding the UV system's HVAC, electrical building, effluent pumps and ability to meet new limits in the draft NPDES permit. A final capital plan will be developed based on the findings of these studies. In the meantime, the City's 2013-2014 budget includes \$1.0 million of capital funding for UV disinfection based on the SWPCA's assumption that significant upgrade to the UV disinfection system will be necessary.

- The plant relies on effluent pumps to push water out of the plant during daily high-tide events. These pumps are thus critical, and 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, we believe that such projects are not immediately pressing.
- Odor control systems are operated as "flow-through" with no chemical being added due to issues with delivery of chemical. The SWPCA and its sludge operator, Synagro, have identified improvements that are anticipated to reduce odors. Some of these improvements are being provided by Synagro and others including new chemical feed system and fan sheave are being funded from the FY2013 capital plan. No additional funding for odor control improvements, however, has been included in the FY2014 capital plan.
- The plant water system is not strained, which creates clogging issues in other parts of the WPCF's system. The WPCF has two strainers. One is no longer able to be used due to modifications in plant hydraulics and the other is not functional. While this system is not critical to plant performance, it does create maintenance and reliability issues and should be addressed with a capital project in the future. \$750,000 was budgeted in FY2014 for the blowers, but has been delayed to FY2015. In general, the SWPCA's pump stations are highly 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. However, there are a few pumping stations that are older and have reached the typical end of their useful lives. These stations do not seem to have reliability issues, and thus are 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% of the collection system is less 50 years old, with 25% 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 appears to have an active system of cleaning and videotaping the collection system. However, as historical data on cleaning and CCTV is not available, it is difficult to assess the adequacy of the SWPCA's past maintenance.

5. Capital Improvement Program

Pirnie/ARCADIS was provided with the 6-year capital plan for the SWPCA, which covers the fiscal years 2013 through 2018. This plan is provided as **Appendix C**. 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.

Other recent capital projects include the following:

- Intervale sewer extension and East Cross road area sewers are two of the recently completed projects during the past year. These projects have benefited approximately 70 properties in the Intervale Road area and 17 properties at East Cross Road that will connect to the City of Stamford sewer system. These two projects cost approximately \$7.6 million.
- Piping for the odor control system at the plant which was recently retrofitted.
- Hurricane barrier recertification, which included tree and stump removal, pump station switchgear upgrades and other activities required for recertification. This project cost approximately \$295,000 and was done in FY2011.

In addition, as discussed above the SWPCA is in the process of completing major upgrades to three primary sludge gravity thickeners and two secondary clarifiers, has a contractor that is repairing updated city-wide computerized sewer mapping, has embarked on an aggressive CMOM program, recently received bids for the construction of the Carriage Drive area sewers, completing design for the Wedgemere Road and Perna Lane Sewers and is in the process of completing studies regarding improvements to odor control systems, effluent pumps, and UV system.

5.2. Future Capital Improvement Planning

A summary of the SWPCA's 6-year capital plan is provided in Table 5-1. The full plan is included in Appendix C. In general, a vast majority of the plan is dedicated to the collection system, and only a small proportion is provided for the pump stations.

**Table 5-1:
Summary of 6-Year Capital Plan by Category (\$ Millions)***

Category	Annual Capital Cash Flow Forecast (FY)						Total	Avg.	% of
	2013	2014	2015	2016	2017	2018		per FY	Total
Treatment Plants	\$1.8	\$1.7	\$4.6	\$3.1	\$3.2	\$5.1	\$19.3	\$3.9	50%
Pump Stations	\$0.0	\$0.3	\$0.2	\$0.2	\$0.2	\$0.0	\$0.8	\$0.2	2%
Collection System	\$0.5	\$6.2	\$4.0	\$1.3	\$4.2	\$2.5	\$18.7	\$3.7	48%
Total	\$2.3	\$8.2	\$8.8	\$4.5	\$7.5	\$7.6	\$38.8	\$7.8	100%

*Totals may not add due to rounding.

It should be noted that Pirnie/ARCADIS also obtained the City of Stamford's Capital Budget for Fiscal Year 2013-2014, which we understand has been adopted. It is our understanding that the SWPCA has communicated with the City approval requirements for additional projects and is in the process of securing such approvals. The 6-year capital plan represents the SWPCA's anticipated plan based on the information available as of May 2013, and is subject to change as additional information becomes available.

5.2.1. Treatment Plant

A total of \$19.3 million is dedicated to treatment plant capital projects over the next six years. This is an average of \$3.9 million per year. 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 \$19 million, \$6 million is dedicated to a proposed headworks project to provide new coarse and fine screening, as well as new raw sewage pumps and \$5 million is anticipated for a new sludge dryer in FY2018. An additional \$1.5 million is dedicated to UV disinfection and another \$1.4 million to aeration blowers. The SWPCA is in the process of completing the \$1.5 million project that was dedicated to upgrades to two secondary clarifiers and to the gravity thickeners. This project is currently 95% complete.

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

- The primary sludge degritter system functions poorly, creating grit issues throughout the entire plant. There is \$200,000 in the budget in FY2015. However, it is likely that a complete upgrade needs to be done for the entire system, which may not be able to be accomplished for this budget. While upgrades could feasibly be put off until after this five year period, plans should be made for a capital project beyond the five-year planning horizon and the system should be re-evaluated periodically to identify if capital improvement is needed sooner.

- While the SWPCA and Synagro are in process of completing pelletizer odor control improvements and upgrades to 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.
- Currently the City's 2014 budget includes \$1.5 million of capital funding for UV disinfection improvements. The level of funding, however, should be updated (may be revised up or down) once the results of current ongoing studies are complete and the SWPCA has a better understanding of upgrade requirements and/or need to replace the UV disinfection system.
- 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. A complete upgrade to this system should be considered within the next several years.

5.2.2. Pump Stations

A total of \$800,000 is budgeted for pump station upgrades over the next six years. Of this budget, \$100,000 is budgeted to procure portable standby generators. An additional \$600,000 is dedicated to miscellaneous pump station upgrades between FY2014 and FY2018.

As mentioned, most of the pump stations are in good to very good condition. Many are relatively new or recently upgraded. Only Alvord Lane and Carter Drive are older stations that are in need of upgrade. However, both are currently reliable. There is a \$75,000 budget for Alvord Lane building repairs in 2014. There are no mechanical upgrades planned at either of these facilities, but mechanical upgrades to both could feasibly be pushed beyond 2018.

As the wastewater pump stations are generally in good condition, we believe that \$150,000 each year in capital funding over the next four years is appropriate.

5.2.3. Collection System

The collection system has almost an equal proportion of capital funding as the treatment plant. Of the \$18.7 Million dedicated over the next six years, \$10.2 million, or 55% of the total funding for the collection system is dedicated to the construction of new sewers. This funding is made up of four projects, the Carriage Drive, Wedgemere Road, Perna Lane and West View Lane Projects. Additionally, \$2.5 million, or 13% of the collection system capital plan is dedicated to Capacity, Management, Operations and Maintenance (CMOM) programs that are a result of the current consent order (which is discussed further in Section 6). Excluding these projects, there is \$5 million remaining over the next five years for the maintenance and upgrade of existing sewers. This is a significant

increase over historic amounts. While the vast majority (74%) of the system is over 26 years old, 9% is over 51 years old, and 16% 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 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.

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 where capital projects are 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 determine how to maximize existing available funds and properly identify future funding needs. It is recommended that the SWPCA update its 6-year capital plan as soon as the results of studies, which it funds out of its operating budget, are available 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 draft permit dated May 16, 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% 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
- Added compliance schedules for studies to determine how to comply with new fecal coliform and enterococci limits

As noted above, the final draft permit requires the SWPCA to comply with the new limits established for fecal coliform and enterococci no later than October 31, 2016. Table 6-1 highlights the current and anticipated permit limits of interest to this report.

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

Parameter	Limit Type	NPDES Limit	
		(Current Permit)	(New Permit)
Average Daily Flow (MGD)	Monthly Average	24	--
BOD ₅ – Effluent (mg/L)	Monthly Average	20	20
BOD ₅ – % Removal	Daily	85	85
TSS – Effluent (mg/L)	Monthly Average	20	20
TSS - % Removal	Daily	85	85
Ammonia (as N) – Effluent (mg/L) November - May	Monthly Average	--	--
Ammonia (as N) – Effluent (mg/L) June - October	Monthly Average	2	2
Fecal Coliform (CFU/100 mL)	30-day geometric mean	200	88 ¹
Fecal Coliform (CFU/100 mL)	7-day geometric mean	400	2601
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	NA	35
Enterococci (CFU/100 mL)	Instantaneous Limit	NA	500
UV Dose (mW, s/cm ²)	Instantaneous Limit	>30	>30

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 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 6-2. Stamford will either pay or receive money from the Nitrogen Credit Exchange that is managed by the CTDEEP.

**Table 6-2.
Total Nitrogen Limits from General Permit**

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

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

**Table 6-3.
Regulations Governing Residuals Disposal**

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

Regulations governing air emissions at the Stamford WPCF are reflected in the Title V Operating Permit for this facility.

6.2. Recently Promulgated Regulations

6.2.1. Sanitary Sewer Overflow Control Programs

While the regulations described above affect the treatment plants, there are also regulations in place that impact the collection systems. Sanitary sewer overflows (SSOs) are the biggest issue currently facing collection systems.

Properly designed, operated, and maintained sanitary sewer systems are meant to collect and transport all of the sewage that flows into them to a treatment plant. However, occasional unintentional discharges of raw sewage from municipal sanitary sewers occur in almost every system. These types of discharges are called sanitary sewer overflows (SSOs). SSOs have a variety of causes, including but not limited to severe weather, improper system operation and maintenance, and vandalism. The untreated sewage from these overflows can contaminate water bodies, causing serious water quality problems. It can also back-up into basements, causing property damage and threatening public health. When SSOs happen frequently, it means something is wrong with the system. Problems that can cause chronic SSOs include:

- **Infiltration and Inflow (I&I):** too much rainfall or snowmelt infiltrating through the ground into leaky sanitary sewers not designed to hold rainfall, and excess water inflowing through roof drains, sump pumps or other illegal connections, broken pipes, and/or badly connected sewer service lines;
- **Undersized Systems:** sewers and pumps are too small to carry sewage from the service area, which may include newly developed subdivisions or commercial areas;
- **Pipe Failures:** blocked, broken or cracked pipes, tree roots grown into the sewer, and/or sections of pipe that have settled or shifted so that pipe joints no longer match.
- **Equipment Failures:** pump failures, power failures, or other failures at pump stations.

The U.S. Environmental Protection Agency (EPA) has been for several years promoting a program entitled “Capacity Assurance, Management, Operation and Maintenance (CMOM)” for municipal sanitary collection systems to address sanitary sewer overflows.

The CMOM program is a dynamic management framework to encourage the identification and correction of performance-limiting situations in the collection system. The CMOM program includes flexible procedures to manage, operate and maintain collection systems and to investigate the adequacy of collection system capacity. Self-assessment and information management tools for program improvement and modification of program elements are an integral part of CMOM.

On May 23, 2007 a bill entitled “The Raw Sewage Overflow Community Right-to-Know Act (HR 2452)” was introduced into the House of Representatives. The bill passed the House of Representatives on June 23, 2008. On April 20, 2010, the bill was sent to the Senate (S.937) without amendment and referred to the Committee on Environment and Public Works. However, this bill has since stalled in the Senate and has yet to become law. If this bill is enacted into law, this bill would ensure that wastewater treatment plants monitor and report discharges of raw sewage. The bill defines sanitary sewer overflows and establishes a program to monitor, report and correct sanitary sewer overflows.

Current NPDES regulations (40 CFR 122.41) require all NPDES permits to include two standard conditions for proper operation and maintenance of wastewater systems and related facilities (40 CFR 122.41(e)) and for the permittee to take all reasonable steps to minimize or prevent any discharge in violation of the permit that has a reasonable likelihood of adversely affecting human health or the environment (40 CFR 122.41(d)). In addition to federal regulations, the Regulations of Connecticut State Agencies require reporting of bypasses and compliance with CMOM programs.

