

FINAL OFFICIAL STATEMENT DATED JUNE 17, 2020

Refunding Issue: Book-Entry-Only

Rating: S&P Global Ratings “AA+”

In the opinion of Robinson & Cole LLP, Bond Counsel, under existing law, interest on the 2020 Series B Bonds is included in gross income for federal income tax purposes pursuant to the Code. In the opinion of Robinson & Cole LLP, Bond Counsel, based on existing statutes, interest on the 2020 Series B 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.

\$32,000,000



**GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
REGIONAL WASTEWATER SYSTEM REVENUE REFUNDING BONDS,
2020 SERIES B (FEDERALLY TAXABLE)**

Dated: Date of Delivery

Due: As Shown on Inside Cover Page

The Greater New Haven Water Pollution Control Authority Regional Wastewater System Revenue Refunding Bonds, 2020 Series B (the “2020 Series B Bonds”), are being issued, and will be secured by an Indenture of Trust, dated as of August 1, 2005 (as amended and supplemented, the “Indenture”), by and between the Greater New Haven Water Pollution Control Authority (the “Authority”) and U.S. Bank National Association (as successor to Wachovia Bank, National Association), Hartford, Connecticut, as Trustee (the “Trustee”), including the Thirty-second Supplemental Indenture, dated as of July 1, 2020. The Authority was created in August 2005 and owns and operates the Regional Wastewater System (as defined herein) pursuant to the authority granted by Sections 22a-500 to 22a-519, inclusive, of the Connecticut General Statutes, as amended.

The 2020 Series B Bonds will be special limited obligations of the Authority, payable solely from revenues and other receipts, funds and moneys pledged therefor pursuant to the Indenture, and will be secured on a parity basis with certain Bonds (as defined herein), and any additional Bonds, indebtedness or other obligations issued or incurred on a parity basis with the 2020 Series B Bonds, under the Indenture. The full faith and credit of the Authority is not pledged to the payment of the 2020 Series B Bonds, and neither the full faith and credit nor the taxing power of the State nor any municipality of the State is pledged to the payment of the 2020 Series B Bonds. The Authority has no taxing power.

Interest on the 2020 Series B Bonds will be paid semiannually on February 15 and August 15, commencing on August 15, 2020. The 2020 Series B 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. Purchases of the 2020 Series B 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 2020 Series B Bonds will be made to purchasers. So long as Cede & Co. is the registered owner of the 2020 Series B Bonds, principal and interest, as shown on the inside cover page, are payable to DTC by the Trustee. See “BOOK-ENTRY-ONLY SYSTEM” herein.

The 2020 Series B Bonds are subject to redemption prior to maturity. See “The 2020 SERIES B BONDS - Redemption Provisions” herein.

The 2020 Series B Bonds are being issued to refund a portion of outstanding 2012 Series B Bonds and 2014 Series B Bonds and to pay costs of issuance related to the 2020 Series B Bonds. See “PLAN OF FINANCE – Authorization and Purpose” herein.

The 2020 Series B Bonds are offered for delivery 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, Shipman & Goodwin LLP, of Hartford, Connecticut. U.S. Bank National Association will serve as Trustee, Registrar, Transfer, Paying, Certifying, and Escrow Agent for the 2020 Series B Bonds. It is anticipated that the 2020 Series B Bonds will be available for delivery through the facilities of DTC or its custodial agent on or about July 8, 2020.

RAYMOND JAMES



\$32,000,000
GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY
REGIONAL WASTEWATER SYSTEM REVENUE REFUNDING BONDS, 2020 SERIES B
(FEDERALLY TAXABLE)

Interest Payment Dates: February 15 and August 15, commencing on August 15, 2020
Principal Payment Dates: August 15, as shown below

<u>Due</u>	<u>Amount</u>	<u>Interest Rate</u>	<u>Yield</u>	<u>CUSIP¹</u>
2020	\$650,000	0.750%	0.750%	39222PEB6
2021	550,000	0.830%	0.830%	39222PEC4
2022	555,000	0.900%	0.900%	39222PED2
2023	560,000	1.050%	1.050%	39222PEE0
2024	565,000	1.150%	1.150%	39222PEF7
2025	825,000	1.250%	1.250%	39222PEG5
2026	835,000	1.450%	1.450%	39222PEH3
2027	850,000	1.600%	1.600%	39222PEJ9
2028	3,225,000	1.750%	1.750%	39222PEK6
2029	4,835,000	1.850%	1.850%	39222PEL4
2030	4,930,000	1.950%	1.950%	39222PEM2
2031	5,030,000	2.000%	2.000%	39222PEN0
2032	5,130,000	2.100%	2.100%	39222PEP5

\$3,460,000 3.000% Term Bond due August 15, 2042 - Yield 3.000% CUSIP¹: 39222PEQ3

¹ CUSIP is a registered trademark of the American Bankers Association. CUSIP data herein are provided by Standard & Poor's CUSIP Service Bureau, a division of The McGraw-Hill Companies, Inc. The CUSIP numbers listed above are being provided solely for the convenience of Bondholders only at the time of issuance of the 2020 Series B Bonds and the Authority does not make any representation with respect to such numbers or undertake any responsibility for their accuracy now or at any time in the future. The CUSIP number for a specific maturity is subject to being changed after the issuance of the 2020 Series B Bonds as a result of procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of certain maturities of the 2020 Series B Bonds.

No dealer, broker, salesperson or other person has been authorized by the Authority, Phoenix Advisors, LLC and Query & Associates, LLC (the “Co-Municipal Advisors”) 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 Authority, the Co-Financial Advisors 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 2020 Series B 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 provided by the Authority and obtained from other sources which are believed to be reliable, but the Authority has not independently verified such information. The information herein is subject to change without notice, and neither the delivery of this Official Statement nor any sale made thereafter shall, under any circumstances, create any implication that there has been no change in the affairs of the Authority or in any other information contained herein, since the date hereof.

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 Authority 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 Authority, the Co-Financial Advisors 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 Authority. These forward-looking statements speak only as of the date of this Official Statement. The Authority disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained herein to reflect any change in the Authority’s expectations with regard thereto or any changes in events, conditions or circumstances on which any such statement is based.

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.

Underwriter’s Counsel is not passing upon and does not assume responsibility for the accuracy or adequacy and completeness of the statements made in this Official Statement, and it makes no representation that it has independently verified the same.

U.S. Bank National Association by acceptance of its duties as Trustee under the Indenture, as amended and supplemented, has not reviewed this Official Statement and makes no representations as to the information contained herein, including but not limited to, any representations as to the use of the proceeds, the financial feasibility of the system or related activities.

Bond Counsel is not passing upon and does not assume responsibility for the accuracy or adequacy of the statements made in this official statement (other than matters expressly set forth in its opinion attached hereto as Appendix D), and it makes no representation that it has independently verified the same.

IN CONNECTION WITH THE OFFERING OF THE 2020 SERIES B BONDS, THE UNDERWRITER MAY OVERALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF SUCH 2020 SERIES B BONDS AT LEVELS ABOVE THOSE WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

The 2020 Series B Bonds have not been registered under the Securities Act of 1933, as amended, nor have the 2020 Series B Bonds been registered under any state securities laws.

The Authority deems the Official Statement to be “final” for purposes of the Securities and Exchange Commission Rule 15c2-12(b)(1), but it is subject to revision or amendment.

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GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

Board of Directors

<u>Name/Title</u>	<u>Appointing Constituent Municipality</u>	<u>Term Expires</u>
Stephen A. Mongillo, <i>Chairman</i>	Hamden	12/31/2022
Clayton Williams, Vice <i>Chairman</i>	New Haven	12/31/2022
Salvatore DeCola, Director	New Haven	12/31/2022
Joyce Alton, Director	New Haven	12/31/2022
Raymond Pompano, Director	East Haven	12/31/2020
Russell N. Cyr., Director	Hamden	12/31/2020
Michael Fimiani, Director	New Haven	12/31/2021
Jeffrey D. Ginzberg, Esq., Director	Woodbridge	12/31/2021
Robert Falcigno, Director	East Haven	12/31/2021

Management and Officers

<u>Name</u>	<u>Position</u>
Sidney J. Holbrook	Executive Director
Gabriel Varca	Treasurer and Director of Finance and Administration
Thomas Sgroi, P.E.	Director of Engineering
Gary Zrelak	Director of Operations

BOND COUNSEL - Robinson & Cole LLP
Hartford, Connecticut

CO-MUNICIPAL ADVISOR – Phoenix Advisors, LLC
Milford, Connecticut

CO- MUNICIPAL ADVISOR – Query & Associates, LLC
Philadelphia, Pennsylvania

COST OF SERVICE CONSULTANTS – Arcadis, Inc. and O’Neil Accounting & Consulting
White Plains, New York / Marlborough, Connecticut

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OFFICIAL STATEMENT

\$32,000,000

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY REGIONAL WASTEWATER SYSTEM REVENUE REFUNDING BONDS, 2020 SERIES B (Federally Taxable)

INTRODUCTION

The purpose of this Official Statement is to furnish information regarding the issuance by the Greater New Haven Water Pollution Control Authority (the “Authority”) and the security for the \$32,000,000 aggregate principal amount of its Regional Wastewater System Revenue Refunding Bonds, 2020 Series B (the “2020 Series B Bonds”) under and pursuant to Section 22a-500 to 22a-519, inclusive, of the Connecticut General Statutes, as amended (the “Act”), and an Indenture of Trust dated as of August 1, 2005 (as amended and supplemented, the “Original Indenture”), by and between the Authority and U.S. Bank National Association (as successor to Wachovia Bank, National Association), Hartford, Connecticut, as Trustee (the “Trustee”), as further supplemented by the Thirty-second Supplemental Indenture, dated as of July 1, 2020 (the “Thirty-second Supplemental Indenture” and together with the Original Indenture, the “Indenture”).

The 2020 Series B Bonds are being issued to refund a portion of the 2012 Series B Bonds, and a portion of the 2014 Series B Bonds, and to pay costs of issuance related to the 2020 Series B Bonds.

The Indenture constitutes a contract between the Authority, the Trustee and the holders from time to time of the Bonds (as hereinafter defined). The 2020 Series B Bonds are the seventh issuance of Regional Wastewater System Revenue Bonds (“Revenue Bonds”) under the Indenture. In addition to Revenue Bonds, the Indenture also secures loans made by the State of Connecticut pursuant to the Clean Water Fund Act (“Clean Water Fund Obligations”). The Clean Water Fund Obligations include Project Loan Obligations (as hereinafter defined) in an original principal amount of approximately \$98 million, of which approximately \$50 million are outstanding as of July 1, 2020. The Clean Water Fund Obligations include Project Loan Obligations previously issued by the Constituent Municipalities (as hereinafter defined) prior to the acquisition of each constituent municipality’s sewerage system (the “Assumed Clean Water Fund Obligations”). The Authority’s Regional Wastewater System Revenue Bonds, 2005 Series A (the “2005 Series A Bonds”), the 2008 Clean Renewable Energy Bonds (the “CREBs”), the Regional Wastewater System Revenue Bonds, 2012 Series B (the “2012 Series B Bonds”), the Regional Wastewater System Revenue Refunding Bonds, 2014 Series B (the “2014 Series B Bonds”), the Regional Wastewater System Revenue Refunding Bonds, 2016 Series A (the “2016 Series A Bonds”), the 2020 Series B Bonds, the Clean Water Fund Obligations and any additional bonds, indebtedness and obligations of the Authority issued or incurred pursuant to the Indenture on a parity basis with the 2005 Series A Bonds, the CREBs, the 2012 Series B Bonds, the 2014 Series B Bonds, the 2016 Series A Bonds, the 2020 Series B Bonds, and the Clean Water Fund Obligations are collectively referred to herein as the “Bonds.”

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

The Greater New Haven Water Pollution Control Authority

The Greater New Haven Water Pollution Control Authority is a regional water pollution control authority that owns and operates a wastewater collection and treatment system (the “Regional Wastewater System”). The Authority’s service area embraces the 83-square-mile territory of four contiguous municipalities - New Haven, East Haven, Hamden and Woodbridge (the “Constituent Municipalities”). The Regional Wastewater System also accepts sewerage discharges from the Towns of North Branford and North Haven pursuant to contracts.

The Authority was created pursuant to the Act by concurrent ordinances of the four Constituent Municipalities adopted in June 2005 for the purpose of consolidating services for the Constituent Municipalities, improving the overall Regional Wastewater System performance and assuring the provision of adequate wastewater management and water pollution control services within the service area.

The Board of Directors of the Authority (the “Board of Directors”) comprises nine members from the Constituent Municipalities. Four directors are appointed by the City of New Haven, two directors are appointed by each of the Towns of Hamden, and East Haven, and the remaining director is appointed by the Town of Woodbridge. The Authority’s Bylaws provide the method of appointment, compensation and terms of office for members of the Board of Directors. The powers of the Authority are exercised by the nine-member Board of Directors. See “THE AUTHORITY” herein.

Security for the 2020 Series B Bonds

The 2020 Series B Bonds are special limited obligations of the Authority payable solely from Revenues and other receipts, funds and moneys pledged therefor pursuant to the Indenture. The full faith and credit of the Authority is not pledged to the payment of the 2020 Series B Bonds, and neither the full faith and credit nor the taxing power of the State nor any municipality of the State is pledged to the payment of the 2020 Series B Bonds. The Authority has no taxing power.

Under the Indenture, the Authority has 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 Regional Wastewater System that, together with amounts capitalized from the proceeds of Bonds and amounts otherwise made available from the General Fund will be sufficient in each Fiscal Year to pay Operating Expenses and provide for: the 115% Debt Service Coverage Ratio Requirement (amounts withdrawn and available for withdrawal from the General Fund are limited to 15% of debt service for this requirement) and restoration of any account within the Debt Service Reserve Fund for the Bonds and any debt service reserve fund created and maintained for Parity Indebtedness to their required deposit levels. The Authority has also covenanted to 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 sufficient in each Fiscal Year to provide for the Operating Expenses of the Authority and debt service on Parity Obligations and Subordinated Indebtedness coming due in such Fiscal Year. See Appendix C - SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE.

Under the Act, the rate-setting power of the Authority is not subject to regulation, review or reduction by the State Public Utilities Regulatory Authority or any other body. See "SECURITY AND PLEDGE OF THE INDENTURE – Security and Pledge and Rate Covenant."

As permitted by the Act, the Authority has included in the Indenture the pledge and agreement of the State not to limit or alter the rights vested in the Authority to contract with any bondholders or noteholders until all obligations of the Authority to such holders have been fully met or discharged.

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PLAN OF FINANCE

Authorization and Purpose

On February 11, 2020, the Board of Directors of the Authority authorized the issuance of up to \$32,000,000 revenue refunding bonds to refund all or portions of the 2012 Series B Bonds and 2014 Series B Bonds and to pay costs of issuance of the 2020 Series B Bonds.

Plan of Refunding

The 2020 Series B Bonds are being issued to refund at or prior to maturity certain outstanding maturities of the Authority's 2012 Series B Bonds and 2014 Series B Bonds (the "Refunded Bonds") as set forth below. The refunding is contingent upon delivery of the 2020 Series B Bonds.

Bond	Maturity Date	Interest Rate	Par Amount	Call Date	Call Price	CUSIPS
Regional Wastewater System Revenue Bonds, 2012 Series B:						
	07/01/2025	3.375%	\$ 255,000	07/01/2022	100.000	39222PCB8
	07/01/2026	3.375%	265,000	07/01/2022	100.000	39222PCB8
	07/01/2027	3.375%	<u>275,000</u>	07/01/2022	100.000	39222PCB8
			\$795,000			
	07/01/2028	5.000%	285,000	07/01/2022	100.000	39222PCC6
	07/01/2029	5.000%	300,000	07/01/2022	100.000	39222PCC6
	07/01/2030	5.000%	315,000	07/01/2022	100.000	39222PCC6
	07/01/2031	5.000%	330,000	07/01/2022	100.000	39222PCC6
	07/01/2032*	5.000%	<u>345,000</u>	07/01/2022	100.000	39222PCC6
			\$1,575,000			
	07/01/2033	4.000%	\$ 360,000	07/01/2022	100.000	39222PCD4
	07/01/2034	4.000%	375,000	07/01/2022	100.000	39222PCD4
	07/01/2035	4.000%	390,000	07/01/2022	100.000	39222PCD4
	07/01/2036	4.000%	410,000	07/01/2022	100.000	39222PCD4
	07/01/2037*	4.000%	<u>425,000</u>	07/01/2022	100.000	39222PCD4
			\$1,960,000			
	07/01/2038	4.000%	\$ 440,000	07/01/2022	100.000	39222PCE2
	07/01/2039	4.000%	460,000	07/01/2022	100.000	39222PCE2
	07/01/2040	4.000%	475,000	07/01/2022	100.000	39222PCE2
	07/01/2041	4.000%	495,000	07/01/2022	100.000	39222PCE2
	07/01/2042*	4.000%	<u>515,000</u>	07/01/2022	100.000	39222PCE2
			\$ 2,385,000			
Regional Wastewater System Revenue Refunding Bonds, 2014 Series B:						
	08/15/2028 ¹	5.000%	\$2,400,000	08/15/2024	100.000	39222PCV4
	08/15/2029	5.000%	4,100,000	08/15/2024	100.000	39222PCW2
	08/15/2030	5.000%	4,315,000	08/15/2024	100.000	39222PCX0
	08/15/2031	5.000%	4,535,000	08/15/2024	100.000	39222PCY8
	08/15/2032	5.000%	<u>4,765,000</u>	08/15/2024	100.000	39222PCZ5
			\$20,115,000			

* Final maturity of Term Bonds

⁽¹⁾ Partially Refunded

Upon delivery of the 2020 Series B Bonds, a portion of the 2020 Series B 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 (the “Escrow Agreement”) dated as of July 1, 2020 between the Escrow Agent and the Authority. The Escrow Agent will use such proceeds to purchase a portfolio of non-callable direct obligations of, or obligations guaranteed by, the government of the United States of America, including United States Treasury State and Local Government Series (“SLGS”) securities, Federal National Mortgage Association (“FNMA”) securities, and any other securities permitted by Section 7-400 of the Connecticut General Statutes, all of which shall not be callable or pre-payable at the option of the issuer thereof (the “Escrow Securities”). The Authority may also enter into an agreement to reinvest receipts from Escrow Securities not immediately required to pay the principal of and redemption premium, if any, and interest on the Refunded Bonds. All investment income on and the maturing principal of the Escrow Securities held in the Escrow Deposit Fund will be irrevocably deposited by the Authority for payment of the Refunded Bonds. The balance of the proceeds of the 2020 Series B Bonds will be used to pay costs of issuance and the Underwriter’s discount.

Verification of Mathematical Computations

American Municipal Tax-Exempt Compliance Corporation dba AMTEC, of Avon, Connecticut and Michael Torsiello, C.P.A. (an independent Certified Public Accountant) of Morrisville, North Carolina (together, the “Verification Agent”) will verify from the information provided to it the mathematical accuracy as of the date of the closing of the 2020 Series B Bonds of 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 of, interest on and applicable call premium, if any, payment requirements of the Refunded Bonds. The Verification Agent will express no opinion on the assumptions provided to it.

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THE AUTHORITY

General

The Authority is a public body politic and corporate, and a political subdivision of the State established and created for the performance of an essential public and governmental function. Pursuant to the Act, the Authority has the power to own and operate the Regional Wastewater System; to levy assessments and sewer use fees; to place liens on real estate to secure such assessments and fees; and to issue revenue bonds. The Authority is also eligible for grants and loans under the State Clean Water Fund program.

The Authority was created pursuant to the Act by concurrent ordinances of the Constituent Municipalities, acting through their respective legislative bodies in June 2005 for the purpose of consolidating services for the Constituent Municipalities, improving the overall Regional Wastewater System performance and assuring the provision of adequate wastewater management and water pollution control services within the service area. The Commissioner of the Department of Environmental Protection and the State Treasurer reviewed the Authority's preliminary plan of operation, as prepared and submitted by the Constituent Municipalities, in July 2005.

On August 29, 2005 (the "Regionalization Date"), the Authority acquired the wastewater systems of the Constituent Municipalities with a portion of the proceeds of the Authority's 2005 Series A Bonds. The Authority also assumed the outstanding Clean Water Fund Obligations (the "Assumed Clean Water Fund Obligations") of the Constituent Municipalities. Pursuant to an agreement between the City of New Haven and the Authority, the City of New Haven is responsible for 40% of the costs associated with certain Assumed Clean Water Fund Obligations issued pursuant to the Combined Sewer Overflow (CSO) plan. See "Connecticut Department of Energy and Environmental Protection" herein.

The Authority operates the Regional Wastewater System including the wastewater treatment plant located in New Haven (the "Treatment Plant") and collects, transports, treats and disposes of sewage generated in the Constituent Municipalities, as well as a small portion of sewerage discharges of the Towns of North Branford and North Haven, pursuant to a contract.

The average daily flow at the Treatment Plant is about 29 million gallons per day ("MGD"). The Treatment Plant has an average daily design flow capacity of 40 MGD and provides primary and secondary treatment for all wastewater influent up to 60 MGD. During high flow events (maximum of 100 MGD) all flow receives primary treatment; however, flow exceeding 60 MGD bypasses secondary treatment but receives disinfection along with the secondary effluent prior to discharge. The Treatment Plant provides the following unit processes: screening and grit removal, raw waste pumping, three primary clarifiers, four aeration trains, eight secondary clarifiers, gravity thickeners and chlorine disinfection prior to discharge. Thickened sludge is delivered to the on-site sewage sludge incinerator for processing.

Governance and Management

Board Membership and Responsibilities

The Authority is governed by a nine-member Board of Directors. By ordinance and Bylaws of the Authority, four Directors are appointed by the City of New Haven, two Directors are appointed by each of the Town of Hamden and East Haven, and one Director is appointed by the Town of Woodbridge. The members of the Board of Directors are shown below.

<u>Name/Title</u>	<u>Appointing Constituent Municipality</u>	<u>Term Expires</u>
Stephen A. Mongillo, <i>Chairman</i>	Hamden	12/31/2022
Clayton Williams, <i>Vice Chairman</i>	New Haven	12/31/2022
Salvatore DeCola, <i>Director</i>	New Haven	12/31/2022
Joyce Alton, <i>Director</i>	New Haven	12/31/2022
Raymond Pompano, <i>Director</i>	East Haven	12/31/2020
Russell N. Cyr., <i>Director</i>	Hamden	12/31/2020
Michael Fimiani, <i>Director</i>	New Haven	12/31/2021
Jeffrey D. Ginzberg, Esq., <i>Director</i>	Woodbridge	12/31/2021
Robert Falcigno, <i>Director</i>	East Haven	12/31/2021

Under the Bylaws, a majority vote of the Directors is required to approve standard business of the Authority. Certain matters, such as entering into an agreement with respect to the distribution of rights and properties of the Authority upon the termination of its corporate existence, entering into or approving any sludge agreement, entering into any inter-local agreement, entering into any agreement with respect to the sale or lease of assets of the Authority which would leave the Authority without a significant continuing business activity, removal of a Director, awarding of a contract by negotiation without public bidding, amending, modifying, restating or replacing the Sewer Ordinance, and increasing the permitted processing capacity of the Authority's Treatment Plant, would require a two-thirds vote of the Directors.

The Board of Directors establishes insurance, health care, retirement, and other employee benefits as it deems necessary and convenient for the effective administration of the Authority. Key management positions are designated in each function area under the major divisions of Finance & Administration, Engineering and Operations.

Management and Staff

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

Sidney J. Holbrook, Executive Director. Mr. Holbrook is the Executive Director of the Authority. He has 35-years of wastewater, environmental and public management experience. Mr. Holbrook has served as the Executive Director of the Authority since 2009. Prior to this position, he owned and operated the Monoflo Septic Tank Co., Inc. in Westbrook, Connecticut and was the principal of SJH Associates which provided Environmental Consulting Services. Mr. Holbrook also served as Governor John Rowland's Chief of Staff from 1997 to 2002, directly overseeing sixteen (16) State agencies including the Department of Environmental Protection, Department of Transportation, Department of Public Health and Department of Social Services. Prior to his tenure as Chief of Staff, Mr. Holbrook served as the Commissioner of the Department of Environmental Protection. On May 10, 2011, Mr. Holbrook was recognized by the National Association of Clean Water Agencies in Washington, D.C. with a Public Service Award for his dedication to Environmental Stewardship. As Executive Director, his responsibilities include managing and directing all administrative, operational and financial activities and programs of the Authority.

Gabriel Varca, Treasurer and Director of Finance and Administration, CPA. Mr. Varca is the Treasurer and Director of Finance and Administration for the Authority. For 28 years, Mr. Varca held various operations and management positions with the New Haven Water Pollution Control Authority ("NHWPCA"). He assists the Executive Director in the creation of the operating budget and capital improvement plan budget and is responsible for the administrative and financial operations of the Authority including accounting, finance, billing and collections. Mr. Varca has a Class III Wastewater Operators License from the Connecticut Department of Environmental Protection and earned a B.S. in Accounting from Connecticut State University.

Thomas V. Sgroi, P.E., Director of Engineering. Mr. Sgroi is the Director of Engineering for the Authority. Mr. Sgroi has over 25 years of engineering and construction management experience. His responsibilities include completion of executive management work for the Authority's planning and engineering programs, which include design, construction, utility services, GIS, mapping, records management and capital improvement projects. Mr. Sgroi earned a B.S. in Civil Engineering from the University of Hartford. He is also a Licensed Professional Engineer in the State of Connecticut.

Gary Zrelak, Director of Operations. Mr. Zrelak is the Director of Operations for the Authority. He has over 30 years of experience in wastewater operations. His responsibilities include supervising and managing the performance of the Authority's contract operator for the water pollution control facilities, sanitary sewer collection systems and pumping stations within State and Federal regulations. Prior to his employment by the Authority, Mr. Zrelak was the Process Control Superintendent for the NHWPCA for more than seven years. Mr. Zrelak earned a B.S. in Agronomy, College of Agriculture, University of Connecticut and a M.S. Degree in Environmental Science from the University of New Haven. He also holds a Class IV Wastewater Operators License from the Connecticut Department of Environmental Protection and a Class IV Collection Systems License from the New England Water Pollution Control Association.

Employee Relationships

The Authority currently has 64 full and part-time employees and two four-year Collective Bargaining Agreements. The first agreement is: with Local 1303-434, American Federation of State, County and Municipal Employees ("AFSCME"), AFL-CIO. This union represents the Authority's operations, customer service and collection system maintenance employees. The second is with AFSCME Local 818-054. This union represents the Authority's supervisory employees. The agreements were renewed in June 2020 and are effective through June 30, 2024. They include salary adjustments of 3.0% per year.

The Authority is a member of the Connecticut Municipal Employees Retirement Plan, a State-maintained pension plan with ninety-seven municipal members. In addition, the Authority maintains a deferred compensation 457(b) eligible savings retirement plan; a tuition reimbursement plan; and an individual and family health and dental insurance plan. The Authority does not provide other-post employment benefits such as health or life insurance.

Operations and Maintenance

During the 15-year period from 1998 through 2013, Operations Management International, Inc. (OMI) was the contract operator and maintenance provider for the Authority's Treatment Plant and collection system pursuant to a 1997 contract that was assumed by the Authority on the Regionalization Date in 2005. Upon expiration of the 1997 contract, the Authority took back the operations of the Treatment Plant and collection system effective January 1, 2014 and entered into a Confidential Settlement Agreement dated May 12, 2016 with OMI and its parent company CH2M Hill, Ltd to fully and finally resolve any disputes between the parties (see Litigation). The Authority continues to operate the Treatment Plant, pump stations and operate and maintain the wastewater collection system with its own staff. Maintenance of the Treatment Plant and pump stations, however, is contracted to New Haven Residuals, LP ("New Haven Residuals"), an affiliate of Synagro (see below).

Synagro

Synagro Technologies ("Synagro") describes itself as the country's largest recycler of organic residuals for water and wastewater residuals management. On the Regionalization Date, the Authority assumed the 1995 contract of the New Haven Water Pollution Control Authority with Synagro. The 1995 contract has been extended until 2024 pursuant to that certain Second Amended and Restated Operating Agreement dated August 25, 2014 (the "Agreement"). Under the Agreement, Synagro continues to undertake responsibility for the receipt and disposal of sludge generated by the Treatment Plant. The sludge is incinerated at the on-site incinerator. The Authority compensates Synagro under the Agreement at a price per ton with escalators and adjustments.

Pursuant to a fifteen-year contract with New Haven Residuals (an affiliate of Synagro) dated October 2, 2013 and commencing January 4, 2014 (the "Synagro Maintenance Contract"), New Haven Residuals undertook responsibility for the maintenance of the Authority's Treatment Plant and pump stations. The Authority compensates New Haven Residuals on a fixed annual fee basis with escalators and adjustments.

The Service Area

The service territory of the Authority's Regional Wastewater System consists of the Constituent Municipalities. The service territory also includes portions of North Branford and North Haven which are served pursuant to contracts (the "Interlocal Agreements") assumed by the Authority on the Regionalization Date from East Haven and Hamden. The municipalities of North Branford, North Haven are not Constituent Municipalities and as such have no seat on the Board of Directors. The physical assets of the Authority include 30 wastewater-pumping stations, approximately 510 miles of sanitary sewers, 50 miles of combined storm and sanitary sewers, eight siphons, one wet weather storage tank and the Treatment Plant, including the on-site sludge incinerator.

The Authority serves a population of approximately 200,000, including residential, commercial, government and non-profit customers. The Authority provides wastewater service to approximately 48,000 customers. The population in the service area has been stable, experiencing small increases in recent years. The customer base is expected to continue to remain relatively stable over the next five to ten years since no significant sewer extensions are currently planned or in development.

The Constituent Municipalities' customer base (the "Service Area") and metered water consumption, which was assumed by the Authority, has remained relatively constant over the past five years. There have been some periods of declining water consumption due to the implementation of water conservation programs and customer response to other water company initiatives, which have resulted in decreased water consumption. In general, the consequence to the Authority of declining water consumption in the Service Area is that the Authority will have to increase its billing rates tied to water consumption to obtain the same level of revenue that lower rates would have produced with higher water consumption. The Authority maintains a minimum consumption of 15 hundred cubic feet (ccf) in the Service Area per quarter as a means of producing revenue consistent with cost of operations. The Authority anticipates that the water consumption trends over the next five years will be consistent with recent experience.

**Top Customers
Fiscal Year 2019**

Name	User Fees	Consumption	Percentage of Revenue (1)
Yale University	\$2,613,327	555,922	6.29%
City of New Haven Housing Authority	1,031,716	223,871	2.48%
American Greenfuels LLC (2)	632,829	10,393	1.52%
Yale New Haven Hospital	630,037	127,244	1.52%
Southern CT State University	365,667	77,204	0.88%
Quinnipiac University	359,086	75,308	0.86%
State of Connecticut (Whalley Ave)	263,223	57,540	0.63%
Calabro Cheese Company (2)	194,159	25,260	0.47%
JSIP Town Walk LLC	141,207	30,899	0.34%
GM Broadmore Apartments LP	138,613	30,324	0.33%
Total	\$6,369,864	1,213,965	15.34%

(1) Based on total Fiscal Year 2019 billing revenues of \$41,518,244

(2) Includes High Strength Surcharges

CCF rate = \$4.56

The Interlocal Agreements

The Authority accepts and disposes of wastewater originating within a portion of the Town of North Branford and portions of the Town of North Haven for which the Authority charges the towns in accordance with the terms and conditions of, as applicable (i) that certain Interlocal Agreement dated August 2009 with the Town of North Branford, and (ii) that certain Interlocal Agreement with the Town of North Haven dated November 2019. The Authority serves approximately 530 homes in total in the Towns of North Branford and North Haven. The annual revenue from these customers is estimated at approximately \$160,000 annually.

Administrative Orders

The Authority and the Connecticut Department of Energy and Environmental Protection (“CTDEEP”) entered into an administrative consent order, dated July 1, 2009, concerning the design and implementation of combined sewer overflow (“CSO”) control projects. The Authority is undertaking the plans and projects in compliance with the consent order. This has included the closure of several combined sewer overflow regulators and outfalls, the construction of green infrastructure throughout the combined sewer overflow service area, the preparation of the 2016 Long-Term Control Plan Update, and the completion of a \$60 million plant upgrade in 2016. The Consent Order dated July 1, 2009, was modified on July 7, 2015 and again on November 12, 2019 (as modified, the “Order”), to recognize the significant progress made toward its goals and to eliminate completed and/or no longer relevant requirements. The Order identifies the specific plans and projects contemplated to be undertaken within the next five-years as well as generally through 2040. This includes the preparation of Long-Term Control Plan Update every five years. The Authority and the CTDEEP continue to have discussions regarding the plan, projects, and information requirements.

Through the implementation of the ongoing LTCP improvements, an actual reduction of CSO volumes of 93.63 million gallons (MG) during the Typical Year (down to 32.4 MG from 125.93 MG baseline) was identified as of the 2016 Conditions Hydraulic Model. Furthermore, the Authority has since completed many of the Short-Term Control Plan improvements identified in its 2016 LTCP Update, which result in an additional CSO volume reduction of approximately 12.8 MG (down to 19.6 MG), resulting in a total reduction to date of over 84%.

The Authority leads in State with respect to its achievements in reducing CSO’s discharges to the Long Island Sound. Biennial studies conducted by Save the Sound have demonstrated that water quality in the Sound is improving. The 2018 Long Island Sound Report Card gives an “A” rating to the water quality of the Sound within the Authority’s discharge area.

Sewer Ordinance

General

The Authority's Sewer Ordinance (the "Sewer Ordinance") governs the operation, maintenance and expansion of the Regional Wastewater System. In order to guarantee consolidated operation, maintenance and expansion of the Regional Wastewater System by the Authority, the Sewer Ordinance repealed similar ordinances of its Constituent Municipalities which, prior to the Regionalization Date, served to govern operation, maintenance and expansion of their individual wastewater systems. Material provisions of the Sewer Ordinance are summarized below.

Regional Wastewater System Extensions and Expansions

In the case of any proposal to extend or expand the capacity of the Regional Wastewater System, the Authority, prior to implementing any such extension or expansion, shall provide notice to and shall obtain the consent and required approval(s) of the governing body of the municipality in which such proposed sanitary sewer extension or expansion is located; provided, however, that expansions of capacity only, expansions due to emergency situations or other exigent circumstances beyond the reasonable control of the Authority, and expansions related to normal maintenance and in accordance with prudent industry practices shall not require prior consent and approval of any Constituent Municipality.

Assessment of Benefits; Benefit Charge

Pursuant to provisions contained in the Act, the Authority may levy and collect benefit assessments upon the lands and buildings within its jurisdiction, which, in its judgment, are especially benefited by a sanitary sewer, according to such rules as the Authority may adopt, subject to the right of appeal, as provided therein.

No assessment shall be made until after a public hearing before the Authority, at which the owner of the property to be assessed shall have an opportunity to be heard concerning the proposed assessment.

Assessments, including any installment thereof, shall be due and payable at such time as it is fixed by the Authority, provided no assessment shall become due until the work, or particular portion thereof for which such assessment was levied, has been completed.

Any assessment of benefits, including any installment thereof, that is not paid within 30 days after the due date shall be delinquent, shall be subject to interest and shall constitute a lien upon the property assessed and a charge upon the owner thereof.

Rates Established

Charges for sanitary sewer services furnished by the Authority for residential, commercial, industrial and institutional users shall be established and revised from time to time by the Authority in accordance with the Act, the Connecticut General Statutes as amended, and the United States Code.

Rates for Property Located Outside the Authority's Service Territory

The charges to be made by the Authority for sewer service to property outside the limits of the Authority's service territory shall be established on the basis of a formal contract with the Authority or billed directly to such customers, the charges established in the contract to be not more than the actual costs to the Authority to provide the sewer service, and the contract shall be approved by the Authority.

No Reduced Rates or Free Service Permitted

All persons owning, renting, leasing or having management or control of property or premises that produce waste that is discharged into the Regional Wastewater System, including domestic waste, and subject to the provisions of the Sewer Ordinance, shall be charged the rates established by the Authority, and no reduced rates or free sanitary sewer services shall be furnished to any such person, property or premises. In all cases, the owner of property shall have final responsibility for the payment of sewer charges.

Billing and Collection

Billing for sewer services is made to the Authority's customers at least semi-annually or monthly or quarterly depending on location and monthly water use. All sewer user charges are due and payable in full upon receipt of the bill. Any charges not paid in full within the 30 calendar days of the date of the bill are considered delinquent and bear interest from the date of the bill at the rate provided by the Connecticut General Statutes for delinquent property taxes.

Cost of Service Study; Proposed Rates

Pursuant to the Sewer Ordinance, the Executive Director ensures that a Cost of Service Study is performed at least annually. The objective of the Cost of Service Study is to produce a schedule of recommended user rates and charges for the customers of the Authority's Regional Wastewater System which will be sufficient to meet the anticipated costs of operating the System for the upcoming fiscal year.

