

PRELIMINARY OFFICIAL STATEMENT DATED OCTOBER 8, 2024

NEW ISSUE

Rating: S&P: AA-
(See "RATING" herein)

In the opinion of Hawkins Delafield & Wood LLP, Bond Counsel to the City, under existing statutes and court decisions, and assuming continuing compliance with certain tax covenants described herein, (i) interest on the Series 2024 Bonds is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Internal Revenue Code of 1986, as amended (the "Code") and (ii) interest on the Series 2024 Bonds is not treated as a preference item in calculating the alternative minimum tax imposed on individuals and corporations under the Code, however interest on the Series 2024 Bonds is included in the "adjusted financial statement income" of corporations that are subject to the alternative minimum tax under Section 55 of the Code. In addition, in the opinion of Bond Counsel to the City, under existing statutes, interest on the Series 2024 Bonds is exempt from the New Hampshire personal income tax on interest. See "TAX MATTERS" herein for a description of certain other provisions of the Code that may affect the tax treatment of interest on the Series 2024 Bonds for certain bondholders.



\$108,020,000*
CITY OF MANCHESTER, NEW HAMPSHIRE
Sewer Revenue Bonds, Series 2024 (Green Bonds)

Dated: Date of Delivery

Due: June 1 as shown herein

The \$108,020,000* Sewer Revenue Bonds, Series 2024 (Green Bonds) (the "Series 2024 Bonds") are expected to be applied (i) to finance a portion of the costs of various improvements to the City's wastewater treatment, collection and disposal systems (as more fully described herein, the "Series 2024 Project") and (ii) to pay certain costs of issuance of the Series 2024 Bonds.

The Series 2024 Bonds are being issued pursuant to Chapter 33-B of the Revised Statute of the State of New Hampshire, a resolution adopted by the City on August 6, 2024, the City's General Sewer Revenue Bond Resolution, adopted on December 9, 2021 (the "General Resolution"), as supplemented by the Second Supplemental Resolution Authorizing the Issuance of \$_____ City of Manchester, New Hampshire Sewer Revenue Bonds, Series 2024 (Green Bonds), adopted on October __, 2024 (the "Second Supplemental" and, together with the General Resolution and all other resolutions supplemental thereto, the "Resolution").

The Series 2024 Bonds will be issued as fully registered bonds in the denomination of \$5,000 or any integral multiple thereof. Interest (due each June 1 and December 1, commencing June 1, 2025) on the Series 2024 Bonds will be payable by The Bank of New York Mellon Trust Company, N.A., as trustee (the "Trustee"), to the registered owners thereof as more fully described herein.

The Series 2024 Bonds will be issued initially under the book-entry only system, registered in the name of Cede & Co., as nominee of The Depository Trust Company, Brooklyn, New York ("DTC"). Individual purchases of beneficial interests in the Series 2024 Bonds may only be made in such book-entry form (without certificates). So long as DTC or its nominee is the registered owner of the Series 2024 Bonds, payments of the principal of, redemption premium, if any, and interest on the Series 2024 Bonds will be made by wire transfer directly to DTC or its nominee. Disbursement of such payments to DTC participants is the responsibility of DTC and disbursement of such payments to the beneficial owners is the responsibility of DTC participants. See "APPENDIX F – Book-Entry Only System" hereto.

The Series 2024 Bonds are payable as to both interest and principal solely from the Revenues of the System on a parity with Bonds (as defined herein) heretofore and hereafter issued and Parity Debt (as defined herein) hereafter incurred by the City all as set forth in the Resolution, subject to the provisions of the Resolution permitting the application of Revenues and other funds for the purposes and on the terms and conditions set forth in the Resolution. See "SECURITY FOR THE SERIES 2024 BONDS" herein.

The Series 2024 Bonds are subject to optional and mandatory redemption prior to their stated maturity dates as described herein. See "THE SERIES 2024 BONDS – Optional Redemption" and "– Mandatory Sinking Fund Redemption" herein.

THE SERIES 2024 BONDS SHALL NOT BE GENERAL OBLIGATIONS OF THE CITY AND THE FULL FAITH AND CREDIT OF THE CITY ARE NOT PLEDGED FOR THE PAYMENT OF THE SERIES 2024 BONDS. NEITHER THE STATE NOR ANY OTHER POLITICAL SUBDIVISION THEREOF (EXCEPT THE CITY TO THE LIMITED EXTENT PROVIDED IN THE RESOLUTION) SHALL BE OBLIGATED TO PAY THE PRINCIPAL OF, PREMIUM OR INTEREST ON THE SERIES 2024 BONDS AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OR ANY POLITICAL SUBDIVISION THEREOF IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF, PREMIUM OR INTEREST ON ANY SERIES 2024 BONDS.

The Series 2024 Bonds are offered when, as and if issued and received by the Underwriters and are subject to the approval of legality by Hawkins Delafield & Wood LLP, New York, New York, Bond Counsel. Certain legal matters will be passed upon for the Underwriters by its counsel, Nixon Peabody LLP, Manchester, New Hampshire. PFM Financial Advisors LLC, Boston, Massachusetts, is serving as Municipal Advisor to the City in connection with the issuance of the Series 2024 Bonds. It is expected that the Series 2024 Bonds will be available for delivery through the facilities of DTC on or about October 30, 2024.

Raymond James

J.P. Morgan

Dated: October __, 2024

* Preliminary, subject to change.

This Preliminary Official Statement and the information contained herein are subject to completion or amendment without notice. These securities may not be sold nor may offers to buy be accepted prior to the time the Official Statement is delivered in final form. Under no circumstances shall this Preliminary Official Statement constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of, these securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction.

\$108,020,000*
CITY OF MANCHESTER, NEW HAMPSHIRE
Sewer Revenue Bonds, Series 2024 (Green Bonds)

\$43,765,000* Serial Bonds

Maturity (June 1) *	Principal Amount*	Interest Rate	Price or Yield	CUSIP† (Base CUSIP 562361)
2026	\$ 115,000			
2027	210,000			
2028	315,000			
2029	1,340,000			
2030	1,465,000			
2031	1,995,000			
2032	2,095,000			
2033	2,200,000			
2034	2,395,000			
2035	2,515,000			
2036	2,640,000			
2037	2,770,000			
2038	2,915,000			
2039	3,060,000			
2040	3,210,000			
2041	3,370,000			
2042	3,535,000			
2043	3,720,000			
2044	3,900,000			

\$64,255,000* Term Bonds

\$22,640,000* [__. __]% Term Bonds due June 1, 2049* Yield [__. __]%* CUSIP† 562361[__]

\$41,615,000* [__. __]% Term Bonds due June 1, 2054* Yield [__. __]%* CUSIP† 562361[__]

* Preliminary, subject to change.

† CUSIP numbers have been assigned by an organization not affiliated with the City and are included for the convenience of the owners of the Series 2024 Bonds. The City is not responsible for the selection or uses of the CUSIP numbers, nor is any representation made as to their correctness on the Series 2024 Bonds or as indicated above. A CUSIP number may be changed after the issuance date. CUSIP® is a registered trademark of the American Bankers Association.

CITY OF MANCHESTER, NEW HAMPSHIRE

MAYOR

Jay P. Ruais

BOARD OF ALDERMEN

Ward 1	Chris Morgan	Ward 7	Ross W. Terrio
Ward 2	Dan Goonan	Ward 8	Edward Sapienza
Ward 3	Pat Long	Ward 9	Jim Burkush
Ward 4	Christine Fajardo	Ward 10	Bill Barry
Ward 5	Anthony Sapienza	Ward 11	Norm Vincent
Ward 6	Crissy Kantor	Ward 12	Kelly Thomas
At Large	Joseph Kelly Lavasseur	At Large	Daniel P. O'Neil

CITY OFFICIALS

Sharon Y. Wickens Finance Officer

Matthew Normand City Clerk

Emily Gray Rice City Solicitor

BOND COUNSEL

Hawkins Delafield & Wood LLP
New York, New York

MUNICIPAL ADVISOR

PFM Financial Advisors LLC
Boston, Massachusetts

REGARDING THIS OFFICIAL STATEMENT

This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy any of the Series 2024 Bonds in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. No dealer, salesperson or any other person has been authorized to give any information or make any representation, other than those contained herein, in connection with the offering of any of the Series 2024 Bonds and if given or made, such information or representation must not be relied upon. Neither the delivery of this Official Statement nor the sale of any of the Series 2024 Bonds implies that there has been no change in the affairs of the City of Manchester, New Hampshire (the “City”), the Environmental Protection Division (“EPD”) of the City or the other matters described herein since the date hereof.

The factors affecting the City’s financial condition are complex. This Official Statement should be considered in its entirety and no one factor considered less important than any other by reason of its location herein. Where agreements, reports or other documents are referred to herein, reference should be made to such agreements, reports or other documents for more complete information regarding the rights and obligations of parties thereto, facts and opinions contained therein and the subject matter thereof. Any electronic reproduction of this Official Statement may contain computer-generated errors or other deviations from the printed Official Statement. In any such case, the printed version controls.

This Official Statement contains forecasts, projections and estimates that are based on expectations and assumptions which existed at the time such forecasts, projections and estimates were prepared. The inclusion in this Official Statement of such forecasts, projections and estimates should not be regarded as a representation by the City, its independent auditors, its feasibility consultant or the Underwriters 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, changes in political, social and economic conditions, regulatory initiatives and compliance with governmental regulations, litigation and various other events, conditions and circumstances, many of which are beyond the control of the City. These forward-looking statements speak only as of the date of this Official Statement. The City 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 City’s expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based.

The Underwriters have reviewed the information in this Official Statement pursuant to their responsibilities to investors under the federal securities laws, but the Underwriters do not guarantee the accuracy or completeness of such information.

CDM Smith (the “Feasibility Consultant”) was engaged in 2021 to prepare a feasibility report which was set forth in the Official Statement, dated December 9, 2021, relating to the City’s 2021 sewer revenue bonds (the “Original Feasibility Report”). In connection with the issuance of the Series 2024 Bonds, the Feasibility Consultant has provided an update and supplement to the information contained in the Original Feasibility Report (the “2024 Feasibility Report Update” and, together with the Original Feasibility Report, the “2024 Bond Feasibility Report”), which update summarizes only certain specific matters and sections contained in the Original Feasibility Report, including EPD’s major achievements

and challenges since the preparation of the Original Feasibility Report. The 2024 Feasibility Report Update also includes updated financial projections, including capital improvement requirements and projected revenues, rates and debt service coverage for the forecast period through Fiscal Year 2029. The 2024 Feasibility Report Update and the Original Feasibility Report are included as APPENDIX D to this Official Statement. Matters addressed in the 2024 Bond Feasibility Report are based on various assumptions and methodologies and are subject to certain qualifications. Reference is hereby made to the entire 2024 Bond Feasibility Report for such important opinions, projections, qualifications and assumptions. CDM Smith has consented to the inclusion of the 2024 Bond Feasibility Report in this Official Statement. The Original Feasibility Report has not been updated since its preparation except for the specific matters and sections described in the 2024 Feasibility Report Update. The Original Feasibility Report is included for reference purposes only and neither the delivery of this Official Statement nor the sale of any of the Series 2024 Bonds implies that there has been no change in the matters and sections of the Original Feasibility Report that have not been updated by the 2024 Feasibility Report Update.

Marcum LLP, EPD's independent auditor, has not reviewed, commented on or approved, and is not associated with, this Official Statement. The report of Marcum LLP relating to EPD's financial statements for the Fiscal Year ended June 30, 2023, which is a matter of public record, is included in this Official Statement. However, Marcum LLP has not performed any procedures on any financial statements or other financial information of EPD or the City, including without limitation any of the information contained in this Official Statement, since the date of such report. Marcum LLP has consented to the inclusion of its report in this Official Statement.

References to website addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader's convenience. Unless specified otherwise, such websites and the information or links contained therein are not incorporated into, and are not part of, this Official Statement for the purposes of Rule 15c2-12 adopted by the United States Securities and Exchange Commission under the Securities Exchange Act of 1934.

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

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This Table of Contents does not list all of the subjects contained in this Official Statement, and in all instances references should be made to the complete Official Statement to determine all of the subjects set forth therein.

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OFFICIAL STATEMENT

Relating to

CITY OF MANCHESTER, NEW HAMPSHIRE

\$108,020,000*

Sewer Revenue Bonds, Series 2024 (Green Bonds)

INTRODUCTION

Authorization and Official Statement

The City of Manchester, New Hampshire (the “City”) is issuing \$108,020,000* aggregate principal amount of its Sewer Revenue Bonds, Series 2024 (Green Bonds) (the “Series 2024 Bonds”), dated their date of delivery, pursuant to Chapter 33-B of the Revised Statutes of the State of New Hampshire (the “State”), as amended from time to time (the “Enabling Act”), a resolution of the City adopted on August 6, 2024, the General Sewer Revenue Bond Resolution adopted on December 9, 2021 (the “General Resolution”), as supplemented by the Second Supplemental Resolution Authorizing the Issuance of \$_____ City of Manchester, New Hampshire Sewer Revenue Bonds, Series 2024 (Green Bonds), adopted on October __, 2024 (the “Second Supplemental” and, together with the General Resolution and all other resolutions supplemental thereto, the “Resolution”).

The City has previously issued its \$46,535,000 Sewer Revenue Bonds, Series 2021 (Green Bonds), all of which are currently outstanding (the “Outstanding Bonds”). For purposes of this Official Statement, “Bonds” means, as the context requires, the Series 2024 Bonds, the Outstanding Bonds, and any additional bonds hereafter issued under the General Resolution.

The purpose of this Official Statement is to set forth certain information pertaining to the City, its sewer system (as more fully described herein, the “System”) and the revenues generated by it, the Series 2024 Bonds, and the Resolution, and other related matters in connection with the sale of the Series 2024 Bonds. Capitalized terms used but not otherwise defined in this Official Statement have the meanings given them in “APPENDIX C – General Resolution” hereto.

The City

The City is located on the Merrimack River in south central New Hampshire, approximately 58 miles north of Boston, Massachusetts. It is bordered by the towns of Hooksett, Bedford, Londonderry, Goffstown, Auburn, Litchfield and Merrimack. The City has a population of approximately 115,644 according to the 2020 report of the United States Census Bureau, and is expected to continue to grow as noted herein. The City occupies a land area of 33.0 square miles. The Manchester Metropolitan Area, with a ten-mile radius, has a population of 339,322. The Manchester Metropolitan Area and the Manchester Trade Area are areas that the City believes represent key geographic regions for the City’s growing economy. The City is the largest city north of Boston and has been visited by nearly every candidate for President dating back to Abraham Lincoln, especially since the time when New Hampshire began hosting the “first-in-the-nation” presidential primary. For additional information concerning the

* Preliminary, subject to change.

City and its Environmental Protection Division, see “APPENDIX A – General, Economic and Demographic Information Relating to the City of Manchester, New Hampshire” and “APPENDIX B – City of Manchester, New Hampshire Department of Public Works Environmental Protection Division Financial Statements and Supplemental Information for the Fiscal Year Ended June 30, 2023” hereto.

The System

Created in 1975, the Environmental Protection Division (“EPD”) is an enterprise of the City’s Department of Public Works (“DPW”) and is responsible for the collection and treatment of wastewater for the City and treatment of wastewater conveyed from the Towns of Bedford, Goffstown and Londonderry, New Hampshire. The City owns the System, which includes a conventional secondary wastewater treatment plant (the “WWTP”) and 11 wastewater pumping stations. The System provides wastewater collection and treatment in a service area with a total population of 172,000 residents. The City is essentially fully sewered with approximately 26,000 customers. The outside community flow is managed under intermunicipal agreements with each town.

Purpose of the Series 2024 Bonds

The Series 2024 Bonds are being issued to provide funds to (a) finance a portion of the costs of the various improvements to the System (as more fully described under “GREEN BOND DESIGNATION AND USE OF PROCEEDS – Use of Proceeds” herein) and (b) pay certain costs of issuance of the Series 2024 Bonds.

Security for the Series 2024 Bonds

The Series 2024 Bonds, together with the Outstanding Bonds and all other Bonds hereafter issued and Parity Debt (as defined herein) hereafter incurred, are secured by a first pledge of all of the Revenues of the System and other funds pledged therefor under the Resolution, subject to the provisions of the Resolution permitting the application of Revenues and other funds for the purposes and on the terms and conditions set forth in the Resolution. The Revenues, when received by the City, shall immediately be subject to the lien of the Resolution, which lien shall be valid and binding against all parties having claims of any kind in tort, contract or otherwise against EPD or the City. See “SECURITY FOR THE SERIES 2024 BONDS – Pledge of Revenues” herein.

The Series 2024 Bonds will not be secured by the Bond Reserve Fund.

Rate Covenant

Under the Resolution, the City has covenanted to fix, charge and collect such rates and other charges sufficient to provide Net Revenues in each Fiscal Year equal to at least 1.15 times the aggregate annual amount of principal of and interest due on the Bonds and all Parity Debt coming due in such Fiscal Year. See “SECURITY FOR THE SERIES 2024 BONDS – Rate Covenant” herein.

Additional Obligations

Additional bonds issued or incurred on a parity with the Series 2024 Bonds and the Outstanding Bonds may be issued pursuant to the Resolution provided that certain conditions set forth therein are met. The Resolution also permits the City to incur certain indebtedness on a parity with the Bonds (the “Parity Debt”) provided that certain conditions set forth therein are met. See “SECURITY FOR THE SERIES 2024 BONDS – Additional Indebtedness” herein.

Payment

Principal of the Series 2024 Bonds will be payable in each of the years and in the amounts set forth on the inside cover page hereof. Initially, principal of and interest on the Series 2024 Bonds will be payable when due by wire transfer by the Trustee to The Depository Trust Company, Brooklyn, New York (“DTC”), which will in turn remit such interest and principal to DTC participants, which will in turn remit such interest and principal to Beneficial Owners (as defined herein) of the Series 2024 Bonds. See “THE SERIES 2024 BONDS – General” herein and “APPENDIX F – Book-Entry Only System” hereto.

Risk of Investment

The Series 2024 Bonds are payable primarily from certain moneys available to the City from the System. For a discussion of some of the risks associated with the purchase of the Series 2024 Bonds, see “RISK FACTORS RELATING TO THE SERIES 2024 BONDS” herein.

THE SERIES 2024 BONDS SHALL NOT BE GENERAL OBLIGATIONS OF THE CITY AND THE FULL FAITH AND CREDIT OF THE CITY ARE NOT PLEDGED FOR THE PAYMENT OF THE SERIES 2024 BONDS. NEITHER THE STATE NOR ANY OTHER POLITICAL SUBDIVISION THEREOF (EXCEPT THE CITY TO THE LIMITED EXTENT PROVIDED IN THE RESOLUTION) SHALL BE OBLIGATED TO PAY THE PRINCIPAL OF, PREMIUM OR INTEREST ON THE SERIES 2024 BONDS AND NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE STATE OR ANY POLITICAL SUBDIVISION THEREOF IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF, PREMIUM OR INTEREST ON ANY SERIES 2024 BONDS.

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THE SERIES 2024 BONDS

General

The Series 2024 Bonds shall be dated the date of delivery thereof and shall bear interest at the rates and shall mature on the dates as set forth on the inside cover page of this Official Statement.

The Series 2024 Bonds shall be issued in fully registered form without interest coupons appurtenant thereto in the denomination of \$5,000 or any integral multiple thereof.

Principal of, redemption price of and premium, if any, on the Series 2024 Bonds shall be payable by the Trustee. Interest on the Series 2024 Bonds is payable by check mailed by the Trustee to the holders of such Series 2024 Bonds in whose name such Series 2024 Bonds are registered upon the bond registration books as of the fifteenth day (whether or not a business day) of the calendar month next preceding each June 1 and December 1 (the "Record Date") at the holder's address as it appears on the bond registration books. However, since the Series 2024 Bonds shall initially be issued in book-entry form only, and so long as they are held in such form, the principal of, redemption price of and premium, if any, and interest on the Series 2024 Bonds shall be payable by wire transfer by the Trustee to DTC. See "APPENDIX F – Book-Entry Only System" hereto.

Optional Redemption

The Series 2024 Bonds maturing prior to June 1, __, are not subject to redemption prior to maturity at the option of the City. The Series 2024 Bonds maturing on and after June 1, __, shall be subject to redemption prior to maturity, at the option of the City, in whole or in part, in any order of maturity, at any time, on and after June 1, __, at a redemption price equal to 100% of the principal amount thereof, together with interest accrued, if any, to the date fixed for redemption.

Mandatory Sinking Fund Redemption

The Series 2024 Bonds maturing on June 1, 2049*, shall be subject to mandatory sinking fund redemption prior to their stated maturity at 100% of the principal amount thereof to be redeemed plus accrued interest to the date fixed for redemption, without premium, from sinking fund installments on June 1 of the years set forth in the following table in the respective principal amounts set forth opposite such years:

Series 2024 Bonds <u>maturing on June 1, 2049*</u>	
<u>Year*</u>	<u>Principal Amount*</u>
2045	\$4,095,000
2046	4,305,000
2047	4,515,000
2048	4,745,000
2049 [†]	4,980,000

[†] Final maturity.

* Preliminary, subject to change.

The Series 2024 Bonds maturing on June 1, 2054*, shall be subject to mandatory sinking fund redemption prior to their stated maturity at 100% of the principal amount thereof to be redeemed plus accrued interest to the date fixed for redemption, without premium, from sinking fund installments on June 1 of the years set forth in the following table in the respective principal amounts set forth opposite such years:

<u>Series 2024 Bonds</u> <u>maturing on June 1, 2054*</u>	
<u>Year*</u>	<u>Principal Amount*</u>
2050	\$ 5,225,000
2051	5,495,000
2052	9,800,000
2053	10,290,000
2054 [†]	10,805,000

[†] Final maturity.

Notice of Redemption

In the event any Series 2024 Bonds shall be called for redemption, notice of redemption shall be mailed at least twenty (20) days and not more than sixty (60) days prior to the date fixed for redemption, to the registered holders of each such Series 2024 Bond to be redeemed at the address shown on the registration books kept by the Trustee, but failure to mail any such notice, or any defect therein, shall not affect the validity of any proceedings for the redemption of such Series 2024 Bonds. In the case of an optional redemption of the Series 2024 Bonds, such notice shall contain to the extent applicable, (x) any condition to such redemption, including that such redemption is conditioned upon receipt by the Trustee of sufficient moneys to pay the redemption price of such Series 2024 Bonds on the date fixed for redemption and (y) that on the redemption date, and upon the satisfaction of any such condition, the Series 2024 Bonds to be redeemed shall cease to bear interest. See “APPENDIX F – Book-Entry Only System” hereto.

Selection for Redemption

So long as the book-entry only system is in effect for the Series 2024 Bonds, if fewer than all of the Series 2024 Bonds are called for redemption, the City will select the Series 2024 Bonds to be redeemed and if less than all of the Series 2024 Bonds of a maturity are to be redeemed, DTC and its participants will select the Series 2024 Bonds within a maturity to be redeemed in such manner as DTC and its participants in their discretion deem proper. If the book-entry only system is no longer in effect for the Series 2024 Bonds, selection for redemption of fewer than all of the Series 2024 Bonds of any one maturity will be made by the Trustee by lot as provided in the Resolution.

Purchase of Series 2024 Bonds

When the Series 2024 Bonds are subject to redemption pursuant to “Optional Redemption” above, Series 2024 Bonds paid by the City shall be purchased in lieu of redemption on the applicable redemption date at a purchase price equal to 100% of the principal amount of the Series 2024 Bonds to be redeemed if the Trustee has been directed by the City on or before said purchase date specifying that the

* Preliminary, subject to change.

moneys provided for such purpose shall be used to purchase Series 2024 Bonds in lieu of redemption. No such purchase of Series 2024 Bonds shall operate to extinguish the indebtedness of the City evidenced by such Series 2024 Bonds or modify the terms thereof, and such Series 2024 Bonds shall remain Outstanding under the Resolution.

PLAN OF FINANCE

The Series 2024 Bonds are being issued to provide funds to (a) finance a portion of the costs of the Series 2024 Project described under “GREEN BOND DESIGNATION AND USE OF PROCEEDS – Use of Proceeds” herein and (b) pay certain costs of issuance of the Series 2024 Bonds.

GREEN BOND DESIGNATION AND USE OF PROCEEDS

Green Bond Designation

The City is designating the Series 2024 Bonds as “Green Bonds” due to what it believes are the environmental benefits of the Series 2024 Project. The purpose of labeling the Series 2024 Bonds as “Green Bonds” is to allow investors to more easily identify that they are investing directly in bonds which finance such environmentally beneficial projects.

The City does not intend to obtain any outside source to certify the Series 2024 Bonds as Green Bonds. The designation of the Series 2024 Bonds as Green Bonds is solely as a result of the determination by the City. The term “Green Bonds” is not defined in nor related to the Resolution. The use of the term in this Official Statement is solely for identification purposes and is not intended to provide or imply that any owner of any Series 2024 Bonds is entitled to any security other than as provided in the Resolution. The repayment obligation of the City with respect to the Series 2024 Bonds is not conditioned on the satisfaction of any certification related to the status of the Series 2024 Bonds as Green Bonds. The City does not make any representation as to the ability of the Series 2024 Bonds to fulfill such environmental and sustainability criteria. The Series 2024 Bonds may not be a suitable investment for investors seeking exposure to green or sustainable assets. There is currently no market consensus on what precise attributes are required for a particular project to be defined as “green” or “sustainable” and therefore no assurance can be provided to investors that the projects financed with proceeds of the Series 2024 Bonds will continue to meet investor expectations regarding sustainability performance.

Use of Proceeds

The Series 2024 Project is comprised of the following elements:

- **Cemetery Brook CSO Tunnel Project.** Cemetery Brook is the City’s largest and most urbanized drainage basin that accounts for about 75% of combined sewer overflow (“CSO”) discharges. A completed engineering feasibility study concluded that a deep tunnel is the most viable method to execute this civil works project. The proposed tunnel will have an interior diameter of approximately 12.5 feet, be 2.25 miles long, and be 30 to 80 feet below the surface. The tunnel will have seven significant drop shaft structures to collect drainage and discharge air. The tunnel will be designed with a climate change allowance that exceeds current industry standards. In addition, green infrastructure is planned to accommodate this project including the conversion of an old railroad bed into an urban bike and walking trail. Project completion is anticipated in 2028. The anticipated cost of this project is \$230 million, of which approximately \$95 million is expected to be financed with the proceeds of the Series 2024 Bonds.

- **Christian Brook C-2 Project.** The construction of a CSO sewer separation project. The new lateral drainage system will be designed with a climate change allowance that exceeds current industry standards. Project completion is anticipated in 2027. The anticipated cost of this project is \$26.3 million, of which approximately \$13.8 million is expected to be financed with the proceeds of the Series 2024 Bonds.
- **CMOMs Contract No. 5 and No. 6 Project.** The construction of a sewer rehabilitation and upgrade project. This will be the fifth and sixth construction contracts in the City’s 15-year old sewer collection management, operation and maintenance (“CMOM”) program, a formalized proactive sewer maintenance program, and will involve the rehabilitation of about ten miles of sanitary sewer pipes at various locations in the City. The construction method will consist of replacement, point repairs, lining, and point lining. Project completion is anticipated in 2027. The anticipated cost of these two projects is \$10 million, which is expected to be financed with the proceeds of the Outstanding Bonds and the Series 2024 Bonds.
- **Emergency Power Upgrade Project.** The upgrade of EPD’s emergency power systems at the WWTP and at pump stations. The WWTP currently has four original early-1970s oil-fired turbine generators. This project will upgrade the emergency standby equipment at the WWTP to current technologies. This project includes clean fuel for generators with minimized emissions. Project completion is anticipated in 2027. The anticipated cost of this project is \$20.3 million, of which approximately \$6.5 million is expected to be financed with the proceeds of the Series 2024 Bonds.

Process for Project Evaluation and Selection

EPD’s Fiscal Year 2025 approved capital improvement plan (“CIP”) details planned capital projects through Fiscal Year 2029. This includes an assessment of the capital projects relative to the identified needs of the System. EPD develops an annual CIP, which is submitted to the Board of Mayor and Aldermen for approval. In developing the CIP, planned capital spending on CSO related projects are largely enforcement driven, developed to satisfy the requirements of the Consent Decree as part of the Long Term Control Plan (both as more fully described under “THE SYSTEM – Governmental Regulation” herein). Planned capital improvements at the WWTP are based on the 20-year schedule developed for EPD in 2010 of anticipated capital improvements for the WWTP (the “Master Plan”). EPD anticipates completion of the identified projects and the need for an updated Master Plan in 2030. Planned capital improvements to the collection system are driven by the CMOM.

Management of Proceeds

Pursuant to the Resolution, the net proceeds of the Series 2024 Bonds remaining after the deduction of issuance costs will be deposited into a separate project account established under the Resolution and used to pay costs of the Series 2024 Project. Such amounts will be tracked and disbursed for such purpose and pending disbursement will be invested in investments prescribed by the Resolution.

Green Bond Reporting

EPD expects to report annually on the expenditure of the proceeds of the Series 2024 Bonds until the proceeds have been expended on the Series 2024 Project. The report will be made available to the public on EPD’s website (<https://www.manchesternh.gov/Departments/Sewer-and-Stormwater/CSO/Supplemental-CSO-Information>). Such report is voluntary and will not be included as a reporting item in the Continuing Disclosure Agreement as described under “SECONDARY MARKET DISCLOSURE” herein. Failure to provide such ongoing voluntary reports will not constitute an Event of

Default under the Resolution, and beneficial owners of the Series 2024 Bonds will not have any remedies available for any such failure.

SOURCES AND USES OF FUNDS

The proceeds from the sale of the Series 2024 Bonds are estimated to be applied as follows:

Sources of Funds

Principal Amount of Series 2024 Bonds
Premium
Total Sources.....

Use of Funds

Construction Fund
Costs of Issuance⁽¹⁾
Total Uses.....

(1) Includes legal fees, underwriters' discount, rating agency fees, etc.

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DEBT SERVICE REQUIREMENTS

The following schedule sets forth the debt service requirements for the Series 2024 Bonds and the Outstanding Bonds for each of the 12 months ending June 30.

12 months Ending June 30	Debt Service on Outstanding Bonds		Series 2024 Bonds		Aggregate Debt Service
	Principal	Interest	Principal	Interest	
2025	-	\$ 1,878,900			
2026	-	1,878,900			
2027	-	1,878,900			
2028	-	1,878,900			
2029	-	1,878,900			
2030	-	1,878,900			
2031	\$ 85,000	1,878,900			
2032	395,000	1,874,650			
2033	605,000	1,854,900			
2034	665,000	1,824,650			
2035	730,000	1,791,400			
2036	785,000	1,762,200			
2037	1,860,000	1,730,800			
2038	1,940,000	1,656,400			
2039	2,145,000	1,578,800			
2040	2,240,000	1,493,000			
2041	2,335,000	1,403,400			
2042	2,730,000	1,310,000			
2043	2,835,000	1,200,800			
2044	2,950,000	1,087,400			
2045	3,070,000	969,400			
2046	3,190,000	846,600			
2047	3,320,000	719,000			
2048	3,450,000	586,200			
2049	3,590,000	448,200			
2050	3,735,000	304,600			
2051	<u>3,880,000</u>	<u>155,200</u>			
Totals	\$46,535,000	\$39,628,800			

Totals may not add due to rounding.

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SECURITY FOR THE SERIES 2024 BONDS

The General Fund of the City is not liable and the credit and taxing power of the City is not pledged for the payment of the principal of and interest on the Series 2024 Bonds. The holders of the Series 2024 Bonds may not compel the exercise of the taxing power by the City or the forfeiture of its property. The principal of and interest on the Series 2024 Bonds are not a debt of the City, nor a legal or equitable pledge, charge, lien or encumbrance, upon any of its property, or upon any of its income, receipts, or revenues except the Revenues of the System, subject to the provisions of the Resolution permitting the application of Revenues and other funds for the purposes and on the terms and conditions set forth in the Resolution. For a more extensive discussion of the terms and provisions of the Resolution, including the security for the Series 2024 Bonds, the funds and accounts established by the Resolution and the purposes to which moneys in such funds and accounts may be applied, see "APPENDIX C – General Resolution" hereto.

Pledge of Revenues

The Series 2024 Bonds, together with the Outstanding Bonds and all Bonds and Parity Debt hereafter issued or incurred, are secured by a first pledge of all of the Revenues of the System and other funds pledged therefor under the Resolution, subject to the provisions of the Resolution permitting the application of Revenues and other funds for the purposes and on the terms and conditions set forth in the Resolution. The Revenues, when received by the City, shall immediately be subject to the lien of the Resolution, which lien shall be valid and binding against all parties having claims of any kind in tort, contract or otherwise against EPD or the City. The Revenues shall not be used for any other purposes, except as set forth in the Resolution.

The Resolution defines the "System" as the wastewater collection, treatment and disposal system of the City, including the plants, works, instrumentalities or parts thereof and appurtenances thereto, lands, easements, rights in lands, rights of way, contract rights, sewers, conduits, pipe lines, mains, pumping and ventilating stations, sewage treatment or disposal systems, plants and works, connections and outfalls and all plants, buildings, facilities, structures, equipment, boats, conveyances, sewer mains and pipe lines, and any other property, rights and easements, real, personal, tangible or mixed, acquired or leased, incidental to and included in such system or parts thereof, and any improvements, extensions, enlargements, renewals, replacements and betterments, constructed, acquired or made by the City.

The Resolution defines "Revenues" as all rates, fees, charges, rents, payments and other income and receipts derived by the City from or for the ownership, operation, use or services of the System including, without limiting the generality of the foregoing, Subsidy Payments, investment proceeds and, to the extent required by the Resolution or a Supplemental Resolution to be deposited in the Revenue Fund, proceeds of insurance, condemnation, sales or other disposition of assets, and other income and receipts, in each case derived by or for the account of the City from the operation and ownership of the System.

The Resolution defines "Subsidy Payments" as the amounts payable to the City from any governmental entity, federal, State or local, in connection with bonds, notes or other evidences of indebtedness of the City issued to finance or refinance costs of the System.

The Resolution defines "Net Revenues", with respect to any period of time, as the Revenues during such period less Revenues deposited in the Revenue Fund to pay Operating Expenses.

The Resolution defines "Operating Expenses" as all actual operation and maintenance costs of the System paid or incurred by the City in any particular Fiscal Year or period to which said term is

applicable or charges made therefor during such Fiscal Year or period, as determined in conformity with Generally Accepted Accounting Principles. Operating Expenses include, but are not limited to, amounts payable under Credit Facilities or Liquidity Facilities for any fees, costs, expenses, indemnification or other obligations to any provider thereto, its parent and its assignees and participants or any agent therefor; fees and expenses of the Fiduciaries; and any other current expenses or obligations required to be paid by the City under the provisions of the Resolution or by law, all to the extent properly allocable to the System. Operating Expenses do not include depreciation or obsolescence charges or reserves therefor; amortization of intangibles or other bookkeeping entries of a similar nature; interest charges and charges for the payment of principal, or amortization, of bonded or other indebtedness of the City; any payments under a Qualified Swap Agreement; unrealized gains and losses from investments, extinguishment of debt and Qualified Swap Agreements; costs, or charges made therefor, for capital additions, replacements, betterments, extensions or improvements to or retirements from the System which under Generally Accepted Accounting Principles are properly chargeable to the capital account or the reserve for depreciation; losses from the sale, abandonment, reclassification, revaluation or other disposition of any properties of the System; such items, including taxes and fuel, which are capitalized pursuant to the then existing accounting practices of the City; or costs, charges or losses for any other item that is extraordinary and/or non-recurring.

Flow of Funds

The City has covenanted under the Resolution to:

- (i) collect the Revenues and any such Revenues so collected shall be deposited by the City, within two (2) business days, into the Revenue Fund, and
- (ii) deposit into the Revenue Fund all other amounts required by the Resolution to be so deposited or any other amounts which the City elects to deposit therein.

From the amounts deposited in the Revenue Fund in each month, the City shall:

first, set aside an amount which, when added to any amounts on deposit in the Revenue Fund to be applied to the purpose, will be sufficient to pay the current Operating Expenses of the City expected to be payable in such month; and

second, to the extent available, transfer to the Trustee for deposit in the following Funds, the amounts set forth below, such transfers to be made no later than the last business day of each month and in the following order of priority:

- (A) To the Bond Fund, (after taking into account any moneys from Bond proceeds on deposit in the Bond Fund for capitalized interest and any moneys not constituting Revenues on deposit in the Bond Fund to pay interest and Principal Installments), an amount for each Series of Bonds Outstanding equal to the sum of: (A) an amount equal to one-sixth (1/6th) of the amount of interest falling due on the Bonds of such Series on the next interest payment date, or such other proportionate amount as shall be necessary to ensure monthly deposits for the payment in full of interest on the next interest payment date, as set forth in the Supplemental Resolution authorizing such Series; (B) an amount equal to one-twelfth (1/12th) of the amount of principal falling due on the next date upon which a Principal Installment falls due on the Bonds of such Series, or such other proportionate amount as shall be necessary to ensure monthly deposits for the payment in full of the Principal Installment on such date, as set forth in the Supplemental Resolution

authorizing such Series and (C) an amount as may be determined by the City for the purposes of payments under a Parity Swap Agreement, pro rata in accordance with the respective amounts due for such purposes (and simultaneously with the transfer described in this clause, the City may transfer a similar amount from the Revenue Fund for the benefit of the holders of any other Parity Debt);

- (B) To the Bond Reserve Fund for credit to (A) the Common Bond Reserve Account therein the amount, if any, necessary to increase the amount on deposit therein, determined as of the first (1st) day of the Fiscal Year, to an amount equal to the Common Bond Reserve Account Requirement unless a lesser amount is otherwise applicable pursuant to the provisions of the Resolution and (B) each other Bond Reserve Account therein, if any, the amounts necessary to satisfy any deficiencies in such Bond Reserve Accounts as may be determined and required by the applicable Supplemental Resolution, pro rata on the basis of the amounts so required;
- (C) To the Rebate Fund, the amount, if any, necessary to make the amount on deposit therein equal to the Rebate Fund Requirement, if any, determined in accordance with the applicable Supplemental Resolution; and
- (D) To the Revenue Stabilization Fund, the amount, if any, determined by the City.

Any amounts retained in the Revenue Fund after making the foregoing payments and transfers may be used for any lawful purpose of the City. All amounts so used shall upon withdrawal be forever free and clear of any lien or pledge created by the Resolution. Any amounts retained in the Revenue Fund after making the foregoing payments and transfers may also be deposited in the Bond Fund.

Amounts set aside by the City in the Revenue Fund to pay Operating Expenses of the System shall only be used for such purpose. All amounts so paid shall forthwith upon withdrawal be forever free and clear of any lien or pledge created by the Resolution.

If the City has entered into a Parity Swap Agreement corresponding to the interest rates payable on a Series of Bonds or any portion thereof, the net amounts received by the City, if any, pursuant to such Parity Swap Agreement shall be deposited in the Revenue Fund and applied to the deposits required under the Resolution, and the net amounts to be paid by the City under such Parity Swap Agreement on a parity with the Bonds (excluding any termination payments) shall be paid on a parity with the payment of principal of and interest on the Bonds.

Bond Reserve Fund

The Series 2024 Bonds will not be secured by the Bond Reserve Fund.

Revenue Stabilization Fund

Moneys in the Revenue Stabilization Fund shall be applied as an Authorized Officer of the City may from time to time determine. At any time, the City shall withdraw from such Fund and deposit in the Revenue Fund or the Bond Fund such amounts as may be determined by an Authorized Officer of the City for purposes of managing the receipt of Revenues and payment of expenses.

Rate Covenant

The City has covenanted in the Resolution to at all times fix rates and collect charges for each class of service rendered by the System, and from time to time, to amend or adjust such rates so that the Revenues of the System shall always be sufficient to:

- (i) provide for the payment of Operating Expenses,
- (ii) provide for the payment of the principal of and interest on all Bonds Outstanding (except any part thereof the payment of which has been provided for by the deposit of proceeds of Bonds or other moneys not constituting Revenues in the Bond Fund), and the net payments owing under Outstanding Parity Debt and payable on a parity with the Bonds as and when the same become due and payable, together with the maintenance of proper reserves therefor,
- (iii) maintain the Funds and Accounts established in the Resolution,
- (iv) provide for the payment of expenses of administration and operation and maintenance of the System which may be necessary to preserve the same in good repair and working order, including the necessary reserves therefor, and
- (v) comply in all respects with the terms and provisions of the Resolution and to pay and discharge all charges or liens payable out of the Revenues when due and enforceable including without limitation the payment of other bonds, notes or other evidences of indebtedness of the City issued to finance or refinance costs of the System.

Without limiting the generality of the foregoing, the City further covenants in the Resolution that the City will, at all times, fix, charge and collect such rates and other charges and adopt a budget as shall be required in order that, in each Fiscal Year, Net Revenues shall be at least 1.15 times the sum of the Aggregate Debt Service and the net amounts owing with respect to Parity Debt and payable in such Fiscal Year (the "Net Revenue Requirement"). The failure in any Fiscal Year to comply with the Net Revenue Requirement covenant with respect to any Fiscal Year shall not constitute a default or an Event of Default under the Resolution provided the City shall comply with the following paragraph.

On or before the end of each Fiscal Year, in conjunction with preparation of the Annual Budget, the City shall complete a review of the financial condition of the System for the purpose of estimating whether the Net Revenues for such Fiscal Year and for the next succeeding Fiscal Year will be sufficient to comply with the Net Revenue Requirement covenant and shall by certificate of an Authorized Officer of the City make a determination with respect thereto. Such review shall take into consideration the completion of any uncompleted Project and the issuance of future Series of Bonds if necessary to finance the completion of such Project. A copy of such certificate setting forth a reasonably detailed statement of the actual and estimated Revenues, Operating Expenses, Aggregate Debt Service, and any other estimates or assumptions upon which such determination was based, shall be filed with the Trustee within thirty (30) days of the adoption of the Annual Budget or, if earlier, by the end of such Fiscal Year. If the City determines that the Net Revenues may not be so sufficient in the then current Fiscal Year, it shall forthwith, with advice and recommendations from the Consulting Engineer, develop a corrective plan of action to comply with the Net Revenue Requirement covenant in such following and later Fiscal Years. Such a corrective plan may include an increase in the schedule of rates and other charges, the development of changes to operations or expense reductions designed to lower Operating Expenses and/or a description of extraordinary circumstances which led to an insufficiency of Net Revenues and an explanation as to why such circumstances are unlikely to occur in the following year. The City's

corrective plan demonstrating projected compliance in such subsequent Fiscal Year shall be filed with the Trustee and implemented within one hundred and eighty (180) days of the adoption of the Annual Budget for such subsequent Fiscal Year.

Additional Indebtedness

Additional Bonds. The City may at any time and from time to time, issue Additional Bonds under the General Resolution secured on a parity with the Series 2024 Bonds and the Outstanding Bonds. Such Series of Additional Bonds may be issued for the purposes of (i) financing Costs of Projects, (ii) financing Costs of completing Projects, (iii) paying the principal of and redemption premium, if any, and interest on any Bonds or Bond Anticipation Notes, (iv) providing additional funds for deposit into the Bond Reserve Fund and (v) paying costs incident to the issuance of such Series of Bonds. The proceeds, including accrued interest, of the Additional Bonds of each Series shall be applied simultaneously with the delivery of such Additional Bonds as provided in the Supplemental Resolution authorizing such Series.

Such Additional Bonds shall be authenticated and delivered by the Trustee only upon receipt by it of, among other items, at least one of the following set forth in clause (i) or (ii) below:

- (i) a certificate of an Authorized Officer of the City (a) setting forth the Net Revenues for any period of twelve (12) consecutive calendar months out of the twenty-four (24) consecutive calendar months next preceding the authentication and delivery of the Bonds being issued and (b) demonstrating that for each future Fiscal Year in which Bonds are Outstanding (including the Bonds to be issued) such Net Revenues equal or exceed 1.15 times the sum of the Aggregate Debt Service in such Fiscal Year (including the estimated Debt Service on the Bonds to be issued and excluding Debt Service on any Bonds being refunded by the Bonds to be issued) and the amounts owing with respect to Parity Debt during such Fiscal Year and payable on parity with the Bonds; or
- (ii) a certificate of the Consulting Engineer (a) setting forth the estimated Net Revenues for the next five (5) Fiscal Years and (b) demonstrating that the minimum amount of such estimated annual Net Revenues in the next five (5) Fiscal Years equals or exceeds 1.15 times the sum of the Aggregate Debt Service payable in the current or any succeeding Fiscal Year (including the estimated Debt Service on the Bonds to be issued and excluding Debt Service on any Bonds being refunded by the Bonds to be issued) and the amounts owing with respect to Parity Debt during each such Fiscal Year and payable on parity with the Bonds. For purposes of such certificate, estimated Net Revenues shall include estimated revenue from (a) any adjustment of sewer rates which shall have been formally adopted and placed in effect on or prior to the date of authentication and delivery of the Bonds to be issued and (b) any new facilities or facilities anticipated to be acquired and expected to be placed into use and operation.

Refunding Bonds. The City may issue Refunding Bonds at any time (i) to refund Bonds Outstanding of one or more Series, (ii) to refund one or more maturities within a Series or any Bonds of one or more maturities within one or more Series, (iii) to refund any Parity Debt or (iv) to refund any other bonds, notes or other evidences of indebtedness of the City issued to finance or refinance costs of the System. 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 under the Resolution required by the provisions of the Supplemental Resolution authorizing such Bonds.

Refunding Bonds of any such Series shall be authenticated and delivered by the Trustee only upon receipt by it of, among other items, a certificate of an Authorized Officer of the City demonstrating that the Debt Service on the Bonds Outstanding and the debt service on Parity Debt Outstanding in each Fiscal Year immediately after the issuance of such Refunding Bonds shall be no greater than the Debt Service on the Bonds Outstanding and the debt service on Parity Debt Outstanding in each Fiscal Year immediately prior to the issuance of such Refunding Bonds.

Parity Debt. The Resolution permits the City to incur certain indebtedness that is secured and payable on a parity with Bonds issued under the Resolution. Such Parity Debt shall be authenticated and delivered by the Trustee only upon satisfaction of the requirements for the issuance of Additional Bonds set forth above.

“Parity Debt” is defined in the Resolution as any Parity Reimbursement Obligation, any Parity Swap Agreement or any other obligation of the City permitted under the Enabling Act or otherwise by law for or related to borrowed money having an equal lien and charge upon the Revenues and therefore payable on a parity with the Bonds.

“Parity Reimbursement Obligation” is defined in the Resolution as a Reimbursement Obligation, excluding any termination payments and any accelerated payments, the payment of which is secured by a pledge of, and a lien on, Revenues on a parity with the Bonds.

“Parity Swap Agreement” is defined in the Resolution as a Qualified Swap Agreement with respect to which the obligation of the City to make payments to the Swap Provider, pursuant to such Qualified Swap Agreement, excluding any termination payments and amounts representing fees and expenses, is on a parity with the Bonds.

THE SYSTEM

The Environmental Protection Division (“EPD”), a division of the City’s DPW, provides services for the collection and treatment of wastewater for the City. Created in 1975, EPD is responsible for the collection and treatment of wastewater for the City, and treatment of wastewater conveyed from the Town of Bedford, New Hampshire, the Town of Goffstown, New Hampshire and the Town of Londonderry, New Hampshire. The outside community flow is managed under inter-municipal agreements with each town. EPD functions as an enterprise and is fully supported by user fees and grants.

Description of Facilities

The facilities of the System consist of approximately 390 miles of sewers, twelve pumping stations and the WWTP. The City’s collection system is approximately 45% combined sewer system and consists of 10,700 manholes and pipes ranging from 1 to over 130 years old, sized from 8 inches in diameter to side by side 4x10 ft. box culverts. The WWTP was constructed in 1975 with an average annual capacity of 26 mgd. The WWTP was upgraded in 1994 to increase average annual secondary treatment capacity to 34 mgd and again in 2016 to the current average annual secondary treatment capacity of 42 mgd. For a detailed description of the System, see “APPENDIX D – 2024 Bond Feasibility Report” hereto.

Governmental Regulation

The City is not aware of any environmental or regulatory issues that would adversely impact its ability or the ability of the System to provide wastewater service as described in this Official Statement.

Regulatory requirements applicable to the System are imposed by regulations of the United States Environmental Protection Agency (the “USEPA”) and the New Hampshire Department of Environmental Services. As of October 1, 2024, there were no pending claims by the USEPA or the State.

The City was issued an Administrative Order in 1998 by the USEPA, requiring the City to evaluate and plan for appropriate treatment of CSOs pursuant to the Federal Clean Water Act. In March 1999, the City and USEPA entered into a negotiated compliance order that established a 10-year, \$58 million Phase I CSO abatement program (“Phase I”). The City completed all work required by that compliance order on schedule in 2010. Upon completion of Phase I, the City prepared a Phase II Long-Term Control Plan to add projects designed to further control CSOs and address certain public health issues (sewer backups and street flooding). The City completed construction of the first two Phase II contracts in 2014 and 2016. In September 2020, the City and USEPA agreed to an update to the long-term control plan and Phase II program, which was incorporated into a formal Consent Decree. The Phase II program is estimated to have a project cost of \$385.0 million (2024 dollars), with an implementation period of 20 years, commencing September 28, 2020.

The City was issued a Notice of Violation by the USEPA for sewage sludge incinerator (“SSI”) emissions in 2016. The City then negotiated a consent decree with the USEPA to achieve compliance. A \$9 million SSI compliance project was designed and constructed from 2016 to 2019. The City has been in full compliance with all SSI regulations since 2019.

The City’s national pollutant discharge elimination system (“NPDES”) permit expired in 2020, although EPD had submitted its renewal on a timely basis. The 2020 permit remains in effect until a new final permit is issued by the USEPA. The USEPA issued a new draft NPDES permit in 2024. Although the draft permit is similar to the existing permit, the City has formally objected to several provisions, including limitations on aluminum and ammonia. The aluminum limitations were removed from the City’s previous permit based on a river water quality study that was performed in 2008/2009. The City is currently conducting a similar study. The City has requested that it be required to report ammonia levels for this next permit cycle to collect sufficient data to make informed decisions moving forward. If the final permit includes the proposed ammonia limit, such limitation would add significant capital costs to achieve compliance. The City has not received responses on its objections from the USEPA. It is not possible to assess the timing of a permit being finalized nor the terms of the final permit.

The City has been governed under, and has been in compliance with, the Municipal Separate Storm Sewer System national permit since 2004. In 2018, the permit was reissued and as of the date of this Official Statement, the City is in full compliance with all requirements.

Intermunicipal Agreements

In January 2013, the City entered into Intermunicipal Agreements with each of the Town of Bedford, the Town of Goffstown and the Town of Londonderry pursuant to which the City agrees to provide wastewater service to each town through the System and to treat and discharge to the Merrimack River all wastewater received from each town in accordance with municipal, state and federal regulations.

The basic premises of the Intermunicipal Agreements are (i) each municipality shall pay the total cost of those facilities within another municipality that are solely for the first municipality’s use; (ii) each

municipality that benefits from a facility shall share the cost of that facility, which is required for more than one municipality; and (iii) to establish the WWTP design flow capacities.

Capital costs of the System are allocated to each town in proportion to the design capacity that the town has reserved in the treatment plant, interceptors and pumping stations, plus a one percent (1%) administration charge.

Each town has the following reserved capacities in the WWTP:

- Bedford (1.5 mgd or 3.51% of the plant’s maximum capacity),
- Goffstown (2.3 mgd or 4.99% of the plant’s maximum capacity) and
- Londonderry (4 mgd or 9.37% of the plant’s maximum capacity).

Based on these reserved capacities and other factors, each town’s share of the capital cost of the WWTP is as follows:

- Bedford (4.37%),
- Goffstown (4.11%) and
- Londonderry (10.16%).

Over the course of the last ten years, each town’s average annual flow has been as follows:

- Bedford (.4976 mgd or 33.18% of its reserved capacity),
- Goffstown (.9385 mgd or 44.06% of its reserved capacity), and
- Londonderry (1.3660 mgd or 34.15% of its reserved capacity).

Operation and maintenance costs of the System are divided into administrative costs (costs which are fixed and not influenced by the quantity and/or composition of wastewater collected and/or treated) and variable costs (costs which vary with, or are influenced by, the quantity and/or composition of wastewater collected and/or treated). The allocation of operation and maintenance costs is based on continuous measurement of flow and certain other periodic sampling and analyses. In addition, for maintenance of all pipes and structures for all town sewers that convey wastewater into the System, each town pays an annual lump sum payment of \$1,286 (increased annually by CPI (Boston Index)).

The City sends each town a monthly itemized bill for all charges incurred under the applicable Intermunicipal Agreement. If such bill is not paid within thirty (30) days, the respective town incurs a twelve percent (12%) per annum charge. The following chart sets forth the revenue received from each town for the Fiscal Years shown.

Annual Revenue From Towns

<u>Town</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u> <u>(unaudited)</u>
Bedford	\$ 398,722	\$ 199,924	\$ 203,026	\$ 272,164	\$ 504,885
Goffstown	435,892	359,319	348,606	256,965	521,465
Londonderry	<u>797,542</u>	<u>675,304</u>	<u>564,415</u>	<u>708,640</u>	<u>949,496</u>
Total Revenue	\$1,632,156	\$1,234,547	\$1,165,047	\$1,237,769	\$1,975,846

The term of each Intermunicipal Agreement is twenty (20) years, with five (5) year amendments based on National Pollutant Discharge Elimination System and other regulatory permits. The Intermunicipal Agreements are currently expected to expire in January 2033. The Intermunicipal

Agreements provide for automatic renewal for successive two-year periods after expiration of the initial twenty (20) year agreement, unless either party elects to terminate. Notice of termination of an Intermunicipal Agreement is required to be given five (5) years prior to the expiration of the then applicable term.

In the event that any party to an Intermunicipal Agreement fails to comply with the terms or conditions thereof, the other party thereto shall give notice of said failure of compliance. The noncomplying party is obligated to immediately and diligently proceed to cure the default. If the noncomplying party fails to respond with corrective methods or procedures to cure the default for thirty (30) days after said notice, the noticing party may proceed against the noncomplying party at law or in equity to enforce all provisions of the Intermunicipal Agreement, including termination thereof.

Management and Employees

EPD is responsible for the management and operation of the System. EPD operates as an enterprise division within the DPW. As of June 30, 2024, EPD had 44 full-time employees, with 6 open full-time positions, plus an additional 15 DPW staff that support EPD.

EPD is comprised of four departments:

- Administration – responsible primarily for the management of EPD’s financial resources. Billing services are provided by Manchester Water Works. EPD Administration staff are responsible for daily, weekly and monthly reconciliations of billing records and reports.
- Treatment Plant Operations – responsible for the operations of the WWTP.
- Industrial Pretreatment – responsible for the implementation of EPD’s industrial pretreatment program.
- Stormwater – responsible for the implementation of the City’s stormwater management program.

DPW staff operate and maintain the wastewater collection system within the City under the direction of EPD.

EPD employees are affiliated with the AFSCME union. The current AFSCME contract will expire at the end of 2024. Negotiations on a new contract have not commenced.

Service Area and Users

The service area of the System covers the City and the Towns of Bedford, Goffstown and Londonderry for a total population of 172,000 residents. With approximately 26,000 customers, the City is essentially fully sewered.

Customer Accounts by Customer Type. The following table shows the number of active sewer customer accounts and revenues (unaudited) generated by each type of customer for Fiscal Year 2024.

<u>Customer Type</u>	<u># of Accounts</u>	<u>Revenues</u>
Residential	24,053	\$15,881,093
Commercial	1,998	4,379,937
Industrial	49	627,746
Wholesale	3	1,975,845
City	1	-

Top 10 Customers by Revenue. The following table lists the top ten Fiscal Year 2024 rate payers of the System by revenue. The top ten rate payers collectively represented less than 8% of the total System revenues in Fiscal Year 2024.

Top Ten Customers in Fiscal Year 2024

Customer	Total Revenues
1. Manchester Housing Authority	\$440,708
2. Nylon Corporation of America	296,807
3. Elliot Hospital	233,010
4. Wellington DHC	131,048
5. Hillsborough County	116,939
6. SMS Sundial	101,379
7. Velcro	101,005
8. Brady Sullivan	96,101
9. VA Hospital	93,030
10. Catholic Medical Center	89,974

Annual Utilization. The WWTP has an average annual secondary treatment capacity of 42 mgd and an average daily flow of 24 mgd of which approximately 5 mgd is attributable to stream inflow and infiltration. The following table shows the annualized utilization by customer type for the System for Fiscal Year 2024.

Customer Class	Utilization (mgd)
Residential	5.6
Commercial	1.8
Industrial	0.3
Wholesale	3.3
The City	0.1

System Rates

The average annual sewer rate for a user of the System is \$669 compared to the State average annual sewer rate of \$996. EPD approved sewer rates are listed in the table below. In March 2023, the Board of Mayor and Aldermen approved a 6-year rate increase, consisting of 9% annual increases through Fiscal Year 2028. The adopted rate increases take effect in April of each year.

	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>
Commodity Rate (\$/HCF).....	\$ 5.05	\$ 5.50	\$ 6.00	\$ 6.54	\$ 6.54
Discounted Commodity Rate (\$/HCF)	2.53	2.75	3.00	3.27	3.27
Service Charge (\$/Unit/Year)					
Residential Single Dwelling	123.40	134.52	146.64	159.84	159.84
Residential Single Dwelling – Discounted.....	61.70	67.26	73.32	79.92	79.92
Condo	123.40	134.52	146.64	159.84	159.84
Multi-Family	78.52	85.60	93.32	101.72	101.72
Multi-Family – Discounted	39.26	42.80	46.66	50.86	50.86
Commercial	168.28	183.44	199.96	217.96	217.96
Commercial – Discounted	84.14	91.72	99.98	108.98	108.98
Industrial.....	347.76	379.04	413.16	450.36	450.36
Industrial Strength Surcharges					
BOD (\$/100 lbs)	49.25	53.68	58.51	63.78	63.78
TSS (\$/100 lbs).....	49.25	53.68	58.51	63.78	63.78
Flow (\$/1,000 gal)	4.70	5.12	5.58	6.08	6.08

Rate Setting Process

The rates for the System are set by EPD and approved by the City’s Board of Mayor and Aldermen.