More information on this program as it relates to the SWPCA’s operation is provided below.

6.3. Administrative Orders

Currently, the SWPCA is under a consent order related to a failure to report collection system bypasses and a failure to submit annual CMOM reports in accordance with USEPA guidelines.

On April 6 and 7, 2009, an EPA contractor (PG Environmental, LLC) inspected the SWPCA’s sanitary sewer collection system to determine the SWPCA’s compliance with its NPDES Permit. Subsequently, it was determined that between December 21, 2004 and April 6, 2009, the SWPCA violated Section 8 (C) of its NPDES permit by failing to report 20 sanitary sewer bypass events.

An EPA Clean Water Act (CWA) Administrative Order was issued to the City of Stamford on September 29, 2009 for failure to report “bypass” of pollutants from its wastewater collection system (Section 22a-430-3(k)(4) of the Regulations of Connecticut State Agencies and Section 8(C) of the SWPCA’s NPDES Permit. The order required the SWPCA to comply with bypass reporting requirements, and 14 other CMOM related issues.

On March 9, 2011, EPA Region-I issued an Administrative Complaint to the City of Stamford. This complaint alleged that the SWPCA failed to report to the CTDEEP (formerly CTDEP) bypasses from its wastewater collection systems on 25 separate occasions during the past five years, a violation of its NPDES permit. Additionally, the SWPCA failed to submit its Annual CMOM Program Implementation Report to EPA by January 31, 2011, as required by the September 29, 2009 Finding of Violation and Order issued to the City. The Complaint proposed that a penalty of up to \$177,500 be assessed against the City for its CWA violations.

On August 18, 2011, EPA Region-I issued a consent agreement and final order (CAFO) to the City of Stamford and SWPCA, along with a final fine amount of \$26,000.00. The fine was paid by SWPCA on September 20, 2011.

The following is the list of infractions discovered by the EPA and the CTDEEP, along with necessary corrections and status as of 2012:

1. Ensure sanitary sewer bypass incidences are properly recorded, communicated, and reported to CTDEEP and other agencies (completed; and being done); and
2. Address various outstanding questions from prior correspondence sourced from EPA and CTDEEP; and develop a CMOM Program that addresses a multitude of issues related to asset management of SWPCA’s collection and conveyance system. A list of items with status updates are summarized below:
 - Develop and implement preventative maintenance programs for collection and conveyance system, inclusive of manhole and pump inspections and assessments, plus proper record keeping (completed; and being done).
 - Submit copies of safety standard operating procedures (SOPs) to EPA (completed).
 - Develop and implement smoke and dye testing (SDT) procedures and submit to EPA (completed).
 - Develop an emergency sanitary sewer overflow (SSO) response plan and submit to EPA (completed).
 - Develop an inventory and map of SWPCA’s sanitary collection system (Incomplete. Project currently underway).

- Perform an evaluation and capacity assessment of sanitary collection system (RFP issued February 2012; proposals received; 5-interviews completed; award pending).
- Implement a regularly scheduled closed circuit video program of the SWPCA's sanitary collection system (Equipment on-hand; staff shortage).
- Develop a FOG Abatement Policies and Procedures Manual (completed).
- Implement FOG Abatement Program (In process; staff shortage).
- Investigate alternative(s) to strengthen the enforcement of FOG Abatement Ordinance by revising/renewing FOG Abatement Ordinance with meaningful consequences for non-responsive/non-compliant FPEs, i.e., after second NOV revoke FPE's food permit license (Incomplete).
- Forecast and determine capital and operating budget needs, specifically for the sanitary sewer collection and pump systems that includes costs for infrastructure rehabilitation and repair projects; and, supportive staff and equipment for operating and maintaining the systems (Being done but needs to be refined).
- Add a line item in the 2013 O&M budget for fleet management and replacement (completed).
- Review and determine if performance indicators relative to budget per pump station or operating budget per mile can be initiated and implemented by June 2012 (Incomplete);
- Periodic job classification and salary studies on a periodic basis will commence June 2012, and continue on an annual basis thereafter (Incomplete);
- Review the SWPCA's board of administrator's efforts to increase sewer rehabilitation capital budget amounts between 1-2 percent of the total system pipe length per year and try to include in the fiscal 2013 budget session (Incomplete);
- Continue with regular safety training for new and existing employees (On-going);
- Develop additional bilingual information to reflect the varied demographics within the community and initiate before the end of 2011. Also, review the use GIS map to track customer complaints and to identify problem areas within the collection system to determine if one or both of these variables can be monitored and tracked by the selected CMMS. These activities will occur within one-year of operating the new CMMS (Pending/Incomplete);
- Management information system (MIS); it is anticipated a CMMS will be acquired by the end of 2011. Subsequently, the tasks involved in setting up and integrating other variables, i.e., asset and resource management, purchasing/procurement and inventory/materials management, and GIS, SCADA, and other SWPCA systems will be reviewed to determine if all and/or some of these variables will be progressively integrated over the next 2 to 3 years (Pending/Incomplete);
- Increase the number of full time street maintenance mechanics (Incomplete);

- Equipment and collection system maintenance needs will be determined by the end of 2011 (Completed);
- SWPCA will plan on achieving the 30 to 40 miles per year cleaning Objectives (Pending);
- Maintenance of cross country easements and development of maintenance plan to access and maintain these easement locations (Incomplete);
- Identify and implement a CMMS (evolving/incomplete); and
- Provide periodic refresher training to staff personnel (on-going).

As of the writing of this report, the collection system inventory/mapping project was well underway, with a pilot project that mapped the following:

- 27-miles of sanitary sewer pipe with piping diameter of 18”;
- 3-pump stations;
- 1.5 miles of force mains; and,
- 22-junction & diversion chambers

A program is also now underway since 2012 that logs areas of sewer cleaning, CCTV investigation and any sewer complaints, such as backups. The creation of such a log is an excellent step towards maintaining an accurate record of collection system condition and maintenance.

On January 10, 2013, the SWPCA received an information request pursuant to Section 308 of the Clean Water Act from the EPA. The information request pertains primarily to schedule for implementation of critical elements of an effective preventative maintenance program required by the above Order. In February 2013 SWPCA responded to the EPA’s request.

6.4. Notices of Violation

In addition to the consent order described above, the SWPCA currently has the following Notices of Violation (NOVs) issued by the CTDEEP:

- Undisinfected secondary treated discharge issued July 9, 2010 (NOV # 10-004). This NOV alleges that undisinfected, secondary treated wastewater was discharging from the Stamford WPCF for a period of two hours. This discharge was apparently a result of UV system maintenance work. It is alleged that an alarm was transmitted to the plant’s Supervisory Control and Data Acquisition (SCADA) system indicating a loss of power to the UV system. However, no staff was monitoring the SCADA system at the time to be able to respond to the alarm.

It is our understanding that corrective actions were taken and the NOV has since been closed.

- 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 pumps system. This report was completed and transmitted to the CTDEEP in February, 2012. The VFDs that caused the issue were replaced in November, 2011. However, this NOV remains open.
- Failure to keep records required by Air Permit #172-023, issued May 18, 2012 (NOV #16927). The NOV relates to failure to maintain certain records, as required by the air permit for the sludge drying (pelletizing) facility, and an operational issue related to the temperature maintained in the afterburner. The issues in this NOV were addressed quickly and are no longer believed to be an issue. The SWPCA is in the process of applying for a minor permit modification to more accurately describe the operation of the facility and process monitoring.
- The following failures issued September 10, 2012, which resulted in NOV #12-007:
 - Failure to comply with final effluent treatment limits
 - Failure to operate clarifier and pumps,
 - Failure to prevent a bypass
 - Failure to implement a user charge

This NOV is a result of a failure of three nitrate recycle (NRCY) pumps and lack of secondary clarifier capacity caused by a clarifier that had been out of service for an extended period of time. This out of service equipment contributed to an exceedance of the plant's effluent TSS limit and a treatment system bypass. The SWPCA corrected the issues with the NRCY pumps and currently has a contractor on-board for repair of the clarifier in question.

- Failure to achieve 98% destruction efficiency of their Thermal Oxidizer as required in Air Permit No. 172-0238 (NOV #17080). The Thermal Oxidizer unit averaged 85.9% destruction efficiency. This NOV was based on a sludge pelletizing facility emission test on April 4, 2013, in which the thermal oxidizer did not meet the required destruction efficiency.

The WPCA has suggested modifying the permit by eliminating the total hydrocarbon (THC) 98% destruction efficiency requirement, since the THC emission rate was 0.15 lbs/hr which is below the permit limit of 0.224 lbs/hr.

A draft response to this NOV has been submitted to the CTDEEP by the SWPCA, and it is our understanding that the SWPCA is currently discussing the approach to this NOV with the CTDEEP.

6.5. 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. The SWPCA has applied for a renewal of its NPDES permit with the CTDEEP including a minor permit modification to more accurately describe the operation of the facility and process monitoring. Although the new permit has not been finalized, a lower limit for fecal coliform has been proposed. Currently, the SWPCA believes, that the UV system is capable of meeting these more stringent limits, however, the UV system manufacturer Wedeco has reviewed the data, and based on an initial model analysis recommends a third bank of lamps to meet the new limits. The SWPCA is evaluating options, including a new more efficient UV system without adding new banks and with comparable power usage to the existing system. The estimated capital costs for these improvements will vary with the system selected. The SWPCA has included \$1 million in its 2014 capital budget for UV upgrades. The CTDEEP requested that the improvements be implemented within the next two years. The SWPCA anticipates three years may be required to allow for additional study, design and implementation. This is under discussion with the CTDEEP.

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.

6.6. 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 appears that the SWPCA is making significant strides towards achieving the requirements of this consent order. The SWPCA, has invested significant funds in doing so, and has included in its 6-year plan continued significant investment in CMOM activities. The SWPCA, however, will need to address the Section 308 request issued to them by the EPA on January 10, 2013 which indicates a need for the SWPCA to establish a more aggressive schedule for implementation to satisfy EPA requirements. The SWPCA will also need to address the more stringent requirements of its new permit. The SWPCA is planning for upgrades to the UV system to address requirements and will update its capital improvement plan based on findings of additional studies. The SWPCA has represented that it is committed to meeting all regulatory requirements.

While 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, or to equipment failures which have since been addressed.

7. Historical and Projected Customer Statistics

7.1. Customer Base

According to the 2010 Census, the City has a population of approximately 123,000 and Darien has a population of 21,000. It is estimated that the SWPCA currently provides services to 19,500 customer accounts which represent a population of approximately 97,000 in the City and approximately 12,400 in Darien, including residential, commercial, and industrial, government and non-profit customers. The remaining 20% of City population and 40% of Darien population are served by septic systems.

Similar to most municipalities, the largest SWPCA customer type is residential (including homeowners, condominium owners and renters) at approximately 88%, while the remaining 12% of customers are commercial and industrial.

Table 7-1 illustrates the historic number of customers and consumption compared to the past three years. As illustrated in this table, the City's customer base has been experiencing some growth even during these difficult economic times. The amount of billable consumption, however, varies and has generally been trending down for the past five-years. It is not clear if the water consumption amounts will continue to decline or if they have reached a stable low point.

**Table 7-1.
Customers and Consumption**

Description	FY2009 ²	FY2010 ²	FY2011 ²	FY2012 ³	FY2013 ³
Customers	19,084	19,066	19,360	19,388	19,548
Annual Increase in Customers	2.8%	-0.1%	1.5%	0.1%	0.8%
Consumption (CCF) ¹	4,553,000	4,575,000	4,278,000	4,468,000	4,387,000
Annual Consumption Change	5.00%	0.48%	-6.50%	4.4%	-1.8%

(1) CCF represents hundred cubic feet (equivalent to 748 gallons).

(2) Source: Stamford Water Pollution Control Authority. Financial Statements and Supplementary Information for the Years Ended June 30, 2011 and 2010.

(3) FY2012 and FY2013 numbers are preliminary and subject to change. Estimated based on active accounts as of August 2012 including 91 accounts which are in transitions and estimated billable volumes for FY2012 and historic trends.