The Cost of Service Study shall include:

- A review and evaluation of the proposed expense budget for the upcoming fiscal year, and preparation of cost estimates for the succeeding four fiscal years based on the Executive Director's cost estimates.
- A review and evaluation of the proposed revenue budget for the upcoming fiscal year, and preparation of revenue estimates for the succeeding four fiscal years based on the Executive Director's revenue estimates.
- Determination of the projected revenue requirement from user rates for the upcoming fiscal year and the succeeding four fiscal years.
- Development of a schedule of recommended rates and charges sufficient to support the estimated annual revenue requirements from user rates for the upcoming fiscal year and the succeeding four fiscal years.
- Analysis of the Authority's historical collection rate, including the current fiscal year and the Executive Director's estimate of the collection rate for the upcoming fiscal year.
- Preparation of a report documenting recommendations, assumptions and methodology.
- Such other information as required by the Executive Director from time to time.

The Executive Director shall review the results and submit the Cost of Service Study to the Board of Directors on or before the third Monday in April.

Annual Budget; Sewer User Charge

The Executive Director shall submit an Annual Budget consisting of the next fiscal year's projected expenditures and recommended user rates and charges and a proposed Annual Budget for the upcoming fiscal year; an annual update to the Five Year Capital Improvement Plan; and the impact of the Annual Budget of the next fiscal year's projected expenditures and revenues and user rates and charges to the Authority's Board of Directors and file it with the city/town clerk of each of the Constituent Municipalities on or before the third Monday in April. Within ten (10) business days after such submission, the Annual Budget which consists of the next fiscal year's projected expenditures and recommended user rates and charges and a proposed Annual Capital Budget for the upcoming fiscal year; an annual update to the Five Year Capital Improvement Plan; and the impact of the Annual Budget of the next Fiscal year's projected expenditures and revenues and user rates and charges shall be published once in a newspaper having general circulation in each of the Constituent Municipalities. After such publication, but no earlier than ten (10) business days after public notice thereof, the Authority's Board of Directors shall hold a public hearing on such Annual Budget of the next fiscal year's projected revenue and expenditures and recommended user rates and charges and consider and act on such Annual Budget of the next fiscal year's projected revenues and expenditures and recommended user rates and charges on or before the first Monday in June.

Within five (5) days of filing with the city/town clerk of each of the Constituent Municipalities by the Authority's Board of Directors, the Annual Budget of the next fiscal year's projected expenditures and revenues and the approved user rates and charges shall be published once in a newspaper having general circulation in each of the Constituent Municipalities. Each year the Annual Budget shall include a line item for unanticipated operating contingencies. The Executive Director shall make specific requests to the Authority's Board of Directors for the Authority to expend funds from the contingency account from time to time subject to certification by the Treasurer as to the availability of funds.

The Executive Director shall submit one (1) copy of the adopted Annual Budget of the Authority to the State of Connecticut Office of Policy and Management by July first of each year or within thirty (30) calendar days after the adoption of the budget, whichever is later pursuant to the Act.

Rates and Sewer Charges

The Authority is empowered to establish and impose just and equitable fees, rates, charges and penalties and levy assessments of property benefited by the Regional Wastewater System for any services it performs. The Board of Directors is responsible for approval of all fees, rates, charges and penalties. Rates are based on metered water flow use and billed directly to the user on a quarterly basis unless otherwise specified.

Following a public hearing on May 12, 2020, the Authority adopted its schedule of rates and charges for Fiscal Year ended June 30, 2021 and approved in principle, subject to annual review, increases to such schedule for Fiscal Years 2022 through 2025 sufficient to meet the 115% Debt Service Coverage Ratio Requirement, taking into account the anticipated issuance of additional revenue bonds and Clean Water Fund Obligations estimated to be necessary to support its adopted five-year

capital plan. See Appendix B – “Cost of Services Study Fiscal Year 2021”. The Authority’s fiscal year capital budget and the annual budget for Fiscal Year 2021 (the “Capital Budget”), which includes updates and revisions to the Authority’s five-year Capital Improvement Program (through Fiscal Year 2025), anticipates the issuance of about \$58 million in additional permanent Project Loan Obligations and no additional revenue bonds over the next five years.

Billing Procedure

Customers of the Authority are classified according to the nature of their water consumption. All homes, dormitories and apartment buildings are classified as residential, all manufacturing enterprises in which water is used as part of the manufacturing process are classified as industrial, and all business and institutional enterprises other than those classified as industrial are classified as commercial; municipal and other public entities are classified as public authority.

In general, customers of the New Haven Service Area are billed on a quarterly basis. For customers with public supplied water (metered), the annual consumption from January to December of the previous calendar year (annual consumption method) is used for the billing period July 1 through June 30. Quarterly customers who use Three Hundred (300) CCF or less in a calendar year have their consumption adjusted for seasonal usage; the adjusted usage is used for billing commencing on July 1. Approximately 365 large-volume customers are billed on a monthly basis. The billing to the approximately 23,000 customers in New Haven takes place in July and April. The billing to the approximately 25,000 customers in East Haven, Hamden and Woodbridge takes place in August, November, February and May.

The costs associated with the Authority’s billing and collection activities and certain of its administrative and accounting costs are recovered through an administrative charge applied to each bill. The Authority estimates that it processed a total of 194,700 bills in the Fiscal Year ending June 30, 2020.

Operating Budget

The Authority’s operating budget is prepared by the Executive Director and submitted to the Board of Directors for review and approval. The Authority, through its Board of Directors, is required to adopt and file with the Trustee a copy of the annual budget on or before June 30 in each fiscal year. If for any reason the Authority shall not have adopted the annual budget before such June 30, the annual budget for the then current fiscal year shall be deemed to be the annual budget for the ensuing fiscal year until a new annual budget is adopted. The Authority may at any time adopt an amended annual budget for the then current or ensuing fiscal year, but no such amended annual budget shall supersede any prior annual budget until the Authority shall have filed with the Trustee a copy of such amended annual budget. The Authority, through its Board of Directors, is responsible for setting and imposing sewer user rates and charges for all customers of the Constituent Municipalities. The Board of Directors 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. Additional sources of revenue include outside sludge revenues, fat, oil and grease (“FOG”) disposal revenues, high strength user charges, connection fees and other miscellaneous revenues. On May 12, 2020, the Authority adopted its Annual Budget for Fiscal Year ending June 30, 2021.

Financial Condition of the Authority

The Authority is required under State law to annually appoint a firm of independent certified public accountants to audit the financial statements of the Authority. The Board of Directors, at the May 12, 2020 Board meeting, approved the appointment of RSM US, LLP to act as its auditors for Fiscal Years ended June 30, 2021. The audited general purpose financial statements for Fiscal Year ended June 30, 2019 are appended hereto as Appendix A. These financial statements were prepared for the Authority by RSM US, LLP.

A summary of the audited financial position for fiscal years 2015-2019, and a summary of audited statements of revenues, expenses, and changes in net assets for fiscal years 2016-2019, together with projected unaudited results for fiscal year ending June 30, 2020 are provided in the tables on page 13.

Global Health Emergency Risk

The outbreak of COVID-19, a respiratory virus caused by a new strain of coronavirus, has been declared a Public Health Emergency of International Concern by the World Health Organization. On March 13, 2020, in response to the COVID-19 outbreak, the President of the United States declared a national emergency. The spread of the virus has affected travel, commerce and financial markets globally, and is expected to affect global, national and State economic growth. Financial markets in the United States and throughout the world have seen a significant increase in volatility attributed to COVID-19 concerns, including significant declines in the stock and bond markets.

In the State of Connecticut, the Governor declared a state of emergency on March 10, 2020 as a result of the COVID-19 outbreak. The Governor has issued numerous Executive Orders prohibiting certain activities in an attempt to slow the spread of COVID-19, including cancellation of all public-school classes for all students, restrictions on the number of people who can attend gatherings of all types, reduction and suspension of activity at State offices, agencies and facilities, limiting restaurants to take-out and delivery service only, and the closure of all non-essential businesses.

On April 1, 2020, the Governor issued Executive Order No. 7S entitled “Protection of Public Health and Safety During COVID-19 Pandemic and Response – Safe Stores, Relief for Policyholders, Taxpayers, and Tenants”, which was subsequently amended by Executive Order No. 7W issued April 9, 2020 (as amended, “Executive Order No. 7S”). Section 6 of Executive Order 7S established two programs, a “Deferment Program” and a “Low Interest Rate Program”. The Deferment Program, for the period April 1, 2020 through and including July 1, 2020, offers eligible taxpayers, businesses, nonprofits, and residents a deferment by three (3) months of any taxes on real property, personal property or motor vehicles, or municipal water, sewer and electric rates, charges or assessments for such tax, rate, charge, or assessment from the time it became due and payable. Eligible taxpayers, businesses, nonprofits, and residents are those that attest to or document significant economic impact by COVID-19, and/or those that document they are providing relief to those significantly affected by the COVID-19 pandemic. The Low Interest Rate Program provides a three percent (3%) per annum interest rate to all taxpayers on the delinquent portion of the principal of any taxes on real property, personal property or motor vehicles, or municipal water, sewer and electric rates, charges or assessments, or part thereof, for three (3) months from the time when it became due and payable until the same is paid, for any such tax, rate, charge, or assessment due and payable from April 1, 2020 through and including July 1, 2020, unless such delinquent portion is subject to interest and penalties at less than three percent (3%) per annum.

Municipalities and quasi-municipal corporations, such as the Authority, are required to participate in one or both programs by vote of its legislative body or board of directors no later than April 25, 2020. On April 14, 2020, the Board of Directors of the Authority voted to participate in the Low Interest Rate Program. The Authority does not believe participation in the Low Interest Rate Program will have a material adverse effect on its finances or ability to pay debt service on its Bonds, including the 2020 Series B Bonds.

Additional Executive Orders may be issued from time to time. The State has a dedicated website providing up-to-date information concerning the State’s actions in response to the COVID-19 virus, including the Executive Orders, at: [CT.Gov/coronavirus](https://www.ct.gov/coronavirus). Neither the Authority, the Underwriter, nor any of the other parties involved with the issuance of the 2020 Series B Bonds has reviewed the information provided by the State on this website and such parties take no responsibility for the accuracy thereof.

The potential impact of the national and State response to COVID-19 to date, and the continued spread of COVID-19 and the national and State response thereto, cannot be predicted at this time, but could have a materially adverse effect on the economies of the State and its municipalities, including the Service Area, and the Authority’s finances, credit ratings and ability to pay the debt service on its Bonds, including the 2020 Series B Bonds, in the future.

Statement of Net Assets

	Audited 6/30/19	Audited 6/30/18	Audited 6/30/17	Audited 6/30/16	Audited 6/30/15
Assets					
Current Assets					
Cash and cash equivalents	\$48,318,131	\$42,366,987	\$38,417,620	\$38,189,265	\$38,192,150
Accounts receivable	6,893,374	8,122,122	7,392,611	8,063,629	7,794,189
Receivable from City of New Haven	776,132	760,775	750,286	758,036	859,920
Other current assets	<u>117,897</u>	<u>114,274</u>	<u>120,983</u>	<u>113,016</u>	<u>136,421</u>
Total current assets	56,105,534	51,364,158	46,681,500	47,123,946	46,982,680
Capital assets	304,000,422	292,174,805	285,441,666	269,677,115	243,661,881
Less accumulated depreciation	<u>73,132,396</u>	<u>63,442,311</u>	<u>54,094,319</u>	<u>44,802,872</u>	<u>39,248,480</u>
	230,868,026	228,732,494	231,347,347	224,874,243	204,413,401
Non-current receivable – City of New Haven	5,437,346	6,214,009	6,973,025	7,723,866	8,470,845
Restricted assets	13,553,223	13,148,826	12,781,054	12,273,745	12,075,654
Due from settlement	1,631,396	2,131,396	2,631,396	3,631,396	-
Debt issuance costs, less accumulated amortization	--	--	--	--	--
Total assets	<u>\$307,595,525</u>	<u>\$301,590,883</u>	<u>\$300,414,322</u>	<u>\$295,627,196</u>	<u>\$271,942,580</u>
Deferred Outflows of Resources					
Deferred Pension Expense	6,869,343	1,819,221	3,439,669	1,549,417	740,570
Deferred amounts on refunding	<u>3,230,968</u>	<u>3,572,525</u>	<u>3,924,068</u>	<u>4,315,051</u>	<u>2,449,980</u>
Total deferred outflows of resources	<u>10,100,311</u>	<u>5,391,746</u>	<u>7,363,737</u>	<u>5,864,468</u>	<u>3,190,550</u>
Liabilities					
Current Liabilities					
Current portion of long-term debt	\$ 10,644,254	\$ 7,960,814	\$ 7,169,824	\$ 8,067,045	\$ 5,711,464
Accounts payable	4,329,584	3,745,595	3,444,251	7,220,581	10,792,122
Retainage payable	139,634	123,721	21,651	1,027,552	804,478
Accrued interest	1,400,289	1,417,505	3,106,847	2,512,566	1,778,493
Accrued expenses	1,914,072	1,802,195	1,697,381	1,699,900	1,557,007
Contribution payable to State	<u>934,477</u>	<u>983,660</u>	<u>1,032,843</u>	<u>1,082,026</u>	<u>-</u>
Total current liabilities	19,362,310	16,033,490	16,472,797	21,609,670	20,643,564
Noncurrent Liabilities					
Net Pension Liability	9,901,970	4,877,689	5,948,997	3,294,094	2,259,514
Long-term debt, less current portion	<u>149,446,456</u>	<u>158,262,526</u>	<u>164,677,991</u>	<u>164,312,441</u>	<u>156,814,658</u>
Total noncurrent liabilities.....	<u>159,348,426</u>	<u>163,140,215</u>	<u>170,626,988</u>	<u>167,606,535</u>	<u>159,074,172</u>
Total liabilities	\$178,710,736	\$179,173,705	\$187,099,785	\$189,216,205	\$179,717,736
Deferred Inflows of Resources					
Deferred Pension Credit	\$206,147	\$301,730	\$388,206	\$649,977	\$866,636
Net Assets					
Invested in capital assets, net of related debt .	\$90,713,941	\$91,680,569	\$91,092,175	\$81,390,504	\$68,371,023
Restricted	3,061,851	2,723,138	2,791,195	2,319,934	1,386,895
Unrestricted	<u>45,003,161</u>	<u>33,103,487</u>	<u>26,406,698</u>	<u>27,915,044</u>	<u>24,790,840</u>
Total net assets	<u>\$138,778,953</u>	<u>\$127,507,194</u>	<u>\$120,290,068</u>	<u>\$111,625,482</u>	<u>\$94,548,758</u>

**Statement of Revenues and
Expenditures and Changes in Net Assets**

	Projected 6/30/20	Audited 6/30/19	Audited 6/30/18	Audited 6/30/17	Audited 6/30/16
Operating Revenue					
Residential	\$28,810,079	\$28,090,034	\$27,574,363	\$26,158,080	\$25,518,148
Commercial and industrial	11,132,785	11,667,505	11,264,860	10,208,269	9,940,485
Municipal	1,963,660	1,821,685	1,675,181	1,464,207	1,357,097
Delinquent interest and lien fees	972,115	1,252,062	1,280,988	1,317,929	1,388,999
Outside sludge	250,000	288,441	278,915	273,476	246,221
Other	2,090,000	1,795,900	2,697,613	2,089,721	1,360,530
Provision for bad debts	<u>(65,000)</u>	<u>(65,873)</u>	<u>86,768</u>	<u>158,716</u>	<u>(114,816)</u>
Total operating revenue	45,153,639	44,849,754	44,858,688	41,670,398	39,696,664
Operating Expenses					
Operation and maintenance	24,720,117	24,175,230	25,199,607	22,383,933	24,129,472
Depreciation and amortization	<u>9,800,000</u>	<u>9,693,951</u>	<u>9,347,992</u>	<u>9,303,442</u>	<u>5,554,392</u>
Total operating expenses	34,520,117	33,869,181	34,547,599	31,687,375	29,683,864
Operating income	10,633,522	10,980,573	10,311,089	9,983,023	10,012,800
Nonoperating Income (Expense)					
Expense of Debt Issuance	-	-	-	-	-
Other income	115,392	132,542	147,609	162,709	6,178,597
Interest income	810,000	925,365	530,192	348,771	313,479
Interest expense	<u>(4,821,000)</u>	<u>(5,056,012)</u>	<u>(5,096,577)</u>	<u>(3,849,131)</u>	<u>(4,260,330)</u>
Total nonoperating income (expense).....	(3,895,608)	(3,998,105)	(4,418,776)	(3,337,651)	2,231,746
Income before capital contributions	6,737,914	6,982,468	5,892,313	6,645,372	12,244,546
Capital contributions	<u>2,820,000</u>	<u>4,289,291</u>	<u>1,324,813</u>	<u>2,019,214</u>	<u>4,832,178</u>
Change in net assets	9,557,914	11,271,759	7,217,126	8,664,586	17,076,724
Net assets beginning.....	<u>138,778,953</u>	<u>127,507,194</u>	<u>120,290,068</u>	<u>111,625,482</u>	<u>94,548,758</u>
Net assets ending	\$148,336,867	\$138,778,953	\$127,507,194	\$120,290,068	\$111,625,482

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Budgeted and Projected Revenue Requirements for Fiscal Years 2021-2025

The Authority's budget for Fiscal Year 2021 as adopted, together with projected revenue requirements for subsequent Fiscal Years 2022-2025 for the Service Area, are provided in the Cost of Service Study for Fiscal Year 2021 included as Appendix B and summarized below.

Revenue Requirements and Recommended User Rates

	1	2	3	4	5	6	7	8	9
	FY21	% ch.	FY22	% ch.	FY23	% ch.	FY24	% ch.	FY25
A. OPERATIONS & MAINTENANCE									
1 Personnel	\$9,463,423	5%	\$9,940,000	5%	\$10,447,000	5%	\$10,991,000	5%	\$11,573,000
2 Utilities	4,681,900	2%	4,775,000	2%	4,870,000	2%	4,967,000	2%	5,066,000
3 Plant Operations & Collection System	1,125,000	2%	1,148,000	2%	1,171,000	2%	1,196,000	2%	1,221,000
4 Contracted Maintenance	2,156,012	3%	2,221,000	3%	2,288,000	3%	2,357,000	3%	2,428,000
5 Contracted Sludge & Ash Disposal	3,207,387	3%	3,304,000	3%	3,403,000	3%	3,505,000	3%	3,610,000
6 Other Contracted Services	5,798,490	3%	5,948,000	3%	6,104,000	3%	6,263,000	3%	6,429,000
7 Payments In-lieu of Taxes (PILOT)	750,000	0%	750,000	0%	750,000	0%	750,000	0%	750,000
8 Equipment, Vehicles & Supplies	1,046,500	3%	1,079,000	3%	1,111,000	3%	1,146,000	3%	1,181,000
9 Plant Repairs & Replacement	1,904,400	3%	1,962,000	3%	2,21,00	3%	2,082,000	3%	2,144,000
10 Contingency	500,000	0%	500,000	0%	500,000	0%	500,000	0%	500,000
11 Total Operations & Maintenance Costs	30,633,112	3%	31,627,000	3%	32,665,000	3%	33,757,000	3%	34,902,000
B. DEBT SERVICE									
Revenue Bonds:									
12 Principal	3,561,667	5%	3,731,667	5%	3,911,667	0%	3,900,000	4%	4,065,000
13 Interest	3,700,399	-5%	3,530,251	-5%	3,352,040	-5%	3,192,362	-5%	3,024,956
Clean Water Fund Notes:									
14 Principal	5,174,721	-3%	5,041,259	19%	6,14,79	-4%	5,795,254	0%	5,803,006
15 Interest	1,240,309	-9%	1,129,067	13%	1,276,058	4%	1,328,661	6%	1,406,502
16 Total Debt Service	13,677,096	-2%	13,432,243	8%	14,553,844	-2%	14,216,277	1%	14,299,463
17 TOTAL COST OF SERVICES	\$44,310,208	2%	\$45,059,243	5%	\$47,218,844	2%	\$47,973,277	3%	\$49,201,463
C. DEBT SERVICE COVERAGE									
18 Debt Service Coverage Requirement	2,735,000	-2%	2,686,000	8%	2,911,000	-2%	2,843,000	1%	2,860,000
19 Debt Service Coverage Ratio	1.20		1.20		1.20		1.20		1.20
D. MISCELLANEOUS REVENUES									
20 Interest & Lien Fees	(1,255,000)	0%	(1,255,000)	0%	(1,255,000)	0%	(1,255,000)	0%	(1,255,000)
21 Aged Accounts Receivable	(4,500,000)	0%	(4,500,000)	0%	(4,500,000)	0%	(4,500,000)	0%	(4,500,000)
22 Investment Income	(750,000)	0%	(750,000)	0%	(750,000)	0%	(750,000)	0%	(750,000)
23 High Strength Surcharges	(850,000)	0%	(850,000)	0%	(850,000)	0%	(850,000)	0%	(850,000)
24 Grease Disposal	(525,000)	0%	(525,000)	0%	(525,000)	0%	(525,000)	0%	(525,000)
25 Outside Sludge	(250,000)	0%	(250,000)	0%	(250,000)	0%	(250,000)	0%	(250,000)
26 Interlocal Fees	(160,000)	0%	(160,000)	0%	(160,000)	0%	(160,000)	0%	(160,000)
27 Reimbursements - Synagro	(650,000)	0%	(650,000)	0%	(650,000)	0%	(650,000)	0%	(650,000)
28 Other Revenues	(690,000)	0%	(690,000)	0%	(690,000)	0%	(690,000)	0%	(690,000)
29 Total Miscellaneous Revenues	(9,630,000)	0%	(9,630,000)	0%	(9,630,000)	0%	(9,630,000)	0%	(9,630,000)
E. CITY OF NEW HAVEN REIMBURSEMENT									
30 CSO CWF Principal	(952,757)	-6%	(900,018)	20%	(1,081,166)	-14%	(927,600)	-18%	(763,846)
31 CSO CWF Interest	(148,064)	-15%	(125,888)	24%	(156,646)	5%	(164,213)	-10%	(147,756)
32 Total City of New Haven Reimbursement	(1,100,822)	-7%	(1,025,906)	21%	(1,237,812)	-12%	(1,091,813)	-17%	(911,602)
F.TO/(FROM) DEBT SERVICE RESERVE SINKING FUND									
33 To/(From) Debt Service Res. Sinking Fund	500,000		750,000		(300,000)		250,000		250,000
34 NET REVENUE REQUIREMENT	\$36,814,386	3%	\$37,839,337	3%	\$38,962,032	4%	\$40,344,464	4%	\$41,769,862
G. RECEIVABLE MANAGEMENT COSTS									
35 Estimated collection rate	89%		89%		89%		89%		89%
37 REVENUE REQUIREMENT	\$41,624,647	3%	\$42,776,278	3%	\$44,037,733	4%	\$45,591,027	4%	\$47,192,598
H. RATE CALCULATION									
38 Elderly Credit	(\$93,000)		(\$99,200)		(\$105,400)		(\$111,600)		(\$117,800)
39 Consumption	8,050,000		8,050,000		8,050,000		8,050,000		8,050,000
40 Number of bills	194,700		194,700		194,700		194,700		194,700
41 Administrative fee	\$16.00		\$17.00		\$18.00		\$19.00		\$20.00
42 CCF Rate	\$4.80		\$4.91		\$5.05		\$5.22		\$5.39
Change from Prior Year	2.30%		2.30%		2.90%		3.40%		3.30%

Capital Improvement Program

There are three essential components to the Authority's efforts to upgrade and improve the quality of its Regional Wastewater System.

First, the Authority has a five-year capital improvement program focused on the improvements to the New Haven Treatment Plant to enhance operating efficiency and meet future regulatory requirements regarding limiting nitrogen discharges to the Long Island Sound. In 2016, the Authority completed its \$60 million plant upgrade to increase nitrogen removal, and to install a new odor control system, a new solids handling facility, and a new plant wide electrical system backbone including two 2-Megawatt emergency generators. Additional nitrogen upgrades and plant renewal projects totaling approximately \$13 million are scheduled through 2024.

Second is the implementation of a long-term combined sewer overflow ("CSO") plan to eliminate wet weather overflows (the Combined Sewage Overflow/Long Term Control Plan or "CSO/LTCP"). The Authority has completed the short-term improvements identified in its 2016 scheduled five-year CSO/LTCP Update to the Facility Plan. The LTCP is continuously updated every 5-years. The 2016 CSO/LTCP Update was approved by the State and accepted in the modified consent order dated November 2019. The LTCPs intermediate-term improvements are underway and the next scheduled update is expected in September 2022. The intermediate-term improvements include a \$33 million wet-weather capacity upgrade to the Authority's East Street Pump Station.

Third, the Authority is focusing on implementation of a wastewater collection system, pump station and force main long-term repair and rehabilitation program, in accordance with its approved Capacity, Management, Operations and Maintenance (CMOM) Plan. This program includes resiliency improvements and rehabilitation upgrades for each of the Authority's pump stations, an ongoing cured-in-place pipe sewer lining program for large diameter and small diameter sewer mains, a manhole rehabilitation program, and an infiltration and inflow removal program. Through this long-term repair and rehabilitation program, the Authority continues to reduce the average age of its collection system and increase system reliability and capacity.

The capital program identifies approximately \$123 million of projects either under way or to be performed in the current fiscal year and projected over the next five years of the capital plan through 2025. See "THE AUTHORITY – Capital Improvement Program," "SECURITY AND PLEDGE OF THE INDENTURE - Additional Bonds Test", Appendix B - Cost of Service Study for Fiscal Year 2021 and Appendix C – "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Additional Bonds" herein.

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For the current and next four fiscal years, the expected capital outlay for the Authority's Capital program is summarized below:

Projected CIP for Fiscal Years 2021 through Fiscal Year 2025

Line No.	Description	1 FY21	2 FY22	3 FY23	4 FY24	5 FY25	6 Total
COMBINED SEWER OVERFLOW LONG TERM CONTROL PLAN							
1	Yale Trumbull Phase 2B	\$15,500,000	\$ -	\$ -	\$ -	\$ -	\$15,500,000
2	Orchard Street Sewer Separation	6,500,000	-	-	-	-	6,500,000
3	Long Term Control Plan Update	860,000	-	-	-	-	860,000
4	Total CSO Long Term Control Plan	\$22,860,000	\$ -	\$ -	\$ -	\$ -	\$22,860,000
EAST SHORE WATER POLLUTION CONTROL FACILITY							
5	Nitrogen Upgrades	\$1,150,000	\$ -	\$ -	\$ -	\$ -	\$1,150,000
6	Concrete Work – Chlorine Contact and Wall Repairs	500,000	-	-	-	-	\$500,000
7	East Shore Admin. Building HVAC	250,000	-	-	-	-	\$250,000
8	East Shore Primary Sludge Pumps	240,000	-	-	-	-	\$240,000
9	Roof Replacements - East Shore	150,000	150,000	-	-	-	\$300,000
10	Secondary Clarifier Drain Valves	160,000	160,000	160,000	-	-	\$480,000
11	Plant Inlet Works Main Gates	200,000	100,000	100,000	-	-	\$400,000
12	SCADA Improvements	-	200,000	-	-	-	\$200,000
13	Laboratory Rehabilitation	-	700,000	-	-	-	\$700,000
14	Morris Cove Oil Tank	-	125,000	-	-	-	\$125,000
15	Primary Clarifier Drive and Screw Replacements	-	160,000	-	-	-	\$160,000
16	East Shore Odor Scrubber Maintenance	-	300,000	-	-	300,000	\$600,000
17	FOG Fuel System	-	-	500,000	-	-	\$500,000
18	Wetwell Covers	-	-	300,000	-	-	\$300,000
19	Primary Tank Major Maintenance	-	-	-	150,000	-	\$150,000
20	East Shore TPS Pumps	-	-	-	-	300,000	\$300,000
21	FIS Upgrade	-	-	-	-	300,000	\$300,000
22	Total East Shore WPC Facility	\$2,650,000	\$1,895,000	\$1,060,000	\$150,000	\$900,000	\$6,655,000
COLLECTION SYSTEM, PUMP STATIONS & FORCE MAINS							
23	Design and Construction East Street Pump Station	\$11,450,000	\$ -	\$ -	\$ -	\$ -	\$11,450,000
24	Mill River Phase 2 SSES Hamden - Part 2	600,000	-	-	-	-	600,000
25	Riverside Interceptor	500,000	500,000	-	-	-	1,000,000
26	Cured-in-Place Pipe Lining	1,200,000	1,000,000	1,000,000	1,000,000	1,000,000	5,200,000
27	Emergency On-Call Services	300,000	300,000	300,000	300,000	300,000	1,500,000
28	Pump Station Imp. – Design & Const.	50,000	500,000	50,000	500,000	50,000	1,150,000
29	Bypass Hose/Piping	-	100,000	-	-	-	100,000
30	Design and Construction Union Street PS	-	190,000	-	-	-	190,000
31	Main Sewerage Pumps – East Shore	-	140,000	-	-	140,000	280,000
32	Design and Construction Union Street Pump Station	-	2,000,000	18,100,000	-	-	20,100,000
33	Mill River Phase 3 I/I Rehab	-	500,000	4,000,000	-	-	4,500,000
34	New Combo Truck	-	-	380,000	-	-	380,000
35	Design and Construction Boulevard Pump Station	-	-	3,840,000	35,410,000	-	39,250,000
36	Central Interceptor & Easements	-	-	1,500,000	2,000,000	-	3,500,000
37	Foxon Park Interceptor	-	-	-	1,000,000	1,500,000	2,500,000
38	Manhole Rehabilitation Program	-	-	-	-	700,000	700,000
39	Morris Cove Bar Screens	-	-	-	-	700,000	700,000
40	Total Coll. System, PS & Force Mains	\$14,100,000	\$5,230,000	\$29,170,000	\$40,210,000	\$4,390,000	\$93,100,000
41	TOTAL CAPITAL IMPROVEMENT PLAN	\$39,610,000	\$7,125,000	\$30,230,000	\$40,360,000	\$5,290,000	\$122,615,000
SOURCES OF FINANCING							
42	Clean Water Fund - Grants	\$17,188,000	\$800,000	\$8,776,000	\$14,164,000	\$ -	\$40,928,000
43	Clean Water Fund - Notes	<u>18,215,000</u>	<u>1,700,000</u>	<u>17,164,000</u>	<u>21,246,000</u>	-	<u>58,325,000</u>
44	Total Clean Water Fund	35,403,000	2,500,000	25,940,000	35,410,000	-	99,253,000
45	FEMA Grants	-	-	-	-	-	-
46	Dedicated Infrastructure Renewal Fund	4,207,000	4,625,000	4,290,000	4,950,000	5,290,000	23,362,000
47	Total Sources of Financing	\$39,610,000	\$7,125,000	\$30,230,000	\$40,360,000	\$5,290,000	\$122,615,000

The cost of the Capital Improvement Program is expected to be funded by a combination of general funds of the Authority, Clean Water Fund Obligations bearing interest at the rate of 2% per annum, grants under the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program, and grants under the State's Clean Water Fund program.

Outstanding Parity Indebtedness

As of July 8, 2020, the Authority has \$153,430,233 aggregate principal amount of Outstanding Parity Indebtedness. This total includes the outstanding principal amount of the 2005 Series A Bonds, the proceeds of which were used by the Authority in 2005 to acquire the Regional Wastewater System from the Constituent Municipalities; the 2008 Series B issue of Clean Renewable Energy Bonds (CREBs), the proceeds of which were used for energy improvements, the 2012 Series B Bonds, the proceeds of which were used to finance various capital improvements; the 2014 Series B Bonds, the proceeds of which were used to refund certain maturities of the 2005 Series A Bonds, the 2016 Series A Bonds, the proceeds of which were used to refund the 2008 Series A Bonds, the 2020 Series B Bonds and the Assumed Clean Water Fund Obligations and Clean Water Fund Obligations including permanent Project Loan Obligations, the proceeds of which have been used by the Authority, or the Constituent Municipalities in the case of the Assumed Clean Water Fund Obligations, to make capital improvements to the Regional Wastewater System.

In accordance with the CSO Cost Sharing Agreement between the Authority and the City of New Haven, New Haven is responsible for 40% of the debt service on the Initial Assumed Clean Water Fund Obligations and Clean Water Fund Obligations issued for purposes of CSO capital improvements. As of July 8, 2020, the aggregate principal amount of the Initial Assumed Clean Water Fund Obligations and Clean Water Fund Obligations subject to the terms of the CSO Cost Sharing Agreement is \$18,901,524.

SOURCES AND USES OF FUNDS

The proceeds of the 2020 Series B Bonds and certain other amounts are expected to be applied as follows:

Sources

Par Amount.....	\$32,000,000.00
Authority Deposit for 2020 Series B Debt Service Reserve Fund	<u>354,887.00</u>
Total Sources	\$32,354,887.00

Uses

Deposit to Escrow Fund	\$31,644,986.61
Deposit to the Debt Service Reserve Fund ⁽¹⁾	354,887.00
Underwriter's Discount	187,256.25
Costs of Issuance ⁽²⁾	<u>167,757.14</u>
Total Uses	\$32,354,887.00

⁽¹⁾ A portion of the Debt Service Reserve Fund Requirement for the 2020 Series B Bonds will be funded by the allocation of investments on deposit in the Common Account of the Debt Service Reserve Fund.

⁽²⁾ Includes legal, advisory and consulting fees and expenses, rating agency fees, and other miscellaneous costs and expenses related to the issuance of the 2020 Series B Bonds.

THE 2020 SERIES B BONDS

General

The 2020 Series B 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 the date of delivery and will bear interest from that date to their respective maturities as set forth on the inside cover page hereof, subject to optional and mandatory redemption prior to maturity as described below under “Redemption Provisions.” Ownership interests in the 2020 Series B Bonds will be available in denominations of \$5,000 and integral multiples thereof. Interest on the 2020 Series B Bonds will be payable on August 15, 2020 and semiannually on each February 15 and August 15 thereafter. Interest on the 2020 Series B Bonds will be calculated on the basis of a 360-day year, consisting of twelve 30-day months. Interest on the 2020 Series B Bonds will be payable to the registered owners of the 2020 Series B Bonds as of the close of business on the last business day of January and July in each year.

So long as Cede & Co. is the registered owner of the 2020 Series B Bonds, all payments of principal of and interest on the 2020 Series B Bonds are payable by wire transfer by 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 SYSTEM” herein.

Redemption Provisions

Optional Redemption. The 2020 Series B Bonds maturing on or before August 15, 2029 are not subject to optional redemption. The 2020 Series B Bonds maturing after August 15, 2029 are subject to optional redemption prior to maturity commencing August 15, 2029, as a whole or in part, at any time, at the option of the Authority, at the redemption price of par plus accrued interest to the date of redemption.

Notice of Redemption. The Trustee shall give notice, in the name of the Authority, of the redemption of the 2020 Series B Bonds, which notice shall specify the Series and maturities of the 2020 Series B Bonds to be redeemed, the redemption date and the place or places where amounts due upon such redemption will be payable and, if less than all of the 2020 Series B Bonds of any like Series and maturity are to be redeemed, the numbers, CUSIP numbers or other distinguishing marks of such 2020 Series B Bonds so to be redeemed. Such notice shall further state whether the notice and the redemption are unconditional or conditional; if unconditional, that on such date there shall become due and payable upon each Bond to be redeemed the Redemption Price thereof, together with interest accrued to the redemption date; if conditional, that on such date that, if there shall be sufficient funds available to effect such redemption on the redemption date, there shall become due and payable upon each 2020 Series B Bond to be redeemed the Redemption Price thereof, together with interest accrued to the redemption date, and, in either case, that if there shall be sufficient funds available to effect such redemption on the redemption date, then from and after such date interest thereon shall cease to accrue and be payable. The Trustee shall mail a copy of such notice by first class mail, postage prepaid, not less than thirty days before the redemption date, to the owners of the 2020 Series B Bonds which are to be redeemed, at their last addresses appearing upon the registry books.

Mandatory Sinking Fund Redemption. The 2020 Series B Bonds maturing August 15, 2042 are subject to mandatory sinking fund redemption in part on August 15, 2042 of the respective years shown below in the principal amount shown below, without premium, from sinking fund installments deposited with the Paying Agent which are required to be made in amounts sufficient to redeem such 2020 Series B Bonds (or to pay such 2020 Series B Bonds at maturity in the case of the final sinking fund installment for the 2020 Series B Bonds) in the principal amounts shown below:

2020 Series B Bonds Maturing August 15, 2042	
<i>Due</i>	<i>Sinking Fund Installments</i>
2033	\$ 300,000
2034	310,000
2035	320,000
2036	335,000
2037	340,000
2038	350,000
2039	360,000
2040	370,000
2041	380,000
2042 ¹	395,000

¹ Final Maturity

BOOK-ENTRY-ONLY SYSTEM

The Depository Trust Company (“DTC”), New York, NY, will act as securities depository for the 2020 Series B Bonds. The 2020 Series B 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 2020 Series B 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 2020 Series B Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2020 Series B Bonds on DTC’s records. The ownership interest of each actual purchaser of each 2020 Series B 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 2020 Series B 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 2020 Series B Bonds, except in the event that use of the book-entry system for the 2020 Series B Bonds is discontinued.