EPD continuously monitors operating and CIP budgets. EPD updated its long-term financial/rate setting model as required. As a result, rate needs generally are identified years before they are required. EPD also employs consultants to perform rate studies on an as needed basis. When a rate change is to be implemented, EPD submits a draft ordinance change for review and approval by the Board of Mayor and Aldermen. A brief presentation of rate needs is typically presented to the Board of Mayor and Aldermen by EPD. The Board of Mayor and Aldermen can then, at its discretion, refer the request to an Aldermen subcommittee for further review.

Billing and Collection of Sewer Charges

EPD charges its customers a fixed service charge based on property type, a commodity rate based on water consumption, and industrial strength surcharges based on flow and loadings. The majority of EPD’s customers are billed on a quarterly basis, receiving four bills per year, with some larger customers billed monthly. Water meter readings and water and sewer billings are handled by Manchester Water Works. Manchester Water Works is paid quarterly for its services with the amount renegotiated every 5 years. The current 5 year period expires June 30, 2026. The annual amount of the payment to Manchester Water Works will be \$425,000 in Fiscal Year 2025 and \$450,000 in Fiscal Year 2026.

On March 1, 2016, EPD and Manchester Water Works entered into a combined billing services Agreement (the “Billing Agreement”) and moved to a combined water and sewer bill. The Billing Agreement provides that all payments received for outstanding customer account balances are to be applied to sewer usage and sewer related charges first, then any remaining funds are applied to outstanding water charges (this applies to both payment-in-full or partial payment receipts). For

outstanding balances for unpaid bills, a five percent (5%) late fee is imposed on balances outstanding over 30 days. The Billing Agreement also provides that all revenues associated with billing and collections are to be shared equally between EPD and Manchester Water Works. The Billing Agreement was amended on April 22, 2021.

SYSTEM FINANCIAL INFORMATION

Financial Statements

“APPENDIX B – City of Manchester, New Hampshire Department of Public Works Environmental Protection Division Financial Statements and Supplemental Information for the Fiscal Year Ended June 30, 2023” (the “Financial Statements”) have been prepared by Marcum LLP (the “Auditor”).

The Auditor’s letter concludes that the Financial Statements present fairly, in all material respects, the net position, changes in financial position, and cash flows of EPD, as of and for the Fiscal Year ended June 30, 2023, and the related notes to financial statements, in accordance with accounting principles generally accepted in the United States of America. The Financial Statements should be read in their entirety.

System Financial Statements

Balance Sheet. The following table presents EPD's System's Balance Sheet from EPD's audited financial statements for the Fiscal Years 2021, 2022 and 2023 and unaudited data for Fiscal Year 2024.

	2021	2022	2023	2024 (unaudited)
ASSETS				
Current Assets:				
Cash and short-term investments	\$ 7,543,664	\$ 10,493,873	\$ 9,852,743	\$13,769,348
Due from other funds	10,992			
Accounts receivable	1,276,375	1,557,571	1,734,810	2,245,798
Unbilled revenues	4,504,750	4,526,582	5,550,925	5,869,963
Accrued interest receivable	92,058	82,207	75,418	45,467
Prepaid expenditures		317,667	320,844	349,398
Inventory	53,852	60,948	90,499	111,989
Current portion of long-term assets:				
Due from local governments	267,714	365,562	365,562	365,562
Due from the State of New Hampshire	541,248	541,249	535,466	538,294
TOTAL CURRENT ASSETS	14,290,653	17,945,659	18,526,267	23,295,819
Noncurrent Assets:				
Restricted cash and cash equivalents	1,471,284	49,162,282	33,055,078	18,185,879
Due from local governments	4,022,580	5,487,785	5,174,012	4,756,657
Due from the State of New Hampshire	7,179,919	6,708,791	6,173,325	5,645,204
Accounts receivable	13,784			
TOTAL NONCURRENT ASSETS	12,687,567	61,358,858	44,402,415	28,587,740
Capital Assets:				
Land	1,604,049	1,604,049	1,604,049	1,604,049
Wastewater treatment plant, receiving and pump stations	122,481,588	122,616,801	122,688,340	122,814,243
Interceptors	91,856,370	91,856,370	107,029,302	141,023,683
Other improvements - collection systems and misc. sewers	126,919,938	135,769,351	137,635,714	139,008,275
Equipment and vehicles	29,907,634	30,153,197	31,433,875	56,437,841
Construction-in-progress	13,915,493	33,437,200	46,621,179	6,764,285
Less accumulated depreciation	(177,242,329)	(185,194,801)	(193,317,051)	(201,213,421)
TOTAL CAPITAL ASSETS	\$209,442,743	230,242,167	253,695,408	266,438,955
TOTAL DEFERRED OUTFLOWS OF RESOURCES	3,008,510	2,234,576	3,337,061	3,337,061
TOTAL ASSETS & DEFERRED OUTFLOWS	239,429,473	311,781,260	319,961,151	321,659,575
LIABILITIES				
Current Liabilities:				
Accounts payable	4,425,139	7,995,283	2,963,943	4,425,598
Accrued interest on debt	29,472	269,790	278,075	268,529
Accrued liabilities	1,223,703	394,538	3,801,625	1,754,075
Due to the State of New Hampshire	8,224,360	14,840,625	22,730,725	24,877,195
Due to other funds	-	57,455	41,402	44,551
Compensated absences	464,536	487,273	510,735	567,658
Current portion of State of New Hampshire revolving loan fund notes payable	3,408,840	3,819,704	3,843,561	3,549,610
TOTAL CURRENT LIABILITIES	17,776,050	27,864,668	34,170,066	34,487,216
CURRENT LIABILITIES PAYABLE FROM RESTRICTED ASSETS	385,031	1,945,124	2,412,151	3,179,033
Noncurrent Liabilities:				
State of New Hampshire revolving loan fund notes payable, net of current portion	30,577,398	88,004,229	84,160,669	81,775,937
Net pension liability	7,688,058	6,563,113	9,262,693	9,262,693
Net OPEB liability	1,235,602	1,146,038	1,372,949	1,372,949
TOTAL NONCURRENT LIABILITIES	39,501,058	95,713,380	94,796,311	92,411,579
TOTAL DEFERRED INFLOWS OF RESOURCES	1,266,027	1,282,588	227,576	227,576
TOTAL LIABILITIES & DEFERRED INFLOWS	58,928,166	126,805,760	131,606,104	130,305,404
TOTAL NET POSITION	180,501,307	184,975,500	188,355,047	191,354,171
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION	\$239,429,473	\$311,781,260	\$319,961,151	\$321,659,575

Statement of Revenues, Expenditures and Changes in Net Position. The following table presents EPD’s Statement of Revenues, Expenditures and Changes in Net Position from EPD’s audited financial statements for Fiscal Years 2021, 2022 and 2023 and unaudited data for Fiscal Year 2024.

	2021	2022	2023	2024 (unaudited)
Operating Revenues				
Sewer user charges	\$ 18,584,555	\$ 18,657,674	\$ 19,986,289	\$ 21,524,610
Other operating revenues	2,617,903	2,615,990	2,874,776	3,793,809
Total Operating Revenues	<u>21,202,458</u>	<u>21,273,664</u>	<u>22,861,065</u>	<u>25,318,419</u>
Operating Expenses				
Personnel services	4,879,404	3,987,513	5,396,869	5,120,942
Plant and collection system maintenance	2,899,089	3,163,039	3,250,449	4,821,511
Light, heat and power	1,801,534	2,006,689	2,770,843	3,123,486
General and administrative	993,096	989,970	968,016	989,345
Depreciation	7,832,223	7,952,344	8,122,250	8,617,353
Total Operating Expenses	<u>18,405,346</u>	<u>18,099,555</u>	<u>20,508,427</u>	<u>22,672,637</u>
Net Operating Income	<u>2,797,112</u>	<u>3,174,109</u>	<u>2,352,638</u>	<u>2,645,782</u>
Nonoperating Revenues (Expenses)				
Interest income	8,586	50,990	851,196	1,184,516
Interest expense	(889,242)	(1,469,251)	(2,115,223)	(2,073,253)
Reimbursement of bond interest expense	327,577	260,764	179,059	136,852
Gain on sale of asset	(3,237)	(128)		
Rent and other income	9,542	26,022	8,165	13,514
Total Nonoperating Revenues (Expenses)	<u>(546,774)</u>	<u>(1,131,603)</u>	<u>(1,076,803)</u>	<u>(738,371)</u>
Income before Capital Contributions	2,250,338	2,042,506	1,275,835	1,907,411
Capital contributions	<u>3,972,059</u>	<u>2,431,687</u>	<u>2,103,712</u>	<u>370,726</u>
Change in Net Position	6,222,397	4,474,193	3,379,547	2,278,137
Net position, Beginning of Fiscal Year	174,278,910	180,501,307	184,975,500	188,355,047
Net Position, End of Fiscal Year	<u>\$ 180,501,307</u>	<u>\$ 184,975,500</u>	<u>\$ 188,355,047</u>	<u>\$ 190,633,184</u>

Financial Policies

The City and the Board of Mayor and Aldermen have adopted financial management policies to provide for (i) the prudent investment of City funds and (ii) the management of debt.

Investment Policy. The City has an adopted Investment Policy. The Finance Officer reports on investment performance to the Board of Mayor and Aldermen on a quarterly basis.

Debt Management Policy. The City has adopted debt policies and ordinances for the handling of one-time revenues, insurance reserves and undesignated fund balances.

Outstanding Sewer Obligations

As of June 30, 2024, the City had outstanding indebtedness of \$30,419,105 relating to the System, consisting of both general obligation debt of the City and state revolving fund loans. Such indebtedness is a general obligation of the City and is not legally payable from, or secured by, the Revenues. Such indebtedness does not constitute Bonds or Parity Debt under the Resolution; however, EPD has historically paid, and expects to continue to pay in the future, debt service with respect to such indebtedness from Net Revenues, after the payment of Bonds and Parity Debt.

The general debt limit of the City is 9.75% of base valuation, of which water and System projects ordered by the State Water Supply and Pollution Control Commission, self-supporting sewer debt, debt for urban redevelopment and housing purposes, and overlapping debt are excluded from the measure of indebtedness. Other water projects are subject to a separate, special debt limit of 10% of the City's base valuation. Borrowings authorized by special legislative acts rather than the general municipal finance statutes are sometimes excluded from a city or town's statutory debt limit.

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Projected Operating Results and Debt Service Coverage

The following table presents the Projected Summary of Revenues, Operating Expenses and Debt Service Coverage for Fiscal Year 2025 through and including Fiscal Year 2029 as set forth in “APPENDIX D – 2024 Bond Feasibility Report” hereto. See “APPENDIX D – 2024 Bond Feasibility Report” for a discussion of the methodology and assumptions underlying such projections. *No assurance can be given that Revenues, operating expenses and debt service coverages will be consistent with that which is projected below and in the 2024 Bond Feasibility Report. See “RISK FACTORS RELATING TO THE SERIES 2024 BONDS” herein.*

	2025	2026	2027	2028	2029
Billing Revenues					
Total Rate Revenue	\$22,595,925	\$24,634,878	\$26,844,880	\$29,274,867	\$31,207,562
Miscellaneous Revenue					
Septage Fees	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000
Granite Ridge	350,000	350,000	350,000	350,000	350,000
Outside Community	1,400,000	1,428,000	1,456,560	1,485,691	1,515,405
Reimbursement - O&M					
Interest & Misc. Income (late fees)	750,000	750,000	750,000	750,000	750,000
Tax Deposits	-	-	-	-	-
Outside Community	1,097,833	1,132,038	1,157,596	1,208,213	1,423,501
Reimbursement - Capital					
State & Federal Grants	3,797,813	665,397	651,080	636,764	622,447
Total Miscellaneous Revenue	\$ 8,795,646	\$ 5,725,435	\$ 5,765,236	\$ 5,830,668	\$ 6,061,353
Total Revenue	\$31,391,571	\$30,360,312	\$32,610,117	\$35,105,535	\$37,268,916
Operating Expenses					
Personnel	\$5,469,382	\$5,674,484	\$5,887,277	\$6,108,050	\$6,337,102
O&M	7,328,105	7,511,308	7,699,090	7,891,568	8,088,857
Worker's Compensation and Other Miscellaneous	108,000	110,700	113,468	116,304	119,212
Total Operating Expenses	\$12,905,487	\$13,296,491	\$13,699,835	\$14,115,922	\$14,545,170
Total Net Revenue for Debt Service	\$18,486,084	\$17,063,821	\$18,910,282	\$20,989,614	\$22,723,745
2021 Series Bonds	\$1,878,900	\$1,878,900	\$1,878,900	\$1,878,900	\$1,878,900
2024 Series Bonds	3,165,586	5,516,000	5,605,250	5,699,750	6,709,000
Debt Service Coverage on 2021 Series and 2024 Series Bonds	3.66	2.31	2.53	2.77	2.65
Future Revenue Bonds					
2026 Series Bonds	-	-	\$4,806,611	\$9,110,000	\$9,108,500
2028 Series Bonds	-	-	-	-	1,042,540
Debt Service Coverage on 2021 Series, 2024 Series, 2026 Series, 2028 Series Bonds	3.66	2.31	1.54	1.26	1.21
General Obligation and SRF Debt Service¹					
Existing SRF Debt Service	\$ 724,636	\$ 713,228	\$ 701,821	\$ 690,414	\$ 603,875
2021B Direct Placement	2,059,701	1,999,947	1,940,655	1,876,979	976,372
2021C Direct Placement	1,261,960	1,241,770	1,221,650	1,201,600	1,181,620
Future SRF Debt Service	1,994,606	1,957,031	1,959,269	2,292,527	3,930,731
Total General Obligation and SRF Debt Service	\$6,040,903	\$5,911,976	\$5,823,394	\$6,061,520	\$6,692,598
Total Debt Service Coverage from Net Revenues¹	1.67	1.28	1.04	0.92	0.89
Cash Balance Required to Satisfy the General Bond Resolution Rate Covenant	\$0	\$0	\$0	\$1,760,557	\$2,707,793

¹ Shown for illustrative purposes only. General Obligation System Related Bonds are unsecured general obligations of the City, with no pledge or claim on the Revenues of the System. EPD has historically paid, and expects to continue to pay in the future, debt service with respect to such indebtedness from Net Revenues, after the payment of Bonds and Parity Debt.

For purposes of satisfying the General Bond Resolution rate covenant in Fiscal Year 2028 and Fiscal Year 2029, EPD plans to deposit cash on hand to the Bond Fund at the beginning of each such fiscal year and to provide for such deposits in its annual budgets for such fiscal years.

Retirement Plans

All eligible employees of EPD participate in a City pension plan, either the Manchester Employees' Contributory Retirement System ("MECRS") or the Old System Pension Plan. MECRS has required city contributions whereas the Old System Pension Plan does not. Both plans comply with GASB 75 and use outside actuarial consultants to determine proper accounting compliance and treatment. Below is a summary of MECRS' required contributions and net pension liabilities for June 30, 2019 through June 30, 2023.

Manchester Employees' Contributory Retirement System (EPD Proportionate Share)

<u>Fiscal Year</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Percent Contributed</u>	<u>Proportionate Share of City Net Pension Liability</u>	<u>Net Pension Liability⁽¹⁾</u>	<u>Funded Ratio</u>
2023	\$854,502	\$854,502	100%	4.58%	\$8,880,806	55.90%
2022	771,332	771,332	100	4.45	6,189,114	67.40
2021	736,588	736,588	100	4.77	7,344,913	62.80
2020	607,975	607,975	100	4.28	5,914,748	62.75
2019	546,827	546,827	100	4.17	6,338,548	57.30

(1) Assumes 7.00% investment rate and 2.75% payroll growth.

The Old System was closed to new employees on January 1, 1974. As of July 1, 2023, EPD's Old System membership consisted of three retirees and beneficiaries receiving benefits. The net pension liability as of June 30, 2023 was \$381,887 and the pension expense was \$199,959. Detailed information describing EPD's Retirement Plans is included in Note 13 to the Financial Statements included in APPENDIX B to this Official Statement.

Other Post-Employment Benefits ("OPEB")

The City provides post-employment healthcare benefits for retired employees through the City's plan. The plan is funded on a pay-as-you go basis and not administered through a trust. EPD's OPEB liability as of June 30, 2023 was \$414,354 and the pension expense was \$1,522,928.

In addition to the OPEB plan, EPD participates in the Manchester Employees' Contributory Retirement System Medical Subsidy. The OPEB plan provides a medical insurance subsidy to qualified retired members. EPD's proportionate share of the MECRS Medical Subsidy net OPEB liability as of the last measurement date of December 31, 2022 was \$958,595.

Detailed information describing EPD's OPEB is included in Note 14 to the Financial Statements included in APPENDIX B to this Official Statement.

Historical and Planned Capital Improvements

For the three most recent Fiscal Years, capital improvements in the amount of \$87,012,787 were completed, primarily from proceeds of the Outstanding Bonds, from SRF loans, from excess revenues of the System and from fund balances.

EPD's Fiscal Year 2025 CIP was approved by the Board of Mayor and Aldermen on June 4, 2024. For the period Fiscal Year 2025 through Fiscal Year 2029, EPD estimates total capital spending of \$354.8 million. Of the total, \$61.9 million is for WWTP projects, \$19.9 million is for Capacity Management, Operations, and Maintenance program related projects, and \$273.0 million is for CSO related projects. See "APPENDIX D – 2024 Bond Feasibility Report" hereto for a summary of EPD's capital projects.

Risk Management

The City has a program of both self-insurance and policies for worker's compensation, health and general liability. Under this arrangement a third-party administrator manages the claims with the City Risk Manager.

RISK FACTORS RELATING TO THE SERIES 2024 BONDS

The following section describes certain special considerations and risk factors affecting the risk of nonpayment or the security for the Series 2024 Bonds. The following discussion is not meant to be an exhaustive or definitive description of the risks associated with a purchase of the Series 2024 Bonds and does not necessarily reflect the relative importance of the various risks. Potential investors are advised to consider the following special factors regarding the Series 2024 Bonds, together with all other information in this Official Statement, in order to make an informed investment decision with respect to the Series 2024 Bonds. There can be no assurance that other risk factors are not or will not become material in the future.

General

Payment of principal of and interest on the Series 2024 Bonds depends primarily upon the revenues derived from operation of the System. Some of the events which could affect the revenues received by the System are set forth below. The following discussion of risks is not meant to be an exhaustive list of the risks associated with the purchase of the Series 2024 Bonds and the order in which the risks are discussed does not necessarily reflect the relative importance of the various risks.

Limited Obligations

The Series 2024 Bonds are limited obligations of the City and are not secured by a legal or equitable pledge or charge or lien upon any property of the City or any of its income or receipts, except the Revenues. The obligation of the City to pay debt service on the Bonds from Revenues does not constitute an obligation of the City to levy or pledge any form of taxation or for which the City has levied or pledged any form of taxation.

The City is obligated under the Resolution to make debt service payments solely from Revenues, subject to the provisions of the Resolution permitting the application of Revenues and other funds for the purposes and on the terms and conditions set forth in the Resolution. There is no assurance that the City can succeed in operating the System such that the Revenues in the future will be sufficient for that purpose.

Demand, Sensitivity of Collections to Wastewater Volumes

There can be no assurance that the local demand for services provided by the System will continue according to historical levels. All residential and some non-residential customer System service charges are based on wastewater flows. Reduced wastewater flows based on drought conditions, voluntary or mandatory conservation measures, changes in usage, or other factors would result in declines in System service charge revenues. Reduction in the level of customer flows could require an increase in rates or charges in order to produce Net Revenues sufficient to comply with the Net Revenue Requirement. Such rate increases could further decrease customer demand.

System Expenses

There can be no assurance that the Operating Expenses of the System will be consistent with the levels described in this Official Statement. Changes in technology, increases in the cost of energy or other expenses and increased regulatory requirements (including increased regulation of treated wastewater discharge and emissions) would reduce Net Revenues, and could require substantial increases in rates or charges in order to comply with the Net Revenue Requirement.

Risks Relating to the 2024 Bond Feasibility Report

The projections developed using the Projected Revenues, Operating Expenses and Debt Service Coverage and described in “APPENDIX D – 2024 Bond Feasibility Report” are based in part upon the forecasts contained in the 2024 Bond Feasibility Report. No assurance can be given that actual Revenues, Operating Expenses and Debt Service Coverage will be consistent with that which is projected in the 2024 Bond Feasibility Report. See “APPENDIX D – 2024 Bond Feasibility Report” hereto. The Original Feasibility Report has not been updated since its preparation except for the specific matters and sections described in the 2024 Feasibility Report Update. The Original Feasibility Report is included for reference purposes only and neither the delivery of this Official Statement nor the sale of any of the Series 2024 Bonds implies that there has been no change in the matters and sections of the Original Feasibility Report that have not been updated by the 2024 Feasibility Report Update.

Environmental Regulation

The kind and degree of sewer treatment which is effected through the System is regulated, to a large extent, by the federal government and the State of New Hampshire. Treatment standards set forth in federal and state law control the operations of the System and mandate its use of technology. In the event that the federal government, acting through the USEPA, or the State of New Hampshire, acting through the New Hampshire Department of Environmental Services, or additional federal or state legislation, should impose stricter water quality standards upon the System, the City’s expenses could increase accordingly, and rates and charges would have to be increased to offset those expenses. It is not possible to predict the direction federal or state regulation will take with respect to wastewater quality standards, although it is likely that both will impose more stringent standards with attendant higher costs.

Limited Recourse on Default

Failure by the City to pay debt service on the Series 2024 Bonds constitutes an Event of Default under the Resolution and the Trustee is permitted to pursue remedies at law or in equity to enforce the City’s obligation to make such payments. The Series 2024 Bonds are not subject to acceleration prior to maturity.

Limitations on Remedies

The ability of the City to comply with its covenants under the Resolution and to generate Revenues sufficient to pay principal of and interest with respect to the Series 2024 Bonds may be adversely affected by actions and events outside of the control of the City and may be adversely affected by actions taken (or not taken) by voters, property owners, taxpayers or persons obligated to pay assessments, fees and charges. Furthermore, the remedies available to the owners of the Series 2024 Bonds upon the occurrence of an Event of Default under the Resolution are in many respects dependent upon judicial actions which are often subject to discretion and delay and could prove both expensive and time consuming to obtain.

In addition to the limitations on remedies contained in the Resolution, the rights and obligations under the Resolution may be subject to bankruptcy, insolvency, reorganization, arrangement, fraudulent conveyance, moratorium and other laws relating to or affecting creditors' rights, to the application of equitable principles, to the exercise of judicial discretion in appropriate cases and to limitations on legal remedies against cities in the State of New Hampshire. The opinion to be delivered by Bond Counsel concurrently with the issuance of the Series 2024 Bonds will be subject to such limitations, and the various other legal opinions to be delivered concurrently with the issuance of the Series 2024 Bonds will be similarly qualified. See "APPENDIX E – Proposed Form of Opinion of Bond Counsel" hereto. If the City fails to comply with its covenants in the Resolution or fails to pay principal of and interest due on the Series 2024 Bonds, there can be no assurance of the availability of remedies adequate to protect the interest of the holders of the Series 2024 Bonds.

Bankruptcy

The federal bankruptcy code permits a municipality, such as the City, that is insolvent or unable to meet its debts to file a petition in a court of bankruptcy for the purpose of effecting a plan to adjust its debts provided such municipality is authorized by applicable state law. No New Hampshire statute specifically authorizes a New Hampshire municipality, such as the City, to file for bankruptcy under the federal bankruptcy code.

Bankruptcy proceedings by the City could have adverse effects on the holders of the Series 2024 Bonds including (1) delay in the enforcement of their remedies, (2) subordination of their claims to those supplying goods and services to the City after the initiation of bankruptcy proceedings and to the administrative expenses of bankruptcy proceedings and (3) imposition without their consent of a reorganization plan reducing or delaying payment of the Series 2024 Bonds. The federal bankruptcy code contains provisions intended to ensure that, in any reorganization plan not accepted by at least a majority of a class of creditors, such as the holders of the Series 2024 Bonds, such creditors will have the benefit of their original claim or the "indubitable equivalent". The effect of these and other provisions of the federal bankruptcy code cannot be predicted and may be significantly affected by judicial interpretation.

The above references to the federal bankruptcy code are not to be construed as an indication that the City expects to resort to the provisions of the federal bankruptcy code.

Tax Exemption

The City has covenanted in the Resolution that it will take all actions necessary to assure the exclusion of interest with respect to the Series 2024 Bonds from the gross income of the Holders of the Series 2024 Bonds to the same extent as such interest is permitted to be excluded from gross income under the Code in the gross income of the Holders thereof for federal tax purposes. As discussed herein under "TAX MATTERS," interest on the Series 2024 Bonds could become includable in gross income

for federal income tax purposes, retroactive to the date of issuance of the Series 2024 Bonds, as a result of future acts or omissions by the City in violation of covenants obtained in connection with this financing, or in connection with changes in tax law. There is no provision in the Series 2024 Bonds or the Resolution requiring any redemption of the Series 2024 Bonds or changes in the interest rate on the Series 2024 Bonds in such event.

Additional Obligations

The Resolution permits the issuance of Bonds and Parity Debt secured by Net Revenues on a parity basis to the Outstanding Bonds and the Series 2024 Bonds. Such Additional Bonds and Parity Debt would increase debt service payable from Revenues and could adversely affect debt service coverage with respect to the Outstanding Bonds and the Series 2024 Bonds. In such event, however, the Net Revenue Requirement will remain in effect. See “SECURITY FOR THE SERIES 2024 BONDS – Rate Covenant” herein. The Resolution also permits the issuance of indebtedness secured by or payable from Revenues that is not secured on a parity basis with the Outstanding Bonds and the Series 2024 Bonds. The City currently anticipates issuing parity indebtedness and non-parity indebtedness in the next several years with respect to the System. For a discussion and description of such indebtedness, see “APPENDIX D – 2024 Bond Feasibility Report” hereto.

Climate Change

Climate change is a critical factor in the operation, design, and construction of environmental infrastructure. Current infrastructure was not designed for today’s population density, amount of impervious area, and climate change weather events and are under great stress during storm events. Therefore, EPD has taken a pro-active approach in its CIP and climate change is required to be evaluated for impacts as part of every engineering report. EPD has addressed climate change in the sizing of pipes to insure long-term capacity, motor sizes to confirm operating efficiency in a warmer environment, and snow loads on structures.

Cybersecurity

The City relies on computers and technology to conduct its operations, including the operation of the System. The City and its departments face cyber threats from time to time including, but not limited to, hacking, viruses, malware and other forms of technology attacks. While no network is completely immune from all possible compromise, the City exercises its due diligence in protecting the data it possesses and the systems it operates. To date, there have been no significant cyber-attacks on the City’s computers and technologies.

While the City is routinely maintaining its technology systems and continuously implementing new information security controls, no assurances can be given that the City’s security and operational control measures will be successful in guarding against all cyber threats and attacks. The results of any attack on the City’s computer and technology could negatively impact the City’s operations and the operation of the System, and the costs related to such attacks could be substantial.

TAX MATTERS

Opinion of Bond Counsel

In the opinion of Hawkins Delafield & Wood LLP, Bond Counsel to the City, under existing statutes and court decisions and assuming continuing compliance with certain tax covenants described herein, (i) interest on the Series 2024 Bonds is excluded from gross income for federal income tax

purposes pursuant to Section 103 of the Internal Revenue Code of 1986, as amended (the “Code”), and (ii) interest on the Series 2024 Bonds is not treated as a preference item in calculating the alternative minimum tax imposed on individuals and corporations under the Code, however interest on the Series 2024 Bonds is included in the “adjusted financial statement income” of corporations that are subject to the alternative minimum tax under Section 55 of the Code. In rendering its opinion, Bond Counsel has relied on certain representations, certifications of fact, and statements of reasonable expectations made by the City in connection with the Series 2024 Bonds, and Bond Counsel has assumed compliance by the City, with certain ongoing covenants to comply with applicable requirements of the Code to assure the exclusion of interest on the Series 2024 Bonds from gross income under Section 103 of the Code.

In the opinion of Hawkins Delafield & Wood LLP, Bond Counsel to the City, under existing statutes, interest on the Series 2024 Bonds is exempt from the New Hampshire personal income tax on interest.

Bond Counsel expresses no opinion as to any other federal, state or local tax consequences arising with respect to the Series 2024 Bonds, or the ownership or disposition thereof, except as stated above. Bond Counsel renders its opinion under existing statutes and court decisions as of the issue date, and assumes no obligation to update, revise or supplement its opinion to reflect any action thereafter taken or not taken, any fact or circumstance that may thereafter come to its attention, any change in law or interpretation thereof that may thereafter occur, or for any other reason. Bond Counsel expresses no opinion as to the consequence of any of the events described in the preceding sentence or the likelihood of their occurrence. In addition, Bond Counsel expresses no opinion on the effect of any action taken or not taken in reliance upon an opinion of other counsel regarding federal, state or local tax matters, including, without limitation, exclusion from gross income for federal income tax purposes of interest on the Series 2024 Bonds.

Certain Ongoing Federal Tax Requirements and Covenants

The Code establishes certain ongoing requirements that must be met subsequent to the issuance and delivery of the Series 2024 Bonds in order that interest on the Series 2024 Bonds be and remain excluded from gross income under Section 103 of the Code. These requirements include, but are not limited to, requirements relating to use and expenditure of gross proceeds of the Series 2024 Bonds, yield and other restrictions on investments of gross proceeds, and the arbitrage rebate requirement that certain excess earnings on gross proceeds be rebated to the federal government. Noncompliance with such requirements may cause interest on the Series 2024 Bonds to become included in gross income for federal income tax purposes retroactive to their issue date, irrespective of the date on which such noncompliance occurs or is discovered. The City has covenanted to comply with certain applicable requirements of the Code to assure the exclusion of interest on the Series 2024 Bonds from gross income under Section 103 of the Code.

Certain Collateral Federal Tax Consequences

The following is a brief discussion of certain collateral federal income tax matters with respect to the Series 2024 Bonds. It does not purport to address all aspects of federal taxation that may be relevant to a particular owner of a Series 2024 Bond. Prospective investors, particularly those who may be subject to special rules, are advised to consult their own tax advisors regarding the federal tax consequences of owning and disposing of the Series 2024 Bonds.

Prospective owners of the Series 2024 Bonds should be aware that the ownership of such obligations may result in collateral federal income tax consequences to various categories of persons, such as corporations (including S corporations and foreign corporations), financial institutions, property

and casualty and life insurance companies, individual recipients of Social Security and railroad retirement benefits, individuals otherwise eligible for the earned income tax credit, and taxpayers deemed to have incurred or continued indebtedness to purchase or carry obligations the interest on which is not included in gross income for federal income tax purposes. Interest on the Series 2024 Bonds may be taken into account in determining the tax liability of foreign corporations subject to the branch profits tax imposed by Section 884 of the Code.

Bond Premium

In general, if an owner acquires a Series 2024 Bond for a purchase price (excluding accrued interest) or otherwise at a tax basis that reflects a premium over the sum of all amounts payable on the Series 2024 Bond after the acquisition date (excluding certain “qualified stated interest” that is unconditionally payable at least annually at prescribed rates), that premium constitutes “bond premium” on that Series 2024 Bond (a “Premium Bond”). In general, under Section 171 of the Code, an owner of a Premium Bond must amortize the bond premium over the remaining term of the Premium Bond, based on the owner’s yield over the remaining term of the Premium Bond, determined based on constant yield principles (in certain cases involving a Premium Bond callable prior to its stated maturity date, the amortization period and yield may be required to be determined on the basis of an earlier call date that results in the lowest yield on such bond). An owner of a Premium Bond must amortize the bond premium by offsetting the qualified stated interest allocable to each interest accrual period under the owner’s regular method of accounting against the bond premium allocable to that period. In the case of a tax-exempt Premium Bond, if the bond premium allocable to an accrual period exceeds the qualified stated interest allocable to that accrual period, the excess is a nondeductible loss. Under certain circumstances, the owner of a Premium Bond may realize a taxable gain upon disposition of the Premium Bond even though it is sold or redeemed for an amount less than or equal to the owner’s original acquisition cost. Owners of any Premium Bonds should consult their own tax advisors regarding the treatment of bond premium for federal income tax purposes, including various special rules relating thereto, and state and local tax consequences, in connection with the acquisition, ownership, amortization of bond premium on, sale, exchange, or other disposition of Premium Bonds.

Information Reporting and Backup Withholding

Information reporting requirements apply to interest paid on tax-exempt obligations, including the Series 2024 Bonds. In general, such requirements are satisfied if the interest recipient completes, and provides the payor with, a Form W-9, “Request for Taxpayer Identification Number and Certification”, or if the recipient is one of a limited class of exempt recipients. A recipient not otherwise exempt from information reporting who fails to satisfy the information reporting requirements will be subject to “backup withholding”, which means that the payor is required to deduct and withhold a tax from the interest payment, calculated in the manner set forth in the Code. For the foregoing purpose, a “payor” generally refers to the person or entity from whom a recipient receives its payments of interest or who collects such payments on behalf of the recipient.

If an owner purchasing a Series 2024 Bond through a brokerage account has executed a Form W-9 in connection with the establishment of such account, as generally can be expected, no backup withholding should occur. In any event, backup withholding does not affect the excludability of the interest on the Series 2024 Bonds from gross income for federal income tax purposes. Any amounts withheld pursuant to backup withholding would be allowed as a refund or a credit against the owner’s federal income tax once the required information is furnished to the Internal Revenue Service.

Miscellaneous

Tax legislation, administrative actions taken by tax authorities, or court decisions, whether at the federal or state level, may adversely affect the tax-exempt status of interest on the Series 2024 Bonds under federal or state law or otherwise prevent beneficial owners of the Series 2024 Bonds from realizing the full current benefit of the tax status of such interest. In addition, such legislation or actions (whether currently proposed, proposed in the future, or enacted) and such decisions could affect the market price or marketability of the Series 2024 Bonds.

Prospective purchasers of the Series 2024 Bonds should consult their own tax advisors regarding the foregoing matters.

LEGAL MATTERS

Hawkins Delafield & Wood LLP, New York, New York, Bond Counsel to the City, will render its approving opinion as to the validity and legality of the Series 2024 Bonds the form of which is annexed hereto in APPENDIX E. Certain legal matters will be passed upon for the Underwriters by their counsel, Nixon Peabody LLP, Manchester, New Hampshire.

LITIGATION

In the opinion of the City Solicitor, no litigation of any nature is now pending or, to her knowledge, threatened restraining or enjoining the issuance or delivery of the Series 2024 Bonds or the levy or collection of any sewer fees and charges to pay the interest on or principal of the Series 2024 Bonds, or in any manner questioning the authority or proceedings for the issuance of the Series 2024 Bonds or for the levy or collection of said sewer fees and charges, or relating to the Series 2024 Bonds or affecting the validity thereof or the levy or collection of said sewer fees and charges, and neither the corporate existence or boundaries of the City nor the title of any of the present officers thereof to their respective offices is being contested, and no authority or proceedings for the issuance of the Series 2024 Bonds has or have been repealed, revoked or rescinded. In the opinion of the City Solicitor, there is no pending litigation likely to result, either individually or in the aggregate, in final judgment against the City that would materially adversely affect its financial position or which is not otherwise adequately covered by the City insurance.

SECONDARY MARKET DISCLOSURE

In order to assist the Underwriters in complying with Rule 15c2-12 promulgated by the Securities and Exchange Commission (“Rule 15c2-12”), on the date of issuance of the Series 2024 Bonds, the City and the Trustee will enter into a Continuing Disclosure Agreement (the “Continuing Disclosure Agreement”). Pursuant to the Continuing Disclosure Agreement, the City will undertake to provide, on or before the last day of the tenth month after the close of each Fiscal Year while the Series 2024 Bonds are outstanding, commencing with the Fiscal Year ended June 30, 2024, for filing with the Municipal Securities Rulemaking Board (the “MSRB”), on an annual basis, financial and operating information of the type hereinafter described and included in this Official Statement, which is referred to herein as “Annual Information”, together with the annual financial statements of EPD prepared in accordance with Generally Accepted Accounting Principles as prescribed from time to time for governmental units by the Governmental Accounting Standards Board, the Financial Accounting Standards Board or any successor to either. In addition, the City will undertake, for the benefit of the holders of the Series 2024 Bonds, to provide to the MSRB, in a timely manner not in excess of ten (10) business days after the occurrence of the specified event, the notices required to be provided by Rule 15c2-12 and described below (the “Notices”).

“Annual Information” means, collectively, (i) updated versions of the following financial information and operating data contained in this Official Statement, for each Fiscal Year of the City, as follows: (a) to the extent not included in the audited financial statements, the information appearing in this Official Statement under the following headings: “DEBT SERVICE REQUIREMENTS”; “THE SYSTEM – Intermunicipal Agreements – Annual Revenue From Towns”, “THE SYSTEM – Service Area and Users – Customer Accounts by Customer Type” and “– Top 10 Customers by Revenue”; and “SYSTEM FINANCIAL INFORMATION – System Financial Statements – Balance Sheet” and “– Statement of Revenues, Expenditures and Changes in Net Position”, “SYSTEM FINANCIAL INFORMATION – Retirement Plans – Manchester Employees’ Contributory Retirement System (EPD Proportionate Share)”; provided, however, that references to this Official Statement for the Bonds as a means of identifying such financial information and operating data shall not prevent the City from reorganizing such material in annual information reports and (b) to the extent not included in the audited financial statements or the information provided pursuant to (a) above, historic financial information and historic operating data of that type included in each of the following charts set forth in “APPENDIX A – General, Economic and Demographic Information Relating to the City of Manchester, New Hampshire” hereto (but only to the extent reasonably available, without requiring the retention of outside professionals): City Employment and Payrolls, City Annual Average Employment and Wages, City Labor Force and Employment and Unemployment Rates, City’s Largest Employers and City’s Largest Taxpayers; provided, however, that the references to APPENDIX A of this Official Statement for the Series 2024 Bonds as a means of identifying such financial information and historic operating data shall not prevent the City from reorganizing such material in annual information reports; and (ii) the information regarding amendments to the Continuing Disclosure Agreement required pursuant to the provisions of the Continuing Disclosure Agreement. Annual Information shall include audited financial statements, if available, or unaudited financial statements.

The “Notices” include notices of any of the following events with respect to the Series 2024 Bonds: (1) principal and interest payment delinquencies; (2) non-payment related defaults, if material; (3) unscheduled draws on debt service reserves reflecting financial difficulties; (4) unscheduled draws on credit enhancements reflecting financial difficulties; (5) substitution of credit or liquidity providers, or their failure to perform; (6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices of determinations with respect to the tax status of the Series 2024 Bonds, or other material events affecting the tax-exempt status of the Series 2024 Bonds; (7) modifications to rights of holders of the Series 2024 Bonds, if material; (8) bond calls (other than mandatory sinking fund redemptions) if material and tender offers; (9) defeasances; (10) release, substitution, or sale of property securing repayment of the Series 2024 Bonds, if material; (11) rating changes; (12) bankruptcy, insolvency, receivership or similar event of the City; (13) the consummation of a merger, consolidation, or acquisition involving the City or the sale of all or substantially all of the assets of the City, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; (14) appointment of a successor or additional trustee or the change of name of a trustee, if material; (15) incurrence of a financial obligation (as defined in Rule 15c2-12) of the City with respect to the System, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar items of a financial obligation of the City with respect to the System, any of which affect holders of the Series 2024 Bonds, if material; and (16) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation of the City with respect to the System, any of which reflect financial difficulties.

The sole and exclusive remedy for breach or default under the Continuing Disclosure Agreement to provide continuing disclosure described above is an action to compel specific performance of the undertaking of the City, and no person, including any holder of the Series 2024 Bonds, may recover

monetary damages thereunder under any circumstances. In addition, if all or any part of Rule 15c2-12 ceases to be in effect for any reason, then the information required to be provided under the undertaking, insofar as the provision of Rule 15c2-12 no longer in effect required the providing of such information, shall no longer be required to be provided.

The foregoing is intended to set forth a general description of the type of financial information and operating data that will be provided; the descriptions are not intended to state more than general categories of financial information and operating data; and where the Continuing Disclosure Agreement calls for information that no longer can be generated because the operations to which it related have been materially changed or discontinued, a statement to that effect will be provided. The Continuing Disclosure Agreement, however, may be amended or modified without consent of the holders of the Series 2024 Bonds under certain circumstances set forth in the Continuing Disclosure Agreement. Copies of the Continuing Disclosure Agreement, when executed by the City and Trustee upon the delivery of the Series 2024 Bonds, will be on file at the office of the Finance Officer of the City.

In connection with the previous issuance of the Outstanding Bonds, the City entered into an agreement to provide continuing disclosure for the benefit of the beneficial owners of the Outstanding Bonds, which agreement is similar to the Continuing Disclosure Agreement. In the past five years, there were late filings of certain operating data for Fiscal Year 2022 and Fiscal Year 2023. Such Fiscal Year 2022 data were filed on September 8, 2023, and such Fiscal Year 2023 data were filed on September 30, 2024. In addition, there were late filings with respect to two State revolving fund loans. The City has taken steps to assure that future filings will be completed on a timely basis.

MUNICIPAL ADVISOR

PFM Financial Advisors LLC, Boston, Massachusetts has served as Municipal Advisor to the City in connection with the issuance of the Series 2024 Bonds.

INDEPENDENT ACCOUNTANTS

The audited financial statements of EPD for the year ended June 30, 2023, is included in APPENDIX B to this Official Statement and have been audited by Marcum LLP, independent accountant, as stated in its report appearing in APPENDIX B. Marcum LLP, EPD's independent auditor, has not been engaged to perform, and has not performed, since the date of its report included herein, any procedures on the financial statements addressed in that reports nor has Marcum LLP performed any procedures relating to this Official Statement. Marcum LLP has consented to the inclusion of its report in this Official Statement.

FEASIBILITY CONSULTANT

In connection with the issuance of the Series 2024 Bonds, CDM Smith was engaged to prepare the 2024 Feasibility Report Update, which updates the Original Feasibility Report that was prepared in 2021 in connection with the issuance of the Outstanding Bonds. The Original Feasibility Report and the 2024 Feasibility Report Update (which are together referred to herein as the 2024 Bond Feasibility Report) are included as APPENDIX D to this Official Statement. The Original Feasibility Report is included for informational purposes only. See "RISK FACTORS – Risks Relating to the 2024 Bond Feasibility Report." Matters addressed in the 2024 Bond Feasibility Report are based on various assumptions and methodologies and are subject to certain qualifications. Reference is hereby made to the entire 2024 Bond Feasibility Report for such important opinions, projections, qualifications and assumptions. CDM Smith has consented to the inclusion of its 2024 Bond Feasibility Report in this Official Statement.

UNDERWRITING

The Series 2024 Bonds are being purchased for reoffering by the Underwriters listed on the cover hereof (the “Underwriters”) for whom Raymond James & Associates, Inc. is acting as the representative. The Series 2024 Bonds are being purchased by the Underwriters pursuant to the terms of a Contract of Purchase for the Series 2024 Bonds with the City. Pursuant to the Contract of Purchase, the Underwriters have agreed to purchase not less than all of the Series 2024 Bonds at the net aggregate purchase price of \$ _____, which is equal to the par amount of the Series 2024 Bonds plus original premium of \$ _____ and less an underwriters’ discount of \$ _____. The Underwriters may offer and sell the Series 2024 Bonds to certain dealers (including dealers depositing the Series 2024 Bonds into unit investment trusts) and others at prices lower or yields higher than the public offering prices or yields stated on the inside cover page of this Official Statement. The initial offering prices or yields may be changed from time to time by the Underwriters.

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

J.P. Morgan Securities LLC (“JPMS”), one of the Underwriters of the Series 2024 Bonds, has entered into negotiated dealer agreements (each, a “Dealer Agreement”) with each of Charles Schwab & Co., Inc. (“CS&Co.”) and LPL Financial LLC (“LPL”) for the retail distribution of certain securities offerings at the original issue prices. Pursuant to each Dealer Agreement, each of CS&Co. and LPL may purchase Series 2024 Bonds from JPMS at the original issue price less a negotiated portion of the selling concession applicable to any Series 2024 Bonds that such firm sells.

RATING

S&P Global Ratings (“S&P”) has assigned a rating of “AA-” to the Series 2024 Bonds. The City furnished S&P with information contained in this Official Statement and certain other materials and information about the City. Generally, rating agencies base their ratings on such materials and information, as well as investigations, studies and assumptions developed by the rating agencies.

A rating, including any related outlook with respect to potential changes in such ratings, reflects only the view of the agency giving such rating and is not a recommendation to buy, sell or hold the Series 2024 Bonds. An explanation of the significance of a rating may be obtained only from the rating agency furnishing the same. The rating of the Series 2024 Bonds may be changed at any time, and no assurance can be given that it will not be revised downward or withdrawn entirely by S&P if, in the judgment of S&P, circumstances so warrant. Any such downward revision or withdrawal of the rating is likely to have an adverse effect on the market price of the Series 2024 Bonds.

MISCELLANEOUS

The references herein to the Enabling Act, the General Resolution, the Second Supplemental, the Series 2024 Bonds and the Continuing Disclosure Agreement are made subject to all of the respective provisions thereof, to which reference is hereby made for further information. The references thereto in this Official Statement do not purport to be complete statements thereof. The agreement of the City with the holders of the Series 2024 Bonds is fully set forth in the Resolution, and neither any advertisement of such Series 2024 Bonds nor this Official Statement is to be construed as a contract with the purchasers of such Series 2024 Bonds. All appendices to this Official Statement are hereby incorporated as integral parts of this Official Statement. So far as any statements are made in this Official Statement involving matters of opinion or estimate, whether or not expressly so stated, they are intended merely as such and not as presentations of fact. Copies of the documents mentioned in this paragraph are on file at the offices of the City and of the Trustee.

CITY OF MANCHESTER, NEW HAMPSHIRE

By: _____
Mayor

By: _____
Finance Officer

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APPENDIX A

**GENERAL, ECONOMIC AND DEMOGRAPHIC INFORMATION
RELATING TO THE CITY OF MANCHESTER, NEW HAMPSHIRE**

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General

The City of Manchester, New Hampshire (the “City”) is the largest city north of Boston, Massachusetts. The City has a population of approximately 115,644 and occupies a land area of 33 square miles. This Appendix sets forth employment information and other demographic information concerning the economy of the City.

Employment

The City has a diversified industrial economy. The following table lists the major categories of payroll and employment for the City for calendar years 2018 through 2022, and for the third quarter of calendar year 2023.

City Employment and Payrolls

Year	Type	Number of Firms	Payroll	Average Employment
3rd Quarter 2023	Goods Producing	365	\$ 583,687,520	7,768
	Service Producing	2,776	3,868,510,464	55,353
	Total	3,141	\$ 4,452,197,984	63,121
2022	Goods Producing	363	\$ 644,941,440	7,656
	Service Producing	2,794	3,956,404,140	54,541
	Total	3,157	\$ 4,601,345,580	62,197
2021	Goods Producing	371	\$ 545,575,955	7,536
	Service Producing	2,778	3,608,673,269	53,023
	Total	3,149	\$ 4,154,249,224	60,559
2020	Goods Producing	344	\$ 602,605,533	7,233
	Service Producing	2,730	3,405,130,334	52,039
	Total	3,074	\$ 4,007,735,867	59,272
2019	Goods Producing	346	\$ 519,316,602	7,523
	Service Producing	2,801	3,359,209,305	57,185
	Total	3,147	\$ 3,878,525,907	64,708
2018	Goods Producing	335	\$ 496,972,350	7,438
	Service Producing	2,793	3,258,315,065	57,243
	Total	3,128	\$ 3,775,287,415	64,681

Source: NH Department of Employment Security Covered Employment and Wage annual averages.

City Annual Average Employment and Wages

The following table lists the average annual employment and wages for the City for the fourth quarter of calendar year 2023.

Industry	Units	Annual Average Employment	Average Weekly Wage
Total, Private plus Government	3,202	69,902	\$1,492.00
Total Private	3,136	62,674	1,492.00
Goods-Producing Industries	366	7,693	1,860.00
Construction*			
Manufacturing*			
Service-Providing Industries	2,770	54,981	1,441.00
Wholesale Trade*			
Retail Trade*			
Transportation and Warehousing*			
Information*			
Finance and Insurance*			
Real Estate and Rental and Leasing*			
Professional and Technical Services*			
Management of Companies and Enterprises*			
Administrative and Waste Services*			
Educational Services*			
Health Care and Social Assistance*			
Arts, Entertainment, and Recreation*			
Accommodation and Food Services*			
Other Services, Except Public Administration*			
Total Government	66	7,228	1492.00
Federal Government	28	2,743	1858.00
State Government	30	1,079	1128.00
Local Government	8	3,406	1312.00

* As of the date of this Official Statement, the Economic and Labor Market Information Bureau has not yet released data.

Source: New Hampshire Employment Security, Economic and Labor Market Information Bureau, www.nhes.nh.gov/elmi.

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Labor Force and Employment and Unemployment Rates

The following table sets forth the City's average labor force and unemployment rates for calendar years 2012 through 2022 and for the first quarter of calendar year 2023 as well as the unemployment rates for New Hampshire, New England and the United States as a whole for the same periods.

City		Annual Average Unemployment Rate			
Year	Labor Force	Manchester	New Hampshire	New England	United States
2023	63,960	2.3 %	2.6 %	3.3 %	3.6 %
2022	64,250	2.7	2.4	4.0	3.8
2021	62,940	4.0	6.7	6.9	5.3
2020	65,257	7.8	6.7	8.0	8.1
2019	65,581	2.7	2.6	3.1	3.7
2018	64,854	2.7	2.6	3.5	3.9
2017	63,560	3.0	2.8	3.8	4.4
2016	62,703	3.0	2.9	4.1	4.9
2015	61,995	3.7	3.4	4.9	5.3
2014	61,931	4.7	4.3	5.9	6.2
2013	61,547	5.7	5.1	6.9	7.4
2012	61,261	6.2	5.5	7.2	8.1

Source: NH Department of Employment Security, Economic and Labor Market Information Bureau.

Largest Employers

The following table lists the largest employers in the City, exclusive of the City itself.

Name	Product/Function	Employees
Hannaford Brothers	Retail Supermarket	5,300
Elliot Hospital	Acute Care	4,000
Southern NH University	Education	3,386
Catholic Medical Center	Acute Care	2,854
Home Depot	Retail Hardware	2,571
Eversource	Electric Utility	1,138
United Parcel Service	Package Transportation	1,131
Macy's	Retail	900
TD Bank	Financial Services	850
Veterans Affairs Medical Center	Health Care	850
Comcast	Media & Technology	800
Staples	Office Supplies	671
Citizens Bank	Financial Services	630

Source: 2023 Book of Lists, NH Business Review.

Largest Taxpayers

The following table lists the ten largest taxpayers in the City for tax year 2023. The ten largest taxpayers in the City for tax year 2023 were businesses representing a diverse array of industries and made up only 6.94% of the City's total assessed valuation.

Taxpayer	2023 Taxable Assessed Value	Percentage of Total City Taxable Assessed Value
Public Service Co. of NH	\$ 201,208,600	1.50%
Energy North Natural Gas, Inc.	157,153,400	1.17
Manchester Mall Realty Trust	154,075,400	1.15
PRCP-NH Manchester LLC	80,282,000	0.60
SMC Waterford PL Apts, LP	77,495,800	0.58
Wellington DHC, LLC	65,299,400	0.49
Village Circle Way	61,884,400	0.46
The Timbers	47,646,600	0.35
1200 Elm Street, LLC	43,920,800	0.33
Greenview Associates LP	<u>43,445,000</u>	<u>0.32</u>
Total	\$932,411,400	6.94%

Source: City of Manchester, Board of Assessor.

Building Permits

The following table sets forth the number of building permits issued by the City for public and private construction projects and their estimated construction costs for Fiscal Years 2014 through December 31, 2023 and for the first six months of Fiscal Year 2024.

Fiscal Year	New Construction		Additions and Alterations⁽¹⁾		Total	
	Residential	Non-Residential	Residential	Non-Residential	Permits Issued	Estimated Cost
2024	\$ 8,865,756	\$72,059,154	\$ 6,479,925	\$ 49,226,454	448	\$136,631,289
2023	26,036,636	60,021,066	16,354,364	114,720,872	958	217,132,938
2022	29,111,996	3,940,650	14,914,351	90,450,580	1,071	138,417,577
2021	21,616,653	22,494,490	10,714,470	74,388,244	1,018	129,213,857
2020	21,315,843	35,335,256	8,225,146	190,236,523	947	256,719,921
2019	25,673,428	10,643,806	9,914,312	88,873,037	1,070	135,104,583
2018	25,251,938	8,678,547	11,244,597	100,991,639	1,173	146,166,721
2017	25,445,682	6,751,532	20,151,063	85,158,062	1,938	137,506,339
2016	39,077,167	6,264,350	27,820,848	68,348,661	2,014	141,511,026
2015	48,511,699	2,592,037	18,722,555	53,574,125	1,894	123,400,416
2014	19,720,255	5,859,352	15,596,457	49,027,293	1,796	90,203,357

(1) Includes Residential & Non-Residential Accessory Buildings

Source: Department of Planning & Community Development.

APPENDIX B

**CITY OF MANCHESTER, NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION FINANCIAL STATEMENTS AND
SUPPLEMENTAL INFORMATION FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

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**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION
(AN ENTERPRISE FUND OF THE CITY OF MANCHESTER, NEW HAMPSHIRE)**

**FINANCIAL STATEMENTS
AND SUPPLEMENTARY INFORMATION**

FOR THE YEAR ENDED JUNE 30, 2023

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

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INDEPENDENT AUDITORS' REPORT

To the Honorable Board of Mayor and Aldermen
Environmental Protection Division

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of the Environmental Protection Division (the EPD) (an enterprise fund of the City of Manchester, New Hampshire), as of and for the year ended June 30, 2023, and the related notes to the financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the financial position of the Environmental Protection Division as of June 30, 2023, and the changes in financial position and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States (*Government Auditing Standards*). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the EPD and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the EPD's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 EPD's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the EPD's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Reporting Entity

As discussed in Note 1 to the financial statements, the financial statements of the Environmental Protection Division are intended to present the financial position and the changes in financial position and cash flows of only that portion of the City of Manchester, New Hampshire that is attributable to the transactions of the EPD. They do not purport to, and do not, present fairly the financial position of the City of Manchester, New Hampshire as of June 30, 2023, and the changes in its financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis and certain pension and OPEB schedules be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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 evidence sufficient to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the EPD's financial statements. The accompanying supplementary schedule appearing on page 52 is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the basic financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated April 23, 2024 on our consideration of the EPD's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely 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 the effectiveness of the EPD's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the EPD's internal control over financial reporting and compliance.

Marcum LLP

Andover, MA
April 23, 2024

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

MANAGEMENT'S DISCUSSION AND ANALYSIS

JUNE 30, 2023

Within this section of the City of Manchester, New Hampshire Environmental Protection Division's (the EPD) annual financial report, management provides a narrative discussion and analysis of the EPD's financial activities for the year ended June 30, 2023. The EPD's performance is discussed and analyzed within the context of the accompanying financial statements and disclosures following this section.

Overview of the Financial Statements

The EPD is an enterprise fund of the City of Manchester, New Hampshire. An enterprise fund is established to account for the operations that are financed and operated in a manner similar to businesses found in the private sector, where fees are charged to external parties to cover the costs of providing goods and services. An enterprise fund uses the accrual basis of accounting and accordingly, revenues are recognized when earned and expenses are recognized as incurred.

The discussion and analysis is intended to serve as an introduction to the basic financial statements. The basic financial statements include (1) the Statement of Net Position, (2) the Statement of Revenues, Expenses and Changes in Net Position, (3) the Statement of Cash Flows, and (4) Notes to the Financial Statements.

The Statement of Net Position is designed to indicate our financial position at specific points in time. At June 30, 2023, it shows our net position of \$188,355,047 which comprises \$142,960,453 invested in capital assets, \$1,112,091 restricted for equipment replacement, and \$44,282,503 unrestricted.

The Statement of Revenues, Expenses, and Changes in Net Position summarizes our operating results and reveals how much, if any, of a profit was earned for the year. As discussed in more detail below, our change in net position for the year ended June 30, 2023 was \$3,379,547.

The Statement of Cash Flows provides information about cash receipts, cash payments, investing, and financing activities during the accounting period. A review of our Statement of Cash Flows indicates that cash receipts from operating activities adequately covered our operating expenses and debt service requirements in fiscal year 2023.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

MANAGEMENT’S DISCUSSION AND ANALYSIS

JUNE 30, 2023

The following is a summary of the EPD’s financial data for the prior two fiscal years.