Table 7-2 illustrates the top ten customers, not including Darien and Aquarion whose revenue is contracted.

**Table 7-2.
Overall Top Ten Customers in FY2012**

	Property Owner	Billed Consumption (CCF)	% of Total
1	City of Stamford	60,670	1.41%
2	Stamford Hospital	43,988	1.02%
3	Stamford Housing Authority	41,284	0.96%
4	Rippowam Park Associates LP	38,750	0.90%
5	Saint John's Towers	37,880	0.88%
6	Hilton Stamford Hotel	32,402	0.75%
7	Fairfield Bedford LLC	28,920	0.67%
8	Stamford Town Center	31,144	0.72%
9	Stamford Marriott Hotel	24,318	0.56%
10	Bayview Towers	23,126	0.54%
	Subtotal	362,482	8.40%

Source: Stamford Water Pollution Control Authority. Financial Statements and Supplementary Information for the Years Ended June 30, 2011 and 2010.

As illustrated in the above table, the largest single customer, not including the City of Stamford, is Stamford Hospital, which represents approximately 1% of the total billable consumption. The top ten customers represent approximately 8% of the total billable consumption. The SWPCA has a strong and diverse customer base. It is also noted that currently there are plans to redevelop Saint John's Towers. Construction is anticipated to take place beginning in Fiscal Year (FY) 2013 and will result in some temporary loss of billable volumes. However new construction and redevelopment is anticipated to outpace this temporary loss and the temporary loss is not anticipated to have a material impact on revenues since it represents less than 1% of total billable volumes.

7.2. User Rates and Charges

Through its Board of Directors, the SWPCA 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, to pay 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.

The SWPCA receives operating revenue through sewer usage charges for Stamford customers (83%), sewer usage and capital reimbursement charges to Darien customers (9%), fees and other operating income (6%), and contracted revenue from Aquarion (2%) (FY2012 Financial Statements). The SWPCA's Fiscal Year (FY) runs from July 1 to June 30.

Table 7-3 shows the adopted rate structure for the SWPCA for FY2012 and FY2013 as compared to the past three years. Although the SWPCA's billing policy still identifies a minimum bill charge, the SWPCA no longer implements this charge pursuant to a resolution adopted by the Board.

**Table 7-3.
Rate Structure**

Description	FY2009 ²	FY2010 ²	FY2011 ²	FY2012 ³	FY2013 ⁴
Rate per ccf of Billed Water Use	\$3.38	\$3.46	\$3.56	\$3.86	\$3.89/\$4.21 (\$4.05)
Annual Rate Increase	11.55%	2.37%	2.89%	8.43%	9.07%
Minimum Bill per Account ¹	\$25	\$25	0	0	0
Minimum Bill Per Year	\$50	\$50	0	0	0
Average Residential Bill	\$378.56	\$366.76	\$391.60	\$393.72 ^b	\$413.10 ^b
Average Residential CCF	112	106	110	102 ^d	102 ^d

- (1) Bills are issued twice per year once in October and once in May. The SWPCA used to charge a minimum amount per bill, but recently abolished this practice.
- (2) Source: Stamford Water Pollution Control Authority Financial Statements and Supplementary Information for the Years Ended June 30, 2011 and 2010.
- (3) Source: Stamford Water Pollution Control Authority Approved Operating Budgets.
- (4) 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.
- (5) These are based on estimated average residential customer billable metered water consumption as verbally reported by the SWPCA Administrations Manager in October 2012.

Although unit rates have been increasing, consumption has generally been declining over the past several years resulting in only a very small actual increase in the average residential sewer bill. The SWPCA reports that the average residential customer currently consumes 102 billable ccf of water per year, as compared to historic levels which have exceeded 115 ccf per year, at times. Between FY2009 and FY2012, the rates have been increased in excess of 25%. However, due to declining water consumption, the actual residential bill has only increased about 3% over this period, which means that rates

revenues have been very flat in recent years. Recent data indicates that billable volumes have stabilized for FY2013.

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 water consumption data for a six month period that excludes summer use. 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 provide billing and accounts receivable services for the SWPCA. The SWPCA typically anticipates a billing collection rate of 95%, however, actual billing collection rates appear to vary on an annual basis from 89% to 97%. The draft FY2012 Financial Statements reported a collection rate of 95% for FY2012, 89% for FY2011 and 95% for FY2010. The SWPCA FY2013 year to date data indicates the billing collection rate remains stable at approximately 95%.

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 6 month bill is mailed, Computil automatically mails late payment notification and assesses a penalty interest (1.5%) and late interest (1.5%). At the 45 day and 60 day interval, 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: 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 proceeding begins 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 Ward's 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.

**Table 7-4.
Historical Financial Performance⁽²⁾**

	FY2009 ⁽¹⁾	FY2010 ⁽¹⁾	FY2011 ⁽²⁾	FY2012 ⁽³⁾
Revenues				
Sewer Use Charges	\$14,959,865	\$17,686,192	\$15,663,871	\$19,073,000
Other Revenue	5,605,479	4,663,259	4,282,124	3,934,000
Interest Income	182,255	75,000	112,844	98,000
Total Revenue	\$20,747,599	\$22,424,451	\$20,058,839	\$23,105,000
Expenses				
Operation & Maintenance	11,435,815	13,302,824	10,955,553	11,444,000
Debt Service	9,212,666	9,143,594	9,231,422	9,399,000
Total Expenses	\$20,648,481	\$22,446,418	\$20,186,975	\$20,843,000
Senior Lien DS Coverage ⁽⁴⁾	1.34	1.32	1.35	1.68
Total Debt Service Coverage ⁽⁵⁾	1.01	1.00	0.99	1.10

(1) Webster Bank spreadsheet entitled “WPCA Expenses and Revenues Spread sheet thru FY2014-2015 Working Draft.xls”.

(2) FY2011 based on audited financial statements prepared by O’Conner Davies Munns & Dobbins, LLP.

(3) FY2012 based on audited financial statements prepared by O’Conner Davies Munns & Dobbins, LLP.

(4) 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.

(5) 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.

As illustrated in Table 7-4, the SWPCA has been meeting all of its obligations pursuant to the Indenture and has done a good job at controlling its expenses. The significant increase in sewer use charges in FY2012 is attributable to several factors including a rate increase, stabilization of billable metered water use volumes, and increase in receipt of aged accounts. The decrease in other revenue in FY2012 was due primarily to reduction in nitrogen credit revenues, load shedding revenues and Darien capital reimbursement charges.

7.3. Rate Comparison

While it is difficult to compare rates on a apples to apples basis due to variances in cost recovery structures and billing methods, Table 7-5 below serves to provide a summary of

the rate structures implemented by peer communities and an estimate of the average annual residential cost based on the reported rate structure and estimated billable water consumption of 102 CCF per year, as applicable. As illustrated in Table 7-5 and Figure 7-1, the SWPCA rates are currently comparable to sewer use rates posted by communities in the region. In addition, the SWPCA has recently completed major plant upgrades, whereas several of the regional communities listed still require significant investment to meet regulatory requirements including nitrogen reduction.

**Table 7-5.
Sewer Service Rate Comparisons**

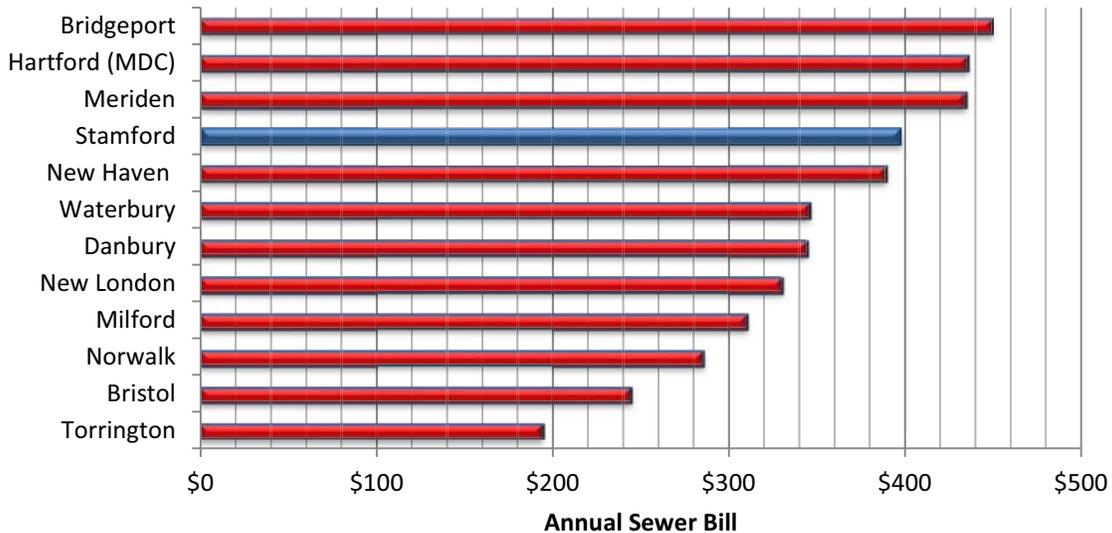
City	Fixed Rate	Usage Rate (per CCF)	Estimated Annual Bill (based on 102 CCF)
Torrington (1)	\$194.00		\$194.00
Bristol (2)	\$14.39	\$1.83	\$244.22
Norwalk (3)	\$285.00		\$285.00
Milford (4)	\$309.72		\$309.72
New London (5)	\$31.64	\$3.31	\$329.66
Danbury (6)	\$23.25	\$2.46	\$343.92
Waterbury		\$3.39	\$345.37
New Haven (7)	\$13.00	\$3.30	\$388.60
Stamford (8)		\$4.05	\$396.78
Meriden (9)	\$14.05	\$3.70	\$433.60
Hartford MDC (10)	\$190.00	\$2.40	\$434.80
Bridgeport		\$4.40	\$449.11

- (1) Annual Sewer Fee for Residential Customer.
- (2) Fixed Rate represents Quarterly Meter Charge for a 5/8" meter.
- (3) Annual Sewer Fee for Residential Customer.
- (4) Annual Cost per Equivalent Residential Unit (ERU).
- (5) Fixed Rate for Quarterly Meter Charge for a 5/8" Meter. Usage Rate has minimum charge of \$6.65 for first 5 CCF or less, \$3.1/CCF thereafter.
- (6) Sewer bills are based on 90% of water consumption. Quarterly Minimum Charges of \$23.25.
- (7) Fixed Rate for Quarterly Administration Fee. Sewer charges include minimum bill for first 15 Ccf or less of water usage equal to \$49.50 in 2013.
- (8) Up until 2010 had a monthly minimum bill of \$25.00.
- (9) Fixed Rate represents Quarterly Meter Charge for a 5/8" meter.
- (10) Prior to 2013, sewer cost included in ad valorem tax. Rate includes surcharge that is on water bill for CSO of \$190 per year.

It may appear that the SWPCA's CCF rate is on the higher end of its peers, however, it should be noted that the SWPCA's rates are all inclusive (i.e., no other flat rate or administration charges) and directly based on actual consumption. Other communities have fixed components in addition to variable components based on CCF as well as minimum bill charges. In addition, the SWPCA has already completed its nitrogen reduction improvements and in FY2012 received the highest nitrogen credit payment in the State of Connecticut; and does not have any combined sewer overflows and therefore will not be subject to the significant capital upgrade reinvestment requirements that other combined systems in Connecticut currently face. Many of the peer communities identified above have just begun to embark on much needed capital improvements, including nitrogen reduction and elimination of combined sewer overflows.

Figure 7-1: 2013 Sewer Bill Comparison

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



8. Projected Operating Financial Analysis

8.1. Overview

Pirnie/ARCADIS reviewed the historical (Section 7) and SWPCA-prepared forecast of revenues, O & M expenses, debt service payments, and proposed capital improvements associated with the System. Our review was completed for the purpose of assessing the reasonableness of the SWPCA's Forecast and associated financial results.