To facilitate subsequent transfers, all 2020 Series B 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 2020 Series B 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 2020 Series B Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such 2020 Series B 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 2020 Series B 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 2020 Series B 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 Authority 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 2020 Series B 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 2020 Series B Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Authority 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 Authority, 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 Authority 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 2020 Series B Bonds at any time by giving reasonable notice to the Authority 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 Authority 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 Authority believes to be reliable, but the Authority takes no responsibility for the accuracy thereof. The Authority can make no assurances that DTC, Direct Participants, Indirect Participants or other nominees of Beneficial Owners of the 2020 Series B Bonds will act in the 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.

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SECURITY AND PLEDGE OF THE INDENTURE

Security and Pledge

All Bonds and Clean Water Fund Obligations (including the Assumed Clean Water Fund Obligations and the CREBs) issued pursuant to the Indenture shall be special limited obligations of the Authority, payable solely from Revenues and other receipts, funds and moneys pledged (the "Trust Estate"). Pursuant to the Granting Clauses set forth in the Indenture, the Authority has pledged the Trust Estate as security for the payment of the Bonds and the performance of any other obligation of 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. As provided by the Act, the Revenues, moneys, securities and other funds so pledged and then or thereafter received by 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 Authority.

Flow of Funds

All revenues received by the Authority 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. 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 Authority as being necessary to provide (taking into account amounts on deposit therein and expenses incurred and unpaid for the current month) for 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 Authority, 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 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 Authority 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 Authority as being required to be deposited in such Fund and the Accounts thereunder in accordance with the Indenture, a Supplemental 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 Annual 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 General Fund.

So long as no Event of Default has occurred and is continuing, the Authority is permitted to, and does, maintain control and possession of the Revenue Fund, the Operating Fund and the Rebate Fund.

Debt Service Reserve Fund

The 2020 Series B Bonds are additionally secured by the Common Account in the Debt Service Reserve Fund. The Common Account holds funds adequate to meet the Debt Service Reserve Fund Requirement for each outstanding series of Bonds over time. Assumed Clean Water Fund Obligations and Clean Water Fund Obligations of the Authority are secured by Special Accounts in the Debt Service Reserve Fund. Amounts on deposit in Special Accounts in the Debt Service Reserve Fund shall be applied solely to the Bonds for which such Accounts have been established and such Bonds shall not be entitled to amounts on deposit in the Common Account. Amounts on deposit in debt service reserve funds for Parity Indebtedness shall be applied solely to the Parity Indebtedness for which such funds have been established and such Parity Indebtedness shall not be entitled to amounts on deposit in the Common Account.

If, as of April 1 or October 1 of each year or on any date on which the Trustee receives the written direction of the Authority, 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 Debt Service Fund. If, as of April 1 or October 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 Annual Budget for the next Fiscal Year, the Authority shall, in its Annual 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 Authority, withdraw from the Common or Special 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 under 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.

Pursuant to the Indenture, "Debt Service Reserve Fund Requirement" is defined to mean, as of any date of calculation the lesser of: (i) the maximum annual Debt Service on such Bonds (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act); (ii) ten percent (10%) of the Stated Principal Amount of such Bonds; or (iii) 125% of the average annual Debt Service on such Bonds (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act), or an amount, if any, 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 Authority 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 Authority with Notice of such objection within 30 days of the date of the Authority'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 Authority 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 hereof. For the purpose of calculating the Debt Service Reserve Fund Requirement for any Series of Variable Rate Bonds, the maximum annual Debt Service on such Series of Bonds (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act) shall be determined by reference to the Pro Forma Bond Issue for such Series as set forth in the Supplemental Indenture authorizing such Series. Pursuant to the Indenture, "Minimum Reserve" is defined to mean the least 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. See Appendix C – "SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Definitions".

Debt Service Reserve Funds
As of July 8, 2020

Series	Original Par Amount	Maximum Annual D/S	DSRF Balance	DSRF Requirement
<u>Common Account</u>				
Revenue Bonds				
2005 Series A Rev Bonds	\$91,290,000	\$ 333,125	\$ 32,500	10% Par (a)
2012 Series B Rev Bonds	9,295,000	253,750	95,500	10% Par (a)
2014 Series B Rev Bonds	77,510,000	5,495,100	4,199,000	10% Par (a)
2016 Series A Rev Bonds	15,550,000	1,055,150	1,055,150	MADS (a)
2020 Series B Rev Bonds	32,000,000	5,291,830	2,108,693	125% (a,b)
Clean Renewable Energy Bonds				
2008 Series B (CREBS)	2,500,000	187,208	197,999	MADS (a)
<u>Special Accounts</u>				
Clean Water Fund Obligations				
2007 Series A CWF 563-DC	8,961,758	548,910	290,731	50% (c)
2007 Series C CWF Consolidated	20,560,842	2,199,723	1,147,225	50% (c)
2007 Series E CWF 463-CD1	934,984	61,896	32,784	50% (c)
2009 Series C CWF 206-CSL	3,952,524	237,710	123,974	50% (c)
2011 Series D CWF 581-C1	6,121,755	368,171	64,003	2 months (d)
2013 Series A CWF 627-C	656,236	39,467	6,861	2 months (d)
2013 Series C CWF 441-D	3,571,120	214,772	37,331	2 months (d)
2013 Series D CWF 581-C2	6,276,714	377,490	65,615	2 months (d)
2016 Series B CWF 676-C	3,160,728	190,091	33,036	2 months (d)
2017 Series A CWF 441-C	43,656,934	3,001,880	537,532	2 months (d)
2020 Series A CWF 711-DC	5,146,207	308,772	<u>59,146</u>	2 months (d)
Total			<u>\$10,087,080</u>	

All funds are held with U.S. Bank National Association.

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- (a) Pursuant to the Indenture, “Debt Service Reserve Fund Requirement” is generally defined to mean, as of any date of calculation, the lesser of: (i) the maximum annual debt service on such Bonds (“MADS”); (ii) ten percent (10%) of the stated principal amount of such Bonds (“10% Par”); or (iii) 125% of the average annual debt service on such Bonds (“125%”), for each series of Bonds, as indicated above. See “SECURITY AND PLEDGE OF THE INDENTURE – Debt Service Reserve Fund” and Appendix C – “SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Definitions”.
- (b) The Debt Service Reserve Fund Requirement for the 2020 Series B Bonds will be funded by a cash deposit from the Authority and the allocation of investments on deposit in the Common Account of the Debt Service Reserve Fund.
- (c) Per agreement with the State, the Debt Service Reserve Fund Requirement for these Clean Water Fund Obligations is fifty percent (50%) of MADS.
- (d) Per agreement with the State, the Debt Service Reserve Fund Requirement for these Clean Water Fund Obligation is two (2) months of debt service.

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 Authority authorizing each issue of Subordinated Indebtedness. The Authority may transfer amounts from the General Fund to the Subordinated Indebtedness Fund for the payment of any amounts (including termination payments) due on Qualified Swaps, as provided in the applicable Supplemental Indenture.

General Fund

The Trustee shall, on each Bond Payment Date, apply moneys credited to the General 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 General 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 Authority the amount, if any, necessary (or all the moneys in the General 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 Authority, (ii) to the Debt Service Reserve Fund the amount, if any, necessary (or all the moneys in the General 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 Authority the amount, if any, necessary (or all the moneys in the General 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 Authority. Moneys remaining on deposit in the General Fund after such transfers may also be transferred by the Trustee to the Authority to pay Operating Expenses or for any other lawful purpose related to the Authority or the Regional Wastewater System, including but not limited to, the funding of a capital fund from which the Authority may pay for capital improvements to the Regional Wastewater System, Rebate Amounts pursuant to any Tax Regulatory Agreement or to reimburse the Authority for its expenses; following any such transfer, the moneys transferred shall not be considered pledged moneys under the terms of the Indenture.

Rate Covenant

Pursuant to the Indenture, 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 in each Fiscal Year:

1. sufficient to provide for 100% of the Operating Expenses of the Authority and a Debt Service Coverage Ratio (Revenues plus withdrawals from the General Fund to pay Operating Expenses and Parity Obligations plus the Fiscal Year-end unrestricted General Fund balance minus Operating Expenses divided by (a) the Annual Aggregate Debt Service on (i) the Bonds then Outstanding, (ii) Clean Water Fund Obligations that are Parity Obligations, and (iii) Parity Indebtedness plus (b) interest on Parity Bond Anticipation Notes ((a)(i), (ii) and (iii) and (b), collectively, "Parity Obligations") of at least 1.0x in such Fiscal Year, and

2. together with amounts capitalized from the proceeds of Bonds and amounts withdrawn or available for withdrawal from the General Fund, sufficient in each Fiscal Year to pay Operating Expenses and provide for:

(A) a Debt Service Coverage Ratio at least equal to the 115% Debt Service Coverage Ratio Requirement (amounts withdrawn and available for withdrawal from the General Fund are limited to 15% of debt service for this requirement); plus

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

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

The Authority further covenants that in each Fiscal Year, 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 General Fund to pay Operating Expenses, debt service on the Bonds, Clean Water Fund Obligations, Parity Indebtedness and interest on Parity Bond Anticipation Notes 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 Annual Debt Service" for Bonds hereunder; provided however, that failure to collect such Revenues and other amounts under this clause (ii) shall under no circumstances be treated as an Event of Default.

Additional Bonds Test

In order to issue additional Bonds pursuant to Section 206 of the Indenture secured on a parity with the Bonds, except in the case of any Series of Initial Bonds issued pursuant to Section 205 of the Indenture or of Refunding Bonds issued pursuant to Section 207 of the Indenture, the Indenture requires:

- (a) a Certificate of an Authorized Representative of the Authority setting forth for the last Fiscal Year for which audited financial statements are available, (i) the Revenues, adjusted as hereinafter described, (ii) the Aggregate Annual Debt Service on the Bonds then Outstanding and all Parity Indebtedness then outstanding, (iii) the total Operating Expenses, (iv) the amount withdrawn from the General Fund to pay Operating Expenses and Parity Obligations and the unrestricted balance to the credit of the General Fund as of the end of such Fiscal Year, and (v) showing that the Debt Service Coverage Ratio is at least equal to the 115% Debt Service Coverage Ratio Requirement; provided that (A) if an increase in the rates, fees and charges for services of the Regional Wastewater System shall have been approved prior to the delivery of such Certificate, such that no further legal requirements need be met to effect such increase, the Revenues calculated under clause (i) above shall be adjusted to the amount of Revenues which would have been derived from the Regional Wastewater System for said full Fiscal Year if such increased rates, fees and charges for services of the Regional Wastewater 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 Regional Wastewater 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 Regional Wastewater System, after deducting therefrom the Operating Expenses estimated by the Authority as attributable in such year to such customer or customers.
- (b) a Certificate of an Authorized Representative of the Authority as confirmed by an Independent Consultant 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 General Fund to pay Operating Expenses and Parity Obligations and the unrestricted balance to the credit of the General Funds as of the end of each such Fiscal Year, (iv) the projected Aggregate Annual Debt Service on the Bonds then Outstanding, all Parity Indebtedness then outstanding and the additional Bonds then proposed to be issued, and any other additional Bonds to be issued during such Fiscal Years according to the aforementioned Certificate, and (v) showing that the Debt Service Coverage Ratio in the Fiscal Year in which the additional Bonds are issued and each of the four succeeding Fiscal Years will be at least equal to (Y) the 115% Debt Service Coverage Ratio Requirement and (Z) in the fifth full Fiscal Year after the Fiscal Year in which the additional Bonds are issued, at least equal to the 115% Debt Service Coverage Ratio Requirement calculated using the maximum amount of Aggregate Annual Debt Service to occur in such fifth full Fiscal Year or any future Fiscal Year on account of all Bonds to be outstanding at the beginning of such fifth Fiscal Year.

Pursuant to Section 207 of the Indenture, one or more series of refunding bonds may be issued pursuant to the Indenture at any time to refund any Outstanding Bonds or Outstanding Parity Indebtedness provided that (i) average annual Debt Service on such Series of Refunding Bonds (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act) shall not exceed the average annual Debt Service on the Outstanding Bonds or outstanding Parity Obligations (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act) to be refunded and (ii) the maximum Debt Service in any Fiscal Year on such Series of Refunding Bonds (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act) shall not exceed the maximum Debt Service in any Fiscal Year on the Outstanding Bonds or outstanding Parity Indebtedness (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act) to be refunded, all as shown in a Certificate signed by an Authorized Representative of the Authority 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) of the Indenture may be issued by meeting the requirements of Section 206(d) and (e) of the Indenture.

Other Indebtedness

Under the Indenture, the Authority 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. However, the Indenture shall not prevent the Authority from issuing notes payable from the proceeds of Bonds or bonds or notes or other obligations for the corporate purposes of 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 Authority as a general obligation of the Authority or 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 general obligation or 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.

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DEBT SERVICE REQUIREMENTS**As of July 8, 2020****(Pro Forma)**

The following table sets forth the debt service requirements for each fiscal year ending June 30 for the Outstanding Bonds and the 2020 Series B Bonds:

Fiscal Year Ending June 30	Outstanding Bonds (1) Principal and Interest	2020 Series B			Total Debt Service
		Principal	Interest	Total	
2021	\$ 12,545,767.67	\$ 650,000	\$ 369,465.84	\$ 1,019,465.84	\$ 13,565,233.51
2022	12,166,691.94	550,000	609,825.00	1,159,825.00	13,326,516.94
2023	11,983,642.02	555,000	605,045.00	1,160,045.00	13,143,687.02
2024	11,469,669.55	560,000	599,607.50	1,159,607.50	12,629,277.05
2025	10,966,811.75	565,000	593,418.75	1,158,418.75	12,125,230.50
2026	10,168,984.16	825,000	585,013.75	1,410,013.75	11,578,997.91
2027	10,010,910.42	835,000	573,803.75	1,408,803.75	11,419,714.17
2028	9,953,213.99	850,000	560,950.00	1,410,950.00	11,364,163.99
2029	7,424,975.98	3,225,000	525,931.25	3,750,931.25	11,175,907.23
2030	5,737,907.52	4,835,000	452,988.75	5,287,988.75	11,025,896.27
2031	5,502,099.28	4,930,000	360,197.50	5,290,197.50	10,792,296.78
2032	5,269,992.83	5,030,000	261,830.00	5,291,830.00	10,561,822.83
2033	5,140,564.74	5,130,000	157,665.00	5,287,665.00	10,428,229.74
2034	9,427,892.21	300,000	99,300.00	399,300.00	9,827,192.21
2035	9,371,744.68	310,000	90,150.00	400,150.00	9,771,894.68
2036	9,313,323.07	320,000	80,700.00	400,700.00	9,714,023.07
2037	3,019,826.51	335,000	70,875.00	405,875.00	3,425,701.51
2038	1,314,123.46	340,000	60,750.00	400,750.00	1,714,873.46
2039	262,239.76	350,000	50,400.00	400,400.00	662,639.76
2040	107,748.72	360,000	39,750.00	399,750.00	507,498.72
2041	-	370,000	28,800.00	398,800.00	398,800.00
2042	-	380,000	17,550.00	397,550.00	397,550.00
2043	-	395,000	5,925.00	400,925.00	400,925.00
Total	\$151,158,130.26	\$32,000,000	\$6,799,942.09	\$38,799,942.09	\$189,958,072.35

(1) Outstanding Bonds debt service net of refunded portions of the 2012 Series B Bonds and the 2014 Series B Bonds.

TAX MATTERS

Federal Income Taxes

In the opinion of Robinson & Cole LLP, Bond Counsel, under existing law, interest on the 2020 Series B Bonds is included in gross income for federal income tax purposes pursuant to the Code.

United States Tax Consequences

The following is a summary of certain United States federal income tax consequences resulting from the beneficial ownership of the 2020 Series B Bonds by certain persons. This summary does not consider all possible federal income tax consequences of the purchase, ownership, or disposition of, or receipt of interest on, the 2020 Series B Bonds and is not intended to reflect the individual tax position of any beneficial owner. Moreover, except as expressly indicated, this summary is limited to those persons who purchase a 2020 Series B Bond at its issue price, which is the first price at which a substantial amount of the 2020 Series B Bonds is sold to the public, and who hold 2020 Series B Bonds as “capital assets” within the meaning of the Code (generally, property held for investment). This summary does not address beneficial owners that may be subject to special tax rules, such as banks, insurance companies, dealers in securities or currencies, purchasers that hold 2020 Series B Bonds as a hedge against currency risks or as part of a straddle with other investments or as part of a “synthetic security” or other integrated investment (including a “conversion transaction”) comprising a bond and one or more other investments, or United States Holders (as defined below) that have a “functional currency” other than the United States dollar. This summary is applicable only to a person (a “United States Holder”) who or that is the beneficial owner of 2020 Series B Bonds and is (a) an individual citizen or resident of the United States, (b) a corporation or partnership or other entity created or organized under the laws of the United States or any State (including the District of Columbia), or (c) a person otherwise subject to federal income taxation on its worldwide income. This summary is based on the United States tax laws and regulations currently in effect and as currently interpreted and does not take into account possible changes in the tax laws or interpretations thereof any of which may be applied retroactively. Except as provided below, it does not discuss the tax laws of any state, local, or foreign governments.

United States Holders

Payments of Stated Interest. In general, for a United States Holder, interest on a 2020 Series B Bond will be taxable as ordinary income at the time it is received or accrued, depending on the beneficial owner’s method of accounting for tax purposes.

2020 Series B Bonds Purchased at Original Issue Premium. The initial public offering price of certain maturities of the 2020 Series B Bonds (a “2020 Series B OIP Bond”) may be greater than the principal amount payable on such 2020 Series B Bonds at maturity. The excess of the initial public offering price at which a substantial amount of a 2020 Series B OIP Bond is sold over the principal amount payable at maturity or on an earlier call date constitutes original issue premium. The offering prices relating to the yields set forth on the inside front cover page of this Official Statement are expected to be the initial public offering prices at which a substantial amount of each maturity of the 2020 Series B Bonds were ultimately sold to the public. Under Section 171 of the Code, a holder of a 2020 Series B OIP Bond may elect to treat such excess as “amortizable bond premium”, in which case the amount of interest required to be included in the taxpayer’s income each year with respect to the 2020 Series B OIP Bond will be reduced by the amount of amortizable bond premium (based on the 2020 Series B OIP Bond’s yield to maturity) allocable to that year. If such an election is made, the amount of each reduction in interest income will result in a corresponding reduction in the taxpayer’s adjusted basis in the 2020 Series B OIP Bond. Any election to amortize bond premium is applicable to all taxable debt instruments held by the taxpayer at the beginning of the first taxable year to which the election applies or thereafter acquired by the taxpayer and may not be revoked without the consent of the Internal Revenue Service (“IRS”).

2020 Series B Bonds Purchased at Original Issue Discount. The initial public offering price of certain maturities of the 2020 Series B Bonds (a “2020 Series B OID Bond”) may be less than the stated redemption price at maturity on such 2020 Series B Bonds. The excess of the stated redemption price at maturity over the initial public offering price at which a substantial amount of a 2020 Series B OID Bond is sold constitutes original issue discount, unless such excess is less than a specified de minimis amount. The offering prices relating to the yields set forth on the inside cover page of this Official Statement are expected to be the initial public offering prices at which a substantial amount of each maturity of the 2020 Series B Bonds were ultimately sold to the public.

Under Section 1272 of the Code, the amount of original issue discount treated as having accrued with respect to any 2020 Series B OID Bond during each day it is owned by a taxpayer is added to the owner’s adjusted basis for purposes of determining gain or loss upon the sale or other disposition of such 2020 Series B OID Bond by such owner. Accrued original issue discount on a 2020 Series B OID Bond is included in gross income of a United States Holder for each day during the tax year the United States Holder held the 2020 Series B OID Bond.

Original issue discount on a 2020 Series B OID Bond is treated as accruing on the basis of economic accrual for such purposes, computed by a constant semiannual compounding method using the yield to maturity on such 2020 Series B OID Bond. The original issue discount attributable to any bond for any particular semiannual period is equal to the excess of the product of (i) one-half of the yield to maturity of such bond, and (ii) the amount which would be the adjusted basis of the bond at the beginning of such semiannual period if held by the original owner and purchased by such owner at the initial public offering price, over the interest paid during such period. The amount so treated as accruing during each semiannual period is apportioned in equal amounts among the days in that period to determine the amount of original issue discount accruing for such purposes during each such day. Prospective purchasers of 2020 Series B Bonds at a discount, whether at the date of original issue or subsequent thereto, are advised to consult their own tax advisors regarding the federal, state and local tax consequences of ownership and disposition of, and receipt of interest on, such 2020 Series B Bonds.

Purchase, Sale, Exchange, and Retirement of 2020 Series B Bonds. A United States Holder's adjusted basis in a 2020 Series B Bond generally will equal its cost, increased by the amount of any original issue discount previously included in the United States Holder's income with respect to the 2020 Series B Bond, and reduced by the amount of any amortizable bond premium applied to reduce interest on the 2020 Series B Bond. A United States Holder generally will recognize gain or loss on the sale, exchange, or retirement of a 2020 Series B Bond equal to the difference between the amount realized on the sale or retirement (not including any amount attributable to accrued but unpaid interest) and the United States Holder's adjusted basis in the 2020 Series B Bond. Any such gain or loss recognized on the sale, exchange or retirement of a 2020 Series B Bond generally will be capital gain or loss and will be long-term capital gain or loss if the 2020 Series B Bond was held for more than one year. The defeasance or material modification of the terms of any 2020 Series B Bond may result in a deemed reissuance thereof, in which event a United States Holder may recognize taxable gain or loss without any corresponding receipt of proceeds.

Backup Withholding. United States Holders may be subject to backup withholding on payments of interest and, in some cases, disposition proceeds of the 2020 Series B Bonds, if they fail to provide an accurate Form W-9, "Request for Taxpayer Identification Number and Certification," or a valid substitute form, or have been notified by the IRS of a failure to report all interest and dividends, or otherwise fail to comply with the applicable requirements of backup withholding rules. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules will be allowed as a credit against the United States Holder's United States federal income tax liability (or refund) provided the required information is timely furnished to the IRS. Prospective United States Holders should consult their tax advisors concerning the application of backup withholding rules.

Medicare Tax Affecting U.S. Owners. For taxable years beginning after December 31, 2012, a United States Holder that is an individual or estate, or a trust that does not fall into a special class of trusts that is exempt from such tax, will be subject to a Medicare tax on the lesser of (1) the U.S. owner's "net investment income" for the taxable year and (2) the excess of the U.S. owner's modified adjusted gross income for the taxable year over a certain threshold. A United States Holder's net investment income will generally include its interest income and its net gains from the disposition of the 2020 Series B Bonds, unless such interest income or net gains are derived in the ordinary course of the conduct of a trade or business (other than a trade or business that consists of certain passive or trading activities). A United States Holder that is an individual, estate, or trust, should consult its own tax advisor regarding the applicability of the Medicare tax.

Information Reporting

In general, information reporting requirements will apply with respect to payments to a United States Holder of principal and interest (and with respect to annual accruals of original issue discount) on the 2020 Series B Bonds, and with respect to payments to a United States Holder of any proceeds from a disposition of the 2020 Series B Bonds. This information reporting obligation, however, does not apply with respect to certain United States Holders including corporations, tax-exempt organizations, qualified pension and profit sharing trusts, and individual retirement accounts. In the event that a United States Holder subject to the reporting requirements described above fails to supply its correct taxpayer identification number in the manner required by applicable law or is notified by the IRS that it has failed properly to report payments of, interest and dividends, a backup withholding tax (currently at a rate of 28%) generally will be imposed on the amount of any interest and principal and the amount of any sales proceeds received by the United States Holder on or with respect to the 2020 Series B Bonds.

Any payments of interest and original issue discount on the 2020 Series B Bonds to a Non-United States Holder generally will be reported to the IRS and to the Non-United States Holder, whether or not such interest or original issue discount is exempt from United States withholding tax pursuant to a tax treaty or the portfolio interest exemption. Copies of these information returns also may be made available under the provisions of a specific treaty or agreement to the tax authorities of the country in which the payee resides.

Information reporting requirements will apply to a payment of the proceeds of the disposition of a 2020 Series B Bond by or through (a) a foreign office of a custodian, nominee, other agent, or broker that is a United States person, (b) a foreign custodian, nominee, other agent, or broker that derives 50% or more of its gross income for certain periods from the

conduct of a trade or business in the United States, (c) a foreign custodian, nominee, other agent, or broker that is a controlled foreign corporation for United States federal income tax purposes, or (d) a foreign partnership if at any time during its tax year one or more of its partners are United States persons who, in the aggregate, hold more than 50% of the income or capital interest of the partnership or if, at any time during its taxable year, the partnership is engaged in the conduct of a trade or business within the United States, unless the custodian, nominee, other agent, broker, or foreign partnership has documentary evidence in its records that the beneficial owner is not a United States person and certain other conditions are met, or the beneficial owner otherwise establishes an exemption.

The federal income tax discussion set forth above is included for general information only and may not be applicable depending upon a beneficial owner's particular situation. Beneficial owners should consult their tax advisors with respect to the tax consequences of the purchase, ownership, and disposition of the 2020 Series B Bonds, including the tax consequences under state, local, foreign, and other tax laws and the possible effects of changes in federal or other tax laws.

State Taxes

In the opinion of Robinson & Cole LLP, Bond Counsel, based on existing statutes, interest on the 2020 Series B 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 2020 Series B Bonds is included in gross income for purposes of the Connecticut corporation business tax.

Prospective purchasers of the 2020 Series B 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 2020 Series B Bonds.

General

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. On the date of delivery of the 2020 Series B Bonds, Bond Counsel will deliver their opinions in the form attached hereto as Appendix D.

The above discussion does not purport to deal with all aspects of federal, state and local taxation that may be relevant to a particular owner of a 2020 Series B Bond. Prospective purchasers of the 2020 Series B Bonds, particularly those who may be subject to special rules, are advised to consult their own tax advisors regarding the federal, state and local tax consequences of ownership and disposition of, and receipt of interest on, the 2020 Series B Bonds.

RATING

S&P Global Ratings ("S&P") has assigned a rating of "AA+" to the 2020 Series B Bonds. The Authority furnished to S&P certain information and materials, some of which have been included in this Official Statement. S&P should be contacted directly for an explanation of such rating.

There is no assurance that the rating of S&P will continue in effect for any given period of time or that such rating will not be revised, suspended or withdrawn S&P if, in its judgment circumstances so warrant. A downward revision, suspension or withdrawal of any such rating may have an adverse effect on the market price or marketability of the Authority's bonds, including the 2020 Series B Bonds.

UNDERWRITING

Subject to the terms and conditions of the Bond Purchase Agreement, the Authority has agreed to sell to Raymond James & Associates, Inc. (the "Underwriter"), and the Underwriter has agreed to purchase, the 2020 Series B Bonds at the net aggregate purchase price of \$31,812,743.75 (consisting of the par amount of \$32,000,000, less underwriter's discount of \$187,256.25). The Underwriter will be obligated to purchase all such 2020 Series B Bonds, if any such 2020 Series B Bonds are purchased. The 2020 Series B 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 2020 Series B Bonds into investment trusts) at prices lower than such initial public offering prices, and such initial public offering prices may be changed, from time to time, by the Underwriter.

LITIGATION

In the opinion of counsel to the Authority, there are no claims or litigation pending or to its knowledge threatened, which would result in final judgments against the Authority which would have a material adverse effect on the finances of the Authority or which would impact the validity of the 2020 Series B Bonds or the power of the Authority to assess and collect revenues to pay them. Notwithstanding the foregoing, a Confidential Settlement Agreement and Mutual Release Agreement between the Authority; CH2M Hill, Ltd. And Operations Management International Inc. (the contracted operations and maintenance provider for the wastewater system from 1998 through 2013) was executed on May 12, 2016. This agreement provides a schedule of compensation to the Authority through the seventh anniversary of the closing date of the agreement (through May 12, 2023) and resolves all disputes between the parties.

CERTAIN LEGAL MATTERS

The unqualified approving opinion, the proposed form of which is set forth in Appendix D, of Robinson & Cole LLP, of Hartford, Connecticut, Bond Counsel to the Authority, will be furnished upon delivery of the 2020 Series B Bonds. Certain legal matters will be passed on for the Underwriter by their counsel, Shipman & Goodwin LLP, of Hartford, Connecticut.

COST OF SERVICE CONSULTANT

Arcadis, Inc. and O'Neil Accounting & Consulting, LLC have prepared a Cost of Service Study ("COSS") for Fiscal Year 2021, dated April 9, 2020, for the Authority which developed the revenue requirements that are the basis for the rates, and anticipated increases in such rates for customers of the Authority. A copy of the COSS is included as Appendix B.

RISK MANAGEMENT

The Authority is exposed to various risks of loss related to industry liability, employee health and medical, professional liability, theft or impairment of assets, errors or omissions, injury to employees, natural disasters, and owners and contractors protective liability and environmental liability. The Authority purchases commercial insurance for all risks of loss. Coverage has not been materially reduced, nor has settled claims exceeded commercial coverage.

THE CO-MUNICIPAL ADVISORS

Phoenix Advisors LLC, of Milford Connecticut and Query & Associates, LLC of Philadelphia, Pennsylvania are serving as Co-Municipal Advisors to the Authority for the issuance of the 2020 Series B Bonds. The municipal advisors have assisted in the preparation of this Official Statement and in other matters relating to the planning, structuring and issuance of the 2020 Series B Bonds and have provided other advice. They, however, do not assume responsibility for the adequacy of the statements made herein and makes no representation that they have independently verified the same.

MISCELLANEOUS

Availability of Continuing Information

The Authority prepares, in accordance with State law, annual audited financial statements and file such annual audits with the State Office of Policy and Management within six months of the end of its fiscal year. In order to assist the Underwriter to comply with the requirements of Rule 15c2-12(b)(5) promulgated by the Securities and Exchange Commission, the Authority will agree to provide or cause to be provided annual financial information and operating data, timely notice of certain events within ten (10) business days of the occurrence of such events, and timely notice of a failure by the Authority to provide the required annual financial information on or before the date specified in the Continuing Disclosure Agreement with respect to the 2020 Series B Bonds, pursuant to a Continuing Disclosure Agreement substantially in the form attached as Appendix E to this Official Statement. The Underwriter's obligation to purchase the 2020 Series B Bonds shall be conditioned upon its receiving, on or prior to the delivery of the 2020 Series B Bonds, an executed copy of the Continuing Disclosure Agreement.

The Authority has previously undertaken, in continuing disclosure agreements, entered into for the benefit of holders of certain of its bonds, to provide certain financial information and event notices pursuant to Rule 15c2-12(b)(5). In the past five years, the Authority has not failed to comply, in all material respects, with its previous undertakings in its continuing disclosure agreements.

The Authority has registered with the EMMA reminder system to receive email reminders to help ensure timely filing of disclosure requirements.

Additional Information

Additional information may be obtained upon request from Sidney J. Holbrook, Executive Director, Greater New Haven Water Pollution Control Authority, 260 East Street, New Haven, Connecticut 06511, telephone (203) 466-5280.

The Official Statement is submitted in connection with the sale of the 2020 Series B 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 Authority and duly executed and delivered on their behalf.

This Official Statement is not to be construed as a contract or agreement between the Authority and the purchasers or holders of any of the 2020 Series B 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 Authority from official and other sources and is believed by the Authority to be reliable, but such information other than that obtained from official records of the Authority has not been independently confirmed or verified by the Authority and its accuracy is not guaranteed.

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

GREATER NEW HAVEN WATER POLLUTION CONTROL AUTHORITY

By: /s/ *Sidney J. Holbrook*

Sidney J. Holbrook, *Executive Director*

By: /s/ *Gabriel Varca*

Gabriel Varca, *Treasurer and Director of Finance Administration*

June 17, 2020

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APPENDIX A

**AUDITED FINANCIAL STATEMENTS OF THE AUTHORITY
FOR THE FISCAL YEAR ENDED JUNE 30, 2019**

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Greater New Haven Water Pollution Control Authority

Financial Report
June 30, 2019 and 2018

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Financial Section

Independent Auditor's Report

To the Board of Directors
Greater New Haven Water Pollution Control Authority

Report on the Financial Statements

We have audited the accompanying financial statements of the Greater New Haven Water Pollution Control Authority (the Authority), as of and for the years ended June 30, 2019 and 2018, and the related notes to the financial statements, which collectively comprise the Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

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

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the Authority as of June 30, 2019 and 2018, and the changes in financial position and cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the Management Discussion and Analysis on pages 3-8, the Schedule of Contributions – Municipal Employees' Retirement System on page 32 and the Schedule of the Authority's Proportionate Share of the Net Pension Liability – Municipal Employees' Retirement System on page 33 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 3, 2019, on our consideration of the Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of these reports is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. These reports are an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Authority's internal control over financial reporting and compliance.

RSM US LLP

New Haven, Connecticut
December 3, 2019

**Greater New Haven
Water Pollution Control Authority
Management's Discussion and Analysis – *Unaudited*
For the Year Ended June 30, 2019**

INTRODUCTION

The Greater New Haven Water Pollution Control Authority (the GNHWPCA or the Authority) was organized in 2005 as a political subdivision of the State of Connecticut (the State) established and created for the performance of an essential public and governmental function. It was created as a regional water pollution control authority under Connecticut Public Act 95-329, subsequently enacted as Title 22a, Sections 500 to 519 of the Connecticut General Statutes (the Statutes), as amended (the Act). The GNHWPCA was created pursuant to the Act by concurrent ordinances of the four municipalities (the City of New Haven, and the Towns of Hamden, East Haven and Woodbridge (the Constituent Municipalities). Under the Act, the GNHWPCA is empowered to purchase, own and operate a public sewer system; to levy assessments and sewer use fees; to place liens on real estate to secure such assessments; and to issue revenue bonds. The GNHWPCA is also eligible for grants and loans under the State of Connecticut Clean Water Fund program (CWF). Under the by-laws of the GNHWPCA, a governing Board of Directors (Board) comprised of representatives of the Constituent Municipalities was established.

On August 29, 2005, the GNHWPCA entered into an Asset Purchase Agreement (regionalization) with the Constituent Municipalities and thereby acquired ownership of the wastewater system assets of the Constituent Municipalities which included CWF obligations.

In order to finance the acquisition of the wastewater system assets, the GNHWPCA issued \$91,290,000 of revenue bonds (the 2005 Series A Bonds) subject to an Indenture of Trust (the Indenture). The Indenture constitutes a contract between the GNHWPCA, the Trustee and the holders of the 2005 Series A Bonds. The Indenture secures the 2005 Series A Bonds and the CWF loans assumed from the Constituent Municipalities. The majority of these bonds were refinanced in 2014.

The wastewater system assets acquired by the GNHWPCA included: the East Shore Wastewater Treatment Plant (the Treatment Plant), located in New Haven; 30 pump stations; a collection system of approximately 560 miles of sanitary and combined sewers (the Collection System); and machinery and equipment. The system provides wastewater treatment services to approximately 50,000 customers throughout the four communities.

The GNHWPCA operates on a fiscal year that starts on July 1 and ends on June 30.

Management's Discussion and Analysis (MD&A) provides supplemental information to the audit and should be read in conjunction with such audit. The purpose of the MD&A is to introduce and highlight the more detailed information provided in the audited financial statements. For example, it will assess improvement to or deterioration of the GNHWPCA financial position and will identify factors that, in management's opinion, affected financial performance during the fiscal period under review.

CONTENTS OF THE AUDITED FINANCIAL STATEMENTS

Our financial statements are prepared using proprietary fund (enterprise fund) accounting that employs essentially the same basis of accounting as private-sector business enterprises. Under this method of accounting, an economic resources measurement focus and the accrual basis of accounting are used.

Revenue is recorded when earned and expenses are recorded when incurred. The financial statements include statements of net position, statements of revenues, expenses and changes in net position, and statements of cash flows. These statements are followed by notes to the financial statements.

The GNHWPCA's audited financial statements include the following:

Statements of net position

These statements provide information about the GNHWPCA's investments in resources (assets) and deferred outflows of resources, and its obligations to creditors (liabilities) and deferred inflows of resources, with the difference between them reported as net position. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the GNHWPCA is improving or deteriorating.

Statements of revenues, expenses and changes in net position

These statements demonstrate changes in net position from one period to another by accounting for operating and non-operating revenues and expenditures and measuring the financial results of operations combined with any capital contributions to determine the net change in position for the period. This change combined with the beginning of the period net position balance reconciles to the net position at the end of the period. The information may be useful to determine how the GNHWPCA has funded its costs.

Statements of cash flows

These statements report cash and cash equivalent activity for the year resulting from operating activities, non-capital financing activities, capital and related financial activities and investing activities. The net result of these activities added to the beginning of the year cash and cash equivalents balance reconciles to the cash and cash equivalents balance at the end of the year.

Notes to financial statements and required supplementary information

Notes to the financial statements contain information essential to understanding the financial statements, such as the GNHWPCA accounting methods and policies. Required supplementary information contains information on the GNHWPCA's participation in the State of Connecticut Municipal Employees' Retirement System.

THE GNHWPCA BUSINESS

The GNHWPCA was created pursuant to Sections 22a-500 to 22a-519, inclusive, of the Statutes to (a) operate the Treatment Plant and to (b) use, equip, re-equip, repair, maintain, supervise, manage, operate and perform any act pertinent to collection, transportation, treatment and disposal of sewage with respect to the Constituent Municipalities. Currently, the daily flow at the Treatment Plant is approximately 25 million gallons per day with a wet weather capacity of 100 million gallons per day.