Summary of Net Position

	2023	2022
Assets		
Current and other assets	\$ 62,928,682	\$ 79,304,517
Capital assets	253,695,408	230,242,167
Total Assets	316,624,090	309,546,684
Deferred Outflows of Resources	3,337,061	2,234,576
Total Assets and Deferred Outflows of Resources	319,961,151	311,781,260
Liabilities		
Long-term liabilities	98,639,872	99,533,084
Other liabilities	32,738,656	25,990,088
Total Liabilities	131,378,528	125,523,172
Deferred Inflows of Resources	227,576	1,282,588
Net Position		
Net investment in capital assets	142,960,453	123,425,400
Restricted for equipment replacement	1,112,091	1,011,527
Unrestricted	44,282,503	60,538,573
Total Net Position	188,355,047	184,975,500
Total Liabilities, Deferred Inflows of Resources, and Net Position	\$ 319,961,151	\$ 311,781,260

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

MANAGEMENT'S DISCUSSION AND ANALYSIS

JUNE 30, 2023

Summary of Changes in Net Position

	2023	2022
Operating revenues	\$ 22,861,065	\$ 21,273,664
Operating expenses	20,508,427	18,099,555
Operating Income	2,352,638	3,174,109
Nonoperating revenues (expenses), net	(1,076,803)	(1,131,603)
Capital contributions	2,103,712	2,431,687
Change in Net Position	3,379,547	4,474,193
Net Position - Beginning of Year	184,975,500	180,501,307
Net Position - End of Year	\$ 188,355,047	\$ 184,975,500

Financial Highlights

- User charges were \$19,986,289 in fiscal year 2023, an increase of \$1,328,615 from the prior year. Other operating revenues were \$2,874,776 in fiscal year 2023, an increase of \$258,786 from the prior year.
- Operating expenses totaled \$20,508,427 in fiscal year 2023, an increase of \$2,408,872 from the prior year.
- Nonoperating revenues (expenses), were (\$1,076,803) in fiscal year 2023, a decrease of \$54,800 from the prior year.
- In fiscal year 2015, EPD combined billing and collections with the City of Manchester's Water Works Department. The Water Works Department handles all billing and collections for the EPD. The EPD reimburses the Water Works Department \$400,000 a year for these services rendered on behalf of the EPD.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

MANAGEMENT'S DISCUSSION AND ANALYSIS

JUNE 30, 2023

Capital Assets and Debt Administration

Capital Assets

Total capital assets at year-end amounted to \$253,695,408 (net of accumulated depreciation), an increase of \$23,453,241 from the prior year. Additionally, \$21,026,692 from construction in progress was moved to depreciable assets. This investment in depreciable capital assets includes land, structures and improvements, interceptors, equipment and vehicles, and infrastructure assets.

Long-Term Debt

At the end of the current fiscal year, total bonded debt and loans payable was \$88,004,230.

Additional information on capital assets, debt, and other long-term liabilities can be found in the Notes to the Financial Statements.

Requests for Information

This financial report is designed to provide a general overview of the City of Manchester Environmental Protection Division's finances for all those with an interest in the EPD's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Accounting/Business Services Officer
City of Manchester Environmental Protection Division
300 Winston Street
Manchester, New Hampshire 03103

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

STATEMENT OF NET POSITION

JUNE 30, 2023

Assets

Current Assets

Cash and short-term investments	\$ 9,852,743
Accounts receivable	1,734,810
Unbilled receivables	5,550,925
Accrued interest receivable	75,418
Prepaid expenses	320,844
Inventory	90,499
Current portion of long-term assets	
Due from local governments	365,562
Due from the State of New Hampshire	535,466

Total Current Assets 18,526,267

Noncurrent Assets

Restricted cash and short-term investments	33,055,078
Due from local governments	5,174,012
Due from the State of New Hampshire	6,173,325
Capital assets	
Land	1,604,049
Wastewater treatment plant, receiving and pump stations	122,688,340
Interceptors	107,029,302
Other improvements - collection systems and misc. sewers	137,635,714
Equipment and vehicles	31,433,875
Construction-in-progress	46,621,179
Less accumulated depreciation	<u>(193,317,051)</u>

Total Noncurrent Assets 298,097,823

Deferred Outflows of Resources

Deferred outflows - pension related	2,897,056
Deferred outflows - OPEB related	<u>440,005</u>

Total Deferred Outflows of Resources 3,337,061

Total Assets and Deferred Outflows of Resources \$ 319,961,151

The accompanying notes are an integral part of these financial statements.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

STATEMENT OF NET POSITION (CONTINUED)

JUNE 30, 2023

Liabilities

Current Liabilities

Accounts payable	\$ 2,963,943
Accrued interest on debt	278,075
Accrued liabilities	3,801,625
Due to the State of New Hampshire	22,730,725
Other current liabilities	41,402
Compensated absences liability	510,735
Current portion of long-term liabilities	
Bonds and loans payable	<u>3,843,561</u>

Total Current Liabilities

34,170,066

Current Liabilities Payable From Restricted Assets

Retainage payable	2,412,151
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Noncurrent Liabilities

Bonds and loans payable, net of current portion	84,160,669
Net pension liability	9,262,693
Net OPEB liability	<u>1,372,949</u>

Total Noncurrent Liabilities

94,796,311

Deferred Inflows of Resources

Deferred inflows - pension related	91,965
Deferred inflows - OPEB related	<u>135,611</u>

Total Deferred Inflows of Resources

227,576

Total Liabilities and Deferred Inflows of Resources

131,606,104

Net Position

Net investment in capital assets	142,960,453
Restricted for equipment replacement	1,112,091
Unrestricted	<u>44,282,503</u>

Total Net Position

188,355,047

**Total Liabilities, Deferred Inflows of Resources,
and Net Position**

\$ 319,961,151

The accompanying notes are an integral part of these financial statements.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

FOR THE YEAR ENDED JUNE 30, 2023

Operating Revenues	
Sewer user charges	\$ 19,986,289
Other operating revenues	<u>2,874,776</u>
Total Operating Revenues	<u>22,861,065</u>
Operating Expenses	
Personnel services	5,396,869
Plant and collection system maintenance	3,250,449
Light, heat, and power	2,770,843
General and administrative	968,016
Depreciation	<u>8,122,250</u>
Total Operating Expenses	<u>20,508,427</u>
Net Operating Income	<u>2,352,638</u>
Nonoperating Revenues (Expenses)	
Interest income	851,196
Interest expense	(2,115,223)
Reimbursement of bond interest expense	179,059
Rent and other income	<u>8,165</u>
Total Nonoperating Revenues (Expenses), Net	<u>(1,076,803)</u>
Income Before Capital Contributions	1,275,835
Capital contributions	<u>2,103,712</u>
Change in Net Position	3,379,547
Net Position, Beginning of Year	<u>184,975,500</u>
Net Position, End of Year	<u><u>\$ 188,355,047</u></u>

The accompanying notes are an integral part of these financial statements.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED JUNE 30, 2023

Cash Flows From Operating Activities	
Cash received from customers	\$ 21,659,483
Payments to suppliers	(6,654,050)
Payments for wages and benefits	<u>(4,581,688)</u>
Net Cash Provided by Operating Activities	<u>10,423,745</u>
Cash Flows From Non-Capital Financing Activities	
Rent and other income	<u>8,165</u>
Net Cash Provided by Non-Capital and Related Financing Activities	<u>8,165</u>
Cash Flows From Capital and Related Financing Activities	
Acquisition and construction of capital assets	(33,139,351)
Contributed capital by federal, state, and local governments	2,958,607
Principal paid on general obligation bonds and loans	(3,515,287)
Proceeds from revolving loan fund	7,890,100
Interest paid on loans payable	(2,106,938)
Reimbursement of bond interest expense	<u>(118,568)</u>
Net Cash (Used for) Capital and Related Financing Activities	<u>(28,031,437)</u>
Cash Flows From Investing Activities	
Interest and other income	<u>851,196</u>
Net Cash Provided by Investing Activities	<u>851,196</u>
Net Change in Cash and Short-Term Investments	(16,748,331)
Cash and Short-term Investments, Beginning of Year	<u>59,656,152</u>
Cash and Short-term Investments, End of Year	<u>\$ 42,907,821</u>

The accompanying notes are an integral part of these financial statements.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

STATEMENT OF CASH FLOWS (CONTINUED)

FOR THE YEAR ENDED JUNE 30, 2023

Reconciliation of Operating Income to Net Cash

Provided by Operating Activities

Operating income	\$ 2,352,638
Adjustments to reconcile operating income to net cash provided by operating activities:	
Depreciation	8,122,250
Change in assets, liabilities, and deferred inflows/outflows	
Accounts receivable	(177,236)
Unbilled receivables	(1,024,343)
Inventory	(29,551)
Prepaid expenses	(3,177)
Deferred outflows of resources	(1,102,485)
Accounts payable	(314,535)
Accrued liabilities	721,296
Due to other funds	(16,053)
Compensated absences liability	23,462
Net pension liability	2,699,580
Net OPEB liability	226,911
Deferred inflows of resources	<u>(1,055,012)</u>
Net Cash Provided by Operating Activities	<u>\$ 10,423,745</u>

The accompanying notes are an integral part of these financial statements.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

REPORTING ENTITY

The City of Manchester, New Hampshire Department of Public Works Environmental Protection Division (the EPD) is reported as an enterprise fund and a business-type activity in the financial statements of the City of Manchester, New Hampshire (the City). The EPD operates the sewage treatment plant, sewage pumping stations, and collection systems and is responsible for all services relating to the transportation and treatment of sewage for the City.

The accounting policies of the EPD conform to accounting principles generally accepted in the United States of America (GAAP) as applicable to governmental units. The Governmental Accounting Standards Board (GASB) is the accepted standard setting body for establishing governmental and financial reporting principles.

MEASUREMENT FOCUS, BASIS OF ACCOUNTING, AND FINANCIAL STATEMENT PRESENTATION

The financial statements of the EPD are prepared using the *economic resources measurement focus* and the *accrual basis of accounting*. Under this method, revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows.

The financial statements distinguish operating revenues and expenses from nonoperating revenues and expenses. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with ongoing principal operations. All other revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

CASH AND SHORT-TERM INVESTMENTS

All cash and short-term investments are managed by the City and consist of deposits in interest bearing checking accounts and the New Hampshire Public Deposit Investment Pool (the NHPDIP), an external investment pool. The NHPDIP operates in accordance with RSA 383:22 and its regulations and is under the control of the New Hampshire Banking Commission and Advisory Committee. Participation units of the NHPDIP are considered short-term for financial statement presentation purposes due to their high liquidity and are carried at amortized cost in accordance with GASB Statement 79.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

RECEIVABLES

Accounts receivable comprises unpaid revenues for septage and sewer fees. The EPD periodically evaluates accounts receivable for collectability. Management believes that an allowance for uncollectible accounts would be immaterial to the financial statements and has not recorded an allowance at June 30, 2023.

UNBILLED REVENUES

Unbilled revenues represent sewer usage and service charges earned during the fiscal period but not yet billed.

INVENTORY

Inventory consists of chemicals and oil and is recorded at cost on a first-in, first-out basis.

CAPITAL ASSETS

Capital assets are recorded at historical cost whether purchased or constructed. Donated capital assets are recorded at acquisition value at the date of donation. Capital projects not completed by the end of the fiscal year are classified as construction-in-progress and recorded at cost. Assets with individual values greater than or equal to \$25,000 and an estimated useful life greater than or equal to three years are capitalized. Costs of normal maintenance and repairs that do not add to the value of the asset, or do not materially extend the life of the asset, are not capitalized. Routine maintenance and repairs are charged to expense accounts as incurred.

Depreciation of these assets is computed using the straight-line method over the following estimated useful lives of the related assets:

WWTP and pump stations	25 years
Interceptors and receiving station	50 years
Collection systems and miscellaneous	25 to 50 years
Equipment and vehicles	3 to 20 years

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

COMPENSATED ABSENCES

Full-time employees are entitled to vacation and sick leave with full pay on the basis of the employee's scheduled workweek and years of service. Vacation and sick leave are computed at the end of each completed month of service for affiliated employees and on a weekly basis for non-affiliated employees.

Unused vacation leave is payable upon termination and/or retirement. Unused sick leave is payable upon retirement, duty disability retirement, or death up to 120 days. Upon termination under satisfactory conditions, non-affiliated and affiliated employees with 15 or more years of continuous service are paid up to 60 days of accrued sick leave.

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

DEFERRED OUTFLOWS OF RESOURCES

Deferred outflows of resources represent the consumption of net assets by the EPD that is applicable to future reporting periods. Deferred outflows of resources have a positive effect on net position, similar to assets. Deferred outflows of resources related to pensions and OPEB, in accordance with GASB Statements No. 68 and 75, are more fully disclosed in the corresponding pension and OPEB notes.

SELF-INSURANCE

Certain components of the City, including the EPD, are self-insured for workers' compensation, general liability, and property insurance. The New Hampshire Department of Labor requires the safety margin to provide a confidence level of at least 75% for workers' compensation for self-insured entities under their jurisdiction. Based on an independent actuarial analysis, contingency reserves are calculated using a 75% confidence level for all coverages.

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ENVIRONMENTAL PROTECTION DIVISION**

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

DEFERRED INFLOWS OF RESOURCES

Deferred inflows of resources represent the acquisition of net assets by the EPD that is applicable to future reporting periods. Deferred inflows of resources have a negative effect on net position, similar to liabilities. Deferred inflows of resources related to pensions and OPEB, in accordance with GASB Statements No. 68 and 75, are more fully disclosed in the corresponding pension and OPEB notes.

LONG-TERM OBLIGATIONS

Long-term debt and other long-term obligations are reported as liabilities in the Statement of Net Position.

NET POSITION

Net position is classified in the following categories:

Net Investment in Capital Assets

This category groups all capital assets, including infrastructure, into one component of net position. Accumulated depreciation and the outstanding principal balances of debt attributable to the acquisition, construction, or improvement of these assets reduce this category.

Restricted Net Position

This category presents restricted funds set aside each year for the replacement of equipment, as required by United States Environmental Protection Agency regulations.

Unrestricted Net Position

This category represents the balance of net position not restricted for any project or other purpose. Unrestricted resources may be designated by the EPD for use in operations.

**CITY OF MANCHESTER, NEW HAMPSHIRE
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ENVIRONMENTAL PROTECTION DIVISION**

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

REVENUES AND EXPENSES

Revenues and capital contributions are based on the EPD's authorized minimum charges and rates applied to customer consumption of water. Operating revenues are recognized when wastewater services are provided to customers.

Revenues from non-exchange transactions are recognized based on the requirements of GASB 33, as soon as all eligibility requirements are met. Non-exchange type revenues are reported as capital contributions in the Statement of Revenues, Expenses, and Changes in Net Position.

Operating expenses include the cost of operations, maintenance, sales and service, administrative expenses and depreciation on capital assets.

All revenues and expenses not meeting these definitions are classified under nonoperating in the Statement of Revenues, Expenses, and Changes in Net Position.

ACCOUNTING ESTIMATES

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect certain 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 may differ from those estimates.

NOTE 2 - DEPOSITS AND INVESTMENTS

The following is a summary of the EPD's deposits and investments which reconciles to the Statement of Net Position captions "Cash and short-term investments" and "Restricted cash and short-term investments" as of June 30, 2023:

Cash and short-term investments	\$ 9,788,012
NH Public Deposit Investment Pool	64,731
Restricted deposits with NHPDIP	3,524,241
Restricted refunding with Citizens	<u>29,530,837</u>
	<u>\$ 42,907,821</u>

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 2 - DEPOSITS AND INVESTMENTS (CONTINUED)

The responsibility for custodial credit risk of deposits and investments and other risks and policies related to investments rests with the City as a whole; accordingly, separate disclosure is not presented in these financial statements. The City of Manchester’s Annual Comprehensive Financial Report provides the detailed disclosure for deposit and investment risks.

NOTE 3 - DUE FROM LOCAL GOVERNMENTS

The EPD is reimbursed annually by local municipalities that receive wastewater services through the EPD for a portion of their capital costs. The agreements’ terms average 20 years and are automatically renewed in five-year increments thereafter unless either party elects to terminate the agreement. Capital costs include costs for the design, planning, engineering, land acquisition, legal, financing, capitalized interest, administration, and facility construction costs. The “Due from local governments” receivable represents the municipalities’ contractual commitments to reimburse the EPD.

Amounts due from the Towns of Bedford, Goffstown, and Londonderry at June 30, 2023 were due as follows:

June 30,	Principal	Interest
2024	\$ 365,562	\$ 185,643
2025	365,562	173,615
2026	365,562	161,586
2027	365,562	149,558
2028	365,562	137,530
2029-2033	1,882,867	507,104
2034-2038	1,411,330	210,817
2039-2043	335,898	49,435
Thereafter	81,669	23,057
	\$ 5,539,574	\$ 1,598,345

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 4 - DUE FROM THE STATE OF NEW HAMPSHIRE

The EPD is reimbursed annually by the State of New Hampshire (the State) for a portion of the principal and interest relating to debt incurred to upgrade the wastewater treatment facility. The “Due from the State of New Hampshire” receivable represents the State’s contractual commitment to reimburse the EPD for the repayment of that debt. Interest incurred by the EPD from the State is shown as a reimbursement of bond interest expense in the Statement of Revenues, Expenses, and Changes in Net Position.

At June 30, 2023, the EPD reported the following amounts receivable from the State of New Hampshire:

June 30,	Principal	Interest
2024	\$ 535,466	\$ 141,377
2025	518,003	113,053
2026	565,697	112,010
2027	548,840	69,032
2028	544,094	62,646
2029-2033	2,617,398	205,567
2034-2038	1,150,061	67,194
2039-2043	229,232	3,331
	\$ 6,708,791	\$ 774,210

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 5 - CAPITAL ASSETS

Capital asset activity for the fiscal year ended June 30, 2023 is detailed below:

	Balance July 1, 2022	Increases	Decreases	Balance June 30, 2023
Capital assets, not being depreciated				
Land	\$ 1,604,049	\$ --	\$ --	\$ 1,604,049
Construction-in-progress	<u>33,437,200</u>	<u>34,210,671</u>	<u>(21,026,692)</u>	<u>46,621,179</u>
Total Capital Assets, Not Being Depreciated	<u>35,041,249</u>	<u>34,210,671</u>	<u>(21,026,692)</u>	<u>48,225,228</u>
Capital assets, being depreciated				
WWTP, receiving and pump stations	122,616,801	71,539	--	122,688,340
Interceptors	91,856,370	15,172,932	--	107,029,302
Collection systems and misc. sewers	135,769,351	1,866,363	--	137,635,714
Equipment and vehicles	<u>30,153,197</u>	<u>1,280,678</u>	<u>--</u>	<u>31,433,875</u>
Total Capital Assets Being Depreciated	<u>380,395,719</u>	<u>18,391,512</u>	<u>--</u>	<u>398,787,231</u>
Less accumulated depreciation for				
WWTP, receiving and pump stations	(90,782,974)	(2,018,121)	--	(92,801,095)
Interceptors	(45,167,896)	(1,837,668)	--	(47,005,564)
Collection systems and misc. sewers	(36,018,166)	(2,815,982)	--	(38,834,148)
Equipment and vehicles	<u>(13,225,765)</u>	<u>(1,450,479)</u>	<u>--</u>	<u>(14,676,244)</u>
Total Accumulated Depreciation	<u>(185,194,801)</u>	<u>(8,122,250)</u>	<u>--</u>	<u>(193,317,051)</u>
Total Capital Assets Being Depreciated, Net	<u>195,200,918</u>	<u>10,269,262</u>	<u>--</u>	<u>205,470,180</u>
Total Capital Assets, Net	<u>\$ 230,242,167</u>	<u>\$ 44,479,933</u>	<u>\$ (21,026,692)</u>	<u>\$ 253,695,408</u>

NOTE 6 - ACCOUNTS PAYABLE

Accounts payable represents fiscal year 2023 expenses paid after year end.

NOTE 7 - ACCRUED LIABILITIES

Accrued liabilities consisted of the following at June 30, 2023:

CX billing credits	\$ 140,992
Accrued salaries	101,009
Project expenses	3,333,831
Operating expenses	<u>225,793</u>
	<u>\$ 3,801,625</u>

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 8 - WORKERS' COMPENSATION CLAIMS

The City maintains a stop-loss policy with limits of \$250,000 per year, per claim. A third-party administrator has been established to manage the claims. State law generally limits the City's general liability for an incident to \$275,000 per individual and \$925,000 per incident. There is a \$1,150,000 limit per employee for workers' compensation claims paid by the City on behalf of the EPD, which are reimbursed by the EPD.

An accrual for estimated unpaid workers' compensation claims was recorded by the EPD at June 30, 2023. This amount is included within "Accrued Liabilities". The change in the accrual is as follows:

	Claims Payable July 1	Claims Incurred	Claims Paid	Claims Payable June 30
June 30, 2023	\$ 107,238	\$ 834,908	\$ 894,223	\$ 47,923
June 30, 2022	\$ 176,560	\$ 889,191	\$ 958,513	\$ 107,238

NOTE 9 - DUE TO THE STATE OF NEW HAMPSHIRE

Due to the State of New Hampshire represents loan agreements with the State of New Hampshire under the State Water Pollution Control Revolving Loan Fund (SRF) program. The purpose of the loans is to aid in financing qualifying projects connected with the expansion of the Wastewater Treatment Plant (WWTP) and water pollution abatement projects.

The EPD had the following amounts due to the State of New Hampshire, but not permanently funded as of June 30, 2023:

Project	Interest Rate	Date of Issue	Balance at June 30, 2023
Solids Train Handling Upgrade	2.70%	September 20, 2018	\$ 21,317,957
WWTF and Stormwater Asset Management	2.70%	September 20, 2018	520,078
Stormwater Planning -MS4 Permit Compliance	2.00%	February 3, 2021	892,689
			<u>\$ 22,730,725</u>

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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 9 - DUE TO THE STATE OF NEW HAMPSHIRE (CONTINUED)

The amounts outstanding will be permanently funded upon completion of the project.

The following summarizes activity during fiscal year 2023.

Beginning Balance	Drawdowns	Reductions	Ending Balance
<u>\$ 14,840,625</u>	<u>\$ 7,890,100</u>	<u>\$ --</u>	<u>\$ 22,730,725</u>

NOTE 10 - LONG-TERM DEBT

Long-term liability activity for the year ended June 30, 2023 was as follows:

	Beginning Balance July 1, 2022	Increases	Decreases	Ending Balance June 30, 2023	Due Within One Year	Noncurrent
General obligations bonds	\$ 75,331,148	\$ --	\$ (3,101,142)	\$ 72,230,006	\$ 3,125,000	\$ 69,105,006
Unamortized premium	8,980,275	--	(304,416)	8,675,859	304,416	8,371,443
State of New Hampshire revolving loan (direct borrowings)	7,512,510	--	(414,145)	7,098,365	414,145	6,684,220
Total bonds payable	<u>91,823,933</u>	<u>--</u>	<u>(3,819,703)</u>	<u>88,004,230</u>	<u>3,843,561</u>	<u>84,160,669</u>
Net pension liability	6,563,113	2,699,580	--	9,262,693	--	9,262,693
Net OPEB liability	1,146,038	226,911	--	1,372,949	--	1,372,949
	<u>\$ 99,533,084</u>	<u>\$ 2,926,491</u>	<u>\$ (3,819,703)</u>	<u>\$ 98,639,872</u>	<u>\$ 3,843,561</u>	<u>\$ 94,796,311</u>

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 10 - LONG-TERM DEBT (CONTINUED)

The balances of the EPD's portion of loans, general obligation, and revenue bonds payable outstanding at June 30, 2023 consisted of the following:

Purpose of Issue and Description	Original Principal	Outstanding
General Obligation Bonds - Public Offerings		
General Obligation Bond, dated June 2021 at a rate of 1.25%, 11 year term	\$ 16,595,000	\$ 11,960,006
General Obligation Bond, dated June 2021 at a rate of 1.40%, 15 year term	15,955,000	<u>13,735,000</u>
Total General Obligation Bonds - Public Offerings		25,695,006
Loans - Direct Borrowings		
State Revolving Loan Fund, with a loan agreement dated December 2018 at a rate of 2.00%, 20 year term	2,500,000	1,781,250
State Revolving Loan Fund, with a loan agreement dated December 2021 at a rate of 2.00%, 20 year term	5,907,905	<u>5,317,115</u>
Total Loans - Direct Borrowings		7,098,365
Revenue Bonds - Direct Placement		
Revenue Bond, dated December 2021 at a rate of 4.00%, 30 year term	46,535,000	<u>46,535,000</u>
Total Revenue Bonds - Direct Placement		<u>46,535,000</u>
		79,328,371
Less Current Portion		<u>(3,539,145)</u>
Total Non-Current Portion		<u>\$ 75,789,226</u>

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 10 - LONG-TERM DEBT (CONTINUED)

The debt service requirements as of June 30, 2023 were as follows:

June 30,	Principal	Interest
2024	\$ 3,539,145	\$ 2,362,657
2025	3,433,976	2,314,414
2026	3,393,407	2,266,756
2027	3,352,856	2,219,612
2028	3,307,477	2,172,983
2029-2033	10,879,185	10,280,598
2034-2038	11,125,726	9,064,272
2039-2043	13,111,598	7,021,447
2044-2048	15,980,000	4,208,600
2049-2052	11,205,000	908,000
	<u>\$ 79,328,371</u>	<u>\$ 42,819,339</u>

In addition, the EPD had \$22,730,725 outstanding as of June 30, 2023 payable to the State of New Hampshire under the State's revolving loan fund program for eligible project costs. Once projects are complete, the amounts are financed through long-term notes payable (See Note 9).

NOTE 11 - FUNDS ALLOCATED FOR EQUIPMENT REPLACEMENT

The EPD is required by the United States Environmental Protection Agency to set aside funds each year for the replacement of equipment; \$60,000 dollars were deposited in the year ended June 30, 2023. In addition, interest of \$40,564 for restricted net position for the year ending June 30, 2023 was earned on the allocated funds. The restricted cash allocated for equipment replacement at June 30, 2023 was \$1,112,091. There was no acquisition of equipment from the replacement fund in fiscal year 2023.

**CITY OF MANCHESTER, NEW HAMPSHIRE
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ENVIRONMENTAL PROTECTION DIVISION**

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS

The EPD follows the provisions of the Governmental Accounting Standards Board Statement No. 68 (GASB 68), *Accounting and Financial Reporting for Pensions - An Amendment of GASB Statement No. 27*, with respect to employees' retirement funds.

All eligible employees of the EPD participate in the City's pension plan, either the Manchester Employees' Contributory Retirement System (the MECRS) or the Old System pension plan.

TOTAL NET PENSION LIABILITY

The total net pension liabilities, deferred outflows and inflows of resources related to pensions, and pension expense reported by the EPD in the Statement of Net Position and Statement of Revenues, Expenses, and Changes in Net Position comprise both of the pension plans in which the EPD's employees participate.

	Deferred Outflows	Net Pension Liability	Deferred Inflows	Pension Expense
The MECRS	\$ 2,857,496	\$ 8,880,806	\$ 58,728	\$ 1,522,928
Old System	39,560	381,887	33,237	199,959
	\$ 2,897,056	\$ 9,262,693	\$ 91,965	\$ 1,722,887

MANCHESTER EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM (THE MECRS)

A. The MECRS Plan Description

In 1974, the City established the Manchester Employees' Contributory Retirement System (the MECRS), a single-employer public employee retirement system that provides pension benefits to covered employees other than firefighters, police officers, teachers, and employees previously covered under the Old System pension plan. Manchester School District administration employees are also covered under the MECRS plan.

The MECRS is a component unit of the City of Manchester and is reported as a fiduciary fund type in the City's Annual Comprehensive Financial Report. The MECRS also issues an annual stand-alone financial report that is available from the MECRS administrative offices at 1045 Elm Street, Suite 403, Manchester, New Hampshire 03101-1824. This stand-alone report can also be downloaded from the MECRS website at www.manchesterretirement.org.

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS (CONTINUED)

***MANCHESTER EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM (THE MECRS)
(CONTINUED)***

A. The MECRS Plan Description (Continued)

The EPD's membership in the MECRS consisted of the following at December 31, 2022, the date of the last actuarial valuation:

Retirees and beneficiaries receiving benefits	31
Current employees - active or vested	38
	69

By policy, the MECRS plan requires (i) an annual actuarial valuation, with yearly updates, and (ii) annual City contributions based on actuarial determinations. During the year of actuarial valuation, the City has historically contributed the annual determined contribution (ADC) of the pension plan. Any difference between the ADC and the actual contribution made has been settled by the next actuarial valuation date.

B. The MECRS Benefits Provided

Except as described in the following sentences, the MECRS applies to all full-time and permanent part-time employees of the City, including elected and appointed officials. The MECRS does not cover certain categories of employees, such as temporary employees, members of boards and commissions who are not full-time or permanent part-time employees of the City. In addition, the MECRS does not cover active employees hired before January 1, 1974 who elected to remain in the Old System pension plan.

All covered employees hired after January 1, 1974, are required to participate in the MECRS as a condition of employment. Employees are 100% vested after five years of service. The normal retirement age is 60 and the benefit is calculated at 2% of final average total compensation (1.5% for service completed before January 1, 1999) during the highest three years of service in the last ten years of service (hereafter final average earnings) multiplied by the years of service. If a member becomes totally and permanently disabled from a job-related incident, there is no service or age requirement and the minimum benefit is 50% of the final average earnings. For a non-job-related incident, disability benefits are payable only if 15 years of service have been rendered and are based on the accrued benefit to the date of disability.

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS (CONTINUED)

***MANCHESTER EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM (THE MECRS)
(CONTINUED)***

B. The MECRS Benefits Provided (Continued)

Permanent employees of the City of Manchester prior to January 1, 1974 who were in service as of January 1, 1974, are eligible for early retirement if credited with no less than 20 years of service. Such early retirement benefit shall be equal to the greater of: (i) 50% of the member's final average earnings, or (ii) the sum of the member's years of service multiplied by 2% of the member's final average earnings (1.5% for service completed before January 1, 1999). Members enrolled subsequent to January 1, 1974 are eligible for early retirement benefits if their age plus years of service are equal to or greater than 80, or if they have attained age 55 with 20 years or more of service.

Cost of living adjustments (COLA) are granted pursuant to Administrative Rule 7 by the MECRS Board of Trustees.

MECRS benefit provisions are established by the City and benefit provision changes require amendment of Chapter 218 of the City Charter, first by enabling legislation by the New Hampshire legislature and then subject to approval of the voters of the City through referendum.

C. The MECRS Contributions

The MECRS employee contribution rates are established by the City. Employee contribution changes require amendment of Chapter 218 of the City Charter, first by enabling legislation by the New Hampshire legislature and then subject to approval of the voters of the City through referendum. Employee pension contribution equaled 3.75% of their salaries for fiscal year 2023. If an employee leaves covered employment or dies before 5 years of service, the MECRS refunds accumulated employee contributions and their earnings, calculated at the rates determined annually by the MECRS Board of Trustees.

The MECRS' legislative authority requires City contributions in amounts sufficient to fund the benefits set forth in the MECRS. The contributions are determined by the MECRS Board of Trustees on the basis of an independent actuary's valuation and are expressed as a percentage of gross payrolls. Significant actuarial assumptions used to compute the actuarially determined contribution requirements are the same as those used to compute the pension fund obligation.

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS (CONTINUED)

***MANCHESTER EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM (THE MECRS)
(CONTINUED)***

C. The MECRS Contributions (Continued)

The City's contribution rates as a percentage of payroll were based on an actuarial valuation performed as of December 31, 2022. For the year ended June 30, 2023, the EPD's contribution to the MECRS totaled \$854,502. As of December 31, 2022, EPD's covered employee payroll for the MECRS was \$2,611,316.

D. The MECRS Summary of Significant Accounting Policies

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the MECRS and additions to/deductions from the MECRS' fiduciary net position have been determined on the same basis as they are reported by the MECRS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with benefit terms. Investments are reported at fair value.

E. The MECRS Pension Liabilities, Pension Expense, and Deferred Outflows and (Inflows) of Resources Related to Pensions

At June 30, 2023, the EPD reported a net pension liability of \$8,880,806 for its proportionate share of the MECRS' collective net pension liability. The net pension liability was measured as of December 31, 2022, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of that date. The EPD's proportionate share of the MECRS' collective net pension liability was actuarially determined, using covered employee payroll valued as of December 31, 2022, as provided by the City. At December 31, 2022, the EPD's proportion was 4.58%.

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS (CONTINUED)

***MANCHESTER EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM (THE MECRS)
(CONTINUED)***

E. The MECRS Pension Liabilities, Pension Expense, and Deferred Outflows and (Inflows) of Resources Related to Pensions (Continued)

For the year ended June 30, 2023, the EPD recognized pension expense of \$1,522,928. In addition, the EPD reported deferred outflows and inflows of resources related to pension from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 167,660	\$ 571
Net difference between projected and actual investment earnings	1,303,829	--
Changes in proportional share of contributions	389,285	58,157
Changes in assumptions	528,438	--
Contributions subsequent to the measurement date	468,284	--
	\$ 2,857,496	\$ 58,728

Deferred outflows of resources related to the MECRS resulting from the EPD's contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2024. Other amounts reported as deferred outflows and (inflows) of resources related to the MECRS will be recognized as an increase in the EPD's pension expense as follows:

Year ended June 30	Amount
2024	\$ 449,472
2025	583,405
2026	907,974
2027	839,105
	\$ 2,330,484

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS (CONTINUED)

***MANCHESTER EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM (THE MECRS)
(CONTINUED)***

E. The MECRS Pension Liabilities, Pension Expense, and Deferred Outflows and (Inflows) of Resources Related to Pensions (Continued)

The MECRS Actuarial Assumptions

The total pension liability in the December 31, 2022 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Valuation date	December 31, 2022
Actuarial cost method	Entry-Age Normal
Rate of investment return	6.75% for 2022
Projected salary increases	2.50% - 6.93% including inflation
Wage inflation	2.50%
COLA assumption	1.00% compounded annually

Mortality rates were based on Pub-2010 Mortality Table projected to 2039 using projection scale MP-2019. This assumption is used to measure the probabilities of dying after retirement. The projection to 2039 is the margin for mortality improvement.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These real rates of return 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.

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS (CONTINUED)

***MANCHESTER EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM (THE MECRS)
(CONTINUED)***

E. The MECRS Pension Liabilities, Pension Expense, and Deferred Outflows and (Inflows) of Resources Related to Pensions (Continued)

The MECRS Actuarial Assumptions (Continued)

For each major asset class that is included in the pension plan target asset allocation at December 31, 2022, these best estimates are summarized in the following table:

Asset Class	Current Target	Assumptions - Nominal Arithmetic	30-Year Real Returns Weighted Return
Cash	2.0%	2.3%	NA
Equities			
Large cap equities	20.0%	7.3%	0.9%
Small/mid cap equities	6.0%	8.5%	0.3%
International equities (unhedged)	7.0%	7.9%	0.4%
International small cap (unhedged)	4.0%	9.3%	0.3%
Emerging International equities	7.0%	12.0%	0.6%
Global equities	<u>10.0%</u>	8.2%	0.5%
Total Equity	<u>54.0%</u>		
Fixed Income			
US aggregate bonds	6.0%	3.3%	0.0%
US TIPS	6.0%	2.7%	0.0%
Global Multi-Sector fixed income	<u>8.0%</u>	5.1%	0.2%
Total Fixed Income	<u>20.0%</u>		
Alternatives			
Real estate (core)	12.0%	8.3%	0.7%
Private markets	<u>12.0%</u>	12.7%	1.2%
Total Alternatives	<u>24.0%</u>		
Expected 30-Year Real Return - Prior to inflation			5.16%

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NOTE 12 - RETIREMENT PLANS (CONTINUED)

***MANCHESTER EMPLOYEES' CONTRIBUTORY RETIREMENT SYSTEM (THE MECRS)
(CONTINUED)***

E. The MECRS Pension Liabilities, Pension Expense, and Deferred Outflows and (Inflows) of Resources Related to Pensions (Continued)

The MECRS Discount Rate

The discount rate used to measure the total pension liability was 6.75% for the year ended December 31, 2022.

The MECRS Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the EPD's net pension liability calculated using the discount rate of, as well as what the EPD's net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate.

Year	1% Decrease (5.75%)	Current Discount Rate (6.75%)	1% Increase (7.75%)
June 30, 2023	\$ 1,125,186	\$ 8,880,806	\$ 6,881,678

F. The MECRS Plan Fiduciary Net Position

Detailed information about the pension plan's fiduciary net position is available in the MECRS' separately issued financial report.

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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS (CONTINUED)

OLD SYSTEM RETIREMENT PLAN

A. Old System Plan Description

Prior to January 1, 1974, all eligible City employees participated in the Old System, a single-employer contributory public employee retirement system (PERS). When the MECRS was established, all employees hired before January 1, 1974 were given the option to remain in the Old System or participate in the MECRS. The Old System was replaced by the MECRS and only operates to cover the remaining participants. All employees covered under the Old System are fully vested. Benefits under the Old System are limited to retirement benefits without death benefits to survivors.

At July 1, 2022, the date of the latest actuarial valuation, the EPD's Old System membership consisted of four retirees or beneficiaries receiving benefits. There are no active vested members.

The Old System was closed to new employees as of January 1, 1974.

B. Old System Benefits Provided

Eligible employees who retire from active employment with the City after completing at least 20 years of service may receive a lifetime annuity equal to 50% of final year's pay. No other benefits are provided under the Old System plan.

C. Old System Contributions

Active members are not required to contribute to the Old System plan. Actuarially determined employer contributions are calculated as of July 1, two years prior to the end of the fiscal year in which contributions are reported. For the years ended June 30, 2023, the City made no contributions to the Old System pension plan.

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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS (CONTINUED)

OLD SYSTEM RETIREMENT PLAN (CONTINUED)

D. Old System Summary of Significant Accounting Policies

The accounting policies of the Old System as reported in the City's Annual Comprehensive Financial Report for the year ended June 30, 2023 conforms to generally accepted accounting principles for public employee retirement systems (PERS). The significant accounting policies of the Old System are summarized below:

Basis of Accounting

The Old System financial statements are prepared using the accrual basis of accounting. Employer contributions are recognized when the employer has made a formal commitment to provide the contributions. Benefits are recognized when due and payable in accordance with the terms of the plan.

Investment Policy

Investments are reported at market value. Old System assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the Old System pension plan.

Net Pension Liability

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Old System and additions to/deductions from the Old System's fiduciary net position have been determined on the same basis as they are reported by the Old System. For this purpose, benefit payments are recognized when due and payable in accordance with benefit terms. Investments are reported at market value.

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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS (CONTINUED)

OLD SYSTEM RETIREMENT PLAN (CONTINUED)

E. Old System Pension Liability, Pension Expense, and Deferred Inflows of Resources Related to Pensions

At June 30, 2023, the EPD reported a net pension liability of \$381,887 for its proportionate share of the Old System's collective net pension liability. The net pension liability was measured as of June 30, 2023 and was determined by actuarial valuations as of July 1, 2022.

For the year ended June 30, 2023, the EPD recognized pension (expense) of \$199,959. In addition, the EPD reported net deferred inflows of resources related to pension of \$6,323 related to the net difference between projected and actual investment earnings in fiscal year 2023.

Old System Actuarial Assumptions

The total Old System pension liability was determined by an actuarial valuation as of July 1, 2022, using the following actuarial assumptions, applied to all periods included in the measurement:

Valuation Date	June 30, 2023
Actuarial Cost Method	Entry-Age Normal
Discount rate	3.74%
Salary increases	3.50%
Inflation rate	2.50%

Mortality rates were based on the PUB-2010 General Employees Headcount-Weighted Mortality Table projected with full generational mortality improvement using Scale MP-2020.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of 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.

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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS (CONTINUED)

OLD SYSTEM RETIREMENT PLAN (CONTINUED)

E. Old System Pension Liability, Pension Expense, and Deferred Inflows of Resources Related to Pensions (Continued)

Old System Actuarial Assumptions (Continued)

Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target allocation as of June 30, 2023 are summarized in the following table:

Asset Class	Target Allocation	Expected Rate of Return
Domestic equity	56%	4.14%
International equity	-	5.40%
Fixed income	37%	1.05%
Cash	7%	0.00%
	100%	

Old System Discount Rate

The blended discount rate used to measure the Old System total pension liability was 3.74% for the year ended June 30, 2023. The projection of cash flows used to determine the discount rate assumed there will continue to be no future contributions made by plan members or the City. Based on those assumptions, the Old System's fiduciary net position was projected to be insufficient to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return of pension plan investments was applied to the first six periods of projected benefit payments and a 3.65% municipal bond rate was applied to all periods thereafter to determine the total pension liability. The municipal bond rate was based on the Bond Buyer 20-Bond General Obligation Municipal Bond Index as of June 30, 2023.

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 12 - RETIREMENT PLANS (CONTINUED)

OLD SYSTEM RETIREMENT PLAN (CONTINUED)

E. Old System Pension Liability, Pension Expense, and Deferred Inflows of Resources Related to Pensions (Continued)

Old System Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the EPD's proportionate share of the Old System's collective net pension liability, calculated using the current discount rate, as well as what the EPD's proportionate share of the Old System's collective net pension liability would be if it were calculated using a discount rate that is 1 percentage-point lower or 1 percentage-point higher than the current rate:

Year	1 % Increase (2.70%)	Current Discount Rate (3.70%)	1% Increase (4.7%)
June 30, 2023	\$ 428,464	\$ 381,887	\$ 378,688

NOTE 13 - OTHER POST-EMPLOYMENT BENEFITS (GASB 75)

GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, replaces the requirements of GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*. This statement establishes standards for recognizing and measuring liabilities, deferred outflows of resources, deferred inflows of resources, and expenses. This Statement identifies the methods and assumptions that are required to be used to project benefit payments, discounted projected benefit payments to their actuarial present value, and attribute that present value to periods of employee service.

OPEB PLAN

All the following OPEB disclosures are based on a measurement date of June 30, 2023 and an actuarial valuation date of July 1, 2022.

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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 13 - OTHER POST-EMPLOYMENT BENEFITS (GASB 75) (CONTINUED)

OPEB PLAN (CONTINUED)

A. Plan Description

The City provides post-employment healthcare benefits for retired employees through the City's plan. The City provides health insurance coverage through Anthem, Inc. The OPEB plan is not administered through a trust that meets the criteria in paragraph 4 of GASB 75.

B. Benefits Provided

The City provides medical and prescription drug insurance to retirees and their covered dependents. All active employees who retire from the City and meet the eligibility criteria will receive these benefits.

C. Contributions

The City indirectly provides post-employment healthcare for retired employees through an implicit rate covered by current employees. Retirees of the City who participate in this single-employer plan pay 100% of the healthcare premiums to participate in the City's healthcare program. Since they are included in the same pool as active employees, the insurance rates are implicitly higher for current employees due to the age consideration. This increased rate is an implicit subsidy the City pays for the retirees. For the year ended June 30, 2023, the contribution was \$32,641.

D. Plan Membership

At June 30, 2023, the following employees were covered by the benefit terms:

Retired members and survivors	3
Covered spouses	3
Active employees	36
	<hr/>
	42
	<hr/> <hr/>

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 13 - OTHER POST-EMPLOYMENT BENEFITS (GASB 75) (CONTINUED)

OPEB PLAN (CONTINUED)

E. Actuarial Assumptions and Other Inputs

The total OPEB liability was determined by an actuarial valuation as of July 1, 2022, using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.54%
Discount rate	3.65%, net of investment expenses
Healthcare cost trend rates	8% for 2023, decreasing 0.5% per year to 6% then grading down to an ultimate trend of 4.1%.
Retirees' share of benefit-related costs	100%

The discount rate was based on the Bond Buyer 20-Bond GO Index at June 30, 2023.

Pre-retirement mortality rates were based on the PubG-2010 headcount-weighted Employee General Mortality Tables, projected with fully generational mortality improvement using scale MP-2019.

Pro-retirement mortality is for healthy retirees was based on 101% of PubG-2010 headcount-weighted Employee General Mortality Tables for males and 109% PubG-2010 headcount-weighted Employee General Mortality Tables for females, projected with fully generational mortality improvement using scale MP-2019.

The actuarial assumptions used in the valuation were based on the results of the most recent actuarial experience study.

F. Discount Rate

The discount rate used to measure the total OPEB liability was 3.65% for the year ended June 30, 2023. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate.

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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 13 - OTHER POST-EMPLOYMENT BENEFITS (GASB 75) (CONTINUED)

OPEB PLAN (CONTINUED)

G. Total OPEB Liability

The EPD's total OPEB liability of \$414,354 was measured as of June 30, 2023 and was determined by an actuarial valuation as of July 1, 2022.

H. Changes in the Total OPEB Liability

The following summarizes the changes to the total OPEB liability for the past year:

	Total OPEB Liability
Balance at July 1, 2022	\$ 364,352
Changes for the year:	
Service cost	23,030
Interest	13,184
Differences between expected and actual experience	30,275
Changes in assumptions	14,988
Changes of benefit terms	(1,545)
Benefit payments	(29,930)
Net Changes	50,002
Balance at June 30, 2023	\$ 414,354

Changes of assumptions and other inputs reflect a change in the discount rate of 3.65% as of June 30, 2023. Additionally, the health cost trend rates, inflation assumption, and the mortality tables, retirement rates and turnover rates were updated since the prior valuation.

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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 13 - OTHER POST-EMPLOYMENT BENEFITS (GASB 75) (CONTINUED)

OPEB PLAN (CONTINUED)

I. Sensitivity of the Total OPEB Liability to Changes in the Discount Rate

The following presents the total OPEB liability, as well as what the total OPEB liability would be if it were calculated using a discount rate that is one percentage-point lower or one percentage-point higher than the current discount rate:

Year	1% Decrease (2.65%)	Current Discount Rate (3.65%)	1% Increase (4.65%)
June 30, 2023	\$ 450,648	\$ 414,354	\$ 381,398

J. Sensitivity of the Total OPEB Liability to Changes in the Healthcare Cost Trend Rates

The following presents the total OPEB liability, as well as what the total OPEB liability would be if it were calculated using healthcare cost trend rates that are one percentage-point lower or one percentage-point higher than the current healthcare cost trend rates:

Year	1% Decrease (6.00%)	Current Healthcare Trend Rate (7.00%)	1% Increase (8.00%)
June 30, 2023	\$ 372,428	\$ 414,354	\$ 463,701

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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 13 - OTHER POST-EMPLOYMENT BENEFITS (GASB 75) (CONTINUED)

OPEB PLAN (CONTINUED)

K. OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the year ended June 30, 2023, the EPD recognized an OPEB expense of \$54,593. At June 30, 2023, the EPD reported deferred outflows and inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ --	\$ 62,260
Change in assumptions	47,458	36,708
	\$ 47,458	\$ 98,968

Other amounts reported as deferred outflows and (inflows) of resources related to OPEB will be recognized as an increase (decrease) in OPEB expense as follows:

Year Ended June 30	Amount
2024	\$ (18,018)
2025	(6,725)
2026	(8,737)
2027	(13,490)
2028	(5,154)
Thereafter	614
	\$ (51,510)

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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 13 - OTHER POST-EMPLOYMENT BENEFITS (GASB 75) (CONTINUED)

MANCHESTER EMPLOYEES' RETIREMENT SYSTEM MEDICAL SUBSIDY

A. Plan Description

In addition to the OPEB plan discussed in Note 12 A, the DA participates in the Manchester Employees' Contributory Retirement System (the MECRS) Medical Subsidy. The MECRS administers a single-employer public employee retirement system that provides pension benefits to covered employees other than firefighters, police officers, teachers and employees previously covered under the Old System pension plan. Manchester School District administration employees are also covered under the MECRS plan. Following the November 2005 ratification by City referendum of Chapter 41 Laws of 2005, the MECRS began operating a Retiree Health Insurance Sub-Trust (Sub-Trust) pursuant to the provisions of Internal Revenue Code Section 401(h). The Sub-Trust provides health insurance subsidies to retirees based upon their creditable service at retirement. The benefit is limited to members who continue to obtain their health insurance through the City's health insurance plan after the retire. The benefit amount for those already retired on March 1, 2006 was equal to 50% of the amount paid to those retiring after that date.

B. Benefits Provided

The OPEB plan provides a medical insurance subsidy to qualified retired members. The medical subsidy is a payment made by the MECRS to the former employer or their insurance administrator toward the cost of health insurance for a qualified retiree. Spouses, dependents and/or beneficiaries are not eligible for any subsidy. The full amount of the monthly health insurance subsidy is \$200 as of January 1, 2006 and increases by 4% annually beginning January 1, 2007. The full \$200 is prorated based on the member's service at retirement.

C. Contributions

Active members contribute 1.25% of their pay. The contribution for the year ended June 30, 2023 was \$32,641. The City provides a matching contribution. Contributions to the Sub-Trust are commingled with those of the pension trust and are invested in aggregate. All assets are invested as prescribed in the MECRS' investment guidelines. Under no circumstances are the Sub-Trust contributions made by the employee available for refund and in the event of termination, such contributions forfeit to the MECRS. Assets of the Sub-Trust are available solely for the payment of subsidy benefits to qualified members of the MECRS. Should the MECRS be discontinued, assets in excess of those required to meet ongoing benefit obligations of the MECRS would revert to the employer.

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 13 - OTHER POST-EMPLOYMENT BENEFITS (GASB 75) (CONTINUED)

MANCHESTER EMPLOYEES' RETIREMENT SYSTEM MEDICAL SUBSIDY (CONTINUED)

D. Actuarial Assumptions and Other Inputs

Actuarial assumptions and other inputs for the collective total OPEB liability are the same as the Retirement System, which is disclosed in Note 12.

E. Net OPEB Liability, Expense, and Deferred Outflows and Inflows

The EPD's proportionate share of the net MECRS Medical Subsidy (net OPEB liability) as of the measurement date of December 31, 2022 was \$958,595.

For the year ended June 30, 2023, the EPD recognized an OPEB expense related to the MECRS Medical Subsidy of \$161,262. On June 30, 2023, the EPD reported deferred outflows and inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ 39,482	\$ 20,448
Changes in assumptions	103,302	--
Changes in proportional share of contributions	139,726	16,195
Net difference between projected and actual OPEB	96,124	--
Contributions subsequent to the measurement date	13,913	--
	\$ 392,547	\$ 36,643

The amount reported as deferred outflows of resources related to OPEB resulting from contributions subsequent to the measurement date and before the end of the fiscal year will be included as a reduction of the net OPEB liability in the year ending June 30, 2024.

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NOTES TO THE FINANCIAL STATEMENTS

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NOTE 13 - OTHER POST-EMPLOYMENT BENEFITS (GASB 75) (CONTINUED)

MANCHESTER EMPLOYEES' RETIREMENT SYSTEM MEDICAL SUBSIDY (CONTINUED)

F. Net OPEB Liability, Expense, and Deferred Outflows and Inflows (Continued)

Other amounts reported as deferred outflows and (inflows) of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ended June 30	Amount
2024	\$ 99,321
2025	54,690
2026	48,351
2027	63,331
2028	65,816
Thereafter	<u>10,482</u>
	<u>\$ 341,991</u>

G. Sensitivity of the Net MECRS Medical Subsidy OPEB Liability to Changes in the Discount Rate

Detailed information about the sensitivity of the net MECRS medical subsidy OPEB liability to changes in the discount rate is available in the separately issued City of Manchester, New Hampshire's Annual Comprehensive Financial Report.

**CITY OF MANCHESTER, NEW HAMPSHIRE
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NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED JUNE 30, 2023

NOTE 13 - OTHER POST-EMPLOYMENT BENEFITS (GASB 75) (CONTINUED)

CONSOLIDATION OF TOTAL/NET OPEB LIABILITIES AND RELATED DEFERRED OUTFLOWS AND INFLOWS

The following consolidates the EPD's total OPEB liability and related deferred outflows/inflows, and the EPD's proportionate share of the MECRS Medical Subsidy net OPEB liability and related deferred outflows/inflows at June 30, 2023:

	June 30, 2023			
	Net OPEB Liability	Total Deferred Outflows of Resources	Total Deferred Inflows of Resources	OPEB Expense
City OPEB Plan	\$ 414,354	\$ 47,458	\$ 98,968	\$ 54,593
Proportionate share of MECRS Medical Subsidy Plan	958,595	392,547	36,643	161,262
	\$ 1,372,949	\$ 440,005	\$ 135,611	\$ 215,855

NOTE 14 - INTERMUNICIPAL AGREEMENTS

In fiscal year 2023, Bedford, Goffstown, and Londonderry paid the EPD \$272,164, \$256,965, and \$708,640, respectively, for their share of operating and maintenance costs.

NOTE 15 - COMMITMENTS AND CONTINGENCIES

The City was issued an Administrative Order in 1998 by the United States Environmental Protection Agency (EPA), requiring the City to evaluate and plan for appropriate treatment of Combined Sewer Overflows (CSOs) pursuant to the Federal Clean Water Act. The City completed all work required by the Administrative Order on schedule in 2010. As of June 30, 2023, there was no pending claim by the EPA or the State.

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NOTES TO THE FINANCIAL STATEMENTS

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NOTE 15 - COMMITMENTS AND CONTINGENCIES (CONTINUED)

The City prepared a Phase II Long-Term Control Plan to address the CSOs on the City's East Side and submitted it to the EPA in March 2010. The Phase II CSO abatement program recommends \$160 million in environmental infrastructure improvements over 20 years to the City's east side. Due to area flooding, the City completed construction of the first two Phase II contracts in 2014 and 2016. In September 2020, the City and the EPA agreed to an update to the Long-Term Control Plan and Phase II program, which was incorporated into a formal Consent Decree. The Phase II program is estimated to have a project cost of \$380 million, with an implementation period of 20 years.

The City was issued a Notice of Violation by the EPA for the wastewater treatment plant's incinerator emissions. The City negotiated a consent decree with the EPA to achieve compliance. An \$8 million incinerator emissions upgrade project was constructed and went online in June of 2019 resulting in full compliance with the EPA's new incinerator emissions regulations. The EPD was subsequently released from the Consent Decree on January 19, 2023.

The City has been governed under, and been in compliance with, the Municipal Separate Storm Sewer System (MS4) national permit since 2004. In 2018 the MS4 permit was reissued and the City is currently in full compliance with all requirements

NOTE 16 - SUBSEQUENT EVENTS

Management has evaluated subsequent events through April 23, 2024, which is the date the financial statements were available to be issued.

**CITY OF MANCHESTER, NEW HAMPSHIRE
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**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF PROPORTIONATE SHARE
OF THE NET PENSION LIABILITY
(Unaudited)**

Manchester Employees' Contributory Retirement System						
Fiscal Year	Measurement Date	Proportion of the Net Pension Liability	Proportionate Share of the Net Pension Liability	Covered Payroll	Proportionate Share of the Net Pension Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position Percentage of the Total Pension Liability
June 30, 2023	December 31, 2022	4.58%	\$ 8,880,806	\$ 2,611,316	340.09%	55.90%
June 30, 2022	December 31, 2021	4.45%	6,189,114	2,460,998	251.49%	67.40%
June 30, 2021	December 31, 2020	4.77%	7,344,913	2,589,040	283.69%	62.80%
June 30, 2020	December 31, 2019	4.28%	5,914,748	2,266,077	261.01%	62.75%
June 30, 2019	December 31, 2018	4.17%	6,338,548	2,167,626	292.42%	57.30%
June 30, 2018	December 31, 2017	4.30%	5,381,034	2,295,582	234.41%	63.67%
June 30, 2017	December 31, 2016	4.24%	5,510,207	2,243,781	245.58%	59.63%
June 30, 2016	December 31, 2015	4.49%	5,741,064	2,377,677	241.46%	59.33%
June 30, 2015	December 31, 2014	4.72%	4,935,758	2,562,462	192.62%	64.82%
Old System						
Fiscal Year	Measurement Date	Proportion of the Net Pension Liability	Proportionate Share of the Net Pension Liability	Covered Payroll	Proportionate Share of the Net Pension Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position Percentage of the Total Pension Liability
June 30, 2023	June 30, 2023	4.50%	\$ 381,887	\$ --	0.00%	34.37%
June 30, 2022	June 30, 2022	6.39%	373,999	--	0.00%	39.34%
June 30, 2021	June 30, 2021	5.93%	343,145	--	0.00%	49.36%
June 30, 2020	June 30, 2020	5.86%	401,657	--	0.00%	44.78%
June 30, 2019	June 30, 2019	5.30%	357,842	--	0.00%	55.15%
June 30, 2018	June 30, 2018	5.24%	322,965	--	0.00%	57.46%
June 30, 2017	June 30, 2017	4.91%	304,515	--	0.00%	55.44%
June 30, 2016	June 30, 2016	4.82%	344,438	--	0.00%	72.82%
June 30, 2015	June 30, 2015	6.34%	276,437	--	0.00%	72.82%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See notes to the EPD's financial statements for summary of significant actuarial methods and assumptions.

See independent auditors' report on required supplementary information.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF PENSION CONTRIBUTIONS
(Unaudited)**

Manchester Employees' Contributory Retirement System						
Fiscal Year	Contractually Determined Contribution	Contributions in Relation to the Contractually Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll	
June 30, 2023	\$ 854,502	\$ 854,502	\$ --	\$ 2,577,444	33.15%	
June 30, 2022	771,332	771,332	--	2,314,234	33.33%	
June 30, 2021	736,588	736,588	--	2,543,671	28.96%	
June 30, 2020	607,975	607,975	--	2,373,546	25.61%	
June 30, 2019	546,827	546,827	--	2,218,181	24.65%	
June 30, 2018	525,521	525,521	--	2,167,626	24.24%	
June 30, 2017	531,173	531,173	--	2,243,781	23.67%	
June 30, 2016	525,235	525,235	--	2,377,677	22.09%	
June 30, 2015	575,067	575,067	--	2,562,462	22.44%	
Old System						
Fiscal Year	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll	
June 30, 2023	\$ 31,541	\$ --	\$ 31,541	\$ --	0.00%	
June 30, 2022	44,614	--	44,614	--	0.00%	
June 30, 2021	39,038	--	39,038	--	0.00%	
June 30, 2020	44,090	--	44,090	--	0.00%	
June 30, 2019	42,803	--	42,803	--	0.00%	
June 30, 2018	41,496	--	41,496	--	0.00%	
June 30, 2017	32,698	--	32,698	--	0.00%	
June 30, 2016	33,724	--	33,724	--	0.00%	
June 30, 2015	26,219	--	26,219	--	0.00%	

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See notes to the EPD's financial statements for summary of significant actuarial methods and assumptions.