A summary of the projected revenue and expenses of the System for the current fiscal year (FY2013) through FY2018 is presented in Table 8-1. In order to achieve the indicated results, the SWPCA anticipates that increases in its rates for service will be necessary and are the result from the following:

- Funding and implementation of the projected CIP.
- Repayment of loans to the City.
- Building of an operating reserve.
- General inflationary costs associated with the operation and maintenance of the System.

Initially, a 0.08% rate increase for FY2013 was approved by the SWPCA Board in an effort to minimize cost increases during the continued lack-luster economy. However, in light of concerns regarding funding needed to comply with the USEPA administrative order and new permit limits as well as to fund capital improvements and capital reserves, the SWPCA has approved a mid-year rate increase of 8% to become effective for the May 2013 billing cycle.

Table 8-1 below presents a summary of the projected forecast including required rate increases and resulting debt service coverage ratios.

**Table 8-1.
Summary of Projected Results – FY2013 through FY2018**

Revenues	FY2013 (1)	FY2014	FY2015	FY2016	FY2017	FY2018
Billing Revenues (2)	\$17,414,481	\$18,791,000	\$19,084,400	\$19,084,400	\$19,655,575	\$19,655,575
Other Revenue (3)	6,263,551	7,451,566	7,228,232	7,557,795	7,812,475	8,113,788
Total Revenue	\$23,678,032	\$26,242,566	\$26,312,632	\$26,642,195	\$27,468,051	\$27,769,363
Expenditures	FY2013 (1)	FY2014	FY2015	FY2016	FY2017	FY2018
Operation & Maintenance (4)	\$12,600,199	\$13,317,589	\$13,595,919	\$13,941,321	\$14,250,181	\$14,566,754
Receivables Management (5)	871,000	940,000	954,000	954,000	983,000	983,000
Total Expenses	\$13,471,199	\$14,257,589	\$14,549,919	\$14,895,321	\$15,233,181	\$15,549,754
Senior Lien DS Coverage (6)	1.69	1.99	1.94	1.79	1.79	1.68
DS Coverage from Current Net Revenues (7)	1.09	1.29	1.20	1.20	1.20	1.14
DS Coverage from all Available Funds(8)	1.19	1.56	1.53	1.60	1.66	1.69
User Fee Calculation	FY2013 (1)	FY2014	FY2015	FY2016	FY2017	FY2018
Annual Consumption (ccf) (9)	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000
Number of Billing Customers (9)	19,548	19,743	19,941	20,140	20,342	20,545
User Fee Per ccf (9)	\$4.05	\$4.37	\$4.44	\$4.44	\$4.57	\$4.57
Annual Percent Increase	5%	8%	2%	0%	3%	0%

- (1) Based on SWPCA FY2013 and FY2014 Annual Operating Budgets.
- (2) User charge to Stamford customers based on estimated billable metered water use.
- (3) Includes special assessment revenue, Town of Darien revenue, Aquarion Revenue, nitrogen credits, interest income and other miscellaneous revenue.
- (4) Includes personnel, contracted services and other such expenses associated with the operation and maintenance of the System.
- (5) Based on an assumed collection rate of 95%.
- (6) Debt service coverage ratio for all revenue bonds and clean water fund loans measured by dividing net revenues by the debt service for the revenue bonds and clean water fund loans. City loans and general obligation debt remain subordinate.
- (7) Debt service coverage ratio for all debt based on current net revenues divided by the total debt service.
- (8) Debt service coverage ratio that includes current net revenues and additional general fund balances available for debt service prior to dividing by the total debt service. See Table 8-6 for additional information on general fund balances. SWPCA cash available ending FY2012 was \$515,420.
- (9) Based on the SWPCAs projections.

8.2. Review of Revenues and O&M Expenses

Presented in Table 8-6 at the end of this section are the financial projections as prepared for the Forecast Period. The Forecast was based on:

- The SWPCA’s adopted FY2013 and FY2014 Annual Operating Budget
- Actual FY2011 and FY2012 audited results provided by the SWPCA
- The CIP established by the SWPCA and discussed in previous sections of this Report

The following provides a brief description of the System revenues and expenses. The Summary of Significant Assumptions contained in Appendix D is an integral part of the Forecast and should also be reviewed.

8.2.1. System Revenues

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 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.

8.2.2. Operation and Maintenance (O&M) Expenses

O&M expense include 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 projections include the contract operation of sludge management by Synagro. The Synagro agreement is scheduled to expire in FY2013, whereupon future sludge management costs are anticipated to decrease over current contracted costs.

8.3. Historical and Projected Debt Service

The SWPCA has funded its capital program through issuance of revenue bonds, general obligation bonds and State Clean Water Fund (CWF) grants and loans. Table 8-2 summarizes the current principle amount of debt outstanding for the SWPCA. In addition to the amounts identified below, the SWPCA separately owes the City funds to reimburse borrowings from the City's pooled cash account.

**Table 8-2.
Existing Bond Debt and Clean Water Fund Obligations as of 6-30-12**

Revenue Bond Debt		General Obligation Bond Debt		Clean Water Fund Obligations	
Issue	Balance	Issue	Balance	Issue	Balance
2003 Series A	\$10,345,000	GO	\$8,864,154	CWF 117-C	\$330,021
2006 Series A	17,940,000	2009 Babs	9,585,000	CWF 375-C	198,064
				CWF 414-D	1,587,923
				CWF 414-C	51,174,729
Total Revenue Fund	\$28,285,000		\$18,449,154	Total Clean Water Fund	\$53,290,738
Total Amount of Principal Outstanding as of 6-30-12					\$100,024,892

(1) Source: Webster Bank

(2) Does not include funds owed to City for borrowings from the City's pooled cash account or self-supporting debt fund.

The schedule of payments associated with the outstanding debt obligations is presented in Table 8-3.

**Table 8-3.
Existing Debt Service**

Period Ending	Parity Debt		Subordinate Debt ⁽¹⁾	Aggregate Debt
	Existing Revenue Bond Debt Service (2003 and 2006)	Existing CWF Debt Service (117-C, 375-C, 414-C, 414-D)	Existing General Obligation Bond Debt Service	Subtotal Existing Debt
6/30/2013	1,988,825	4,827,735	2,574,190	9,390,751
6/30/2014	1,991,175	4,824,140	2,527,166	9,342,481
6/30/2015	1,992,181	4,741,282	2,465,254	9,198,717
6/30/2016	1,991,625	4,683,233	1,978,406	8,653,265
6/30/2017	1,992,331	4,664,423	1,761,758	8,418,512
6/30/2018	1,991,718	4,639,047	1,816,342	8,447,106
6/30/2019	1,989,991	4,639,047	1,766,470	8,395,509
6/30/2020	1,989,508	4,639,047	1,377,174	8,005,728
6/30/2021	1,991,730	4,424,089	1,267,583	7,683,402
6/30/2022	1,990,936	4,424,089	960,140	7,375,165
6/30/2023	1,993,653	4,424,089	942,088	7,359,829
6/30/2024	1,990,406	4,424,089	878,310	7,292,805
6/30/2025	1,993,456	4,424,089	909,940	7,327,485
6/30/2026	1,992,756	737,348	757,045	3,487,149
6/30/2027	1,994,406	-	745,320	2,739,726
6/30/2028	1,991,369	-	736,791	2,728,160
6/30/2029	1,993,331	-	721,416	2,714,748
6/30/2030	1,991,894	-	709,148	2,701,041
6/30/2031	1,991,931	-	-	1,991,931
6/30/2032	1,988,319	-	-	1,988,319
6/30/2033	1,995,694	-	-	1,995,694
6/30/2034	1,204,063	-	-	1,204,063
6/30/2035	1,204,425	-	-	1,204,425
6/30/2036	1,202,413	-	-	1,202,413
6/30/2037	1,202,906	-	-	1,202,906
6/30/2036	-	-	-	-
TOTAL	\$ 46,641,041	\$ 60,515,748	\$ 24,894,541	\$ 132,051,330

(1) Includes the 2009 Taxable Build America Bonds.

According to the Indenture (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 Fourth Supplemental Indentures, dated as of October 1, 2003, February 28, 2006, September 1, 2006 and August 1, 2009, respectively), the SWPCA is required to maintain a debt service reserve fund for the 2003 and 2006 Revenue Bonds and the Clean Water Fund obligations. Table 8-4 provides the current funds available in the SWPCA debt service reserve funds. There are no debt service reserve requirements for the General Obligation (GO) Bonds (which includes the SWPCA's 2009 Taxable Build America Bonds). The GO Bonds are subordinated debt.

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

	2012	2011	2010
Clean Water Fund – Debt Service Reserve	\$4,711,889	\$ 4,652,364	\$ 4,557,073
2003 Debt Service Reserve Fund	866,908	840,609	814,169
2006 Debt Service Reserve Fund	1,207,352	1,207,299	1,207,299
2003 and 2006 Debt Service Funding Accrual	956,216	1,110,767	1,098,388
Total	\$7,742,365	\$ 7,811,039	\$ 7,676,929

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.

In addition to the debt service reserve funds, the SWPCA must also generate sufficient revenues to maintain a debt service coverage ratio equal to at least 1.15 for the Revenue Bonds and Clean Water Fund obligations. Only a 1.0 times coverage is required for the GO bonds. Note that GO bonds are also subordinate to the Revenue Bonds and the Clean Water Fund obligations.

The SWPCA’s access to the City’s pooled cash accounts, subordination of GO debt and the history of the City lending the SWPCA money, as needed, indicates that the City and the SWPCA are closely linked.

8.4. Issuance of Additional Bonds

The 2013 Series A Bonds are being issued to establish:

- New money, in the amount of approximately \$14 million, to fund the FY2013, FY2014 and the portions of FY2015 capital improvement program and reimburse the City for borrowings used to fund the FY2012 capital improvement program.
- Refund the outstanding amount of the 2003 Bonds in the amount of approximately \$10 million.

The proposed debt service schedule for the 2013 Series A Bonds is provided in Table 8-5 along with a summary of the projected annual refunding savings to the SWPCA. As illustrated in Table 8-5, the refunding of the Series 2003 revenue bonds is projected to provide a net present value savings to the SWPCA of approximately \$1 million.

Additional revenue bonds beyond 2015 are expected to be issued and have been included in the SWPCA Forecast as required to fund future capital improvement needs for FY2016 through FY2018. Additional capital improvement needs are anticipated to be approximately \$20 million over this time period. Currently, the SWPCA does not anticipate any of these projects to be eligible for funding through the State’s Clean Water Fund (CWF) program. However, should such CWF funding become available, this would offset the need to issue revenue bonds and would serve to reduce overall financing costs.

The issuance of future debt (revenue bonds and CWF borrowings) is subject to a condition precedent to delivery of a series of additional bonds as per the Indenture which requires that the SWPCA's Forecast, presented in Table 8-6, maintain a Debt Service Coverage Ratio, including the revenue bonds expected to be issued by the SWPCA that will meet the requirements of the additional bonds test of 115% debt service coverage. The projections assume the SWPCA will implement the annual rate increases shown on Table 8-6 at the beginning of each fiscal year.