The Authority is responsible for the day-to-day management of the operations of the Treatment Plant and Collection System. Currently, the Authority contracts out for the maintenance of the system and for the operation of the incinerator through two (2) long-term contracts (Note 10).

The Authority currently has 64 full time equivalent employees.

FINANCIAL HIGHLIGHTS

Condensed Statements of Revenues, Expenses and Changes in Net Position

(Dollars in Thousands)	Years ended June 30,			Dollar Variance		Percentage Variance	
	2019	2018	2017	19 vs. 18	18 vs. 17	19 vs. 18	18 vs. 17
Operating revenues	\$ 44,850	\$ 44,859	\$ 41,670	\$ (9)	\$ 3,189	(0.0%)	7.7%
Operating expenses	24,175	25,200	22,384	(1,025)	2,816	(4.1%)	12.6%
Depreciation and amortization	9,694	9,348	9,303	346	45	3.7%	0.5%
Total operating expenses, including depreciation	33,869	34,548	31,687	(679)	2,861	(2.0%)	9.0%
Operating income	10,981	10,311	9,983	670	328	6.5%	3.3%
Nonoperating (expense) income	(3,998)	(4,419)	(3,338)	421	(1,081)	(9.5%)	32.4%
Capital grants	4,289	1,325	2,019	2,964	(694)	223.7%	(34.4%)
Change in net position	\$ 11,272	\$ 7,217	\$ 8,664	\$ 4,055	\$ (1,447)	56.2%	(16.7%)

The following items highlight the condensed statements of revenues, expenses and changes in net position, shown above.

Operating Revenues

Operating revenue of \$44.9 million for fiscal year 2019 remained the same as operating revenue for fiscal year 2018. Contributing factors include a decrease in revenue received for permits fees and the State Nitrogen Credit Exchange program. The decreases in revenue were offset by a rate increase of \$.20 per centum cubic feet (CCF) from fiscal year 2018 to fiscal year 2019. The GNHWPCA Board approved a charge of \$4.56 per CCF to meet the requirements of the indenture and to fund capital improvements.

Operating revenue of \$44.9 million for fiscal year 2018 represents an increase of \$3.2 million or 7.7% compared to \$41.7 million in operating revenues for fiscal year 2017. The increase in operating revenue is primarily attributed to a rate increase of \$0.24 per centum cubic feet (CCF) from fiscal year 2017 to fiscal year 2018. The GNHWPCA Board approved a charge of \$4.36 per CCF to meet the requirements of the indenture and to fund capital improvements. Other contributing factors include an increase in permit fees and revenue received from the State Nitrogen Credit Exchange program.

Operating Expenses

Operating expenses include all costs, including maintenance, necessary to deliver wastewater collection and treatment services. It also includes the administrative resources and billing and customer service costs employed to ensure efficient operations.

Operating expenses including depreciation and amortization for fiscal year 2019 decreased to \$33.9 million a decrease of \$0.6 million over fiscal year 2018 with a total of \$34.5 million. The decrease is mainly due to decreases in expenses for health insurance and retirement contributions, legal and lawyer fees, and waste and ash disposal fees.

Operating expenses including depreciation and amortization for fiscal year 2018 increased to \$34.5 million, an increase of \$2.8 million over fiscal year 2017 with a total of \$31.7 million. The increase is mainly due to increases in employee benefits for health insurance and retirement contributions, legal and lawyer fees, contractual services and waste and ash disposal fees.

Non-operating Income and Expense

Non-operating income and expense includes revenue from investment income, reflective of market rates of return, which is used in the general operation of the entity; and interest expense which consists primarily of interest incurred on revenue bonds issued and outstanding and loans assumed in connection with the CWF Program.

Non-operating income and (expenses) in fiscal year 2019 decreased \$0.4 million or (9.5%) from \$4.4 million in fiscal year 2018. The increase in non-operating income and (expenses) is directly related to an increase in interest income received on investment. The non-operating expense of \$4.0 million is comprised of interest expense net of interest income received.

Non-operating income and (expenses) in fiscal year 2018 increased \$1.1 million or 32.4% from \$3.3 million in fiscal year 2017. The increase in non-operating income and (expenses) is directly related to an increase in interest expense due to the closing of CWF project 441-C in September of 2017. The non-operating expense of \$4.4 million is comprised of interest expense net of interest income received.

Condensed Statements of Net Position

(Dollars in Thousands)	June 30,			Dollar Variance		Percentage Variance	
	2019	2018	2017	19 vs. 18	18 vs. 17	19 vs. 18	18 vs. 17
Assets							
Current assets	\$ 56,106	\$ 51,364	\$ 46,682	\$ 4,742	\$ 4,682	9.2%	10.0%
Capital assets, net	230,868	228,732	231,347	2,136	(2,615)	0.9%	(1.1%)
Noncurrent assets							
Restricted assets	13,553	13,149	12,781	404	368	3.1%	2.9%
Other	7,069	8,345	9,604	(1,276)	(1,259)	(15.3%)	(13.1%)
Total assets	307,596	301,590	300,414	6,006	1,176	2.0%	0.4%
Deferred outflows of resources	10,100	5,392	7,364	4,708	(1,972)	87.3%	(26.8%)
Liabilities							
Current liabilities	19,362	16,033	16,473	3,329	(440)	20.8%	(2.7%)
Noncurrent liabilities	159,348	163,140	170,627	(3,792)	(7,487)	(2.3%)	(4.4%)
Total liabilities	178,710	179,173	187,100	(463)	(7,927)	(0.3%)	(4.2%)
Deferred inflows of resources	206	302	388	(96)	(86)	(31.8%)	(22.2%)
Net position							
Net investment in capital assets	90,714	91,681	91,092	(967)	589	(1.1%)	0.6%
Restricted	3,062	2,723	2,791	339	(68)	12.4%	(2.4%)
Unrestricted	44,313	32,413	25,717	11,900	6,696	36.7%	26.0%
Unrestricted – designated	690	690	690	-	-	-	-
Total net position	\$ 138,779	\$ 127,507	\$ 120,290	\$ 11,272	\$ 7,217	8.8%	6.0%

The following items highlight the condensed statements of net position shown above.

Current Assets

The increase of \$4.7 million in current assets between fiscal year 2018 and fiscal year 2019 resulted primarily from strong collections of outstanding sewer use fees and a reduction in receivables from the State of CT for FEMA projects which resulted in an increase in cash and cash equivalents at June 30, 2019.

Capital Assets

The Authority's investment in capital assets as of June 30, 2019 amounted to \$230,868,026 (net of accumulated depreciation). This investment in capital assets is attributable to additions to equipment and sanitary sewer infrastructure, such as repairs and replacement of equipment, facility upgrades to the waste water treatment facility, pump station rehabilitations and the renewal or replacement of the waste water collection system.

Capital assets are assets acquired for the use in operations that will benefit more than a single fiscal year. Capital assets are stated at cost. Normal maintenance and repairs that do not add to the value of the assets 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. Additional information on capital assets is presented in Note 4.

The Authority's investment in capital assets as of June 30, 2018 amounted to \$228,732,494 (net of accumulated depreciation). This investment in capital assets is attributable to additions to equipment and sanitary sewer infrastructure, such as repairs and replacement of equipment, facility upgrades to the waste water treatment facility, pump station rehabilitations and the renewal or replacement of the waste water collection system.

Restricted Assets

The term "restricted assets" refers primarily to certain funds established under various bond indentures whose use is restricted for the following purposes:

- Debt Service
- Debt Service Reserves
- Construction
- Maintenance Escrow
- Solids Handling Sinking Fund

The increase of \$0.4 million in restricted assets between fiscal year 2018 and fiscal year 2019 is due to an increase to the debt service reserve fund related to revenue bonds and State Clean Water Fund obligations and an increase in the Solids Handling fund for capital expenditures at the incinerator.

The GNHWPCA invests these restricted assets in investments as allowed by the Indenture, for example, depository accounts in direct obligations of the federal or state governments (or agencies) or in guaranteed investment contracts.

Other Non-Current Assets

Other non-current assets decreased \$1.3 million or (15%) to \$7.1 million from \$8.3 million for fiscal year 2019. The decrease is directly related to the reduction of the long-term portion of the receivable from the City of New Haven and the receivable from contract operator settlement.

Current Liabilities

The increase of \$3.3 million in current liabilities from fiscal year 2018 to fiscal year 2019 is primarily attributed to an increase in accounts payable and accrued expenses of \$0.6 million and the increase of the current portion in long-term debt in the amount of \$2.7 million.

Non-Current Liabilities

Non-current liabilities decreased by \$3.8 million from fiscal year 2018 to fiscal year 2019. This is primarily due to an increase in net pension liability of \$5 million offset by a reduction of long-term debt payable of \$8.8 million at June 30, 2019. Additional information on non-current liabilities is presented in Note 6 and Note 9.

Non-current liabilities decreased by \$7.5 million from fiscal year 2017 to fiscal year 2018. This is primarily due to an reduction in net pension liability and Long Term Debt payable at June 30, 2018. Additional information on non-current liabilities is presented in Note 6 and Note 9.

Net Position

(2019)

By far the largest portion of the GNHWPCA's net position of \$138.8 million, 65% or \$91 million reflects our investment in capital assets (e.g. land, buildings, machinery, equipment and infrastructure) in the Constituent Municipalities served by the Authority. An additional portion of the Authority's net position \$3 million represents resources that are subject to external restrictions to the requirement of the indenture. The remaining balance of the unrestricted net position \$44.3 million may be used to meet the Authority's ongoing obligations and to fund "pay as you go" Capital projects that have been approved but not yet completed. \$0.7 million has been designated for future debt service.

Total net position increased by \$11.3 million or 8.8% to \$138.8 million for fiscal year 2019 from \$127.5 million in fiscal year 2018 as a result of operations and the Authority's investment in capital assets.

(2018)

By far the largest portion of the GNHWPCA's net position of \$127.5 million, 72% or \$91.7 million reflects our investment in capital assets (e.g. land, buildings, machinery, equipment and infrastructure) in the Constituent Municipalities served by the Authority. An additional portion of the Authority's net position \$2.7 million represents resources that are subject to external restrictions to the requirement of the indenture. The remaining balance of the unrestricted net position \$32.4 million may be used to meet the Authority's ongoing obligations and to fund "pay as you go" Capital Projects that have been approved but not yet completed. \$0.7 million has been designated for future debt service.

Total net position increased by \$7.2 million or 6.0% to \$127.5 million for fiscal year 2018 from \$120.3 million in fiscal year 2017 as a result of operations and the Authority's investment in capital assets.

THE GNHWPCA'S CUSTOMER BASE

The GNHWPCA serves a population of almost 201,000 users; the customer base is primarily residential and commercial. Of its approximately 50,000 customers, 46,500 are residential and approximately 3,500 are commercial, industrial and public authorities.

LIQUIDITY AND CAPITAL RESOURCES

In fiscal year 2019 the Authority generated \$44.9 million in total operating revenues and \$1.1 million from investment and other earnings. These amounts were used to pay operations and maintenance of \$24.1 million and to fund debt service of \$13.1 million (\$8 million principal and \$5.1 million interest).

The Authority funds its program of capital improvements largely through debt financing and capital contributions from the CWF program, through the issuance of revenue bonds, and by pay-as-you-go funding from Reserves.

In fiscal year 2018 the Authority generated \$44.9 million in total operating revenues and \$0.7 million from investment and other earnings. These amounts were used to pay operations and maintenance of \$25.2 million and to fund debt service of \$12.4 million (\$7.3 million principal and \$5.1 million interest).

The Authority funds its program of capital improvements largely through debt financing and capital contributions from the CWF program, the issuance of revenue bonds and by pay as you go funding from reserves.

CREDIT RATING

GNHWPCA's credit ratings for its bonds are AA by Standard & Poor's, A1 by Moody's and A+ by Fitch Investors Service

FINANCIAL STATEMENT PRESENTATION

The GNHWPCA financial statements are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America.

REQUEST FOR INFORMATION

This financial report is designed to provide a general overview of the Greater New Haven Water Pollution Control Authority's finances. Questions concerning any of the information provided in this report or requests for additional information should be addressed in writing to the Director of Finance and Administration, Greater New Haven Water Pollution Control Authority, 260 East Street, New Haven, Connecticut 06511.

Basic Financial Statements

Greater New Haven Water Pollution Control Authority

Statements of Net Position June 30, 2019 and 2018

	2019	2018
Assets		
Current assets:		
Cash and cash equivalents	\$ 48,318,131	\$ 42,366,987
Accounts receivable, less allowance for doubtful accounts of \$3,740,685 and \$3,796,356 in 2019 and 2018, respectively	6,893,374	8,122,122
City of New Haven receivable	776,132	760,775
Other current assets	117,897	114,274
Total current assets	56,105,534	51,364,158
Noncurrent assets:		
Restricted assets	13,553,223	13,148,826
Due from settlement	1,631,396	2,131,396
City of New Haven receivable	5,437,346	6,214,009
Capital assets, net of accumulated depreciation and amortization	230,868,026	228,732,494
Total noncurrent assets	251,489,991	250,226,725
Total assets	307,595,525	301,590,883
Deferred Outflows of Resources		
Deferred pension expense	6,869,343	1,819,221
Deferred amounts on refunding	3,230,968	3,572,525
Total deferred outflows of resources	10,100,311	5,391,746
Liabilities		
Current liabilities:		
Accounts payable	4,329,584	3,745,595
Accrued interest	1,400,289	1,417,505
Accrued expenses	1,914,072	1,802,195
Retainage payable	139,634	123,721
Current portion of long-term debt	10,644,254	7,960,814
Contribution payable to state	934,477	983,660
Total current liabilities	19,362,310	16,033,490
Noncurrent liabilities:		
Net pension liability	9,901,970	4,877,689
Long-term debt, less current portion	149,446,456	158,262,526
Total noncurrent liabilities	159,348,426	163,140,215
Total liabilities	178,710,736	179,173,705
Deferred Inflows of Resources		
Deferred pension credit	206,147	301,730
Total deferred inflows of resources	206,147	301,730
Net Position		
Net investment in capital assets	90,713,941	91,680,569
Restricted:		
Debt service	1,677,897	1,602,167
Escrow	1,383,954	1,120,971
Unrestricted	44,313,252	32,413,578
Unrestricted – designated for debt service reserve	689,909	689,909
Total net position	\$ 138,778,953	\$ 127,507,194

See notes to financial statements.

Greater New Haven Water Pollution Control Authority

**Statements of Revenues, Expenses and Changes in Net Position
Years Ended June 30, 2019 and 2018**

	2019	2018
Operating revenues:		
Residential	\$ 28,090,034	\$ 27,574,363
Commercial and industrial	11,667,505	11,264,860
Municipal	1,821,685	1,675,181
Delinquent interest and lien fees	1,252,062	1,280,988
Outside sludge disposal	288,441	278,915
Other	1,795,900	2,697,613
(Provision) credit for bad debts	(65,873)	86,768
Total operating revenues	44,849,754	44,858,688
Operating expenses:		
Operation and maintenance	24,175,230	25,199,607
Depreciation and amortization	9,693,951	9,347,992
Total operating expenses	33,869,181	34,547,599
Operating income	10,980,573	10,311,089
Nonoperating income (expense):		
Other income	132,542	147,609
Interest income	925,365	530,192
Interest expense	(5,056,012)	(5,096,577)
Total nonoperating expense	(3,998,105)	(4,418,776)
Income before capital contributions	6,982,468	5,892,313
Capital contributions	4,289,291	1,324,813
Change in net position	11,271,759	7,217,126
Net position, beginning of year	127,507,194	120,290,068
Net position, end of year	\$ 138,778,953	\$ 127,507,194

See notes to financial statements.

Greater New Haven Water Pollution Control Authority

Statements of Cash Flows Years Ended June 30, 2019 and 2018

	2019	2018
Cash flows from operating activities:		
Receipts from customers and users	\$ 46,078,503	\$ 43,629,177
Payments to suppliers	(15,571,541)	(16,021,071)
Payments to employees	(8,066,141)	(8,250,118)
Net cash provided by operating activities	22,440,821	19,357,988
Cash flows from capital and related financing activities:		
Proceeds from notes payable and interim obligations	2,499,183	44,113,512
Principal payments on debt (includes paydown/defeasance of \$0 and \$41,788,726 in 2019 and 2018, respectively)	(7,960,803)	(49,047,975)
Interest paid on debt	(5,402,681)	(7,124,388)
Proceeds from City of New Haven	761,306	748,527
Proceeds from settlement	500,000	1,000,000
Proceeds received from capital contributions	4,289,291	1,324,813
Acquisition and construction of capital assets	(11,829,483)	(6,733,139)
Net cash used in capital and related financing activities	(17,143,187)	(15,718,650)
Cash flows provided by non-capital activities:		
Other income	132,542	147,609
Cash flows provided by investing activities:		
Interest received	925,365	530,192
Net increase in cash and cash equivalents	6,355,541	4,317,139
Cash and cash equivalents:		
Beginning	55,515,813	51,198,674
Ending	\$ 61,871,354	\$ 55,515,813
Reported on statements of net position as follows:		
Unrestricted cash and cash equivalents	\$ 48,318,131	\$ 42,366,987
Restricted assets	\$ 13,553,223	\$ 13,148,826
Reconciliation of operating income to net cash provided by operating activities:		
Operating income	\$ 10,980,573	\$ 10,311,089
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation and amortization	9,693,951	9,347,992
Loss (credit) for bad debts	65,873	(86,768)
Changes in assets and liabilities:		
Decrease (increase) in accounts receivable	1,162,875	(1,142,743)
(Increase) decrease in other assets	(3,623)	6,709
Increase in accounts payable and retainage	599,902	403,414
Increase (decrease) in other liabilities	4,975,098	(1,120,491)
(Increase) decrease in deferred outflows of resources - deferred pension	(5,050,122)	1,620,448
Decrease in deferred inflows of resources	(95,583)	(86,476)
Increase in accrued expenses	111,877	104,814
Net cash provided by operating activities	\$ 22,440,821	\$ 19,357,988

See notes to financial statements.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 1. Reporting Entity and Summary of Significant Accounting Policies

Reporting entity: The Greater New Haven Water Pollution Control Authority (the GNHWPCA or the Authority) was organized in 2005 as a political subdivision of the State of Connecticut (the State), established and created for the performance of an essential public and governmental function. It was created as a regional water pollution control authority under Connecticut Public Act 95-329, subsequently enacted as Title 22a, Sections 500 to 519 of the Connecticut General Statutes (Statutes), as amended (the Act). The GNHWPCA was created pursuant to the Act by concurrent ordinances of the City of New Haven (City) and the Towns of Hamden, East Haven and Woodbridge (collectively, the Constituent Municipalities). Under the Act, the GNHWPCA is empowered to purchase, own and operate a public sewer system; to levy assessments and sewer use fees; to place liens on real estate to secure such assessments; and to issue revenue bonds. The GNHWPCA is also eligible for grants and loans under the State Clean Water Fund (CWF) program. Under the by-laws of the GNHWPCA, a governing Board of Directors comprised of representatives of the Constituent Municipalities was established.

Accounting principles generally accepted in the United States of America (GAAP) require that the reporting entity include organizations for which the nature and significance of their relationship with the primary entity are such that their exclusion would cause the reporting entity's financial statements to be misleading or incomplete. This criterion has been considered and there are no agencies or entities that should be, but are not, combined with the financial statements of the GNHWPCA.

In 2005, the GNHWPCA entered into an Asset Purchase Agreement (the Agreement) with the Constituent Municipalities. Under the Agreement, the Authority acquired ownership of their wastewater system assets and assumed certain obligations of the Constituent Municipalities.

Accounting standards adopted in the current year:

Governmental Accounting Standards Board (GASB) Statement No. 89, *Accounting for Interest Cost Incurred before the End of a Construction Period*. The objectives of this Statement are (1) to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and (2) to simplify accounting for interest cost incurred before the end of a construction period. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. Earlier application is encouraged. The requirements of this Statement should be applied prospectively.

The Authority adopted this standard on July 1, 2018. The effects of the implementation did not have a material impact on the Authority's financial statements.

GASB Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*, the primary objective of this Statement is to improve the information that is disclosed in notes to government financial statement related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt. The adoption of GASB Statement No. 88 did not impact the Authority's financial position or results of operations.

Significant accounting policies are as follows:

Basis of accounting: The GNHWPCA utilizes the accrual basis of accounting, as required of proprietary funds under GAAP, under which revenues are recognized when earned and expenses are recognized when incurred.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 1. Reporting Entity and Summary of Significant Accounting Policies (Continued)

Accounting estimates: The preparation of financial statements 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 GNHWPCA considers all unrestricted and restricted highly liquid investments with an original maturity of three months or less when purchased to be cash equivalents.

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

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

	<u>Years</u>
Land improvements	15-50
Buildings and improvements	40
Machinery and equipment	5-20
Sewer lines	10-50
Vehicles	5

Debt issuance costs and bond premiums: Costs incurred in connection with issuance of long-term debt, consisting primarily of legal fees, are expensed as incurred. Bond premiums have been deferred and are being amortized over the life of the related debt.

Net position: Net position is classified in the following categories:

Net investment in capital assets: The net investment in capital assets component of net position consists of capital assets, net of accumulated depreciation, reduced by the outstanding balances of bonds, notes, or other borrowings that are attributable to the acquisition, construction or improvement of those assets. Deferred outflows of resources and deferred inflows of resources that are attributable to the acquisition, construction, or improvement of those assets or related debt are included in this component of net position.

Restricted net position: This category represents external restrictions imposed by creditors, grantors, contributors or laws or regulations of other governments and restrictions imposed by law through constitutional provisions or enabling legislation.

Unrestricted net position: This category represents the amount not restricted for any project or other purpose.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 1. Reporting Entity and Summary of Significant Accounting Policies (Continued)

Revenues: Revenues are based on the GNHWPCA authorized minimum charges and rates per hundred cubic feet (CCF) applied to customer consumption of water. Revenues are recognized when utility services are provided.

The GNHWPCA bills customers based on actual water consumption used during the previous calendar year (2017), with an adjustment for seasonal use for residential customers who use less than 300 CCF's per year.

Interest is levied on accounts that are 30 days past due. The GNHWPCA has the authority to file liens on past due accounts.

Operating revenues and expenses: The GNHWPCA distinguishes operating revenues and expenses from non-operating. Operating revenues result from charges to customers for wastewater disposal and related services. Operating expenses include the cost of operations, maintenance, sales and service, administrative expenses and depreciation. All revenues and expenses not meeting this definition are reported as non-operating or capital contributions.

Capital contributions: Capital contributions are recognized when eligibility requirements are met. Capital contributions consist principally of grant funding received under the CWF Program, contributions received from the City under a cost sharing agreement for CWF projects and contributions received from the State Department of Transportation for costs incurred to move infrastructure.

Compensated absences: Under the terms of two collective bargaining agreements, employees are awarded vacation on January 1 of each year based on years of service, and can accumulate up to 40 days of unused vacation. 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. Retiring employees are paid for 100% of their unused vacation and unused sick leave up to 90 days. Such balances are recorded as a component of accrued expenses in the statements of net position.

Vested sick leave and accumulated vacation leave is recognized as an expense and liability as the benefits accrue to employees.

Net pension liability: The net pension liability is measured as the portion of the actuarial present value of projected benefits that is attributed to past periods of employee service (total pension liability), net of the pension plan's fiduciary net position. The pension plan's fiduciary net position is determined using the same valuation methods that are used by the pension plan for purposes of preparing its statement of fiduciary net position. The net pension liability is measured as of a date (measurement date) no earlier than the end of the employer's prior fiscal year, consistently applied from period to period.

Deferred outflows/inflows of resources: In addition to assets, the statements of net position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period or periods and so will not be recognized as an outflow of resources expense until then. The Authority reports a deferred charge on refunding and deferred outflows related to pension in the statements of net position. A deferred charge on refunding results from the difference in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt. A deferred outflow of resources related to pension results from differences between expected and actual experience, changes in assumptions or other inputs. These amounts are deferred and included in pension expense in a systematic and rational manner.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 1. Reporting Entity and Summary of Significant Accounting Policies (Continued)

In addition to liabilities, the statements of net position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period or periods and so will not be recognized as an inflow of resources (revenue) until that time. The Authority reports a deferred inflow of resources related to pensions in the statements of net position. A deferred inflow of resources related to pension results from differences between expected and actual experience, changes in assumptions or other inputs. These amounts are deferred and included in pension expense in a systematic and rational manner.

Fair value: The GNHWPCA uses fair value measurements to record fair value adjustments to certain assets and to determine fair value disclosures. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is best determined based upon quoted market prices. However, in certain instances, there are no quoted market prices for certain assets or liabilities. In cases where quoted market prices are not available, fair values are based on estimates using present value or other valuation techniques. Those techniques are significantly affected by the assumptions used, including the discount rate and estimates of future cash flows. Accordingly, the fair value estimates may not be realized in an immediate settlement of the asset or liability.

Fair value measurements focus on exit prices in an orderly transaction (that is, not a forced liquidation or distressed sale) between market participants at the measurement date under current market conditions. If there has been a significant decrease in the volume and level of activity for the asset or liability, a change in valuation technique or the use of multiple valuation techniques may be appropriate. In such instances, determining the price at which willing market participants would transact at the measurement date under current market conditions depends on the facts and circumstances and requires the use of significant judgment.

The GNHWPCA's fair value measurements are classified into a fair value hierarchy based on the markets in which the assets and liabilities are traded and the reliability of the assumptions used to determine fair value.

The three categories within the hierarchy are as follows:

Level 1: Quoted prices in active markets for identical assets and liabilities.

Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly, including quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, interest rates and yield curves observable at commonly quoted intervals, implied volatilities, credit spreads, and market-corroborated inputs.

Level 3: Unobservable inputs shall be used to measure fair value to the extent that relevant observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at the measurement date. Level 3 assets and liabilities include financial instruments whose value is determined using pricing models, discounted cash flows methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant management judgment.

See Note 2 for additional information regarding fair value.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 2. Cash, Cash Equivalents and Investments

Deposits: The GNHWPCA's custodial credit risk policy for deposits conforms to the State requirement that each depository maintain segregated collateral in an amount equal to a defined percentage of its public deposits based upon the bank's risk based capital ratio.

Investments: The GNHWPCA does not have a formal credit risk policy for investments; however, the GNHWPCA adheres to the Statutes which, in general, allows the GNHWPCA to invest in obligations of the United States of America or United States government sponsored corporations, in shares or other interests in any custodial arrangement, pool, or no-load, open-end management type investment company or investment trust (as defined), in obligations of any state or political subdivision rated within the top two rating categories of any nationally recognized rating service, or in obligations of the state or political subdivision rated within the top three rating categories of any nationally recognized rating service.

Investments in guaranteed investment contracts (GIC) are recorded at contract value, which approximate fair value, and are not part of the fair value hierarchy. The value of the GIC at June 30, 2019, is as follows:

Investment at contract value:	
Guaranteed investment contract	<u><u>\$ 5,896,500</u></u>

Interest rate risk: The GNHWPCA does not have a policy for interest rate risk. This is the risk that changes in market interest rates will adversely affect the fair value of the investment. Generally, the longer the maturity of the investment, the greater the sensitivity of its fair value to changes in market interest rates. The GIC matures August 15, 2035.

Credit risk: Generally, credit risk is the risk that an issuer of a debt type investment will not fulfill its obligation to the holder of the investment. This is measured by assignment of a rating by a nationally recognized rating organization. The GIC is not rated.

Concentrations: The GNHWPCA's policy is to maintain a diversified portfolio to minimize the risk of loss resulting from over-concentration of assets in a specific issuer. The GIC is with one issuer.

Custodial credit risks:

Deposits: The GNHWPCA is subject to custodial credit risk. This is the risk that, in the event of failure of a depository financial institution, an entity will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. At June 30, 2019 and 2018, \$18,437,895 and \$12,365,791 of the GNHWPCA's bank balance of \$57,282,288 and \$50,941,559, respectively, was uninsured and uncollateralized.

Investments: This is the risk that in the event of the failure of the counterparty (e.g., broker-dealer) to a transaction, an entity will not be able to recover the value of its investment or collateral securities that are in the possession of another party.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 2. Cash, Cash Equivalents and Investments (Continued)

A summary of balances as of June 30 consist of the following:

	2019		
	Unrestricted	Restricted	Total
Deposits	\$ 48,318,131	\$ 7,656,723	\$ 55,974,854
Guaranteed investment contract	-	5,896,500	5,896,500
	<u>\$ 48,318,131</u>	<u>\$ 13,553,223</u>	<u>\$ 61,871,354</u>
	2018		
	Unrestricted	Restricted	Total
Deposits	\$ 42,366,987	\$ 7,252,326	\$ 49,619,313
Guaranteed investment contract	-	5,896,500	5,896,500
	<u>\$ 42,366,987</u>	<u>\$ 13,148,826</u>	<u>\$ 55,515,813</u>

Note 3. Receivable

The Authority has a receivable from the City with respect to a cost sharing agreement entered into in conjunction with the State Department of Energy and Environmental Protections approved long term control plan for the CWF program. Under the terms of the cost sharing agreement, the City agreed to reimburse the GNHWPCA for 40% of the debt service costs associated with the funding received. Included in the balance at June 30, 2019, are certain outstanding obligations assumed pursuant to the Agreement. The terms associated with this receivable mirror the underlying terms of the CWF obligations of the GNHWPCA. The total receivable at June 30, 2019, is \$6,213,478 of which \$776,132 is current. The total receivable at June 30, 2018 was \$6,974,784. The City made principal payments of \$761,306 and \$748,527 during the years ended June 30, 2019 and 2018, respectively.

The Authority also has a receivable of approximately \$2,131,000 of which \$500,000 is current, related to a \$6,000,000 settlement of a lawsuit with a former contract operator. Installment payments will be made through 2023.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 4. Capital Assets

Capital assets activity for the year ended June 30, was as follows:

	2019				
	Beginning Balance	Additions	Disposals	Transfers	Ending Balance
Capital assets, not being depreciated:					
Land	\$ 3,019,650	\$ -	\$ -	\$ 2,100	\$ 3,021,750
Construction in progress	7,907,779	7,639,247	(108,594)	(6,794,433)	8,643,999
Total capital assets, not being depreciated	10,927,429	7,639,247	(108,594)	(6,792,333)	11,665,749
Capital assets, being depreciated:					
Buildings and improvements	46,008,201	551,301	(28,996)	4,946,033	51,476,539
Machinery and equipment	97,903,090	1,572,967	-	-	99,476,057
Furniture and fixtures	3,292,876	159,777	-	346,099	3,798,752
Infrastructure	132,513,678	2,017,729	-	1,500,201	136,031,608
Vehicles	1,529,531	22,186	-	-	1,551,717
Total capital assets, being depreciated	281,247,376	4,323,960	(28,996)	6,792,333	292,334,673
Less accumulated depreciation for:					
Buildings and improvements	17,473,715	1,729,981	(3,866)	-	19,199,830
Machinery and equipment	17,653,356	4,860,187	-	-	22,513,543
Furniture and fixtures	2,656,135	236,521	-	-	2,892,656
Infrastructure	24,739,064	2,720,664	-	-	27,459,728
Vehicles	920,041	146,598	-	-	1,066,639
Total accumulated depreciation	63,442,311	9,693,951	(3,866)	-	73,132,396
Total capital assets, being depreciated, net	217,805,065	(5,369,991)	(25,130)	6,792,333	219,202,277
Total capital assets, net	\$ 228,732,494	\$ 2,269,256	\$ (133,724)	\$ -	\$ 230,868,026

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 4. Capital Assets (Continued)

Capital assets activity for the year ended June 30, was as follows:

	2018				
	Beginning Balance	Additions	Disposals	Transfers	Ending Balance
Capital assets, not being depreciated:					
Land	\$ 2,967,937	\$ 51,713	\$ -	\$ -	\$ 3,019,650
Construction in progress	5,167,760	3,363,540	-	(623,521)	7,907,779
Total capital assets, not being depreciated	8,135,697	3,415,253	-	(623,521)	10,927,429
Capital assets, being depreciated:					
Buildings and improvements	45,733,367	274,834	-	-	46,008,201
Machinery and equipment	96,042,037	1,237,532	-	623,521	97,903,090
Furniture and fixtures	3,275,561	17,315	-	-	3,292,876
Infrastructure	131,095,031	1,418,647	-	-	132,513,678
Vehicles	1,159,973	369,558	-	-	1,529,531
Total capital assets, being depreciated	277,305,969	3,317,886	-	623,521	281,247,376
Less accumulated depreciation for:					
Buildings and improvements	15,928,497	1,545,218	-	-	17,473,715
Machinery and equipment	12,871,817	4,781,539	-	-	17,653,356
Furniture and fixtures	2,482,702	173,433	-	-	2,656,135
Infrastructure	22,086,274	2,652,790	-	-	24,739,064
Vehicles	725,029	195,012	-	-	920,041
Total accumulated depreciation	54,094,319	9,347,992	-	-	63,442,311
Total capital assets, being depreciated, net	223,211,650	(6,030,106)	-	623,521	217,805,065
Total capital assets, net	\$ 231,347,347	\$ (2,614,853)	\$ -	\$ -	\$ 228,732,494

Included in construction in progress is \$0 and \$20,863 of capitalized interest at June 30, 2019 and 2018, respectively.

Note 5. Restricted Assets

Pursuant to the 2005 Series A Bond Indenture and the Agreement, the 2008 Series A Bond Indenture, 2012 Series B Revenue Bond Indenture, the 2014 Series B Revenue Bond, the 2016 Series A Revenue Bond, as well as certain legal settlements, certain funds are required to be maintained for purposes specified in the applicable agreement.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 5. Restricted Assets (Continued)

At June 30, GNHWPCA's restricted assets were being maintained for the following purposes:

	2019	2018
Debt service reserve fund – Revenue Bonds and CWF*	\$ 9,793,354	\$ 9,590,416
Unspent construction funds from Revenue Bonds*	698,018	835,272
Debt service fund	1,677,897	1,602,167
Solids handling maintenance escrow	1,317,454	1,054,471
Maintenance escrow	66,500	66,500
	<u>\$ 13,553,223</u>	<u>\$ 13,148,826</u>

* Unspent bond proceeds

These funds come with a maximum debt service requirement, and minimum percentages of these issuances that the GNHWPCA is required to maintain at all times:

	Original Bond Issuance	Maximum Debt Service Requirement	Debt Service Reserve Fund Balance	DRSF Requirement*	Indenture
2005 Series A Rev Bonds	\$ 325,000	\$ 333,125	\$ 32,500	10%	1st
2007 Series A CWF 563-DC	8,961,757	548,910	286,763	50%	3rd
2007 Series C CWF Consolidated	20,560,842	2,199,723	1,131,568	50%	6th
2007 Series E CWF 463-CD1	934,984	61,896	32,337	50%	8th
2008 Series B (CREBS)	2,500,000	187,000	195,296	100%	10th
2009 Series C CWF 206-CSL	3,952,524	237,710	122,282	50%	13th
2011 Series D CWF 581-C1	6,121,755	368,171	63,130	2 months *	16th
2012 Series B Rev Bonds	9,295,000	538,800	546,810	100%	18th
2013 Series A CWF 627-C	656,236	39,467	6,768	2 months *	20th
2013 Series C CWF 441-D	3,571,120	214,772	36,821	2 months *	22nd
2013 Series D CWF 581-C2	6,276,714	377,490	64,720	2 months *	23rd
2014 Series B Rev Bond Refunding	77,510,000	5,497,675	5,564,153	100%	25th
2016 Series A Rev Bond Refunding	15,550,000	1,055,150	1,146,334	100%	27th
2016 Series B CWF 676-C	3,160,728	190,091	32,585	2 Months *	28th
2017 Series A CWF 441-C	43,656,934	518,348	531,287	2 Months *	29th
Total	<u>\$ 203,033,594</u>	<u>\$ 12,368,328</u>	<u>\$ 9,793,354</u>		

*Per State, a minimum of two month debt service payments is required to be maintained.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 6. Long-Term Debt

Long-term debt consists of the following at June 30:

	2019	2018
2005 Series A Revenue Bonds		
\$26,085,000 Term Bonds, issued August 2005, interest payable semi-annually at 5.0%, due August 15, 2035.	\$ 325,000	\$ 325,000
2008 Series B Clean Renewable Energy Bonds (CREBs)		
\$2,500,000 Term Bonds, issued April 2008, interest payable quarterly at 3.3% – 5.73%, due in annual principal amounts, beginning December 2008, of \$166,667, through December 2022.	666,667	833,333
2012 Series B Revenue Bonds		
\$9,295,000 of Revenue Bonds, issued July 12, 2012. The bonds bear interest of 2.00% to 4.180% and mature from July 12, 2013 to July 12, 2042.	8,115,000	8,325,000
2014 Series B Revenue Refunding Bonds		
\$62,265,000 of Revenue Bonds, issued July 10, 2014. The bonds bear interest of 2.00% to 5.00% and mature from July 10, 2014 to August 15, 2032.	49,405,000	51,845,000
\$15,245,000 Term Bond, issued July 2014, interest payable semi-annually at 4.00%, due August 15, 2035.	15,245,000	15,245,000
2016 Series A Revenue Refunding Bonds		
\$15,550,000 of Revenue Bonds, issued March 8, 2016. The bonds bear interest of 3.00% to 5.00% and mature from March 8, 2017 to November 15, 2037.	14,325,000	14,790,000
Notes Payable and Other		
State of Connecticut Clean Water Fund obligation, due in monthly principal amounts of \$32,000 to \$146,000, plus interest at 2%, through 2026(A).	7,246,156	8,594,496
State of Connecticut Clean Water Fund obligation, due in annual principal payments amounts of \$169,000 to \$233,000, plus interest at 2%, through 2029 (A).	2,038,741	2,233,559

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 6. Long-Term Debt (Continued)

	2019	2018
Notes Payable and Other (Continued)		
State of Connecticut Clean Water Fund obligation, due in annual principal payment amounts of \$183,000 to \$361,000, plus interest at 2%, through 2030 (A).	\$ 3,779,537	\$ 4,068,972
State of Connecticut Clean Water Fund obligation, due in annual principal payments amounts of \$152,000 to \$209,000, plus interest of 2%, through 2033 (A).	2,579,992	2,741,400
State of Connecticut Clean Water Fund obligation, due in annual principal payments amounts of \$266,000 to \$373,000, plus interest of 2%, through 2033 (A).	4,606,137	4,888,438
State of Connecticut Clean Water Fund obligation, due in annual principal payments amounts of \$27,613 to \$50,916, plus interest of 2%, through 2032.	461,569	491,480
State of Connecticut Clean Water Fund obligation, due in monthly principal payments amounts of \$10,854 to \$15,814, plus interest of 2%, through 2036.	2,726,294	2,860,401
State of Connecticut Clean Water Fund obligations, due in monthly principal payment amounts of \$186,568, plus interest at 2% (A).	39,739,004	41,977,821
State of Connecticut Clean Water Fund Interim obligations, bearing interest at 2% (A).	2,499,183	-
Total long-term debt	153,758,280	159,219,900
Unamortized bond premium	6,332,430	7,003,440
	160,090,710	166,223,340
Less current portion	10,644,254	7,960,814
	<u>\$ 149,446,456</u>	<u>\$ 158,262,526</u>

(A) Pursuant to the Agreement, the GNHWPCA assumed outstanding obligations in connection with the CWF Program approved long-term control program. Additionally, the GNHWPCA entered into a cost-sharing agreement with the City with respect to CWF Program obligations issued to the GNHWPCA.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 6. Long-Term Debt (Continued)

The 2005 Series A Revenue Bonds are subject to mandatory sinking fund redemption requirements prior to maturity at a redemption price equal to the principal amount plus accrued interest to the date upon which the redemption takes place. For purposes of the \$20,310,000 and \$26,085,000 Term Bonds, the annual date of redemption begins on November 15, 2026 and August 31, 2031, respectively. Amounts were refunded with the Series B 2014 Revenue Bonds, leaving \$325,000 due as of 2019.