See independent auditors' report on required supplementary information.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF PROPORTIONATE SHARE
OF THE NET OPEB LIABILITY**

(Unaudited)

City OPEB Plan						
Fiscal Year	Measurement Date	Proportion of the Total OPEB Liability	Proportionate Share of the Total OPEB Liability	Covered Payroll	Proportionate Share of the Total OPEB Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position Percentage of the Total OPEB Liability
June 30, 2023	June 30, 2023	0.23%	\$ 414,354	\$ 2,441,047	16.97%	0.00%
June 30, 2022	June 30, 2022	0.23%	364,352	2,370,383	15.37%	0.00%
June 30, 2021	June 30, 2021	1.24%	385,612	2,370,383	16.27%	0.00%
June 30, 2020	June 30, 2020	1.02%	357,402	2,099,067	17.03%	0.00%
June 30, 2019	June 30, 2019	1.15%	346,797	1,915,218	18.11%	0.00%
June 30, 2018	June 30, 2018	1.01%	283,177	1,777,103	15.93%	0.00%
Manchester Employees' Contributory Retirement System Medical Subsidy						
Fiscal Year	Measurement Date	Proportion of the Net OPEB Liability	Proportionate Share of the Net OPEB Liability	Covered Payroll	Proportionate Share of the Net OPEB Liability as a Percentage of Covered Payroll	Plan Fiduciary Net Position Percentage of the Total OPEB Liability
June 30, 2023	December 31, 2022	3.73%	\$ 958,595	\$ 2,611,316	36.71%	46.30%
June 30, 2022	December 31, 2021	4.45%	781,686	2,460,998	31.76%	53.40%
June 30, 2021	December 31, 2020	4.77%	849,990	2,589,040	32.83%	49.43%
June 30, 2020	December 31, 2019	4.28%	666,052	2,266,077	29.39%	48.70%
June 30, 2019	December 31, 2018	4.17%	685,701	2,159,529	31.75%	42.73%
June 30, 2018	December 31, 2017	2.69%	372,858	1,435,506	25.97%	47.47%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See notes to the EPD's financial statements for summary of significant actuarial methods and assumptions.

See independent auditors' report on required supplementary information.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF OPEB CONTRIBUTIONS
(Unaudited)**

	Manchester Employees' Contributory Retirement System Medical Subsidy					
	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year	Fiscal Year
	2023	2022	2021	2020	2019	2018
Contractually required contribution	\$ 32,641	\$ 28,928	\$ 31,796	\$ 29,669	\$ 27,727	\$ 27,095
Contributions in relation to the contractually required contribution	<u>32,641</u>	<u>28,928</u>	<u>31,796</u>	<u>29,669</u>	<u>27,727</u>	<u>27,095</u>
Contribution Deficiency (Excess)	<u>\$ --</u>	<u>\$ --</u>	<u>\$ --</u>	<u>\$ --</u>	<u>\$ --</u>	<u>\$ --</u>
Covered payroll	\$ 2,611,316	\$ 2,314,234	\$ 2,543,671	\$ 2,373,546	\$ 2,218,181	\$ 2,167,626
Contributions as a percentage of covered payroll	1.25%	1.25%	1.25%	1.25%	1.25%	1.25%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See notes to the EDP's financial statements for summary of significant actuarial methods and assumptions.

See independent auditors' report on required supplementary information.

**CITY OF MANCHESTER, NEW HAMPSHIRE
DEPARTMENT OF PUBLIC WORKS
ENVIRONMENTAL PROTECTION DIVISION**

SUPPLEMENTARY INFORMATION

SCHEDULE OF DIRECT OPERATING EXPENSES

FOR THE YEAR ENDED JUNE 30, 2023

Personnel Services	
Salaries and wages	\$ 2,774,215
Payroll taxes and related benefits	1,159,972
Pension liability expense	768,994
Insurance	688,148
Miscellaneous	5,540
	<hr/>
	5,396,869
	<hr/>
Plant and Collection System Maintenance	
Other maintenance and repairs	1,362,381
Chemicals	854,616
Operation and maintenance sewer lines and pump stations	253,125
Ash disposal	590,382
Incinerator maintenance	189,945
	<hr/>
	3,250,449
	<hr/>
Light, Heat and Power	
Natural gas	611,816
Electricity	2,132,384
Fuel oil	26,643
	<hr/>
	2,770,843
	<hr/>
General and Administrative	
Insurance	148,444
Outside services	65,472
Billing services	400,000
Service agreements	160,263
Postage and printing	6,704
Telephone	34,177
Office supplies and expenses	15,651
Other maintenance and repairs	1,527
Small tools and equipment	55,293
Janitorial supplies	12,609
Vehicle repairs and maintenance	6,028
Vehicle gas and oil	8,789
Miscellaneous	53,059
	<hr/>
	968,016
	<hr/>
Total Direct Operating Expenses (excluding depreciation)	\$ 12,386,177
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See independent auditors' report on supplementary information.

APPENDIX C
GENERAL RESOLUTION

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CITY OF MANCHESTER, NEW HAMPSHIRE

GENERAL SEWER REVENUE BOND RESOLUTION

Adopted on December 9, 2021

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**CITY OF MANCHESTER, NEW HAMPSHIRE
GENERAL SEWER REVENUE BOND RESOLUTION**

WHEREAS, the City of Manchester, New Hampshire (the “City”), is a New Hampshire municipal corporation and a political subdivision of the State of New Hampshire and is authorized by Chapter 33-B of the New Hampshire Revised Statutes, as amended (the “Enabling Act”), to issue bonds and notes for the construction of revenue-producing facilities; and

WHEREAS, the City owns and operates through its Division of Environmental Protection the System (as hereinafter defined); and

WHEREAS, the City wishes to authorize the issuance, from time to time, of bonds, notes and other evidences of indebtedness secured as hereinafter provided and to use the proceeds derived from the sale thereof for the financing, in whole or in part, of the costs of the System and the refunding of bonds, notes or other evidences of indebtedness incurred in respect of such costs.

NOW, THEREFORE, be it resolved by the City, acting by and through its Mayor and Finance Officer, acting pursuant to the Enabling Act and authorizing resolutions of the Board of Mayor and Aldermen of the City, as follows:

ARTICLE I

DEFINITIONS; AUTHORITY AND INTERPRETATION

Section 1.01. Definitions. In this Resolution unless a different meaning clearly appears from the context:

“Account” means any account established pursuant to this Resolution.

“Additional Bonds” means the bonds of the City authorized, authenticated and delivered pursuant to Section 2.04 hereof.

“Aggregate Debt Service” means, for any period of twelve (12) consecutive calendar months and as of any date of calculation, the sum of the amounts of Debt Service for such period with respect to all Series of Bonds.

“Alternate Interest Rate” means a rate as of any date of determination: (a) with respect to Bonds that were or will be, at the date of the original issuance thereof, the subject of an opinion of Bond Counsel to the effect that the interest thereon is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, a rate of interest equal to, at the option of the City, either (i) the average of the Variable Rate Tax-Exempt Index for the five (5) years preceding such date of determination or (ii) with respect to Outstanding Variable Rate Bonds, the average of the actual variable rates that were in effect (weighted according to the length of the period during which each such variable rate was in effect) for the most recent 12-month period immediately preceding the date of calculation for which such information is

available (or shorter period if such information is not available for a 12-month period) and (b) with respect to Bonds that were not and will not be, at the date of the original issuance thereof, the subject of an opinion of Bond Counsel to the effect that the interest thereon is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code, a rate of interest equal to, at the option of the City, either (i) the average of the Variable Rate Taxable Index for the five (5) years preceding such date of determination or (ii) with respect to Outstanding Variable Rate Bonds, the average of the actual variable rates that were in effect (weighted according to the length of the period during which each such variable rate was in effect) for the most recent 12-month period immediately preceding the date of calculation for which such information is available (or shorter period if such information is not available for a 12-month period). Notwithstanding the foregoing, in no event shall the Alternate Interest Rate be in excess of the maximum interest rate allowed by law on obligations of the City. Notwithstanding the foregoing, for purposes of calculating compliance with Section 7.11(b) hereof, with respect to Variable Rate Bonds, the actual rate of interest of such Variable Rate Bonds on the date of calculation shall be used.

“Alternate Liquidity Facility” means a replacement liquidity facility which satisfies the requirements specified in a Supplemental Resolution.

“Annual Budget” means any budget or budgets with respect to the System adopted pursuant to the provisions of Section 7.08 hereof.

“Authenticating Agent” means, in respect of a particular Series, the agent so described in and appointed pursuant to this Resolution or the Supplemental Resolution for such Series.

“Authorized Investments” means and includes any of the following securities, if and to the extent the same are at the time legal investments by the City of the funds to be invested therein and conform to the policies set forth in any investment guidelines adopted by the City or by a duly appointed committee of the Governing Body and in effect at the time of the making of such investment:

- (a) Government Obligations;
- (b) Certificates or receipts representing direct ownership of future interest or principal payments on Government Obligations or any obligations of agencies or instrumentalities of the United States of America which are backed by the full faith and credit of the United States, which certificates or receipts are issued directly by the United States Department of Treasury or by the agency or instrumentality issuing such obligations;
- (c) Bonds, debentures, notes or other evidences of indebtedness issued by any of the following: Federal Home Loan Mortgage Corporation, Federal Home Loan Banks, Federal National Mortgage Association, Federal Farm Credit Bank, Government National Mortgage Association, Federal Bank for Cooperatives, Federal Intermediate Credit Banks, Federal Financing Bank, Export-Import Bank of the United States, Federal Land Banks, United Postal Service or any other agency or instrumentality of the United States of America; or the International Reconstruction Development Bank;

(d) U.S. dollar denominated debt obligations of a multilateral organization of governments for which the United States government is a participant, shareholder and/or voting member with minimum ratings of AA-/Aa3 (or the equivalent) or A-1/P-1 (or the equivalent) by any one Rating Agency, including but not limited to: the Inter-American Development Bank, International Bank for Reconstruction & Development, African Development Bank, Asian Development Bank and the International Finance Corporation;

(e) All other obligations issued or unconditionally guaranteed as to the timely payment of principal and interest by an agency or person controlled or supervised by and acting as an instrumentality of the United States of America pursuant to authority granted by Congress;

(f) (i) Interest-bearing time or demand deposits, certificates of deposit, or other similar banking arrangements with any government securities dealer, bank, trust company, savings and loan association, national banking association or other savings institution (including the Trustee); provided, however, that such deposits, certificates, and other arrangements are fully insured by the Federal Deposit Insurance Corporation or (ii) interest-bearing time or demand deposits or negotiable or non-negotiable certificates of deposit with any bank, trust company, national banking association or other savings institution (including the Trustee), provided such deposits and certificates are in or with a bank, trust company, national banking association or other savings institution whose long-term unsecured debt is rated A-/A3 (or the equivalent) by any one Rating Agency or A-1/P-1 (or the equivalent) by any one Rating Agency;

(g) Bankers' acceptances issued, drawn on or guaranteed by a U.S. bank or U.S. branch of a foreign bank with minimum ratings of A-1/P-1 (or the equivalent) by any one Rating Agency;

(h) U.S. dollar denominated commercial paper issued or guaranteed by a U.S. or foreign corporation, company, financial institution trust or other entity, including both unsecured debt and asset-backed programs with minimum ratings of A-1/P-1 (or the equivalent) by any one Rating Agency;

(i) U.S. dollar denominated corporate notes, bonds or other debt obligations issued or guaranteed by a U.S. or foreign corporation, financial institution, non-profit or other entity with minimum ratings of A-/A3 (or the equivalent) or A-1/P-1 (or the equivalent) by any one Rating Agency;

(j) Repurchase agreements collateralized by securities described in subparagraph (a), (b) or (c) above with any primary dealer recognized by a Federal Reserve Bank or any commercial bank the long-term unsecured debt of which (or of the corporate parent of which), in either case, is rated in one of the three (3) highest long-term rating categories by Standard & Poor's and Moody's (without regard to gradations within such category) and, if rated by any other Rating Agency, rated in any of the three (3) highest rating categories of such Rating Agency (without regard to gradations within such category); provided, however, that (1) a specific written repurchase agreement governs the transaction, (2) the securities are held, free and clear of any lien, by the City or the Trustee, as the case may be, or an independent third party acting solely as agent for the City or the Trustee, and such third party is (a) a Federal Reserve Bank or (b) a bank which is a member of the Federal Deposit Insurance Corporation and which

has combined capital, surplus and undivided profits of not less than \$25 million, and the City or the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the City or the Trustee, (3) if the repurchase agreement has a term of more than thirty (30) days then the City or the Trustee will value the collateral securities no less frequently than monthly and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within five (5) business days of such valuation and (4) the fair market value of the collateral securities in relation to the amount of the repurchase obligation, including principal and interest, is equal to at least 102%;

(k) Money market funds registered under the federal Investment Company Act of 1940 and rated in the highest rating category by Standard & Poor's and Moody's (if such rating agencies are Rating Agencies) and, if rated by any other Rating Agency, rated in the highest category of such Rating Agency;

(l) Shares of investment companies or cash equivalent investments which are authorized to invest only in assets or securities described in subparagraphs (a), (b), (c), (d) and (f) above;

(m) Obligations the interest on which is excluded from gross income for purposes of federal income taxation that have been advance-refunded prior to their maturity and are fully and irrevocably secured as to principal and interest by Government Obligations, or Government Obligations which have been stripped of their unmatured interest coupons or interest coupons stripped from Government Obligations, held in trust for the payment thereof and which obligations are rated in the highest rating category by any one Rating Agency;

(n) Short-term or long-term obligations the interest on which is excludable from gross income for federal income tax purposes and that are rated in any of the three (3) highest rating categories (without regard to gradations within such category) by any one Rating Agency, or shares of investment companies or cash equivalents which are authorized to invest primarily in such obligations;

(o) Forward purchase and sale agreements with providers rated in any of the three (3) highest rating categories (without regard to gradations within such category), at the time of acquisition thereof, by at least one Rating Agency; provided, however, that if the investment agreement is guaranteed by a third (3rd) party, then such rating requirement shall apply to the guarantor only; provided, further, that in all cases such rating requirements shall apply only at the time the investment agreement is executed; and

(p) Any other investment authorized pursuant to an amendment or supplement hereto pursuant to Section 10.01(h) hereof.

"Authorized Officer" means, with respect to the City, the Finance Officer and, when used in reference to an act or document, shall also mean any other person authorized by the Governing Body to perform such act or sign such document.

"Board of Mayor and Aldermen" means the Board of Mayor and Aldermen of the City.

“Bond Anticipation Notes” means any of the notes issued pursuant to Section 2.06 hereof.

“Bond” or “Bonds” means any of the bonds of the City authenticated and delivered under and pursuant to a Supplemental Resolution.

“Bond Counsel” means an attorney or firm of attorneys of nationally recognized standing in the field of law relating to municipal bonds selected by the City.

“Bond Fund” means the fund so designated which is created and established by Section 5.02 hereof.

“Bond Registrar” means the Trustee or any other bank or trust company organized under the laws of any state of the United States of America or national banking association, appointed by the City to perform the duties of Bond Registrar enumerated in Article III hereof.

“Bond Reserve Account” means the Common Bond Reserve Account and each other Bond Reserve Account in the Bond Reserve Fund established pursuant to a Supplemental Resolution.

“Bond Reserve Fund” means the fund so designated which is created and established by Section 5.02 hereof.

“Bond Reserve Fund Requirement” means, with respect to any Series of Bonds, at the election of the City as set forth in the Supplemental Resolution authorizing such Series, either the Common Bond Reserve Account Requirement or a Separate Series Bond Reserve Requirement.

“Bondholder”, “Holder”, “holder”, “owner” or any similar term when used with reference to a Bond or Bonds, means the registered owner of any Outstanding Bond or Bonds; provided, however, that the term “owner” when used with reference to Parity Debt or any Parity Swap Agreement means the party entitled to enforce payment under any Parity Debt obligation or Parity Swap Agreement, respectively.

“Book-Entry Form” means the form of the Bonds which permits book-entry registration as provided in Sections 3.01 and 3.10 hereof.

“City” means the City of Manchester, New Hampshire, a New Hampshire municipal corporation, or any other political subdivision or public instrumentality of the State which shall hereafter succeed to the powers of the City relating to the System.

“Code” means the Internal Revenue Code of 1986, as amended and supplemented from time to time, and the applicable temporary, proposed, or final regulations promulgated thereunder by the United States Treasury Department.

“Common Bond Reserve Account” means the account in the Bond Reserve Fund so designated which is created and established by Section 5.02 hereof.

“Common Bond Reserve Account Secured Bonds” means the Bonds of any Series designated as being secured by the Common Bond Reserve Account in the Supplemental Resolution providing for the issuance of such Series of Bonds.

“Common Bond Reserve Account Requirement” means the amount equal to the maximum Aggregate Debt Service due on the Common Bond Reserve Account Secured Bonds Outstanding in the current or any succeeding Fiscal Year; provided, however, that if, upon the issuance of a Series of Bonds, such amount would require moneys, in an amount in excess of the maximum amount permitted under the Code to be deposited therein from the proceeds of such Bonds, the Common Bond Reserve Account Requirement shall mean an amount equal to the sum of the Common Bond Reserve Account Requirement immediately preceding issuance of such Bonds and the maximum amount permitted under the Code to be deposited therein from the proceeds of such Bonds, as certified by an Authorized Officer of the City. For purposes of this definition, “net proceeds” of a Series of Bonds shall mean the face amount of such Series minus original issue discount plus any premium received on the sale of such Series. For the purpose of calculating the Common Bond Reserve Account Requirement for any Variable Rate Bonds of a Series, the Debt Service on such Series shall be determined by reference to the Pro Forma Bond Issue for the Variable Rate Bonds of such Series set forth in the Supplemental Resolution authorizing such Series.

“Construction” means the negotiation, acquisition, erection, building, alteration, improvement, testing, increase, enlargement, extension, reconstruction, interconnection, renovation or rehabilitation of a Project; the inspection and supervision thereof; and the engineering, architectural, legal, appraisal, fiscal, economic and environmental investigations, services and studies, surveys, designs, plans, working drawings, specifications, procedures and other actions incidental thereto.

“Construction Fund” means the fund so designated which is created and established by Section 5.02 hereof.

“Consulting Engineer” means the engineer or engineering firm or corporation at the time retained by the City pursuant to Section 7.09 hereof.

“Costs” or “Cost of Construction”, when used with reference to a Project, means and includes the cost of Construction; the cost of the acquisition of all property, including real, personal and mixed; the cost of demolishing, removing or relocating any buildings or structures on lands so acquired, including the cost of acquiring any land to which such buildings or structures may be moved or relocated; the cost of all systems, facilities, machinery, apparatus and equipment, financing charges, interest to the extent not paid or provided for from revenues or other sources; the cost of engineering and architectural surveys, plans and specifications; the cost of consultants’ and legal services; the cost of lease guarantee, bond insurance or other credit facilities, other expenses necessary, reasonably related or incidental to the Construction of a Project and the financing of the Construction thereof, including the Costs of Issuance, the amounts authorized in this Resolution to be paid into any reserve or other special fund from the proceeds of Bonds and the financing of the placing of any project in operation.

“Costs of Issuance” means all items of expense directly or indirectly related to the authorization, issuance, offering and sale 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 provider of a Credit Facility or Reserve Fund 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, or any other cost, charge or fee in connection with the original issuance of Bonds.

“Counsel’s Opinion” means an opinion signed by an attorney or firm of attorneys of recognized standing who may be counsel to the City.

“Credit Facility” means any irrevocable letter of credit, surety bond, policy of bond insurance, loan agreement or other credit arrangement provided by a financial institution or insurance company or association pursuant to which the City or the Trustee is entitled to obtain funds to pay the principal or Redemption Price of and interest on Bonds.

“Credit Facility Provider” means any issuer of a Credit Facility.

“Debt Service” means, for any period, 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 period on such Series of Bonds; provided, however, that with respect to Variable Rate Bonds, the aggregate amount of interest shall be calculated at the Alternate Interest Rate per annum (or, if a Qualified Swap Agreement is in effect with respect to a Series of Bonds and the Swap Provider with respect to such Qualified Swap Agreement or its guarantor satisfies the Minimum Rating Requirement, the swap rate or, in the event that such Qualified Swap Agreement, taken together with such Bonds, results in a net fixed rate payable by the City for the term of such Bonds, such net fixed rate, as applicable) and (ii) that portion of each Principal Installment payable during such period on such Series of Bonds, such interest and Principal Installments to be calculated on the assumption that Bonds of such Series Outstanding at the date of calculation will cease to be Outstanding by reason, but only by reason of the payment of each Principal Installment on its due date; provided, further, that, if any Refundable Principal Installment of a Series of Bonds is included in Debt Service for a Fiscal Year, Debt Service shall be determined as if such Refundable Principal Installment had been payable over a period extending from the due date of such Refundable Principal Installment through the last date on which such Series of Bonds could have been stated to mature under the Enabling Act as in effect on the date of issuance of such Series, in installments which would have required equal annual payments of Principal Installments and interest over such period. Debt Service shall not include (a) interest to be paid from Bond proceeds deposited in the Bond Fund or (b) interest and Principal Installments to be paid from moneys not constituting Revenues deposited in the Bond Fund.

“Defeasance Obligations” means any of the following which are not subject to redemption at the option of anyone other than the holder thereof (except as provided in clause (iii) below):

- (i) Any (a) direct obligations of the United States of America for the full and timely payment of which the full faith and credit of the United States of America is pledged and (b) obligations issued by an entity controlled or

supervised by and acting as an instrumentality of the United States of America, the full and timely payment of the principal of, premium, if any, and interest on which is fully guaranteed as a full faith and credit obligation of the United States of America (including any securities described in (a) issued or held in book-entry form on the books of the Department of Treasury of the United States of America), which obligations, in either case, are not subject to redemption prior to maturity at the option of anyone other than the holder thereof;

(ii) To the extent not included in (i) above, obligations of the Federal National Mortgage Association, Government National Mortgage Association, the Federal Financing Bank, the Federal Intermediate Credit Banks, Federal Banks for Cooperatives, Federal Land Banks, Federal Home Loan Banks, Federal Farm Credit Bank, Federal Home Loan Mortgage Association, Export Import Bank of the United States, United States Postal Service or any other agency or instrumentality of the United States of America or any corporation wholly owned by the United States of America, which obligations are not subject to redemption prior to maturity at the option of anyone other than the holder thereof;

(iii) Any evidences 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 clause (i) or (ii) hereof held by a bank or trust company as custodian, under which the owner of the investment is the real party in interest and has the right to proceed directly and individually against the obligor on the obligations described in clause (i) or (ii) hereof, as the case may be, and which underlying obligations are not available to satisfy any claim of the custodian or any person claiming through the custodian or to whom the custodian may be obligated;

(iv) Any bonds or other obligations of any state of the United States of America or of any agency, instrumentality or local governmental unit of any such state (a) which are not callable at the option of the obligor prior to maturity or as to which irrevocable notice has been given by the obligor to call such bonds or obligations on the date specified in the notice, (b) which are fully secured as to principal and interest and redemption premium, if any, by a fund consisting only of cash or bonds or other obligations of the character described in clause (i) or (ii) hereof which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such bonds or other obligations on the maturity date or dates thereof or the specified redemption date or dates pursuant to such irrevocable instructions, as appropriate and (c) as to which the principal of and interest on the bonds and obligations of the character described in clause (i) or (ii) hereof which have been deposited in such fund along with any cash on deposit in such fund is sufficient to pay principal of and interest and redemption premium, if any, on the bonds or other obligations described in this clause (iv) on the maturity date or dates thereof or on the redemption date or dates specified in the irrevocable instructions referred to in subclause (a) of this clause (iv), as appropriate;

(v) Any agreements with insurance companies or other financial institutions, or subsidiaries or affiliates thereof (hereinafter in this clause (v) referred to as “Providers”), (a) whose outstanding unsecured senior indebtedness or claims-paying ability, as the case may be, shall be rated, or who shall have a “financial programs rating” or other equivalent rating, in the highest whole rating category, without regard to any qualifier, by any one Rating Agency or (b) whose obligations under such agreements or contracts shall be unconditionally guaranteed by another insurance company or other financial institution, or subsidiary or affiliate thereof, whose outstanding unsecured senior indebtedness or claims-paying ability, as the case may be, shall be rated, or who shall have a “financial programs rating” or other equivalent rating, in the highest whole rating category, without regard to any qualifier, by any one Rating Agency, pursuant to which agreements or contracts the Provider shall be absolutely, unconditionally and irrevocably obligated to repay the moneys invested by the City and interest thereon at a guaranteed rate, without any right of recoupment, counterclaim or set off. The Provider may have the right to assign its obligations under any such agreement to any other insurance company or other financial institution, or subsidiary or affiliate thereof; provided, however, that such assignee also shall be an insurance company or other financial institution, or subsidiary or affiliate thereof, satisfying the requirements set forth in either subclause (a) or subclause (b) of the preceding sentence;

(vii) Any obligations that would result in the rating of the relevant defeasance escrow in the highest whole rating category, without regard to any qualifier, by any one Rating Agency; and

(viii) With respect to any Bonds, any other obligations specified in the Supplemental Resolution authorizing such Bonds.

“Depository” means any bank or trust company organized under the laws of any state of the United States or any national banking association selected by the City as a depository of moneys and securities held under the provisions of this Resolution, and may include the Trustee, provided that if the Trustee shall fail to provide such approval, it shall deliver to the City a statement of its reasons for such failure.

“DTC” means The Depository Trust Company, a limited purpose trust company organized under the New York Banking Law, its nominee, Cede & Co., and its successors, to the extent that they act as a registered clearing agency under the Securities Exchange Act of 1934, and as a securities depository.

“Enabling Act” means Chapter 33-B of the Revised Statutes of the State of New Hampshire, as amended from time to time, unless expressly stated to refer to the Enabling Act as in effect on a specific date.

“Event of Default” means any event so designated and specified in Section 8.01 hereof.

“Fiduciary” means the Trustee, any Depository, the Bond Registrar, any Authenticating Agent and any Paying Agent, or any or all of them as may be appropriate. The use of the term “Fiduciary” shall not be deemed to mean that a party owes any fiduciary duty to another.

“Finance Officer” means the Finance Officer of the City.

“Fiscal Year” means the twelve-month period commencing July 1 of any calendar year and ending June 30 of the succeeding calendar year or such other period of twelve (12) calendar months authorized by the City. In the event that a different fiscal year is authorized, references herein and any Supplemental Resolution to July 1 or June 30 shall refer, respectively, to the first and last day of such fiscal year.

“Fitch” shall mean Fitch, Inc., located at 300 West 57th Street, New York, New York 10019, and its successors and assigns and if such corporation shall be dissolved or liquidated or shall no longer issue ratings on obligations similar to the Bonds, “Fitch” shall be deemed to refer to any other nationally recognized securities rating organization (other than Moody’s or S&P) designated by the City by written notice to the Trustee.

“Fixed Rate” means the fixed rate of interest applicable to any Series of Bonds or portion thereof, established in accordance with the terms of this Resolution and any applicable Supplemental Resolution.

“Fixed Rate Bonds” means Bonds of any Series which bear interest at a Fixed Rate from the date of issue of such Series of Bonds or the date such Series of Bonds or a portion thereof are converted to a Fixed Rate until the specified maturity date thereof or the date fixed for prior redemption, as the case may be.

“Fund” means any fund established pursuant to this Resolution.

“Generally Accepted Accounting Principles” means accounting principles, standards, methods and terminology followed and construed, as nearly as practicable, in conformity with the pronouncements of the Financial Accounting Standards Board (or any successor), the Governmental Accounting Standards Board (or any successor), the International Accounting Standards Board (or any successor) or any other nationally or internationally recognized accounting standards, as determined by the City, in each case as amended from time to time.

“Governing Body” means the Division of Environmental Protection of the City or other City office or department or delegee of the Mayor duly and lawfully charged with the supervision of the operation of the System or any other matter relating to this Resolution and, where applicable, shall mean the Board of Mayor and Aldermen; and in the event that the ownership or operation of the System shall be transferred as provided by law to any public entity other than the City, the duly authorized governing body of such public entity.

“Government Obligations” means direct general obligations of, or obligations the timely payment of principal of and interest on which are unconditionally guaranteed by, the United States of America.

“Liquidity Agreement” means an agreement between the Trustee and a Liquidity Facility Provider, as originally executed and as it may from time to time be supplemented, modified or amended in accordance with its terms, and any similar agreement entered into in connection with an Alternate Liquidity Facility.

“Liquidity Facility” means any letter of credit, surety bond, loan agreement, standby bond purchase agreement or other arrangement provided by a financial institution or insurance company or association which has been rated not lower than the second (2nd) highest rating category by any one Rating Agency (without regard to gradations within such category), and which provides for the purchase of any Bonds, but shall not include any Credit Facility.

“Liquidity Facility Provider” means any issuer of a Liquidity Facility.

“Maximum Interest Rate” means, with respect to any particular Variable Rate Bonds, a numerical rate of interest, which may be set forth in the Supplemental Resolution authorizing such Bonds, that shall be the maximum rate of interest such Bonds may at any time bear; provided, however, that should the City obtain insurance or other coverage which provides that any increase in the Variable Rate above a threshold rate will be reimbursed or paid by the insurer, such threshold rate will be deemed to be the Maximum Interest Rate. The insurer providing such insurance policy shall be an insurer whose insurance policies are rated in at least the second (2nd) highest rating category by any one Rating Agency (without regard to gradations within such category), or their successors.

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

“Minimum Rating Requirement” means, with respect to a Swap Provider or the guarantor of a Qualified Swap Agreement, the long-term indebtedness of the Swap Provider or the guarantor, respectively, or the claims-paying ability of the Swap Provider or the guarantor, respectively, is rated at least Baa2 or BBB by either Standard & Poor’s or Moody’s, respectively.

“Moody’s” means Moody’s Investors Service, a corporation duly organized and existing under and by virtue of the laws of the State of Delaware, located at 7 World Trade Center, 250 Greenwich Street, New York, NY 10007, and its successors and assigns, except that if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, then the term “Moody’s” shall be deemed to refer to any other nationally recognized securities rating agency selected by the City.

“Net Revenue Requirement” means, with respect to any period of time, an amount equal to 1.15 times the sum of the Aggregate Debt Service and the net amounts owing with respect to Parity Debt and payable on a parity with the Bonds for such period.

“Net Revenues” means, with respect to any period of time, the Revenues during such period less Revenues deposited in the Revenue Fund to pay Operating Expenses.

“Operating Expenses” means all actual operation and maintenance costs of the System paid or incurred by the City in any particular Fiscal Year or period to which said term is applicable or charges made therefor during such Fiscal Year or period, as determined in conformity with Generally Accepted Accounting Principles. Operating Expenses include, but are not limited to, amounts payable under Credit Facilities or Liquidity Facilities for any fees, costs, expenses, indemnification or other obligations to any provider thereto, its parent and its assignees and participants or any agent therefor; fees and expenses of the Fiduciaries; and any other current expenses or obligations required to be paid by the City under the provisions of this Resolution or by law, all to the extent properly allocable to the System. Operating Expenses do not include depreciation or obsolescence charges or reserves therefor; amortization of intangibles or other bookkeeping entries of a similar nature; interest charges and charges for the payment of principal, or amortization, of bonded or other indebtedness of the City; any payments under a Qualified Swap Agreement; unrealized gains and losses from investments, extinguishment of debt and Qualified Swap Agreements; costs, or charges made therefor, for capital additions, replacements, betterments, extensions or improvements to or retirements from the System which under Generally Accepted Accounting Principles are properly chargeable to the capital account or the reserve for depreciation; losses from the sale, abandonment, reclassification, revaluation or other disposition of any properties of the System; such items, including taxes and fuel, which are capitalized pursuant to the then existing accounting practices of the City; or costs, charges or losses for any other item that is extraordinary and/or non-recurring.

“Option Bonds” means Bonds which by their terms may be tendered by and at the option of the holder thereof for purchase from the holder prior to the stated maturity thereof.

“Outstanding” means (a) when used with reference to Parity Debt or Parity Swap Agreements, as of any date, all Parity Debt or Parity Swap Agreements, respectively, theretofore or thereupon entered into by the City pursuant to the terms of this Resolution in connection with a Series of Bonds and not terminated or cancelled and (b) when used with reference to Bonds (or a Series of Bonds), as of any date, all Bonds (or all Bonds of such Series), theretofore or thereupon authenticated and delivered under this Resolution; except:

(1) Any Bonds cancelled by the Trustee, at or prior to such date;

(2) Bonds (or portions of Bonds), for the payment or redemption of which moneys, equal to the principal amount or Redemption Price thereof, as the case may be, with accrued interest to the date of maturity or redemption date, shall be held in trust under this Resolution and set aside for such payment or redemption (whether at or prior to the maturity or redemption date); provided, however, that if such Bonds (or portions of Bonds), are to be redeemed, notice of such redemption shall have been given as in Article IV hereof provided or provision satisfactory to the Trustee shall have been made for the giving of such notice;

(3) Bonds, in lieu of or in substitution for which other Bonds shall have been authenticated and delivered pursuant to Sections 3.04, 3.06, 3.07, 3.08, 4.06 or 11.06 hereof;

(4) Bonds deemed to have been paid as provided in subsection (b) of Section 13.01 hereof; and

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

“Parity Debt” means any Parity Reimbursement Obligation, any Parity Swap Agreement or any other obligation of the City permitted under the Enabling Act or otherwise by law for or related to borrowed money having an equal lien and charge upon the Revenues and therefore payable on a parity with the Bonds, and with respect to which the Trustee has received the certificates described in Section 2.04(b) hereof.

“Parity Reimbursement Obligation” means a Reimbursement Obligation, excluding any termination payments and any accelerated payments, the payment of which is secured by a pledge of, and a lien on, Revenues on a parity with the lien created by Section 5.01 hereof.

“Parity Swap Agreement” means a Qualified Swap Agreement with respect to which the obligation of the City to make payments to the Swap Provider, pursuant to such Qualified Swap Agreement, excluding any termination payments and amounts representing fees and expenses, is on a parity with the lien upon the Revenues created by Section 5.01 hereof and with respect to which, the Trustee has received the certificates described in Section 2.04(b) hereof.

“Paying Agent” means, in respect of a particular Series of Bonds, any bank, national banking association or trust company designated by the City to pay the principal of, premium, if any, or interest on such Bonds, and any successor or successors appointed under this Resolution.

“Principal Installment” means, as of any particular date of calculation and with respect to any Series, an amount of money equal to (i) the principal amount of Bonds of such Series Outstanding which mature on a single future date, for which no Sinking Fund Installments have been established, (ii) the unsatisfied balance (determined as provided in Section 5.04 hereof) of any Sinking Fund Installments due on a certain future date for Bonds of such Series Outstanding, plus the sinking fund redemption premiums, if any, which may be applicable upon redemption of such Bonds on such future date or (iii) if such future date coincides 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 plus such applicable redemption premiums, if any.

“Pro Forma Bond Issue” means, when used with reference to the Bond Reserve Fund Requirement in connection with a Series of Variable Rate Bonds, the hypothetical fixed rate long-term bond issue set forth in the Supplemental Resolution 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 City 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; provided, however, that such interest rate shall be not less than 80% of the “30-year revenue bond index” then most recently published by The Bond Buyer or, if such index is no longer published, such other substantially comparable index as determined by the City.

“Project” means any improvements, extensions, enlargements, renewals, rehabilitations, betterments, alterations, repairs and replacements of the System, including the planning, development, financing or Construction thereof.

“Qualified Swap Agreement” means an interest rate swap agreement, cap agreement, collar agreement, floor agreement or similar hedging agreement between the City and a Swap Provider and relating to a Series of Bonds or portion thereof, (a) (i) the term of which is not less than the term of the Bonds to which such swap agreement relates or (ii) the term of which is ten (10) years or less, which relates to Bonds which bear interest at a variable rate of interest to which a maximum rate is stated pursuant to the terms thereof, and which, taken together with such Bonds, results in a net fixed rate payable by the City for the term of such Bonds, (b) with respect to which Moody’s and Standard & Poor’s have assigned to the unsecured obligations of the Swap Provider or its guarantor as of the date such agreement is entered into, a rating of at least A3 and A-, respectively, and (c) with respect to which the City has notified each rating agency then rating the Bonds to which such agreement relates (whether or not such rating agency also rates the unsecured obligations of the Swap Provider or its guarantor) in writing of its intention to enter into such agreement and has received from such rating agency a written indication that the entering into of such agreement by the City will not in and of itself cause a reduction or withdrawal by such rating agency of its rating on the Bonds to which such agreement relates.

“Rating Agency” means, at any particular time, each of Fitch, Moody’s and S&P, and any other nationally recognized securities rating organization (other than Fitch, Moody’s and S&P) designated by the City by written notice to the Trustee.

“Rebate Fund” means the Fund so designated and established by Section 5.02 hereof.

“Rebate Fund Requirement” means, as of any date of calculation, an amount equal to the aggregate of the amounts, if any, specified in each Supplemental Resolution authorizing the issuance of a Series of Bonds as the amount required to be maintained in the Rebate Fund with respect to such Bonds.

“Record Date” means, with respect to a particular Series of Bonds, the fifteenth (15th) day of the calendar month (whether or not a business day), if the interest payment date for such Series is the first day of the month, or the first day of the calendar month (whether or not a business day), if the interest payment date for such Series is the fifteenth (15th) day of the month, next preceding each interest payment date for such Series, unless otherwise provided by the Supplemental Resolution authorizing such Series.

“Redemption Price” means, with respect to any Bond, the principal amount thereof plus the applicable premium, if any, payable upon redemption thereof pursuant to such Bond or this Resolution and, unless the context indicates to the contrary, includes the Sinking Fund Redemption Price.

“Refundable Principal Installment” shall mean any Principal Installment for any Series of Bonds which the City intends to pay with moneys which are not Revenues, provided that such intent shall have been expressed in the Supplemental Resolution authorizing such Series of Bonds and provided further that such Principal Installment shall be a Refundable Principal Installment only until the date of adoption of the Annual Budget in the Fiscal Year immediately preceding the Fiscal Year in which such Principal Installment comes due unless the City has delivered to the Trustee a certificate of an Authorized Officer of the City that it has made provision for the payment of such Principal Installment from a source other than Revenues.

“Refunding Bonds” means the Bonds authorized, authenticated and delivered pursuant to Section 2.05 hereof.

“Reimbursement Obligation” means the obligation of the City described in Section 2.07(b) hereof to directly reimburse the issuer of a Credit Facility, Reserve Facility or Liquidity 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 Facility” means a surety bond, insurance policy, letter of credit (and any confirming letter of credit) or other financial guaranty or instrument, authorized by or pursuant to this Resolution or a Supplemental Resolution establishing a Bond Reserve Account, to be delivered in lieu of or substitution for all or a portion of the moneys otherwise required to be held in such Bond Reserve Account.

“Reserve Fund Facility Agreement” means an agreement between the City and a Reserve Fund Facility Provider pursuant to which the Reserve Fund Facility Provider provides a Reserve Fund Facility.

“Reserve Fund Facility Provider” means any provider of a Reserve Fund Facility then in effect for all or part of the Bonds.

“Resolution” means this General Sewer Revenue Bond Resolution as from time to time amended and supplemented.

“Revenue Fund” means the fund so designated and established by Section 5.02 hereof.

“Revenue Stabilization Fund” means the fund so designated and established by Section 502 hereof.

“Revenues” means all rates, fees, charges, rents, payments and other income and receipts derived by the City from or for the ownership, operation, use or services of the System including, without limiting the generality of the foregoing, Subsidy Payments, investment proceeds and, to the extent required by this Resolution or a Supplemental Resolution to be

deposited in the Revenue Fund, proceeds of insurance, condemnation, sales or other disposition of assets, and other income and receipts, in each case derived by or for the account of the City from the operation and ownership of the System.

“Separate Series Bond Reserve Requirement” means, for any Series of Bonds for which the Supplemental Resolution authorizes a Separate Series Bond Reserve Requirement, the amount, if any, specified in such Supplemental Resolution as the Separate Series Bond Reserve Requirement.

“Series” means all Bonds authenticated and delivered on original issuance and identified pursuant to the Supplemental Resolution authorizing such Bonds as a separate Series of Bonds.

“Sinking Fund Installment” means each amount so designated which is established pursuant to any Supplemental Resolution.

“Sinking Fund Redemption Price” means, with respect to any Bond, the principal amount thereof, plus the applicable premiums, if any, payable upon the redemption thereof from moneys accumulated in the Bond Fund by reason of the payment of Sinking Fund Installments.

“Standard & Poor’s” means S&P Global Ratings, a corporation duly organized and existing under and by virtue of the laws of the State of New York, located at 55 Water Street, New York, New York 10041, and its successors and assigns, except that if such corporation shall be dissolved or liquidated or shall no longer perform the functions of a securities rating agency, then the term “Standard & Poor’s” shall be deemed to refer to any other nationally recognized securities rating agency selected by the City.

“State” means the State of New Hampshire.

“Subsidy Payments” means amounts payable to the City from any governmental entity, federal, State or local, in connection with bonds, notes or other evidences of indebtedness of the City issued to finance or refinance costs of the System.

“Supplemental Resolution” means any resolution of the City adopted pursuant to Article X hereof.

“Swap Provider” means the counterparty with whom the City enters into a Qualified Swap Agreement.

“System” means the wastewater collection, treatment and disposal system of the City, including the plants, works, instrumentalities or parts thereof and appurtenances thereto, lands, easements, rights in lands, rights of way, contract rights, sewers, conduits, pipe lines, mains, pumping and ventilating stations, sewage treatment or disposal systems, plants and works, connections and outfalls and all plants, buildings, facilities, structures, equipment, boats, conveyances, sewer mains and pipe lines, and any other property, rights and easements, real, personal, tangible or mixed, acquired or leased, incidental to and included in such system or parts thereof, and any improvements, extensions, enlargements, renewals, replacements and betterments, now or hereafter constructed, acquired or made by the City.

“Tax Certificate” means the arbitrage and use of proceeds certificate or similar certificate executed by the City in connection with the issuance of a Series of Bonds, the interest on which is intended to be excluded from gross income for federal income tax purposes.

“Trustee” means The Bank of New York Mellon Trust Company, N.A., and its successor or successors and any other corporation which may at any time be substituted in its place pursuant to this Resolution.

“Variable Rate” means a variable interest rate to be borne by a Series of Bonds or any one or more maturities within a Series of Bonds. The method of computing such variable interest rate shall be specified in the Supplemental Resolution authorizing such Series of Bonds; provided, however, that, such Variable Rate may be subject to a Maximum Interest Rate and may be subject to a Minimum Interest Rate and that there may be an initial rate specified, in each case as provided in such Supplemental Resolution.

“Variable Rate Bonds” means Bonds of any Series which bear a Variable Rate, except Bonds of such Series which have been converted to bear interest at a Fixed Rate.

“Variable Rate Taxable Index” means such index as, at the time, is in general use as a proxy for short-term interest rates on debt obligations of state and local governments the interest on which is not excluded from gross income for federal income tax purposes, as determined by an Authorized Officer of the City.

“Variable Rate Tax-Exempt Index” means such index as, at the time, is in general use as a proxy for short-term interest rates on debt obligations of state and local governments the interest on which is excluded from gross income for federal income tax purposes, as determined by an Authorized Officer of the City.

Section 1.02. Interpretation. (a) Articles and Sections mentioned by number only herein are the respective Articles and Sections of this Resolution so numbered;

(b) As used in this Resolution, the terms “herein”, “hereunder”, “hereby”, “hereto”, “hereof” and any similar terms refer to this Resolution; the term “heretofore” means before the time of adoption of this Resolution; and the term “hereafter” means after the time of adoption of this Resolution;

(c) As used in this Resolution, words importing persons include firms, associations and corporations, and words importing the singular include the plural and vice versa;

(d) This Resolution may be cited, or otherwise referred to as the “General Sewer Revenue Bond Resolution”; and

(e) Whenever, in this Resolution, the City is named or referred to, it shall and shall be deemed to include its successors and assigns whether so expressed or not. All of the covenants, stipulations, obligations and agreements by or on behalf of, and other provisions for the benefit of, the City contained in this Resolution shall bind and inure to the benefit of such successors and assigns and shall bind and inure to the benefit of any officer, board, commission,

authority, agent or instrumentality to whom or to which there shall be transferred by or in accordance with law, or who or which is empowered to exercise or perform, any right, power or duty of the City, or of its successors or assigns, the possession of which is necessary or appropriate in order to comply with or perform any of the covenants, stipulations, obligations, agreements or other provisions of this Resolution or comply with or fulfill any conditions set forth in this Resolution.

Section 1.03. Resolution to Constitute Contract. In consideration of the purchase and acceptance of any and all of the Bonds authorized to be issued hereunder by those who shall hold the same from time to time, this Resolution shall be deemed to be and shall constitute a contract between the City and the holders from time to time of the Bonds; and the pledge made in this Resolution and the covenants and agreements therein set forth to be performed on behalf of the City shall be for the equal benefit, protection and security of the holders of any and all of the Bonds, all of which, regardless of the time or times of their authentication and delivery or maturity, shall be of equal rank without preference, priority or distinction of any of the Bonds over any other thereof except as expressly provided in or permitted by this Resolution.

ARTICLE II

AUTHORIZATION AND ISSUANCE OF BONDS

Section 2.01. Authorization of Bonds. (a) The City is hereby authorized to issue from time to time as herein provided Bonds of the City to be designated as “Sewer Revenue Bonds” which may be issued in one or more Series as hereinafter provided. The Bonds shall be limited obligations of the City payable solely from the sources herein provided. The aggregate principal amount of the Bonds which may be executed, authenticated and delivered under this Resolution is not limited except as provided in this Resolution or in the Enabling Act or as limited by law. The Bonds shall not be general obligations of the City and the full faith and credit of the City are not pledged for the payment of the Bonds. Neither the State nor any other political subdivision thereof (except the City to the limited extent provided herein) shall be obligated to pay the principal of, premium or interest on any Bonds and neither the faith and credit nor the taxing power of the State or of any political subdivision thereof is pledged to the payment of the principal of, premium or interest on any Bonds.

(b) The Bonds may be issued in one or more Series, with such further appropriate particular designations added to or incorporated in such title for the Bonds of any particular Series, as the City may determine and as may be necessary to distinguish such Bonds from the Bonds of any other Series. Each Bond shall bear upon its face the designation so determined for the Series to which it belongs.

(c) The issuance of Bonds of a Series shall be authorized pursuant to a Supplemental Resolution adopted pursuant to Article X hereof. Each such Supplemental Resolution shall, subject to the express limitations of this Resolution, specify (i) the authorized principal amount of such Series; (ii) the purpose or purposes for which such Series is being issued, which shall be one or more of the purposes specified in Section 2.04 or Section 2.05 hereof; (iii) the date, maturity dates and amounts of each maturity, the Sinking Fund Installment payment dates, if any, the amount of each Sinking Fund Installment, if applicable, and the first

and all subsequent interest payment dates of the Bonds of such Series or the manner of determining the same; (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 and the interest payment dates therefor and the method of payment thereof, and in the case of Variable Rate Bonds, the Maximum Interest Rate, if any, for such Bonds, the terms of the Pro Forma Bond Issue applicable thereto, and the provisions, if any, as to the calculation or change of or conversion from Variable Rates 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) the authorized denomination or denominations of and the manner of dating, numbering and lettering the Bonds of such Series; (vi) the Redemption Price or Redemption Prices, if any, and the redemption terms, if any, of the Bonds of such Series and the place or places of payment of the principal or Redemption Price, if any, of and interest on the Bonds of such Series; (vii) direction for the application and disbursement of the proceeds of the Bonds of such Series; (viii) provisions for the sale of the Bonds of such Series; (ix) a description of the Project, if any, to be financed by the Bonds of such Series, which description may be amended by the City from time to time without the consent of any other person or entity, notwithstanding the provisions of Article XI of this Resolution; (x) the form of the Bonds of such Series and the form of the Trustee’s certificate of authentication; (xi) with regard to Option Bonds, provisions regarding tender and payment thereof; (xii) if the Bonds of such Series shall be Common Bond Reserve Account Secured Bonds; (xiii) the Principal Installments, if any, for such Series which will be Refundable Principal Installments together with a schedule showing the Debt Service for such Series; and (xiv) any other provisions deemed advisable by the City, in lieu of or in substitution for the provisions of this Resolution, which may include such modifications as may be necessary to provide for the issuance of Bonds without certificates and evidenced in Book-Entry Form.

(d) Unless otherwise provided in a Supplemental Resolution in respect of any Series of Bonds, all the Bonds of each Series of like maturity shall be identical in all respects, except as to denominations, numbers and letters. After the original issuance of Bonds of any Series, no Bonds of such Series shall be issued except in lieu of or in substitution for other Bonds of such Series pursuant to Sections 3.04, 3.06, 3.07, 3.08, 4.06 or 11.06 hereof.

(e) Nothing in this Resolution shall be deemed to preclude or prevent the consolidation into a single Series for purposes of issuance and sale of Bonds otherwise permitted by this Resolution to be issued at the same time in two or more separate Series; provided, however, that solely for the purpose of satisfying the requirements of Section 2.02, Section 2.04 or Section 2.05 hereof, as the case may be, the Bonds otherwise permitted by this Resolution to be issued as a separate Series shall be considered separately as if such Bonds were to be issued as a separate Series. In the event that separate Series are combined for purposes of issuance and sale, they may be issued under a single Supplemental Resolution notwithstanding any other provision of this Resolution.

Section 2.02. General Provisions for Issuance of the Bonds. The Bonds shall be executed by the City and delivered to the Trustee and thereupon shall be authenticated by the Trustee and delivered to the City upon its order, but only upon the receipt by the Trustee at or prior to such authentication, of:

(a) An opinion of Bond Counsel to the effect that (i) the City has the right and power to adopt this Resolution under the Enabling Act, (ii) this Resolution has been duly and lawfully adopted by the City, is in full force and effect and is valid and binding upon the City and is enforceable against the City; (iii) this Resolution creates the valid pledge which it purports to create of the Revenues and amounts on deposit in certain of the Funds established hereunder, subject to the application thereof to the purposes and on the conditions permitted by this Resolution; (iv) the Bonds of such Series are valid and binding limited obligations of the City enforceable in accordance with their terms and the terms of this Resolution; and (v) all conditions required by this Resolution 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 Enabling Act and this Resolution; provided, however, that such opinion of Bond Counsel as to the matters in clauses (ii) and (iv) above, may take an exception on account of the laws of bankruptcy, reorganization and insolvency and of other laws affecting creditors' rights generally and to the exercise of judicial discretion in accordance with general equitable principles;

(b) A written order as to the delivery of the Bonds setting forth the disposition of the proceeds of the sale of the Bonds as in this Resolution provided, signed by an Authorized Officer of the City;

(c) In the case of each Series of Bonds, a copy of the Supplemental Resolution authorizing such Bonds, certified by an Authorized Officer of the City;

(d) If Bonds shall be issued under this Resolution containing an option which requires the City to purchase or redeem Bonds at the election of the Bondholder at such time or times and in such amount or amounts as the Bondholder may elect, then the City shall furnish to the Trustee a Liquidity Facility in such an amount that would accommodate an election by all Bondholders to purchase or redeem the entire aggregate Outstanding principal amount of such Series of Bonds;

(e) A copy of this Resolution, certified by an Authorized Officer of the City and, for each Series of Bonds, a copy of the related Supplemental Resolution certified as aforesaid;

(f) If so determined by the City, the creation and provisions for maintenance in the Bond Reserve Fund of a Bond Reserve Account specifically for the Bonds of such Series, and to the extent determined by the City, for Bonds of any other Series whether or not Refunding Bonds, and the application of moneys therein, the amount (or the method of determining the amount), if any, to be deposited from the proceeds of such Series of Bonds in such Bond Reserve Account and any other matters and things relating to such Bond Reserve Account, including the Separate Series Bond Reserve Requirement, the terms and conditions upon which a Reserve Fund Facility may be used to fund all or a portion of the Separate Series Bond Reserve Requirement and the terms upon which any withdrawals from such Bond Reserve Account shall be replenished, as are not contrary to or inconsistent with this Resolution as therefore in effect; and

(g) Such further documents, moneys and securities as are required by the provisions of Sections 2.04 and 2.05 hereof and as may be required by the Supplemental Resolution.

Section 2.03. Application of Bond Proceeds and Allocation Thereof. Upon receipt thereof, the City shall apply the proceeds of a Series of Bonds as provided in the applicable Supplemental Resolution.

Section 2.04. Additional Bonds. (a) After authentication and delivery of the initial Series of Bonds pursuant to this Resolution, one or more Series of Additional Bonds may be authenticated and delivered upon original issuance at any time or from time to time for the purposes of (i) financing Costs of Projects, (ii) financing Costs of completing Projects, (iii) refunding as described in Section 2.05(a) hereof and which does not satisfy the requirements of Section 2.05(b)(1)(A) hereof, (iv) paying the principal of and redemption premium, if any, and interest on any Bond Anticipation Notes, (v) providing additional funds for deposit into the Bond Reserve Fund and (vi) paying costs incident to the issuance of such Series of Bonds. The proceeds, including accrued interest, of the Additional Bonds of each Series shall be applied simultaneously with the delivery of such Additional Bonds as provided in the Supplemental Resolution authorizing such Series.

(b) The Bonds of any such Series shall be authenticated and delivered by the Trustee only upon receipt by it (in addition to the documents and moneys required by Section 2.02 hereof) of:

(1) At least one of the following set forth in clause (A) or (B) hereof:

(A) A certificate of an Authorized Officer of the City (i) setting forth the Net Revenues for any period of twelve (12) consecutive calendar months out of the twenty-four (24) consecutive calendar months next preceding the authentication and delivery of the Bonds being issued and (ii) demonstrating that for each future Fiscal Year in which Bonds are Outstanding (including the Bonds to be issued) such Net Revenues equal or exceed 1.15 times the sum of the Aggregate Debt Service in such Fiscal Year (including the estimated Debt Service on the Bonds to be issued and excluding Debt Service on any Bonds being refunded by the Bonds to be issued) and the amounts owing with respect to Parity Debt during such Fiscal Year and payable on parity with the Bonds; or

(B) A certificate of the Consulting Engineer (i) setting forth the estimated Net Revenues for the next five (5) Fiscal Years and (ii) demonstrating that the minimum amount of such estimated annual Net Revenues in the next five (5) Fiscal Years equals or exceeds 1.15 times the sum of the Aggregate Debt Service payable in the current and any succeeding Fiscal Year (including the estimated Debt Service on the Bonds to be issued and excluding Debt Service on any Bonds being refunded by the Bonds to be issued) and the amounts owing with respect to Parity Debt during each such Fiscal Year and payable on parity with the Bonds. For purposes of such certificate, estimated Net Revenues shall include estimated revenue from (a) any adjustment of sewer rates which shall have been formally

adopted and placed in effect on or prior to the date of authentication and delivery of the Bonds to be issued and (b) any new facilities or facilities anticipated to be acquired and expected to be placed into use and operation;

(2) The amount, if any, to be deposited in the Bond Reserve Fund so that the balance in such Fund shall equal the amount required immediately after delivery of such Additional Bonds; and

(3) A certificate of an Authorized Officer of the City stating that no Event of Default has occurred and is then continuing or that the issuance of the Bonds to be issued will fully cure any such Event of Default, and providing reasonable detail with reference to both the applicable Event of Default and such cure.

Section 2.05. Refunding Bonds. (a) One or more Series of Refunding Bonds may be issued at any time (i) to refund Outstanding Bonds of one or more Series, (ii) to refund one or more maturities within a Series or any Bonds of one or more maturities within one or more Series, (iii) to refund any Parity Debt or (iv) to refund any other bonds, notes or other evidences of indebtedness of the City heretofore or hereafter issued to finance or refinance costs of the System. 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 under this Resolution required by the provisions of the Supplemental Resolution authorizing such Bonds.

(b) Refunding Bonds of any such Series shall be authenticated and delivered by the Trustee only upon receipt by it (in addition to the documents required by Section 2.02 hereof) of:

(1) At least one of the following set forth in clause (A) or (B) hereof:

(A) A certificate of an Authorized Officer of the City demonstrating that the Debt Service on the Bonds Outstanding and the debt service on Parity Debt Outstanding in each Fiscal Year immediately after the issuance of such Refunding Bonds shall be no greater than the Debt Service on the Bonds Outstanding and the debt service on Parity Debt Outstanding in each Fiscal Year immediately prior to the issuance of such Refunding Bonds; or

(B) The documents and moneys described in subsection (b) of Section 2.04 hereof;

(2) Instructions to the Trustee to give due notice of redemption, if applicable, of all the Bonds to be refunded on a redemption date or dates specified in such instructions, subject to the provisions of Section 13.01 hereof;

(3) If the Bonds to be refunded are not by their terms subject to redemption or will not be redeemed within the next succeeding sixty (60) days, instructions to the Trustee, satisfactory to it, to mail the notice provided for in Section 13.01 hereof to the holders of the Bonds being refunded;

(4) Either (i) moneys in an amount sufficient, as provided in Section 13.01, to effect payment at the applicable Redemption Price of the Bonds to be refunded, together with accrued interest on such Bonds to the redemption date, which moneys shall be held by the Trustee or any one or more of the Paying Agents in a separate account irrevocably in trust for the benefit of and assigned to the respective holders of the Bonds to be refunded or (ii) Defeasance Obligations and any moneys, in such principal amounts, of such maturities, bearing such interest, and otherwise having such terms and qualifications, as shall be necessary to comply with the provisions of subsection (b) of Section 13.01 hereof, which Defeasance Obligations and moneys shall be held in trust and used only as provided in said subsection (b); and

(5) Such further documents and moneys as are required by the provisions of any Supplemental Resolution adopted pursuant to Article X hereof.

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

Section 2.06. Bond Anticipation Notes. Whenever the City shall authorize a Series of Bonds, the City may, by resolution, authorize the issuance of notes, including commercial paper notes, and renewals thereof, in anticipation of such Series. The principal of and interest on such notes (and any 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 priority over any other pledge of such proceeds created by this Resolution. The City may also pledge the Revenues to the payment of the interest on such notes on a parity with the pledge created by Section 5.01 hereof upon providing the Trustee the certificates described in Section 2.04(b) hereof. A copy of the resolution of the City authorizing such notes, certified by an Authorized Officer of the City, shall be delivered to the Trustee following its adoption together with such other information concerning such notes as the Trustee may reasonably request.

Section 2.07. Credit Facilities, Liquidity Facilities and Qualified Swap Agreements. (a) In connection with the issuance of any Series of Bonds hereunder, the City may obtain or cause to be obtained one or more Credit Facilities, Liquidity Facilities, Reserve Fund Facilities or Qualified Swap Agreements. In connection therewith the City may enter into such agreements with the issuer of such Credit Facility, Liquidity Facility, Reserve Fund Facility or Qualified Swap Agreement providing for, inter alia: (i) the payment of fees and expenses to such issuer for the issuance of such Credit Facility, Liquidity Facility, Reserve Fund Facility or Qualified Swap Agreement, (ii) the terms and conditions of such Credit Facility, Liquidity Facility, Reserve Fund Facility or Qualified Swap Agreement and the Series of Bonds affected thereby and (iii) the security, if any, to be provided for the issuance of such Credit Facility, Liquidity Facility, Reserve Fund Facility or Qualified Swap Agreement.