**Table 8-5.
Debt Service Schedule for the 2013 Series A Bonds⁽¹⁾**

New Money		Refunding				Total 2013 Series A	
Date	Net Debt Service	Prior Debt Service	Refunding Net Debt Service	Savings	Present Value to 08/20/2013 @ 3.6809772%	Date	Total Net Debt Service
6/30/2014	304,743	785,455	427,569	357,886	354,499	6/30/2014	732,313
6/30/2015	822,900	788,961	432,900	356,061	336,301	6/30/2015	1,255,800
6/30/2016	824,700	786,605	432,300	354,305	322,743	6/30/2016	1,257,000
6/30/2017	825,000	788,130	782,625	5,505	-1,673	6/30/2017	1,607,625
6/30/2018	823,750	788,630	783,375	5,255	-1,873	6/30/2018	1,607,125
6/30/2019	822,000	786,605	783,125	3,480	-3,283	6/30/2019	1,605,125
6/30/2020	824,625	786,855	781,875	4,980	-1,973	6/30/2020	1,606,500
6/30/2021	826,500	786,105	784,500	1,605	-4,527	6/30/2021	1,611,000
6/30/2022	822,750	784,355	781,000	3,355	-3,058	6/30/2022	1,603,750
6/30/2023	823,375	787,890	786,250	1,640	-4,240	6/30/2023	1,609,625
6/30/2024	823,250	786,525	780,250	6,275	-889	6/30/2024	1,603,500
6/30/2025	824,000	787,625	785,800	1,825	-3,826	6/30/2025	1,609,800
6/30/2026	825,700	786,250	783,000	3,250	-2,739	6/30/2026	1,608,700
6/30/2027	826,800	788,500	784,300	4,200	-2,040	6/30/2027	1,611,100
6/30/2028	822,400	789,250	784,600	4,650	-1,676	6/30/2028	1,607,000
6/30/2029	822,500	788,500	783,900	4,600	-1,615	6/30/2029	1,606,400
6/30/2030	822,000	786,250	782,200	4,050	-1,825	6/30/2030	1,604,200
6/30/2031	825,800	787,375	784,400	2,975	-2,314	6/30/2031	1,610,200
6/30/2032	823,900	786,750	780,500	6,250	-497	6/30/2032	1,604,400
6/30/2033	826,300	789,250	785,400	3,850	-1,658	6/30/2033	1,611,700
6/30/2034	823,000	-	-	-	-	6/30/2034	823,000
6/30/2035	825,225	-	-	-	-	6/30/2035	825,225
6/30/2036	822,588	-	-	-	-	6/30/2036	822,588
6/30/2037	823,438	-	-	-	-	6/30/2037	823,438
6/30/2038	822,638	-	-	-	-	6/30/2038	822,638
6/30/2039	825,050	-	-	-	-	6/30/2039	825,050
6/30/2040	825,538	-	-	-	-	6/30/2040	825,538
6/30/2041	824,100	-	-	-	-	6/30/2041	824,100
6/30/2042	825,600	-	-	-	-	6/30/2042	825,600
6/30/2043	824,900	-	-	-	-	6/30/2043	824,900
6/30/2044	822,000	-	-	-	-	6/30/2044	822,000
	25,027,068	15,745,866	14,609,869	1,135,997	973,837		39,636,938

(1) Subject to Change. Debt service net of interest earnings on debt service reserve are presented based on debt schedule, dated June 12, 2013, provided by Raymond James | Morgan Keegan.

8.5. Projected Revenue and Expenses

Presented in Table 8-6 are financial projections for the SWPCA for the period of FY2013 through FY2018. These financial projections were prepared based on a review of historic performance, the FY 2011 and FY2012 Audited Financial Statements, budgeted performance for FY2012 and FY2013, and a review of capital financing requirements and best practices.

The operation and maintenance of the facilities are the responsibility of the SWPCA and are supported by the City. The operation and maintenance of the facilities are funded through Billing Revenues and other revenues; with Billing Revenue serving as the primary revenue source for the SWPCA. Billing Revenues (the user rate, administrative charge and minimum bill) are determined annually by the SWPCA as part of its budget process. The user rate, administrative charge and minimum bill are set by the Authority's Board of Directors to generate revenue in an amount sufficient to pay all of the operating and maintenance expenses and capital expenditures of the System and to achieve a 115% Senior Lien debt service coverage ratio requirement as specified in the Indenture and a 100% Subordinate debt service coverage ratio.

The user rate was increased by 8 percent from \$3.89 per ccf for the first half of FY2013 to \$4.21 per ccf for the second half of FY2013, resulting in an effective annual rate of \$4.05 per ccf. A 4% rate increase from the \$4.21 per ccf rate (or 8% increase from the \$4.05 per ccf rate) is budgeted for FY2014 bringing the FY2014 rate to \$4.37 per ccf. The Forecast, anticipates that two additional rate increases will be required over the next five years, but at rates less than inflation. Table 8-6 summarizes the projected revenue and expenses of the System for the Forecast Period assuming that future annual rate increases shown are implemented at the beginning of each fiscal year. As illustrated in Table 8-6, based on these projections, the SWPCA is expected to meet or exceed the 115% senior lien debt service coverage ratio requirement of the Indenture in each year of the Forecast Period.

The proposed rate increases serve to build a SWPCA operating reserve in excess of \$1.5 million in accordance with a request by CTDEEP as well as to pay down the outstanding balance due to the City's pooled cash account within five-years. As illustrated in Table 8-6, the forecast includes an annual transfer out of the SWPCA's fund into the City's pooled cash account of \$1.15 million in FY2014 and \$1.25 million thereafter until the outstanding balance is paid off in FY2018. In addition, it includes building the SWPCA's general fund to allow for operating and capital reserves in excess of \$5 million by FY2018.

Table 8-6.
Projected Revenues and Expenses – FY2013 through FY2018

I. SYSTEM REVENUES:	FY13	FY14	FY15	FY16	FY17	FY18
A. BILLING REVENUES						
1. Number of Customers.....	19,548	19,743	19,941	20,140	20,342	20,545
2. Billable Metered Water Use (ccf).....	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000	4,300,000
3. Wastewater User Charge Revenue.....						
Sewer Use Rate (\$/ccf).....	4.05	4.37	4.44	4.44	4.57	4.57
Rate Increase (%).....	4.9%	7.9%	1.6%	0.0%	3.0%	0.0%
TOTAL BILLING REVENUES	17,414,481	18,791,000	19,084,400	19,084,400	19,655,575	19,655,575
B. MISCELLANEOUS REVENUES						
4. Interest Income.....	95,000	100,000	131,475	140,362	149,087	158,950
5a. Special Assessments - Connection Fees.....	1,380,585	1,549,000	1,715,667	1,882,667	2,049,667	2,216,667
5b. Special Assessments - New Line Charges.....	465,538	751,000	331,958	404,373	409,064	439,581
6. Interlocal Agreement (Darien) User Charges ...	1,477,380	1,444,026	1,499,313	1,541,436	1,578,981	1,617,480
7. Darien Capital Reimbursement.....	694,573	728,481	757,127	779,118	799,225	838,561
8. Septic Tank Revenues.....	270,000	290,000	290,000	292,900	295,829	298,787
9. Regional Lab Revenues.....	60,000	55,000	55,000	55,550	56,106	56,667
10. Sewer Use - Lien Fees.....	114,000	180,000	180,000	181,800	183,618	185,454
11. Sewer Use - Delinquent Interest.....	361,076	525,000	525,000	530,250	535,553	540,908
12. Aquarion User Charges.....	210,452	321,418	321,418	324,632	327,879	331,157
13. Load Shedding.....	56,671	25,000	25,000	25,250	25,503	25,758
14. Rebates - B.A.B.s.....	152,498	148,701	144,120	138,959	132,972	126,176
15. City Reimbursement/Other.....	85,000	485,446	492,155	500,498	508,993	517,643
16. Nitrogen Trading Exchange Credit Revenues....	840,778	848,494	760,000	760,000	760,000	760,000
TOTAL MISCELLANEOUS REVENUES	6,263,551	7,451,566	7,228,232	7,557,795	7,812,475	8,113,788
D. RECEIVABLE MANAGEMENT COSTS						
17. Billing Collection Rate.....	(871,000)	(940,000)	(954,000)	(954,000)	(983,000)	(983,000)
	95%	95%	95%	95%	95%	95%
TOTAL SYSTEM REVENUES	\$ 22,807,032	\$ 25,302,566	\$ 25,358,632	\$ 25,688,195	\$26,485,051	\$26,786,363
II. SYSTEM EXPENSES:						
E. OPERATIONS & MAINTENANCE						
18. WPCA Admin (less deprec. & interest).....	\$ 3,568,042	\$ 4,418,012	\$ 4,526,467	\$ 4,690,480	\$ 4,814,322	\$ 4,942,178
19. Process Control.....	3,292,414	2,918,555	2,976,927	3,036,465	3,097,194	3,159,138
20. Laboratories.....	493,549	416,693	425,027	433,527	442,198	451,042
21. Sludge Process.....	2,361,823	2,331,704	2,378,338	2,425,905	2,474,423	2,523,911
22. Compliance.....	92,871	101,218	103,242	105,307	107,413	109,562
23. Building Maintenance.....	265,500	259,500	264,690	269,984	275,383	280,891
24. Equipment Maintenance.....	898,138	1,017,244	1,037,589	1,058,341	1,079,507	1,101,098
25. Pump Station Maintenance.....	634,393	747,043	761,984	777,224	792,768	808,623
26. Sewer Maintenance.....	310,335	410,486	418,696	427,070	435,611	444,323
27. Barrier Maintenance.....	237,000	247,000	251,940	256,979	262,118	267,361
28. Billing Services.....	446,134	450,134	451,020	460,040	469,241	478,626
TOTAL SYSTEM EXPENSES	\$ 12,600,199	\$ 13,317,589	\$ 13,595,919	\$ 13,941,321	\$14,250,181	\$14,566,754
TOTAL NET REVENUES FOR DEBT SERVICE	\$ 10,206,833	\$ 11,984,977	\$ 11,762,714	\$ 11,746,874	\$12,234,870	\$12,219,610
III. DEBT SERVICE PAYMENTS:						
29. Existing 2003 Revenue Bonds.....	786,305	0	0	0	0	0
30. 2013 Series A Bonds						
A. New Money.....	0	304,743	822,900	824,700	825,000	823,750
B. Refunding of 2003 Bonds.....	0	427,569	432,900	432,300	782,225	783,375
31. Repayment of Existing CWF Loans.....	4,827,735	4,824,140	4,741,282	4,683,233	4,664,423	4,639,047
32. Existing Revenue Bonds (Series 2006)	1,202,520	1,205,720	1,203,220	1,205,020	1,204,201	1,203,088
<i>Subtotal Senior Lien Debt</i>	<i>6,816,560</i>	<i>6,762,172</i>	<i>7,200,302</i>	<i>7,145,253</i>	<i>7,476,249</i>	<i>7,449,259</i>
33. Existing GO Bonds (Subordinate).....	2,574,190	2,527,166	2,465,254	1,978,406	1,761,758	1,816,342
34. New Debt Service for Capital Improvements.....						
a. Revenue Bonds Net Debt Service (Senior Lien)	0	0	129,419	671,337	957,050	1,444,279
b. City Pooled Cash Account Interest Payments ...	13,103	10,228	7,103	3,978	853	0
TOTAL DEBT SERVICE	\$ 9,403,853	\$ 9,299,566	\$ 9,802,078	\$ 9,798,974	\$10,195,909	\$10,709,880
SENIOR LIEN DS COVERAGE	1.69	1.99	1.94	1.79	1.79	1.68
DS COVERAGE FROM CURRENT NET REVENUES	1.09	1.29	1.20	1.20	1.20	1.14
IV. SWPCA CASH FUND BALANCE SUMMARY						
35. Beginning Balance	\$ 515,420	\$ 982,974	\$ 2,517,974	\$ 3,228,974	\$ 3,926,974	\$ 4,715,974
36. Transfers In.....	803,000	2,685,000	1,961,000	1,948,000	2,039,000	1,510,000
37. Transfers Out (to City Pooled Cash Account) ..	(335,446)	(1,150,000)	(1,250,000)	(1,250,000)	(1,250,000)	(341,023)
38. Ending Balance - Unrestricted Cash.....	\$ 982,974	\$ 2,517,974	\$ 3,228,974	\$ 3,926,974	\$ 4,715,974	\$ 5,884,951
DS COVERAGE FROM ALL AVAILABLE FUNDS	1.19	1.56	1.53	1.60	1.66	1.69
V. CITY POOLED CASH ACCOUNT BALANCE						
Beginning Balance	\$ 5,576,469	\$ 5,241,023	\$ 4,091,023	\$ 2,841,023	\$ 1,591,023	\$ 341,023
Transfers In	\$ (335,446)	\$ (1,150,000)	\$ (1,250,000)	\$ (1,250,000)	\$ (1,250,000)	\$ (341,023)
Transfers Out.....	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Ending Balance - Due to City of Stamford.....	\$ 5,241,023	\$ 4,091,023	\$ 2,841,023	\$ 1,591,023	\$ 341,023	\$ 0

8.6. Significant Assumptions

Appendix D to this Report provides a summary of the SWPCA's significant assumptions used in support of the Forecast and related information for each line item of the Forecast as presented in Table 8-6.