The 2012 Series B Revenue Bonds are subject to mandatory sinking fund redemption requirements prior to maturity at a redemption price equal to the principal amount plus accrued interest to the date upon which this redemption takes place. For purposes of the \$2,090,000 and \$7,205,000 Term Bonds, the annual date of redemption begins on January 1, 2013 and July 1, 2024, respectively. Mandatory sinking fund redemption requirements range from \$240,000 to \$515,000.

The 2014 Series B Revenue Refunding Bonds are subject to mandatory sinking fund redemption requirements prior to maturity at a redemption price equal to the principal amount plus accrued interest to the date upon which this redemption takes place. For purposes of the \$62,265,000 and \$15,245,000 Term Bonds, the annual date of redemption begins on July 1, 2015 and July 1, 2036, respectively. Mandatory sinking fund redemption requirements range from \$2,290,000 to \$5,075,000.

The 2016 Series A Revenue Refunding Bonds are subject to mandatory sinking fund redemption requirements prior to maturity at a redemption price equal to the principal amount plus accrued interest to the date upon which this redemption takes place. For purposes of the \$15,550,000 Term Bond, the annual date of redemption begins on November 15, 2026.

Additionally, the 2005, 2008, 2012, 2014, and 2016 bond indentures contain certain restrictive and financial covenants, including a rate covenant which requires the GNHWPCA to set rates to provide for 100% of operating expenses and a Debt Service Coverage ratio of 115%.

The annual debt service requirements on the above debt at June 30, 2019, are as follows:

	Principal	Interest	Total
2020*	\$ 10,644,254	\$ 5,071,052	\$ 15,715,306
2021	8,333,984	4,825,676	13,159,660
2022	8,542,327	4,559,772	13,102,099
2023	8,638,530	4,285,663	12,924,193
2024	8,382,737	4,032,630	12,415,367
2025-2029	40,642,585	16,034,467	56,677,052
2030-2034	43,539,950	8,233,614	51,773,564
2035-2039	23,088,913	1,469,284	24,558,197
2040-2044	1,945,000	159,300	2,104,300
Total	\$153,758,280	\$ 48,671,458	\$202,429,738

*2020 Principal figure of \$10,644,254 includes interim funding obligations (IFO) of \$2,499,183 that are scheduled to convert to a permanent loan obligation (PLO) by June 30, 2020.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 6. Long-Term Debt (Continued)

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

	2019				
	Beginning Balance	Increases	Decreases	Ending Balance	Due Within One Year
Revenue obligation bonds	\$ 91,363,333	\$ -	\$ 3,281,666	\$ 88,081,667	\$ 3,416,667
Notes payable	67,856,567	-	4,679,137	63,177,430	4,728,404
Interim obligations	-	2,499,183	-	2,499,183	2,499,183
Net pension liability	4,877,689	5,024,281	-	9,901,970	-
Total long-term liabilities	<u>\$ 164,097,589</u>	<u>\$ 7,523,464</u>	<u>\$ 7,960,803</u>	<u>\$ 163,660,250</u>	<u>\$ 10,644,254</u>

	2018				
	Beginning Balance	Increases	Decreases	Ending Balance	Due Within One Year
Revenue obligation bonds	\$ 94,540,000	\$ -	\$ 3,176,667	\$ 91,363,333	\$ 3,281,667
Notes payable	28,282,215	43,656,934	4,082,582	67,856,567	4,679,147
Interim obligations	41,332,148	456,578	41,788,726	-	-
Net pension liability	5,948,997	-	1,071,308	4,877,689	-
Total long-term liabilities	<u>\$ 170,103,360</u>	<u>\$ 44,113,512</u>	<u>\$ 50,119,283</u>	<u>\$ 164,097,589</u>	<u>\$ 7,960,814</u>

Prior year defeasance: In prior years, the Authority has defeased various bond issues by creating separate irrevocable trust funds. New debt has been issued and the proceeds have been used to purchase U.S. government securities that were placed in the trust funds. The investments and fixed earning from the investments are sufficient to fully service the defeased debt until the debt is called or matures. For financial reporting purposes, the debt has been considered defeased and therefore removed as a liability from the Authority's financial statements. At June 30, 2019 and June 30, 2018, the defeased bonds outstanding were \$0 and \$15,695,000, respectively. These bonds were called and redeemed on November 15, 2018.

Note 7. Interest Cost

The total interest cost incurred during the years ended June 30, 2019 and 2018, was \$5,056,012 and \$5,117,440, respectively, of which \$0 and \$20,863, respectively, were capitalized as part of the cost of various capital projects and offset by amortization of debt issuance costs and bond premiums and discounts, respectively.

Note 8. Risk Management

The GNHWPCA maintains commercial insurance for various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. Claims have not exceeded coverage amounts in the last three fiscal years.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 9. Retirement Plan

Defined Benefit Pension Plan:

Plan description: Certain employees of the GNHWPCA participate in a cost-sharing multiple-employer defined benefit pension plan administered by the State of Connecticut Employees' Retirement System (MERS or the System). Under a cost-sharing plan, pension obligations for employees of all employers are pooled and plan assets are available to pay the benefits of the employees of any participating employer providing pension benefits through the plan, regardless of the status of the employers' payment of its pension obligation to the plan. The plan provides retirement and disability benefits and death benefits to plan members and beneficiaries.

MERS issues a publicly available financial report that includes financial statements and required supplementary information for the plans. Those reports can be obtained at www.ct.gov.

Benefit provisions: The plan provides retirement, disability and death benefits and annual cost-of-living adjustments to plan members and their beneficiaries. Employees are eligible to retire at age 55 with 5 years of continuous active service, or 15-year of active non-continuous aggregate service. In addition, compulsory retirement is at age 65 for police and fire members. Employees under the age of 55 are eligible to retire with 25 years of service under certain conditions.

Average final compensation: Average of the three highest paid years of service.

Normal form of benefit: Life annuity.

Normal Retirement: For members not covered by Social Security: 2% of average final compensation times years of service. For members covered by Social Security: 1-1/2% of the average final compensation not in excess of the year's breakpoint plus 2% of average final compensation in excess of the year's breakpoint, times years of service. The maximum benefit is 100% of average final compensation and the minimum benefit is \$1,000 annually. Both the minimum and the maximum include Workers Compensation and Social Security benefits. If any member covered by Social Security retires before age 62, his/her benefit until he/she reaches age 62 or receives a Social Security disability award is computed as if he/she were not under Social Security.

Early Retirement: Members must have 5 years of continuous or 15 years of active aggregate service. Benefits are calculated as a service retirement allowance on the basis of the average of the three highest paid years of service to the date of termination. Deferred to normal retirement age, or an actuarially reduced allowance may begin at the time of separation.

Disability Retirement - Service connected:

Condition for allowance: Totally and permanently disabled from engaging in any gainful employment in the service of the Authority provided such disability has arisen out of and in the course of his/her employment with the Authority. Disability due to hypertension or heart disease, in the case of firemen and policemen, is presumed to have been suffered in the line of duty.

Amount of allowance: Calculated as a service retirement allowance based on compensation and service to the date of the disability with a minimum benefit (including worker's compensation benefits) of 50% of compensation at the time of the disability.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 9. Retirement Plan (Continued)

Disability Retirement - Non-Service Connected:

Condition for allowance: 10 years of service and permanently and totally disabled from engaging in any gainful employment in the service of the Authority.

Amount of allowance: Calculated as a service retirement allowance based on compensation and service to the date of the disability.

Death benefit:

Condition for benefit: Eligible for service, disability retirement, or vested allowance, and married for at least 12 months preceding death.

Amount of benefit: Benefits are calculated based on the average of the three highest paid years of service and creditable service at date of death, payable to the spouse. Benefit is equal to 50% of the average of the life annuity allowance and reduced 50% joint and survivor allowance.

Pre-retirement death benefit: The plan also offers a lump-sum return of contributions with interest or if vested and married, the surviving spouse will receive a lifetime benefit.

Cost-of-living adjustment: For those retired prior to January 1, 2002: (i) the benefits of disabled retirees, service retirees who have reached age 65, and beneficiaries of deceased retirees who would have reached age 65 are adjusted each July 1. The difference between the actual annual yield of the actuarial value of assets on a calendar year basis to a 6% yield is calculated. This difference is the adjustment applied the following July 1. The minimum adjustment is 3% and the maximum is 5%; (ii) The benefits for all others on the roll are adjusted on January 1, 2002, and on each subsequent July 1. The amount of each adjustment is 2.5%. For those retiring on or after January 1, 2002, benefits are adjusted each July 1. The adjustment is 60% of the annual increase in the CPI up to 6%. The minimum annual COLA is 2.5%; the maximum is 6%.

Contributions - by members: For members not covered by Social Security: 5% of compensation. For members covered by the Social Security: 2-1/4% of compensation up to the Social Security taxable wage base plus 5% of compensation, if any, in excess of such base.

Contributions - by employer: Participating entities make annual contributions consisting of a normal cost contribution, a contribution for the amortization of the net unfunded accrued liability and a prior service amortization payment which covers the liabilities of the System not met by member contributions.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 9. Retirement Plan (Continued)

Assumptions: The total pension liability was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Valuation date	June 30, 2018
Measurement date	June 30, 2018
Actuarial cost method	Entry Age Normal
Amortization method	Level dollar, closed
Remaining amortization period	21 years
Asset valuation method	Smoothed market with 20% recognition of investment gains and losses
Investment rate return	7.00%, net of investment related expense
Projected salary increases (3.25%)	3.50-10.00%, including inflation

Mortality rates - For the period after retirement and for dependent beneficiaries, mortality rates were based on the RP-2014 Combined Mortality Table adjusted to 2006 and projected to 2015 with Scale MP-2017 and projected to 2022 with Scale BB for General Employees and the RP-2014 Blue Collar Mortality Table adjusted to 2006 and projected to 2015 with Scale MP-2017 and projected to 2022 with Scale BB for Police and Fire. For disabled retirees, the RP-2014 Disabled Mortality Table projected with Scale BB to 2020 was used. The static projection produces sufficient margin in the mortality rates to reflect future improvement in our judgement.

Future cost-of-living adjustments for members who retire on or after January 1, 2002 are 60% of the annual increase in the CPI up to 6%. The minimum annual COLA is 2.5%; the maximum is 6%.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 9. Retirement Plan (Continued)

The long-term expected rate of return: The long-term expected rate of return on pension plan investments was determined using a lognormal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and most recent best estimates of arithmetic real rates of return for each major asset class are to be provided by the fiduciary of the plan.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Equity	20%	5.30%
Developed market International	11%	5.10%
Emerging Market International	9%	7.40%
Core Fixed Income	16%	1.60%
Inflation Linked Bonds	5%	1.30%
Emerging Market Debt	5%	2.90%
High Yield Bond	6%	3.40%
Real Estate	10%	4.70%
Private Equity	10%	7.30%
alternative Investments	7%	3.20%
Liquidity Fund	1%	0.09%
	<u>100%</u>	

Discount rate: The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at the actuarially determined rates in future years. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the net pension liability to changes in the discount rate: The following presents the net pension liability of the System, calculated using the discount rate of 7.00%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
Net pension liability	\$ 16,157,928	\$ 9,901,970	\$ 6,439,973

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 9. Retirement Plan (Continued)

Pension liabilities, pension expense, and deferred outflows of resources and deferred inflows of resources: At June 30, 2019, the GNHWPCA reported a liability of \$9,901,970 for its proportionate share of the net pension liability related to its participation in MERS. The net pension liability was measured as of June 30, 2018, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. GNHWPCA's proportion of the net pension liability was based on its share of contributions to the MERS for fiscal year 2018 relative to the total expected contributions of all participating employers for that fiscal year. At June 30, 2018 and 2019, GNHWPCA's proportion was 4.075540% and 4.239083%, respectively.

For the year ended June 30, 2019, GNHWPCA recognized pension expense of \$330,327. At June 30, 2019, GNHWPCA reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 528,909	\$ (196,182)
Net difference between projected and actual investments earnings	841,410	-
Change in proportion and differences between employer contributions and proportionate share of contributions	559,862	(9,965)
Contributions subsequent to the measurement date	722,985	-
Change of assumptions	4,216,177	-
Total	<u>\$ 6,869,343</u>	<u>\$ (206,147)</u>

\$722,985 reported as deferred outflows of resources related to pensions resulting from the GNHWPCA's contributions in fiscal year 2019 subsequent to the measurement date will be recognized as a reduction of the net pension liability for the year ended June 30, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Years ending June 30:	
2020	\$ 1,936,216
2021	1,603,652
2022	1,079,204
2023	1,321,139
2024	-
Thereafter	-

The GNHWPCA also recognized a contribution payable to the State of approximately \$934,477 and \$983,660 at June 30, 2019 and 2018, respectively.

Note 10. Commitments and Contingencies

The GNHWPCA is a defendant in various litigation, principally involving property damage and other miscellaneous claims. Based upon the advice of legal counsel, management believes that the ultimate resolution of these matters will not have a material adverse effect on the financial condition or the results of operations of the GNHWPCA.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 10. Commitments and Contingencies (Continued)

The Authority executed a 15-year Maintenance Services Agreement with New Haven Residuals, LP (Maintenance Contractor) on September 30, 2013 that went into effect January 4, 2014. The comprehensive agreement with the Maintenance Contractor provides for the maintenance of the East Shore Treatment Plant and pump stations. The agreement establishes performance and reporting requirements for the maintenance of the system, and requires the implementation of the maintenance management program to include preventive, predictive, and corrective maintenance for all components of the system.

The agreement provides for payment of a service fee to the Maintenance Contractor consisting of the following components:

- A fixed component of \$1,930,000 (2014 dollars, adjusted annually);
- Reimbursement for expenditures for maintenance, major repairs, capital costs and outside services up to a project expense limit of \$1,100,000 (2014 dollars, adjusted annually). Amounts expended by the Maintenance Contractor in excess of the limit are paid by the GNHWPCA, subject to a markup due to the Maintenance Contractor if project expense limit exceed \$2,000,000; and
- 50% of the revenues collected by the GNHWPCA from the Fats, Oils and Greases Facility.
- The GNHWPCA is responsible for all utility costs except for natural gas for the maintenance building.

As a result of the new Maintenance Services Contract the Authority assumed the day to day operations of the treatment plant and sewer collection system effective January 4, 2014. For fiscal year ended June 30, 2019, the Authority paid operations and maintenance fees totaling \$2,057,361 compared to \$2,012,350 for fiscal year ended June 30, 2018.

The GNHWPCA executed a new 10 year extension on August 25, 2014, with New Haven Residuals, LP (Synagro) for the receipt and disposal of sludge at the East Shore Treatment Plant and operation of the sludge burning incinerator. Under the terms of the new agreement Synagro is responsible for reimbursing the GNHWPCA for the cost of all utilities, except water, associated with the specified services. The agreement provides a payment of a service fee to Synagro to process 6,570 dry tons of sludge with provisions for adjusted fees for defined deviations from that level. The Service Fee is \$385 per dry ton for 2014 subject to annual adjustments for inflation. As of July 1, 2019, the Service Fee is \$357.80 per dry ton subject to annual adjustments for inflation.

Under the terms of the new agreement, Synagro is allowed to solicit sludge from other entities (outside sludge) to utilize the capacity of the on-site incinerator. Synagro is required to pay as a royalty \$35 per dry ton of outside sludge processed to a sinking fund. The GNHWPCA is required to match all such payments into the sinking fund with all combined contributions to be used for any capital projects that exceed a cost of \$20,000. Synagro is responsible for all capital projects costing less than \$20,000. Combined payments to the sinking fund are expected to approximate \$500,000 annually. As of July 1, 2016, Synagro is responsible for any capital projects costing less than \$50,000 and the GNHWPCA is not required to contribute to sinking funds making the expected annual sinking fund payment approximately \$250,000.

At June 30, 2019, the GNHWPCA has approximately \$139,634 of unbilled, ongoing contracts for construction and improvements of its sewer systems. Funding for these projects is primarily being provided by the CWF in the form of loans and grants and through excess revenue bond proceeds.

Greater New Haven Water Pollution Control Authority

Notes to Financial Statements

Note 11. Pronouncements Issued, Not Yet Effective

The GASB has issued several pronouncements that have effective dates that may impact future financial presentations. Management has not currently determined what, if any, impact implementation of the following statements may have on the financial statements:

GASB Statement No. 84, *Fiduciary Activities*, this Statement establishes criteria for identifying fiduciary activities of all state and local governments. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018.

GASB Statement No. 87, *Leases*. This Statement improves the accounting and financial reporting for leases by governments. This Statement increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019.

GASB Statement No. 90, *Majority Equity Interests—an amendment of GASB Statements No. 14 and No. 61*. The primary objectives of this Statement are to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018. Earlier application is encouraged.

GASB Statement No. 91, *Conduit Debt Obligations*. In May 2019, the GASB issued Statement No. 91, Conduit Debt Obligations. This Statement provides a single method of reporting conduit debt obligations by issuers and eliminates diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. The requirements of this Statement are effective for reporting periods beginning after December 15, 2020. Earlier application is encouraged. The Authority is not an issuer of conduit debt, therefore this Statement will have no effect on its financial statements.

Required Supplementary Information – Unaudited

Greater New Haven Water Pollution Control Authority

RSI-1

**Schedule of Contributions – Municipal Employees' Retirement System
Required Supplementary Information – Unaudited
Last Six Fiscal Years***

Measurement Period Ended June 30,	2019	2018	2017	2016	2015	2014
Actuarially determined contribution	\$ 722,985	\$ 707,169	\$ 628,493	\$ 640,404	\$ 740,570	\$ 550,085
Contributions in relation to the actuarially determined contribution	722,985	707,169	628,493	640,404	740,570	550,085
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered-employee payroll	\$ 5,973,474	\$ 5,715,345	\$ 5,583,297	\$ 5,349,972	\$ 5,260,359	\$ 3,821,094
Contributions as a percentage of covered-employee payroll	12.10%	12.37%	11.26%	11.97%	14.08%	14.40%

*This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, the Authority will present information for those years for which information is available.

Notes to Schedule

Valuation Date: June 30, 2018

Measurement Date: June 30, 2018

The actuarially determined contributions are calculated as of June 30, each biennium for the fiscal years ending two and three years after the valuation date.

Methods and assumptions used to determine contribution rates:

Actuarial cost method Entry Age

Amortization method Level dollar, closed

Single equivalent amortization period 21 years

Asset valuation method 5 years' smoothed market (20% write up)

Inflation 3.25%

Salary increases 3.5%-10%, including inflation

Investment rate of return 7%, net of investment related expense

Changes in assumptions: In 2018, the latest experience study for the System updated most of the actuarial assumptions utilized in the June 30, 2018 valuation to include: rates of inflation, real investment return mortality, withdrawal, disability, retirement and salary increase were adjusted to more closely reflect actual anticipated experience. These assumptions were recommended as part of the Experience Study for the System for the five-year period ended June 30, 2017.

**Schedule of the Authority's Proportionate Share of the Net
Pension Liability – Municipal Employees' Retirement System
Required Supplementary Information – Unaudited
Last Five Fiscal Years****

	2019	2018	2017	2016	2015*
GNHWPCA's proportion of the net pension liability	4.239083%	4.075540%	4.075540%	3.011707%	3.011707%
GNHWPCA's proportionate share of the net pension liability	<u>\$ 9,901,970</u>	<u>\$ 4,877,689</u>	<u>\$ 5,948,997</u>	<u>\$ 3,294,094</u>	<u>\$ 2,259,514</u>
GNHWPCA's covered-employee payroll	<u>\$ 5,973,474</u>	<u>\$ 5,715,345</u>	<u>\$ 5,583,297</u>	<u>\$ 5,349,972</u>	<u>\$ 5,260,359</u>
GNHWPCA's proportionate share of the net pension liability as a percentage of its covered payroll	<u>165.77%</u>	<u>85.34%</u>	<u>106.55%</u>	<u>61.57%</u>	<u>42.95%</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>73.60%</u>	<u>91.68%</u>	<u>88.29%</u>	<u>92.72%</u>	<u>90.48%</u>

*as restated

**This schedule is presented to illustrate the requirement to show information for 10 years. However, until a full 10-year trend is compiled, the Authority will present information for those years for which information is available.

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APPENDIX B

COST OF SERVICE STUDY FISCAL YEAR 2021

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Greater New Haven
Water Pollution Control Authority

Cost of Service Study for Fiscal Year 2021

April 9, 2020

COST OF SERVICE STUDY FOR FISCAL YEAR 2021

Prepared for:

Greater New Haven Water Pollution Control
Authority

260 East Street

New Haven, Connecticut 06511

Prepared by:

Arcadis U.S., Inc.
O'Neil Accounting & Consulting, LLC

Our Ref.:

05654066.0000

Date:

April 9, 2020

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ACRONYMS AND ABBREVIATIONS

CCF	One hundred cubic feet
CGS	Connecticut General Statutes
CSO	Combined sewer overflow
CWF	Clean Water Fund
FYxx	Fiscal year ended June 30, 20xx
GNHWPCA	Greater New Haven Water Pollution Control Authority
IFO	Interim Funding Obligation
MGD	Million gallons per day (flow volume)
MGH	Million gallons per hour (flow volume)
O&M	Operation and maintenance
PLO	Permanent Loan Obligation
RWA	South Central Connecticut Regional Water Authority

1 INTRODUCTION

1.1 Background

The Greater New Haven Water Pollution Control Authority (“GNHWPCA”) was created in 2005 to provide sewage collection and treatment service to customers in the City of New Haven and the Towns of Hamden, East Haven and Woodbridge (the “Constituent Municipalities”) and wholesale treatment service to the towns of North Haven and North Branford via interlocal agreements. Prior to creation of the GNHWPCA in 2005, the utility was owned and operated by the City of New Haven’s Water Pollution Control Authority.

The GNHWPCA is organized in accordance with Connecticut General Statutes (“CGS”) §§22a-500 to 519 inclusive (the “Act”). The purpose of the GNHWPCA is to further the environmental protection laws of the State of Connecticut and to gain efficiencies and economies of scale with respect to the planning, design, construction, management, operation and maintenance of the regional wastewater system. Since acquiring the utility, the GNHWPCA has been providing quality and affordable wastewater services to its customers.

The GNHWPCA was created to (a) operate the wastewater 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 with respect to the Constituent Municipalities. Currently, the daily flow at the treatment plant is approximately 29 million gallons per day (“MGD”). The treatment plant has an average daily design flow capacity of 40 MGD and currently provides primary and secondary treatment for all wastewater influent up to 60 MGD. During high flow events, all flow receives primary treatment; however, flow exceeding 60 MGD bypasses secondary treatment but receives disinfection along with the secondary effluent prior to discharge. The treatment plant provides the following unit processes: screening and grit removal, raw waste pumping, three primary clarifiers, four aeration trains, eight secondary clarifiers, gravity thickeners and chlorine disinfection prior to discharge. Thickened sludge is delivered to the on-site sewage sludge incinerator for processing.

The maintenance of the treatment plant and collection system is performed under contract by New Haven Residuals, LP (“Synagro”). Synagro is also responsible (under a separate agreement) for sludge receipt and disposal including operation and maintenance of the sludge incinerator at the East Shore Treatment Plant.

1.2 Objective and Scope

In accordance with §42 of the GNHWPCA’s ordinance (the “Sewer Ordinance”) the Executive Director will ensure that a cost of service study is performed at least annually. The objective of the cost of service study is to produce a schedule of recommended user rates and charges for the customers of the GNHWPCA’s system which will be sufficient to meet the anticipated costs of operating the sanitary sewer system for the upcoming fiscal year.

The Cost of Service Study shall include:

COST OF SERVICE STUDY FOR FISCAL YEAR 2021

- A review and evaluation of the proposed expense budget for the upcoming fiscal year, and preparation of cost estimates for the succeeding four fiscal years based on the Executive Director's cost estimates.
- A review and evaluation of the proposed revenue budget for the upcoming fiscal year, and preparation of revenue estimates for the succeeding four fiscal years based on the Executive Director's revenue estimates.
- Determination of the projected revenue requirement from user rates for the upcoming fiscal year and the succeeding four fiscal years.
- Development of a schedule of recommended rates and charges sufficient to support the estimated annual revenue requirements from user rates for the upcoming fiscal year and the succeeding four fiscal years.
- Analysis of the GNHWPCA's historical collection rate, including the current fiscal year and the Executive Director's estimate of the collection rate for the upcoming fiscal year.
- Preparation of a report documenting recommendations, assumptions and methodology.
- Such other information as required by the Executive Director from time to time.

The Executive Director shall review the results and submit the cost of service study to the GNHWPCA Board of Directors on or before the third Monday in April.

1.3 Sewer Ordinance

The GNHWPCA's ordinance governs the operation, maintenance and expansion of the regional wastewater system. In order to guarantee consolidated operation, maintenance and expansion of the regional wastewater system by the GNHWPCA, the Sewer Ordinance also acted to repeal similar ordinances of the Constituent Municipalities which previously served to govern operation, maintenance and expansion of their individual wastewater systems. Material provisions of the Sewer Ordinance that affect this study are detailed in the sections which follow.

1.3.1 Assessment of Benefits; Benefit Charge

Pursuant to provisions contained in the Act, the GNHWPCA may levy and collect benefit assessments upon the lands and buildings within its jurisdiction, which, in its judgment, are especially benefited by a sanitary sewer, according to such rules as the GNHWPCA may adopt. No assessment shall be made until after a public hearing before the GNHWPCA, at which time the owner of the property to be assessed shall have an opportunity to be heard concerning the proposed assessment.

Assessments, including any installment thereof, are due and payable at such time as fixed by the GNHWPCA, provided no assessment shall become due until the work, or particular portion thereof for which such assessment was levied, has been completed. Any assessment of benefits, including any installment thereof, which is not paid within 30 days after the due date, is considered delinquent and will be subject to interest and will constitute a lien upon the property assessed and a charge upon the owner thereof.

1.3.2 Rates Established

Charges for sanitary sewer services furnished by the GNHWPCA for residential, commercial, industrial and institutional users are to be established and revised from time to time by the GNHWPCA. Sewer use charges are to reflect a proportional distribution of costs among all users in accordance with the Act, and Chapter 103 of the Connecticut General Statutes, as amended.

1.3.3 Rates for Property Located Outside the GNHWPCA's Service Territory

The charges to be made by the GNHWPCA for sewer service to property outside the limits of the GNHWPCA's service territory are to be established on the basis of a formal contract with the GNHWPCA, and billed directly to such customers.

1.3.4 No Reduced Rates or Free Service Permitted

All persons owning, renting, leasing or having management or control of property or premises that produce waste that is discharged into the regional wastewater system, including domestic waste, and subject to the provisions of the Sewer Ordinance, shall be charged the rates established by the GNHWPCA, and no reduced rates or free sanitary sewer services are to be furnished to any such person, property or premises.

1.3.5 Billing and Collection

Billing for sewer services is made to the GNHWPCA's customers monthly or quarterly. All sewer user charges are due and payable in full on receipt. Any charges not paid in full within 30 days of the billing date are considered delinquent and bear interest from the due date at the rate provided pursuant to CGS for delinquent property taxes.

1.3.6 Cost of Service Study; Proposed Rates

The Executive Director of the GNHWPCA is to ensure that a cost of service study is performed at least annually. The Executive Director reviews the results of the study and submits the study on or before the third Monday in April to the GNHWPCA Board of Directors for consideration and public hearing. If the Executive Director's recommendations as to the proposed rates and charges are not disapproved, or approved with modifications by the GNHWPCA Board of Directors by the first day of the next fiscal year, the Executive Director's recommended rates and charges will automatically become effective until such time as they are superseded by a renewal of the above procedure. Billings for services are to be rendered as the GNHWPCA determines. In the period intervening between cost of service studies, the GNHWPCA may amend user charges so long as such charges are based upon the anticipated cost of operating the system and such charges are presented to the general public at a public hearing in accordance with CGS.

2 GNHWPCA SYSTEM & CUSTOMERS

2.1 Regional System Profile

Wastewater treated by the GNHWPCA at the wastewater treatment plant is discharged into Long Island Sound and must meet both federal and state effluent quality standards. The GNHWPCA was organized to ensure the necessary professional technical and skilled personnel, specialized facilities and equipment, and financial resources are available to allow it to carry out its mission: “To provide reliable municipal wastewater services in compliance with applicable laws, in a cost efficient and effective method, and with the intent and desire to protect the environment and public health of the constituent municipalities.” Furthermore, its operations are expected to be financially self-sufficient.

The wastewater systems of the Constituent Municipalities include any device, equipment, appurtenance, plant facility and method for receiving, collecting, transporting, reducing, treating, reclaiming, disposing, separating or discharging sewage or the residue from the treatment of sewage. The wastewater systems may also include the purchase and/or lease of real estate and improvements thereto deemed necessary or desirable by the GNHWPCA for the purpose of establishing and providing wastewater management and water pollution control services.

Table 2-1 presents a brief summary of the wastewater systems of the GNHWPCA.

Table 2-1. Summary of GNHWPCA Wastewater System

Service Area	53,000 acres
Treatment Plant Capacity	40 mgd
Average Daily Flow	29 mgd
Pump Stations	30
Siphons	8
Sewer Collection System	510 miles
Combined Sanitary/Storm Sewers	50 miles
Manholes	14,300

Source: GNHWPCA management.

2.2 GNHWPCA Customer Base

The total number of sewer service connections (customers) is approximately 47,900 based upon information from the GNHWPCA’s customer billing system. According to 2018 Connecticut Department of Public Health data, the total population of the Constituent Municipalities was approximately 229,000. It is estimated that approximately 201,000 residents within the Constituent Municipalities currently receive

COST OF SERVICE STUDY FOR FISCAL YEAR 2021

sewer service from the GNHWPCA. Through interlocal agreements between the GNHWPCA and the towns of North Branford and North Haven, an additional population of approximately 1,500 is served by the GNHWPCA. As illustrated in Table 2-2, the City of New Haven is the largest Constituent Municipality representing approximately 60 percent of the population served.

Table 2-2. Constituent Municipality Customers Served

Municipality	Population Served	/----- Active Customer Accounts¹ -----/				
		Residential	Commercial	Industrial	Public Auth.	Total
New Haven	124,000	20,661	1,992	70	187	22,910
Hamden	50,000	13,627	776	34	39	14,476
East Haven	26,000	9,907	282	7	23	10,219
Woodbridge	1,000	293	78	-	3	374
Total	201,000	44,488	3,128	111	252	47,979

(1) GNHWPCA Customer Information System (CIS) data as of December 2019.

The customer base served by the GNHWPCA consists of a diverse mix of residential and commercial customers. Customers are classified according to the nature of their use of water as well as their property ownership classification, since billing is conducted based on property ownership. Single and multifamily homes and apartment buildings are classified as “residential”, manufacturing enterprises in which water is used as part of the manufacturing process are classified as “industrial”, business and institutional enterprises other than those classified industrial are classified as “commercial” and municipal and other government agencies are classified as “public authority”. It is important to note that in some instances there is a discrepancy between the nature of the water use and the property classification. For example, the New Haven Housing Authority is a public authority responsible for numerous residential households. The GNHWPCA classifies this customer as a public authority.

2.3 Organization & Management

2.3.1 Governance

The business of the GNHWPCA is managed by or under the direction of a Board of Directors, which may exercise all such powers of the GNHWPCA and perform all such lawful acts and activities as are allowed by the Connecticut General Statutes, as amended, and by its bylaws and ordinances.

According to provisions of the Sewer Ordinance and Section 2.2 of its bylaws, the GNHWPCA is to be governed by a qualified Board of Directors, comprised as follows:

The GNHWPCA has nine (9) Directors, each of whom shall have one vote. Four (4) Directors have been appointed from New Haven by the Mayor of New Haven, with the approval of the Board of Aldermen of New Haven. Two (2) Directors have been appointed from East Haven by the Mayor of East Haven, with the approval of the Town Council of East Haven. Two (2) Directors have been appointed from Hamden by the Mayor of Hamden, with the approval of the Town Council of

COST OF SERVICE STUDY FOR FISCAL YEAR 2021

Hamden. One Director has been appointed from Woodbridge by the First Selectman of Woodbridge, with the approval of the Board of Selectmen of Woodbridge.

The Directors are appointed for three year staggered terms as outlined in detail in the bylaws and ordinance. In any single year, no more than four (4) Directors' terms are scheduled to expire at one time, thereby designed to institutionalize a continuity of governance.

All business of the GNHWPCA is managed and directed by the Board of Directors, as allowed by CGS and the GNHWPCA's bylaws.

The GNHWPCA's bylaws may be revised by the affirmative vote of no less than two-thirds of the Directors in accordance with CGS §22a-501(a) (1), as amended. However, the bylaws provide that any amendment to include new constituent municipalities shall require a unanimous affirmative vote of the Board of Directors.

The current membership of the Board is as follows:

Table 2-3. Current Board of Directors

Name/Title	Appointed By	Term Expires
Russell N. Cyr, Director	Hamden	12/31/20
Raymond Pompano, Sr., Director	East Haven	12/31/20
Robert Falcigno, Director	East Haven	12/31/21
Jeffrey D. Ginzberg, Director	Woodbridge	12/31/21
Michael Fimiani, Director	New Haven	12/31/21
Clayton Williams, Vice Chairman	New Haven	12/31/22
Joyce Alton, Director	New Haven	12/31/22
Salvatore DeCola, Director	New Haven	12/31/22
Stephen A. Mongillo, Chairman	Hamden	12/31/22

According to the bylaws, a majority vote of the Directors is required to approve all business transactions of the GNHWPCA. Certain matters, such as entering into an agreement with respect to the distribution of rights and properties of the GNHWPCA upon the termination of its corporate existence, entering into or approving any sludge agreement, entering into any inter-local agreement, entering into any agreement with respect to the sale or lease of assets of the GNHWPCA which would leave the GNHWPCA without a significant continuing business activity, removal of a Director, awarding of a contract by negotiation without public bidding; amending, modifying, restating or replacing the Sewer Ordinance, and increasing the permitted processing capacity of the GNHWPCA's treatment plant, each would require a 2/3rds vote of the Directors.

The Board establishes insurance, health care, retirement, and other employee benefits as it deems necessary and convenient for the effective administration of the GNHWPCA. Key management positions are designed in each functional area under the major divisions of Executive Director, Finance and Administration, Engineering and Operations to address the operation, maintenance and management of the regional wastewater system by the GNHWPCA.