(b) The City may secure a Credit Facility or Liquidity 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 City in the applicable Supplemental Resolution. The City may also in an agreement with the issuer of a Credit Facility, Reserve Fund Facility or Liquidity Facility agree to directly reimburse such issuer for amounts paid under the terms of such Credit Facility, Reserve Fund Facility or Liquidity Facility, together with interest thereon (the “Reimbursement Obligation”); provided, however, that no Reimbursement Obligation shall be created, for purposes of this Resolution, until amounts are paid out under such Credit Facility, Reserve Fund Facility or Liquidity Facility. Any such Reimbursement Obligation and any Qualified Swap Agreement, other than any termination payments or accelerated payments thereunder, may be secured by a pledge of, and a lien on, Revenues on a parity with the pledge created by Section 5.01 hereof.

(c) Any such Credit Facility or Liquidity Facility shall be for the benefit of and secure, or provide for the payment or purchase price of, such Series of Bonds or portion thereof as specified in the applicable Supplemental Resolution.

(d) If a Credit Facility is provided for a Series of Bonds or for specific Bonds, unless otherwise provided by the City in the Supplemental Resolution under which such Bonds are issued, the Credit Facility Provider shall have the following rights: (i) the right to make requests, direct or provide consent to actions hereunder or to otherwise direct proceedings all as provided in Article VIII (including, with respect to requests and directions given to the Trustee, upon providing the Trustee with such indemnity as it may require) hereof to the same extent and in place of the owners of the Bonds, when such request, direction or consent is required from owners of Bonds, which are secured by the Credit Facility and for such purposes the Credit Facility Provider shall be deemed to be the Bondholder of such Bonds and (ii) the right to act in place of the owners of the Bonds which are secured by the Credit Facility for purposes of removing a Trustee or appointing a Trustee under Article IX hereof. The rights granted to any such Credit Facility Provider, with respect to the provisions of Articles VIII and IX hereof, shall be disregarded and be of no effect if the Credit Facility Provider is in default of its payment obligations under its Credit Facility.

Section 2.08. Separate Systems. Nothing contained in this Resolution shall prevent the City from authorizing and issuing bonds, notes, warrants, certificates or other obligations or evidences of indebtedness, other than Bonds, to acquire, construct, develop, compile or otherwise obtain any separate or other system as permitted by the Act, and any incidental properties to be constructed, developed, compiled or otherwise acquired in connection therewith, which system shall be a separate system and which bonds or other obligations or evidences of indebtedness shall be payable solely from the revenues or other income derived from the ownership or operation of such system and which revenues and other income shall not constitute Revenues; provided, however, that the City will not issue bonds, notes, warrants, certificates or other obligations or evidences of indebtedness for the purpose of acquiring or constructing such a separate system unless and until a report of the Consulting Engineer shall be delivered to the Trustee to the effect that in the opinion of the Consulting Engineer, the acquisition, construction or operation of such separate system will not result in a reduction of the Revenues below the amounts covenanted by Section 7.11 hereof to be maintained.

ARTICLE III

GENERAL TERMS AND PROVISIONS OF BONDS

Section 3.01. Medium of Payment; Form and Date; Letters and Numbers.

(a) The Bonds shall be payable, with respect to interest, principal and Redemption Price, in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts.

(b) The Bonds of each Series shall be issued only in fully registered form without coupons unless otherwise authorized by a Supplemental Resolution. As set forth in the Supplemental Resolution authorizing such Series, the Bonds of each Series may be in certificated form or may be evidenced by Book-Entry Form as provided in Section 3.10 hereof or may be evidenced in Book-Entry Form without certificates. Any Supplemental Resolution may contain such additional provisions regarding registration, discharge and transfer of Bonds of such Series as are not inconsistent with this Resolution.

(c) The principal and Redemption Price of any Bond shall be payable, upon surrender of such Bond, at such offices or agencies of the City as are provided for in the applicable Supplemental Resolution. Interest on any Bond shall be payable by check or draft mailed to the holder thereof unless some other method of payment shall be provided for in the applicable Supplemental Resolution. Interest on any Bond which is payable, and is punctually paid or provided for, on any interest payment date shall be paid to the person in whose name that Bond is registered at the close of business on the Record Date for such interest.

(d) Each Bond shall be numbered and lettered as provided in the Supplemental Resolution authorizing the Series of which such Bond is a part and so as to be distinguished from every other Bond.

(e) Unless otherwise provided in a Supplemental Resolution in respect of any Series of Bonds, the Bonds shall be dated as of the interest payment date next preceding the date of authentication thereof by the Trustee, unless such date of authentication shall be an interest payment date or the date of original issuance of the Bonds, in which case they shall be dated as of such date of authentication; provided, however, that if, as shown by the records of the Trustee, interest on the Bonds shall be in default, the Bonds issued in lieu of Bonds surrendered for transfer or exchange may be dated as of the date to which interest has been paid in full on the Bonds surrendered; provided, further, that if the date of authentication shall be prior to the first interest payment date for the Bonds of such Series, the Bonds shall be dated as provided in the Supplemental Resolution authorizing the Bonds of such Series. The Bonds of each Series shall bear interest from their date.

Section 3.02. Legends. The Bonds of each Series may contain or have endorsed thereon such provisions, specifications and descriptive words not inconsistent with the provisions of this Resolution as may be necessary or desirable to comply with custom, the rules of any securities exchange or commission or brokerage board, or otherwise, as may be determined by the City prior to the authentication and delivery thereof.

Section 3.03. Execution and Authentication. (a) The Bonds shall be executed in the name of the City by the manual or facsimile signature of its Mayor and the Finance Officer, and its corporate seal (or a facsimile thereof) shall be impressed, imprinted, engraved or otherwise reproduced thereon and attested by the manual or facsimile signature of the City Clerk of the City, or in such other manner as may be required by law or by resolution of the Governing Body. In case any one or more of the officers who shall have signed or sealed any of the Bonds shall cease to be such officer before the Bonds so signed and sealed shall have been authenticated and delivered by the Trustee, such Bonds, may, nevertheless, be authenticated and delivered as herein provided, and may be issued as if the persons who signed or sealed such Bonds had not ceased to hold such offices. Any Bond of a Series may be signed and sealed on behalf of the City by such persons as at the time of the execution of such Bond shall be duly authorized or hold the proper office in the City, although at the date of such Bond such person may not have been so authorized or have held such office.

(b) The Bonds of each Series shall bear a certificate of authentication, in the form set forth in the Supplemental Resolution authorizing such Series of Bonds, executed manually by the Trustee or Authenticating Agent. Only such Bonds as shall bear such manually executed certificate of authentication shall be entitled to any right or benefit under this Resolution, and no Bond shall be valid or obligatory for any purpose until such certificate of authentication shall have been duly executed by the Trustee or Authenticating Agent. Such certificate of the Trustee upon any Bond executed on behalf of the City shall be conclusive evidence that the Bond so authenticated has been duly authenticated and delivered under this Resolution and that the holder thereof is entitled to the benefits of this Resolution.

(c) In the case of any Series of Bonds for which the Bond Registrar is other than the Trustee for such Series of Bonds or the City, and such Bond Registrar has not theretofore been appointed as an Authenticating Agent for such Series, the Trustee may appoint the Bond Registrar as an Authenticating Agent with the power to act on such Trustee's behalf and subject to its direction in the authentication and delivery of Bonds in connection with transfers, exchanges and redemptions under Sections 3.04, 3.06, 3.07, 4.06 and 11.06 hereof and the authentication and delivery of Bonds by an Authenticating Agent pursuant to this Section shall, for all purposes of this Resolution, be deemed to be the authentication and delivery by the Trustee. Either the Trustee, or the Authenticating Agent for a Series of Bonds, shall authenticate all Bonds of such Series upon their initial issuance and any Bonds of the Series issued in substitution for other Bonds pursuant to Section 3.08 hereof.

Section 3.04. Interchangeability of Bonds. Unless otherwise provided in a Supplemental Resolution in respect of any Series of Bonds, the holder of any Bond or Bonds of one or more denominations shall have the right to exchange such Bond or Bonds for a new Bond or Bonds of any denomination of the same aggregate principal amount and Series and maturity as the surrendered Bond or Bonds. Such Bond or Bonds shall be exchanged for a new Bond or Bonds upon the request of the holder thereof in person or by his attorney duly authorized in writing, upon surrender of such Bond or Bonds at the designated office of the Bond Registrar together with a written instrument of transfer satisfactory to the Bond Registrar, duly executed by the registered owner or his attorney duly authorized in writing, and upon payment of any charges which the Bond Registrar may make as provided in Section 3.07 hereof.

Section 3.05. Bond Registrar and Bond Register. The Bonds of a Series shall be registered upon original issuance and upon subsequent transfer or exchange as provided in this Resolution. Any Supplemental Resolution may contain such additional provisions regarding the registration, transfer and exchange of Bonds of a Series as are not inconsistent with this Resolution. The City shall designate, in respect of each Series of Bonds, a person to act as Bond Registrar for such Series. The Bond Registrar appointed for any Series of Bonds may be either the City, the Trustee, the Authenticating Agent or the Paying Agent for such Series of Bonds. Any person, including the City, undertaking to act as Bond Registrar in respect of a Series of Bonds shall accept the duties of Bond Registrar under this Resolution and the applicable Supplemental Resolution in a certificate signed by an officer of the Bond Registrar, which certificate shall be filed with the Trustee for that Series. The Bond Registrar in respect of each Series of Bonds shall act as registrar and transfer agent for all Bonds of such Series. The City shall cause to be kept at an office of the Bond Registrar for a Series of Bonds a bond register in which, subject to such reasonable regulations as it may prescribe, the City shall provide for the registration of the Bonds of such Series and for the registration of transfers of such Bonds. The City shall cause the Bond Registrar to designate, by a written notification to the Trustee, a specific office location (which may be changed from time to time, upon similar notification) at which the bond register is kept. The Bond Registrar for a Series of Bonds shall, in any case where it is not also the Trustee in respect of such Series, forthwith following each Record Date in respect of such Series and at any other time as reasonably requested by the Trustee for such Series, certify and furnish to such Trustee, and to any Paying Agent for such Series, as such Trustee shall specify, the names, addresses, and holdings of Bondholders and any other relevant information reflected in the bond register, and the Trustee and any such Paying Agent shall for all purposes be fully entitled to rely upon the information so furnished to it and shall have no liability or responsibility in connection with the preparation thereof.

Section 3.06. Negotiability, Transfer and Registry. (a) Each Bond shall be transferable only upon the books of the City, which shall be kept for that purpose at the designated office of the Bond Registrar, by the registered owner in person or by his attorney duly authorized in writing, upon surrender with a written instrument of transfer satisfactory to the Bond Registrar and duly executed by the registered owner or such duly authorized attorney. Upon the transfer of any such Bond, the City shall issue in the name of the transferee a new Bond or Bonds of the same Series and of the same aggregate principal amount and maturity as the surrendered Bonds. For the purposes of this Resolution, Option Bonds which are required to be tendered pursuant to the provisions of this Resolution shall be deemed surrendered for transfer even though such Bonds have not been actually delivered.

(b) The City and each Fiduciary may deem and treat the person in whose name any Bond shall be registered upon the books of the City, as the absolute owner of such Bond, whether such Bond shall be overdue or not, for the purpose of receiving payment of, or on account of, the principal and Redemption Price, if any, of and interest on such Bond and for the payment of the purchase price of any Option Bond tendered to the City and for all other purposes, and all such payments so made to any such registered owner or upon his order, shall be valid and effectual to satisfy and discharge the liability upon such Bond to the extent of the sum or sums so paid, and neither the City nor any Fiduciary shall be affected by any notice to the contrary. The City agrees to indemnify and save each Fiduciary harmless from and against any

and all loss, cost, charge, expense, judgment or liability incurred, by it, acting in good faith and without negligence under this Resolution, in so treating such registered owner.

Section 3.07. Regulations with Respect to Exchanges and Transfers. In all cases in which the privilege of exchanging Bonds or transferring Bonds is exercised, the City shall execute and the Trustee or Authenticating Agent shall authenticate and deliver Bonds in accordance with the provisions of this Resolution. All Bonds surrendered to the Bond Registrar in any such exchanges or transfers shall forthwith be delivered to and cancelled by the Trustee. For every such exchange or transfer of Bonds, whether temporary or definitive, other than the first such exchange or transfer with respect to each Bond, the City or the Bond Registrar may make a charge sufficient to reimburse it for any printing costs, tax, fee or other government charge required to be paid. Neither the City nor the Bond Registrar shall be required (a) to transfer or exchange Bonds during a period beginning at the opening of business on the Record Date next preceding an interest payment date on the Bonds or next preceding the date (as determined by the Trustee) of any selection of Bonds of a particular Series to be redeemed and ending on such interest payment date, or for a period of fifteen (15) days next preceding the date (as determined by the Trustee) of any selection of Bonds to be redeemed or thereafter until after the first mailing of notice of redemption of any proposed redemption of Bonds or (b) to transfer or exchange any Bonds called for redemption; provided, however, that the City and the Bond Registrar shall be required to make any exchange, registration or transfer of any Bond or Option Bond remarketed in accordance with the Supplemental Resolution providing for such remarketing of Bonds.

Section 3.08. Bonds Mutilated, Destroyed, Stolen or Lost. In case any Bond shall become mutilated or be destroyed, stolen or lost, the City shall execute, and thereupon the Trustee or Authenticating Agent shall authenticate and deliver, a new Bond of like Series, maturity and principal amount as the Bond so mutilated, destroyed, stolen or lost, in exchange and substitution for such mutilated Bond, upon surrender and cancellation of such mutilated Bond, or in lieu of and substitution for the Bond destroyed, stolen or lost, upon filing with the Trustee evidence satisfactory to the City and the Trustee that such Bond has been destroyed, stolen or lost, and proof of ownership thereof, and upon furnishing the City and the Trustee with indemnity satisfactory to them and complying with such other reasonable regulations as the City and the Trustee may prescribe and paying such expenses as the City and Trustee may incur, including printing expenses. All Bonds so surrendered to the Trustee shall be cancelled by it. Any such new Bonds issued pursuant to this Section in substitution for Bonds alleged to be destroyed, stolen or lost shall be at any time enforceable by anyone, shall be entitled to equal and proportionate benefits with all other Bonds issued under this Resolution and shall be equally secured by the moneys or securities held by the City or the Fiduciaries for the benefit of the Bondholders.

Section 3.09. CUSIP Identification Numbers. CUSIP identification numbers may be printed on the Bonds, but no such number shall be deemed to be a part of any Bond or a part of the contract evidenced thereby, and no liability shall hereafter attach to the City, any Fiduciary or any of their respective officers or agents because of or on account of said CUSIP identification numbers.

Section 3.10. Book-Entry Form. Notwithstanding any other provision of this Resolution, the City may employ a book-entry-only system of registration with respect to any Bonds, and the procedures regarding such registration shall be set forth in a Supplemental Resolution. Any provisions of this Resolution inconsistent with book-entry-only Bonds or the rules or regulations of any securities depository providing such system of regulation shall not be applicable to such book-entry-only Bonds.

ARTICLE IV

REDEMPTION OF BONDS

Section 4.01. Privilege of Redemption and Redemption Price. Bonds subject to redemption prior to maturity pursuant to this Resolution shall be redeemable, upon notice as provided in this Article IV, at such time, at such Redemption Prices and upon such terms in addition to the terms contained in this Article IV as may be specified in any Supplemental Resolution for any Series.

Section 4.02. Redemption at the Election or Direction of the City. In the case of any redemption of Bonds at the election or direction of the City, the City shall give written notice to the Trustee of its election or direction so to redeem and specifying the redemption date, the Series and the principal amounts of the Bonds of each maturity of such Series to be redeemed. Such notice shall be given at least forty-five (45) days prior to the redemption date or such shorter period as shall be acceptable to the Trustee. In the event notice of redemption shall have been given as in Section 4.05 hereof provided, there shall be paid from the Bond Fund or from any other available source, on or prior to the redemption date to the appropriate Fiduciaries, an amount in cash which, in addition to other moneys, if any, available and held therefor, will be sufficient to redeem all of the Bonds to be redeemed on the redemption date at their Redemption Price plus interest accrued and unpaid to the redemption date.

Section 4.03. Redemption Otherwise than at City's Election or Direction. Whenever by the terms of this Resolution or any Supplemental Resolution in respect of a Series the Trustee is required or authorized to redeem Bonds otherwise than at the election or direction of the City, the Trustee shall select the Bonds to be redeemed, give notice of redemption and pay the Redemption Price thereof, plus interest accrued and unpaid to the redemption date, to the appropriate Paying Agents in accordance with the terms of this Article IV and, to the extent applicable, Section 5.04 hereof.

Section 4.04. Selection of Bonds to be Redeemed. The City may elect to redeem less than all Outstanding Bonds of any Series. If the City elects to redeem less than all Outstanding Bonds of any Series, such Bonds shall be redeemable in such order of maturity as the City shall determine, or such other order as specified by an Authorized Officer of the City in writing to the Trustee. If less than all of the Bonds of any Series of like maturity shall be called for prior redemption, the particular Bonds or portions of Bonds to be redeemed shall be selected by the Trustee by lot or with respect to any Bonds, by such other method as may be prescribed in the Supplemental Resolution authorizing such Bonds; provided, however, that, unless otherwise provided in a Supplemental Resolution authorizing the issuance of a Series of Bonds, the portion of any Bond of a denomination of more than \$5,000 to be redeemed shall be in the principal

amount of \$5,000 or an integral multiple thereof, and that, in selecting portions of such Bonds for redemption, the Trustee shall treat each such Bond as representing that number of Bonds of \$5,000 denominations which is obtained by dividing the principal amount of such Bonds to be redeemed in part by \$5,000.

Section 4.05. Notice of Redemption; Conditional Notice. (a) When the Trustee shall receive notice from the City of its election or direction to redeem Bonds pursuant to Section 4.02 hereof, and when redemption of Bonds is authorized or required pursuant to Section 4.03 hereof, the Trustee shall give notice, in the name of the City, of the redemption of such Bonds, which notice shall specify the Series and the maturities of the 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 Bonds of any Series of any like maturity are to be redeemed, the letters and numbers or other distinguishing marks of such Bonds so to be redeemed, and, in the case of Bonds to be redeemed in part only, such notice shall also specify the respective portions of the principal amount thereof to be redeemed. Such notice shall further state that on such date there shall become due and payable the Redemption Price of each Bond to be redeemed, or the Redemption Price of the specified portions of the principal thereof in the case of Bonds to be redeemed in part only, together with interest accrued to the redemption date, and that from and after such date interest thereon shall cease to accrue and be payable. Unless otherwise provided in a Supplemental Resolution, such notice shall be mailed, postage prepaid, not less than thirty (30) days nor more than sixty (60) days before the redemption date, to the registered owners of any Bonds or portions of Bonds which are to be redeemed, at their last addresses appearing upon the registry books.

(b) Any notice of optional redemption (other than redemptions to satisfy mandatory sinking fund requirements) of Bonds may state that it is conditional upon receipt by the Trustee of moneys sufficient to pay the Redemption Price together with accrued interest to the redemption date, or upon the satisfaction of any other condition, or that it may be rescinded in whole or in part upon the occurrence of any other event, and any conditional notice so given may be rescinded in whole or in part if any such other event occurs. Notice of such rescission, failure to fund the Redemption Price or satisfaction of such other condition shall be given by the Trustee to affected holders of such Bonds as promptly as practicable upon the failure of such condition or the occurrence of such other event, in the same manner as the conditional notice of redemption was given.

(c) Failure of the registered owner of any Bond which is to be redeemed to receive any notice given pursuant to subsection (a) or (b) of this Section or Section 4.07 hereof shall not affect the sufficiency or validity of the proceedings contemplated thereby.

Section 4.06. Payment of Redeemed Bonds. Notice having been given in the manner provided in Section 4.05 hereof, the Bonds or portions thereof so called for redemption shall become due and payable on the redemption date so designated at the Redemption Price, plus interest accrued and unpaid to the redemption date, and, upon presentation and surrender thereof at any place specified in such notice, such Bonds, or portions thereof, shall be paid at the Redemption Price, plus interest accrued and unpaid to the redemption date. If there shall be drawn for redemption less than all of a Bond, the City shall execute and the Trustee or Authenticating Agent shall authenticate and the appropriate Fiduciary shall deliver, upon the

surrender of such Bond, without charge to the owner thereof, for the unredeemed balance of the principal amount of the Bond so surrendered, Bonds of like Series and maturity in any authorized denominations. If, on the redemption date, moneys for the redemption of all the Bonds or portions thereof of any like Series and maturity to be redeemed, together with interest to the redemption date, shall be held by the Paying Agents so as to be available therefor on said date and if notice of redemption shall have been given as aforesaid, then, from and after the redemption date, interest on the Bonds or portions thereof of such Series and maturity so called for redemption shall cease to accrue and become payable. If said moneys shall not be so available on the redemption date, such Bonds or portions thereof shall continue to bear interest until paid at the same rate as they would have borne had they not been called for redemption.

Section 4.07. Purchase in Lieu of Redemption. Notwithstanding any other provisions of this Article IV, (i) if so provided in the Supplemental Resolution authorizing the issuance thereof, any Bonds subject to optional redemption and cancellation shall also be subject to optional call for purchase and resale by the City upon giving the same notices (which shall include the direction to call such Bonds for purchase and resale) that are required in connection with the optional redemption of such Bonds, which notices may be conditional and may be rescinded in whole or in part as with calls for redemption, (ii) the particular Bonds to be called shall be selected in the same manner as Bonds redeemed, (iii) such Bonds shall be called at the same times and at the same prices as are applicable to the optional redemption of such Bonds and (iv) the City shall provide the Bond Registrar with written instructions for the registration and delivery of the Bonds so purchased. No purchase of Bonds pursuant to this Section shall operate to extinguish the indebtedness of the City evidenced thereby or modify the terms of Bonds, and such Bonds shall remain Outstanding under this Resolution.

ARTICLE V

ESTABLISHMENT OF FUNDS AND APPLICATION THEREOF

Section 5.01. The Pledge Effected by this Resolution. (a) There are hereby pledged for the payment of the principal or Redemption Price of and interest on the Bonds in accordance with their terms and the provisions of this Resolution, subject only to the provisions of this Resolution permitting the application thereof for the purposes and on the terms and conditions set forth in this Resolution, (i) all Revenues and (ii) all Funds and Accounts, other than the Rebate Fund, established by this Resolution.

(b) It is the intention of the City that, to the fullest extent permitted by law, this pledge shall be valid and binding from the time when it is made, that the Revenues, moneys, securities and other funds so pledged and then or thereafter received by the City shall immediately be subject to the lien of such pledge and shall be valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the City, irrespective of whether such parties have notice thereof.

Section 5.02. Establishment of Funds and Accounts. (a) The following Funds and Accounts are hereby established:

- (1) Revenue Fund, to be held by the City;

- (2) Bond Fund, to be held by the Trustee;
- (3) Bond Reserve Fund, consisting of the Common Bond Reserve Account and each other Bond Reserve Account, if any, as may be established therein by Supplemental Resolution, to be held by the Trustee;
- (4) Rebate Fund, to be held by the City;
- (5) Revenue Stabilization Fund, to be held by the City; and
- (6) Construction Fund, to be held by the City.

(b) The Trustee shall, at the request of the City, establish within any Fund held by the Trustee such Accounts as shall be designated in the written instructions of an Authorized Officer of the City and shall in like manner establish within any Account such sub-accounts for the purposes of such Accounts as shall be so designated, which Accounts and sub-accounts may be available for only one series of Bonds.. The City may establish pursuant to a Supplemental Resolution authorizing the issuance of a Series of Bonds, additional Funds and Accounts for the purposes designated in such Supplemental Resolution.

Section 5.03. Disposition of Revenues and Other Amounts. (a) From and after the time of delivery by the Trustee of the first Bond authenticated and delivered under this Resolution, Revenues shall be collected by the City and deposited, within two (2) business days, into the Revenue Fund. In addition, there shall be deposited into the Revenue Fund all other amounts required by this Resolution to be so deposited or any other amounts which the City elects to deposit therein.

(b) From the amounts first deposited in the Revenue Fund in each month, the City shall set aside an amount from such Revenues which, when added to any amounts on deposit in the Revenue Fund to be applied to the purpose, will be sufficient to pay the current Operating Expenses of the City expected to be payable in such month. Such amounts shall be paid out from time to time by the City for Operating Expenses of the System. All amounts so paid shall forthwith upon withdrawal be forever free and clear of any lien or pledge created by this Resolution.

(c) If the City shall have entered into a Parity Swap Agreement corresponding to the interest rates payable on a Series of Bonds or any portion thereof, the net amounts received by the City, if any, pursuant to such Parity Swap Agreement shall be deposited in the Revenue Fund and applied to the deposits required hereunder, and the net amounts to be paid by the City under such Parity Swap Agreement on a parity with the Bonds (excluding any termination payments) shall be paid on a parity basis with the Bonds as provided by subsection (d) of this Section and in the Supplemental Resolution authorizing the Series of Bonds to which the Parity Swap Agreement relates.

(d) The City shall, from amounts on deposit in the Revenue Fund, to the extent available and subject to the provisions of subsection (b) of this Section, transfer to the Trustee or any Depository, as the case may be, for deposit in the following Funds, the amounts

set forth below, such transfers to be made no later than the last business day of each month and in the following order of priority:

(1) To the Bond Fund (after taking into account any moneys from Bond proceeds on deposit in the Bond Fund for capitalized interest and any moneys not constituting Revenues on deposit in the Bond Fund to pay interest and Principal Installments), an amount for each Series of Outstanding Bonds equal to the sum of: (A) an amount equal to one-sixth (1/6th) of the amount of interest falling due on the Bonds of such Series on the next interest payment date, or such other proportionate amount as shall be necessary to ensure monthly deposits for the payment in full of interest on the next interest payment date, as set forth in the Supplemental Resolution authorizing such Series; (B) an amount equal to one-twelfth (1/12th) of the amount of principal falling due on the next date upon which a Principal Installment falls due on the Bonds of such Series, or such other proportionate amount as shall be necessary to ensure monthly deposits for the payment in full of the Principal Installment on such date, as set forth in the Supplemental Resolution authorizing such Series and (C) an amount as may be determined by the City for the purposes of subsection (c) of this Section, pro rata in accordance with the respective amounts due for such purposes (simultaneously with the transfer described in this clause, the City may transfer a similar amount from the Revenue Fund for the benefit of the holders of any Parity Debt not described in subsection (c) of this Section); provided, however, that with respect to Variable Rate Bonds, the aggregate amount of interest shall be calculated at the Alternate Interest Rate per annum (or, if a Qualified Swap Agreement is in effect with respect to a Series of Bonds and the Swap Provider with respect to such Qualified Swap Agreement or its guarantor satisfies the Minimum Rating Requirement, the swap rate or, in the event that such Qualified Swap Agreement, taken together with such Bonds, results in a net fixed rate payable by the City for the term of such Bonds, such net fixed rate, as applicable);

(2) To the Bond Reserve Fund for credit to (A) the Common Bond Reserve Account therein the amount, if any, necessary to increase the amount on deposit therein, determined as of the first (1st) day of the Fiscal Year, to an amount equal to the Common Bond Reserve Account Requirement unless a lesser amount is otherwise applicable pursuant to the provisions of Section 5.05(g) or (h) hereof and (B) each other Bond Reserve Account therein, if any, the amounts necessary to satisfy any deficiencies in such Bond Reserve Accounts as may be determined and required by the applicable Supplemental Resolution, pro rata on the basis of the amounts so required;

(3) To the Rebate Fund, the amount, if any, necessary to make the amount on deposit therein equal to the Rebate Fund Requirement, if any, determined in accordance with the applicable Supplemental Resolution; and

(4) To the Revenue Stabilization Fund, the amount, if any, determined by the City.

Any amounts retained in the Revenue Fund after making the foregoing payments and transfers may be used for any lawful purpose of the City, including but not limited to the cost of the construction of additions, improvements or betterments to, or the reconstruction of,

the System, emergency repairs of the System, major or extraordinary repairs, renewals or replacements of the System, redemption of any Bonds and expenses of such purchase or redemption, reserves for items of Operating Expenses the payment of which is not immediately required, reserves for the payment of any future costs, expenses, payments or transfers, or the payment of other bonds, notes or other evidences of indebtedness of the City heretofore or hereafter issued to finance or refinance costs of the System. All amounts so used shall forthwith upon withdrawal be forever free and clear of any lien or pledge created by this Resolution. Any amounts retained in the Revenue Fund after making the foregoing payments and transfers may also be deposited in the Bond Fund.

Section 5.04. Bond Fund. (a) The Trustee shall pay out of the Bond Fund to the respective Paying Agents (i) before each interest payment date for any of the Bonds the amount required for the interest payable on such date, (ii) on or before each interest payment date for any of the Bonds, an amount equal to the Principal Installment, if any, due on such date by reason of maturity of any of the Bonds or by reason of the payment of any Sinking Fund Installment and (iii) on or before any redemption date for the Bonds, the amount required for the payment of the Redemption Price and interest on the Bonds then to be redeemed. Such amounts shall be applied by the Paying Agents on and after the due dates thereof. The Trustee shall also pay out of the Bond Fund the accrued interest included in the purchase price of Bonds purchased for retirement.

(b) Amounts accumulated in the Bond Fund by reason of the payment of any Sinking Fund Installment may, and if so directed in writing by an Authorized Officer of the City shall, be applied by the Trustee, on or prior to the sixtieth (60th) day preceding the due date of such Sinking Fund Installment, to (i) the purchase of Bonds of the Series and maturity for which such Sinking Fund Installment was established or (ii) the redemption of such Bonds at the applicable Sinking Fund Redemption Price, if then redeemable by their terms. All such purchases of Bonds shall (i) be made at prices not exceeding the applicable Sinking Fund Redemption Price of such Bonds plus accrued interest, (ii) be made by the Trustee as arranged by the City in such manner and from such sellers or brokers at such prices as the City shall determine and (iii) insure that delivery of the Bonds so purchased shall not occur later than the sixtieth (60th) day next preceding the redemption date to which such Bonds are to be applied. The applicable Sinking Fund Redemption Price of any Bonds (or principal amount of maturing Bonds) so purchased or redeemed shall be deemed to constitute part of the Bond Fund until such Sinking Fund Installment date, for the purpose of calculating the amount of such Fund. As soon as practicable after the sixtieth (60th) day preceding the due date of any such Sinking Fund Installment, the Trustee shall proceed to call for redemption on such due date Bonds of the Series and maturity for which such Sinking Fund Installment was established (except in the case of Bonds maturing on a Sinking Fund Installment date) in such amount as shall be necessary to complete the retirement of the unsatisfied balance of such Sinking Fund Installment after making allowance for any Bonds purchased or redeemed pursuant to this Section 5.04 which the City has directed the Trustee to apply as a credit against such Sinking Fund Installment as provided in subsection (d) of this Section 5.04. The Trustee shall pay out of the Bond Fund to the appropriate Paying Agents, on or before the redemption date the amount required for the redemption of the Bonds so called for redemption, and such amount shall be applied by such Paying Agents to such redemption.

(c) The amount, if any, deposited in the Bond Fund from the proceeds of sale of the Bonds shall be set aside in such Fund and applied to the payment of interest on the Bonds as the same becomes due and payable. The amount, if any, deposited in the Bond Fund not constituting Revenues shall be set aside in such Fund and applied to the payment of interest on and Principal Installments of the Bonds as the same become due and payable.

(d) Upon any purchase or redemption pursuant to subsection (b) of this Section of Bonds of any Series and maturity for which Sinking Fund Installments shall have been established, (i) if the principal amount of the Bonds so purchased is less than or equal to the next succeeding Sinking Fund Installment for such Series there shall be credited to the next such Sinking Fund Installment an amount equal to the principal amount of the Bonds of such Series so purchased and (ii) if the principal amount of the Bonds so purchased is greater than the next succeeding Sinking Fund Installment, there shall be credited toward each such Sinking Fund Installment thereafter to become due an amount bearing the same ratio to such Sinking Fund Installment as the total principal amount of such Bonds so purchased or redeemed bears to the total principal amount of all such Sinking Fund Installments to be so credited or, at the option of the City, an amount equal to the next succeeding Sinking Fund Installment. The portion of any such Sinking Fund Installment remaining after the deduction of any such amounts credited toward the same (or the original amount of any such Sinking Fund Installment if no such amounts shall have been credited toward the same) shall constitute the unsatisfied balance of such Sinking Fund Installment for the purpose of calculation of Sinking Fund Installments due on a future date.

(e) Upon any purchase or redemption of Bonds of any Series and maturity for which Sinking Fund Installments shall have been established, other than as provided in subsection (d) of this Section, the principal amount of the Bonds so purchased or redeemed shall be credited to such Sinking Fund Installments thereafter as the City may determine at its option. The portion of any such Sinking Fund Installment remaining after the deduction of any such amounts credited toward the same (or the original amount of any such Sinking Fund Installment if no such amounts shall have been credited toward the same) shall constitute the unsatisfied balance of such Sinking Fund Installment for the purpose of calculation of Sinking Fund Installments due on a future date.

Section 5.05. Bond Reserve Fund. (a) Amounts on deposit in any Bond Reserve Account, other than the Common Bond Reserve Account, established for one or more Series shall be used and withdrawn as provided in the Supplemental Resolutions authorizing the issuance of such Series, and any withdrawals therefrom shall be replenished or reimbursed as provided in the related Supplemental Resolutions.

(b) Amounts on deposit in the Common Bond Reserve Account shall be applied, to the extent other funds are not available therefor pursuant to Section 504 hereof, solely to pay the Principal Installments of and interest on the Common Bond Reserve Account Secured Bonds when due. Unless otherwise provided in a Supplemental Resolution, amounts so applied shall be derived first, from cash or Authorized Investments on deposit therein and, second, from draws or demands on Reserve Fund Facilities held as a part thereof upon the terms and conditions set forth in any such Reserve Fund Facilities; provided, however, that if more than one Reserve Fund Facility is held in the Common Bond Reserve Account at the time moneys are

to be withdrawn therefrom the Trustee shall obtain payment under each such Reserve Fund Facility pro rata based upon the respective amounts then available to be paid thereunder.

(c) If, as of June 30 or, if such day is not a business day, on the next preceding business day, the amount in the Common Bond Reserve Account exceeds the Common Bond Reserve Account Requirement for the Fiscal Year then ending, after giving effect to any Reserve Fund Facility deposited in the Common Bond Reserve Account, the Trustee shall withdraw from the Common Bond Reserve Account the amount of any excess therein as of the date of such withdrawal and deposit the moneys so withdrawn into the Bond Fund.

(d) Whenever the amount (exclusive of Reserve Fund Facilities) in the Common Bond Reserve Account, together with the amount in the Bond Fund allocable to the Common Bond Reserve Account Secured Bonds, is sufficient to pay all Outstanding Common Bond Reserve Account Secured Bonds in accordance with their respective terms, the funds on deposit in the Common Bond Reserve Account shall be transferred to the Bond Fund and applied to the redemption or payment at maturity of all Common Bond Reserve Account Secured Bonds Outstanding.

(e) In the event of the refunding of any Common Bond Reserve Account Secured Bonds, the Trustee shall, upon the written direction of the City, withdraw from the Common Bond Reserve Account all or any portion of the amounts accumulated therein with respect to such Bonds to be refunded and deposit such amounts as provided in such written direction; provided, however, 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 13.01 hereof and (ii) after giving effect to any amounts being simultaneously deposited therein, the amount remaining in the Common Bond Reserve Account after such withdrawal shall not be less than the Common Bond Reserve Account Requirement.

(f) In lieu of or in substitution for moneys or Authorized Investments otherwise required to be deposited in the Common Bond Reserve Account, the City may deposit or cause to be deposited with the Trustee a Reserve Fund Facility for the benefit of the Holders of the Common Bond Reserve Account Secured Bonds for all or any part of the Common Bond Reserve Account Requirement; provided, however, (i) that any such surety bond or insurance policy shall be issued by an insurance company or association duly authorized to do business in the State and either (A) the claims paying ability of which is rated at the time such surety bond or insurance policy is delivered, without regard to qualification of such rating by symbols such as “+” or “-” or numerical notation, in at least the second (2nd) highest rating category by any one Rating Agency or (B) obligations insured by a surety bond or an insurance policy issued by such company or association and rated at the time such surety bond or insurance policy is delivered, without regard to qualification of such rating by symbols such as “+” or “-” or numerical notation, in at least the second (2nd) highest rating category by any one Rating Agency and (ii) that any such letter of credit shall be issued by a bank, a trust company, a national banking association, a corporation subject to registration with the Board of Governors of the Federal Reserve System under the Bank Holding Company Act of 1956 or any successor or provision of law, a federal branch pursuant to the International Banking Act of 1978 or any successor provision of law or a domestic branch or agency of a foreign bank which branch or agency is duly licensed or authorized to do business under the laws of any state or territory of the United

States of America, the unsecured or uncollateralized long-term debt obligations of which, or long-term obligations secured or supported by a letter of credit issued by such person, are rated at the time such letter of credit is delivered, without regard to qualification of such rating by symbols such as “+” or “-” or numerical notation, in at least the second (2nd) highest rating category by any one Rating Agency. Each Reserve Fund Facility shall be payable (upon the giving of such notice as may be required thereby) on any date on which moneys are required to be withdrawn from the Common Bond Reserve Account and such withdrawal cannot be made without obtaining payment under such Reserve Fund Facility. For the purposes of this Section 5.05 and Section 6.04 hereof, in computing the amount on deposit in the Common Bond Reserve Account, a Reserve Fund Facility shall be valued at the amount available to be paid thereunder on the date of computation. In connection with a Reserve Fund Facility, the City may enter into a Reserve Fund Facility Agreement with the Reserve Fund Facility Provider of any such Reserve Fund Facility providing for, inter alia: (1) the payment of fees and expenses to such Reserve Fund Facility Provider for the issuance of such Reserve Fund Facility, (2) the terms and conditions of such Reserve Fund Facility and (3) the security, if any, to be provided for any obligations of the City with respect to such Reserve Fund Facility.

(g) If at any time it shall be necessary to use moneys in the Common Bond Reserve Account for the purpose of paying principal or interest on Common Bond Reserve Account Secured Bonds as to which there would otherwise be a default, then the moneys so used shall be replaced within twenty-four (24) months by depositing in the Common Bond Reserve Account twenty-four (24) substantially equal consecutive monthly deposits, commencing not later than the month following the occurrence of such deficiency.

(h) If, as a result of the expiration or termination of a Reserve Fund Facility, a deficiency shall be created in the Common Bond Reserve Account, the Common Bond Reserve Account Requirement shall be calculated so as to exclude the amount of such deficiency and the Common Bond Reserve Account Requirement shall be increased in each of the five (5) Fiscal Years after the date such deficiency was created by an amount equal to twenty per centum (20%) of the aforesaid deficiency.

(i) Notwithstanding any other provision of this Resolution to the contrary and unless otherwise provided in a Supplemental Resolution, the Bond Reserve Requirement shall be calculated only at the time of issuance of a Series of Bonds and at such other time or times as the City may determine.

Section 5.06. Rebate Fund. Upon the issuance, sale and delivery of any Series of Bonds subject to the Rebate Fund Requirement, the Trustee shall establish a separate account within the Rebate Fund for such Series. Funds on deposit in the Rebate Fund shall be applied as set forth in the applicable Supplemental Resolution. Unless otherwise specified in the applicable Supplemental Resolution, interest or other income derived from the investment or deposit of moneys in the Rebate Fund shall be transferred to the Revenue Fund.

Section 5.07. Revenue Stabilization Fund. Moneys in the Revenue Stabilization Fund shall be applied as hereinafter provided as an Authorized Officer of the City may from time to time determine. At any time, the City shall withdraw from such Fund and deposit in the

Revenue Fund or the Bond Fund such amounts as may be determined by an Authorized Officer of the City for purposes of managing the receipt of Revenues and payment of expenses.

Section 5.08. Construction Fund. (a) There shall be paid into the Construction Fund the amounts required to be so paid by the provisions of this Resolution or any Supplemental Resolution, and there may be paid into the Construction Fund, at the option of the City, any moneys received for or in connection with the System by the City from any other source.

(b) The City shall hereafter establish within the Construction Fund a separate account for each Project, the Costs of which are to be paid in whole or in part out of the Construction Fund. The City shall hereafter create a separate account, if necessary, in which to deposit the proceeds of insurance and the proceeds of contractors' performance bonds with respect to physical loss or damage to any part of the System for which a separate account is not then maintained.

(c) The proceeds of insurance maintained pursuant to this Resolution against physical loss of or damage to the System and of contractors' performance bonds with respect thereto, shall be paid into the appropriate separate account in the Construction Fund.

(d) Amounts in each separate account established for a Project shall be applied to the purpose or purposes specified in the Supplemental Resolution authorizing the Bonds issued to finance such Project or, if no Bonds are so issued, to the purpose or purposes specified in a certificate of an Authorized Officer of the City and filed with the Trustee.

(e) Moneys in the Construction Fund shall be invested by the City to the fullest extent practicable in Authorized Investments maturing in such amounts and at such times as may be necessary to provide funds when needed to pay Costs of Construction or such other costs as may be required to be paid from such moneys. The City may, and to the extent required for payments from the Construction Fund shall, sell any such Authorized Investments at any time, and the proceeds of such sale, and of all payments at maturity and upon redemption of such investments, shall be held in the applicable account in the Construction Fund. Interest received on moneys or securities in a separate account in such Fund shall be held in such account.

(f) If, upon notice from the Trustee, the moneys in the Bond Fund or the Bond Reserve Fund, and together with other available moneys held under this Resolution, shall be insufficient to pay the interest and Principal Installments becoming due on the Bonds, the City shall transfer from the appropriate account or accounts of the Construction Fund to the Trustee for deposit in the Bond Fund the amount necessary (or all the moneys in said account or accounts if less than the amount necessary) to satisfy such deficiency.

(g) Upon a determination by certificate of an Authorized Officer of the City that all or a portion of the amounts on deposit in any account in the Construction Fund are no longer required for the purposes thereof, all or the specified portion of such account shall be paid over to the Trustee for deposit in the Bond Reserve Fund, if and to the extent necessary to satisfy any deficiency in any Bond Reserve Account therein, and any balance remaining after such payment and deposit shall be returned by the Depository to the City for deposit into the Revenue

Fund; provided, however, that no such deposits or transfers shall be made unless the Trustee shall have received an opinion of Bond Counsel to the effect that such deposit or transfer shall not adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes.

Section 5.09. Valuation of Funds and Accounts. The Trustee shall, as of the close of business on the last day of each June and December, compute in the manner set forth in Section 6.04 hereof the value of the moneys and Authorized Investments in the Bond Fund and the Bond Reserve Fund and shall as promptly as practicable thereafter notify the City as to the result of such computation and the amount of deficiency or surplus in such Fund or Account as of such date.

Section 5.10. Compliance with Tax Certificates. The City shall ensure that all transfers of proceeds or deemed proceeds of Bonds held in a Fund or Account to another Fund or Account pursuant to this Article V, including but not limited to Section 5.08(g) hereof, shall comply with applicable Tax Certificates.

ARTICLE VI

DEPOSITARIES, SECURITY FOR DEPOSITS AND INVESTMENT OF FUNDS

Section 6.01. Depositaries. (a) All moneys held by the Trustee under the provisions of this Resolution shall be deposited with the Trustee or with one or more Depositaries in trust for the Trustee. All moneys held by the City under this Resolution shall be deposited with one or more Depositaries in the name of the City. All moneys deposited under the provisions of this Resolution with the Trustee or any Depository shall be held in trust and applied only in accordance with the provisions of this Resolution, and each of the Funds established by this Resolution shall be a trust fund.

(b) Each Depository shall be a bank or trust company organized under the laws of any state of the United States or a national banking association which is willing and able to accept the office on reasonable and customary terms and authorized by law to act in accordance with the provisions of this Resolution.

Section 6.02. Deposits. (a) All moneys held by any Depository under this Resolution may be placed in demand or interest bearing time deposits, as directed in writing by the City, provided that such deposits shall permit the moneys so held to be available for use when needed. Any such deposit may be made in the commercial banking department of any Fiduciary which may honor checks and drafts on such deposit as if it were not a Fiduciary. All moneys held by any Fiduciary may be deposited with its banking department on demand or, if and to the extent directed in writing by the City, in interest bearing time deposits, provided that such moneys on deposit be available for use when needed. Such Fiduciary shall allow and credit on such moneys such interest, if any, as it customarily allows upon similar funds of similar size.

(b) All moneys deposited with the Trustee and each Depository shall be credited to the particular Fund or Account to which such moneys belong.

Section 6.03. Investment of Certain Funds. (a) Moneys held in the Bond Fund and the Bond Reserve Fund shall be invested and reinvested by the Trustee at the written direction of the City to the fullest extent practicable in Authorized Investments maturing or redeemable at the option of the holder thereof no later than necessary to provide moneys when needed for payments to be made from such Funds; provided, however, that moneys in the Bond Reserve Fund shall be invested in any Authorized Investment maturing or redeemable at the option of the holder thereof not later than ten (10) years from the date of purchase thereof, but not later than the last maturity date of the Bonds. Moneys in the Revenue Fund, the Revenue Stabilization Fund and the Rebate Fund may be invested and reinvested by the City in Authorized Investments which mature not later than such times as shall be necessary to provide moneys when needed for payments to be made from such Funds. The Trustee, or the Depository, shall make all such investments of moneys held by it in accordance with written instructions from time to time received from any Authorized Officer of the City. In making any investment of moneys in any Fund or Account, the City may instruct the Trustee to combine such moneys with moneys in any other Fund or Account, but solely for the purpose of making such investment in Authorized Investments and provided that a pro rata share of such Authorized Investment shall be credited to each such Fund or Account.

(b) Interest (net of that amount which represents a return of accrued interest paid in connection with the purchase of any investment) earned or any gain realized on any moneys or investments in the Bond Reserve Fund shall be held therein and applied as in Section 5.05 hereof provided. Interest earned (net of that amount which represents a return of accrued interest paid in connection with the purchase of any investment) or any gain realized on any moneys or investments in the Bond Fund shall be applied as in Section 5.04 hereof provided. Interest earned (net of that amount which represents a return of accrued interest paid in connection with the purchase of any investment) or any gain realized from the investment of moneys in all other Funds and Accounts (except the Rebate Fund) shall be retained therein and applied as a credit against the next succeeding deposit required to be made pursuant to Section 5.03 hereof.

(c) Subject to the limitations of the foregoing provisions, any moneys held by the City may, to the extent permitted by law, be pooled with funds of any other public authority, county, municipality, special district or school district of the State, in order to make any purchase of an Authorized Investment permitted hereunder; provided, however, that the City and the Trustee shall at all times keep accurate and complete records of the Authorized Investments so purchased in sufficient detail as will permit the application of such Authorized Investments and the proceeds thereof solely to the purposes and in the manner provided in this Resolution.

(d) Notwithstanding the foregoing provisions of this Section 6.03 or any other provision of this Resolution, the City may direct that investment earnings reasonably expected to be subject to the requirements of Section 148(f) of the Code or the Treasury Regulations applicable thereto may be deposited directly to the Rebate Fund to the extent desirable to comply with the requirements of Section 148(f) of the Code or the Treasury Regulations applicable thereto.

Section 6.04. Valuation or Sale of Investments. (a) Authorized Investments in any Fund or Account created under the provisions of this Resolution shall be deemed at all times

to be 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 liquidation of such investment shall be charged to such Fund or Account. Any net profits remaining after accumulating the sum of all profits realized and losses suffered from the liquidation of such investments in any Fund or Account during each quarterly period shall be transferred or paid as provided in subsection (b) of Section 6.03 hereof.

(b) In computing the amount in any Fund or Account, Authorized Investments therein shall be valued at the market value thereof, exclusive of accrued interest. Authorized Investments shall be valued not less often than annually. Deficiencies in the amount on deposit in any Fund or Account resulting from a decline in the market value of Authorized Investments therein shall be restored no later than the succeeding valuation date.

(c) Except as otherwise provided in this Resolution, the Trustee or any Depository shall use its best efforts to sell at the best price obtainable, or present for redemption, any Authorized Investment held in any Fund or Account whenever it shall be necessary, and upon oral request (later confirmed in writing) from an Authorized Officer of the City in order to provide moneys to meet any payment or transfer from such Fund or Account. The Trustee or any Depository shall not be liable or responsible for any loss resulting from any such investment, sale, liquidation or presentation for investment made in the manner provided above.

ARTICLE VII

PARTICULAR COVENANTS OF THE CITY

The City covenants and agrees with the Trustee and the Bondholders as follows:

Section 7.01. Payment of Bonds. The City shall duly and punctually pay or cause to be paid the principal or Redemption Price, if any, of every Bond and the interest thereon, at the dates and places and in the manner mentioned in the Bonds, according to the true intent and meaning thereof and shall duly and punctually pay all Sinking Fund Installments.

Section 7.02. Extension of Payment of Bonds. The City shall not extend or assent to the extension of the maturity of any Bond or installment of interest, and if the maturity of any Bond or installment of interest shall be extended, such Bond or installment of interest shall not be entitled, in case of any default under this Resolution, to the benefit of this Resolution or to payment out of Revenues or Funds established by this Resolution or moneys held by Fiduciaries (except moneys held in trust for the payment of such Bond or installment of interest) until the prior payment of the principal of all Bonds Outstanding the maturity of which has not been extended and of such portion of the accrued interest on the Bonds as shall not be represented by such extended claims for interest. Nothing herein shall be deemed to limit the right of the City to issue Refunding Bonds and such issuance shall not be deemed to constitute an extension of maturity of Bonds.

Section 7.03. Further Assurance. At any and all times the City shall, so far as it may be authorized by law, pass, make, do, execute, acknowledge and deliver, all and every such further resolutions, acts, deeds, conveyances, assignments, transfers and assurances as may be

necessary or desirable for the better assuring, conveying, granting, pledging, assigning and confirming all and singular the rights, Revenues and other moneys, securities and funds hereby pledged or assigned, or which the City may become bound to pledge or assign.

Section 7.04. Power to Issue Bonds and Pledge Revenues and Other Funds. The City is duly authorized under all applicable laws to issue the Bonds and to adopt this Resolution and to pledge the Revenues and other moneys, securities and funds purported to be pledged by this Resolution in the manner and to the extent provided in this Resolution. Except as provided in Section 5.01 hereof, the Revenues and other moneys, securities and funds so pledged 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 this Resolution, and all corporate or other action on the part of the City to that end has been and will be duly and validly taken. The Bonds and the provisions of this Resolution are and will be valid and legally enforceable obligations of the City in accordance with their terms and the terms of this Resolution. The City shall at all times, to the extent permitted by law, defend, preserve and protect the pledge of the Revenues and other moneys, securities and funds pledged under this Resolution and all the rights of the Bondholders under this Resolution against all claims and demands and to that end will at all times keep a copy of this Resolution in its record.

Section 7.05. Power to Operate System and Collect Rates and Charges. The City has, and will have so long as any Bonds are Outstanding, good, right and lawful power to construct, reconstruct, improve, maintain, operate and repair the System and to fix and collect rates, fees, rents or charges for its use.

Section 7.06. Indebtedness and Liens. So long as the Bonds of any Series shall be Outstanding, the City shall not issue any bonds, notes or other evidences of indebtedness, other than the Bond and Parity Debt, which are payable from or secured by a pledge of the Revenues or of the moneys, securities or funds held or set aside by the City or by the Trustee under this Resolution, and shall not create or cause to be created any lien or charge on the Revenues or such moneys, securities or funds ranking prior to or on a parity with the lien and pledge created by this Resolution and with any applicable Supplemental Resolution; provided, however, that nothing contained in this Section or this Resolution shall prevent the City from hereafter issuing bonds, notes or other evidences of indebtedness for the purposes of the System 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 this Resolution shall be discharged and satisfied as provided in Section 13.01 hereof or from hereafter issuing bonds, notes or other evidences of indebtedness for the purposes of the System which are payable out of or secured by the pledge of amounts which may be withdrawn from the Revenue Fund pursuant to and subject to the limitations of subsection (d) of Section 5.03 hereof and which recite on their face that such pledge of said amounts is and shall be in all respects subordinate to the provisions of this Resolution and the lien and pledge created by this Resolution.

Section 7.07. Sale, Lease and Encumbrance of Property. The City will not sell, assign, lease or otherwise dispose of any substantial portion of the System unless it determines that such disposition would not impair the ability of the City to comply during the current or any future Fiscal Year with the provisions of Section 7.11 hereof. The proceeds of any such disposition not used to acquire other property necessary or desirable for the safe or efficient

operation of the System shall be deposited in the Revenue Fund and used for such purposes as shall be determined by the City, subject to compliance with Section 7.15 hereof and to that end the City shall consult with Bond Counsel if any such property has been financed with debt the interest on which was intended to be excluded from gross income for federal income tax purposes.

Section 7.08. Annual Budget. The City shall prepare, adopt and promptly thereafter file with the Trustee an Annual Budget for each Fiscal Year which shall set forth in reasonable detail the estimated Revenues and Operating Expenses and other expenditures of the System for such Fiscal Year. Such Annual Budget may consist of separate operating and capital budgets as determined by the City. The City also may at any time prepare, adopt and file with the Trustee an amended Annual Budget for the remainder of the then current Fiscal Year.

Section 7.09. Consulting Engineer. The City shall employ a Consulting Engineer, whose duties shall be to make any certificates and perform any other acts required or permitted of the Consulting Engineer under this Resolution, to make an inspection of the System at least once during every consecutive three (3) Fiscal Years, and, not more than sixty (60) or less than forty-five (45) days before the end of the third (3rd) such Fiscal Year, to submit to the City advice and recommendations as to the proper maintenance, repair and operation of the System during the ensuing three (3) Fiscal Years and an estimate of the amount of money necessary for such purposes. Copies of the reports of the Consulting Engineer and of the advices, recommendations and estimates made as hereinabove provided shall be delivered by the City to the Trustee. Any report prepared by the Consulting Engineer in connection with the issuance of Bonds within the last Fiscal Year in such three (3) year period shall satisfy the requirements of this Section for such three (3) year period.

Section 7.10. Operation and Maintenance of System. The City shall at all times operate or cause to be operated the System properly and in a sound and economical manner and shall maintain, preserve, reconstruct and keep the same or cause the same to be so maintained, preserved, reconstructed and kept, with the appurtenances and every part and parcel thereof, in good repair, working order and condition, and shall from time to time make, or cause to be made, all necessary and proper repairs, replacements and renewals so that at all times the operation of the System may be properly and advantageously conducted.

Section 7.11. Rates and Charges. (a) The City shall at all times fix rates and collect charges for each class of service rendered by the System, and will from time to time amend or adjust such rates so that the Revenues of the System shall always be sufficient to (i) provide for the payment of Operating Expenses, (ii) provide for the payment of the principal of and interest on the Outstanding Bonds (except any part thereof the payment of which has been provided for by the deposit of proceeds of Bonds or other moneys not constituting Revenues in the Bond Fund), and the net payments owing under Outstanding Parity Debt and payable on a parity with the Bonds as and when the same become due and payable, together with the maintenance of proper reserves therefor, (iii) maintain the Funds and Accounts established in this Resolution, (iv) provide for the payment of expenses of administration and operation and maintenance of the System which may be necessary to preserve the same in good repair and working order, including the necessary reserves therefor and (v) comply in all respects with the terms and provisions of this Resolution and to pay and discharge all charges or liens payable out

of the Revenues when due and enforceable including without limitation the payment of other bonds, notes or other evidences of indebtedness of the City heretofore or hereafter issued to finance or refinance costs of the System.

(b) Without limiting the generality of the foregoing, the City shall at all times fix, charge and collect such rates and other charges and adopt a budget as shall be required in order that, in each Fiscal Year, Net Revenues shall at least equal the Net Revenue Requirement for such Fiscal Year. The failure in any Fiscal Year to comply with the foregoing Net Revenue Requirement covenant with respect to any Fiscal Year shall not constitute a default or an Event of Default under this Resolution provided the City shall comply with subsection (c) of this Section 7.11.

(c) On or before the end of each Fiscal Year, in conjunction with preparation of the Annual Budget, the City shall complete a review of the financial condition of the System for the purpose of estimating whether the Net Revenues for such Fiscal Year and for the next succeeding Fiscal Year will be sufficient to comply with the Net Revenue Requirement covenant in subsection (b) of this Section 7.11 and shall by certificate of an Authorized Officer of the City make a determination with respect thereto. Such review shall take into consideration the completion of any uncompleted Project and the issuance of future Series of Bonds if necessary to finance the completion of such Project. A copy of such certificate setting forth a reasonably detailed statement of the actual and estimated Revenues, Operating Expenses, Aggregate Debt Service, and any other estimates or assumptions upon which such determination was based, shall be filed with the Trustee within thirty (30) days of the adoption of the Annual Budget or, if earlier, by the end of such Fiscal Year. If the City determines that the Net Revenues may not be so sufficient in the then current Fiscal Year, it shall forthwith, with advice and recommendations from the Consulting Engineer, develop a corrective plan of action to comply with the Net Revenue Requirement covenant in subsection (b) of this Section 7.11 in such following and later Fiscal Years. Such a corrective plan may include an increase in the schedule of rates and other charges, the development of changes to operations or expense reductions designed to lower Operating Expenses and/or a description of extraordinary circumstances which led to an insufficiency of Net Revenues and an explanation as to why such circumstances are unlikely to occur in the following year. The City's corrective plan demonstrating projected compliance in such subsequent Fiscal Year shall be filed with the Trustee and implemented within one hundred and eighty (180) days of the adoption of the Annual Budget for such subsequent Fiscal Year.