9. Conclusion

9.1. Considerations and Assumptions

In preparation of this Report, Pirnie/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 these statements herein. However, Pirnie/ARCADIS has not independently verified the accuracy of the information provided by the City, SWPCA and others. In addition, the scope of the Pirnie/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 8-6, 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 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.
- The costs associated with the continuation of securing contracted sludge management services upon expiration of the existing Synagro Sludge Processing agreement will be generally consistent or lower than current sludge management services costs.

- 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.
- In the event that billable metered water use declines from projected levels, the SWPCA would increase unit user charge rates or modify its rate structure so as to maintain required income levels.
- 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.

9.2. Conclusions

Set forth below are the principal opinions which Pirnie/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.
2. More recently, the System has experienced some Notice of Violations which indicates a need for additional attention to detail. The hiring of the new Plant Supervisor in 2012 and permanent Executive Director in 2013 is 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 shortcomings of 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 are reasonable.
5. The forecasts indicate 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% Debt Service Coverage Ratio Requirement, provided that water consumption rates stabilize and the required rate increases are implemented.



City of Stamford, Connecticut
Engineer's Report

APPENDIX

A

Treatment Plant Performance Analyses



Stamford WPCF
DMR SUMMARY FOR APRIL 2010 TO October 2012

Date	Average Daily Flow (mgd)	TSS inf (mg/L)	TSS eff (mg/L)	% TSS Removal	BOD inf (mg/L)	BOD eff (mg/L)	% BOD Removal	Total Ammonia (as N) Eff (mg/L)	30-day Geometric Average for Fecal Coliform (CFU/100 mL)	7-day Geometric Average for Fecal Coliform (CFU/100 mL)	UV Dose
Apr-10	20.43	212.90	10.70	95%	176.63	10.00	94%	0.014	8.53	200,000.00	88.80
May-10	15.79	281.76	5.62	98%	206.63	14.00	93%	0.00	12.16	59.76	91.05
Jun-10	14.40	337.55	5.95	98%	248.82	11.00	96%	0.00	13.00	26.62	105.50
Jul-10	14.09	354.10	5.05	99%	246.35	12.00	95%	0.00	10.91	39.84	150.50
Aug-10	13.62	342.26	6.04	98%	237.00	16.00	93%	0.00	7.52	107.64	165.10
Sep-10	13.43	429.81	5.48	99%	271.33	14.00	95%	0.00	50.16	166.90	145.60
Oct-10	15.21	291.65	7.05	98%	216.00	2.13	99%	0.00	19.30	194.68	148.10
Nov-10	14.16	278.10	9.60	97%	200.82	3.00	99%	0.00	4.42	8.48	181.95
Dec-10	14.77	343.53	11.63	97%	252.38	3.88	98%	0.00	14.05	28.74	136.00
SUMMARY 2010	15.10	319.07	7.46	97%	228.44	9.56	96%	0.00	15.6	79.08	134.7
Jan-11	14.77	283.48	13.19	95%	231.75	5.00	98%	0.00	38.50	66.59	108.30
Feb-11	18.87	250.11	20.11	92%	212.14	5.07	98%	0.00	21.34	33.07	109.10
Mar-11	24.01	171.39	39.26	77%	145.58	18.83	87%	0.19	1.64	2.11	142.30
Apr-11	19.91	214.44	8.39	96%	156.80	3.60	98%	0.00	1.15	1.41	164.10
May-11	18.35	313.91	9.18	97%	212.12	3.82	98%	0.00	4.81	9.10	97.30
Jun-11	17.33	241.64	7.95	97%	179.65	3.24	98%	0.00	11.82	10.00	7.00
Jul-11	15.26	282.35	5.30	98%	184.88	2.56	99%	0.00	41.00	55.00	6.50
Aug-11	18.04	273.22	12.17	96%	187.67	2.22	99%	0.06	18.00	198.00	77.10
Sep-11	21.55	216.21	37.80	83%	150.47	15.88	89%	0.06	N/A	N/A	131.60
Oct-11	17.27	277.05	8.67	97%	185.63	2.69	99%	0.00	33.00	8095.00	112.70
Nov-11	17.73	283.63	12.74	96%	198.75	3.69	98%	0.00	21.00	769.00	137.30
Dec-11	18.53	238.95	16.95	93%	192.00	4.67	98%	0.09	11.00	21.00	138.00
SUMMARY 2011	18.47	253.86	15.98	93%	186.45	5.94	96%	0.027	18.5	116.5	102.6
Jan-12	16.82	271.57	18.19	93%	211.41	5.94	97%	0.00	22.00	39.00	105.40
Feb-12	15.57	334.74	16.11	95%	250.80	5.33	98%	0.00	10.00	26.00	131.28
Mar-12	15.02	334.05	13.24	96%	234.71	5.35	98%	0.05	7.00	9.00	147.62
Apr-12	14.59	434.43	11.48	97%	257.20	4.47	98%	0.00	11.00	20.00	119.60
May-12	17.50	253.05	13.05	95%	181.33	4.67	97%	0.00	19.00	33.00	89.20
Jun-12	17.83	297.65	11.85	96%	199.80	3.87	98%	0.00	22.00	40.00	86.00
Jul-12	15.43	309.74	10.30	97%	199.41	3.29	98%	0.02	36.00	50.00	126.80
Aug-12	14.56	293.64	12.55	96%	224.12	2.59	99%	0.00	34.00	67.00	132.20
Sep-12	14.10	343.00	8.00	98%	227.00	2.00	99%	0.00	21.00	30.00	-
Oct-12	15.30	306.00	16.00	95%	224.00	4.00	98%	0.08	7.00	68.00	-
Nov-12	14.30	294.00	13.60	95%	231.00	3.00	99%	0.00	7.00	107.00	-
Dec-12	15.60	356.00	14.00	96%	218.00	4.00	98%	0.40	8.00	16.00	-
SUMMARY 2012	15.67	317.79	13.08	96%	220.98	4.15	98%	0.015	18.9	38.2	117.3



City of Stamford, Connecticut
Engineer's Report

APPENDIX

B

Treatment Plant and Pump Station Rating Sheets



Stamford WPCA
Summary of Treatment Plant Condition Assessment

Process Area	Ranking	Comments
Headworks	4	<ul style="list-style-type: none"> - 3 influent channels and bar screens - Headworks consists of influent gates and bar screens. No grit removal at the headworks - Gates and operators are old and badly corroded. It is reported that they do not seal well. - Bar screens are completely vertical, climber type screens with ¾" bar spacing. - Personnel report large amounts of debris passing through bar screens which becomes a problem in downstream processes. - Septage receiving station is also not screened with no grinders, leading to further debris issues - Bar screens are reaching the end of their useful lives and appear somewhat deteriorated. - Headworks area has excellent ventilation - System generally reliable, but significant upgrades will be required in the near future to maintain reliability.
Main Sewage Pumps	3	<ul style="list-style-type: none"> - 5 pumps. 3 pumps on VFDs which are 15 mgd, 230 hp. 2 pumps are constant speed, rated at 10 mgd each with 150 hp motors - Pumps ~ 20 years old, but re-build relatively recently - Pumps, piping and valves show signs of corrosion, with piping and valves appearing worse than pumps. Pipe supports in poor condition - All 5 pumps required under peak flow conditions - Some of the electrical gear is older equipment that requires upgrade - Pumps are generally reliable and function well
Primary Settling Tanks	3	<ul style="list-style-type: none"> - Two tanks. One tank has adequate capacity if the other is taken out of service. - Drive unit on tank #2 was replaced ~ 2005. Tank #1's drive is much older and in need of upgrade. - Scraper in tank #2 is in need of replacement - Exposed concrete is showing signs of deterioration. Concrete below the water line is reported to be in good condition - Process performance is good and drives are generally reliable.
Primary Sludge Pumps	3	<ul style="list-style-type: none"> - 2 pumps (1 per PST). A back-up exists, but cannot be used. Thus, there is no redundancy - Pumps stand up very well to the high grit application - Pumps are over-sized in relation to the degritting system - Piping wears quickly due to high grit

**Stamford WPCA
Summary of Treatment Plant Condition Assessment**

			<ul style="list-style-type: none"> - Pumps generally reliable - Primary sludge dewatered via cyclone dewaterers and grit classifiers (2 pairs) - System oversized for the volume of grit that it handles (since there is no dewatering at the headworks) - System constantly being repaired due to heavy wear
Degritting System	4		
Aeration Tanks	1		<ul style="list-style-type: none"> - 3 tanks. Two completed in recent plant upgrade (~2003). - Tanks configured for biological nutrient removal - Process performance is excellent - All tanks in good physical condition - Methanol feed system constructed under recent plant upgrade. 2 outdoor bulk storage tanks plus indoor feed system. Equipment functions well and is in good condition.
Process Air Blowers	3		<ul style="list-style-type: none"> - 5 blowers. Installed in early 1990s - Only 2 of 5 are normally needed - Blowers showing signs of corrosion, and are nearing end of useful life - Blowers run well and are generally reliable - Blowers are inefficient and do not provide the necessary turn down to prevent over aeration
Secondary Clarifiers	3		<ul style="list-style-type: none"> - 4 clarifiers. Tanks 1-3 date to 1970s. Tank 4 installed in recent plant upgrade (~2004) - An upgrade is currently in the process for the 3 older tanks. The design was completed as of our site visit and construction was expected to begin soon. - Draft tube system being replaced with scraper system as part of upgrade - Concrete is generally in good condition, but some re-surfacing in areas of need will be done during upgrade - Tank #1 has been out of service for many months - Tanks function well from a process perspective
UV Disinfection System	2		<ul style="list-style-type: none"> - 2 UV channels, with 2 banks per channel and 6 modules per bank - Wedeco system - Units flooded during construction and operation of the system has never been as it should be after that - UVT analyzer does not function. May become a regulatory issue, as UVT needs to be reported with DMRS - Have had disinfection problems when solids are lost from a clarifier due to one clarifier being out of service - System is susceptible to flooding because the units are inside a tank. If flow backs up in the plant, it can flood the system's electrical components - System is very well maintained. Lamps are cleaned on a regular basis - Screens upstream of UV units must be cleaned twice per shift because they got clogged with algae. If

**Stamford WPCA
Summary of Treatment Plant Condition Assessment**

		<ul style="list-style-type: none"> - this cleaning is not done, a major hydraulic backup could happen - Plant staff reports that fecal coliform limits may be lowered. System will need to be re-evaluated if this happens
Plant Effluent Pumps	4	<ul style="list-style-type: none"> - 3 submersible effluent pumps. 150 hp. All run on VFDs. VFDs #1 and #2 are relatively new. #3 is older - System has had many issues related to drive failures - System is critical to allow water to be sent through outfall during high tide events. System was only designed to be necessary under rare peak events, but is actually needed on a regular basis due to plant hydraulics being different from design - Because pumps are submersible, a condition assessment could not be performed
Waste Sludge Pumps	3	<ul style="list-style-type: none"> - 3 pumps total. One pump for each clarifier 1-3. No pump for clarifier #4, thus no way to waste from this tank. - No redundancy - Pumps generally in good condition and reliable with some signs of corrosion
Return Sludge Pumps	2	<ul style="list-style-type: none"> - 5 pumps total. 1 pump per clarifier with one standby swing. 75 hp each. - Pumps installed ~ early 1990s. motors replaced ~ 2005 and pumps re-built around same timeframe - Some corrosion and seal leakage evident
Gravity Thickeners	4	<ul style="list-style-type: none"> - 3 thickeners. Original to plant (1970s) - All thickeners are in bad condition but are in the process of being upgraded. Construction work was on-going during our site visit. - All internal components are being replaced as part of the upgrade - Tanks covers and walkways are in good condition and do not require upgrade.
Thickened Sludge Pumps	3	<ul style="list-style-type: none"> - 4 pumps (1 per thickener with one standby) - Pumps are about 40 years old, but have been recently re-built - Pumps and piping show signs of corrosion - Pumps are scheduled for replacement as part of an on-going project
Gravity Belt Thickener	2	<ul style="list-style-type: none"> - 2 thickeners. Both run ~ 8-12 hrs/day, 5 days/week - Thickeners generally in good condition and reliable - Very good ventilation in area
Polymer Feed Skids	4	<ul style="list-style-type: none"> - 2 feed units and 2 blending units - 1 blending unit not useable, and the other is in poor condition - Polymer make-up system needs to be replaced. Plans are in the works
Belt Filter Press Feed Pumps	3	<ul style="list-style-type: none"> - 3 pumps - Significant corrosion and seal leakage evident on pumps and piping - Pumps generally reliable