2.3.2 Management and Staff

The GNHWPCA is headed by an Executive Director, who is responsible for all technical and administrative operations of the GNHWPCA and the implementation of programs, policies and procedures at the direction of the Board. Key management staff members are as follows:

Sidney Holbrook, Executive Director. Mr. Holbrook is the Executive Director of the GNHWPCA. He has more than 30 years of wastewater, environmental and public management experience. Mr. Holbrook has served as the Executive Director of the GNHWPCA since 2009. Prior to this position, he owned and operated the Monoflo Septic Tank Co., Inc. in Westbrook, Connecticut and was the principal of SJH Associates which provided Environmental Consulting Services. Mr. Holbrook also served as Governor John Rowland's Chief of Staff from 1997 to 2002, directly overseeing sixteen State agencies including the Department of Environmental Protection, Department of Transportation, Department of Public Health and Department of Social Services. Prior to his tenure as Chief of Staff, Mr. Holbrook served as the Commissioner of the Department of Environmental Protection. On May 10, 2011, Mr. Holbrook was recognized by the National Association of Clean Water Agencies in Washington, D.C. with a Public Service Award for his dedication to Environmental Stewardship. As Executive Director, his responsibilities include managing and directing all administrative, operational and financial activities and programs of the GNHWPCA.

Gabriel Varca, CPA, Treasurer/Director of Finance and Administration. Mr. Varca is the Treasurer and Director of Finance and Administration. For over 25 years, Mr. Varca has held various operations and management positions with the New Haven Water Pollution Control Authority ("NHWPCA") and the GNHWPCA. He assists the Executive Director in the creation of the operating budget and capital improvement plan budget and is responsible for the administrative and financial operations of the GNHWPCA, including accounting, finance, billing and collections. Mr. Varca has a Class III Wastewater Operators License from the Connecticut Department of Energy & Environmental Protection and he earned a B.S. in Accounting from Southern Connecticut State University.

Gary Zrelak, Director of Operations. Mr. Zrelak is the Director of Operations. He has over 30 years of experience in wastewater operations. His responsibilities include supervising and managing the performance of the GNHWPCA's contract operator for the water pollution control facilities, sanitary sewer collection systems and pumping stations within State and Federal regulations. Prior to his employment by the Authority, Mr. Zrelak was the Process Control Superintendent for the NHWPCA for more than seven years. Mr. Zrelak earned a B.S. in Agronomy from the University of Connecticut and a M.S. Degree in Environmental Science from the University of New Haven. He also holds a Class IV Wastewater Operators License from the Connecticut Department of Energy & Environmental Protection and a Class IV Collection Systems License from the New England Water Pollution Control Association.

Thomas Sgroi, P.E., Director of Engineering. Mr. Sgroi is the Director of Engineering for the GNHWPCA. Mr. Sgroi has over 25 years of engineering and construction management experience. His

responsibilities include completion of executive management work for the Authority's planning and engineering programs, which include design, construction, utility services, GIS, mapping, records management and capital improvement projects. Mr. Sgroi earned a B.S. in Civil Engineering from the University of Hartford. He is also a Licensed Professional Engineer in the State of Connecticut.

An organization chart is included as Exhibit 6.

2.3.3 Contracted Services

2.3.3.1 Maintenance Services Agreement

The GNHWPCA executed a 15 year Maintenance Services Agreement with New Haven Residuals, LP ("Synagro") dated September 30, 2013. The comprehensive agreement with Synagro provides for the maintenance of the East Shore Treatment Plant and pump stations. This agreement establishes performance and reporting requirements for the maintenance of the system, and requires the implementation of a maintenance management program to include preventive, predictive, and corrective maintenance for all components of the system.

The agreement provides for payment of a service fee to Synagro consisting of the following components:

- A fixed component of \$1,930,000 (2014 dollars, adjusted annually);
- Reimbursement for expenditures for maintenance, major repairs, capital projects and outside services up to a defined Project Expense Limit of \$1,100,000 (2014 dollars, adjusted annually). Amounts expended by Synagro in excess of the limit are paid by the GNHWPCA, subject to a markup; and
- 50% of the revenues collected by the GNHWPCA from the Fats, Oils and Greases (i.e., "FOG") facility.

The GNHWPCA is responsible for all utility costs except for natural gas for the maintenance building.

2.3.3.2 Solids Handling Agreement

The GNHWPCA currently also contracts with Synagro for sludge receipt and disposal, including operation and maintenance of the sludge incinerator at the East Shore Treatment Plant under the terms of an agreement that amends and restates the original August 17, 1995 agreement. The September 2014 agreement has an initial term of 10 years and includes two five-year renewal options. The agreement provides for GNHWPCA payment of a service fee to Synagro per dry ton of sludge processed. Synagro, is responsible for reimbursing the GNHWPCA for the cost of all utilities, except water, associated with the specified services. The service fee per dry ton was fixed at the outset of the agreement, and is subject to annual adjustments for inflation.

Under the agreement, Synagro is allowed to solicit sludge from other entities (outside sludge) to maximize the efficiency of the on-site incinerator. Synagro is required to pay a royalty of \$35 per dry ton of outside sludge processed, to a Sinking Fund. The GNHWPCA matches all such payments into the Sinking Fund with such combined contributions to be used for any capital projects that exceed a cost of \$20,000. Synagro maintains responsibility for all capital projects costing less than \$20,000. As of July 1,

2016 (first amendment), Synagro is responsible for any capital projects costing less than \$50,000, and the GNHWPCA is no longer required to contribute to the Sinking Fund. As of July 1, 2019 (second amendment), the service fee was renegotiated and will continue to be subject to annual adjustment. Additionally, the voluntary termination date was changed to September 14, 2024.

Individuals providing services under the maintenance and solids handling contracts are employees of Synagro, not the GNHWPCA. Synagro, maintains 25 staff positions, 13 of which are dedicated wastewater treatment maintenance staff. Currently the staff of the GNHWPCA consists of 67 full- and part-time employees. An organization chart is included as Exhibit 6.

2.3.4 Powers of the GNHWPCA

The GNHWPCA has the power to set rates, bill customers and take appropriate action for collection of delinquent accounts. The GNHWPCA is a regional water pollution control authority formed in accordance with CGS §§22a-500 to 519, which provides powers of municipalities to the GNHWPCA. CGS §22a-501 sets forth in greater detail the powers of a regional water pollution control authority to set rates.

2.3.4.1 Cost Allocation

The goal of the GNHWPCA is to maintain a uniform blended rate for all Constituent Municipalities. This study is being conducted to develop a schedule of recommended sewer user rates sufficient to support the estimated cost of service to all users in the regional wastewater system.

2.3.4.2 Procedures for Establishing Rates and Charges

The GNHWPCA is empowered to establish and impose just and equitable fees, rates, charges, and penalties and levy assessments of property benefited by the wastewater system for any services it performs. The Board of Directors is responsible for approval of all fees, rates, charges and penalties. Rates are based on metered water flow use and billed directly to the user on a quarterly basis unless otherwise specified.

Rates are determined based on the proposed budget and the annual cost of service study, to be considered by the GNHWPCA and the general public and noticed in accordance with state statutes and applicable ordinances and by-laws.

Such charges are to reflect a proportional distribution of costs among all users in accordance with CGS §7-255, as amended from time to time, §204(b) of 33 USC, Section 1284(b) and the Act. No reduced rates or free service are to be permitted. Prior to the establishment of a fee, rate, charge, penalty or assessment, the Board of Directors must hold a public hearing at which all users of the wastewater system will have had an opportunity to be heard concerning any such proposed fee, rate, charge, penalty or assessment.

2.3.4.3 Budget Approval

In accordance with CGS §§22a-500 to 519, and the Sewer Ordinance, the GNHWPCA must ensure a cost of service study is conducted at least annually. The study is to be reviewed by the Executive Director and submitted each year with a schedule of recommended rates and charges for the next fiscal

year. In the period intervening cost of service studies, the GNHWPCA is authorized to amend user charges provided such charges are based upon the anticipated cost of operating the system and are presented at a public hearing, properly noticed.

The annual budget of the next fiscal year's projected revenue and expenditures and recommended sewer user charges are to be submitted to the Board of Directors and filed with the City/Town Clerks in the City of New Haven and Towns of East Haven, Hamden, and Woodbridge by the Executive Director on or before the third Monday in April and, within ten calendar days after such submission, are to be published once in a daily newspaper having circulation in the City of New Haven and Towns of East Haven, Hamden, and Woodbridge. After such publication, but no earlier than ten calendar days after public notice thereof, the GNHWPCA is to hold a public hearing on such projected revenue and expenditures and recommended sewer user charges and consider and act on such projected revenues and expenditures and recommended sewer user charges on or before the first Monday in June.

The Executive Director is required to submit one copy of the annual operating budget of the GNHWPCA to the State of Connecticut Office of Policy and Management by July 1st of each year or within thirty calendar days after the adoption of the budget, whichever is later (CGS §22a-502.). The budget and sewer use charge, if said charge is revised by the GNHWPCA, shall be filed with the City/Town Clerks and published in a daily newspaper having circulation in the City of New Haven and Towns of East Haven, Hamden, and Woodbridge no later than five calendar days after their filing.

2.3.5 Billing & Collection

All billing and collection is coordinated through the Customer Service Department of the GNHWPCA. The costs associated with the GNHWPCA's billing and collection activities and certain of its administrative and accounting costs are recovered through an administrative charge applied to each bill. The GNHWPCA estimates it will produce approximately 194,700 bills in FY21.

2.3.5.1 Billing Procedures

Customers of the GNHWPCA are classified according to the nature of their water consumption. All homes, dormitories and apartment buildings are classified as residential, all manufacturing enterprises in which water is used as part of the manufacturing process are classified as industrial, and all business and institutional enterprises other than those classified industrial are classified as commercial. Municipal and other public entities are classified as public authority. The wastewater customers are billed for wastewater services based on their metered water consumption, as determined by the South Central Connecticut Regional Water Authority ("RWA").

In general, customers are billed on a quarterly basis. Approximately 370 (primarily large volume) customers are billed on a monthly basis. The quarterly billings to the approximately 23,000 customers in New Haven take place in July, October, January and April. The quarterly billings to the approximately 25,000 customers in East Haven, Hamden and Woodbridge take place in August, November, February and May.

Key provisions of the GNHWPCA's billing and collections policy include:

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- Bills not paid within 30 days from the billing date are subject to interest at a rate of 1.5 percent per month from the dated billed.
- A delinquent account is sent to a collection agency after the amount owed is \$90 or greater than 90 days old.
- When an account is sent for collection, the collection fee is added to the bill of the delinquent customer for reimbursement.
- Payments not received continue for further collection procedures under tax warrant or foreclosure proceedings.

The GNHWPCA implemented a new Customer Account Portal in January 2015. The portal gives customers who enroll the ability to view account information including billing history and transaction history, and to receive their bills electronically. The new system also enhances online bill payment options. Now customers have the ability to pay their accounts online or by phone using echeck, or credit/debit cards. Another feature is the ability for customers to enroll in the “Auto Pay” option whereby payment will automatically be drawn from the specified account on file on the due date of the bill.

Customers still have the choice of paying by mail, in person (check only) or by using Checkfree payment services from Fiserv, Inc., which allows customers to pay their bills at several retail chains throughout the service area.

3 FINANCIAL MANAGEMENT

3.1 Introduction

In accordance with CGS §§55b-111 to 112, the GNHWPCA operates as a municipality for the purpose of compliance with auditing and finance requirements. The GNHWPCA can establish eligibility to apply for financing from the Clean Water Fund under the provisions of CGS §§22a-477 to 483. Clean Water Fund notes and tax-exempt revenue bond issues serve as the primary capital funding mechanism for the GNHWPCA. The notes and bonds are issued to fund capital improvements periodically, depending on the GNHWPCA's capital requirements. The issuance of the bonds is in accordance with the requirements and provisions of CGS §22a-507.

The Board of Directors has adopted revised and updated financial management policies. These policies formalize and codify many policies developed and adopted since the inception of the GNHWPCA. The policies address the following areas:

- Governance Philosophy;
- Budgeting and Capital Planning;
- Rate-Setting Policy;
- Financing Policies (Swaps, Term, Variable/Fixed, Useful Lives);
- Maintenance of Reserves;
- Debt Service Coverage and Pay-As-You-Go Capital Funding;
- Investment of Operating Funds and Cash Management; and
- Collection Practices

3.2 Rate Covenants

At its inception, the GNHWPCA issued \$91,290,000 in revenue bonds (Series 2005A) to purchase system assets, refund existing debt and fund reserves. The rate covenant entered into in conjunction with these bonds (and those issued subsequently), and the ability to raise rates are the primary factors that provide the GNHWPCA with credit strength. As is the case with most utility financing, the GNHWPCA has entered rate covenants requiring management to set rates for service that will generate net revenues sufficient to provide a defined minimum level of cash flow in excess of debt service requirements. The Indenture of Trust for the GNHWPCA's bonds (the "Indenture") requires debt service coverage of 115% (i.e., excess cash flows equal to 15% of debt service must be incorporated into sewer rates). In addition, rates must cover operating and maintenance expenses, and contributions to reserve funds for future system improvements, expansions, or replacements. Sufficient revenues, or reserves, should also be available for unexpected emergencies such as flood damage or sewer main breaks.

Pursuant to the Indenture, the GNHWPCA 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

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assessments, which will produce revenues which shall be sufficient in each fiscal year to provide for the following:

- A debt service coverage ratio of at least 115% of the debt service cash requirements;
- Any amount necessary to restore any account within a debt service reserve fund to its required deposit level; and
- Any amount necessary to restore any debt service reserve fund for parity indebtedness to its required deposit level.

For purposes of calculating debt service coverage pursuant to the Indenture, it is also necessary to incorporate reimbursements from the City of New Haven for its share of principal payments on Clean Water Fund ("CWF") notes related to sewer-separation projects. The GNHWPCA has established a receivable for the total that will be reimbursed by the City.

Table 3-1 below details the debt service coverage provided for the years ended June 30, 2015 through 2019.

Table 3-1. Debt Service Coverage Calculation

	FY15	FY16	FY17	FY18	FY19
Cash Flows from User Charges					
Total operating revenues	\$ 39,793,629	\$ 39,696,664	\$ 41,670,398	\$ 44,858,688	\$ 44,849,754
Depreciation	5,353,000	5,554,392	9,303,442	9,347,992	9,693,951
Total operating expenses	(28,531,672)	(29,683,864)	(31,687,375)	(34,547,599)	(33,869,181)
Interest income	299,126	313,479	348,771	530,192	925,365
Reimbursement - New Haven CWF interest	196,035	179,337	163,265	148,137	133,073
Reimbursement - New Haven CWF principal	866,814	848,863	758,591	750,287	761,306
Net cash flows from user charges	17,976,932	16,908,871	20,557,092	21,087,697	22,494,268
Debt Service					
Principal payments on debt	7,003,463	5,711,464	5,426,462	7,259,249	7,960,803
Interest paid on debt	4,239,337	4,260,330	3,849,131	5,096,577	5,056,012
Total debt service payments	11,242,800	9,971,794	9,275,593	12,355,826	13,016,815
Debt service coverage ratio	1.60	1.70	2.22	1.71	1.73

Source: GNHWPCA audited financial statements.

The GNHWPCA has provided a covenant 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 will produce revenues which, together with amounts capitalized from proceeds of bonds or otherwise made available and reserved and not already taken into account by reduction of the obligations which are to be paid from revenues and the amount to be withdrawn from a surplus fund other than to pay capital costs for such fiscal year, will 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. Currently there is no outstanding subordinate debt.

3.3 Reserve Accounts

A fully funded debt service reserve account provides an additional level of security for bondholders. When an unexpected budget shortfall occurs, the reserve fund will allow the GNHWPCA time to implement necessary adjustments before bondholders are adversely affected. The usual debt service reserve requirement is equal to the least of 125% of average annual debt service, 10% of aggregate bond debt service, or maximum annual debt service. A fully funded debt service reserve has an impact on the GNHWPCA's rating and may be essential for an investment grade rating. However, it is also understood that the debt service reserve is really a liquidity source and provides only limited additional security to bondholders.

Reserve accounts totaling approximately \$14.5 million were funded by the GNHWPCA's initial bond issuance. They included a General Fund (operating reserves and funds identified to meet debt service coverage requirements), Clean Water Fund Debt Service Reserves (50% of maximum aggregate annual debt service on CWF notes, now two months' debt service) and the Debt Service Reserve Fund (100% of maximum aggregate annual debt service on revenue bonds). For utilities that consistently maintain high operating reserves and sustain high debt service coverage levels, the debt service reserve fund may be less relevant.

The GNHWPCA has established a Dedicated Infrastructure Renewal Fund, which is used to accumulate reserves to fund ongoing capital projects in lieu of borrowing. This program is funded primarily from the annual cash flow generated by the debt service coverage requirement.

Consistent with prevailing credit rating criteria and its plan of operations, it is assumed that the GNHWPCA will consider the following factors when developing and managing its credit structure:

- **System Size and Assessment Base.** Since the GNHWPCA serves a diverse customer base already, it will seek expansion only when considered to be both operationally and financially appropriate.
- **Governance.** The GNHWPCA's operations are governed in accordance with its bylaws, which provides for the GNHWPCA to establish rates, manage staff, and approve capital improvements, among other responsibilities.
- **Strategic Focus.** The GNHWPCA considers multi-year capital improvement programs that include current and anticipated capital needs that cover asset maintenance, upgrades, and system expansions.
- **Rates, Rate Structure, and Rate Making Flexibility.** The GNHWPCA will evaluate whether rates and revenues cover all financial commitments, inclusive of reserves for emergencies, and whether they are reasonable and affordable, which could affect asset maintenance and expansion of the user base.
- **Additional Considerations.** The GNHWPCA is seeking to build reserve balances over time to establish reliable operating reserves and fund an appropriate share of the ongoing capital improvements from operating funds.

The GNHWPCA is intent on establishing the best credit rating it can attain in order to minimize the impact of borrowing costs. The GNHWPCA's most recent ratings/outlook are as follows:

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- Standard & Poor's – AA+/Stable (2020)
- Moody's – A1/None (2018)
- Fitch – A+/Stable (2018)

4 DETERMINATION OF RATES

4.1 Scope and Methodology

In providing adequate wastewater treatment services to its customers, the GNHWPCA must receive sufficient total revenue to ensure the following objectives:

- Meet legal and contractual requirements, including the terms of the Indenture;
- Maintain current service levels;
- Meet new demands for service;
- Adequately maintain the existing collection and treatment systems; and
- Plan for future needs in an orderly manner.

Regulations established by the U.S. Environmental Protection Agency and Connecticut Department of Energy & Environmental Protection require user fee systems for pollution abatement facilities to produce revenues sufficient to support the operations, maintenance and replacement of facilities. This is the key element in the determination of the rates to be charged to users, since it is intended that the operation of such facilities should be self-supporting. The State and Federal governments have mandated that the viability of such operations should not be compromised. Accordingly, sewer user rates should be set at levels sufficient to recover all costs necessary to finance adequate wastewater treatment and disposal.

4.2 Cost Projections and Determination of Revenue Requirement

The first step to developing appropriate rates is to determine the costs associated with planned future operations. Based on these cost projections and any projected miscellaneous revenues (other than those that will be generated from rates), an annual revenue requirement is established. This represents the amount that must be generated from sewer user charges.

For purposes of this study, the total cost estimates used for FY21 through FY25 were based upon the proposed operating budget for FY21, historical and anticipated trends, and a review of individual budget line-items. The average annual growth rate of costs was developed by management based upon projected needs and historical experience. We also considered those developments in the current year that may affect cost estimates on a significant scale going forward.

This cost of service study incorporates the following cost components:

4.2.1 Operations and Maintenance Costs

Operations and maintenance costs include all costs necessary to deliver wastewater collection and treatment services. It includes not only the technical operation of the plant facilities and collection system, but also the administrative resources employed to ensure efficient operations as well as fixed administrative resources employed to administer the GNHWPCA.

4.2.2 Debt Service

In recognizing costs, cash outlay is the determinant used for cost recovery. Rather than using depreciation, the debt service requirement resulting from the acquisition and construction of assets is used. According to EPA guidelines on establishing cost recovery systems, this is an acceptable method for recognizing costs. Therefore, principal and interest payments are among the costs to be recovered by user fees. Exhibit 4 details the debt service costs for FY21 through FY25.

4.2.3 Estimated Future Debt Service

The cost estimates include a provision for estimated debt service associated with future bond issues to finance planned capital improvements. Based on the GNHWPCA's capital improvement plan for FY21 through FY25 (see Exhibit 5), we have estimated future debt service using the following assumptions:

- Management's assessment of the portion of costs to be financed by Clean Water Fund grants and notes.
- Management's assessment of the project costs that will be shared with the City of New Haven (i.e., 40% of each sewer separation project).
- Revenue bonds to be issued periodically, at a rate of 5% for 30 years, and amortization with level payments.
- Projects financed with Clean Water Fund notes are financed with an Interim Funding Obligation (IFO) until project completion. At completion, IFO's convert to Permanent Loan Obligations (PLO) with payment of 5% of principal outstanding and amortization of the remaining balance over 20 years at 2% with level payments. Interest accrued prior to conversion to PLO is assumed to be included in the amount borrowed under the IFO.
- For purposes of this study, based on management's capital improvement plan, we have assumed the timing and amount of future borrowings as follows:
 - No issuance of new revenue bonds.
 - CSO Projects – Shared with the City of New Haven
 - Amortization of a PLO of \$6,500,000 in November 2020 (CWF Project 711-DC: Regulator Improvements/Green Infrastructure);
 - Amortization of a PLO of \$2,100,000 in December 2022 (Project 2017-1D: East Street Pump Station Design);
 - Amortization of a PLO of \$7,750,000 in June 2023 (Project 2012-4: Yale/Trumbull Phase 2B); and
 - Amortization of a PLO of \$3,250,000 in June 2023 (Project 2019-5: Orchard Street Sewer Separation).
 - Non-CSO Projects
 - Amortization of a PLO of \$7,700,000 in March 2023 (Project 2016-6: East Haven I/I – Phase 3);

- Amortization of a PLO of \$6,320,000 in June 2024 (Project 2019-4C: Nitrogen Upgrades - Construction); and
- Amortization of a PLO of \$6,100,000 in December 2024 (Project 2019-02: Woodbridge I/I – Phase 3).

4.2.4 Miscellaneous Revenues

Miscellaneous revenues (i.e., revenues from all sources other than sewer user charges) are deducted from the total cost of services to determine the net revenue requirement. Miscellaneous revenues for FY21 are based on management's proposed budget. The average annual growth rate of revenues was determined by management based upon projected needs and historical experience.

4.2.5 Debt Service Coverage Requirement

As detailed in Section 3.2 of this report, the GNHWPCA is required under the Indenture of Trust for its revenue bonds to include a provision for additional revenues in its user charges equal to 15% of annual debt service. This provision does not apply, however, to the extent that management has identified and restricted existing reserves equal to all or part of this amount that are not otherwise restricted.

Notwithstanding this exception, the GNHWPCA includes the full 15% requirement in its budget each year and provides for an offsetting use of reserves as applicable. For FY21, management has proposed user charges that provide additional revenues equal to 20% of annual debt service. We have followed the same approach for purposes of this study.

4.2.6 Use of Debt Service Reserve Funds

Maintenance of debt service reserve funds may increase or reduce the GNHWPCA's revenue requirement in any given year. Management has planned funding and use of reserves FY21 through FY25, which has been incorporated into this study.

4.2.7 Receivable Management Costs

Receivable management costs are the estimated portion of billings to customers each year that are not collected during the period. The GNHWPCA implemented a new customer information system in 2010. Management has been able to utilize the CIS system to monitor billing and collections data on a monthly basis. The GNHWPCA's one-year collection rate has been stable in recent years at approximately 89%. Write-offs are minimal due to GNHWPCA's ability to place liens on real property, and the long-term collection rate on receivables remains above 95%.

4.3 Development and Design of Rates and Charges

4.3.1 Objectives

The primary objective in the recommendation of rates is to establish rates that will generate sufficient revenues to meet the total revenue requirements. Billing is based on water consumption using data provided by the RWA stated in 100 cubic foot units ("CCF's"). For purposes of recommending a user rate

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for FY21, we have assumed billable consumption of 8,050,000 CCF based on management's assessment of consumption trends.

4.3.2 Recommended Rate

As detailed further in Table 4-1, which follows, and in Exhibit 1, based upon our assessment of management's budgeted revenues and expenses for FY21 and other assumptions detailed herein, we recommend a quarterly administrative fee of \$16.00 and a CCF rate of \$4.80 for FY21.

The administrative fee was increased by \$1.00 to \$14.00 in 2017. Prior to that, the administrative fee had not been increased since the GNHWPCA was formed in 2005. As the fee is designed to add stability to rate revenues, and correlate to fixed costs, it is reasonable to increase this charge periodically. Accordingly, we recommend increasing the charge as detailed in Table 4-1 below.

Table 4-1. FY21 Recommended User Rate; FY22 through FY25 Projected Rates

Fiscal Year	Estimated Consumption	Admin Fee	CCF Rate	% Change in CCF Rate	Estimated Billings
FY21	8,050,000	\$ 16.00	\$ 4.80	2.3%	\$ 41,625,000
FY22	8,050,000	17.00	4.91	2.3%	42,776,000
FY23	8,050,000	18.00	5.05	2.9%	44,038,000
FY24	8,050,000	19.00	5.22	3.4%	45,591,000
FY25	8,050,000	20.00	5.39	3.3%	47,193,000

4.3.3 Flat Rates for Well Users

The GNHWPCA currently has sewer customers who are not customers of the RWA (i.e., customers whose water supply is from wells), and therefore have no basis for sewer billing. We recommend that customers of the GNHWPCA, who are not customers of the RWA, continue to be billed on the basis used in previous years. The default consumption for a single family residence that is a well user is 24 CCF per quarter. Non-single family residences and other well users who appeal the default consumption are required to complete a survey that collects information about their dwellings and the inhabitants. The customer is billed a flat amount each quarter based on the survey results. Presently, there are well users who are billed at 15, 20, 24, 48 and 96 CCF's. The current quarterly billing amount of \$127.56 (including the administrative fee) for a 24 CCF customer would increase to \$131.20 under the recommended rate structure for FY21.

4.3.4 Disclaimers

In preparation of this report and the conclusions contained herein, Arcadis and O'Neil Accounting and Consulting, LLC. have relied on assumptions and information provided by the GNHWPCA with respect to conditions which may exist or events which may occur in the future. We have not independently verified

COST OF SERVICE STUDY FOR FISCAL YEAR 2021

the accuracy of the information provided by the GNHWPCA and others. While we believe such sources are reliable and the information obtained to be accurate and appropriate for the analysis undertaken and the conclusions reached herein, as is often the case, there may be differences between actual and projected results, some of the estimates used in this report will not be realized, and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the data and results projected in this report and actual results achieved, and those differences may be material.

In the completion of this cost of service study for the GNHWPCA, Arcadis and O'Neil Accounting and Consulting, LLC. are (a) not recommending any action regarding municipal financial products or the issuance of municipal securities; (b) are not acting as a registered municipal advisor to the GNHWPCA and does not owe a fiduciary duty to the GNHWPCA pursuant to Section 15B of the Securities Exchange Act of 1934, as amended by the Dodd-Frank Wall Street Reform and Consumer Protection Act, with respect to the information and material contained in this report. The GNHWPCA should discuss any information and material prepared in connection with this report with any and all internal or external registered municipal advisors that it deems appropriate before acting on this information and material.

5 EXHIBITS

Exhibits 1 through 6 are found on Pages 5-2 through 5-8.

COST OF SERVICE STUDY FOR FISCAL YEAR 2021

Exhibit 1. Revenue Requirement and Recommended User Rates

For the Fiscal Year Ended June 30, 2021
With Estimated Revenue Requirements and User Rates for Fiscal Years 2022 through 2025

Line No.	Description	1 FY21	2 % ch.	3 FY22	4 % ch.	5 FY23	6 % ch.	7 FY24	8 % ch.	9 FY25
A. OPERATIONS & MAINTENANCE										
1	Personnel	\$ 9,463,423	5%	\$ 9,940,000	5%	\$ 10,447,000	5%	\$ 10,991,000	5%	\$ 11,573,000
2	Utilities	4,681,900	2%	4,775,000	2%	4,870,000	2%	4,967,000	2%	5,066,000
3	Plant Operations & Collection System	1,125,000	2%	1,148,000	2%	1,171,000	2%	1,196,000	2%	1,221,000
4	Contracted Maintenance	2,156,012	3%	2,221,000	3%	2,288,000	3%	2,357,000	3%	2,428,000
5	Contracted Sludge & Ash Disposal	3,207,387	3%	3,304,000	3%	3,403,000	3%	3,505,000	3%	3,610,000
6	Other Contracted Services	5,798,490	3%	5,948,000	3%	6,104,000	3%	6,263,000	3%	6,429,000
7	Payments In-lieu of Taxes (PILOT)	750,000	0%	750,000	0%	750,000	0%	750,000	0%	750,000
8	Equipment, Vehicles & Supplies	1,046,500	3%	1,079,000	3%	1,111,000	3%	1,146,000	3%	1,181,000
9	Plant Repairs & Replacement	1,904,400	3%	1,962,000	3%	2,021,000	3%	2,082,000	3%	2,144,000
10	Contingency	500,000	0%	500,000	0%	500,000	0%	500,000	0%	500,000
11	Total Operations & Maintenance Costs	30,633,112	3%	31,627,000	3%	32,665,000	3%	33,757,000	3%	34,902,000
B. DEBT SERVICE										
Revenue Bonds:										
12	Principal	3,561,667	5%	3,731,667	5%	3,911,667	0%	3,900,000	4%	4,065,000
13	Interest	3,700,399	-5%	3,530,251	-5%	3,352,040	-5%	3,192,362	-5%	3,024,956
Clean Water Fund Notes:										
14	Principal	5,174,721	-3%	5,041,259	19%	6,014,079	-4%	5,795,254	0%	5,803,006
15	Interest	1,240,309	-9%	1,129,067	13%	1,276,058	4%	1,328,661	6%	1,406,502
16	Total Debt Service	13,677,096	-2%	13,432,243	8%	14,553,844	-2%	14,216,277	1%	14,299,463
17	TOTAL COST OF SERVICES	\$ 44,310,208	2%	\$ 45,059,243	5%	\$ 47,218,844	2%	\$ 47,973,277	3%	\$ 49,201,463
C. DEBT SERVICE COVERAGE										
18	Debt Service Coverage Requirement	2,735,000	-2%	2,686,000	8%	2,911,000	-2%	2,843,000	1%	2,860,000
19	Debt Service Coverage Ratio	1.20		1.20		1.20		1.20		1.20
D. MISCELLANEOUS REVENUES										
20	Interest & Lien Fees	(1,255,000)	0%	(1,255,000)	0%	(1,255,000)	0%	(1,255,000)	0%	(1,255,000)
21	Aged Accounts Receivable	(4,500,000)	0%	(4,500,000)	0%	(4,500,000)	0%	(4,500,000)	0%	(4,500,000)
22	Investment Income	(750,000)	0%	(750,000)	0%	(750,000)	0%	(750,000)	0%	(750,000)
23	High Strength Surcharges	(850,000)	0%	(850,000)	0%	(850,000)	0%	(850,000)	0%	(850,000)
24	Grease Disposal	(525,000)	0%	(525,000)	0%	(525,000)	0%	(525,000)	0%	(525,000)
25	Outside Sludge	(250,000)	0%	(250,000)	0%	(250,000)	0%	(250,000)	0%	(250,000)
26	Interlocal Fees	(160,000)	0%	(160,000)	0%	(160,000)	0%	(160,000)	0%	(160,000)
27	Reimbursements - Synagro	(650,000)	0%	(650,000)	0%	(650,000)	0%	(650,000)	0%	(650,000)
28	Other Revenues	(690,000)	0%	(690,000)	0%	(690,000)	0%	(690,000)	0%	(690,000)
29	Total Miscellaneous Revenues	(9,630,000)	0%	(9,630,000)	0%	(9,630,000)	0%	(9,630,000)	0%	(9,630,000)
E. CITY OF NEW HAVEN REIMBURSEMENT										
30	CSO CWF Principal	(952,757)	-6%	(900,018)	20%	(1,081,166)	-14%	(927,600)	-18%	(763,846)
31	CSO CWF Interest	(148,064)	-15%	(125,888)	24%	(156,646)	5%	(164,213)	-10%	(147,756)
32	Total City of New Haven Reimbursement	(1,100,822)	-7%	(1,025,906)	21%	(1,237,812)	-12%	(1,091,813)	-17%	(911,602)
F. TO/(FROM) DEBT SERVICE RESERVE SINKING FUND										
33	To/(From) Debt Service Res. Sinking Fund	500,000		750,000		(300,000)		250,000		250,000
34	NET REVENUE REQUIREMENT	\$ 36,814,386	3%	\$ 37,839,337	3%	\$ 38,962,032	4%	\$ 40,344,464	4%	\$ 41,769,862
G. RECEIVABLE MANAGEMENT COSTS										
35		4,810,261		4,936,941		5,075,701		5,246,563		5,422,736
36	Estimated collection rate	89%		89%		89%		89%		89%
37	REVENUE REQUIREMENT	\$ 41,624,647	3%	\$ 42,776,278	3%	\$ 44,037,733	4%	\$ 45,591,027	4%	\$ 47,192,598
H. RATE CALCULATION										
38	Elderly Credit	\$ (93,000)		\$ (99,200)		\$ (105,400)		\$ (111,600)		\$ (117,800)
39	Consumption	8,050,000		8,050,000		8,050,000		8,050,000		8,050,000
40	Number of bills	194,700		194,700		194,700		194,700		194,700
41	Administrative fee	\$ 16.00		\$ 17.00		\$ 18.00		\$ 19.00		\$ 20.00
42	CCF Rate	\$ 4.80		\$ 4.91		\$ 5.05		\$ 5.22		\$ 5.39
	Change from Prior Year	2.3%		2.3%		2.9%		3.4%		3.3%

Note - See Exhibit 2 for supporting calculations for Receivable Management Costs, Revenue Requirement and Debt Service Coverage amounts.