Section 7.12. Maintenance of Insurance. (a) The City shall at all times maintain to the extent reasonably obtainable, the following kinds and the following amounts of insurance, with such variations as shall reasonably be required to conform to applicable standards or customary insurance practice and subject to such exceptions and permissible deductions as are ordinarily required:

(1) Multi-risk insurance on the facilities of the System which are of an insurable nature and of the character usually insured by utilities operating similar facilities, covering direct physical loss or damage thereto from causes customarily insured against, in such amounts necessary or advisable to provide against such loss or damage and to protect the interests of the City and the Bondholders;

(2) Public liability insurance covering injuries to persons and property in such amount as adequate to insure the City against claims arising out of the construction, maintenance, reconstruction or operation of the facilities of the System;

(3) During the construction or reconstruction of any portion of the facilities of the System, such insurance as is customarily carried by others with respect to similar structures used for similar purposes, provided that the City shall not be required to maintain any such insurance to the extent that such insurance is carried for the benefit of the City by contractors; and

(4) Any additional or other insurance required by law to protect the interest of the City and the Bondholders.

(b) Any such insurance shall be in the form of policies or contracts for insurance with insurers of good standing and shall be payable to the City.

(c) The City shall file with the Trustee annually, within one hundred and eighty (180) days after the close of each Fiscal Year, a certificate of an Authorized Officer (i) describing in reasonable detail the insurance then in effect pursuant to this Section and that the City has complied in all respects with the requirements of this Section and (ii) stating whether during such year any portion of the System has been damaged or destroyed and, if so, the amount of insurance proceeds covering such loss or damage and the City's reasonable and necessary costs of construction or replacement thereof.

Section 7.13. Reconstruction; Application of Insurance Proceeds. The proceeds of any insurance paid on account of damage or destruction of any portion of the System and the proceeds of any use or occupancy insurance shall be applied as follows:

(a) If any useful portion of the System shall be damaged or destroyed, the City shall, as expeditiously as possible, continuously and diligently prosecute the reconstruction or replacement thereof. The proceeds of any insurance on account of such damage or destruction shall, to the extent necessary, be applied to the cost of such reconstruction or replacement. The proceeds of any insurance not so applied within eighteen (18) months after receipt shall be paid to the City for deposit to the credit of the Revenue Fund.

(b) If the proceeds of insurance authorized by this Section to be applied to the reconstruction or replacement of any portion of the System are insufficient for such purpose, the deficiency may be supplied out of moneys in the Revenue Fund to the extent not needed to be reserved for the purposes of such Fund.

(c) The proceeds of insurance against physical loss of or damage to any Project, or of contractors' performance bonds with respect to any Project, received during the period of construction thereof, shall be paid to the City and applied toward the payment of the costs of such Project.

Section 7.14. Accounts and Reports. The City shall keep proper books, records and accounts (separate from all other books, records and accounts) in which complete and correct entries shall be made of its transactions relating to the System and the Funds established

by this Resolution and which, together with all other books and papers of the City, including insurance policies, shall at all times be subject to the inspection of the Trustee and the Holders of not less than 25% in principal amount of any Series of Bonds then Outstanding or their representatives duly authorized in writing. The City further covenants that it will keep an accurate record of the total cost of construction of the System, of the Revenues collected and of the application of such Revenues.

Section 7.15. Tax Covenants. The City shall not permit at any time or times any of the proceeds of the Bonds or any other funds of the City to be used directly or indirectly (a) to acquire any securities or obligations the acquisition of which would cause any Bond, the interest on which is intended to be excluded from gross income for federal income tax purposes, to be an “arbitrage bond” as defined in Section 148 of the Code or (b) in a manner which would result in the exclusion of any Bond, the interest on which is intended to be excluded from gross income for federal income tax purposes, from the treatment afforded by Section 103(a) of the Code. Anything contained in the preceding sentence to the contrary notwithstanding, the City reserves the right to issue one or more Series of Additional Bonds the interest on which is includable in the gross income of the recipient thereof for federal income tax purposes, provided that the issuance of such Series does not adversely affect the federal tax exemption of the interest on any Series of Bonds.

Section 7.16. Conditions Precedent. Upon the date of authentication and delivery of any Series of Bonds, all conditions, acts and things required by the Enabling Act and this Resolution to exist, to have happened and to have been performed precedent to and in the issuance of such Bonds shall exist, have happened and have been performed, and the issuance of such Bonds, together with all other indebtedness of the City, shall be within every debt and other limit prescribed by the laws of the State.

ARTICLE VIII

EVENTS OF DEFAULT AND REMEDIES OF BONDHOLDERS

Section 8.01. Events of Default and Remedies of Bondholders. If one or more of the following events (in this Resolution called “Events of Default”) shall happen, that is to say:

(a) with respect to the applicable Series of Bonds if a default shall occur in the due and punctual payment of the principal or Redemption Price of any Bond of such Series or the payment of the purchase price of any Option Bonds when and as the same shall become due and payable, whether at maturity or by call for redemption, or otherwise;

(b) with respect to the applicable Series of Bonds if a default shall occur in the due and punctual payment of any installment of interest on any Bond of such Series;

(c) if a default shall occur in the performance or observance by the City of any other of the covenants, agreements or conditions in this Resolution, the applicable Supplemental Resolution or in the Bonds of any Series contained, and such default shall continue for a period of ninety (90) days after written notice thereof to the City by the Trustee or to the City and to the Trustee by the Holders of not less than 25% in principal amount of the Bonds of

such Series Outstanding; provided, however, that such ninety-day period shall be extended to such longer period of time as the Trustee may deem appropriate in the event of defaults which by their nature will require such longer period of time to cure if the City shall commence such cure within such ninety-day period and pursue the same diligently to completion;

(d) if any default shall exist under any Parity Debt and such default shall continue beyond the grace period, if any, provided for with respect to such default; or

(e) if the City (i) admits in writing its inability to pay its debts generally as they become due, (ii) commences voluntary proceedings in bankruptcy or seeking a composition of indebtedness, (iii) makes an assignment for the benefit of its creditors, (iv) consents to the appointment of a receiver of the whole or any substantial part of the System or (v) consents to the assumption by any court of competent jurisdiction under any law for the relief of debtors of custody or control of the City or of the whole or any substantial part of the System.

Upon the happening and continuance of any Event of Default, the Trustee shall give notice of such occurrence to the registered holders of the Bonds. Upon the happening and continuance of any Event of Default, neither the Trustee nor the holders of the Bonds or Parity Debt shall have the right to declare the principal of any Bonds then Outstanding, or the interest accrued thereon, to be due and payable prior to its stated maturity.

In determining whether an Event of Default has occurred pursuant to subsections (a) or (b) of this Section 8.01, no effect shall be given to payments made under a Credit Facility.

The provisions of subsection (c) of this Section are subject to the limitation that if by reason of force majeure the City is unable in whole or in part to observe and perform any of its covenants, conditions or agreements under this Resolution, the City shall not be deemed in default during the continuance of such disability. The term "force majeure" as used in this Resolution shall include without limitation acts of God, strikes, lockouts or other industrial disturbances; acts of public enemies; orders of any kind of the government of the United States of America or of the State of New Hampshire or any of their departments, agencies, political subdivisions or officials, or any civil or military authority; insurrections; epidemics; landslides; lightning; earthquakes; fires; riots; hurricanes; storms; floods; washouts; droughts; arrests; restraint of government and people; civil disturbances; explosions; breakage or accident to machinery, transmission pipes or canals; partial or entire failure of utilities; or any other cause or event not reasonably within the control of the City. The City shall, however, remedy with all reasonable dispatch the cause or causes preventing it from carrying out its agreements, provided that the settlement of strikes, lockouts and other industrial disturbances shall be entirely within the discretion of the City and the City shall not be required to make settlement of strikes, lockouts and other industrial disturbances by acceding to the demands of the opposing party or parties.

Section 8.02. Accounting and Examination of Records After Default. (a) The City covenants that if an Event of Default shall have happened and shall not have been remedied, the books of record and account of the City and all other records related to the System shall at all times be subject to the inspection and use of the Trustee and of its agents and attorneys, including the engineer or firm of engineers appointed pursuant to Section 8.03 hereof.

(b) The City covenants that if an Event of Default shall happen and shall not have been remedied, the City, upon demand of the Trustee, will account, as if it were the trustee of an express trust, for all available Revenues and other moneys, securities and funds pledged or held under this Resolution for such period as shall be stated in such demand.

Section 8.03. Application of Revenues and Other Moneys After Default.

(a) The City covenants that if an Event of Default shall happen and shall not have been remedied, the City, upon demand of the Trustee, shall pay over or cause to be paid over to the Trustee (i) forthwith, all moneys, securities and funds then held by the City in any Fund or Account under this Resolution (excluding the Rebate Fund) and (ii) all Revenues as promptly as practicable after receipt thereof.

(b) During the continuance of an Event of Default, the Trustee shall apply such moneys, securities, funds and Revenues and the income therefrom as follows and in the following order:

(1) to the payment of the reasonable and proper charges, expenses and liabilities of the Trustee (including counsel fees) and of any engineer or firm of engineers selected by the Trustee pursuant to this Article;

(2) to the payment of the amounts required for reasonable and necessary Operating Expenses and for the reasonable renewals, repairs and replacements of the System necessary to prevent loss of Revenues, as certified to the Trustee by an independent engineer or firm of engineers of recognized standing (who may be an engineer or firm of engineers retained by the City for other purposes) selected by the Trustee. For this purpose the books of record and accounts of the City relating to the System shall at all times be subject to the inspection of such engineer or firm of engineers during the continuance of such Event of Default;

(3) to the payment of the interest and principal or Redemption Price then due on all Series of Bonds and to the payment of any amount owing under Parity Debt, as follows:

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, together with accrued and unpaid interest on the Bonds theretofore called for redemption and any Parity Debt, 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 Debt 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 Bonds and Parity Debt then Outstanding due on

any date, then to the payment thereof ratably, according to the amounts of principal or Redemption Price of such Bonds and Parity Debt due on such date, to the persons entitled thereto, without any discrimination or preference;

(c) If and whenever all overdue installments of interest on all Bonds and Parity Debt, together with the reasonable and proper charges, expenses and liabilities of the Trustee, and all other sums payable by the City under this Resolution, including the principal and Redemption Price of and accrued unpaid interest on all Bonds which shall then be payable, shall either be paid by or for the account of the City, or provision satisfactory to the Trustee shall be made for such payment, and all defaults under this Resolution or the Bonds shall be cured 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 City all moneys, securities and funds then remaining unexpended in the hands of the Trustee (except moneys, securities and funds deposited or pledged, or required by the terms of this Resolution to be deposited or pledged, with the Trustee) and thereupon the City and the Trustee shall be restored, respectively to their former positions and rights under this Resolution. No such payment over to the City by the Trustee nor such restoration of the City and the Trustee to their former positions and rights shall extend to or affect any subsequent default under this Resolution or impair any right consequent thereon.

Section 8.04. Proceedings Brought by Trustee. (a) If an Event of Default shall happen and shall not have been remedied, then and in every such case, the Trustee, by its agents and attorneys, may proceed, and upon written request of the holders of not less than 25% in principal amount of the Bonds Outstanding shall proceed, to protect and enforce its rights and the rights of the holders of the Bonds under this Resolution forthwith by a suit or suits in equity or at law, whether for the specific performance of any covenant herein contained, or in aid of the execution of any power herein granted, or for an accounting against the City as if the City 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 this Resolution.

(b) All rights of action under this Resolution may be enforced by the Trustee without the possession of any of the Bonds or the production thereof in any suit or other proceedings, and any such suit or proceedings instituted by the Trustee shall be brought in its name.

(c) The holders of not less than a majority in principal amount of the Bonds at the time Outstanding may direct 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 involve the Trustee in personal liability or be unjustly prejudicial to the Bondholders not parties to such direction.

(d) Upon commencing any suit at law or in equity or upon commencement of other judicial proceedings by the Trustee to enforce any right under this Resolution, the Trustee

shall be entitled to exercise any and all rights and powers conferred in this Resolution and provided to be exercised by the Trustee upon the occurrence of any Event of Default.

(e) Regardless of the happening of an Event of Default, the Trustee shall have power, but unless requested in writing by the holders of a majority in principal amount of the Bonds then Outstanding, and furnished with reasonable security and indemnity, shall be under no obligation, to institute and maintain such suits and proceedings as may be necessary or expedient to prevent any impairment of the security under this Resolution and to preserve or protect its interests and the interests of the Bondholders.

Section 8.05. Restriction on Bondholder's Action. (a) No holder of any Bond shall have any right to institute any suit or proceeding at law or in equity for the enforcement of any provision of this Resolution or the execution of any trust under this Resolution or for any remedy under this Resolution, unless such holder shall have previously given to the Trustee written notice of the happening of an Event of Default, as provided in this Article, and the holders of at least 25% 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 this Resolution or by the laws of the State to institute such suit or proceedings 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 or failed to comply with such request within sixty (60) days after receipt by it of such notice, request and offer of indemnity, 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 this Resolution, or to enforce any right under this Resolution, except in the manner therein provided; and that all proceedings at law or in equity to enforce any provision of this Resolution shall be instituted, had and maintained in the manner provided in this Resolution and for the equal benefit of all holders of the Outstanding Bonds, subject only to the provisions of Section 7.02 hereof.

(b) Nothing in this Resolution or in the Bonds contained shall affect or impair the obligation of the City, 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, or affect or impair the right of action, which is also absolute and unconditional, of any holder to enforce such payment of its Bond.

Section 8.06. Remedies not Exclusive. No remedy by the terms of this Resolution conferred upon or reserved to the Trustee or the Bondholders is intended to be exclusive of any other remedy, but each remedy shall be cumulative and shall be in addition to every other remedy given under this Resolution or existing at law or in equity or by statute on or after the date of adoption of this Resolution.

Section 8.07. Effect of Waiver and Other Circumstances. (a) No delay or omission of the Trustee or any Bondholder to exercise any right or power arising upon the happening of an Event of Default shall impair any right or power or shall be construed to be a waiver of any such default or be an acquiescence therein.

(b) The holders of not less than two-thirds in principal amount of the Bonds at the time Outstanding, or their attorneys-in-fact duly authorized in writing, may on behalf of the holders of all of the Bonds waive any past default under this Resolution and its consequences, except a default in the payment of interest on or principal or Redemption Price of any of the Bonds. No such waiver shall extend to any subsequent or other default or impair any right consequent thereon.

Section 8.08. Notice of Default. The Trustee shall promptly mail to holders of Bonds written notice of the occurrence of any Event of Default of which the Trustee has knowledge. The Trustee shall mail to the issuer of any Credit Facility and Liquidity Facility notice of an Event of Default described in subsection (a) or (b) of Section 8.01 hereof as soon as possible and notice of the occurrence of any other Event of Default of which the Trustee has knowledge within thirty (30) days of the Trustee's knowledge thereof.

ARTICLE IX

CONCERNING THE FIDUCIARIES

Section 9.01. Trustee; Acceptance of Duties. The Bank of New York Mellon Trust Company, N.A., is hereby appointed Trustee under this Resolution. The Trustee shall signify its acceptance of the duties and obligations imposed upon it by this Resolution by executing and delivering to the City a written certificate of acceptance thereof and by executing such certificate the Trustee shall be deemed to have accepted such duties and obligations with respect to all the Bonds thereafter to be issued, but only, however, upon the terms and conditions set forth in this Resolution.

Section 9.02. Paying Agents; Acceptance of Duties. The City may appoint one or more Paying Agents for the Bonds and may at any time or from time to time appoint one or more other Paying Agents having the qualifications set forth in Section 9.14 hereof for a successor Paying Agent. The Trustee may be appointed a Paying Agent. Each Paying Agent shall signify its acceptance of the duties and obligations imposed upon it by this Resolution by executing and delivering to the City and to the Trustee a written acceptance thereof. Unless otherwise provided, the principal or corporate trust offices of the Paying Agents are designated as the respective offices or agencies of the City for the payment of the interest and principal or Redemption Price of the Bonds.

Section 9.03. Appointment of Depositaries; Acceptance of Duties. The City may appoint one or more Depositaries as of the date of original issuance and delivery of the Bonds and may at any time or from time to time appoint one or more other Depositaries having the qualifications set forth in Section 6.01 hereof. The Trustee may be appointed as a Depositary. Each Depositary shall signify its acceptance of the duties and obligations imposed upon it by this Resolution by executing and delivering to the City and the Trustee a written acceptance thereof.

Section 9.04. Responsibilities of Fiduciaries. (a) The recitals of fact herein and in the Bonds contained shall be taken as the statements of the City and no Fiduciary assumes any responsibility for the correctness of the same. No Fiduciary makes any representations as to the validity or sufficiency of this Resolution or of any Bonds issued thereunder or as to the security

afforded by this Resolution, and no Fiduciary shall incur any liability in respect thereof. The Trustee shall, however, be responsible for any representation contained in its authentication certificate on the Bonds. No Fiduciary shall be under any responsibility or duty with respect to the application of any moneys paid to the City or to any other Fiduciary. No Fiduciary shall be under any obligation or duty to perform any act which would involve it in expense or liability or to institute or defend any suit in respect hereof, or to advance any of its own moneys, unless properly indemnified. Subject to the provisions of subsection (b) of this Section, no Fiduciary shall be liable in connection with the performance of its duties hereunder except for its own negligence or willful misconduct. The Trustee shall have no responsibility with respect to any information, statement or recital in any official statement, offering memorandum or any other disclosure material prepared or distributed with respect to the Bonds, except for any information provided by the Trustee, and shall have no responsibility for compliance with any state or federal securities laws in connection with the Bonds. The permissive right of the Trustee to do things enumerated in this Resolution shall not be construed as a duty. The Trustee may act through agents or attorneys and shall not be responsible for the misconduct or negligence of agents or attorneys appointed with due care.

(b) The Trustee, prior to the occurrence of an Event of Default and after the remedy of all Events of Default which may have occurred, undertakes to perform such duties and only such duties as are specifically set forth in this Resolution and no implied covenants shall be read into this Resolution against the Trustee. In case an Event of Default has occurred and has not been remedied, the Trustee shall exercise such of the rights and powers vested in it by this Resolution, and shall use the same degree of care and skill in their exercise as a prudent man would exercise or use under the circumstances in the conduct of his own affairs. Any provision of this Resolution relating to action taken or to be taken by the Trustee or to evidence upon which the Trustee may rely shall be subject to the provisions of this Section. The Trustee shall not take any Credit Facility into account in determining whether the rights of Bondholders are adversely affected by actions taken pursuant to the terms and provisions of this Resolution.

(c) Although the City recognizes that it may obtain a broker confirmation or written statement containing comparable information at no additional cost, the City agrees that confirmations of permitted investments are not required to be issued by the Trustee for each month in which a monthly statement is rendered.

(d) The Trustee shall have no duty to review, verify or analyze financial statements and shall hold such financial statements solely as a repository for the benefit of the Bondholders and the Trustee shall not be deemed to have notice of any information contained therein, default or event of default which may be disclosed therein in any manner. Delivery of such reports, information and documents to the Trustee is for information purposes only and the Trustee's receipt of such shall not constitute notice or constructive notice of any information contained therein or determinable from information contained therein, including the City's compliance with any of its covenants hereunder (as to which the Trustee is entitled to rely exclusively on a certificate of an Authorized Officer of the City).

Section 9.05. Evidence on Which Fiduciaries May Act. (a) Each Fiduciary shall be protected in acting upon any notice, resolution, request, consent, order, certificate, report, opinion, bond or other paper or document furnished to it pursuant to and conforming to the

requirements of this Resolution, and believed by it to be genuine and to have been signed or presented by the proper party or parties.

(b) Whenever any Fiduciary shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering any action under this Resolution, such matter (unless this Resolution specifically requires other evidence thereof) may be deemed to be conclusively proved and established by a certificate of an Authorized Officer of the City, but in its discretion the Fiduciary may in lieu thereof accept other evidence of such fact or matter or may require such further or additional evidence as to it may seem reasonable.

(c) Except as otherwise expressly provided in this Resolution, any request, order, notice or other direction required or permitted to be furnished by the City to any Fiduciary shall be sufficiently executed if signed by an Authorized Officer of the City.

(d) In the administration of the trusts under this Resolution, the Trustee may consult with counsel, accountants and other skilled persons to be selected and retained by it, and the Trustee shall not be liable for anything done, suffered or omitted in good faith by them in accordance with the written advice or written opinion of any such counsel, accountants or other skilled persons.

(e) The Trustee shall have the right to accept and act upon instructions, including funds transfer instructions (“Instructions”) given pursuant to this Resolution and delivered using Electronic Means (as hereinafter defined); provided, however, that the City shall provide to the Trustee an incumbency certificate listing officials with the authority to provide such Instructions (“Authorized Officials”) and containing specimen signatures of such Authorized Officials, which incumbency certificate shall be amended by the City whenever a person is to be added or deleted from the listing. If the City elects to give the Trustee Instructions using Electronic Means and the Trustee in its discretion elects to act upon such Instructions, the Trustee’s understanding of such Instructions shall be deemed controlling. The City understands and agrees that the Trustee cannot determine the identity of the actual sender of such Instructions and that the Trustee shall conclusively presume that directions that purport to have been sent by an Authorized Official listed on the incumbency certificate provided to the Trustee have been sent by such Authorized Official. The City shall be responsible for ensuring that only Authorized Officials transmit such Instructions to the Trustee and that the City and all Authorized Officials are solely responsible to safeguard the use and confidentiality of applicable user and authorization codes, passwords and/or authentication keys upon receipt by the City. The Trustee shall not be liable for any losses, costs or expenses arising directly or indirectly from the Trustee’s reliance upon and compliance with such Instructions. The City agrees: (i) to assume all risks arising out of the use of Electronic Means to submit Instructions to the Trustee, including without limitation the risk of the Trustee acting on unauthorized Instructions, and the risk of interception and misuse by third parties; (ii) that it is fully informed of the protections and risks associated with the various methods of transmitting Instructions to the Trustee and that there may be more secure methods of transmitting Instructions than the method(s) selected by the City; (iii) that the security procedures (if any) to be followed in connection with its transmission of Instructions provide to it a commercially reasonable degree of protection in light of its particular needs and circumstances; and (iv) to notify the Trustee immediately upon learning of any compromise or unauthorized use of the security procedures.

“Electronic Means” shall mean the following communications methods: e-mail, facsimile transmission, secure electronic transmission containing applicable authorization codes, passwords and/or authentication keys issued by the Trustee, or another method or system specified by the Trustee as available for use in connection with its services hereunder.

(f) In connection with any transfer or exchange of Bonds outside the book-entry-only system, the transferor or owner shall provide or cause to be provided to the Trustee all information necessary to allow the Trustee to comply with any applicable tax reporting obligations, including without limitation any cost basis reporting obligations under Internal Revenue Code Section 6045. The Trustee may rely on the information provided to it and shall have no responsibility to verify or ensure the accuracy of such information.

Section 9.06. Compensation. Unless otherwise determined by contract between the City and a Fiduciary, the City shall pay to each Fiduciary from time to time reasonable compensation for all services rendered under this Resolution, and also all reasonable expenses, charges, counsel fees and other disbursements, including those of its attorneys, agents and employees, incurred in and about the performance of their powers and duties under this Resolution, and each Fiduciary shall have a lien therefor prior to that of the Bonds on any and all funds at any time held by it under this Resolution. Subject to the provisions of Section 9.04 hereof, the City further agrees to indemnify and save each Fiduciary harmless against any liabilities which it may incur in the exercise and performance of its powers and duties hereunder, and which are not due to its negligence or willful misconduct.

Section 9.07. Certain Permitted Acts. Any Fiduciary may become the owner of any Bonds, with the same rights it would have if it were not a Fiduciary. To the extent permitted by law, any Fiduciary may act as depositary for, and permit any of its officers or directors to act as a member of, or in any other capacity with respect to, any committee formed to protect the rights of Bondholders or to effect or aid in any reorganization growing out of the enforcement of the Bonds or this Resolution, whether or not any such committee shall represent the Holders of a majority in principal amount of the Bonds then Outstanding.

Section 9.08. Resignation of Trustee. The Trustee may at any time resign and be discharged of the duties and obligations imposed upon it by this Resolution by giving not less than sixty (60) days written notice to the City, and the City shall mail notice thereof to the Bondholders, specifying the date when such resignation shall take effect; provided, however, that such resignation shall not take effect until the appointment of such successor as provided in Section 9.10 hereof and the acceptance by such successor as provided in Section 9.11 hereof. The City shall send a copy of such notice to the issuer of any Credit Facility and Liquidity Facility then in effect.

Section 9.09. Removal of Trustee. The Trustee may be removed (i) by the City at any time, upon thirty (30) days written notice, except during the existence of an Event of Default, with or without cause in the sole discretion of the City by an instrument in writing signed by an Authorized Officer of the City and (ii) at any time, upon thirty (30) days written notice, by the Holders of a majority in principal amount of the Bonds then Outstanding, excluding any Bonds held by or for the account of the City, by an instrument or concurrent instruments in writing signed and duly acknowledged by such holders or their attorneys-in-fact

duly authorized, and delivered to the City and the Trustee; provided, however, that such removal shall not take effect until the appointment of such successor as provided in Section 9.10 hereof and the acceptance by such successor as provided in Section 9.11 hereof. Copies of each such instrument shall be delivered by the City to each other Fiduciary. The City shall send notice of such removal to the issuer of any Credit Facility and Liquidity Facility then in effect.

Section 9.10. Appointment of Successor Trustee. (a) In the event that the Trustee shall resign or shall be removed or shall become incapable of acting, or shall be adjudged a bankrupt or insolvent, or if a receiver, liquidator or conservator of the Trustee, or of its property, shall be appointed, or if any public officer or court shall take charge or control of the Trustee, or of its property or affairs, a successor may be appointed by the holders of a majority in principal amount of the Bonds then Outstanding, excluding any Bonds held by or for the account of the City, by an instrument or concurrent instruments in writing signed and acknowledged by such Bondholders or by their attorneys-in-fact duly authorized in writing and delivered to such successor Trustee, notification thereof being given to the City and the predecessor Trustee. Pending such appointment, the City by a duly executed written instrument signed by an Authorized Officer of the City shall forthwith appoint a Trustee to fill such vacancy until a successor Trustee shall be appointed by the Bondholders. The successor Trustee shall mail notice of any such appointment to the Bondholders. The City shall send a copy of such notice to the issuer of any Credit Facility and Liquidity Facility then in effect. Any successor Trustee appointed by the City shall, immediately and without further act, be superseded by a Trustee appointed by a majority of the Bondholders as aforesaid.

(b) If in a proper case no appointment of a successor Trustee shall be made pursuant to the foregoing provisions of this Section within forty-five (45) days after the Trustee shall have given to the City written notice of resignation as provided in Section 9.08 hereof or after a vacancy in the office of the Trustee shall have occurred, the Trustee or the holder of any Bond may apply to any court of competent jurisdiction to appoint a successor Trustee.

(c) Any Trustee appointed under the provisions of this Section in succession to the Trustee shall be a bank or trust company organized under the laws of any state of the United States of America or a national banking association, and having combined capital stock, surplus and undivided profits aggregating at least \$50,000,000, if there be such a bank or trust company or national banking association willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by this Resolution.

Section 9.11. Transfer of Rights and Property to Successor Trustee. Any successor Trustee appointed under this Resolution shall execute, acknowledge and deliver to its predecessor Trustee, and also to the City, an instrument accepting such appointment, and thereupon such successor Trustee, without any further act, deed or conveyance, shall become fully vested with all moneys, estates, properties, rights, powers, duties and obligations of such predecessor Trustee; but the predecessor Trustee shall nevertheless, on the written request of the City, or of the successor Trustee, execute, acknowledge and deliver such instruments of conveyance and further assurance and do such other things as may reasonably be required for more fully and certainly vesting in and confirming to such successor Trustee all its right, title and interest in and to any property held by it under this Resolution, and shall pay over, assign and

deliver to the successor Trustee any money or other property subject to the trust and conditions herein set forth. Should any deed, conveyance or instrument from the City be required by such successor Trustee for more fully and certainly vesting in and confirming to such successor Trustee any such moneys, estates, properties, rights, powers and duties, such deed, conveyance or instrument shall be executed, acknowledged and delivered by the City. Any such successor Trustee shall promptly notify the Paying Agents, if any, of its appointment as Trustee.

Section 9.12. Merger or Consolidation. Any company into which any Fiduciary may be merged or converted or with which it may be consolidated or any company resulting from any merger, conversion or consolidation to which it shall be a party or any company to which all or substantially all of the corporate trust business of any Fiduciary may be sold or transferred, shall be the successor to such Fiduciary without the execution or filing of any paper or the performance of any further act; provided, however, that such company shall be a bank or trust company organized under the laws of any state of the United States or a national banking association and shall be authorized by law to perform all the duties imposed upon it by this Resolution.

Section 9.13. Adoption of Authentication. In case any of the Bonds contemplated to be issued under this Resolution shall have been authenticated but not delivered, any successor Trustee may adopt the certificate of authentication of any predecessor Trustee so authenticating such Bonds and deliver such Bonds so authenticated and in case any of the said Bonds shall not have been authenticated, any successor Trustee may authenticate such Bonds in the name of the predecessor Trustee or in its own name.

Section 9.14. Resignation or Removal of Paying Agent and Appointment of Successor. (a) Any Paying Agent may at any time resign and be discharged of the duties and obligations imposed upon it by this Resolution by giving at least sixty (60) days written notice to the City and the other Fiduciaries.

(b) Any Paying Agent may be removed at any time, upon thirty (30) days written notice, by an instrument signed by an Authorized Officer of the City and filed with such Paying Agent and the Trustee. Any successor Paying Agent shall be appointed by the City and shall be a bank or trust company organized under the laws of any state of the United States or a national banking association, having capital stock and surplus aggregating at least \$10,000,000, willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon it by this Resolution.

(c) In the event of the resignation or removal of any Paying Agent, such Paying Agent shall pay over, assign and deliver any moneys held by it as Paying Agent to its successor, or if there be no successor, to the Trustee. In the event that for any reason there shall be a vacancy in the office of any Paying Agent, the Trustee shall act as such Paying Agent.

ARTICLE X

SUPPLEMENTAL RESOLUTIONS

Section 10.01. Supplemental Resolutions Effective upon Filing. A Supplemental Resolution for any one or more of the following purposes shall be fully effective in accordance with its terms and upon the filing with the Trustee of a copy thereof certified by an Authorized Officer of the City:

(a) to close this Resolution against, or provide limitations and restrictions in addition to the limitations and restrictions contained in this Resolution on, the authentication and delivery of Bonds or the issuance of other evidences of indebtedness;

(b) to add to the covenants and agreements of the City in this Resolution, other covenants and agreements to be observed by the City which are not contrary to or inconsistent with this Resolution as theretofore in effect;

(c) to add to the limitations and restrictions in this Resolution, other limitations and restrictions to be observed by the City which are not contrary to or inconsistent with this Resolution as theretofore in effect;

(d) to authorize Bonds of a Series and, in connection therewith, specify and determine the matters and things referred to in Section 2.02 hereof, and also any other matters and things relative to such Bonds which are not contrary to or inconsistent with this Resolution as theretofore in effect, or to amend, modify or rescind any such authorization, specification or determination at any time prior to the first authentication and delivery of such Bonds;

(e) to confirm, as further assurance, any pledge or assignment under and the subjection to any security interest, pledge or assignment created or to be created by this Resolution of the Revenues or of any other moneys, securities or funds;

(f) to surrender any right, power or privilege reserved to or conferred upon the City by this Resolution, including without limitation any reserved rights and remedies of Bondholders or the Trustee following an Event of Default;

(g) to authorize the establishment of a fund or funds to enable the City to self-insure against the risks and hazards relating to a Project and the interests of the City and of the Bondholders as described in Section 7.13 hereof;

(h) to modify the definition of Authorized Investments as directed by the City, provided that the City shall have provided evidence to the Trustee that the details of such modification have been provided in writing to each Rating Agency then assigning a rating on Outstanding Bonds and that each such Rating Agency has either (i) confirmed in writing that such modification will not adversely affect such ratings or (ii) issued a rating on a Series of Bonds to be issued which is not lower than the rating assigned by such Rating Agency to Outstanding Bonds prior to such modification, or any other evidence satisfactory to the Trustee that such modification will not adversely affect the then current ratings, if any, assigned to the Bonds by any Rating Agency;

(i) to modify, amend or supplement this Resolution in such manner as to permit the qualification hereof under the Trust Indenture Act of 1939, as amended, or any similar federal statute hereafter in effect or to permit the qualification of the Bonds for sale under the securities laws of any of the states of the United States of America and, if the City so determines, to add hereto such other terms, conditions and provisions as may be permitted by said Trustee Indenture Act of 1939 or similar federal statute;

(j) to comply with regulations and procedures as are from time to time in effect relating to any book-entry-only system, whether within or without the United States, for the registration of beneficial ownership interests in Bonds;

(k) to comply with additional requirements that a Rating Agency may impose in order to issue or maintain a rating on the Bonds, provided that any Supplemental Resolution, the purpose of which is to effect such changes shall be effective only upon delivery to the City and the Trustee of an opinion of Bond Counsel that such changes shall not adversely affect the validity of the Bonds or the exclusion of interest on the Bonds from the gross income of the Holders thereof for federal income tax purposes;

(l) to modify any of the provisions of this Resolution in any other respect whatever with respect to any Bonds, provided that (i) (A) such modification relates only, and is to be effective prior to the issuance of, such Bonds or (B) such modification relates only, and is to be effective only upon the remarketing of, such Bonds in connection with an optional or mandatory tender thereof for purchase by or on behalf of the City or purchase in lieu of redemption pursuant to Section 4.06 hereof and (ii) such modification is disclosed in an offering or reoffering document applicable to such issuance or remarketing; or

(m) to modify any of the provisions of this Resolution in any other respect whatever, provided that such modification shall be and shall be expressed to be, effective only after all Bonds Outstanding, and outstanding or unpaid Qualified Swap Agreements and Reimbursement Obligation, at the date of the execution and delivery of such Supplemental Resolution shall cease to be Outstanding or owing, as the case may be.

Section 10.02. Supplemental Resolutions Effective upon Consent of Trustee. A Supplemental Resolution for any one or more of the following purposes shall be fully effective in accordance with its terms upon (i) the filing with the Trustee of a copy thereof certified by an Authorized Officer of the City and (ii) the filing with the Trustee and the City of the Trustee's written consent thereto:

(a) to cure any ambiguity, supply any omission or cure or correct any defect or inconsistent provision in this Resolution;

(b) to insert such provisions clarifying matters or questions arising under this Resolution as are necessary or desirable and are not contrary to or inconsistent with the Resolution as theretofore in effect;

(c) to modify or amend any of the terms or provisions of this Resolution if no Bonds are Outstanding at the time such written consent is filed;

(d) to modify or amend any of the terms or provisions of this Resolution, provided that such modification by its terms shall not take effect until all Bonds Outstanding on the date of adoption of such Supplemental Resolution shall have ceased to be Outstanding;

(e) to make any modification or amendment to this Resolution that does not materially and adversely affect the interests of the Bondholders;

(f) to comply with the provisions of Section 3.10 hereof; or

(g) to modify, amend or insert such provisions relating to Parity Debt as are necessary or desirable and not adverse to the rights and interests of the Bondholders.

Section 10.03. Supplemental Resolutions Effective upon Consent of Bondholders. Any Supplemental Resolution not effective in accordance with Sections 10.01 or 10.02 hereof shall take effect only if permitted and in the manner prescribed by Article XI hereof.

Section 10.04. Filing of Counsel's Opinion. Each Supplemental Resolution described in Section 10.01 or Section 10.02 hereof shall be accompanied, when filed with the Trustee, by a Counsel's Opinion to the effect that such resolution has been duly and lawfully adopted by the City in accordance with the provisions of this Resolution, is authorized or permitted by this Resolution and, when effective, will be valid and binding upon the City, the Bondholders and the Trustee; provided, however, that such Counsel's Opinion may take an exception on account of the laws of bankruptcy, reorganization and insolvency and of other laws affecting creditors' rights generally and to the exercise of judicial discretion in accordance with general equitable principles. The Trustee shall be fully protected in relying on Counsel's Opinion that such Supplemental Resolution is authorized or permitted by the provisions of this Resolution. No Supplemental Resolution shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto.

ARTICLE XI

AMENDMENTS

Section 11.01. Mailing. Any provision in this Article for the mailing of a notice or other paper to Bondholders shall be fully complied with if it is mailed postage prepaid or delivered only (i) to each registered owner of Bonds then Outstanding at his address, if any, appearing upon the bond register kept at the designated office of the Bond Registrar and (ii) to the Trustee.

Section 11.02. Powers of Amendment. Any modification or amendment of this Resolution and of the rights and obligations of the City and of the Holders of the Bonds thereunder, in any particular, may be made by Supplemental Resolution of the City, with the written consent given as provided in Section 11.03 hereof (i) of the Holders of not less than a majority in principal amount of the Bonds Outstanding at the time such consent is given, or (ii) in case less than all of the Bonds then Outstanding are affected by the modification or amendment, of the Holders of not less than a majority in principal amount of the Bonds so affected and Outstanding at the time such consent is given, and (iii) in case the modification or

amendment changes the terms of any Sinking Fund Installment, of the Holders of not less than a majority in principal amount of the Bonds of the particular maturity entitled to such Sinking Fund Installment and Outstanding at the time such consent is given; provided, however, that if such modification or amendment will, by its terms, not take effect so long as any Bonds of any specified like maturity remain Outstanding, the consent of the Holders of such Bonds shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds under this Section. No such modification or amendment shall permit a change in the terms of redemption or maturity of the principal of any Outstanding Bonds, or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon without the consent of the Holder of such Bond, or shall reduce the percentages or otherwise affect the classes of Bonds the consent of the Holders of which is required to effect any such modification or amendment, or shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto. For the purpose of this Section, a Bond shall be deemed to be affected by a modification or amendment of this Resolution if the same adversely affects or diminishes the rights of the Holders of such Bonds. The Trustee may in its discretion determine whether or not the rights of the Holders of Bonds of any particular maturity would be adversely affected or diminished by any such modification or amendment, and its determination shall be binding and conclusive on the City and all Holders of Bonds. The Trustee shall be entitled to rely upon an opinion of counsel to such effect.

Section 11.03. Consent of Bondholders. The City may at any time adopt a Supplemental Resolution making a modification or amendment permitted by the provisions of Section 11.02, to take effect when and as provided in this Section. Upon the adoption of such Supplemental Resolution, a copy thereof, certified by an Authorized Officer of the City, shall be delivered to and held by the Trustee for the inspection of the Bondholders. A copy of such Supplemental Resolution (or summary thereof or reference thereto in form approved by the Trustee) together with a request to Bondholders for their consent thereto in form satisfactory to the Trustee shall be mailed by the City to Bondholders. Such Supplemental Resolution shall not be effective unless and until, and shall take effect in accordance with its terms when (a) there shall have been filed with the Trustee (i) the written consents of the Holders of the required principal amount of Outstanding Bonds and (ii) a Counsel's Opinion stating that such Supplemental Resolution has been duly adopted by the City in accordance with the provisions of this Resolution, is authorized or permitted by this Resolution and, when effective, will be valid and binding upon the City, the Bondholders and the Trustee, provided that such Counsel's Opinion (A) may take exceptions for limitations imposed by or resulting from applicable bankruptcy, insolvency, reorganization, moratorium and other laws affecting creditors' rights, or the application of principles of equity relating to or affecting the enforcement of contractual obligations and (B) need not express any opinion as to the availability of any particular remedy and (b) a notice shall have been mailed to the Bondholders as hereinafter in this Section provided. Any such consent shall be binding upon the Holder of the Bonds giving such consent and upon any subsequent Holder of such Bonds and of any Bonds issued in exchange therefor whether or not such subsequent Holder has notice thereof; provided, however, that any consent may be revoked by any Holder of such Bonds by filing with the Trustee, prior to the time when the Trustee's written statement hereafter in this Section referred to is filed, a written revocation, with proof that such Bonds are held by the signer of such revocation. The fact that a consent has not been revoked may be proved by a certificate of the Trustee to the effect that no revocation

thereof is on file with it. Any consent, or revocation thereof, may be delivered or filed prior to any mailing required by this Article and shall not be deemed ineffective by reason of such prior delivery or filing. Within thirty (30) days of any date on which the consents on file with the Trustee and not theretofore revoked shall be sufficient under this Section, the Trustee shall make and file with the City and the Trustee a written statement that the consents of the Holders of the required principal amount of Outstanding Bonds have been filed with it. Such written statement that the consents of the Holders of the required principal amount of Outstanding Bonds have been filed with the Trustee shall be conclusive that such consents have been so filed. At any time thereafter notice, stating in substance that the Supplemental Resolution (which may be referred to as a resolution adopted by the City on a stated date a copy of which is on file with the Trustee) has been consented to by the Holders of the required principal amount of Outstanding Bonds and will be effective as provided in this Section, may be given by mailing to Bondholders (but failure to mail such notice shall not prevent such Supplemental Resolution from becoming effective and binding) and mailing at least once within sixty (60) days after such statement of the Trustee has been so filed. The Trustee shall file with the City proof of the mailing of such notice. A record, consisting of the papers required or permitted by this Section to be filed by or with the Trustee, shall be proof of the matters therein stated. Notwithstanding the foregoing provisions of this Section 11.03, the consent of Bondholders of any Series of Bonds to be issued under a Supplemental Resolution to an amendment of this Resolution that requires consent pursuant to the provisions of Section 11.02 hereof shall be deemed given by such Bondholders if: (1) the nature of the proposed amendment of this Resolution is disclosed in the official statement or other offering document pursuant to which such Series of Bonds is offered and sold to the public or (2) the underwriters or initial purchasers for resale of such Series of Bonds consent in writing to such Supplemental Resolution and file such written consent with the Trustee, or are deemed by their purchase of Bonds of such Series to have consented to such Supplemental Resolution, which consent will have the same effect as a consent of a Bondholder filed with the Trustee pursuant to this Section 11.03.

Section 11.04. Modifications by Unanimous Action. This Resolution and the rights and obligations of the City and of the Holders of the Bonds thereunder may be modified or amended in any respect by a Supplemental Resolution effecting such modification or amendment and the consents of the Holders of all the Bonds then Outstanding, each such consent to be accompanied by proof of the holding at the date of such consent of the Bonds with respect to which such consent is given. Such Supplemental Resolution shall take effect upon the filing (a) with the Trustee of (i) a copy thereof certified by an Authorized Officer of the City, (ii) such consents and accompanying proofs and (iii) the Counsel's Opinion referred to in Section 10.04 hereof and (b) with the City and the Trustee of the Trustee's written statement that the consents of the Holders of all Outstanding Bonds have been filed with it. No mailing of any Supplemental Resolution (or summary thereof) or of any request or notice shall be required. No such modification or amendment, however, shall change or modify any of the rights or obligations of any Fiduciary without its written assent thereto.

Section 11.05. Exclusion of Bonds. Bonds owned or held by or for the account of the City shall not be deemed Outstanding and shall be excluded for the purpose of any calculation required by this Article. At the time of any consent or other action taken under this Article, the City shall furnish the Trustee a certificate of an Authorized Officer of the City, upon which the Trustee may rely, identifying all Bonds so to be excluded.

Section 11.06. Notation on Bonds. Bonds authenticated and delivered after the effective date of any action taken as in Article X hereof or this Article provided may, and if the Trustee so determines shall, bear a notation by endorsement or otherwise in form approved by the City and the Trustee as to such action, and upon demand of the holder of any Bond Outstanding at such effective date and presentation of his Bond to the Trustee, suitable notation shall be made on such Bond by the Trustee as to any such action. If the City or the Trustee shall so determine, new Bonds so modified which, in the opinion of the Trustee and the City, conform to such action may be prepared, authenticated and delivered, and upon demand of the Holder of any Bond then Outstanding shall be exchanged, without cost to such Bondholder, for such Bond then Outstanding.

Section 11.07. Notice to Rating Agencies. The Trustee shall provide to each rating agency then rating the Bonds notice of each proposed amendment to this Resolution and a copy thereof at least fifteen (15) days in advance of its adoption; provided, however, that the failure of the Trustee to comply with this provision shall not affect the validity or effectiveness of any amendment or supplement to this Resolution.

Section 11.08. Amendment Prior to the Issuance of Initial Series of Bonds. Prior to issuance of the initial Series of Bonds hereunder and notwithstanding anything contained in this Resolution to the contrary, the City may, by resolution or by a certificate executed by the Mayor and Finance Officer of the City, make minor modifications to the terms and provisions of this Resolution in any respect or for any purpose and the version of this Resolution delivered at the closing of the initial Series of Bonds hereunder shall constitute the final version of this Resolution. The other provisions of this Resolution relating to amendments (including Article X hereof and this Article XI) shall not be applicable to any amendment made pursuant to this Section.

ARTICLE XII

BOND FORMS

Section 12.01. Form of Bonds and Trustee's Authentication Certificate. The Bonds shall be printed with engraved borders or, upon request of the purchasers of the Bonds or the Bondholders, as the case may be, the Bonds may be typewritten, or the Bonds of a particular Series may be in such other form (including book entry) as may be otherwise provided in the Supplemental Resolution authorizing the issuance of such Series.

ARTICLE XIII

MISCELLANEOUS

Section 13.01. Defeasance. (a) If the City shall pay or cause to be paid, or there shall otherwise be paid, to the holders of all Bonds of a Series the principal or Redemption Price, if applicable, and interest due or to become due thereon, and all other sums payable by the City pursuant to this Resolution and the applicable Supplemental Resolution, at the times and in the manner stipulated therein and in this Resolution and applicable Supplemental Resolution, then the pledge of any Revenues, and other moneys and securities pledged under this Resolution and

applicable Supplemental Resolution and all covenants, agreements and other obligations of the City to such Bondholders, shall thereupon be released, discharged and satisfied. In such event, the Trustee, upon request of the City, shall cause an accounting and all other sums payable by the City pursuant to this Resolution and the applicable Supplemental Resolution to be prepared and filed with the City, and shall execute and deliver to the City all such instruments as may be desirable to evidence such discharge and satisfaction, and the Fiduciaries shall pay over or deliver to the City all moneys and securities held by them pursuant to this Resolution and applicable Supplemental Resolution which are not required for the payment of Bonds not theretofore surrendered for such payment or redemption. If the City shall pay or cause to be paid, or there shall otherwise be paid, to the holders of all Outstanding Bonds of a particular Series, the principal or Redemption Price, if applicable, and interest due or to become due thereon, at the times and in the manner stipulated therein and in this Resolution and applicable Supplemental Resolution, such Bonds shall cease to be entitled to any lien, benefit or security under this Resolution and applicable Supplemental Resolution, and all covenants, agreements and obligations of the City to the holders of such Bonds shall thereupon be discharged and satisfied.

(b) Bonds or interest installments for the payment or redemption of which moneys shall have been set aside and held in trust by the Trustee and/or the Paying Agents at the maturity or redemption date thereof shall be deemed to have been paid within the meaning and with the effect expressed in subsection (a) of this Section. Any Outstanding Bonds shall prior to the maturity or redemption date thereof be deemed to have been paid within the meaning and with the effect expressed in subsection (a) of this Section 13.01 if the City shall have delivered to or deposited with the Trustee (i) irrevocable instructions to pay or redeem all of said Bonds in specified amounts no less than the respective amounts, and on specified dates no later than the respective due dates, of their Principal Installments, (ii) irrevocable instructions to mail to the holders thereof notice of redemption in accordance with Section 4.05 hereof of any Bonds so to be redeemed, (iii) either moneys in an amount which shall be sufficient, or Defeasance Obligations the principal of or the principal of and the interest on which, when due will provide moneys which, together with the moneys, if any, deposited with the Trustee at the same time, shall be sufficient to pay when due the principal or Redemption Price, if applicable, and interest due and to become due on said Bonds on and prior to each specified redemption date or maturity date thereof, as the case may be and (iv) if any of said Bonds are not to be redeemed within the next succeeding sixty (60) days, irrevocable instructions to mail a notice to the holders of such Bonds that the deposit of moneys referred to in clause (iii) hereof has been made with the Trustee and that said Bonds are deemed to have been paid in accordance with this Section and stating the maturity or redemption date upon which moneys are to be available for the payment of the principal or Redemption Price, if applicable of said Bonds. Any notice of redemption with respect to Bonds which constitute less than all of the Outstanding Bonds of any maturity within a Series shall specify the letter and number or other distinguishing marks of each such Bond. The Defeasance Obligations and moneys deposited with the Trustee pursuant to this Section 13.01 shall be held in trust for the payment of the principal or Redemption Price, if applicable, and interest on said Bonds. Payments of principal of and interest on any such Defeasance Obligations which are in excess of the amounts required for payment of such principal or Redemption Price of, or interest on, said Bonds may be withdrawn for any purposes of the City.

(c) Amounts deposited with the Trustee for the payment of Principal Installments of and interest on any Bonds deemed to be paid pursuant to this Section 13.01, if so directed by the City, shall be applied by the Trustee to the purchase of such Bonds in accordance with this subsection. Bonds for which a redemption date has been established may be purchased on or prior to the sixtieth (60th) day preceding the redemption date of Bonds so purchased. Bonds which mature on a single future date may be purchased at any time prior to the maturity date. All such purchases shall be made at prices not exceeding the applicable principal amount or Redemption Price established pursuant to subsection (b) of this Section 13.01, plus accrued interest thereon, and such purchases shall be made in such manner as the Trustee shall determine. No purchase shall be made by the Trustee pursuant to this subsection if such purchase would result in the Trustee holding less than the moneys and Defeasance Obligations required to be held for the payment of all other Bonds deemed to be paid pursuant to this Section 13.01.

(d) The City may purchase with any available funds any Bonds determined to be paid pursuant to this Section 13.01 in accordance with this subsection. Bonds for which a redemption date has been established may be purchased by the City on or prior to the sixtieth (60th) day preceding the redemption date. On or prior to the sixtieth (60th) day preceding the redemption date the City shall give notice to the Trustee of its intention to surrender such Bonds on the redemption date. The Trustee shall proceed to call for redemption the remainder of the Bonds due on the redemption date and shall pay to the City on the redemption date the Redemption Price of and interest on such Bonds upon surrender of such Bonds to the Trustee. Bonds which mature on a single future date may be purchased at any time prior to the maturity date. The Trustee shall pay to the City the principal amount of and interest on such Bonds upon surrender of such Bonds on the maturity date.

(e) Option Bonds shall be deemed to have been paid within the meaning and effect expressed in subsection (a) of this Section 13.01 only if, in addition to satisfying the requirements thereof, the requirements of the Supplemental Resolution authorizing the issuance of such Option Bonds have been satisfied.

(f) 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, Defeasance Obligations and moneys, if any, in accordance with the second sentence of subsection (b) of this Section 13.01, 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 this Section 13.01, the Trustee shall, if requested by the City in writing, pay the amount of such excess to the City free and clear of any lien or pledge securing the Bonds or otherwise existing under this Resolution.

(g) Anything in this Resolution 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 on a date which is one day prior to the date on which such moneys would otherwise escheat to the state in which such Fiduciary is located shall be repaid by the Fiduciary to the City, as its absolute property and free from trust, and the Fiduciary shall thereupon be released and discharged with respect thereto; provided, however, that before making any such payment to the City, the Fiduciary shall, at the expense of the City, provide notice as required by law that said moneys remain unclaimed and that, after a date named in said notice, which date shall not be less than ten (10) nor more than twenty (20) days after the date such notice is first given, the balance of such moneys then unclaimed will be returned to the City.

(h) Upon the defeasance of any of the Bonds pursuant to an advance refunding, the Trustee shall be entitled to receive and to rely upon a verification report and an opinion of counsel.

Section 13.02. Evidence of Signatures of Bondholders and Ownership of Bonds.

(a) Any request, consent, revocation of consent or other instrument which this Resolution may require or permit to be signed and executed by the Bondholders may be in one or more instruments of similar tenor, and shall be signed or executed by such Bondholders in person or by their attorneys duly authorized in writing. Proof of the execution of any such instrument, or of an instrument appointing any such attorney, shall be sufficient for any purpose of this Resolution (except as otherwise therein expressly provided) if made in the following manner, or in any other manner satisfactory to the Trustee, which may nevertheless in its discretion require further or other proof in cases where it deems the same desirable.

The fact and date of the execution of any Bondholder or such Bondholder's duly authorized attorney of such instruments may be proved by a guarantee of the signature thereon by a bank, national banking association or trust company or by the certificate of any notary public or other officer authorized to take acknowledgments of deeds that the person signing such request or other instrument acknowledged to such person the execution thereof, or by an affidavit of a witness of such execution, duly sworn to before such notary public or other officer. Where such execution is by an officer of a corporation or association or a member of a partnership, on behalf of such corporation, association or partnership, such signature guarantee, certificate or affidavit shall also constitute sufficient proof of such person's authority.

(b) The ownership of Bonds and the amount, numbers and other identification, and date of holding the same shall be proved by the registry books.

(c) Any request or consent by the owner of any Bond shall bind all future owners of such Bond in respect of anything done or suffered to be done by the City or any Fiduciary in accordance herewith.

Section 13.03. Moneys Held for Particular Bonds. The amounts held by any Fiduciary for the payment of the interest, principal or Redemption Price due on any date with respect to particular Bonds shall, on and after such date and pending such payment, be set aside on its books and held in trust by it for the Holders of the Bonds entitled thereto.

Section 13.04. Preservation and Inspection of Documents. All documents received by the Trustee under the provisions of this Resolution shall be retained in its possession

and shall be subject at all reasonable times to the inspection of the City, any other Fiduciary and any Bondholder and their agents and their representatives, any of which may make copies thereof.

Section 13.05. Cancellation and Destruction of Bonds. All Bonds paid or redeemed, either at or before maturity, shall be delivered to the Trustee when such payment or redemption is made, and such Bonds, together with all Bonds purchased by the City or the Trustee, shall thereupon be promptly cancelled. Bonds so cancelled may at any time be destroyed by the Trustee, who shall execute a certificate of destruction in duplicate by the signature of one of its authorized officers describing the Bonds so destroyed, and one executed certificate shall be filed with the City and the other retained by the Trustee.

Section 13.06. Parties Interested Herein. Nothing in this Resolution expressed or implied is intended or shall be construed to confer upon, or to give to, any person or corporation, other than the City, the Fiduciaries and the holders of the Bonds, any right, remedy or claim under or by reason of this Resolution or any covenant, condition, or stipulation thereof; and all the covenants, stipulations, promises and agreements in this Resolution by and on behalf of the City shall be for the sole and exclusive benefit of the City, the Fiduciary and the holders of the Bonds.

Section 13.07. No Recourse on Bonds. 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 this Resolution against any member or officer of the City or any person executing the Bonds.

Section 13.08. Consents. All consents and approvals hereby required to be given shall be neither unreasonably withheld nor delayed.

Section 13.09. Severability of Invalid Provision. If any one or more of the provisions, covenants or agreements in this Resolution on the part of the City or the Fiduciaries to be performed should be contrary to law, then such provision or provisions, covenant or covenants, or agreement or agreements, shall be deemed severable from the remaining provisions, covenants and agreements, and shall in no way affect the validity of the other provisions of this Resolution or of the Bonds.

Section 13.10. Captions and Index. Any captions, titles or headings preceding the text of any Article or Section herein and any table of contents or index attached to this Resolution or any copy thereof are solely for convenience of reference and shall not constitute part of this Resolution or affect its meaning, construction or effect.

Section 13.11. Payments on Saturdays, Sundays and Holidays. In any case where the date of any payment required to be made under this Resolution shall be a Saturday or a Sunday or shall be, at the place designated for such payment a legal holiday or a day on which banking institutions are authorized by law to close, then such payment shall not be made on such date but shall be made on the next succeeding business day not a Saturday, Sunday or a legal holiday or a day upon which banking institutions are authorized by law to close.

Section 13.12. Law Applicable. This Resolution being adopted pursuant to statutes of the State of New Hampshire, the law of said State shall be applicable to its interpretation and construction.

Section 13.13. Effective Date. This Resolution shall take effect, after its adoption, upon execution of a certificate of the Finance Officer to the effect that the final form of this Resolution has been approved.

[Remainder of page intentionally left blank]

The foregoing General Sewer Revenue Bond Resolution is hereby adopted on behalf of the City of Manchester, New Hampshire, by the Mayor and the Finance Officer of the City on this 9th day of December, 2021.

CITY OF MANCHESTER, NEW HAMPSHIRE

By: _____
Joyce Craig
Mayor

By: _____
Sharon Y. Wickens
Finance Officer

[Signature page of General Sewer Revenue Bond Resolution]

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APPENDIX D

2024 BOND FEASIBILITY REPORT

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October 7, 2024

Mayor and Board of Aldermen
City Hall
1 City Hall Plaza
Manchester, NH 03101

Subject: 2024 City of Manchester Sewer Revenue Bonds

To the Mayor and Board of Aldermen:

CDM Smith has prepared this cover letter and updated financial evaluation to support the City's Series 2024 sewer revenue bonds (the "2024 Bonds") being issued to finance portions of the Environmental Protection Division's capital improvement program (the "CIP"). This report is a supplement to the full report included in the 2021 Official Statement (the "2021 Report") which follows this supplemental report in Appendix D of the 2024 Bonds Official Statement. Our report for the 2024 Bonds includes this cover letter that provides a summary of the Environmental Protection's Division ("EPD") status since 2021 including major achievements and challenges since our previous report. CDM Smith has also developed updated financial projections for the period 2025 through 2029, including capital improvement requirements and projected revenues, rates, and debt service coverage, for the forecast period through FY 2029 and are attached as Sections 1 and 2 of this supplemental report. These updates replace Sections 4 and 6 in the 2021 Report.

Major items since the 2021 Report include:

- The EPD's facilities continue to be well operated and maintained. There have been no violations of the EPD's National Pollutant Discharge Elimination System ("NPDES") permit over the last three years. The EPD did experience some minor violations of its air permit associated with its incinerator. However, no fines or additional enforcement actions were taken by the regulatory agencies.
- The EPD continues to advance its combined sewer overflow program largely in compliance with the mandated schedule. The EPD did miss two milestone dates, one during the COVID 19 pandemic and the regulatory agencies considered that violation a force majeure event and took no enforcement action. The regulatory agencies took no action regarding the second violation.
- This bond issue will partially fund some of the last major projects included in the combined sewer overflow ("CSO") program.
- As noted, the EPD's facilities are well operated and maintained. EPD continues to use the 2010 Master Plan developed for the facilities to guide investment decisions. It anticipates undertaking an update to that master plan during this forecast period.
- Flows to the wastewater plant have increased in the past several years, largely related to increased storm activity. However, the flows remain well below the plant's capacity and there is



Mayor and Board of Aldermen
October 7, 2024
Page 2

no immediate need to evaluate increases in capacity or other strategies to balance flow and capacity.