Stamford WPCA
Summary of Treatment Plant Condition Assessment

Belt Filter Press	3	<ul style="list-style-type: none"> - 3 presses. - All 3 used about 14 hrs/day, 5 days/week - Press functions well - Screw conveyor is a big maintenance issue. Staff cannot get replacement parts
Pelletizer System	2	<ul style="list-style-type: none"> - System constructed in 2007 - System generally runs well and is reliable - System is source of odor complaints. One wet scrubber is dedicated to the system, but it just has air going through it with no chemical addition. Also have a thermal oxidizer for process air, which is generally effective
Plant Water System	4	<ul style="list-style-type: none"> - 3 pumps to feed general service water needs - Pumps generally in good condition and reliable, with some signs of corrosion - Plant water system is not strained, which causes many clogging problems in the system - Two strainers were once available. One no longer functions due to revised plant hydraulics. The other is old and non-functional.
Odor Control Systems	4	<ul style="list-style-type: none"> - Separate wet scrubber systems are available for the headworks, the PST weirs and thickeners, and the pelletizer/solids handling systems. - Chemical is not being added to any of the scrubber systems due to problems with the chemical feed systems that prohibit delivery of chemical to the scrubbers. - All scrubbers are essentially “flow through” with little to no treatment being provided. - Scrubbers and fans are generally in good condition. - Chemical storage facilities appear in generally good condition. Chemical feed pumps are deteriorating due to lack of use and lack of need to maintain them.
Standby Power Generation	2	<ul style="list-style-type: none"> - The plant has one 1600 kW diesel generator that serves all plant needs. - This generator installed in the recent plant upgrade ~ 2005. - Generator in very good condition. Functions well with minimal issues. - An older 900 kW generator is still available in the headworks area. This generator can be used for the headworks biological reactor system if needed. - The 900 kW generator is over 30 years old, but still functions well.

**Stamford WPCA
Summary of Treatment Plant Condition Assessment**

Ranking key:

- 1- Little to No Risk
- 2- Some Risk
- 3- Moderate Risk
- 4- Significant Risk
- 5- High Risk

Stamford WPCA
Summary of Pumping Station Condition Assessments

Pumping Station	Ranking	Comments
Bennett Street	2	<ul style="list-style-type: none"> - Can pump station- Smith & Lovelass - Residential/commercial area - Pump station dates to 1970s, but pumps and motors only ~ 4 yrs old - 2 dry pit submersible pumps, 5 hp, 125 gpm - Minimal I/I. Only 1 pump runs during peak flows - Pumps and piping generally in good condition. Instrumentation is dated - Previously had problem with rags, but put in pumps with cutter attachments and eliminated issues - Generally reliable with little maintenance issue
Knapp Street	3	<ul style="list-style-type: none"> - Can pump station- Smith & Lovelass. Similar design as Bennett St. - Residential area - Pump station dates to 1970s. Impellers replaced ~ 8-9 years ago, but pumps are old - 2 dry pit submersible pumps, 5 hp - Only 1 pump runs during peak flows - Pumps and piping exhibit corrosion. Instrumentation is dated - Generally reliable with little maintenance issue
Clay Hill	2	<ul style="list-style-type: none"> - Submersible pump station. 2 Flygt pumps, ~ 3 hp each - Residential area - Installed ~ 1990 - Main station which collects flow from 3 other pump stations - Rails showing signs of deterioration - Only 1 pump runs during peak flows - Generally reliable with no maintenance issues
Arden Lane	2	<ul style="list-style-type: none"> - Small submersible pump station. Serves 6 homes. 2 Flygt pumps, ~ 3 hp each - Residential area - Installed ~ 1990 - Couldn't see into wetwell - Plenty of capacity. Pumps run infrequently - Generally reliable with no maintenance issues
Timber Lane	2	<ul style="list-style-type: none"> - Small submersible pump station. Serves 4 homes. 2 Flygt pumps, ~ 3 hp each - Residential area

Stamford WPCA
Summary of Pumping Station Condition Assessments

		<ul style="list-style-type: none"> - Installed ~ 1990 - Plenty of capacity. Pumps run infrequently - Couldn't see into wetwell - Generally reliable with no maintenance issues
Cedar Heights	2	<ul style="list-style-type: none"> - Small submersible pump station. Serves 12 homes. 2 Flygt pumps, ~ 3 hp each - Residential area - Installed ~ 1990 - Wetwell appears in good condition - Plenty of capacity. Pumps run infrequently - Generally reliable with no maintenance issues
Maltbie	2	<ul style="list-style-type: none"> - Small submersible pump station. Serves 3 homes. 2 Flygt pumps, ~ 3 hp each - Residential area - Installed ~ 1990 - Couldn't see into wetwell - Plenty of capacity. Pumps run infrequently - Generally reliable with no maintenance issues
Berry Place	3	<ul style="list-style-type: none"> - Submersible station in commercial/industrial area, behind light industrial building - Large industrial building that PS used to serve has since been torn down. Re-development plans in the making. - Installed in 1950s with upgrades in the mid 1970s. - Pumps are 15-20 years old - Wetwell appears in good condition - Plenty of capacity. - Generally reliable with little maintenance issue
Dee Lane	2	<ul style="list-style-type: none"> - Submersible station in residential area next to golf course - ~ 5 hp pumps. Serves ~ 12 houses - Upgraded ~ 4 years ago with new pumps and electrical. Original station dates to 1950s - Plenty of capacity. Pumps run infrequently - Generally reliable with no maintenance issues
Soundview 1	3	<ul style="list-style-type: none"> - Small submersible station in high end residential area on the shore - ~ 3 hp pumps. Serves ~ 4 houses - Pumps are relatively old (10-20 years) - Some corrosion observed in wetwell - Generally reliable with no maintenance issues

**Stamford WPCA
Summary of Pumping Station Condition Assessments**

Soundview 2	3	<ul style="list-style-type: none"> - Small submersible station in high end commercial area on the shore - ~ 3 hp pumps. Serves 2 office buildings. Receives flow from Soundview 1 PS. - Pumps are relatively old (10-15 years) - Pumps occasionally get clogged with rubber gloves from adjacent medical building - Wetwell in good condition - Generally reliable with no maintenance issues
Pulaski St	3	<ul style="list-style-type: none"> - Small submersible station in industrial area near river. - ~ 3 hp pumps. Serves 1 home and dog shelter. Used to serve buildings across street which have since been torn down. New development is planned for the area. As a result of few users, pumps come on only about twice per month - Pumps are old (over 20 years) - Wetwell in fair condition. - Station could use an upgrade - Generally reliable with no maintenance issues
Hobson St.	2	<ul style="list-style-type: none"> - New, small submersible station in residential area on the shore - Station is a replacement of old station and is not as deep as old station was, potentially leading to build up of rags in the inlet, which can cause pump clogs - Station installed in 2009 - ~ 15 hp pumps - Other than rag issues, generally reliable
Saddle Rock	3	<ul style="list-style-type: none"> - Can pump station- Smith & Lovelass. Extremely deep. As mechanical personnel lift - Residential area - Pump station dates to 1960s or 70s. Pumps and motors replaced ~ 15-20 years ago - 2 dry pit submersible pumps, 15 hp, 500 gpm - Both pumps required under peak flow conditions - Pumps and piping generally in good condition. One pump was out for re-build during site visit. - Instrumentation is dated - Generally reliable

Stamford WPCA
Summary of Pumping Station Condition Assessments

Ranking key:

- 1- Little to No Risk
- 2- Some Risk
- 3- Moderate Risk
- 4- Significant Risk
- 5- High Risk



**City of Stamford, Connecticut
Engineer's Report**

APPENDIX

C

6 Year Capital Plan



APPENDIX C

**Stamford WPCA Six Year Capital Improvement Plan
FY 13 - FY 18**

DESCRIPTION	FY13	FY14	FY15	FY16	FY17	FY18	Total
WASTEWATER TREATMENT PLANT AND BUILDINGS							
REPLACE BOILER FOR HEATING SYSTEM AT OPS BUILDING	\$80,450						\$80,450
CLARIFIER AND THICKENER REHAB	1,566,000						1,566,000
CONCRETE REPAIRS AT PLANT SITE		50,000					50,000
PRIMARY CLARIFIERS 1 & 2 REHAB		400,000					400,000
# 3 SEC CLARIFIER SPRAY MECHANISM		50,000					50,000
SCADA UPGRADE		50,000	700,000				750,000
AIR COMPRESSORS		50,000					50,000
UPGRADE DEGRITTERS		50,000	200,000				250,000
UV UPGRADE		100,000	1,400,000				1,500,000
AERATION BLOWERS		10,000	1,400,000				1,410,000
PLANT MODIFICATIONS/HEADWORKS		100,000	500,000	3,000,000	3,000,000		6,600,000
COLLECTION SYSTEM, PUMP STATIONS & FORCE MAINS							
PURCHASE 3 NEW PORTABLE GENERATORS		100,000					100,000
ASPHALT PAVING AT PUMP STATIONS	10,760						10,760
ALVORD LANE PUMP STATION BUILDING REPAIRS		75,000					75,000
HATCH COVERS FOR PUMP STATIONS		8,000					8,000
DOUBLE WALLED FUEL TANK AT CARTER PS		15,000					15,000
CCTV EQUIPMENT FOR SEWER TRUNK LINES			300,000				300,000
REALIGN SEWER AT AVON AND HOPE ST	215,578						215,578
SEWER REHAB AT SUMMER STREET EXTENSION	185,000						185,000
RECONSTRUCT SEWER AT GLENBROOK AND CRESENT			35,000				35,000
REHAB BEDFORD STREET SEWER			30,000				30,000
RECONSTRUCT SEWER AT SNOW CRYSTAL			70,000				70,000
MANHOLE COVERS	20,000	20,000	20,000	20,000	20,000		100,000
RECONSTRUCTION OF SEWER IN FIRST STREET			82,500				82,500
CARRIAGE DRIVE AREA SEWERS		3,500,000					3,500,000
WEDGEMERE ROAD SEWERS			2,000,000				2,000,000
PERNA LANE AREA SEWERS		166,000			3,000,000		3,166,000
WEST VIEW LANE				100,000		1,500,000	1,600,000
CMOM	40,000	1,500,000	500,000	200,000	200,000		2,440,000
MISCELLANEOUS PUMP STATION MODS		150,000	150,000	150,000	150,000		600,000
SEWER REHABILITATION		1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
SLUDGE PROCESSING AND DISPOSAL							
VEHICLE REPLACEMENTS	90,000	410,000	100,000	50,000	50,000	50,000	750,000
UPGRADE/REPLACE 4 SLUDGE PUMPS		100,000					100,000
PRIMARY SLUDGE PUMPS		50,000					50,000
SHED FOR SLUDGE TRUCKS (1,000,000)							0
PELLETIZER ODOR CONTROL	48,000	50,000					98,000
FLOW DISTRIBUTION TO SEC CLARIFIERS		40,000	300,000				340,000
SLUDGE DRYER REHABILITATION					100,000	5,000,000	5,100,000
GRAVITY LINE FOR SLUDGE DEWATERING PROCESS		150,000					150,000
2013 Dollars (Annual Expenditure)	\$2,255,788	\$8,194,000	\$8,787,500	\$4,520,000	\$7,520,000	\$7,550,000	\$38,827,288

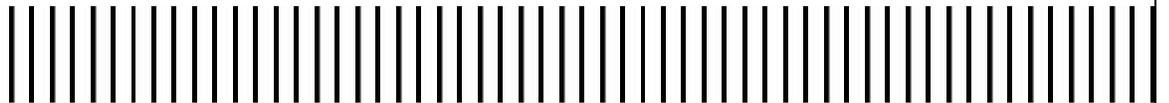


City of Stamford, Connecticut
Engineer's Report

APPENDIX

D

Significant Assumptions



Appendix D

Significant Assumptions

Summary's of Significant Forecast Assumptions and Notes to the SWPCA Financial Forecast

The accompanying Forecast, consisting of Table 8 -6, "Projected Revenues and Expenses", present the SWPCA's calculations of the Debt Service Coverage (DSC) Ratio Requirement and the financial results of operations on a cash basis for FY2013 and the subsequent four fiscal years ending June 30, 2018 (collectively referred to as the Forecast Period). This summary of significant assumptions provides information regarding the basis of the Forecast and support for the underlying assumptions. Pirnie/ARCADIS has reviewed these underlying assumptions for purposes of providing an opinion and making certain conclusions regarding the reasonableness of the Forecast – see Section 9.2 of this Report.