Exhibit 2.
Recommended User Rates - Supporting Calculations
For the Fiscal Year Ended June 30, 2021

1. RECEIVABLE MANAGEMENT CALCULATION

Net revenue requirement	\$ 36,814,386
Interest & lien fees	1,255,000
High strength surcharges	850,000
Customer revenue, net	\$ 38,919,386
Collection rate	89%
Customer revenue, gross	43,729,647
Receivable management cost	\$ 4,810,261

2. REVENUE REQUIREMENT

Total Cost of Services	\$ 44,310,208
Debt Service Coverage Requirement	2,735,000
Miscellaneous Revenues	(9,630,000)
New Haven Reimbursement	(1,100,822)
To/(From) DSR Sinking Fund	500,000
Receivable Management Cost	4,810,261
Revenue Requirement (from CCF Rate)	\$ 41,624,647

3. DEBT SERVICE COVERAGE CALCULATION

User fees	\$ 41,624,647
Miscellaneous Revenues	9,630,000
New Haven Reimbursement	1,100,822
(To)/From DSR Sinking Fund	(500,000)
Receivable management costs	(4,810,261)
Operations & Maintenance Costs	(30,633,112)
Net cash flow before debt service	\$ 16,412,096
Debt service	\$ 13,677,096
Coverage ratio	1.20

COST OF SERVICE STUDY FOR FISCAL YEAR 2021

Exhibit 3. Budgeted Operations & Maintenance Expenses by Department

For the Fiscal Year Ended June 30, 2021
With Estimated Expenses for Fiscal Years 2022 through 2025

Line No.	Description	1 FY21	2 % ch.	3 FY22	4 % ch.	5 FY23	6 % ch.	7 FY24	8 % ch.	9 FY25
EXECUTIVE DIRECTOR										
1	Personnel	\$ 457,553	3%	\$ 469,000	2%	\$ 479,000	2%	\$ 489,000	2%	\$ 500,000
2	Other Contracted Services	782,900	3%	806,000	3%	831,000	3%	856,000	3%	883,000
3	Equipment, Vehicles & Supplies	83,300	3%	86,000	2%	88,000	3%	91,000	3%	94,000
4	Contingency	500,000	0%	500,000	0%	500,000	0%	500,000	0%	500,000
5	Total EXECUTIVE DIRECTOR	1,823,753	2%	1,861,000	2%	1,898,000	2%	1,936,000	2%	1,977,000
FINANCE & ADMINISTRATION										
6	Personnel	964,786	3%	996,000	3%	1,028,000	3%	1,061,000	3%	1,095,000
7	Utilities	3,300	-9%	3,000	0%	3,000	0%	3,000	0%	3,000
8	Other Contracted Services	121,500	3%	125,000	3%	129,000	3%	133,000	3%	137,000
9	Equipment, Vehicles & Supplies	4,500	11%	5,000	0%	5,000	0%	5,000	0%	5,000
10	Total FINANCE & ADMINISTRATION	1,094,086	3%	1,129,000	3%	1,165,000	3%	1,202,000	3%	1,240,000
CUSTOMER SERVICE										
11	Personnel	856,908	3%	885,000	3%	913,000	3%	943,000	3%	974,000
12	Other Contracted Services	637,835	3%	657,000	3%	677,000	3%	697,000	3%	717,000
13	Equipment, Vehicles & Supplies	10,000	0%	10,000	0%	10,000	0%	10,000	0%	10,000
14	Total CUSTOMER SERVICE	1,504,743	3%	1,552,000	3%	1,600,000	3%	1,650,000	3%	1,701,000
EMPLOYEE BENEFITS										
15	Personnel	2,572,486	10%	2,829,000	10%	3,113,000	10%	3,424,000	10%	3,766,000
16	Other Contracted Services	62,000	3%	64,000	3%	66,000	3%	68,000	3%	70,000
17	Total EMPLOYEE BENEFITS	2,634,486	10%	2,893,000	10%	3,179,000	10%	3,492,000	10%	3,836,000
ENGINEERING										
18	Personnel	1,051,402	3%	1,086,000	3%	1,121,000	3%	1,157,000	3%	1,194,000
19	Utilities	6,000	0%	6,000	0%	6,000	0%	6,000	0%	6,000
20	Other Contracted Services	1,044,500	1%	1,053,000	1%	1,062,000	1%	1,071,000	1%	1,080,000
21	Equipment, Vehicles & Supplies	4,000	0%	4,000	0%	4,000	0%	4,000	0%	4,000
22	Total ENGINEERING	2,105,902	2%	2,149,000	2%	2,193,000	2%	2,238,000	2%	2,284,000
OPERATIONS										
23	Personnel	3,560,288	3%	3,675,000	3%	3,793,000	3%	3,917,000	3%	4,044,000
24	Utilities	4,605,400	2%	4,697,000	2%	4,791,000	2%	4,887,000	2%	4,985,000
25	Plant Operations & Collection System	1,125,000	2%	1,148,000	2%	1,171,000	2%	1,196,000	2%	1,221,000
26	Contracted Maintenance	2,156,012	3%	2,221,000	3%	2,288,000	3%	2,357,000	3%	2,428,000
27	Contracted Sludge & Ash Disposal	3,207,387	3%	3,304,000	3%	3,403,000	3%	3,505,000	3%	3,610,000
28	Other Contracted Services	2,431,285	3%	2,503,000	3%	2,576,000	3%	2,651,000	3%	2,731,000
29	Equipment, Vehicles & Supplies	934,200	3%	963,000	3%	993,000	3%	1,025,000	3%	1,057,000
30	Plant Repairs & Replacement	1,904,400	3%	1,962,000	3%	2,021,000	3%	2,082,000	3%	2,144,000
31	Total OPERATIONS	19,923,972	3%	20,473,000	3%	21,036,000	3%	21,620,000	3%	22,220,000
GENERAL SERVICES										
32	Utilities	67,200	3%	69,000	1%	70,000	1%	71,000	1%	72,000
33	Other Contracted Services	718,470	3%	740,000	3%	763,000	3%	787,000	3%	811,000
34	Payments In-lieu of Taxes (PILOT)	750,000	0%	750,000	0%	750,000	0%	750,000	0%	750,000
35	Equipment, Vehicles & Supplies	10,500	5%	11,000	0%	11,000	0%	11,000	0%	11,000
36	Total GENERAL SERVICES	1,546,170	2%	1,570,000	2%	1,594,000	2%	1,619,000	2%	1,644,000
ALL DEPARTMENTS										
37	Personnel	9,463,423	5%	9,940,000	5%	10,447,000	5%	10,991,000	5%	11,573,000
38	Utilities	4,681,900	2%	4,775,000	2%	4,870,000	2%	4,967,000	2%	5,066,000
39	Plant Operations & Collection System	1,125,000	2%	1,148,000	2%	1,171,000	2%	1,196,000	2%	1,221,000
40	Contracted Maintenance	2,156,012	3%	2,221,000	3%	2,288,000	3%	2,357,000	3%	2,428,000
41	Contracted Sludge & Ash Disposal	3,207,387	3%	3,304,000	3%	3,403,000	3%	3,505,000	3%	3,610,000
42	Other Contracted Services	5,798,490	3%	5,948,000	3%	6,104,000	3%	6,263,000	3%	6,429,000
43	Payments In-lieu of Taxes (PILOT)	750,000	0%	750,000	0%	750,000	0%	750,000	0%	750,000
44	Equipment, Vehicles & Supplies	1,046,500	3%	1,079,000	3%	1,111,000	3%	1,146,000	3%	1,181,000
45	Plant Repairs & Replacement	1,904,400	3%	1,962,000	3%	2,021,000	3%	2,082,000	3%	2,144,000
46	Contingency	500,000	0%	500,000	0%	500,000	0%	500,000	0%	500,000
47	Total ALL DEPARTMENTS	\$ 30,633,112	3%	\$ 31,627,000	3%	\$ 32,665,000	3%	\$ 33,757,000	3%	\$ 34,902,000

COST OF SERVICE STUDY FOR FISCAL YEAR 2021

Exhibit 4. Scheduled and Estimated Debt Service

For the Fiscal Years Ended June 30, 2021 through 2025

Line No.	Description	1 FY21	2 % ch.	3 FY22	4 % ch.	5 FY23	6 % ch.	7 FY24	8 % ch.	9 FY25
Revenue Bonds										
2005 Series A										
1	Principal	\$ -	0%	\$ -	0%	\$ -	0%	\$ -	0%	\$ -
2	Interest	16,250	0%	16,250	0%	16,250	0%	16,250	0%	16,250
2008 Series B/CREBs										
3	Principal	166,667	0%	166,667	0%	166,667	-100%	-	0%	-
4	Interest	3,542	-40%	2,125	-67%	708	-100%	-	0%	-
2012 Series B										
5	Principal	225,000	2%	230,000	2%	235,000	2%	240,000	4%	250,000
6	Interest	308,794	-2%	302,688	-2%	297,019	-2%	290,481	-3%	283,131
2014 Series B										
7	Principal	2,660,000	5%	2,795,000	5%	2,940,000	4%	3,065,000	4%	3,190,000
8	Interest	2,832,663	-5%	2,696,288	-5%	2,552,913	-5%	2,429,606	-5%	2,300,050
2016 Series A										
9	Principal	510,000	6%	540,000	6%	570,000	4%	595,000	5%	625,000
10	Interest	539,150	-5%	512,900	-5%	485,150	-6%	456,025	-7%	425,525
Estimated Future Series										
11	Principal	-	0%	-	0%	-	0%	-	0%	-
12	Interest	-	0%	-	0%	-	0%	-	0%	-
Total Revenue Bonds										
13	Principal	3,561,667	5%	3,731,667	5%	3,911,667	0%	3,900,000	4%	4,065,000
14	Interest	3,700,399	-5%	3,530,251	-5%	3,352,040	-5%	3,192,362	-5%	3,024,956
15	Total Debt Service - Revenue Bonds	\$ 7,262,066	0%	\$ 7,261,917	0%	\$ 7,263,707	-2%	\$ 7,092,362	0%	\$ 7,089,956
Clean Water Fund Notes										
CSO Projects										
16	Principal	1,979,490	2%	2,019,445	-5%	1,924,510	-13%	1,668,998	-25%	1,246,492
17	Interest	255,129	-16%	215,175	-19%	175,203	-21%	137,998	-20%	109,975
Non-CSO Projects										
18	Principal	2,792,827	0%	2,791,215	0%	2,802,365	0%	2,813,740	0%	2,825,344
19	Interest	870,149	-6%	814,347	-7%	758,421	-7%	702,270	-8%	645,889
Estimated Future Notes - CSO Projects										
20	Principal	402,403	-43%	230,599	238%	778,404	-16%	650,002	2%	663,122
21	Interest	115,031	-13%	99,546	117%	216,414	26%	272,535	-5%	259,415
Estimated Future Notes - Non-CSO Projects										
22	Principal	-	0%	-	0%	508,801	30%	662,514	61%	1,068,048
23	Interest	-	0%	-	0%	126,021	71%	215,859	81%	391,222
Total Clean Water Fund Notes										
24	Principal	5,174,721	-3%	5,041,259	19%	6,014,079	-4%	5,795,254	0%	5,803,006
25	Interest	1,240,309	-9%	1,129,067	13%	1,276,058	4%	1,328,661	6%	1,406,502
26	Total Debt Service - CWF Notes	\$ 6,415,030	-4%	\$ 6,170,326	18%	\$ 7,290,137	-2%	\$ 7,123,915	1%	\$ 7,209,507
City of New Haven Share of CSO Projects										
CSO Projects										
27	Principal	(791,796)	2%	(807,778)	-5%	(769,804)	-13%	(667,599)	-25%	(498,597)
28	Interest	(102,052)	-16%	(86,070)	-19%	(70,081)	-21%	(55,199)	-20%	(43,990)
Estimated Future Notes - CSO Projects										
29	Principal	(160,961)	-43%	(92,240)	238%	(311,362)	-16%	(260,001)	2%	(265,249)
30	Interest	(46,012)	-13%	(39,818)	117%	(86,565)	26%	(109,014)	-5%	(103,766)
Total City Share of CSO Projects										
31	Principal	(952,757)	-6%	(900,018)	20%	(1,081,166)	-14%	(927,600)	-18%	(763,846)
32	Interest	(148,064)	-15%	(125,888)	24%	(156,646)	5%	(164,213)	-10%	(147,756)
33	Total Debt Service - New Haven Share	\$ (1,100,822)	-7%	\$ (1,025,906)	21%	\$ (1,237,812)	-12%	\$ (1,091,813)	-17%	\$ (911,602)
Total Net Debt Service										
34	Principal	7,783,630	1%	7,872,908	12%	8,844,580	-1%	8,767,654	4%	9,104,160
35	Interest	4,792,644	-5%	4,533,429	-1%	4,471,452	-3%	4,356,810	-2%	4,283,702
36	Total Net Debt Service	\$ 12,576,274	-1%	\$ 12,406,337	7%	\$ 13,316,032	-1%	\$ 13,124,464	2%	\$ 13,387,862

COST OF SERVICE STUDY FOR FISCAL YEAR 2021

Exhibit 5. Capital Improvement Plan

For the Fiscal Years Ended June 30, 2021 through 2025

Line No.	Description	1 FY21	2 FY22	3 FY23	4 FY24	5 FY25	6 Total
COMBINED SEWER OVERFLOW LONG TERM CONTROL PLAN							
1	Yale Trumbull Phase 2B	\$ 15,500,000	\$ -	\$ -	\$ -	\$ -	\$ 15,500,000
2	Orchard Street Sewer Separation	6,500,000	-	-	-	-	6,500,000
3	Long Term Control Plan Update	860,000	-	-	-	-	860,000
4	Total CSO Long Term Control Plan	22,860,000	\$ -	\$ -	\$ -	-	\$ 22,860,000

EAST SHORE WATER POLLUTION CONTROL FACILITY

5	Nitrogen Upgrades	\$ 1,150,000	\$ -	\$ -	\$ -	\$ -	\$ 1,150,000
6	Concrete Work - Chlorine Contact and Wall Repairs	500,000	-	-	-	-	500,000
7	East Shore Admin. Building HVAC	250,000	-	-	-	-	250,000
8	East Shore Primary Sludge Pumps	240,000	-	-	-	-	240,000
9	Roof Replacements - East Shore	150,000	150,000	-	-	-	300,000
10	Secondary Clarifier Drain Valves	160,000	160,000	160,000	-	-	480,000
11	Plant Inlet Works Main Gates	200,000	100,000	100,000	-	-	400,000
12	SCADA Improvements	-	200,000	-	-	-	200,000
13	Laboratory Rehabilitation	-	700,000	-	-	-	700,000
14	Morris Cove Oil Tank	-	125,000	-	-	-	125,000
15	Primary Clarifier Drive and Screw Replacements	-	160,000	-	-	-	160,000
16	East Shore Odor Scrubber Maintenance	-	300,000	-	-	300,000	600,000
17	FOG Fuel System	-	-	500,000	-	-	500,000
18	Wetwell Covers	-	-	300,000	-	-	300,000
19	Primary Tank Major Maintenance	-	-	-	150,000	-	150,000
20	East Shore TPS Pumps	-	-	-	-	300,000	300,000
21	FIS Upgrade	-	-	-	-	300,000	300,000
22	Total East Shore WPC Facility	\$ 2,650,000	\$ 1,895,000	\$ 1,060,000	\$ 150,000	\$ 900,000	\$ 6,655,000

COLLECTION SYSTEM, PUMP STATIONS & FORCE MAINS

23	Design and Construction East Street Pump Station	\$ 11,450,000	\$ -	\$ -	\$ -	\$ -	\$ 11,450,000
24	Mill River Phase 2 SSES Hamden - Part 2	600,000	-	-	-	-	600,000
25	Riverside Interceptor	500,000	500,000	-	-	-	1,000,000
26	Cured-in-Place Pipe Lining	1,200,000	1,000,000	1,000,000	1,000,000	1,000,000	5,200,000
27	Emergency On-Call Services	300,000	300,000	300,000	300,000	300,000	1,500,000

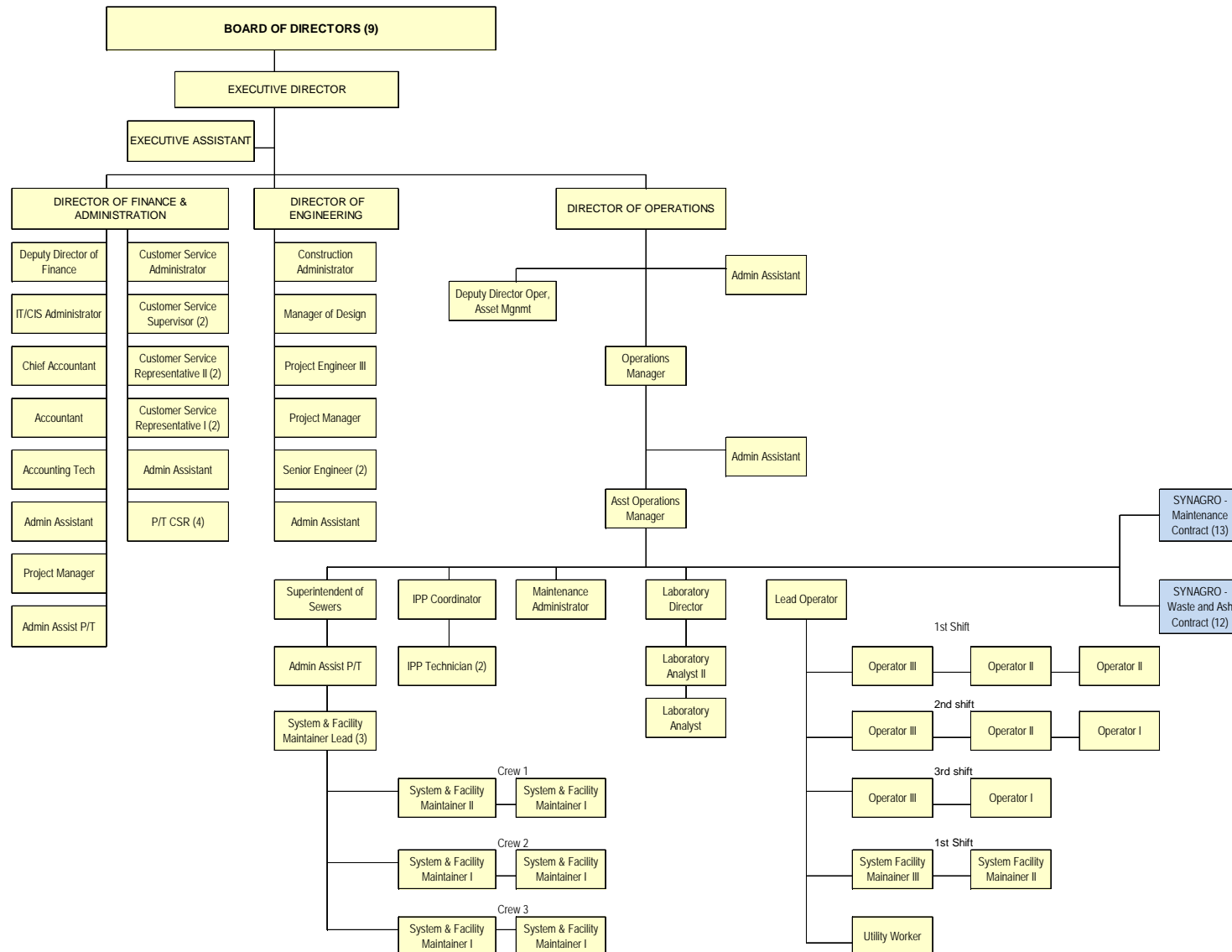
COST OF SERVICE STUDY FOR FISCAL YEAR 2021

Exhibit 5., continued
Capital Improvement Plan

For the Fiscal Years Ended June 30, 2021 through 20254

Line No.	Description	1 FY21	2 FY22	3 FY23	4 FY24	5 FY25	6 Total
COLLECTION SYSTEM, PUMP STATIONS & FORCE MAINS							
28	Pump Station Imp. - Design & Const.	\$ 50,000	\$ 500,000	\$ 50,000	\$ 500,000	\$ 50,000	\$ 1,150,000
29	Bypass Hose/Piping	-	100,000	-	-	-	100,000
30	150 kW Portable Generators	-	190,000	-	-	-	190,000
31	Main Sewerage Pumps - East Shore	-	140,000	-	-	140,000	280,000
32	Design and Construction Union Street Pump Station	-	2,000,000	18,100,000	-	-	20,100,000
33	Mill River Phase 3 I/I Rehab	-	500,000	4,000,000	-	-	4,500,000
34	New Combo Truck	-	-	380,000	-	-	380,000
35	Design and Construction Boulevard Pump Station	-	-	3,840,000	35,410,000	-	39,250,000
36	Central Interceptor & Easements	-	-	1,500,000	2,000,000	-	3,500,000
37	Foxon Park Interceptor	-	-	-	1,000,000	1,500,000	2,500,000
38	Manhole Rehabilitation Program	-	-	-	-	700,000	700,000
39	Morris Cove Bar Screens	-	-	-	-	700,000	700,000
40	Total Coll. System, Pump Stations & Force Mains	\$ 14,100,000	\$ 5,230,000	\$ 29,170,000	\$ 40,210,000	\$ 4,390,000	\$ 93,100,000
41	TOTAL CAPITAL IMPROVEMENT PLAN	\$ 39,610,000	\$ 7,125,000	\$ 30,230,000	\$ 40,360,000	\$ 5,290,000	\$ 122,615,000
SOURCES OF FINANCING							
42	Clean Water Fund - Grants	\$ 17,188,000	\$ 800,000	\$ 8,776,000	\$ 14,164,000	\$ -	\$ 40,928,000
43	Clean Water Fund - Notes	18,215,000	1,700,000	17,164,000	21,246,000	-	58,325,000
44	<i>Total Clean Water Fund</i>	35,403,000	2,500,000	25,940,000	35,410,000	-	99,253,000
45	FEMA Grants	-	-	-	-	-	-
46	Dedicated Infrastructure Renewal Fund	4,207,000	4,625,000	4,290,000	4,950,000	5,290,000	23,362,000
47	Total Sources of Financing	\$ 39,610,000	\$ 7,125,000	\$ 30,230,000	\$ 40,360,000	\$ 5,290,000	\$ 122,615,000

Exhibit 6.
Organization Chart



Arcadis U.S., Inc.

44 South Broadway

15th Floor

Box 751

White Plains, New York 10602-0751

Tel 914 694 2100

Fax 914 694 9286

www.arcadis.com

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APPENDIX C

SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

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SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

The following is a brief summary of certain provisions of the Indenture of Trust between The Greater New Haven Water Pollution Control Authority and U.S. Bank National Association (as successor to Wachovia Bank, National Association) as Trustee, dated as of August 1, 2005, as amended and supplemented by the First Supplemental Indenture dated as of August 1, 2005, the Second Supplemental Indenture dated as of May 31, 2006, the Third Supplemental Indenture dated as of January 31, 2007, the Fourth Supplemental Indenture dated as of February 1, 2007, the Fifth Supplemental Indenture dated as of May 9, 2007, the Sixth Supplemental Indenture dated as of June 14, 2007, the Seventh Supplemental Indenture dated as of August 2, 2007, the Eighth Supplemental Indenture dated as of November 30, 2007, the Ninth Supplemental Indenture dated as of March 1, 2008, the Tenth Supplemental Indenture dated as of April 1, 2008, the Eleventh Supplemental Indenture dated as of May 29, 2009, the Twelfth Supplemental Indenture dated as of June 26, 2009, the Thirteenth Supplemental Indenture dated as of November 30, 2009, the Fourteenth Supplemental Indenture dated as of May 16, 2011, the Fifteenth Supplemental Indenture dated as of June 30, 2011, the Sixteenth Supplemental Indenture dated as of December 28, 2011, the Seventeenth Supplemental Indenture dated as of March 12, 2012, the Eighteenth Supplemental Indenture dated as of July 12, 2012, the Nineteenth Supplemental Indenture dated as of July 31, 2012, the Twentieth Supplemental Indenture dated as of April 30, 2013, the Twenty-First Supplemental Indenture dated as of June 28, 2013, the Twenty-Second Supplemental Indenture dated as of September 30, 2013, the Twenty-Third Supplemental Indenture dated as of December 31, 2013, the Twenty-Fourth Supplemental Indenture dated as of January 10, 2014, the Twenty-Fifth Supplemental Indenture dated as of July 1, 2014, the Twenty-Sixth Supplemental Indenture dated as of December 29, 2014, the Twenty-Seventh Supplemental Indenture dated as of March 1, 2016, the Twenty-Eighth Supplemental Indenture dated as of November 1, 2016, the Twenty-Ninth Supplemental Indenture dated as of September 30, 2017, the Thirtieth Supplemental Indenture dated as of September 25, 2018, and the Thirty-First Supplemental Indenture dated as of May 31, 2020 (collectively, the “Original Indenture”), each by and between the Authority and the Trustee, as further supplemented by the Thirty-Second Supplemental Indenture dated as of July 1, 2020 (the “Thirty-Second Supplemental Indenture”, and together with the Original Indenture, the “Indenture”).

This summary does not purport to be complete and reference is made to the Original Indenture and the Thirty-Second Supplemental 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:

“115% Debt Service Coverage Ratio Requirement” shall mean a Debt Service Coverage Ratio of one hundred and fifteen percent (115%); provided, however, that there may not be taken into account for purposes of compliance with this requirement transfers from the General Fund to pay Parity Obligations (other than transfers made to pay any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and such transfers made to pay interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act) and Fiscal Year-end fund balance to the extent that they exceed fifteen percent (15%) of the Aggregate Annual Debt Service for such Fiscal Year as described in (b) of the definition of Debt Service Coverage Ratio.

“Accrued Aggregate Debt Service” shall mean, as of any time, Aggregate Annual Debt Service accrued or to accrue and unpaid through the end of such time period.

“Aggregate Annual 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 have the meaning set forth in the recitals to the Indenture.

“Authorized Representative” shall mean the Executive Director or such other person or persons so designated by resolution of the Authority, 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.

“Bond” or “Bonds” shall mean the Initial Bonds and any Clean Water Fund Obligations (which are Parity Obligations) and Other Regional Wastewater System Indebtedness issued pursuant to Sections 206 and 207 of the Indenture.

“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 Authority.

“Bond Payment Date” shall mean with respect to the Bonds and Parity Indebtedness issued or incurred under the Indenture, such date on which interest or both a Principal Installment and interest shall be due and payable thereon 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 a 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 Regional Wastewater 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 Regional Wastewater 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 Regional Wastewater System or required by the Indenture;

- (d) expenses of administration properly chargeable to the acquisition, construction, reconstruction, renewal, extension, or improvement of the Regional Wastewater 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 Regional Wastewater 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 one year after the completion of any improvement of the Regional Wastewater System financed by such Series of Bonds or Capitalized Interest as permitted by the Regional Act, 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 condemnation 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 Regional Wastewater 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 Authority and any amounts heretofore or hereafter advanced by the Authority for any of the foregoing purposes.

“Capitalized Interest” shall mean, for any particular Series of Bonds, that portion, if any, of the proceeds thereof which (i) in the case of Other Regional Wastewater 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.

“Chief Financial Officer” shall mean, as of any date, the duly appointed and acting chief financial officer of the Authority, 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 Authority issued by the Authority 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. Clean Water Fund Obligations shall be Parity Obligations unless specifically designated as Subordinated Indebtedness by the Authority.

“Code” shall mean the Internal Revenue Code of 1986, as amended.

“Connecticut General Statutes” shall mean the General Statutes of Connecticut, Revision of 1958, as amended.

“Consulting Engineer” shall mean such independent licensed professional engineer or firm of engineers of recognized standing selected by the Authority and may include an independent engineer or firm of engineers retained by the Authority in one or more other capacities.

“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 (A) Capitalized Interest, and provided that for purposes of this definition interest shall not include any portion of the Accreted Value of Capital Appreciation Bonds and (B) investment (but not reinvestment) earnings on the Debt Service Fund or Debt Service Reserve Fund if such amounts shall have been invested in Investment Securities and the amount of such investment earnings taken into account may be determined precisely, (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 (w) 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, (x) 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, (y) the Principal Installment of the Bonds of any such Series which constitutes an Interim Funding Obligation or Parity 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 Parity Bond Anticipation Notes must begin to be repaid, and (z) in the case of (A) a Qualified Swap applicable to Variable Rate Bonds, interest shall be determined for such period of such Fiscal Year that such Qualified Swap shall be in effect by taking into account the net payments expected by the Authority to be made to the Qualified Swap provider by the Authority or the net payments expected to be made by the Qualified Swap provider to the Authority, such that if the Variable Rate Bonds and the Qualified Swap together result in a net fixed rate payable by the Authority for such period, such net fixed rate shall be deemed to be the interest rate on the Variable Rate Bonds for purposes of this definition and conversely (B) a Qualified Swap applicable to Fixed Rate Bonds, interest shall be determined for such period of such Fiscal Year that such Swap shall be in effect by taking into account the net payments expected by the Authority to be made to the Qualified Swap provider by the Authority or the net payments expected to be made by the Qualified Swap provider to the Authority, such that if the Fixed Rate Bonds and the Qualified Swap together result in a net variable rate payable by the Authority for such period, such net variable rate shall be deemed to be the interest rate on the Fixed Rate Bonds for purposes of this definition. 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 sum of (i)(A) the Revenues for such Fiscal Year (adjusted as provided in Section 206(d) of the Indenture), plus (B) the amount withdrawn from the General Fund to pay Operating Expenses and Parity Obligations for such Fiscal Year, plus (C) the unrestricted balance to the credit of the General Fund as of the end of such Fiscal Year, less (ii) the total Operating Expenses for such Fiscal Year; compared to (b) the Aggregate Annual Debt Service on the Bonds then Outstanding, Clean Water Fund Obligations (which are Parity Obligations), and Parity Indebtedness and interest on Parity Bond Anticipation Notes then outstanding. For purposes of this definition, “unrestricted balance” shall mean cash and Investment Securities that are legally available (whether or not Board approval is required for expenditure) to pay Operating Expenses or Parity Obligations whether or not the Board shall have otherwise restricted their use.

“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 the lesser of: (i) the maximum annual Debt Service on such Bonds (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act); (ii) ten percent

(10%) of the Stated Principal Amount of such Bonds; or (iii) 125% of the average annual Debt Service on such Bonds (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act), or an amount, if any, specified for such Bonds pursuant to a Supplemental Indenture adopted pursuant to the Indenture; 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 Authority 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 Authority with Notice of such objection within 30 days of the date of the Authority'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 Authority 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 annual Debt Service on such Series of Bonds (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act) 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).

"Disbursement Request" shall mean the written request signed by an Authorized Representative of the Authority 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 Bonds other than Clean Water Fund Obligations, shall be in substantially the form set forth in Exhibit A to the Indenture.

"Event of Default" shall mean any event specified in Section 1001 of the Indenture.

"Executive Director" shall mean any Interim Executive Director or Executive Director of the Authority appointed in accordance with the Authority's Bylaws.

"Fiscal Year" shall mean the fiscal year of the Authority.

"Indenture" shall mean the Indenture of Trust as the same may be amended or supplemented by a Supplemental Indenture as permitted by the 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 Authority) and who is appointed by the Authority. If such Independent Consultant is an individual, such person shall not be a member of the Authority's Board of Directors or an employee of the Authority or related to a member of the Authority's Board of Directors or an employee of the Authority. 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's Board of Directors or a relative who is a member of the Authority's Board of Directors.

“Initial Bonds” shall mean the Series 2005 A Bonds, the Series 2005 B Bonds and any additional Bonds issued pursuant to the provisions of Section 205 of the Indenture.

“Interim Funding Obligation” shall have the meaning set forth in the Clean Water Fund Act.

“Interest Payment Date” shall mean a date on which an interest payment is due.

“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 Authority.

“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 least 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.

“Operating Expenses” shall mean all reasonable or necessary current expenses of maintaining, repairing, operating and managing the Regional Wastewater 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 Regional Wastewater System or the income or operation thereof, payments by the Authority in lieu of taxes, 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), capital lease payments per year in an aggregate amount not exceeding ten percent (10%) of the Authority's total Operating Expenses for said year as shown on the Annual Budget for such year, expenses, liabilities and compensation of any Fiduciary or of any issuer of a Credit Facility or fiduciary for any obligation issued by the Authority other than under the Indenture and all other expenses necessary, incidental or convenient for the efficient operation of the Regional Wastewater System, but only to the extent properly attributable to the Regional Wastewater System.

“Other Regional Wastewater System Indebtedness” shall mean any bonds, notes, or other evidences of indebtedness, as the case may be, other than Clean Water Fund Obligations and Initial Bonds, 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 Authority (including, but not limited to, any obligation of the Authority under a Qualified Swap), or (b) indebtedness incurred by a person other than the Authority or any portion thereof for which debt service is a direct or indirect obligation of the Authority; 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. 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 Regional Wastewater 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 Authority 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. If a Qualified Swap is in place, then the synthetic fixed interest rate resulting from such Qualified Swap shall be used as the equivalent of the rates which would have been borne by such Series of Variable Rate Bonds for the term of the Qualified Swap if such Series had been issued as a Series of Fixed Rate Bonds. The reasonableness of the Authority’s determination of the equivalent rates shall be conclusive if it is supported by a certificate of an independent financial advisor or other consultant.

“Project Loan and Grant Agreement” shall mean any Project Loan and Project Grant Agreement entered into by the Authority pursuant to the Clean Water Fund Act.

“Project Loan Obligation” shall have the meaning set forth in the Clean Water Fund Act.

“Qualified Swap” means a financial arrangement (i) entered into by the Authority with an entity which has been assigned directly, or by virtue of a corporate parent guarantee, at the time the arrangement is entered into a credit rating by a Rating Agency, so long as such Rating Agency continues to maintain a rating on the Bonds, and any such other firm that continues to maintain a rating on the Bonds which is not lower than the two highest ratings then assigned by such rating service without qualification by symbols “+” or “-” or a numerical notation; and (ii) that provides that the Authority pay or receive interest on a notional amount; provided that not less than fifteen (15) days prior to entering into any Qualified Swap, the Trustee shall, at the direction of the Authority, provide the Rating Agency so long as it continues to maintain a rating on the Bonds and any such other firm that continues to maintain a rating on the Bonds with an opportunity to review such proposed Qualified Swap.

“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.

“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 fifteenth day of any calendar month preceding the 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 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 of the Indenture 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.

“Regional Act” shall mean Sections 22a-500 to 22a-519, inclusive, of the Connecticut General Statutes, as amended.

“Reimbursement Obligation” shall mean the obligation of the Authority, independent of or in addition to the related Bond or Parity Indebtedness, 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) of the Indenture.

“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 Regional Wastewater System, including but not limited to all Regional Wastewater System connection and use charges and benefit assessments pertaining to the Regional Wastewater System, including all investment proceeds and proceeds of business interruption insurance received by the Authority (other than the proceeds of insurance with respect to damage or destruction of all or any portion of the Regional Wastewater 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 Regional Wastewater System or (b) the financing of any of the foregoing, or (ii) any amounts received by or paid by 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 Authority under such grant agreement in relation to the Regional Wastewater System.

“Rule” means Section 15c2-12(b)(5) under 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 204 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.

“Series 2005 A Bonds” shall mean the Series of Bonds so designated and issued pursuant to Section 205 of the Indenture.

“Series 2005 B Bonds” shall mean the Series of Bonds so designated and issued pursuant to Section 205 of the Indenture.

“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) of the Indenture.

“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 Authority to directly reimburse the issuer of such Credit Facility for amounts paid thereunder and (ii) provides that such obligation be 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 or obligation incurred by the Authority in furtherance of the Authority's corporate purposes under the Clean Water Fund Act, the Regional Act or the Connecticut General Statutes and payable from the Subordinated Indebtedness Fund. Any payments due from the Authority in respect of a Qualified Swap other than interest payable on the notional amount of the Qualified Swap shall be Subordinated Indebtedness, anything in the Indenture to the contrary notwithstanding.

“Subordinated Indebtedness Fund” shall mean the Subordinated Indebtedness Fund established pursuant to Section 502 of the Indenture.

“Subordinated Indebtedness Requirement” shall mean any amount required to be deposited in the Subordinated Indebtedness Fund by resolution of 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 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.

“Tax Regulatory Agreement” shall mean an agreement, certificate or other document entered into by the Authority 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 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.

Authorization of Indenture (Section 201)

The Indenture is entered into pursuant to the authority granted by the Bylaws, Regional Act and the Clean Water Fund Act and pursuant to their provisions. The Authority has ascertained and determined and declared that execution of the Indenture is necessary to carry out its purposes under the Regional Act and 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 Authority in accordance with the Regional Act and the Clean Water Fund Act and the Bylaws and to exercise the powers given thereby and that each and every covenant or agreement contained and made in the Indenture 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 Regional Act and 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 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 under the Indenture and the provisions, covenants and agreements set forth in the Indenture to be performed by or on behalf of 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 Bonds issued under the Indenture 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 by the Indenture, including the Trust Estate. The Bonds shall not be obligations of the Authority 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 Authority or the State within the meaning of any statutory or constitutional provision. Neither the faith and credit nor the taxing power of the Authority or the State is pledged to pay the Bonds.

Bonds issued pursuant to the Indenture shall be special, limited obligations of the Authority 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 Authority 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 to the

Indenture shall not directly or contingently obligate the Authority 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 Authority, 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.

Authorization of Bonds in Series (Section 204)

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. 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 Authority for the purposes of financing Projects, Bonds of the Authority are authorized by the Indenture 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.

Conditions Precedent to Delivery of a Series of Additional Bonds (Section 206)

Series of additional Bonds may be authorized by the Authority for issuance and delivered to the Trustee and thereupon shall be authenticated by the Trustee and delivered to a Depository Institution or upon the Authority's order, but only upon the receipt by the Trustee of:

(a) a Bond Counsel's opinion to the effect that (i) the Authority has the right and power to adopt the Indenture under its Bylaws, the Connecticut General Statutes, including the Regional Act and the Clean Water Fund Act; (ii) the Indenture has been duly and lawfully executed and delivered by the Authority and is valid, binding and enforceable against the Authority 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 Regional Act, the Clean Water Fund Act, if applicable, and the Bylaws; (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 Regional Act, 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 Authority;

(c) a copy of the Indenture or Supplemental Indenture authorizing such Series, certified by an Authorized Representative of the Authority, 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, Parity Indebtedness, Bond Anticipation Notes, Subordinated Indebtedness, or outstanding bonds of the Authority 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 forms of the Bonds of such Series and of the Trustee's certificate of authentication;

(xii) 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, therefor; and

(xiii) any other provisions deemed advisable by the Authority as shall not conflict with the provisions of the Indenture;

(d) except in the case of any Series of Initial Bonds issued pursuant to Section 205 or of Refunding Bonds issued pursuant to Section 207 of the Indenture, a Certificate of an Authorized Representative of the Authority setting forth for the last Fiscal Year for which audited financial statements are available, (i) the Revenues, adjusted as provided in the Indenture, (ii) the Aggregate Annual Debt Service on the Bonds then Outstanding and all Parity Indebtedness then outstanding, (iii) the total Operating Expenses, (iv) the amount withdrawn from the General Fund to pay Operating Expenses and Parity Obligations and the unrestricted balance to the credit of the General Fund as of the end of such Fiscal Year, and (v) showing that the Debt Service Coverage Ratio is at least equal to the 115% Debt Service Coverage Ratio Requirement; provided that (A) if an increase in the rates, fees and charges for services of the Regional Wastewater System shall have been approved prior to the delivery of such Certificate, such that no further legal requirements need be met to effect such increase, the Revenues calculated under clause (d)(i) shall be adjusted to the amount of Revenues which would have been derived from the Regional Wastewater System for said full Fiscal Year if such increased rates, fees and charges for services of the Regional Wastewater 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 Regional Wastewater 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 Regional Wastewater 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 Initial Bonds issued pursuant to Section 205 or of Refunding Bonds issued pursuant to Section 207 of the Indenture, a Certificate of an Authorized Representative of the Authority as confirmed by an Independent Consultant 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 General Fund to pay Operating Expenses and Parity Obligations and the unrestricted balance to the credit of the General Funds as of the end of each such Fiscal Year, (iv) the projected Aggregate Annual Debt Service on the Bonds then Outstanding, all Parity Indebtedness then outstanding and the additional Bonds then proposed to be issued, and any other additional Bonds to be issued during such Fiscal Years according to the aforementioned Certificate, and (v) showing that the Debt Service Coverage Ratio in the Fiscal Year in which the additional Bonds are issued and each of the four succeeding Fiscal Years will be at least equal to (Y) the 115% Debt Service Coverage Ratio Requirement and (Z) in the fifth full Fiscal Year after the Fiscal Year in which the additional Bonds are issued, at least equal to the 115% Debt Service Coverage Ratio Requirement calculated using the maximum amount of Aggregate Annual Debt Service to occur in such fifth full Fiscal Year or any future Fiscal Year on account of all Bonds to be outstanding at the beginning of such fifth Fiscal Year;

(f) except in the case of Refunding Bonds issued pursuant to Section 207 of the Indenture, 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;

(g) in the case of any Series of Bonds other than Clean Water Fund Obligations 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 Authority 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) with respect to the issuance of Clean Water Fund Obligations in connection with the delivery of the certificate of an Authorized Representative set forth in clause (e) above, the Authority 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 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 and Parity Indebtedness may be incurred pursuant to the Indenture at any time to refund any Outstanding Bonds or Outstanding Parity Indebtedness provided that (i) average annual Debt Service on such Series of Refunding Bonds or outstanding Parity Indebtedness (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act) shall not exceed the average annual Debt Service on the Outstanding Bonds or outstanding Parity Obligations (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act) 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 any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the

provisions of the Clean Water Fund Act) shall not exceed the maximum Debt Service in any Fiscal Year on the Outstanding Bonds or outstanding Parity Indebtedness (excluding any one-twentieth (1/20th) principal payment required by any Project Loan and Project Grant Agreement and excluding any interest accrued as a result of the extension or refinancing of Interim Funding Obligations pursuant to the provisions of the Clean Water Fund Act) to be refunded, all as shown in a Certificate signed by an Authorized Representative of the Authority 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) of the Indenture may be issued by meeting the requirements of Section 206(d) and (e) of the Indenture.