- The EPD's NPDES permit expired in 2020, although the EPD had submitted its renewal on a timely basis. The 2020 permit remains in effect until a new final permit is issued by the Environmental Protection Agency (the "EPA"). The EPA issued a new draft permit in 2024. Although the draft permit is similar to the existing permit, the City has formally objected to several provisions of that permit but has not received responses from the EPA. It is not possible to assess the timing of a permit being finalized nor the terms of the final permit. The permit as drafted could impose significant costs on the City.
- The air permit required for the incinerator is valid through May 31, 2026.

Attached to this cover letter is Section 1 a summary of the EPD's anticipated capital improvement expenditures over the forecast period and Section 2 a projection of revenues, expenses and compliance with the General Bond Resolution. The 2021 Report follows this supplemental report.

Sincerely,

A handwritten signature in black ink that reads "Joseph T. Ridge".

Joseph Ridge
CDM Smith Inc.

cc: Fred McNeill—Environmental Protection Division
Lisa Hynes—Environmental Protection Division



1.0 Capital Improvement Plan

This section provides an overview of the EPD’s FY 2025 approved capital improved program (“CIP”) and the anticipated capital projects that EPD anticipated moving forward through FY 2029. This includes an assessment of the capital projects relative to the identified needs of the system.

EPD develops an annual CIP and submits it to the Board of Mayor and Alderman for approval. In developing the CIP, planned capital spending on combined sewer overflow (“CSO”) related projects are largely enforcement driven, developed to satisfy the requirements of the Consent Decree as part of its long-term control plan (“LTCP”). Planned capital improvements at the wastewater treatment plant (the “WWTP”) are based on the Master Plan developed for EPD in 2010. EPD anticipates completion of the identified projects and the need for an updated Master Plan in 2030. Planned capital improvements to the collection system are driven by its EPA-mandated Capacity, Maintenance, Operations and Management (“CMOM”) program.

1.1 CIP Overview

The FY 2025 CIP was approved by the Board of Mayor and Alderman in June 2024. Table 1-1 displays the capital projects for EPD projects, including the inflated project spending and timing of estimated expenditures. Table 1-1 includes the estimated annual amount for FY 2025 through FY 2029 (future year dollars) and then the estimated total between FY 2030 and FY 2041. For the period FY 2025 through FY 2029, EPD estimates total capital spending of \$354.8M. Of the total, \$61.9M is for wastewater treatment plant (“WWTP”) projects, \$19.9M is for CMOM related projects, and \$273.0M is for CSO related projects.

Projects included in the CIP are identified through three primary processes:

- In 2010, the City had a comprehensive wastewater treatment plant facility plan completed to provide a 20-year road map of renovation and rehabilitation of its WWTP. The City has followed that plan since 2010 and continues to do so. The WWTP projects included in this section are the continuation of the City’s implementation of the facility plan recommendations. Prior to 2030, the City will undertake a new facility plan to guide the subsequent 20-year improvement plan for the WWTP. Projects related to the WWTP total approximately \$61.9 million in this CIP.
- The City has developed and the regulatory agencies have agreed to a subsequent phase of CSO abatement. The primary focus of this phase design and construction of the Cemetery Brook Drain and the separation of the Christian Brook area. Approximately \$355 M is identified for CSO projects in this CIP.
- The City undertakes a comprehensive CMOM program to evaluate the requirements of its collection system. The current CIP envisions \$19.9 million through 2029 in CMOM evaluation and corrective action projects.



CDM Smith has reviewed EPD’s capital improvement plan and assessed the adequacy of the planned spending with respect to the overall condition of the system and future requirements.

CDM Smith is of the opinion that the capital improvements summarized in Table 1-1 are sufficient relative to the system needs that have been identified.

Table 1.1 Capital Improvement Plan (Future Year \$)

Project	2025	2026	2027	2028	2029	Beyond 2029
Wastewater Treatment Plant						
SSI - Construction	\$93,707	\$0	\$0	\$0	\$0	\$0
Solids Train Upgrade - Construction	\$654,395	\$0	\$0	\$0	\$0	\$0
Emergency Power Upgrade - Design	\$468,000	\$935,600	\$0	\$0	\$0	\$0
Emergency Power Upgrade - Construction	\$0	\$6,500,000	\$10,150,000	\$3,650,000	\$0	\$0
WWTP Pump Station Upgrade - Design	\$0	\$1,000,000	\$500,000	\$0	\$0	\$0
WWTP Pump Station Upgrade - Construction	\$0	\$0	\$5,546,411	\$10,611,759	\$0	\$0
Solids Disposal Master Plan	\$250,000	\$250,000	\$0	\$0	\$0	\$0
Operations Building Upgrade - Design	\$0	\$0	\$1,323,364	\$661,682	\$0	\$0
Operations Building Upgrade - Construction	\$0	\$0	\$0	\$3,948,653	\$7,897,306	\$0
WWTP Facilities Plan	\$0	\$1,000,000	\$1,000,000	\$0	\$0	\$0
Roofs - 1	\$1,420,100	\$0	\$0	\$0	\$0	\$0
Roofs - 2	\$0	\$200,000	\$1,300,000	\$0	\$0	\$0
Secondary Clarifier Repairs - Design and Construction	\$1,250,000	\$1,250,000	\$0	\$0	\$0	\$0
Total Wastewater Treatment Plant	\$4,136,202	\$11,135,600	\$19,819,775	\$18,872,094	\$7,897,306	\$0
CMOM						
FY19 Asset Management	\$210,000	\$210,271	\$0	\$0	\$0	\$0
CMOM C-5: Study and Design	\$12,250	\$0	\$0	\$0	\$0	\$0
CMOM C-5: Construction	\$1,673,040	\$3,346,080	\$0	\$0	\$0	\$0
CMOM C-6: Study and Design	\$660,000	\$1,315,276	\$0	\$0	\$0	\$0
CMOM C-6: Construction	\$0	\$1,250,000	\$2,500,000	\$1,250,000	\$0	\$0
CMOM C-7: Study and Design	\$0	\$375,000	\$750,000	\$375,000	\$0	\$0
CMOM C-7: Construction	\$0	\$0	\$0	\$1,250,000	\$2,500,000	\$1,250,000



Project	2025	2026	2027	2028	2029	Beyond 2029
Sheffield Road Pump Station Force Main	\$1,150,000	\$1,114,236	\$0	\$0	\$0	\$0
Total CMOM	\$3,705,290	\$7,610,863	\$3,250,000	\$2,875,000	\$2,500,000	\$1,250,000
CSO						
Cohas Brook Phs III - Contract #4	\$1,369	\$0	\$0	\$0	\$0	\$0
Christian Brook - Construction - Main Drain	\$698,347	\$0	\$0	\$0	\$0	\$0
Cemetery Brook Tunnel Project - Design	\$2,112,679	\$0	\$0	\$0	\$0	\$0
System Optimization with Real-Time Controls Design & Const	\$792,687	\$0	\$0	\$0	\$0	\$0
Christian Brook C-2 - Construction (Laterals)	\$10,029,412	\$5,500,000	\$1,500,000	\$0	\$5,475,000	\$0
Cemetery Brook Tunnel Project - Construction	\$21,213,000	\$73,787,000	\$107,707,000	\$27,293,000	\$0	\$0
Queen City Ave Area Separation - Contract #8	\$0	\$0	\$0	\$0	\$4,812,343	\$7,218,515
Cilley Road Area Separation - Contract #9	\$0	\$0	\$0	\$0	\$0	\$21,381,958
Shasta Street Area Separation - Contract #10	\$0	\$0	\$0	\$0	\$0	\$23,946,337
Harvard Ave Area Separation - Contract #11	\$0	\$0	\$0	\$0	\$0	\$20,504,859
Belmont Street Area - Contract #12	\$0	\$0	\$0	\$0	\$0	\$20,354,794
Revere Ave Area - Contract #13	\$0	\$0	\$0	\$0	\$0	\$31,878,612
Phase II CSO Closeout/LTCP Update	\$0	\$0	\$0	\$0	\$0	\$1,962,596
MS4 / SEPP	\$2,695,987	\$2,146,667	\$2,500,000	\$1,750,000	\$2,500,000	\$15,500,000
CSO Discharge Monitoring	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$1,407,637
Post Construction Monitoring	\$0	\$0	\$0	\$0	\$0	\$1,060,000
Total CSO	\$37,643,481	\$81,533,667	\$111,807,000	\$29,143,000	\$12,887,343	\$145,215,307
Total Capital Spending	\$45,484,973	\$100,280,130	\$134,876,775	\$50,890,094	\$23,284,649	\$146,465,307

1.2 Projected Cash Flow - Capital

Table 1-2 summarizes the projected cash flow related to capital expenses for the projection period.



The Beginning Balance Available for Capital is the annual amount of projected funds EPD has available to pay for capital projects, before factoring in bond proceeds or State Revolving Fund (“SRF”) reimbursements. The balance available for capital includes the projected operating surpluses or deficits. In a given year, if EPD is projected to generate rate revenue in excess of the projected rate revenue requirement, the resulting operating surplus is assumed available for use to pay for capital projects. Conversely, in a year where EPD is projected to generate rate revenue lower than the projected rate revenue requirement, the operating deficit is assumed to reduce the available balance for capital projects. Additional discussion of the operating surpluses and deficits is provided in Section 2.

The Sources of Funds – Inflows represent the cash deposited into the fund to be used to pay for capital expenses, through grants, bond proceeds and SRF reimbursements. The total of the Beginning Balance and the Sources of Funds – Inflows represents the annual amount of funds available for capital expenses, shown in the total for Available Funds – Before Use. Current projections and assumptions assume that the future inflows do not include any additional general obligation bonds, excluding the SRF loans previously noted.

The Uses of Funds – Outflows represent the annual capital expenditures, grouped by project funding source. Cash Funded capital is annual pay-go capital, which are projects that EPD would pay for the expenditures directly through available fund balances in the year of the expense. The capital expenditures for revenue bond financed capital are the annual cash payments projected during project duration, for projects assumed financed through proceeds from revenue bond issuances. Similarly, the capital expenditures for SRF financed capital are the annual cash payments projected during project duration, which are paid for in the short term by reimbursements from the SRF program.

The difference between the cash available for capital and the capital expenditures is the Ending Balance, representing the projected fund balance available at the end of the fiscal year, after paying for all capital expenditures. The ending balance is then applied to the next fiscal year as the Beginning Balance for that year.

EPD is projected to maintain adequate levels of cash balances to fund its capital program for the forecast period based on the approved rate increases and SRF reimbursements. This includes the approved rate increases as described in Section 2, as well as assumed transfers from the available balances to cover projected operating deficits in FY 2028 and FY 2029.

Table 1.2 Projected Cash Flow - Capital

	2025	2026	2027	2028	2029
Beginning Balance	\$28,430,480	\$109,867,738	\$15,708,181	\$46,066,531	\$8,174,894
Transfer from Operating - Surplus	\$7,400,695	\$3,756,945	\$796,127	\$0	\$0



	2025	2026	2027	2028	2029
<u>Transfer to Operating - (Deficit)</u>	\$0	\$0	\$0	(\$1,760,557)	(\$2,707,793)
Balance Available for Capital	\$35,831,175	\$113,624,682	\$16,504,308	\$44,305,974	\$5,467,101
Source of Funds - Inflows					
Revenue Bond Proceeds	\$117,500,000	\$0	\$156,000,000	\$0	\$22,500,000
<u>SRF Reimbursements</u>	<u>\$2,021,536</u>	<u>\$2,363,629</u>	<u>\$8,438,998</u>	<u>\$14,759,014</u>	<u>\$11,478,503</u>
Total Source of Funds	\$119,521,536	\$2,363,629	\$164,438,998	\$14,759,014	\$33,978,503
Available Funds - Before Use	\$155,352,711	\$115,988,311	\$180,943,306	\$59,064,988	\$39,445,604
Use of Funds - Outflows					
Capital Expenditures - Cash Funded	\$9,861,524	\$5,370,547	\$1,900,000	\$850,000	\$600,000
Capital Expenditures - GO Bond Financed	\$0	\$0	\$0	\$0	\$0
Capital Expenditures - Revenue Bond Financed	\$34,108,935	\$92,262,916	\$122,607,000	\$33,818,000	\$12,787,343
<u>Capital Expenditures - SRF Financed</u>	<u>\$1,514,514</u>	<u>\$2,646,667</u>	<u>\$10,369,775</u>	<u>\$16,222,094</u>	<u>\$9,897,306</u>
Total Use of Funds	\$45,484,973	\$100,280,130	\$134,876,775	\$50,890,094	\$23,284,649
Available Funds - Before Use	\$155,352,711	\$115,988,311	\$180,943,306	\$59,064,988	\$39,445,604
<u>Use of Funds</u>	<u>(\$45,484,973)</u>	<u>(\$100,280,130)</u>	<u>(\$134,876,775)</u>	<u>(\$50,890,094)</u>	<u>(\$23,284,649)</u>
Ending Cash Balance	\$109,867,738	\$15,708,181	\$46,066,531	\$8,174,894	\$16,160,955



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	2025	2026	2027	2028	2029

Notes:

- 1. Cash funded capital projects are funded through available cash balances.
- 2. SRF reimbursements are assumed to be received by EPD one quarter after the capital expenditure.

2.0 Financial Projections

This section contains financial projections for the period FY 2025 through FY 2029, including projected revenues, expenses, debt service and debt service coverage. For purposes of these projections, only rate increases approved by the Board of Mayor and Aldermen (the “BOMA”) have been incorporated.

2.1 Assumptions

The projections are impacted by various financial assumptions, which include:

- FY 2025 is the base year of the projections, with the FY 2025 Budget the base for the projections.
- Payroll and Benefits costs are inflated at 3.75 percent annually.
- Other operations and maintenance (O&M) expenses are inflated at 2.5 percent annually.
- Capital expenses are inflated at 3.5 percent annually.
- Existing debt service schedules have been provided by EPD, which includes annual debt service for 2019 SRF, 2021 SRF, 2023 SRF, 2024 SRF, GO Bond 2021 B, GO Bond 2021 C, and Revenue Bond 2021.
- The debt service schedule for the Series 2024 Bonds is provided by PFM, based on \$117.5M in revenue bonds. The projections also include future revenue bond issuances of \$156.0M in FY 2027 (Series 2026), and \$22.5M in FY 2028 (Series 2029), with debt service payback beginning in the fiscal year of issuance.
- Future SRF borrowings are assumed to total \$51.4M over the forecast period. SRF loans are assumed to be 20-year terms with a 3.0% interest rate, consistent with the current NHDES Clean Water SRF rates, which are based on the 11-Bond GO Index, plus a 1 percent administration fee. No additional GO bond issues are included in the forecast period, excluding the SRF borrowings.
- Capital expenses for projects under the SRF program are eligible for reimbursements during the course of the project. Future reimbursements are assumed to be received by EPD one quarter after the capital expenditure.
- Miscellaneous revenue assumptions vary by line item:
 - Septage fees are assumed to remain constant at FY 2025 levels throughout projections
 - Interest and miscellaneous income (late fees) are assumed to remain constant at FY 2025 levels throughout projections.
 - Outside community reimbursements for O&M is assumed to increase at 2.0% annually, consistent with the historical rate.



- Outside community reimbursements for prior capital expenses are based on a defined allocation of outstanding debt service supporting WWTP related projects. Reimbursements for capital projects related to WWTP projects are based on the defined allocation and calculated debt service.
- State and federal grants are assumed at the approved amounts for completed projects, representing the reimbursement schedule from the state related to previous borrowings. No grants are assumed on future capital projects.
- The balance in EPD’s fund for use on capital projects at the start of FY 2025 was approximately \$28.4M.
- Sewer rate revenue collected in FY 2024 was \$20,782,402.
- In March 2023, the BOMA approved a 6-year rate increase, consisting of 9.0 percent annual sewer rate increases through FY 2028. The approved rates are summarized in **Table 2.1**.

Table 2.1 Approved Sewer Rates

	2025	2026	2027	2028	2029
Commodity Rates (\$/HCF)					
Commodity Rate	\$5.05	\$5.50	\$6.00	\$6.54	\$6.54
Discounted Commodity Rate	\$2.53	\$2.75	\$3.00	\$3.27	\$3.27
Service Charge (\$/Unit/Year)					
Residential Single Dwelling	\$123.40	\$134.52	\$146.64	\$159.84	\$159.84
Residential Single Dwelling - Discounted	\$61.70	\$67.26	\$73.32	\$79.92	\$79.92
Condo	\$123.40	\$134.52	\$146.64	\$159.84	\$159.84
Multi-Family	\$78.52	\$85.60	\$93.32	\$101.72	\$101.72
Multi-Family – Discounted	\$39.26	\$42.80	\$46.66	\$50.86	\$50.86
Commercial	\$168.28	\$183.44	\$199.96	\$217.96	\$217.96
Commercial - Discounted	\$84.14	\$91.72	\$99.98	\$108.98	\$108.98
Industrial	\$347.76	\$379.04	\$413.16	\$450.36	\$450.36
Industrial Strength Surcharges					
BOD (\$/100 lbs)	\$49.25	\$53.68	\$58.51	\$63.78	\$63.78
TSS (\$/100 lbs)	\$49.25	\$53.68	\$58.51	\$63.78	\$63.78
Flow (\$/1,000 gal)	\$4.70	\$5.12	\$5.58	\$6.08	\$6.08



- Rate increases are assumed to take effect in April of each year. For example, the FY 2025 rates shown in **Table 2-1** will take effect April 1, 2025 and applies for the last quarter of FY 2025 and the first three quarters of FY 2026.
- A typical residential single family sewer bill for FY 2025, assuming consumption of 100 hundred cubic feet (“HCF”), is approximately \$589. With the approved rate increases, the sewer bill is estimated to increase to \$814 in FY 2029.

Incorporating the information received from EPD and the assumptions listed above, the annual revenue requirements and coverage calculations are developed through FY 2029.

2.2 Financial Projections

The financial projections include projections of operations and maintenance (O&M) expenses, debt service payments on outstanding and future debt, miscellaneous or non-rate revenue, and rate revenue. Cash funded capital project expenses are funded through available cash balances, and therefore have no impact on the cash flow projections included in this section. For bond financed capital projects, the capital expenses during project duration are paid through bond proceeds or SRF reimbursements, and therefore do not have a direct impact on projected cash flow requirements in the year of capital expense. As the bonds or SRF borrowings are converted to long-term debt, the annual debt service payments on those loans are realized and included as an expense as part of the cash flow projection. The annual capital cash flow is summarized in Section 1.

2.2.1 Operations and Maintenance

The EPD’s operations and maintenance expenses are summarized by major category in **Table 2-2**. The personnel category represents salaries and benefits for EPD employees. The O&M category represents general operations and maintenance expenses, including payments to the Department of Public Works (“DPW”) for the shared employee expenses related to collection system O&M. The Worker’s Compensation and Other Miscellaneous category represents direct Worker’s Compensation related expenses paid to providers during the year. Operations and maintenance expenses increase from \$12.9 million in FY 2025 to \$14.5 million in FY 2029, representing an average annual increase of 3.0 percent.

Table 2.2 Operations and Maintenance

	2025	2026	2027	2028	2029
Personnel	\$5,469,382	\$5,674,484	\$5,887,277	\$6,108,050	\$6,337,102
O&M	\$7,328,105	\$7,511,308	\$7,699,090	\$7,891,568	\$8,088,857
Worker’s Compensation and Other Miscellaneous	<u>\$108,000</u>	<u>\$110,700</u>	<u>\$113,468</u>	<u>\$116,304</u>	<u>\$119,212</u>
Total Operations and Maintenance	\$12,905,487	\$13,296,491	\$13,699,835	\$14,115,922	\$14,545,170



2.2.2 Debt Service

The projections include EPD annual payments for existing debt service for currently outstanding debt and projected debt service for future borrowings.

Existing debt service represents debt service on EPD’s outstanding obligations: 2019 SRF, 2021 SRF, 2023 SRF, 2024 SRF, GO Bond 2021 B, GO Bond 2021 C, and Revenue Bond 2021. **Table 2-3** includes the debt service schedules for each of the outstanding obligations, through maturity.

Table 2.3 Existing Outstanding Debt, through Maturity

	2019 SRF	2021 SRF	2023 SRF	2024 SRF	2021 GO Series B	2021 GO Series C	2021 Revenue Bond	Total
2025	\$152,000	\$395,830	\$95,663	\$81,143	\$2,059,701	\$1,261,960	\$1,878,900	\$5,925,196
2026	\$149,625	\$389,922	\$94,041	\$79,640	\$1,999,947	\$1,241,770	\$1,878,900	\$5,833,845
2027	\$147,250	\$384,014	\$92,420	\$78,137	\$1,940,655	\$1,221,650	\$1,878,900	\$5,743,026
2028	\$144,875	\$378,106	\$90,798	\$76,635	\$1,876,979	\$1,201,600	\$1,878,900	\$5,647,893
2029	\$142,500	\$372,198	\$89,177		\$976,372	\$1,181,620	\$1,878,900	\$4,640,767
2030	\$140,125	\$366,290	\$87,556		\$949,875	\$1,156,710	\$1,878,900	\$4,579,456
2031	\$137,750	\$360,382	\$85,934		\$439,505	\$1,136,940	\$1,963,900	\$4,124,412
2032	\$135,375	\$354,474	\$84,313		\$162,000	\$1,117,240	\$2,269,650	\$4,123,052
2033	\$133,000	\$348,566	\$82,691			\$1,097,610	\$2,459,900	\$4,121,768
2034	\$130,625	\$342,659				\$1,073,050	\$2,489,650	\$4,035,984
2035	\$128,250	\$336,751				\$1,053,630	\$2,521,400	\$4,040,031
2036	\$125,875	\$330,843				\$1,034,280	\$2,547,200	\$4,038,198
2037	\$123,500	\$324,935					\$3,590,800	\$4,039,235
2038	\$121,125	\$319,027					\$3,596,400	\$4,036,552
2039		\$313,119					\$3,723,800	\$4,036,919
2040		\$307,211					\$3,733,000	\$4,040,211
2041		\$301,303					\$3,738,400	\$4,039,703
2042							\$4,040,000	\$4,040,000
2043							\$4,035,800	\$4,035,800
2044							\$4,037,400	\$4,037,400
2045							\$4,039,400	\$4,039,400
2046							\$4,036,600	\$4,036,600
2047							\$4,039,000	\$4,039,000
2048							\$4,036,200	\$4,036,200
2049							\$4,038,200	\$4,038,200



	2019 SRF	2021 SRF	2023 SRF	2024 SRF	2021 GO Series B	2021 GO Series C	2021 Revenue Bond	Total
2050							\$4,039,600	\$4,039,600
2051							\$4,035,200	\$4,035,200

Anticipated debt service represents annual debt service payments on future projected borrowings. This includes debt service payments on \$51.4M in projected SRF borrowings within the forecast period, and \$296.0M in projected revenue bonds.

The projected SRF borrowings include \$25.1M for FY 2025, \$0 for FY 2026, \$500,000 for FY 2027, \$4.7M for FY 2027, and \$21.1M for FY 2028. **Table 2-4** includes the debt service schedules through maturity for the projected SRF borrowings.

Table 2.4 Anticipated SRF Debt Service, through Maturity

	2025 Borrowing	2027 Borrowing	2028 Borrowing	2029 Borrowing	Total
2025	\$1,994,606	\$0	\$0	\$0	\$1,994,606
2026	\$1,957,031	\$0	\$0	\$0	\$1,957,031
2027	\$1,919,456	\$39,813	\$0	\$0	\$1,959,269
2028	\$1,881,881	\$39,063	\$371,583	\$0	\$2,292,527
2029	\$1,844,306	\$38,313	\$364,583	\$1,683,529	\$3,930,731
2030	\$1,806,731	\$37,563	\$357,583	\$1,651,814	\$3,853,691
2031	\$1,769,156	\$36,813	\$350,583	\$1,620,099	\$3,776,651
2032	\$1,731,581	\$36,063	\$343,583	\$1,588,384	\$3,699,611
2033	\$1,694,006	\$35,313	\$336,583	\$1,556,669	\$3,622,571
2034	\$1,656,431	\$34,563	\$329,583	\$1,524,954	\$3,545,532
2035	\$1,618,856	\$33,813	\$322,583	\$1,493,240	\$3,468,492
2036	\$1,581,281	\$33,063	\$315,583	\$1,461,525	\$3,391,452
2037	\$1,543,706	\$32,313	\$308,583	\$1,429,810	\$3,314,412
2038	\$1,506,131	\$31,563	\$301,583	\$1,398,095	\$3,237,372
2039	\$1,468,556	\$30,813	\$294,583	\$1,366,380	\$3,160,332
2040	\$1,430,981	\$30,063	\$287,583	\$1,334,666	\$3,083,293
2041	\$1,393,406	\$29,313	\$280,583	\$1,302,951	\$3,006,253
2042	\$1,355,831	\$28,563	\$273,583	\$1,271,236	\$2,929,213
2043	\$1,318,256	\$27,813	\$266,583	\$1,239,521	\$2,852,173
2044	\$1,280,681	\$27,063	\$259,583	\$1,207,806	\$2,775,133
2045	\$0	\$26,313	\$252,583	\$1,176,091	\$1,454,987



	2025 Borrowing	2027 Borrowing	2028 Borrowing	2029 Borrowing	Total
2046	\$0	\$25,563	\$245,583	\$1,144,377	\$1,415,522
2047	\$0	\$0	\$238,583	\$1,112,662	\$1,351,245
2048	\$0	\$0	\$0	\$1,080,947	\$1,080,947

The projected revenue bonds include \$117.5M for the 2024 Series, \$156.0M for a projected 2026 Series, and \$22.5M for a projected 2028 Series. **Table 2-5** includes the debt service schedules through maturity for the 2024 Series, the projected 2026 Series, and the projected 2028 Series.

Table 2.5 Anticipated Revenue Bond Debt Service, through Maturity

	2024 Series	2026 Series	2028 Series	Total
2025	\$3,165,586	\$0	\$0	\$3,165,586
2026	\$5,516,000	\$0	\$0	\$5,516,000
2027	\$5,605,250	\$4,806,611	\$0	\$10,411,861
2028	\$5,699,750	\$9,110,000	\$0	\$14,809,750
2029	\$6,709,000	\$9,108,500	\$1,042,540	\$16,860,040
2030	\$6,767,000	\$9,112,250	\$1,392,000	\$17,271,250
2031	\$7,223,750	\$9,110,750	\$1,388,250	\$17,722,750
2032	\$7,224,000	\$9,114,000	\$1,388,750	\$17,726,750
2033	\$7,224,250	\$9,111,500	\$1,388,250	\$17,724,000
2034	\$7,309,250	\$9,113,250	\$1,386,750	\$17,809,250
2035	\$7,309,500	\$9,108,750	\$1,389,250	\$17,807,500
2036	\$7,308,750	\$9,113,000	\$1,390,500	\$17,812,250
2037	\$7,306,750	\$9,110,250	\$1,390,500	\$17,807,500
2038	\$7,313,250	\$9,110,500	\$1,389,250	\$17,813,000
2039	\$7,312,500	\$9,108,250	\$1,386,750	\$17,807,500
2040	\$7,309,500	\$9,108,250	\$1,388,000	\$17,805,750
2041	\$7,309,000	\$9,110,000	\$1,387,750	\$17,806,750
2042	\$7,305,500	\$9,113,000	\$1,391,000	\$17,809,500
2043	\$7,313,750	\$9,106,750	\$1,387,500	\$17,808,000
2044	\$7,307,750	\$9,111,250	\$1,387,500	\$17,806,500
2045	\$7,307,750	\$9,110,500	\$1,390,750	\$17,809,000
2046	\$7,313,000	\$9,109,250	\$1,387,000	\$17,809,250
2047	\$7,307,750	\$9,112,000	\$1,391,500	\$17,811,250
2048	\$7,312,000	\$9,108,000	\$1,388,750	\$17,808,750
2049	\$7,309,750	\$9,112,000	\$1,389,000	\$17,810,750



	2024 Series	2026 Series	2028 Series	Total
2050	\$7,305,750	\$9,113,000	\$1,387,000	\$17,805,750
2051	\$7,314,500	\$9,110,500	\$1,387,750	\$17,812,750
2052	\$11,344,750	\$9,114,000	\$1,391,000	\$21,849,750
2053	\$11,344,750	\$9,112,500	\$1,391,500	\$21,848,750
2054	\$11,345,250	\$9,115,500	\$1,389,250	\$21,850,000
2055		\$20,457,000	\$1,389,250	\$21,846,250
2056		\$20,459,250	\$1,391,250	\$21,850,500

The EPD’s total projected debt service is summarized in **Table 2-6**. This represents the total annual debt service on existing bonds and future bonds projected to be outstanding and issued between FY 2025 and FY 2029 to fund the anticipated CIP in those years. Annual debt service is projected to increase from \$11.1 million in FY 2025 to \$25.4 million in FY 2029.

Table 2.6 Total Projected Debt Service

FY	Existing Debt Service	Anticipated SRF Debt Service	Anticipated Revenue Bond Debt Service	Total
2025	\$5,925,196	\$1,994,606	\$3,165,586	\$11,085,388
2026	\$5,833,845	\$1,957,031	\$5,516,000	\$13,306,876
2027	\$5,743,026	\$1,959,269	\$10,411,861	\$18,114,156
2028	\$5,647,893	\$2,292,527	\$14,809,750	\$22,750,170
2029	\$4,640,767	\$3,930,731	\$16,860,040	\$25,431,538
2030	\$4,579,456	\$3,853,691	\$17,271,250	\$25,704,397
2031	\$4,124,412	\$3,776,651	\$17,722,750	\$25,623,813
2032	\$4,123,052	\$3,699,611	\$17,726,750	\$25,549,413
2033	\$4,121,768	\$3,622,571	\$17,724,000	\$25,468,339
2034	\$4,035,984	\$3,545,532	\$17,809,250	\$25,390,765
2035	\$4,040,031	\$3,468,492	\$17,807,500	\$25,316,022
2036	\$4,038,198	\$3,391,452	\$17,812,250	\$25,241,900
2037	\$4,039,235	\$3,314,412	\$17,807,500	\$25,161,147
2038	\$4,036,552	\$3,237,372	\$17,813,000	\$25,086,924
2039	\$4,036,919	\$3,160,332	\$17,807,500	\$25,004,751
2040	\$4,040,211	\$3,083,293	\$17,805,750	\$24,929,254
2041	\$4,039,703	\$3,006,253	\$17,806,750	\$24,852,706
2042	\$4,040,000	\$2,929,213	\$17,809,500	\$24,778,713



FY	Existing Debt Service	Anticipated SRF Debt Service	Anticipated Revenue Bond Debt Service	Total
2043	\$4,035,800	\$2,852,173	\$17,808,000	\$24,695,973
2044	\$4,037,400	\$2,775,133	\$17,806,500	\$24,619,033
2045	\$4,039,400	\$1,454,987	\$17,809,000	\$23,303,387
2046	\$4,036,600	\$1,415,522	\$17,809,250	\$23,261,372
2047	\$4,039,000	\$1,351,245	\$17,811,250	\$23,201,495
2048	\$4,036,200	\$1,080,947	\$17,808,750	\$22,925,897
2049	\$4,038,200	\$0	\$17,810,750	\$21,848,950
2050	\$4,039,600	\$0	\$17,805,750	\$21,845,350
2051	\$4,035,200	\$0	\$17,812,750	\$21,847,950
2052	\$0	\$0	\$21,849,750	\$21,849,750
2053	\$0	\$0	\$21,848,750	\$21,848,750
2054	\$0	\$0	\$21,850,000	\$21,850,000
2055	\$0	\$0	\$21,846,250	\$21,846,250
2056	\$0	\$0	\$21,850,500	\$21,850,500

2.2.3 Miscellaneous Non-Rate Revenue

Miscellaneous non-rate revenue is summarized in **Table 2-7**. Miscellaneous non-rate revenue represents revenue sources separate from billed rate revenue. To be conservative, these miscellaneous revenue sources are held constant over the forecast period, except for reimbursements from the outside communities. Reimbursement for operations and maintenance is assumed to increase 2 percent annually which has been the historic rate. Capital cost reimbursements are tied to the City’s anticipated debt service payments for work related to the wastewater treatment plant.

Table 2.7 Miscellaneous Non-Rate Revenue

	2025	2026	2027	2028	2029
Septage Fees	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000
Granite Ridge	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000
Outside Community Reimbursement - O&M	\$1,400,000	\$1,428,000	\$1,456,560	\$1,485,691	\$1,515,405
Interest & Misc. Income (late fees)	\$750,000	\$750,000	\$750,000	\$750,000	\$750,000
Tax Deposits	\$0	\$0	\$0	\$0	\$0
Outside Community Reimbursement - Capital	\$1,097,833	\$1,132,038	\$1,157,596	\$1,208,213	\$1,423,501



	2025	2026	2027	2028	2029
State & Federal Grants	\$3,797,813	\$665,397	\$651,080	\$636,764	\$622,447
Total Miscellaneous Revenue	\$8,795,646	\$5,725,435	\$5,765,236	\$5,830,668	\$6,061,353

2.2.4 Rate Revenue

Annual projected rate revenue is summarized in **Table 2-8**. Projected rate revenue represents the annual projected revenue collected through EPD user rates and charges, which includes impact of the approved rate increases through FY 2028.

In FY 2025, EPD has existing cash balances of \$28.4M available. Consistent with the requirements of the Resolution, the existing cash balances have not been included as a revenue source for the purposes of coverage.

Table 2.8 Projected Rate Revenue

	2025	2026	2027	2028	2029
Projected Rate Revenue	\$22,595,925	\$24,634,878	\$26,844,880	\$29,274,867	\$31,207,562
Approved Rate Increase	9.0%	9.0%	9.0%	9.0%	0.0%

Table 2-9 summarizes the total annual projected revenue for EPD, consisting of miscellaneous non-rate revenue and rate revenue.

Table 2.9 Projected Rate Revenue

	2025	2026	2027	2028	2029
Miscellaneous Revenue	\$8,795,646	\$5,725,435	\$5,765,236	\$5,830,668	\$6,061,353
<u>Projected Rate Revenue</u>	<u>\$22,595,925</u>	<u>\$24,634,878</u>	<u>\$26,844,880</u>	<u>\$29,274,867</u>	<u>\$31,207,562</u>
Total Revenue	\$31,391,571	\$30,360,312	\$32,610,117	\$35,105,535	\$37,268,916

2.3 Cash Flow Coverage

Table 2-10 summarizes the projected cash flow and coverage calculations for FY 2025 through FY 2029.

Table 2.10 Projected Rate Revenue

	2025	2026	2027	2028	2029
Billing Revenues					
Total Rate Revenue	\$22,595,925	\$24,634,878	\$26,844,880	\$29,274,867	\$31,207,562
Miscellaneous Revenue					
Septage Fees	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000	\$1,400,000



	2025	2026	2027	2028	2029
Granite Ridge	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000
Outside Community Reimbursement - O&M	\$1,400,000	\$1,428,000	\$1,456,560	\$1,485,691	\$1,515,405
Interest & Misc. Income (late fees)	\$750,000	\$750,000	\$750,000	\$750,000	\$750,000
Tax Deposits	\$0	\$0	\$0	\$0	\$0
Outside Community Reimbursement - Capital	\$1,097,833	\$1,132,038	\$1,157,596	\$1,208,213	\$1,423,501
State & Federal Grants	\$3,797,813	\$665,397	\$651,080	\$636,764	\$622,447
Total Miscellaneous Revenue	\$8,795,646	\$5,725,435	\$5,765,236	\$5,830,668	\$6,061,353
Total Revenue	\$31,391,571	\$30,360,312	\$32,610,117	\$35,105,535	\$37,268,916
Operating Expenses					
Personnel	\$5,469,382	\$5,674,484	\$5,887,277	\$6,108,050	\$6,337,102
O&M	\$7,328,105	\$7,511,308	\$7,699,090	\$7,891,568	\$8,088,857
Worker's Compensation and Other Miscellaneous	\$108,000	\$110,700	\$113,468	\$116,304	\$119,212
Total Operating Expenses	\$12,905,487	\$13,296,491	\$13,699,835	\$14,115,922	\$14,545,170
Total Net Revenue for Debt Service	\$18,486,084	\$17,063,821	\$18,910,282	\$20,989,614	\$22,723,745
2021 Series Bonds	\$1,878,900	\$1,878,900	\$1,878,900	\$1,878,900	\$1,878,900
2024 Series Bonds	\$3,165,586	\$5,516,000	\$5,605,250	\$5,699,750	\$6,709,000
Debt Service Coverage on 2021 Series and 2024 Series Bonds	3.66	2.31	2.53	2.77	2.65
Future Revenue Bonds					
2026 Series Bonds	\$0	\$0	\$4,806,611	\$9,110,000	\$9,108,500
2028 Series Bonds	\$0	\$0	\$0	\$0	\$1,042,540
Debt Service Coverage on 2021 Series, 2024 Series, 2026 Series, 2028 Series Bonds	3.66	2.31	1.54	1.26	1.21
General Obligation and SRF Debt Service					



	2025	2026	2027	2028	2029
Existing SRF Debt Service	\$724,636	\$713,228	\$701,821	\$690,414	\$603,875
2021B Direct Placement	\$2,059,701	\$1,999,947	\$1,940,655	\$1,876,979	\$976,372
2021C Direct Placement	\$1,261,960	\$1,241,770	\$1,221,650	\$1,201,600	\$1,181,620
Future SRF Debt Service	\$1,994,606	\$1,957,031	\$1,959,269	\$2,292,527	\$3,930,731
Total General Obligation and SRF Debt Service	\$6,040,903	\$5,911,976	\$5,823,394	\$6,061,520	\$6,692,598
Total Debt Service Coverage from Net Revenues	1.67	1.28	1.04	0.92	0.89
Cash Balance Required to Meet Coverage	\$0	\$0	\$0	\$1,760,557	\$2,707,793

In fiscal years where EPD is projected to generate more revenue than expenses, an operating surplus is projected and is assumed deposited into EPD funds as available cash for use to pay for capital and other expenses. Conversely, in fiscal years where EPD is projected to generate less revenue than expenses, an operating deficit is projected and cash from existing balances is utilized to offset the difference in the absence of additional rate increases.

The current cash balance in EPD funds is \$28.4M. Given the terms of the Resolution, existing cash balances are not included in the coverage calculations, therefore, the projections are based on the approved rate increases summarized in **Table 2-8**.

As discussed in Section 1 and shown in Table 1-2, EPD is projected to have sufficient cash balances to address projected operating deficits and fund the proposed capital plan.

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The 2021 Report

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Section 1

Introduction

This Bond Feasibility Report has been prepared by CDM Smith for the City of Manchester, NH Environmental Protection Division (EPD, or Division), to project future revenues and expenses based on recent history and the impact of financing and implementing the City's proposed capital improvement program. The focus of this evaluation is for the next five fiscal years, including FY 2022.

1.1 Purpose and Structure

This report includes financial projections for fiscal year (FY) 2022 through FY 2026, developed in conjunction with a review of EPD's FY 2022 Approved Budget, FY 2022 Approved CIP, CSO Annual Report, CMOM Annual Report, as well as reviews of ongoing compliance programs.

This report provides an overview and assessment of EPD's wastewater system. CDM Smith has visited and evaluated key facilities in the EPD's system and has interviewed key staff regarding the operations and maintenance of the system.

This report is organized as follows:

Section 1 focuses on the purpose and scope of the report, including background information on EPD.

- Section 2 provides a review of EPD's organizational and management structure, including a discussion of key leadership positions and staffing levels.
- Section 3 provides an overview of the EPD system, including an assessment on the overall condition of the system. This includes a discussion of current and pending regulatory requirements and EPD's capability of meeting these requirements.
- Section 4 provides a summary and evaluation of the capital projects, project costs, and project timing included in the EPD FY 2022 CIP. This section includes an assessment of the capital projects relative to the identified needs of the system.
- Section 5 provides an assessment of EPD's operations and maintenance (O&M) policies and programs.
- Section 6 provides a financial projection for FY 2022 through FY 2026, including projections of future revenues, expenses, debt service and debt service coverage ratios.

1.2 EPD Background

The Environmental Protection Division is an enterprise division of the City of Manchester, NH Department of Public Works. Created in 1975, the EPD is responsible for the collection and treatment of wastewater for the City of Manchester, and treatment of wastewater conveyed from

the Town of Bedford, NH, the Town of Goffstown, NH, and the Town of Londonderry, NH. The outside community flow is managed under inter-municipal agreements with each entity. The City provides wastewater service to approximately 26,000 customers in the City.

Section 2

Organizational Structure and Management

This section provides an institutional analysis related to EPD's organizational structure, key management positions, and staff levels.

2.1 Organizational Structure

The EPD operates as an enterprise division within the Department of Public Works (DPW). The DPW is managed by a Director, responsible for the operation of four major divisions: Facilities, Highway, Parks Recreation and Cemetery, and Environmental Protection (EPD).

The EPD includes four departments as part of its overall structure: Administration and Finance; Treatment Plant Operations; Industrial Pretreatment; and Stormwater. Total EPD staffing is 44 budgeted full-time persons with 38 filled positions, supplemented by 15 DPW staff that support EPD, focused on sewer collection system operations and maintenance. The Administration department is responsible primarily for the management of EPD's financial resources. The Manchester Water Works provides billing services for the EPD under contract and has since 2015. EPD Administration Department staff are responsible for a review of the weekly preliminary billing register from MWW, and both daily and monthly reconciliation of the utility billing subsidiary reports to the General Ledger. The Treatment Plant Operations department is responsible for the operations and maintenance activities at EPD's Wastewater Treatment Plant. DPW staff operate and maintain the wastewater collection system within the City under the direction of the EPD and Chief Engineer. The Industrial Pretreatment department is responsible for the implementation of the EPD's Industrial Pretreatment Program (IPP). The Stormwater department is responsible for the implementation of the City's Stormwater Management Program.

Figure 2-1 provides an organizational chart of EPD's overall structure, and the departments that fall within the division.

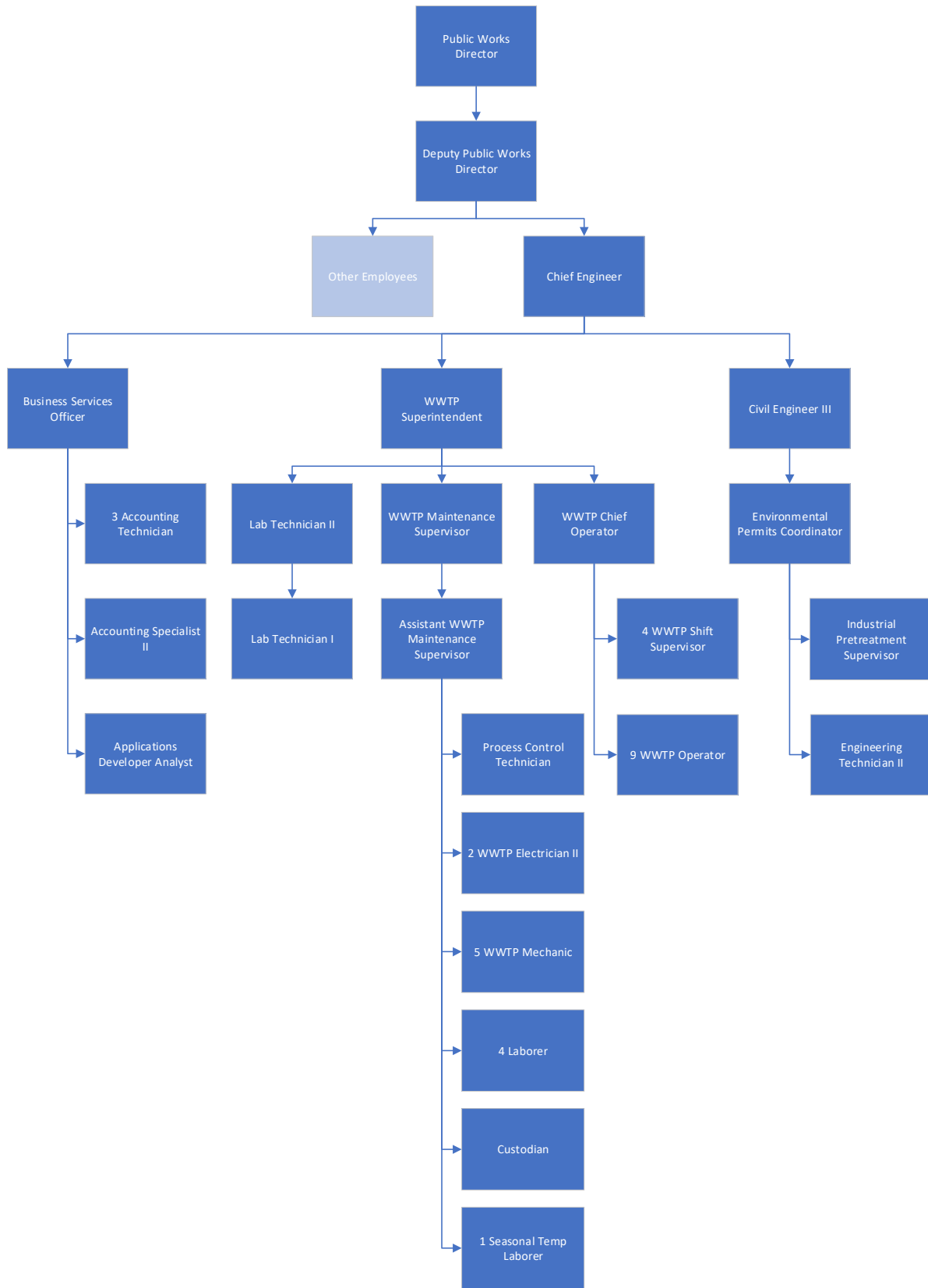


Figure 2-1 Organizational Chart

2.2 Key Leadership Positions

The EPD operates as a division within the City's DPW. The DPW is managed by a Director, Kevin Sheppard, responsible for the management of four major divisions: Facilities, Highway, Parks Recreation and Cemetery, and Environmental Protection. Mr. Sheppard has served in the role as Director of the DPW since 2008, and has been with DPW since 1985, prior to his appointment to Director.

The DPW's Deputy Director, Timothy Clougherty, is responsible for all oversight of public works activities. Mr. Clougherty has been with DPW since 1999.

The EPD is directed by the EPD's Chief Engineer, Fred McNeill, is responsible for the implementation of EPD programs, policies, and procedures at the direction of the Public Works Director and Deputy Public Works Director. Mr. McNeill has served in the role of Chief Engineer since 2006.

Based on our review of the DPW and the EPD, we have concluded that the Department is well managed by well-qualified individuals with the appropriate training and experience.

2.3 Staffing Levels

The EPD currently budgets 44 full-time employees with 38 positions filled and is supported by 15 DPW staff that operate and maintain the collection system. The EPD reimburses DPW for that staff expense. As part of the staffing level review, CDM Smith interviewed key staff responsible for various functions within the EPD organizational structure.

Like many other utilities since the Pandemic began, EPD has experienced difficulties in filling and maintaining desired staffing levels on the operations side. EPD has reduced staff levels by approximately 18 percent of its operating staff from historical high staffing levels. Currently, EPD has 8 open positions, primarily in the field group. To maintain operations and the integrity of the wastewater plant and collection system, significant overtime is being incurred.

CDM Smith did not identify any critical position vacancies that would adversely impact EPD's operations and processes. However, over the mid- and long-term, the current staffing levels with the amount of overtime being used may not be sustainable. The City is hopeful that as the pandemic eases, staff shortages will also ease.

Section 3

Description and Condition of Existing Facilities

3.1 Overview

The EPD public wastewater system provides wastewater collection and treatment to the City of Manchester, NH. The City is essentially fully sewered with approximately 26,000 customers. EPD also provides wastewater treatment services to the Towns of Bedford, Goffstown, and Londonderry.

Approximately 86 percent of the total wastewater flow comes from the City of Manchester (based on 2021 average daily flow) and the remaining 14 percent from the outside communities. The outside communities are billed based on an Intermunicipal Agreement last amended in 2013 and are in effect through 2033. The Intermunicipal Agreement defines the terms of the treatment of the outside community wastewater flow and includes the terms of cost allocation to the outside communities.

The EPD wastewater system includes a conventional secondary wastewater treatment plant capable of treating a maximum flow of 72 million gallons per day (mgd) of wastewater and has received an average of 22 mgd flow over the past three years. The treatment plant was placed into service in 1975 and has been updated periodically.

EPD operates and maintains 12 wastewater pumping stations. The stations have been constructed between 1970 and 2014 and range in size from 68 gallons per minute (gpm) to 6,000 gpm. The two largest pumping stations are the West Side Pumping Station and the Crescent Road Pumping Station (influent pumping station to the WWTP).

The EPD collection system consists of more than 391 miles of sanitary sewer ranging from 8-inch lateral sewers up to 10-foot by 12-foot box culvert sewer interceptors. The stormwater drainage system is comprised of both natural and manmade open channels and about 172 miles of drainage piping ranging from small catch basin connections (typically 12-inch diameter) to 96-inch culverts. The collection system consists of a combination of a separated sewer system (conveys sanitary flow only), combined sewer system (sanitary sewer and drainage flow conveyed through one pipe), and recombined sewer system (sanitary sewer and drainage flow discharge to same location downstream).

Approximately 45 percent of Manchester's system is combined, the combined system generally is over 75 years in age with over 100 miles of combined sewer over 100 years old. A combined sewer system carries storm water and sanitary sewage in a single pipe, which is transported to the wastewater treatment plant. During wet weather, heavy rainfall can cause the combined sewers to fill with more storm water and sanitary sewage than the pipe capacity. To prevent backups into homes and streets, the system discharges the extra flow as Combined Sewer Overflows (CSOs) through a series of outfalls into the Merrimack River.

Through the investigations and alternatives analysis completed in the 1990s, the City developed and submitted in 1995 a long-term control plan (LTCP) to the United States Environmental Protection Agency (EPA) and the New Hampshire Department of Environmental Services (NHDES). In March of 1999, the City and the EPA entered into a Compliance Order (CO) that established a 10-year \$58 million Phase I CSO abatement program (Phase I).

With the submission of the LTCP report, the City has completed all requirements of the CO on or ahead of schedule. Phase I reduced the volume of CSO discharges from the area west of the Merrimack River by more than 99-percent. In general, the west side is now controlled to about the 2-year peak hour intensity storm event and there is now less than one overflow per year on average. This exceeded the goal of the Phase I program which was to provide a 3-month level of CSO control for the four outfalls remaining on the west side. Also, during the implementation of Phase I, the City completed improvements beyond the CO requirements and fully separated two additional drainage basins.

All CSOs to the Piscataquog River upstream of Bass Island have been eliminated, immediately improving the river water quality. Manchester has established a park system along both banks of the river, which include athletic fields and walking trails. Residents use the river and the adjoining park area for recreation and swimming/wading. Recreational uses of the river have increased as the City continues to promote the parks and improve the surface water quality in the area.

Construction of the Phase I program resulted in 53 miles of new or rehabilitated piping. The result was an upgrade to over 25 miles of roads, curbing and sidewalks, while most of the underground pipelines were replaced or rehabilitated. As part of development of the 2010 LTCP update discussed below, a sewer questionnaire was sent out to all sewer users in the city. Numerous responses from property owners on the west side replied that through the implementation of the Phase I program, their sewer backups and/or street flooding has been resolved and thanked the City for addressing their concerns.

In 2010, the City prepared an update to the LTCP as required by the CO, with the primary focus being the remaining combined sewer drainage basins and overflows on the City's east side. The 2010 LTCP update developed the foundation for further control of CSOs and relief public health issues (sewer backups and street flooding). The development of the LTCP update encompassed a strategy which ensures that multiple goals are being achieved simultaneously by providing the greatest long-term overall benefit with several building blocks that address the City's major objectives of CSO reduction, public health issues, brook removal, and urban infrastructure renewal.

The City and the Regulatory Agencies agreed that the work identified in the 2010 LTCP updated should be phased over time because of the construction sequencing and timing issues, as well as the financial impact. Accordingly, the first phase of the Recommended LTCP proposed is a Phase II program over the next 20-years. Following review and negotiation with the US EPA the 2010 LTCP update was accepted, and the Recommended Phase II Program was incorporated into a formal Compliance Order issued on September 28, 2020. The Phase II program is estimated to have a project cost of \$385 million (2021 Dollars), with an implementation period of 20-years. The major components of the Phase II program include:

- \$25 million for WWTP improvements
- \$4 million for system optimization
- \$250 million for brook removal
- \$100 million in sewer separation
- \$6 million for program assessment/reporting

EPD estimates that approximately an average of approximately 220 million gallons of combined sewage is discharged into the Merrimack River annually. This compares to 280 million gallons when the City began its CSO abatement program. Completion of the Phase II program is estimated to reduce the current CSO volume by approximately an additional 70 percent.

3.2 Wastewater Treatment Plant

The City owns and operates a conventional secondary WWTP that was constructed in 1975 and upgraded several times in the 1990 and 2000's. Treated wastewater is discharged through an outfall to the Merrimack River. Detailed description of the treatment processes are presented below. The maximum flow through the preliminary and primary treatment processes is 72 Million Gallons per Day (MGD).

Wastewater flow to the WWTP enters via the Crescent Road Pump Station Annex (CRPSA). Flows conveyed to the CRPSA are through three main conduits. Flows from Manchester, Goffstown, and a very small portion of Bedford are conveyed via the 72-inch interceptor from the north. Flows from Bedford are conveyed via the 36-inch pipe from the siphon structure to the west. And flows from Londonderry and the southern and eastern portions of Manchester are conveyed via the 48-inch interceptor from the south. The flows from both the 36-inch and 48-inch pipes are not gate controlled. Only the 72-inch interceptor is controlled by the 72-inch sluice gate.

The maximum flow through the secondary treatment process is 42 MGD. This is achieved by the automatic adjustment of the Bypass Gates to maintain this flow and divert flow to the Bypass Channel. The maximum flow through the Bypass Channel is 30 MGD. The secondary flow that received full treatment and the bypass flow that received only preliminary and primary treatment are chlorinated separately. They are then blended and the blended flow travels through the Chlorine Contact Chamber to allow enough contact time for disinfection to occur. The wastewater is then dechlorinated with sodium bisulfite to neutralize the chlorine. The plant effluent is then sampled and discharged. The maximum plant effluent flow during a storm event is 72 MGD.

The City has developed a high flow management approach to maximize the flow through the plant and minimize the discharge of untreated flows. This is critical to the City maintaining compliance with its NPDES discharge permit. The high flow management approach is adapted to the anticipated storm intensity and duration based on reliable weather forecasting. Operators are prepared to adjust the approach based on actual storm duration and intensity and flows to the WWTP.

The following subsections summarize the overall condition of the WWTP, with observations and recommendations based on CDM Smith site visits conducted at the WWTP. The site visit included a visual inspection of each major component of the wastewater treatment process, and operational and maintenance issues identified by EPD staff.

3.2.1 Preliminary Treatment

The headworks of the WWTP provide preliminary treatment of the wastewater. This step removes rags, sticks, and other large items from the wastewater stream by means of a bar rack. In addition, as the wastewater enters the grit chamber, the flow decreases to a rate of 2 feet per second (fps), which causes sand, and other inorganic materials to settle out of the stream. The air from the grit blowers keeps organic materials, such as food wastes and human waste, in suspension where it progresses to primary treatment. The material removed (grit and screenings) is temporarily stored on site and is ultimately disposed of at the Waste Management Turnkey Landfill in Rochester, New Hampshire. The disposal contract with Waste Management is part of a much larger disposal contract managed by the City. Typically, these contracts have a five-year term and the current contract is in the process of being renewed.

In 2013, EPD completed a \$4.0M project to upgrade the grit removal process. At the completion of the project, EPD had:

- Replaced chain and flight equipment with new hydraulic screw conveyors
- Installed new grit pumps and classifiers
- Installed new flumes
- Modified covers
- Installed new channel baffles

No deficiencies were noted in this area during the recent inspection.

3.2.2 Primary Treatment

Primary treatment occurs in three circular primary clarifiers. The wastewater from the grit chamber enters the primary clarifiers where it has a residence time of approximately two to three hours. During this process, solid materials settle due to gravity. The settled solids are collected by sweeping mechanisms at the bottom of the tanks where they are pumped to the gravity thickeners, which are part of the sludge handling process. Approximately 50 to 60% of the suspended solids are removed during primary clarification.

3.2.3 Secondary Treatment

Secondary treatment is accomplished via an activated sludge process. This occurs within aeration tanks where bacteria are grown and cultured. The bacteria use oxygen and feed on the remaining suspended solids and dissolved organic matter. Air is introduced to the aeration tanks to assure enough oxygen is available to allow the bacteria to survive. Wastewater enters the three circular secondary clarifiers. The secondary clarification process allows the bacteria from the aeration basins to settle out via gravity. The solids from the secondary clarifiers are either returned to the

aeration basin and/or transferred to the gravity thickeners. At this point the wastewater is sent to disinfection in the next process.

In 2016, EPD completed a \$22.5M project to upgrade the aeration process. At the completion of the project, EPD had:

- Modified the aeration system from two trains of six basins to four trains of three basins
- Installed new fine bubble technology diffusers
- Installed selector basins for TP removal
- Built a new blower building housing four 300 hp blowers
- Upgraded the electrical system (\$3.3M)

No deficiencies were noted in this area of the plant during the recent inspection.

3.2.4 Disinfection

Wastewater is chlorinated and dechlorinated prior to discharge to the Merrimack River. Sodium hypochlorite is added to the wastewater and travels in a maze-like pattern in the Chlorine Contact Chamber to allow for a minimum one-hour contact time between the chlorine and the wastewater. To comply with water quality requirements and the City's NPDES permit, the wastewater must be dechlorinated prior to final discharge. Sodium bisulfite is added to the wastewater and a minimum of two-minutes contact time is necessary to allow the chlorine to be neutralized into harmless salts. At this point the water becomes plant effluent and is discharged by gravity to the Merrimack River.