The Forecast has been prepared based upon 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 information provided by the SWPCA regarding the number of water customers ending FY2012 as documented by Computil (the SWPCA's contracted firm for billing services) and historical and projected future trends. For the purposes of these projections, the number of customers of the SWPCA is thereafter projected to increase at a rate of 1 percent annually over the Forecast Period.
2. Billable Metered Water Use – FY2013 billable metered water use is based on information obtained by Computil from Aquarion Water Company on behalf of the SWPCA regarding metered water consumption for SWPCA customers for the period of October 1, 2011 through March 31, 2012. This data forms the basis of the billing volumes for FY2013. For budgeting purposes, the billed metered water use is projected to be 4,300,000 ccf for FY2014 and remain flat over the planning period to account for continued water conservation efforts which 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 presented in ccf (Line Item 2).

B. Miscellaneous Revenues

4. Interest Income –FY2013 budget based on historical performance and assumed to remain constant over the forecast period. Interest earnings on fund balances have been on the order of 0.25% annually.
5. A) Special Assessment Connection Fees - Estimates based on historic performance and information provided in the FY2012 audit and FY2013 and FY2014 Budgets. Connection charges average approximately \$2.5 million annually; however, customers have the option of amortizing charges over a 15 year period with no interest charges. For the purposes of these projections it is assumed all connection charges are amortized and such revenue will increase over the FY2014 budget revenues by approximately \$167,000 annually for each year of the Forecast Period.

B) Special Assessment New Line Charges – Includes principle and interest on new line charges adjusted for doubtful accounts. Estimates based on information projected in the FY2012 Audit and the SWPCA proposed capital plan for continued sewer expansions. It is assumed that the SWPCA will charge a benefit assessment to customers equal to 40% of the sanitary sewer related cost of the new sewer expansion project and customers will amortize these costs over a 15 year period. Such amortization is subject to interest charges, assumed to equal 4% annually for the purposes of future projections. The remainder of the cost will be paid by the SWPCA; however, the SWPCA will also receive reimbursement from the City for the non-sewer related expansion costs (road paving, etc.) estimated to equal to approximately 20% of the total project cost. The proposed sewer expansion projects are identified within the SWPCA's proposed capital improvement plan presented in Appendix C to this Engineer's Report.
6. Interlocal Agreement (Darien) User Charges – Estimate based on Darien sharing in 12.5% of wastewater operating costs less facility related operating revenues such as lab and nitrogen credit revenue.
7. Darien Capital Reimbursement – Based on the Darien agreement to payment share for capital improvements to the SWPCA wastewater facilities. Future payments assumed to equal 12.5% of the SWPCA's annual debt service payment for capital improvements associated with the wastewater treatment plant.

8. Septic Tank Revenues – Based on FY2013 and FY2014 budget estimates prepared by the SWPCA. Annual projections are assumed to remain constant through FY2015 then increase by 1 percent annually thereafter.
9. Regional Lab Revenues – Based on FY2013 and FY2014 budget estimates prepared by the SWPCA and assumed to remain constant over the Forecast Period.
10. Sewer Use - Lien Fees - Based on FY2013 and FY2014 budget estimates prepared by the SWPCA. Annual projections are assumed to remain constant through FY2015 then increase by 1 percent annually thereafter.
11. Sewer Use – Delinquent Interest - Based on FY2013 and FY2014 budget estimates prepared by the SWPCA. Annual projections are assumed to remain constant through FY2015 then increase by 1 percent annually thereafter.
12. Aquarian User Charges - Based on FY2013 and FY2014 budget estimates prepared by the SWPCA. Annual projections are assumed to remain constant through FY2015 then increase by 1 percent annually thereafter.
13. Load Shedding – Based on FY2013 and FY2014 budget estimates prepared by the SWPCA. Annual projections are assumed to remain constant through FY2015 then increase by 1 percent annually thereafter.
14. Rebates – B.A.B.s – Based on the schedule of annual interest subsidies received by the SWPCA for the 2009 Build America Bonds.
15. City Reimbursement - Other - Revenue based on FY2013 and FY2014 budget estimates prepared by the SWPCA. City Reimbursements assumed to increase at 2% annually and Other revenue assumed to remain constant through FY2015 then increasing at 1% annually thereafter over the Forecast Period.
16. Nitrogen Trading Exchange Credit Revenues –Revenue from Nitrogen Credits based on FY2013 budget estimates prepared by the SWPCA, adjusted in FY2014 to account for lower nitrogen limit of CTDEEP and assumed to remain constant thereafter over the Forecast Period.

C. Receivable Management Costs

17. Billing and Collection Rate - Receivable Management Costs represent the cost of unpaid accounts. Per information provided by the SWPCA, a collection rate of 95 percent is assumed in this analysis. As such, Receivable Management Costs are projected at 5.0 percent of Total Billing Revenues.

II. System Expenses:

E. Operations & Maintenance (Items 18. through 28.)

Operations & Maintenance expenses are based on estimates made by the SWPCA in their FY2013, FY2014 and preliminary FY2015 Annual Operating Budget and projected to increase annually thereafter at a rate of 2.5% over the Forecast Period, except for Line Item 21: Sludge Process. The SWPCA's existing sludge processing contract is scheduled to expire in February 2013. The SWPCA is currently in the process of negotiating a short-term extension and anticipated issuing a request for proposal for long-term sludge processing upon expiration of the extension. It is projected by the SWPCA that upon expiration of the existing agreement and beginning in FY2014, contracted sludge processing costs will decrease by approximately \$160,000 from current FY2013 projected costs.

III. Debt Service Payments:

29. Existing 2003 Revenue Bonds – Debt Service payment schedule prior to refunding with the 2013 Series B 2013 Bonds.
30. 2013 Series A Bonds:
 - A. New Money – Anticipated schedule for new money issued to fund the FY2013-FY2015 capital improvement program is based on preliminary information provided by Raymond James | Morgan Keegan dated June 12, 2013.
 - B. Refunding of the 2003 Bonds – Anticipated schedule for repayment of the 2003 Series B Bonds is based on preliminary information provided by Raymond James | Morgan Keegan dated June 12, 2013.
31. Repayment of Existing CWF loans - CWF obligations are provided by the SWPCA and include the CWF 117-C, CWF 375-C, CWF 414-C, and CWF 414-D.
32. Repayment of Existing Revenue Bonds – The schedule for the repayment of the Series 2006 Bonds as provided by Webster Bank on January 25, 2013 on behalf of the SWPCA.
33. Existing GO Bonds (Subordinate) – The schedule for repayment of the General Obligation Debt including the 2009 Build America Bonds as provided by Webster Bank on January 25, 2013 on behalf of the SWPCA.
34. New Debt Service for Capital Improvements – New Debt Service represents anticipated debt service payments required to fund the total estimated \$20 million in capital improvement program requirements for the period of FY2016 through FY2018.

Based on the CIP, it is anticipated that additional debt will be required to fund the program. It is assumed that revenue bonds will be issued on an

annual basis to fund requirements based on a 20-year repayment term and 4 percent annual interest rate. The FY2013 program is anticipated to initially be funded through the City's pooled cash/self-supporting debt fund and then refunded in full upon issuance of the Series A 2013 revenue bonds. In the interim, the SWPCA will pay interest to the City at current City interest earnings rate of approximately 0.25%.

IV. SWPCA Cash Fund Balance Summary:

35. Beginning Balance - The beginning balance of the General Fund Reserve is the unrestricted cash ending balance in the SWPCA enterprise fund as of FY2012 based on preliminary findings of the City's FY2012 audited Financial Report.
36. Transfers In - Transfers into the fund for capital and operating reserves based SWPCA surplus revenues available after payment of debt service.
37. Transfers Out – Previous year excess revenues and unrestricted reserves transferred out to pay down the SWPCA's outstanding balance in the City's pooled cash account.
38. Ending Balance – Unrestricted Cash - Sum of Items 34 through 36.

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 Senior Lien Debt which includes the Series 2013 Bonds, the Existing Revenues Bonds (Series 2006) and Revenue Bonds for New Debt Service for Capital Improvements.
- 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.
- City Pooled Cash Account Balance is the amount owed to the City with the beginning balance based on the liability amount reported in the FY2012 audited Financial Report.

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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") and the Fifth Supplemental Indenture, dated as of August 1, 2013 (the "Fifth Supplemental Indenture"), all by and among the City, the Authority and the Trustee the Original Indenture, the First Supplemental Indenture, the Second Supplemental Indenture and the Third Supplemental Indenture are referred to collectively herein as 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 Depositary.

“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, 6th 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, 10th 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 Depositary 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 1st 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 Depository.

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

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FORM OF OPINION OF BOND COUNSEL

August 20, 2013

City of Stamford
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 \$22,095,000 aggregate principal amount of City of Stamford, Connecticut Water Pollution Control System and Facility Revenue Bonds, 2013 Series (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 on February 13, 2013 and June 13, 2013, the Board of Representatives of the Municipality on March 4, 2013 and the Authority on February 6, 2013 and June 13, 2013 (the "Financing Resolutions"), authorizing the execution and delivery of the Fifth Supplemental Indenture, dated as of August 1, 2013 (the "Fifth Supplemental Indenture"), by and among the Municipality, the Authority and the Trustee, amending and 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 February 15 and August 15 in each year until maturity, or earlier redemption, commencing February 15, 2014. 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 February 15, 2014 and August 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>
02/15/2013	\$115,000	3.00%	08/15/2025	\$865,000	5.00%
08/15/2014	190,000	3.00	08/15/2026	910,000	5.00
08/15/2015	480,000	6.00	08/15/2027	960,000	5.00
08/15/2016	515,000	6.00	08/15/2028	1,005,000	5.00
08/15/2017	545,000	6.00	08/15/2029	1,055,000	5.00
08/15/2018	580,000	6.00	08/15/2030	1,110,000	5.00
08/15/2019	615,000	6.00	08/15/2031	1,170,000	5.00
08/15/2020	650,000	6.00	08/15/2032	1,230,000	5.00
08/15/2021	690,000	6.00	08/15/2033	485,000	5.00
08/15/2022	735,000	6.00	08/15/2038	2,855,000	5.50
08/15/2023	780,000	5.50	08/15/2043	3,730,000	5.25
08/15/2024	825,000	5.00			

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 Fifth 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

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FORM OF CONTINUING DISCLOSURE AGREEMENT

CONTINUING DISCLOSURE AGREEMENT

City of Stamford, Connecticut
\$22,095,000 Water Pollution Control System and Facility Revenue Bonds, 2013 Series A
Dated August 20, 2013

August 20, 2013

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 \$22,095,000 in aggregate principal amount of their Water Pollution Control System and Facility Revenue Bonds, 2013 Series A, dated August 20, 2013 (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 12, 2013 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 12, 2013 (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



\$22,095,000
CITY OF STAMFORD, CONNECTICUT
WATER POLLUTION CONTROL SYSTEM AND FACILITY
REVENUE BONDS, 2013 SERIES A