(b) All Refunding Bonds of a Series issued under the Indenture shall be executed by the Authority for and delivered to the Trustee and thereupon shall be authenticated by the Trustee and delivered to a Depository Institution or upon the Authority's order, but only upon the receipt by the Trustee (in addition to the documents required by Section 206(a), (b) and (c) and of evidence of the Authority's meeting either the requirements of subsection (a) of Section 207 or subsection (d) and (e) of Section 206 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 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 of the Indenture, which Defeasance Obligations and moneys shall be held in trust and used only as provided in Section 1201 of the Indenture; and

(iv) such further documents and moneys as are required by the provisions of Article XII of the Indenture or any Supplemental Indenture adopted pursuant to Article VIII of the Indenture.

Bond Anticipation Notes (Section 208)

Whenever the Authority shall authorize the issuance of a Series of Bonds, the Authority 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 Authority may also pledge the Revenues to the payment of the interest on, and subject to Section 707 of the Indenture, the principal of such notes. A copy of the resolution of the Authority authorizing such notes, certified by an Authorized Representative of the Authority, 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 under the Indenture, the Authority 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 Authority. In

connection therewith the Authority 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 Authority 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 Authority in the applicable Supplemental Indenture. The Authority 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 Authority may issue or incur Parity Indebtedness for any lawful purpose relating to the Regional Wastewater 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 of the Indenture. All such Parity Indebtedness and the Bonds shall be secured equally, without preference of priority, by the Revenues pledged under the Indenture. There shall be included in any agreement for the repayment of Parity Indebtedness provisions that: (1) any Event of Default under the Indenture shall be an event of default under such agreement; and (2) if the Authority 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 under the Indenture and that all remedies exercised by the Trustee under the Indenture 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 under the Indenture and an event of default under any agreement for the repayment of Parity Indebtedness, which is not inconsistent with the foregoing.

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) The proceeds of the sale of a Series of Bonds may be deposited in the Debt Service Reserve Fund as provided in the Supplemental Indenture pertaining to such Series of Bonds. 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, (such State consent only being needed with respect to Clean Water Fund Obligations) 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 Authority. Pursuant to the Granting Clauses set forth in the Indenture, the Authority have pledged the Trust Estate as security for the payment of the Bonds and the performance of any other obligation of 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. As provided by the Regional Act, this pledge, that the Revenues, moneys, securities and other funds so pledged and then or thereafter received by 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 Authority, irrespective of whether such parties have notice thereof.

Establishment of Funds and Accounts (Section 502)

(a) The Indenture establishes the following Funds:

- (1) Construction Fund;
- (2) Revenue Fund;
- (3) Debt Service Fund;
- (4) Debt Service Reserve Fund;
- (5) Operating Fund;
- (6) Subordinated Indebtedness Fund; and
- (7) General Fund.

(b) The Indenture establishes 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) of the Indenture. 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) The Indenture establishes 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 Authority, 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 written request of the Authority, establish within any Fund held by the Trustee such Accounts as shall be designated in the written instructions of an Authorized Representative of the Authority 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 written request of the Authority, establish a Rebate Fund and Accounts therein, to the extent so provided in a Supplemental Indenture, into which Rebate Fund and Accounts the Authority 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 of the Indenture, 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 Authority 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 Authority 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 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 Authority 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) With respect to Clean Water Fund Obligations, 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 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 Authority 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 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 Authority 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 Authority 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 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 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.

(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 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 Authority as being 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 Authority, 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 Authority 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 Authority as being required to be deposited in such Fund and the Accounts thereunder in accordance with the Indenture, a Supplemental 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 Annual 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 General 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 (including any Sinking Fund 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, (ii) on each date that the same shall be due and payable, the net amount, if any, required to be paid as interest on the notional amount of any Qualified Swap, and (iii) 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 in writing by an Authorized Representative of the Authority 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 Authority.

(c) Upon the purchase of any Bond pursuant to subsection (b) of Section 517 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 of the Indenture, 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 Annual 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 Authority 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 Authority on a pro rata basis; and the Subordinated Indebtedness Fund. Any balance of such excess not so applied shall be transferred by the Authority to the Trustee for credit to the General 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 Authority 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 and the net amounts, if any, payable as interest on the notional amounts of any Qualified Swaps 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 April 1 or October 1 of each year or on any date on which the Trustee receives the written direction of the Authority 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 Debt Service Fund. If, as of April 1 or October 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 Annual Budget for the next Fiscal Year by deposits pursuant to Section 505 of the Indenture, the Authority shall, in its Annual 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 Authority 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 Authority 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 Authority 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 Authority 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 Authority 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 Authority 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 authorized and

directed by the Indenture 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 Authority, 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 (Section 510)

(a) 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 Authority authorizing each issue of Subordinated Indebtedness. The Authority may transfer amounts from the General Fund to the Subordinated Indebtedness Fund for the payment of any amounts (including termination payments) due on Qualified Swaps, as provided in the applicable Supplemental Indenture.

Surplus Fund (Section 511)

(a) The Trustee shall, on each Bond Payment Date, apply moneys credited to the General 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 General 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 Authority the amount, if any, necessary (or all the moneys in the General 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 Authority, (ii) to the Debt Service Reserve Fund the amount, if any, necessary (or all the moneys in the General 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 Authority the amount, if any, necessary (or all the moneys in the General 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 Authority. Such transfer shall be made notwithstanding any other provisions of the Indenture requiring deposits in such Funds. Moneys remaining on deposit in the General Fund after the transfers set forth in Section 511 of the Indenture may also be transferred by the Trustee to the Authority, at the direction of the Authority, to pay Operating Expenses or for any other lawful purpose related to the Authority or the Regional Wastewater System, including but not limited to, the funding of a capital fund from which the Authority may pay for capital improvements to the Regional Wastewater System, Rebate Amounts pursuant to any Tax Regulatory Agreement or to reimburse the Authority for expenses relating to the Authority; following any such transfer, the moneys transferred shall not be considered pledged moneys under the Indenture.

Subordinated Indebtedness (Section 512)

The Authority may, at any time, or from time to time, issue Subordinated Indebtedness as a general obligation of the Authority or 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 of the Indenture; provided, however, that (i) such Subordinated Indebtedness shall be issued only for purposes consistent with the operation and maintenance of the Regional Wastewater System and the proceeds of such Subordinated Indebtedness shall be applied only for such purpose or purposes, and (ii) any such general obligation of the Authority 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 Parity Obligations.

Investment of Certain Funds (Section 515)

(a) Moneys held in the Funds and Accounts established under the Indenture shall be invested and reinvested by the Trustee or the Authorized Representative of the Authority 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 Authority such instructions to specify the particular investment to be made. 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 Debt Service Fund, as provided in Section 509(b) of the Indenture, and (ii) the Construction Fund shall be held in the Construction Fund (unless otherwise specified in the applicable Supplemental Indenture).

(c) All Investment Securities acquired with moneys in any Fund or Account, including the Operating Fund, shall be held by the Trustee in pledge or by a Depository as agent in pledge in favor of the Trustee in accordance with Section 514 of the Indenture.

(d) Nothing in the Indenture shall prevent any Investment Securities acquired as investments for Funds or Accounts held under the Indenture from being issued or held in book-entry form on the books of the United States Treasury.

Valuation and Sale of Investments (Section 516)

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

In computing the amount in any Fund or Account created under the provisions of the Indenture for any purpose provided in the Indenture, obligations purchased as an investment of moneys therein shall be valued at the cost of such obligations or the market value thereof, whichever is lower; provided, however, that in the case of obligations scheduled to mature, or subject to redemption at the option of the holder, in ten (10) years or less, such Investment Securities shall be valued at amortized cost. 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 Authority 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 by it, or present for redemption, any obligation so purchased as an investment whenever it shall be requested in writing by an Authorized Representative of the Authority 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 by it or present for redemption such obligation or obligations designated by an Authorized Representative of the Authority necessary to provide sufficient moneys for such payment or transfer; provided, however, that if the Authority 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, fee, tax, or other charge resulting from the making of any such investment, reinvestment 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 507 of the Indenture, so long as no Event of Default under the Indenture shall have occurred and be continuing, the Authority may, in lieu of the requirements of Sections 504 through 507, maintain control and possession of the Revenue Fund, the Operating Fund and the Rebate Fund and make the transfers required under the Indenture. While the 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 Authority maintains control of the Revenue Fund, the Operating Fund and the Rebate 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 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 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.

Payment of Bonds (Section 701)

The Authority shall duly and punctually pay or cause to be paid, solely from the Trust Estate pledged under the Indenture 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 Authority is duly authorized under all applicable laws to authorize and issue the Bonds. The Authority is duly authorized to execute and enter into the Indenture and to pledge the Revenues and assets purported to be pledged and assigned by the Indenture in the manner and to the extent provided by 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 by the Indenture and all corporate or other action on the part of 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 Authority in accordance with their terms and the terms of the Indenture. 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 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 Authority shall not permit at any time or times any of the proceeds of the Bonds or any other funds of 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 (the "Code").

(b) 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 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 tax purposes.

Accounts and Periodical Reports and Certificates (Section 706)

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 Authority 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 Authority from issuing notes payable from the proceeds of Bonds or bonds or notes or other obligations for the corporate purposes of 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 Authority as a general obligation of the Authority or 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 general obligation or 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.

Authority Budget (Section 711)

(a) The Authority shall, on or before June 30, in each Fiscal Year, adopt and file with the Trustee, a copy of the Annual Budget, duly certified by an Authorized Representative of the Authority to be in compliance with the provisions of the Indenture, each applicable Supplemental Indenture, the Regional Act and the Clean Water Fund Act, showing the estimated Operating Expenses (including Aggregate Annual 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 Annual Budget may set forth such additional information as the Authority may determine.

(b) If for any reason the Authority shall not have adopted the Annual Budget before such June 30, the Annual Budget for the then current Fiscal Year shall be deemed to be the Annual Budget for the ensuing Fiscal Year until a new Annual Budget is adopted.

(c) The Authority may at any time adopt an amended Annual Budget for the then current or ensuing Fiscal Year, but no such amended Annual Budget shall supersede any prior Annual Budget until the Authority shall have filed with the Trustee a copy of such amended Annual Budget.

Rate Covenant (Section 712)

(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 sufficient in each Fiscal Year to provide for 100% of the Operating Expenses of the Authority and a Debt Service Coverage Ratio of at least 1x for such Fiscal Year 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 shall be sufficient in each Fiscal Year to provide for:

(A) a Debt Service Coverage Ratio at least equal to the 115% 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 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 under the Indenture by reduction of the obligations which are to be paid from Revenues and the amount to be withdrawn from the General Fund to pay Operating Expenses, debt service on the Bonds, Clean Water Fund Obligations, Parity Indebtedness and interest on Parity Bond Anticipation Notes 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 Annual 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 General Fund, (iii) the Operating Expenses, (iv) the Aggregate Annual 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 115% 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 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 Regional Wastewater System and any other matters so as to generate additional Revenues and/or reduce Operating Expenses in order to meet the 115% Debt Service Coverage Ratio Requirement. 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 Authority shall file a written statement with the Credit Facility Provider and the Trustee setting forth the reasons why the Authority has failed to implement such recommendations. Copies of resolutions of the Authority adopting such recommendations shall be filed with the Authority, the Credit Facility Provider, as applicable, and the Trustee immediately after adoption thereof. Subject to subsection (c) below, if the Authority take the actions prescribed in subsection (b) of Section 712 of the Indenture, failure to meet the 115% Debt Service Coverage Ratio Requirement shall not be treated as an Event of Default.

(c) Notwithstanding any provision contained in Section 712 of the Indenture to the contrary, if the Debt Service Coverage Ratio Certificate indicates that the Debt Service Coverage Ratio for a Fiscal Year is less than the 115% Debt Service Coverage Ratio Requirement, such event shall be treated as an Event of Default under Section 1001 of the Indenture.

Agreement of the Authority (Section 713)

The Authority agree that 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 Regional Wastewater System (Section 714)

The Authority covenants that it will establish and enforce reasonable rules and regulations governing the use of the Regional Wastewater 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 Regional Wastewater System will be reasonable, that no more persons will be employed by it than are necessary, that it will operate said Regional Wastewater System or cause the Regional Wastewater System to be operated in an efficient and economical manner, that it will at all times maintain said Regional Wastewater System or cause said Regional Wastewater 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 Regional Wastewater System. Nothing in the Indenture shall prevent the Authority from transferring, to the extent permitted by law, the day-to-day operations of the Regional Wastewater System to another entity or any program that would be carried out by 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 715)

The Authority further covenants that, from the Revenues, they will pay all municipal or governmental charges lawfully levied or assessed upon the Regional Wastewater 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 Regional Wastewater 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 Regional Wastewater System or any part thereof or the Revenues; provided, however, that nothing contained in Section 715 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 716)

The Authority covenants that it will maintain the Regional Wastewater 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 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 Regional Wastewater 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 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 Authority and shall be deposited with the Authority. The proceeds of any and all such insurance shall be deposited by the Authority in the name of the Authority with a Depositary.

The Authority covenants that, immediately after any loss or damage to any properties of the Regional Wastewater 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 Regional Wastewater System.

Except as provided in the foregoing paragraph, the proceeds of all insurance referred to in Section 716 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 hereinabove provided 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 Authority. If such proceeds shall be insufficient for such purposes, the deficiency may be supplied out of moneys in the General Fund.

Supplemental Indentures Without Consent of Bondholders (Section 801)

Notwithstanding any other provisions of Article VIII of the Indenture, the Authority and the Trustee may at any time or from time to time enter into a Supplemental Indenture supplementing the Indenture or any Supplemental Indenture so as to modify or amend such indentures, for one or more of the following purposes:

To add to the covenants and agreements of the Authority contained in the Indenture or any Supplemental Indenture, other covenants and agreements thereafter to be observed relative to the acquisition, construction, reconstruction, renovation, equipment, operation, maintenance, development or administration of any project under the Regional Act or the Clean Water Fund Act or relative to the application, custody, use and disposition of the proceeds of the Bonds; or

To confirm, as further assurance, any pledge under and the subjection to any lien on or pledge of the Revenues created or to be created by the Indenture or a Supplemental Indenture; or

To cure any ambiguity, supply any omission, or cure or correct any defect or inconsistent provision in the Indenture; or

To grant to or confer on the Trustee for the benefit of the Bondholders any additional rights, remedies, powers, authority, or security which may lawfully be granted or conferred and which are not contrary to or inconsistent with the Indenture as theretofore in effect; or

To amend any provisions of the Indenture if, prior to the execution of any such amendment there shall be delivered to the Trustee a Bond Counsel's Opinion to the effect that such amendment will not have a material adverse affect on the security, remedies or rights of the Bondholders.

Supplemental Indentures With Consent of Bondholders (Section 802)

(a) At any time or from time to time but subject to the conditions or restrictions contained in the Indenture and each Supplemental Indenture, a Supplemental Indenture may be entered into by the Authority and the Trustee amending or supplementing the Indenture, any Supplemental Indenture or any of the Bonds or releasing the Authority from any of the obligations, covenants, agreements, limitations, conditions or restrictions therein contained. However, no such Supplemental Indenture shall be effective unless such Supplemental Indenture is approved or consented to by the Bondholders, obtained as provided in Article IX, of at least a majority in aggregate principal amount of all Outstanding Bonds affected thereby. In computing any such required percentage there shall be excluded from such consent, and from such Outstanding Bonds, any such Outstanding Bonds owned or held by or for the account of the Authority.

(b) Notwithstanding the provisions of paragraph (a) of Section 802 of the Indenture, except as provided in Section 803 of the Indenture, no such modification changing any terms of redemption of Bonds, due date of principal of or interest on Bonds or making any reduction in principal or Redemption Price of and interest on any Bonds shall be made without the consent of the affected Bondholder.

(c) Notwithstanding any other provisions of Section 802 of the Indenture, no Supplemental Indenture shall be entered into by the Authority and the Trustee, except as provided in Section 803 of the Indenture, reducing the percentage of consent of Bondholders required for any modification of the Indenture or any Supplemental Indenture or diminishing the pledge of the Revenues securing the Bonds.

(d) The provisions of paragraph (a) of Section 802 of the Indenture shall not be applicable to Supplemental Indentures adopted in accordance with the provisions of Section 801 of the Indenture.

Supplemental Indentures By Unanimous Action (Section 803)

Notwithstanding anything contained in the foregoing provisions of Article VIII of the Indenture, the rights and obligations of the Authority and of the owners of the Bonds and the terms and provisions of the Indenture, any Supplemental Indenture or the Bonds may be modified or amended in any respect upon the execution and delivery of a Supplemental Indenture by the Authority and the Trustee with the consent of the holders of all the Outstanding Bonds affected by such modification or amendment, such consent to be given as provided in Article IX of the Indenture.

Powers of Amendment (Section 901)

When the Authority and the Trustee enter into a Supplemental Indenture making a modification or amendment permitted by and requiring the consent of the Bondholders pursuant to the provisions of Section 802 of the Indenture, such Supplemental Indenture shall take effect when and as provided in Section 901 of the Indenture. Upon the execution of such Supplemental Indenture, a copy thereof, certified by an Authorized Officer of the Authority, shall be filed with the Trustee for the inspection of the Bondholders affected. A copy of such Supplemental Indenture (or summary thereof) together with a request to such Bondholders for their consent thereto in form satisfactory to the Trustee, shall be mailed or caused to be mailed by the Authority to such Bondholders. Such Supplemental Indenture shall not be effective unless and until there shall have been filed with the Trustee the written consents of the percentages of owners of Outstanding Bonds in accordance with Section 802 of the Indenture. Each such consent shall be effective only if accompanied by proof of ownership of the Bonds for which such consent is given. A certificate or certificates by the Trustee, which shall be placed on file, that it examined such proof and that such proof is sufficient, shall be conclusive that the consents have been given by the owners of the Bonds described in such certificate or certificates of the Trustee. Any consent shall be binding upon the owner of the Bonds giving such consent and on any subsequent owner of such Bonds (whether or not such owner has notice thereof) unless such consent is revoked in writing by the owner of such Bonds giving such consent or a subsequent owner by filing revocation with the Trustee prior to the date when the notice provided for in Section 901 of the Indenture is first given. The fact that a consent has not been revoked may likewise be proved by a certificate of the Trustee which shall be placed on file. At any time after the owners of the required percentage of Bonds shall have filed their consent to any Supplemental Indenture a notice shall be given or caused to be given to such Bondholders by the Authority by mailing such notice to such Bondholders (but failure to mail such notice shall not prevent such Supplemental Indenture from becoming effective and binding as provided in the Indenture). The Authority shall file with the Trustee proof of giving such notice. Such notice shall state in substance that any Supplemental Indenture (which may be referred to as an indenture executed by and between the Authority and the Trustee on a stated date, a copy of which is on file with the Trustee) has been consented to by the owners of the required percentage of Bonds and shall be effective as provided in Section 901 of the Indenture. A record, consisting of the papers required or permitted by Section 901 of the Indenture to be filed with the Trustee, shall be proof of the matters therein stated. Upon such notice, such Supplemental Indenture making such amendment or modification shall become effective and conclusively binding upon the Authority, the Trustee, and the owners of all Bonds.

Exclusion of Bonds (Section 902)

Bonds owned or held by or for the account of the Authority shall not be deemed Outstanding Bonds for the purpose of any consent or other action or any calculation of Outstanding Bonds provided for in Article VIII of the Indenture, and shall not be entitled to consent or take any other action provided for in Article VIII of the Indenture. At the time of any consent or other action taken under Article VIII of the Indenture, the Authority shall furnish the Trustee a

certificate signed by an Authorized Officer upon which the Trustee may conclusively 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 Authority shall occur on any Parity Indebtedness or under any documents relating to such Parity Indebtedness; or
- (4) default by the Authority in the performance or observance of any other of its covenants, agreements or conditions 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 Authority by the Trustee or to 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 Authority shall (i) apply for or consent to the appointment of a receiver, trustee or liquidator of all or a substantial part of the Regional Wastewater 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 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 Authority 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 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.

Application of Revenues and Other Moneys After Default (Section 1003)

(a) The Authority covenants that if an Event of Default shall occur and shall not have been remedied, 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 Authority or a Depositary 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 and net interest, if any, on the notional amounts of any Qualified Swaps 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 and net interest, if any, on the notional amounts of any Qualified Swaps 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 or Qualified Swap over any other Bond or Parity Indebtedness or Qualified Swap, ratably, according to the amounts due respectively for principal, interest and net interest on the notional amounts 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, and all net payments on Qualified Swaps, 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 Authority 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 Authority, or provision satisfactory to the Trustee shall be made for such payment, and all defaults under the Indenture or the Bonds and Parity Indebtedness and Qualified Swaps 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 Authority 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 Authority 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 Authority 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 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 by the Indenture, or for an accounting against 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 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 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 security and indemnity satisfactory to it) 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 Authority, 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 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.

Defeasance (Section 1201)

(a) If the Authority 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 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 Authority to the Bondholders shall be discharged and satisfied. In such event, the Trustee shall, upon the request of the Authority, execute and deliver to the Authority all such instruments as may be desirable to evidence such discharge and satisfaction and the Fiduciaries shall pay over or deliver to the Authority 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 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 Authority shall have given to the Trustee irrevocable instructions accepted in writing by the Trustee to provide notice 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 Authority as provided in the Indenture prior to the provision 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, in the opinion of a nationally recognized firm of independent certified public accountants, 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 Authority shall have given the Trustee in form satisfactory to it

irrevocable instructions to provide 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 Authority as provided in the Indenture prior to the provision of the notice of redemption referred to in clause (i) of Section 1201 of the Indenture). 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 Authority (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 provision 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 Authority 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 Authority, pay the amount of such excess to the Authority 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 Authority 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 Authority 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 Authority, 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 of the Indenture, 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 of the Indenture, the Trustee shall, if requested by the Authority, pay the amount of such excess to the Authority 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 Authority, be repaid by the Fiduciary to the Authority, 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 Authority for the payment of such Bonds.

Parties Interested In The Indenture (Section 1205)

Nothing in the Indenture expressed or implied is intended or shall be construed to confer upon, or to give to, any person or corporation, other than the Authority, the Fiduciaries, and the holders of the Bonds, any right, remedy or claim under or by reason of the Indenture of any covenant, condition or stipulation thereof; and all covenants, stipulations, promises and agreements in the Indenture contained by and on behalf of the Authority shall be for the sole and exclusive benefit of the Authority, the Fiduciaries, and the holders of the Bonds.

No Recourse on the Bonds (Section 1206)

No recourse shall be had for the payment of the principal of or interest on the Bonds or for any claim based thereon or on the Indenture against any member or officer of the Authority or any person executing the Bonds, or any employee or agent of the foregoing.

Successors and Assigns (Section 1207)

Whenever in the Indenture the Authority is named or referred to, it shall be deemed to include its successors and assigns and all the covenants and agreements in the Indenture contained by or on behalf of the Authority shall bind and inure to the benefit of their respective successors and assigns whether so expressed or not.

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APPENDIX D

FORM OF OPINION OF BOND COUNSEL

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[FORM OF OPINION OF BOND COUNSEL]

July 8, 2020

Greater New Haven Water Pollution Control Authority
260 East Street
New Haven, Connecticut

Ladies and Gentlemen:

We have examined a record of proceedings relating to the issuance by the Greater New Haven Water Pollution Control Authority (the “Authority”) of \$32,000,000 aggregate principal amount of Greater New Haven Water Pollution Control Authority Regional Wastewater System Revenue Refunding Bonds, 2020 Series B (Federally Taxable), dated July 8, 2020 (the “2020 Series B Bonds”). The 2020 Series B Bonds are issued pursuant to Sections 22a-500 to 22a-519, inclusive, of the General Statutes of Connecticut, Revision of 1958, as amended (the “Act”), a resolution of the Board of Directors of the Authority adopted on February 11, 2020 (the “Bond Resolution”), and the Indenture of Trust, dated as of August 1, 2005, by and between the Authority and U.S. Bank National Association (as successor to Wachovia Bank, National Association), as Trustee (the “Trustee”), as amended and supplemented by the First Supplemental Indenture dated as of August 1, 2005, the Second Supplemental Indenture dated as of May 31, 2006, the Third Supplemental Indenture dated as of January 31, 2007, the Fourth Supplemental Indenture dated as of February 1, 2007, the Fifth Supplemental Indenture dated as of May 9, 2007, the Sixth Supplemental Indenture dated as of June 14, 2007, the Seventh Supplemental Indenture dated as of August 2, 2007, the Eighth Supplemental Indenture dated as of November 30, 2007, the Ninth Supplemental Indenture dated as of March 1, 2008, the Tenth Supplemental Indenture dated as of April 1, 2008, the Eleventh Supplemental Indenture dated as of May 29, 2009, the Twelfth Supplemental Indenture dated as of June 26, 2009, the Thirteenth Supplemental Indenture dated as of November 30, 2009, the Fourteenth Supplemental Indenture dated as of May 16, 2011, the Fifteenth Supplemental Indenture dated as of June 30, 2011, the Sixteenth Supplemental Indenture dated as of December 28, 2011, the Seventeenth Supplemental Indenture dated as of March 12, 2012, the Eighteenth Supplemental Indenture dated as of July 12, 2012, the Nineteenth Supplemental Indenture dated as of July 31, 2012, the Twentieth Supplemental Indenture dated as of April 30, 2013, the Twenty-First Supplemental Indenture dated as of June 28, 2013, the Twenty-Second Supplemental Indenture dated as of September 30, 2013, the Twenty-Third Supplemental Indenture dated as of December 31, 2013, the Twenty-Fourth Supplemental Indenture dated as of January 10, 2014, the Twenty-Fifth Supplemental Indenture dated as of July 1, 2014, the Twenty-Sixth Supplemental Indenture, dated as of December 29, 2014, the Twenty-Seventh Supplemental Indenture dated as of March 1, 2016, the Twenty-Eighth Supplemental Indenture dated as of November 1, 2016, the Twenty-Ninth Supplemental Indenture dated as of September 30, 2017, the Thirtieth Supplemental Indenture dated as of September 25, 2018, and the Thirty-First Supplemental Indenture dated as of May 31, 2020 (collectively, the “Original Indenture”), each by and between the Authority and the Trustee, as further supplemented by the Thirty-Second Supplemental Indenture, dated as of July 1, 2020 (the “Thirty-Second Supplemental Indenture” and together with the Original Indenture, the “Indenture”), by and between the Authority and the Trustee. Capitalized terms used herein and not otherwise defined shall have the meaning ascribed to such terms in the Indenture.

The 2020 Series B Bonds delivered on the date hereof are dated as of the date of delivery, bear interest payable semiannually on February 15 and August 15 in each year, commencing August 15, 2020, until maturity or earlier redemption. The 2020 Series B Bonds are issuable only in fully registered form in denominations of \$5,000 or any integral multiple thereof. The 2020 Series B Bonds bear interest at the interest rates per annum and mature on August 15 in each of the years and principal amounts as follows:

<u>Year of Maturity</u>	<u>Principal Amount</u>	<u>Interest Rate Per Annum</u>	<u>Year of Maturity</u>	<u>Principal Amount</u>	<u>Interest Rate Per Annum</u>
2020	\$ 650,000	0.750%	2027	\$ 850,000	1.600%
2021	550,000	0.830	2028	3,225,000	1.750
2022	555,000	0.900	2029	4,835,000	1.850
2023	560,000	1.050	2030	4,930,000	1.950
2024	565,000	1.150	2031	5,030,000	2.000
2025	825,000	1.250	2032	5,130,000	2.100
2026	835,000	1.450	2042*	3,460,000	3.000

*Term bond.

with principal payable at the principal office of U.S. Bank National Association, in Hartford, Connecticut, and with interest payable to the registered owner as of the close of business on the last business day of January and July in each year, by check mailed to such registered owner at his address as shown on the registration books of the Authority kept for such purpose. The 2020 Series B Bonds are subject to optional and mandatory redemption prior to maturity in the manner and upon the terms and conditions described in the Thirty-Second Supplemental Indenture.

The 2020 Series B Bonds are originally registered in the name of Cede & Co., as nominee of The Depository Trust Company ("DTC"), to effect a book-entry system for the ownership and transfer of the 2020 Series B Bonds. So long as DTC or its nominee is the registered owner, principal and interest payments on the 2020 Series B Bonds will be made to DTC.

We have not been engaged or undertaken to review the accuracy, completeness or sufficiency of the Official Statement or other offering material relating to the 2020 Series B Bonds, and we express no opinion relating thereto, excepting only the matters set forth as our opinion in the Official Statement.

We have examined certified copies of the Bond Resolution and executed copies of the Original Indenture and the Thirty-Second Supplemental Indenture. We have also examined one of the 2020 Series B Bonds as executed.

As to questions of fact material to our opinion, we have relied upon representations of the Authority contained in the Indenture, the record of proceedings and other certifications furnished to us, and certifications by officers of 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 Authority) of the documents and agreements to which the Authority is a party.

In our opinion, under existing statutes and court decisions, interest on the 2020 Series B Bonds is included in gross income for federal income tax purposes. We express no opinion regarding any other federal income tax consequences caused by ownership or disposition of, or receipt of interest on, the 2020 Series B Bonds.

We are further of the opinion that, under existing statutes, interest on the 2020 Series B 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. We express no opinion regarding any other State or local tax consequences caused by the ownership or disposition of the 2020 Series B 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.

The rights of owners of the 2020 Series B Bonds and the enforceability of the 2020 Series B Bonds may be limited by bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights generally and by application of equitable principles, whether considered at law or in equity.

Respectfully,

APPENDIX E

FORM OF CONTINUING DISCLOSURE AGREEMENT

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[FORM OF CONTINUING DISCLOSURE AGREEMENT]

CONTINUING DISCLOSURE AGREEMENT

Greater New Haven Water Pollution Control Authority
\$32,000,000 Regional Wastewater System Revenue Refunding Bonds, 2020 Series B (Federally Taxable)
dated July 8, 2020

July 8, 2020

WHEREAS, the Greater New Haven Water Pollution Control Authority (the “Authority”) has heretofore authorized the issuance of \$32,000,000 in aggregate principal amount of its Regional Wastewater System Revenue Refunding Bonds, 2020 Series B (Federally Taxable), dated July 8, 2020 (the “2020 Series B Bonds”), maturing on the dates and in the amounts set forth in the Authority’s Official Statement dated June 17, 2020 describing the 2020 Series B Bonds (the “Official Statement”); and

WHEREAS, the 2020 Series B Bonds have been sold by a negotiated sale pursuant to a Bond Purchase Agreement, dated June 17, 2020 (the “Bond Purchase Agreement”); and

WHEREAS, in the Bond Purchase Agreement, the Authority has heretofore acknowledged that an underwriter may not purchase or sell the 2020 Series B Bonds unless it has reasonably determined that the Authority has undertaken in a written agreement for the benefit of the beneficial owners of the 2020 Series B 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 Authority desires to assist the underwriter of the 2020 Series B Bonds in complying with the Rule; and

WHEREAS, the Authority is 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 2020 Series B Bonds to meet the requirements of the Rule; and

WHEREAS, in order to assist the underwriter of the 2020 Series B Bonds in complying with the Rule, this Continuing Disclosure Agreement (this “Agreement”) is to be made, executed and delivered by the Authority in connection with the issuance of the 2020 Series B Bonds and to be described in the Official Statement, all for the benefit of the beneficial owners of the 2020 Series B Bonds, as they may be from time to time;

NOW, THEREFORE, the Authority hereby represents, covenants and agrees 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 Authority pursuant to, and as described in, Sections 2 and 3 of this Agreement.

“Financial Obligation” shall mean any (i) debt obligation, (ii) derivative instrument entered into in connection with, or pledged as security or source of payment for, an existing or planned debt obligation, or (iii) guarantee of (i) or (ii). Municipal securities as to which a final official statement has been filed with the Repository, consistent with the Rule, shall not be considered a Financial Obligation.

“Fiscal Year End” shall mean the last day of the Authority’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 (EMMA) 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 Authority 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 Authority:

(i) Audited financial statements 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; 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) the amounts of the gross and net taxable grand list;

(B) a listing of the ten largest taxpayers on the grand list, together with each such taxpayer’s taxable valuation thereon;

(C) the percentage and amount of the annual property tax levy collected and uncollected;

(D) a schedule of the annual debt service on outstanding long-term bonded indebtedness;

(E) a calculation of the net direct debt, total direct debt, and total overall net debt (reflecting overlapping and underlying debt);

(F) the total direct debt, total net direct debt and total overall net debt of the Authority per capita;

(G) the ratios of total direct debt and total overall net debt of the Authority to the Authority’s net taxable grand list;

(H) a statement of statutory debt limitations and debt margins; and

(I) the funding status of the Authority’s pension benefit obligations.

(b) The above-referenced information is expected to be provided by the filing of and cross reference to the Authority’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 Authority which will be available from the MSRB.

(c) Subject to the requirements of Section 8 hereof, the Authority reserves 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 Authority agrees that any such modification will be done in a manner consistent with the Rule. The Authority also reserves 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 Authority 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 2020 Series B Bonds, provided, however, that if such financial information and operating data for the Fiscal Year End preceding the date of issuance of the 2020 Series B Bonds is not contained in the Official Statement for the 2020 Series B Bonds or has not otherwise been previously provided, the Authority shall provide such financial information and operating data no later than eight months after the close of such preceding Fiscal Year End. The Authority agrees 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 Authority agrees 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 2020 Series B Bonds, or other material events affecting the tax status of the 2020 Series B 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 2020 Series B 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;
- (xiv) appointment of a successor or additional trustee or the change of name of a trustee, if any, if material;
- (xv) incurrence of a Financial Obligation by any obligated person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of any obligated person, any of which affect Bondholders, if material; and
- (xvi) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of any obligated person, any of which reflect financial difficulties.

Section 5. Notice of Failure. The Authority agrees 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 Authority 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 Authority's obligations under this Agreement shall terminate upon the defeasance, prior redemption or payment in full of all of the 2020 Series B Bonds.

Section 7. Agent. The Authority 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 Authority 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 Authority, 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 2020 Series B 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 Authority 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 Authority chooses 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 Authority 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 Authority agrees, 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 Authority under this Section shall survive termination of this Agreement.

Section 11. Enforceability. The Authority agrees 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 2020 Series B Bonds. In the event the Authority shall fail to perform its duties hereunder, the Authority shall have the option to cure such failure after its receipt of written notice from any beneficial owner of the 2020 Series B Bonds of such failure. In the event the Authority does not cure such failure, the right of any beneficial owner of the 2020 Series B Bonds to enforce the provisions of this undertaking shall be limited to a right to obtain specific performance of the Authority'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 Authority with respect to the 2020 Series B Bonds.

IN WITNESS WHEREOF, the Authority 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.

**GREATER NEW HAVEN WATER POLLUTION
CONTROL AUTHORITY**

By: _____
Name: Sydney J. Holbrook
Title: Executive Director

By: _____
Name: Gabriel Varca
Title: Treasurer

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