No deficiencies were noted in this area of the plant during the recent inspection.

3.2.5 Sludge Processing, Incineration and Disposal

The biosolids collected in the primary and secondary clarifiers are transferred to the sludge handling process, which consists of thickening, dewatering, and eventual incineration in the Fluidized Bed Incinerator (FBI). The City has recently renewed its air permit for the incinerator, effective for the next 5 years.

The collected materials initially enter the gravity thickeners. The gravity thickeners consist of three tanks, much smaller in diameter than the clarifiers. By means of gravity, further solid/liquid separation occurs to a point where the solids content in the thickeners is approximately three to five percent. The "thickened" sludge is then pumped to one of three centrifuges for dewatering. A screw mechanism within the center of the spinning centrifuge moves the sludge as solids are separated from liquid. The sludge has a solids content of approximately 24 to 28 percent when it exits the centrifuge. At this point the sludge is sufficiently dewatered to allow autogenous processing in the FBI. EPD performs annual preventive maintenance on the incinerator. The last major incinerator upgrade was completed in 2011 and it is anticipated that no major upgrade will be required for the next 10 years beyond work programmed into the current CIP.

The City disposes of the ash from the incinerator using two on-site ash lagoons. These are cleared twice a year by Resource Management Inc. for beneficial reuse, applied to roads and landfill cover. Resource Management Inc. has been under contract with the City for 15 years, with contract renewals every 3 years.

The City also maintains a contract with Casella Waste Systems for sludge disposal during incinerator shut-downs or emergency bypass situations. Casella Waste Systems has been under contract with the City for 10 years, with contract renewals every 3 years.

In 2017, EPD completed a \$2.5M project to upgrade the boilers. At the completion of the project, EPD had:

- Replaced three original 300 hp oil fired steam boilers with four energy efficient gas fired hot water condensing boilers
- Installed new piping and air handling equipment
- Installed system for reuse of incinerator energy

In 2018, EPD completed a \$10.0M project to upgrade the thickening process equipment. At the completion of the project, EPD had:

- Completed removal and replacement of all internal components of three 130 ft. diameter clarifiers and three 50 ft. gravity thickeners belt filter presses with three new 75 hp centrifuges
- Installed covers for the new gravity thickeners

In 2019, EPD completed a \$10.0M project related to achieve compliance with Sewage Sludge Incinerator (SSI) regulations. At the completion of the project, EPD had:

- Installed a mercury removal vessel
- Installed a new economizer
- Installed a recuperator base
- Removed two multiple health incinerators
- Installed two new scum tanks

The City recently completed a shut down and inspected the incinerator. No significant problems were identified during this planned maintenance shut-down.

3.2.6 Odor Control

Odor control facilities at the plant include capturing air/odor from covered processes and processing the foul air through a biofilter. With significant changes to the secondary treatment process, odor control in that area is no longer required. EPD recently replaced the media in the existing biofilter, which is done periodically, to maintain performance.

No issues were noted in this area during the inspection.

3.3 Pumping Stations

There are 12 City-owned wastewater pumping stations in the system. The stations have been constructed between 1970 and 2014 and range in size from 68 gallons per minute (gpm) to 6,000 gpm. The two largest pumping stations are the West Side Pumping Station (WSPS) and the Crescent Road Pumping Station (influent pumping station to the WWTP). The smaller pumping stations typically serve a single street or small development. The City does not have responsibility for any privately owned pump stations. A summary of the city owned stations, year constructed, capacity and recent and planned upgrades.

Table 3-1 Summary of Wastewater Pump Stations

Table 3-1
City of Manchester, New Hampshire
Summary of Wastewater Pump Stations

Pump Station	Crescent Road	West Side	Derryfield School	Huse Road	Old Cohas	Juniper Street	Pond Drive	Sheffield Road	Crystal Lake	Trolley Crossing	Candia Road	Dunbarton Road
Year Constructed	1975	1986	1997	1970	2004	2013	2003	1987	1999	2013	2009	2014
Number of Pumps	4	3	4	2	2	2	2	2	2	2	2	2
Pump Capacity (GPM unless noted)	30 to 36 MGD	6,000	260	300	340	360	140	250	1,100	700	1,100	140
Recent Upgrades / Year	N/A	SCADA & Screens / 2013	SCADA / 2013	SCADA / 2013	SCADA / 2013	Replaced / 2013	SCADA / 2013	Pumps & SCADA / 2013	SCADA / 2013	Replaced / 2013	SCADA / 2013	N/A
Planned Upgrades	2025 full upgrade	2021 Roof	None	None	None	None	None	None	None	None	None	None

3.3.1 West Side Pumping Station

Flows from the three major interceptors on the west side converge at the intersection of Second and Cleveland Streets. All flow is then conveyed through a 48-inch pipe on Cleveland Street to the WSPS. There is an influent gate to the WSPS that modulates based on the water level in the wet well. The WSPS has three 6,000 gallon per minute (gpm) pumps that are programmed to operate in lead/lag/lag at predetermined wet well elevations. The Station was constructed in 1986 and has had a SCADA and screening upgrade.

Although the station has the capacity of 24 to 26 million gallons a day (mgd) with all three pumps running at full speed, recorded flow data suggests that the maximum flow being pumped by the station is approximately 20.9 mgd. Flow is screened at the pump station before it is pumped to the east side (through dual 18-inch force mains under the Merrimack River).

3.3.2 Crescent Road Pumping Station Annex

Flows from the Southeast Interceptor (SEI), East Interceptor North (EIN), and Bedford, NH siphon all converge in a junction chamber at the Crescent Road Pump Station, which serves as the influent pump station to the WWTP. The station was constructed in 1975. Flow from the EIN is controlled by WWTP personnel through the modulation of an influent gate. The SEI and Bedford, NH siphon freely discharge into the wet well during normal operation and are not controlled by the influent gate. During normal operation, WWTP personnel operate the gate to attempt to maintain a constant wet well elevation in the pump station. When flow to the pumping station increases during wet weather events, the wet well level rises and the WWTP staff/operators

manually start a second pump and continue to modulate the influent gate to limit the flow to the station. The data collected suggests that the gate typically closes to 10-inches open or less during rain events.

The Crescent Road Pump Station Annex has an installed pumping capacity of about 140 mgd, with redundancy. However, flow pumped from the station is limited to about 72 mgd. Flow is screened and then pumped from the interceptor system up to the aerated grit chambers in the WWTP headworks. There are four variable speed and two constant speed pumps at this station.

All stations are checked two times per week by EPD personnel and additionally by an outside contractor two times per week. Any potentially adverse conditions that are identified by inspectors become work orders and are addressed.

EPD completed a \$6M upgrade program for its pump stations between 2011 and 2014. A capital improvement program is in place and future improvements are proactively programmed at the stations. There has been no significant history of failures at any of the stations and EPD has an effective preventive maintenance program in place along with an appropriate inventory of spare parts and materials.

All of the stations are alarmed to inform staff of potential issues. In addition, the Crescent Road Pump Station Annex is fully integrated into the WWTF's SCADA system since it is the main influent pump station that delivers all flow to the treatment facility. The remaining stations have alarms integrated into the SCADA system so that staff can monitor operation and receive notice of potential issues that may require attention.

On September 24, 2021, CDM Smith conducted site visits of 4 major pumping stations: Crescent Road Pump Station Annex, Candia Road, Crystal Lake/South Mammoth, and the West Side Pump Station. The site visits included a visual inspection of each major component of the stations. In general, all stations were found to be well maintained and in good working order with no operational and maintenance issues identified. EPD has a well-established maintenance and capital improvement plan to effectively upgrade and replace aging pumping station equipment. The plan is updated frequently as conditions and needs change.

3.4 Wastewater Collection System

This section presents an overview of EPD's existing wastewater collection system.

3.4.1 Service Area

Manchester is located in Hillsborough County and encompasses approximately 33.0-square miles of land area and 1.9-square miles of inland water area. The city is bounded by Hooksett to the north, Londonderry to the south, Auburn to the east, and Bedford and Goffstown to the west. Four major bodies of water are located in the city: Lake Massabesic on the eastern border, the Merrimack River running north to south along the F.E. Everett Turnpike, the Piscataquog River generally running west to east in the western portion of the city, and Cohas Brook running east to west from Lake Massabesic to the Merrimack River.

Figure 3-1 shows the tributary areas of the wastewater collection system (referred to by the downstream CSO outfall or by the receiving interceptor if no CSO is located at the downstream

connection point). Manchester currently collects and treats wastewater discharges from Manchester, and treats conveyed flow from Goffstown, Bedford, and Londonderry to the WWTP (located at the southern end of the sewer collection system, adjacent to the Merrimack River and Brown Avenue). The ongoing construction of the Cohas Brook Interceptor will extend Manchester's sewers to the Londonderry line, the City is discussing with Londonderry their interest in connecting to the Manchester system. The City is also discussing with Auburn the possibility of Auburn connecting to Manchester through Londonderry. The final phase of this project is now under construction and will be completed in 2023.

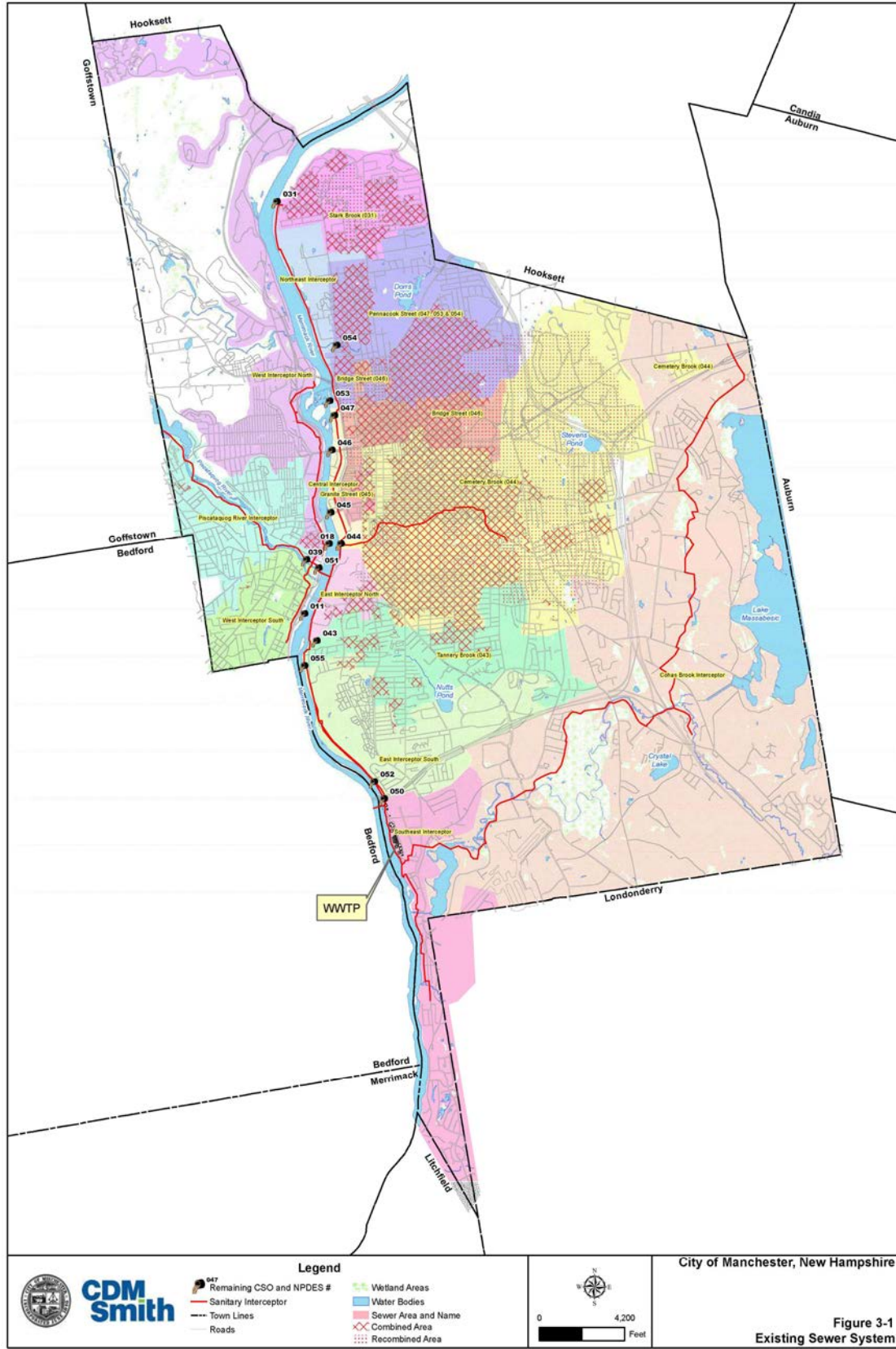


Figure 3-1 Existing Collection System

3.4.2 Drainage Areas

The majority of Manchester is sewered by traditional gravity sewer and pumping stations. The sewer system consists of more than 375-miles of sanitary sewer ranging from 8-inch lateral sewers up to 10-foot by 12-foot box culvert sewer interceptors. The stormwater drainage system is comprised of both natural and manmade open channels and about 172-miles of drainage piping ranging from small catch basin connections (typically 12-inch diameter) to 96-inch culverts.

The City's collection system is broken into three functional sewer areas.

- Separated – sewer conveys only sanitary flow. Stormwater drainage is either conveyed in separate pipes and the stormwater pipelines discharge directly to a waterway or no stormwater infrastructure exists;
- Combined – sanitary sewer and drainage flow conveyed in one pipe; or
- Recombined - sanitary sewer and drainage flow conveyed in separate pipes in the upstream area but eventually the drainage pipelines discharge to the sewer system at a location downstream.

The majority of the combined system generally exceeds 75-years in age. In fact, the city has over 100-miles of sewers over 100-years old, with the oldest sewers dating back to the early 1870's. Sewers this old are generally considered to have reached the end of their useful life and their condition should be assessed and rehabilitated. EPD has an active program to assess and renew an/or replace its aging sewers as part of its ongoing CMOM program described later in this document.

3.4.2.1 Separated Drainage Area

Approximately 55 percent of the sewer collection system is separated. These drainage areas are predominately located on the west side of the Merrimack River, which was separated during Phase I (19-miles of new drain installed), and in the southern and eastern portions of the City. The majority of the system immediately adjacent to the Merrimack River is also separated. It should be noted that the City has an ongoing Capacity, Management, Operation and Maintenance (CMOM) program to continuously assess and rehabilitate the collection system infrastructure.

3.4.2.2 Combined Drainage Area

Approximately 2,800 acres (34 percent of the pipes in the collection system) of Manchester is served by a combined collection system. There are some pockets of separate drainage infrastructure in the combined areas, but cross-connections between the two systems (wastewater and stormwater flow) require classification of these systems as combined. Since the original collection system in Manchester was constructed as a combined system, the remaining combined areas are generally the oldest in the City.

3.4.2.3 Recombined Drainage Area

Some areas in the collection system (approximately 1,900 acres or 11 percent of the collection system) are separated but the drainage discharges into the combined sewer system at a point downstream, and thus is "recombined". Although this existing drainage infrastructure provides

benefits to the local streets (i.e., reduced street flooding and sewer backups), the stormwater flow generated by these areas still impacts the downstream combined sewer system.

3.4.3 Major Interceptors

There are nine main interceptors in the Manchester wastewater collection system as shown on Table 3-2. Most of the interceptors were designed to convey dry weather flow and a portion of wet weather flow to the WWTP.

Table 3-2 Major Interceptors

Interceptor	Length of Pipe (ft)	Size (in)
West Side of Merrimack River		
West Interceptor - North (WIN)	15,300	30-48
West Interceptor - South (WIS)	4,800	10-18
Piscataquog River Interceptor (PRI)	11,300	24-36
East Side of Merrimack River		
East Interceptor - South (EIS)	9,500	24-36
East Interceptor - North (EIN)	15,500	48-72
Central Interceptor (CI)	6,400	30-48
Northeast Interceptor (NEI)	11,900	24
Southeast Interceptor (SEI)	11,200	30-48
Cohas Brook Interceptor (CBI)	54,500	15-42

A majority of the interceptor piping network, located along the banks of the Merrimack and Piscataquog Rivers, was constructed within the last 30-years. The city completed construction of a new interceptor (Cohas Brook Interceptor) in 2009 that provides service to the eastern extents of the city. The Cohas Brook Program phases will extend the interceptor to the Londonderry line, with the final phase of work now under construction. As these interceptor connections are completed to the Londonderry line, the Towns of Londonderry and Auburn may begin contributing sanitary flow to Manchester in accordance with their sewer master plans.

Interceptors on the west side of the Merrimack River convey flow to the West Side Pump Station. The force main from this station extends under the river to a connection into the EIN. The EIN and SEI are the most downstream interceptors that connect and convey flow directly to the WWTP influent pump station.

With the exception of the SEI and the CBI, which are completely separated, the majority of the interceptor piping network conveys flow from portions of the combined sewer system.

3.4.4 Industrial Pretreatment Program

The EPD also has an active industrial pretreatment program intended to reduce or eliminate illegal and toxic discharges from entering the sewer system. The Industrial Pretreatment Supervisor administers the USEPA approved pretreatment program through its Sewer Use Ordinance and issues industrial discharge permits covering discharges of wastewater. These Rules and Regulations govern all users of the wastewater treatment facility through the issuance

of permits, control documents, and through the enforcement of federal pretreatment requirements and technically based local discharge limitations. The IPP staff members inspect all classifications of industrial users at least once. The Class I Industries are inspected annually and their wastewater discharges are sampled annually to determine the concentration and amount of pollutants that get discharged. The IPP department issues a five-year industrial discharge permit. Those industries are required to also sample and submit a Periodically Self-Monitoring Report (PCR) no less than twice a year to the IPP Supervisor.

3.5 Combined Sewer Overflow Outfalls and Regulators

During dry weather, sanitary wastewater flow conveyed to the CSO regulator is directed to the interceptor system (via an interceptor connection pipe) and, ultimately, to the WWTP for treatment. During wet weather conditions, flow that exceeds the interceptor connector pipe capacity is hydraulically diverted to an outfall and discharged to local receiving waters. No dry weather overflows occur from the combined sewer collection system.

When the City's system was built, combined sewers were legal and common. In the 1990's, EPA issued new national regulatory policy that required municipalities with combined systems to eliminate them. That began the work Manchester, and many other cities continues to pursue. In 1999, Manchester and the EPA agreed to the first Compliance Order, creating a 10-year mandated schedule for the first phase of Manchester's work. That work was completed in 2009 Manchester completed an LTCP update in 2010 and reached agreement for the second phase of work in 2019 that is the basis for its current Consent Decree.

3.5.1 Outfalls

The City originally had 28 outfalls with thirteen outfalls that were eliminated during the Phase I CSO Program. There are 15 CSO outfalls remaining in the Manchester wastewater collection system and interceptor network.

Of the 15 remaining CSO outfalls, 2 discharge to the Piscataquog River (adjacent to Bass Island and immediately upstream of the river's confluence with the Merrimack River), 2 discharge to the Merrimack River on the west side of the city, and 11 discharge to the Merrimack River on the east side. The City recently completed a CSO Closure evaluation to review the operation of several CSO's that activate infrequently. The study recommended no closures at this time. EPA approved the findings of the CSO closure study in 2021. Ongoing work on the Phase II CSO program may result in closure of some outfalls over the 20-year implementation period.

Table 3-3 lists the remaining CSO outfalls.

Table 3-3 CSO Outfalls

CSO Outfall Number	CSO Regulator Name	Receiving Water	Interceptor Connection
011	Schiller Street	Merrimack River	WIS
018	Turner/Ferry Streets	Merrimack River	WIN
031	Stark Brook (Elgin Avenue)	Merrimack River	NEI
	Stark Brook (Sixth Avenue)	Merrimack River	NEI
	Stark Brook (Eve Avenue)	Merrimack River	NEI
039	Third Street	Piscataquog River	PRI
043	Tannery Brook	Tannery Brook/Merrimack River	EIS
044	Cemetery Brook (Primary)	Merrimack River	EIN
	Cemetery Brook (Secondary)	Merrimack River	EIN
045	Granite Street	Merrimack River	CI
046	Bridge Street	Merrimack River	CI
047	Pennacook Street	Merrimack River	CI
050	MH #1	Merrimack River	EIN
051	West Side Pump Station	Piscataquog River	WSPS
052	MH #2	Merrimack River	EIN
053	Walnut/North Street	Merrimack River	
	Canal/W. Pennacook		CI
054	Ray Brook	Ray Brook/Merrimack River	-
No Number	Dunbar Street	Merrimack River	EIN

Flap gates or backwater controls are installed on six of the CSO outfalls (West Side Pump Station, Turner/Ferry Street, Third Street, Manhole #1, Manhole #2, and Dunbar Street). There have been no reported occurrences where high river levels have entered the combined system or interceptor network.

3.5.2 Regulators

As shown on Table 3-14, CSOs discharging from Manchester's 15 remaining outfalls are controlled by a total of 19 CSO regulating structures. Of note, Stark Brook (031) has 3 separate regulators that contribute flow to a single outfall pipe and Walnut/North Street (053), which does not directly connect to an outfall pipe, but contributes its overflows to the Canal/W. Pennacook regulator.

3.7 Regulatory Issues

The WWTP currently operates under NPDES Permit number NH 0100447. The current permit was originally issued in 2015 and expired in 2020. Consistent with EPA administrative policies, the City submitted a renewal application on a timely basis. The EPA has yet to issue a new permit to the City, so the expired permit remains fully in effect until such time as the new permit is issued. However, EPD has not received indication from the regulatory agencies as to the specific timing of when a new permit may be issued or whether any substantive changes to the current permit should be expected.

The wastewater treatment plant has experienced periodic reportable events related to exceedance of permit limits. In 2021, there were two instances of phosphorous limit exceedances. Per the consent decree, EPD is required to report any instances of phosphorous limit exceedance but is not considered a violation since this limit is “report only”.

In August 2021, the plant exceeded maximum daily limits for TSS, for both concentrations and mass limit. With the exception of phosphorous, this was the first permit limit exceedance for discharge since 2016. TSS exceedance was the result of excessive wet weather flows that were allowed to enter the treatment plant. Operators will limit influent flows in the future and utilize available relief in the collection system to avoid future exceedance.

In 2020, the City recorded one dry weather overflow, and three wet weather overflows. The following descriptions outline the causes of the City’s unauthorized discharges and the corrective measures which were taken to address the overflow and prevent their reoccurrence. Follow-up letter notifications to the EPA and NHDES are sent for each event.

- Dry Weather Discharges
 - There was one (1) municipal dry weather overflow in 2020. One municipal dry weather SSO was repaired on the Sheffield Road force main.
- Wet Weather Discharges
 - There were three (3) wet weather overflows in 2020. All of them were from the historic problem location on North Commercial Street between Spring Street and Canal Street. The City has an engineer performing the design for the Christian Brook project that will address this issue by constructing upstream drainage improvements, sewer separation and sewer rehabilitation.

The City entered a Consent Decree (CD) with EPA for implementation of the Phase II CSO Long Term Control Plan. The CD includes a 20-year program consisting approximately \$385M in project work. EPD is presently underway with several major projects identified in the CD including preliminary design for the Cemetery Brook Drain, design of the first contract for Christian Brook separation, and evaluation of CSO Real Time Control alternatives. The projects are moving forward according to plan.

The Cemetery Brook Drain project has evolved in the preliminary design phase to explore different options for construction of this major conveyance conduit. EPD plans to construct this

drain as a tunnel which differs from the open cut alternative presented in the Phase II LTCP report. The Basis of Design Report for the Cemetery Brook Drain will be completed in late 2021 and will reflect the tunnel alternative. The tunnel option will allow benefits of the removal of Cemetery Brook from the collection system faster than the program identified in the CD.

3.8 Conclusions

CDM Smith has performed visual condition assessments for the wastewater treatment plant and pumping stations and performed an evaluation of the collection system based on EPD break history and other relevant documentation.

Based on our evaluation and inspection of the facilities, we believe that EPD has taken prudent steps to mitigate its risks and the potential for permit violations. However, given the age of its system and the complex operating environment, system failures and permit issues are possible future events.

Section 4

Capital Improvement Plan

This section provides an overview of the EPD's FY 2022 Approved CIP, which captures planned capital projects through FY 2027. This includes an assessment of the capital projects relative to the identified needs of the system.

EPD develops an annual CIP and submits to the Board of Mayor and Alderman for approval. In developing the CIP, planned capital spending on CSO related projects are largely enforcement driven, developed to satisfy the requirements of the Consent Decree as part of the LTCP. Planned capital improvements at the WWTP are based on the Master Plan developed for EPD in 2010. EPD anticipates completion of the identified projects and the need for an updated Master Plan in 2030. Planned capital improvements to the collection system are driven by the CMOM program.

4.1 CIP Overview

The FY 2022 CIP was approved by the Board of Mayor and Alderman in June 2021. Table 4-1 displays the capital projects for EPD related projects, including the inflated project spending and timing of estimated expenditures. Table 4-1 includes the estimated annual amount for FY 2022 through FY 2026 and then the estimated total between FY 2027 and FY 2041. For the period FY 2022 through FY 2026, EPD estimates total capital spending of \$304.4M. Of the total, \$59.1M is for Wastewater Treatment Plant projects, \$21.2M is for CMOM related projects, \$14.9M is for Cohas Brook projects, and \$209.2M is for CSO related projects.

Projects included in the CIP are identified through three primary processes:

- In 2010, the City had a comprehensive wastewater treatment plant facility plan completed to provide a 20-year road map of renovation and rehabilitation of its WWTP. The City has followed that plan since 2010 and continues to do so. The WWTP projects included in this section are the continuation of the City's implementation of the facility plan recommendations. Prior to 2030, the City will undertake a new facility plan to guide the subsequent 20 year improvement plan for the WWTP. Projects related to the WWTP total approximately \$63 million in this CIP.
- The City has developed and the regulatory agencies have agreed to a subsequent phase of CSO abatement. The primary focus of this phase design and construction of the Cemetery Brook Drain and the separation of the Christian Brook area. Approximately \$486M (inflated \$) is identified for CSO projects in this CIP.
- The City undertakes a comprehensive Capacity Management, Operations, and Maintenance (CMOM) program to evaluate the requirements of its collection system. The current CIP envisions \$33.4 million in CMOM evaluation and corrective action projects.

CDM Smith has reviewed EPD's capital improvement plan and assessed the adequacy of the planned spending with respect to the overall condition of the system and future requirements.

CDM Smith is of the opinion that the capital improvements summarized in Table 4-1 are sufficient relative to the system needs that have been identified.

Table 4-1 Capital Improvement Plan (Inflated \$)

	2022	2023	2024	2025	2026	Beyond 2026
SSI - Construction	\$ 944,488	\$ 225,582	\$ -	\$ -	\$ -	\$ -
Solids Train Upgrade - Design	-	-	-	-	-	-
Solids Train Upgrade - Construction	13,720,479	11,337,503	-	-	-	-
Emergency Power Upgrade - Design	350,000	400,000	-	-	-	-
Emergency Power Upgrade - Construction	-	1,000,000	5,430,892	1,000,000	-	-
Operations Building Upgrade - Design & Construction	-	-	-	4,117,915	4,117,915	4,117,915
WWTP Pump Station Upgrade - Design and Construction	-	500,000	7,200,000	7,200,000	1,526,183	-
Total Wastewater Treatment Plant	\$ 15,014,927	\$ 13,463,085	\$ 12,630,892	\$ 12,317,915	\$ 5,644,098	\$ 4,117,915
FY19 Asset Management	\$ 641,279	\$ 320,639	\$ -	\$ -	\$ -	\$ -
CMOM C-2: Construction	22,662	-	-	-	-	-
CMOM C-3: Construction	2,012,296	-	-	-	-	-
CMOM C-4: Study and Design	297,498	-	-	-	-	-
CMOM C-4: Construction	4,550,000	574,391	-	-	-	-
CMOM C-5: Study and Design	750,000	750,000	-	-	-	-
CMOM C-5: Construction	-	1,000,000	2,500,000	1,500,000	-	-
CMOM C-6: Study and Design	-	-	554,359	554,359	554,359	-
CMOM C-6: Construction	-	-	-	-	1,500,000	4,542,884
CMOM C-7: Study and Design	-	-	-	-	604,288	1,208,576
CMOM C-7: Construction	-	-	-	-	-	6,473,288
Sheffield Road Pump Station Force Main	1,250,000	1,250,000	-	-	-	-
Total CMOM	\$ 9,523,735	\$ 3,895,030	\$ 3,054,359	\$ 2,054,359	\$ 2,658,647	\$ 12,224,748

	2022	2023	2024	2025	2026	Beyond 2026
Cohas Brook Phase III - Contract #4 Design	\$ 235,043	\$ -	\$ -	\$ -	\$ -	\$ -
Cohas Brook Phase III - Contract #4 Construction	7,500,000	4,650,000	2,550,000	-	-	-
Total Cohas Brook	\$ 7,735,043	\$ 4,650,000	\$ 2,550,000	\$ -	\$ -	\$ -
CSO - Support FY19	\$ 207,651	\$ -	\$ -	\$ -	\$ -	\$ -
System Optimization/RTC Study	229,121	-	-	-	-	-
System Optimization/RTC Design and Construction	1,500,000	1,500,000	-	-	-	-
Christian Brook - Design	2,003,759	-	-	-	-	-
Christian Brook C-2 - Design	625,000	625,000	-	-	-	-
Christian Brook - Construction - Main Drain	6,150,000	6,150,000	6,000,000	-	-	-
Christian Brook - Construction - Laterals	-	1,141,052	4,564,208	4,564,208	1,141,052	-
Cemetery Brook Drain - Preliminary Design	165,071	-	-	-	-	-
Cemetery Brook Tunnel Project - Design	4,000,000	4,000,000	-	-	-	-
Cemetery Brook Tunnel Project - Construction	-	-	51,099,103	51,099,103	54,743,796	113,386,719
Queen City Ave Area Separation - Contract #8	-	-	-	-	-	12,030,858
Cilley Road Area Separation - Contract #9	-	-	-	-	-	21,381,957
Shasta Street Area Separation - Contract #10	-	-	-	-	-	23,946,335
Harvard Ave Area Separation - Contract #11	-	-	-	-	-	20,504,859

	2022	2023	2024	2025	2026	Beyond 2026
Belmont Street Area - Contract #12	-	-	-	-	-	20,354,795
Revere Ave Area - Contract #13	-	-	-	-	-	31,878,610
Phase II CSO Closeout/LTCP Update	-	-	-	-	-	981,297
MS4 / SEPP - 2021	501,858	-	-	-	-	-
MS4 / SEPP - 2022	500,000	-	-	-	-	-
MS4 / SEPP - 2023	-	535,663	-	-	-	-
MS4 / SEPP - 2024	-	-	554,411	-	-	-
MS4 / SEPP - 2025	-	-	-	573,870	-	-
MS4 / SEPP - 2025 - SRF	-	-	-	1,721,609	1,721,609	-
MS4 / SEPP - 2026	-	-	-	-	593,955	-
MS4 / SEPP – Beyond 2026	-	-	-	-	-	27,855,603
CSO Discharge Monitoring	200,000	-	-	-	-	-
CSO Discharge Monitoring	-	200,000	-	-	-	-
CSO Discharge Monitoring	-	-	200,000	-	-	-
CSO Discharge Monitoring	-	-	-	200,000	-	-
CSO Discharge Monitoring	-	-	-	-	200,000	-
CSO Discharge Monitoring – Beyond 2026	-	-	-	-	-	3,451,533
Post Construction Monitoring	-	-	-	-	-	1,493,188
Total CSO Projects	\$ 16,082,460	\$ 14,151,715	\$ 62,417,722	\$ 58,158,790	\$ 58,400,412	\$ 277,265,754
Total Capital Spending	\$ 48,356,165	\$ 36,159,830	\$ 80,652,973	\$ 72,531,064	\$ 66,703,157	\$ 293,608,417

4.2 Projected Cash Flow - Capital

Table 4-2 summarizes the projected cash flow related to capital expenses for the projection period.

The Beginning Balance Available for Capital is the annual amount of projected funds EPD has available to pay for capital projects, before factoring in bond proceeds or SRF reimbursements. The balance available for capital includes the projected operating surpluses or deficits. In a given year, if EPD is projected to generate rate revenue in excess of the projected rate revenue requirement, the resulting operating surplus is assumed available for use to pay for capital projects. Conversely, in a year where EPD is projected to generate rate revenue lower than the projected rate revenue requirement, the operating deficit is assumed to reduce the available balance for capital projects. Additional discussion of the operating surpluses and deficits is provided in Section 6.

The Sources of Funds – Inflows represent the cash deposited into the fund to be used to pay for capital expenses, through grants, bond proceeds and SRF reimbursements. The total of the Beginning Balance and the Sources of Funds – Inflows represents the annual amount of funds available for capital expenses, shown in the total for Available Funds – Before Use.

The Sources of Funds – Outflows represent the annual capital expenditures, grouped by project funding source. Cash Funded capital is annual pay-go capital, which are projects that EPD would pay for the expenditures directly through available fund balances in the year of the expense. The capital expenditures for revenue bond financed capital are the annual cash payments projected during project duration, for projects assumed financed through proceeds from revenue bond issuances. Similarly, the capital expenditures for SRF financed capital are the annual cash payments projected during project duration, which are paid for in the short term by reimbursements from the SRF program.

The difference between the cash available for capital and the capital expenditures is the Ending Balance, representing the projected fund balance available at the end of the fiscal year, after paying for all capital expenditures. The ending balance is then applied to the next fiscal year as the Beginning Balance for that year.

EPD is projected to maintain adequate levels of cash balances to fund its capital program for the forecast period. This includes assumed transfers from the available balances to cover projected operating deficits in FY 2026.

Table 4-2 Projected Cash Flow - Capital

	2022	2023	2024	2025	2026
Beginning Balance	\$ 7,481,299	\$ 35,172,404	\$ 21,565,974	\$ 65,925,155	\$ 14,896,227
Transfer from Operating (Surplus)	8,665,966	8,113,101	4,679,747	3,250,562	-
Transfer to Operating (Deficit)	-	-	-	-	(82,908)
Beginning Balance Available for Capital	\$ 16,147,265	\$ 43,285,505	\$26,245,721	\$ 69,175,717	\$14,813,319
Source of Funds - Inflows					
Revenue Bond Proceeds	\$ 55,000,000	\$ -	\$ 103,861,283	\$ -	\$ 117,343,341
SRF Reimbursements ²	12,381,344	14,440,300	16,471,124	18,251,574	11,031,002
Total Source of Funds	\$ 67,381,344	\$14,440,300	\$ 120,332,407	\$ 18,251,574	\$ 128,374,343
Available Funds - Before Use	\$ 83,528,609	\$ 57,725,805	\$ 146,578,128	\$ 87,427,291	\$ 143,187,662
Use of Funds - Outflows					
Capital Expenditures - Cash Funded ¹	\$ 9,355,293	\$ 1,535,636	\$ 754,411	\$ 773,870	\$ 793,955
Capital Expenditures - GO Bond Financed	-	-	-	-	-
Capital Expenditures - Revenue Bond Financed	22,125,000	20,325,000	62,703,462	53,153,462	57,402,443
Capital Expenditures - SRF Financed	16,875,912	14,299,194	17,195,100	18,603,732	8,506,759
Total Fund Uses	\$ 48,356,205	\$ 36,159,830	\$ 80,652,973	\$ 72,531,064	\$ 66,703,157
Available Funds - Before Use	\$ 83,528,609	\$ 57,725,805	\$ 146,578,128	\$ 87,427,291	\$ 143,187,662
Use of Funds	48,356,205	36,159,830	80,652,973	72,531,064	66,703,157
Ending Cash Balance	\$ 35,172,404	\$ 21,565,974	\$ 65,925,155	\$ 14,896,227	\$ 76,484,505

¹ Cash funded capital projects are funded through available cash balances.

² Reimbursements are assumed to be received by EPD one quarter after the capital expenditure. FY 2022 includes actual reimbursements received to date.

Section 5

Operation and Maintenance Policies and Programs

This section examines the EPD's operations and maintenance (O&M) policies and programs.

5.1 Capacity, Management, Operation and Maintenance (CMOM) Program

The City developed a CMOM Program in 2011 to comply with its NDPES permit, to improve the performance of the collection system, and to ensure proper system operation for years to come. A key component of the CMOM program is the ongoing inspection of sewer pipes, many of which are well over 100 years old and in need of repair. The City has been inspecting approximately 100,000 linear feet of pipe per year (approximately 5 percent of the system annually—the amount varies year to year depending on pavement needs), including sewers under streets that are planned to be repaved, as well as inspections of the main interceptor system. Between 2010 and 2020 the City has completed CCTV inspection of more than 65 percent of its collection system. Significant defects that are identified by these inspections are included in rehabilitation contracts (four contracts issued to date), corrected with on call / emergency contract work, or corrected using in house resources. Overall, the current assessment approach is to inspect:

- One interceptor annually
- Sewer lines in planned paving areas annually
- Siphons every 5 years (scheduled for 2021)
- Sewer separation areas prior to design (Christian Brook Area)
- Additional sewers based on their criticality

The City continued construction of the CMOM Sewer Rehab and Repair Project – Contract 3 in 2020. The project was bid for \$5.4 million, which includes approximately 40,000 feet of cured-in-place pipe liners; 2,800 feet of manhole-to-manhole pipe replacement; 13 excavated point repairs, and 150 cured-in-place lining spot repairs. In addition to the contracted work the City has directed the contractor to perform additional emergency repair work on collapsed, failing and other sewers in need of immediate repair. A change order for \$2.25M was executed in 2020 to address these general/emergency repairs, increasing the City's investment into infrastructure improvements and projects total costs to \$7.65M.

In 2021, the City bid and awarded CMOM Sewer Rehabilitation and Repair Project – Contract 4. The project is now under construction with an awarded value of \$4.4M. Work consists of lining approximately 50,000 linear feet of 8-in to 30-in diameter sewers, replacement of approximately 1,700 linear feet of sewer, and internal and excavated point repairs in 138 sewer segments.

5.1.1 Operation and Maintenance Plan

The City developed an Operation and Maintenance Plan to document the ideas, concepts, Best Management Practices and procedures used to enhance the efficiency and reliability of the City's collection system. The goals of the plan are to:

- Prevent sanitary sewer overflows (SSO's) to the greatest extent practicable
- Organize the City's personnel and equipment through a regular collection system maintenance program and SSO emergency response plan
- Develop a system using analytical and engineering methods to assess and prioritize maintenance, rehabilitation and replacement activities for the City-controlled portions of the collection system
- Develop and enforce appropriate ordinances which will better protect the assets and ensure the performance of the collection system
- Ensure the efficient, economic, environmentally sound transport of wastewater to the City's wastewater treatment facility
- Ensure environmental compliance
- Prevent the interruption of wastewater transport service
- Implement structured Asset Management practices
- Transition from reactive to preventative maintenance activities

As required by the City of Manchester's NPDES Permit No. NH0100447 the City must submit a CMOM Annual Report to the EPA and NHDES on March 31st of every year. The program is currently in its 11th year. The report addresses primarily the following reporting requirements:

- A description of the staffing levels maintained during the year.
- A map and description of inspection and maintenance activities conducted, and corrective actions taken during the previous year.
- Expenditures for any collection system maintenance activities and corrective actions taken during the previous year.
- A calculation of the annual average infiltration, the average inflow, the maximum month infiltration and the maximum month inflow for the reporting year. (Not required since Manchester has a combined system)
- A report of any corrective actions taken as a result of unauthorized discharges pursuant to the Unauthorized Discharges section of the permit.

Each reporting requirement is addressed in detail below.

5.1.2 Description of Staffing Levels

The City of Manchester Environmental Protection Division has a complement of 44 budgeted full-time employees, with 38 filled positions, responsible for the operation and maintenance activities related to the City's Wastewater Treatment Facility, collection system, and remote facilities. The number of employees increased by one person from the previous year and includes administration, billing, accounting, customer service, combined sewer, stormwater, and industrial pretreatment staff.

Collection system maintenance activities are also supported by up to 15 Manchester Department of Public Works staff on an as needed basis. The DPW staff is also responsible for the drainage system. The City also employs outside contractors to perform CCTV inspections of the sewer system, pump station inspections, pipeline and manhole replacement/rehabilitation, flow monitoring and major wastewater facility repairs.

5.1.3 Description of Inspections and Maintenance Activities

5.1.3.1 Manhole Inspections

In 2020, 109 manhole inspections were completed by the City's CCTV contractor in accordance with accepted industry standard practices. The DPW Highway Division has been performing manhole repairs based on recommendations in the Phase II CMOM Program. This will continue in Phase III.

5.1.3.2 Pipeline Inspections

In 2019 approximately 155,000 linear feet of pipeline inspections (approximately 7.6 percent of the system) were performed using industry accepted standards and conventional CCTV technology. In 2020, approximately 625 sewer segments or 129,499 linear feet of inspections were completed (approximately 6.5 percent of the system). The priority for these inspections is generally determined based on the City's planned paving operations. Sewer pipes are inspected in streets slated for paving and any repairs are identified during the assessment process. These repairs are either completed by DPW crews (if deemed appropriate) or the CMOM construction contractor. If the DPW crews are to perform the repairs, EPD provides a GIS-based repair map showing existing conditions, limits of work, and scope of the repairs. If the CMOM construction contractor is to perform the work, it is either added to their existing construction contract using a bid item set aside for emergency work or added to the scope for the next construction contract, depending on the timing required for the repairs to take place. The additional financial investment and coordination with the DPW has advanced the CCTV program to be close to a year ahead of the paving program. This is an important achievement for the city to proactively manage the sewers instead of being reactive.

Included in the CCTV inspections noted above in 2020, the City's CCTV contractor completed inspections on the Cohas Brook Interceptor that previously began in 2019. The remaining 22,360 linear feet of this interceptor was inspected in 2020.

In addition to the 2020 PACP compliant pipeline inspections, approximately 36 sewer segments or 5,838 linear feet of new cured-in-place pipe lining was inspected after installation under the CMOM Phase III Contract 3 Sewer Rehabilitation Contract.

5.2 Asset Management Program

The City is currently implementing an Asset Management program for its wastewater infrastructure. The program will include all horizontal and vertical assets. The program is currently under implementation and when complete will be compliant with guidelines established by New Hampshire Department of Environmental Services.

The asset management program will enable EPD to better manage their wastewater assets over their lifecycles through the collection and sustainment of additional asset data and the deployment of new hardware and software tools. The major elements of the program are:

- Inventory and condition assessments of all treatment plant and pump station assets
- Risk assessments for the collection system, treatment plants, and pump stations
- Defining and implementing preventive maintenance tasks and schedules that leverage the asset inventory and completed risk assessments
- Deploying a computerized maintenance management system (Maximo) that allows EDP to manage their asset inventory and all preventive and corrective work they perform
- Deploying iPads and a mobile application (EZMaxMobile) to streamline the execution of asset maintenance, repair, and replacement work and to support the routine collection of important information

Many of the program elements are currently underway and the City is targeting a deployment of the Maximo and EZMaxMobile software tools in the first half of 2022. The largest effort associated with deploying the asset management program, the physical inventory and condition assessment of all assets, is underway and is scheduled to be completed early in 2022.

Section 6

Financial Projections

This section contains financial projections for the period FY 2022 through FY 2026, including projected revenues, expenses, debt service and debt service coverage. For purposes of these projections, we have only assumed rate increases that have been approved by the Mayor and Board of Alderman (the “BOMA”).

6.1 Assumptions

The projections are impacted by various financial assumptions, which include:

- FY 2022 is the base year of the projections, with the FY 2022 Budget the base for projections.
- Payroll and Benefits costs are inflated at 3.75 percent annually.
- Other operations and maintenance (O&M) expenses are inflated at an annual rate of 2.5 percent.
- Capital expenses are inflated at an annual rate of 3.5 percent.
- Existing debt service has been provided by the City, which includes annual debt service for 2019 SRF, 2021 SRF, GO Bond 2021 B, and GO Bond 2021 C.
- The debt service schedule for the Series 2021 Bonds is provided by Raymond James, based on \$55M in revenue bonds with payback structured as 30-year wrapped debt. The projections also include future revenue bond issuances of \$103.9M in FY 2024 (2023 Series) and \$117.3M in FY 2026 (2025 Series), with debt service payback beginning in the fiscal year of issuance.
- Future SRF borrowings are assumed to total \$36.5M over the forecast period. SRF loans are assumed to be 20-year terms with a 3.0% interest rate, consistent with the current NHDES Clean Water SRF rates which are based on the 11-Bond GO Index, plus a 1 percent administration fee.
- Capital expenses for projects under the SRF program are eligible for reimbursements during the course of the project. Future reimbursements are assumed to be received by EPD one quarter after the capital expenditure. A portion of total projected FY 2022 reimbursements includes actual reimbursements received to date.
- Miscellaneous revenue assumptions vary by line item:
 - Septage fees are assumed to remain constant at FY 2022 levels throughout projections.

- Granite Ridge revenue is assumed to remain constant at FY 2022 levels throughout projections.
 - Interest and miscellaneous income (late fees) are assumed to remain constant at FY 2022 levels throughout projections.
 - Tax deposits are assumed to be \$10,000 per year through FY 2024. Tax deposits are assumed to be \$0 for FY 2025 and beyond.
 - Outside community reimbursements for O&M is assumed to increase at 2.0% annually, consistent with the historical rate.
 - Outside community reimbursements for prior capital expenses are based on a defined allocation of outstanding debt service supporting WWTP related projects. Reimbursements for future capital projects related to WWTP projects are based on the defined allocation and calculated debt service.
 - State and federal grants are assumed at the approved amounts for completed projects. No grants are assumed on future capital projects.
- The balance in EPD's unrestricted fund at the start of FY 2022 was approximately \$7,481,000.
 - Sewer rate revenue collected in FY 2021 was \$19,162,485.
 - The EPD approved sewer rates are listed below in Table 6-1. In December 2019, the BOMA approved a 5-year rate increase, consisting of 4.0 percent annual sewer rate increases through FY 2024.

Table 6-1 Approved Sewer Rates

	2021	2022	2023	2024
Commodity Rate (\$/HCF)	\$ 3.75	\$ 3.90	\$ 4.06	\$ 4.22
Discounted Commodity Rate (\$/HCF)	\$ 1.88	\$ 1.96	\$ 2.03	\$ 2.11
Service Charge (\$/Unit/Year)				
Residential Single Dwelling	\$ 91.64	\$ 95.31	\$ 99.12	\$ 103.08
Residential Single Dwelling - Discounted	\$ 45.82	\$ 47.65	\$ 49.56	\$ 51.54
Condo	\$ 91.64	\$ 95.31	\$ 99.12	\$ 103.08
Multi-Family	\$ 58.32	\$ 60.65	\$ 63.08	\$ 65.60
Multi-Family – Discounted	\$ 29.16	\$ 30.33	\$ 31.54	\$ 32.80
Commercial	\$ 124.96	\$ 129.96	\$ 135.16	\$ 140.56
Commercial - Discounted	\$ 62.48	\$ 64.98	\$ 67.58	\$ 70.28
Industrial	\$ 258.20	\$ 268.53	\$ 279.27	\$ 290.44
Industrial Strength Surcharges				
BOD (\$/100 lbs)	\$ 36.57	\$ 38.03	\$ 39.55	\$ 41.14
TSS (\$/100 lbs)	\$ 36.57	\$ 38.03	\$ 39.55	\$ 41.14
Flow (\$/1,000 gal)	\$ 3.48	\$ 3.62	\$ 3.76	\$ 3.91

- The adopted rate increases take effect in April of each year. For example, the FY 2021 rates shown in **Table 6-1** took effect April 1, 2021 and applies to the last quarter of FY 2021 and the first three quarters of FY 2022, the FY 2022 rates shown take effect April 1, 2022 and affects revenues in the last quarter of FY 2022 and the first three quarters of FY 2023.
- A typical residential single family sewer bill for FY 2022, assuming consumption of 100 HCF, is approximately \$471. With the approved rate increases, the sewer bill increases to an estimated \$510 in FY 2024.

Incorporating the information received from the EPD and the assumptions listed above, annual revenue requirements and coverage calculations are developed through FY 2026.

6.2 Billing and Collection

EPD charges its customers a fixed service charge based on property type, a commodity rate based on water consumption, and industrial strength surcharges based on flow and loadings. The majority of EPD's customers are billed on a quarterly basis, receiving four bills per year, with some larger customers billed monthly. Water meter readings and water and sewer billings are handled by Manchester Water Works (MWW). MWW is reimbursed quarterly, currently \$400,000 per year, increasing by \$25,000 every other year with the amount renegotiated every five years.

EPD and MWW moved to a combined water and sewer bill in 2015. As payments are received, they are applied in the following order: sewer fees, past due then current; water fees, past due then current; EPD late fees; MWW late fees. MWW maintains the ability to shut off water service for delinquent accounts, and payments to restore service would be applied in the order listed until the account balance was paid. For outstanding balances for unpaid bills, EPD institutes a 5 percent late fee on balances outstanding over 30 days.

As a result of the Covid-19 pandemic, EPD and MWW relaxed its enforcement policies by suspending the collection of late fee charges on outstanding balances. This policy was implemented in June 2020 and ended September 2020. Historically, EPD's collection rate has been approximately 97 percent, but similar to many utilities in 2020 the collection rate dropped from historical levels due to the pandemic and the restrictions on the ability to enforce bills, with collections decreasing to around 72 percent between June 2020 and September 2020. However, in the last 8 months EPD's collection rate has improved and is comparable to historical levels.

6.3 Financial Projections

The financial projections include projections of operations and maintenance (O&M) expenses, debt service payments on outstanding and future debt, miscellaneous or non-rate revenue, and rate revenue. Cash funded capital project expenses are funded through available cash balances, therefore have no impact on the cash flow projections included in this section. For bond financed capital projects, the capital expenses during project duration are paid through bond proceeds or SRF reimbursements, therefore do not have a direct impact on projected cash flow requirements in the year of capital expense. As the bonds or SRF borrowings are converted to long-term debt, the annual debt service payments on those loans are realized and included as an expense as part of the cash flow projection. The annual capital cash flow is summarized in Section 4.

6.3.1 Operations and Maintenance

The EPD's operations and maintenance expenses are summarized by major category in **Table 6-2**. The personnel category represents salaries and benefits for EPD employees. The O&M category represents general operations and maintenance expenses, including payments to DPW for the shared employee expenses related to collection system O&M. The Worker's Compensation and Other Miscellaneous category represents direct Worker's Compensation related expenses paid to providers during the year. Operations and maintenance expenses increase from \$10.4 million in FY 2022 to \$11.7 million in FY 2026, representing an average annual increase of 3.1 percent.

Table 6-2 Operations and Maintenance

	2022	2023	2024	2025	2026
Personnel	\$ 4,613,516	\$ 4,786,523	\$ 4,966,017	\$ 5,152,243	\$ 5,345,452
O&M	5,588,500	5,728,213	5,871,418	6,018,203	6,168,658
Worker's Compensation and Other Miscellaneous	165,000	169,125	173,353	177,687	182,129
Total Operations and Maintenance	\$ 10,367,016	\$ 10,683,860	\$ 11,010,788	\$ 11,348,133	\$ 11,696,240

6.3.2 Debt Service

The projections include EPD annual payments for existing debt service for currently outstanding debt and projected debt service for future borrowings.

Existing debt service represents debt service on EPD's outstanding obligations: 2019 SRF, 2021 SRF, GO Bond 2021 B, and GO Bond 2021 C. **Table 6-3** includes the debt service schedules for each of the outstanding obligations, through maturity.

Table 6-3 Existing Outstanding Debt Service, through Maturity

Fiscal Year	2021B Direct Placement	2021C Direct Placement	2019 SRF	2021 SRF	Total
2022	\$ 2,238,152	\$ 1,328,479	\$ 159,125	\$ 416,241	\$ 4,141,997
2023	2,175,657	1,307,690	156,750	407,645	4,047,742
2024	2,119,911	1,287,290	154,375	401,738	3,963,313
2025	2,059,701	1,261,960	152,000	395,830	3,869,491
2026	1,999,947	1,241,770	149,625	389,922	3,781,264
2027	1,940,655	1,221,650	147,250	384,014	3,693,569
2028	1,876,979	1,201,600	144,875	378,106	3,601,560

Fiscal Year	2021B Direct Placement	2021C Direct Placement	2019 SRF	2021 SRF	Total
2029	976,372	1,181,620	142,500	372,198	2,672,690
2030	949,875	1,156,710	140,125	366,290	2,613,001
2031	439,505	1,136,940	137,750	360,382	2,074,577
2032	162,000	1,117,240	135,375	354,474	1,769,089
2033	-	1,097,610	133,000	348,566	1,579,176
2034	-	1,073,050	130,625	342,659	1,546,334
2035	-	1,053,630	128,250	336,751	1,518,631
2036	-	1,034,280	125,875	330,843	1,490,998
2037	-	-	123,500	324,935	448,435
2038	-	-	121,125	319,027	440,152
2039	-	-	-	313,119	313,119
2040	-	-	-	307,211	307,211
2041	-	-	-	301,303	301,303

Anticipated debt service represents annual debt service payments on future projected borrowings. This includes debt service payments on \$36.5M in projected SRF borrowings within the forecast period, and \$276.2M in projected revenue bonds.

The projected SRF borrowings include \$600,000 for FY 2023, \$28.5M for FY 2024, \$0 for FY 2025, and \$7.4M for FY 2026. **Table 6-4** includes the debt service schedules through maturity for the projected SRF borrowings.

Table 6-4 Anticipated SRF Debt Service, through Maturity

Fiscal Year	2023 Borrowing	2024 Borrowing	2025 Borrowing	2026 Borrowing	Total
2022	\$ -	\$ -	\$ -	\$ -	\$ -
2023	47,775	-	-	-	47,775
2024	46,875	2,265,897	-	-	2,312,772

Fiscal Year	2023 Borrowing	2024 Borrowing	2025 Borrowing	2026 Borrowing	Total
2025	45,975	2,223,211	-	-	2,269,186
2026	45,075	2,180,525	-	591,685	2,817,285
2027	44,175	2,137,840	-	580,538	2,762,553
2028	43,275	2,095,154	-	569,392	2,707,821
2029	42,375	2,052,468	-	558,246	2,653,089
2030	41,475	2,009,783	-	547,099	2,598,357
2031	40,575	1,967,097	-	535,953	2,543,625
2032	39,675	1,924,411	-	524,807	2,488,893
2033	38,775	1,881,726	-	513,660	2,434,161
2034	37,875	1,839,040	-	502,514	2,379,429
2035	36,975	1,796,354	-	491,368	2,324,697
2036	36,075	1,753,669	-	480,221	2,269,965
2037	35,175	1,710,983	-	469,075	2,215,233
2038	34,275	1,668,297	-	457,929	2,160,501
2039	33,375	1,625,612	-	446,782	2,105,769
2040	32,475	1,582,926	-	435,636	2,051,037
2041	31,575	1,540,240	-	424,490	1,996,305
2042	30,675	1,497,555	-	413,343	1,941,573
2043	-	1,454,869	-	402,197	1,857,066
2044	-	-	-	391,051	391,051
2045	-	-	-	379,904	379,904

The projected revenue bonds include \$55M for the 2021 Series, \$103.9M for a projected 2023 Series, and \$117.3M for a projected 2025 Series. **Table 6-5** includes the debt service schedules through maturity for the 2021 Series, the projected 2023 Series, and the projected 2025 Series.

Table 6-5 Anticipated Revenue Bond Debt Service, through Maturity

Fiscal Year	2021 Series	2023 Series	2025 Series	Total
2022	\$ 860,588	\$ -	\$ -	\$ 860,588
2023	1,948,500	-	-	1,948,500
2024	1,948,500	2,167,171	-	4,115,671
2025	1,948,500	4,021,500	-	5,970,000
2026	1,948,500	4,115,900	2,537,318	8,601,718
2027	1,948,500	4,201,300	6,084,450	12,234,250
2028	1,948,500	4,297,900	6,082,850	12,329,250
2029	1,948,500	5,225,100	6,083,850	13,257,450
2030	1,948,500	5,285,600	6,082,250	13,316,350
2031	2,063,500	5,709,600	6,078,050	13,851,150
2032	2,367,750	5,708,600	6,083,300	14,159,650
2033	2,556,500	5,707,600	6,083,800	14,347,900
2034	2,589,750	5,711,350	6,079,550	14,380,650
2035	2,619,750	5,709,350	6,080,550	14,409,650
2036	2,646,500	5,706,600	6,086,300	14,439,400
2037	3,690,000	5,707,850	6,081,300	15,479,150
2038	3,698,400	5,707,600	6,080,800	15,486,800
2039	3,823,400	5,710,600	6,079,300	15,613,300
2040	3,830,200	5,706,200	6,086,550	15,622,950
2041	3,833,200	5,712,200	6,081,800	15,627,200
2042	4,137,400	5,708,000	6,084,600	15,930,000

Fiscal Year	2021 Series	2023 Series	2025 Series	Total
2043	4,135,600	5,708,800	6,082,600	15,927,000
2044	4,139,400	5,704,200	6,085,800	15,929,400
2045	4,138,400	5,704,200	6,083,800	15,926,400
2046	4,137,600	5,708,400	6,081,600	15,927,600
2047	4,136,800	5,706,400	6,084,000	15,927,200
2048	4,135,800	5,708,200	6,085,600	15,929,600
2049	4,139,400	5,703,400	6,086,200	15,929,000
2050	4,137,200	5,707,000	6,085,600	15,929,800
2051	4,139,200	5,703,400	6,083,600	15,926,200
2052	-	9,842,600	6,085,000	15,927,600
2053	-	9,843,600	6,084,400	15,928,000
2054	-	-	15,926,600	15,926,600
2055	-	-	15,927,600	15,927,600

The EPD's total projected debt service is summarized in Table 6-6. This represents the total annual debt service on existing bonds and projected future bonds issued between FY 2022 and FY 2026 to fund the anticipated CIP in those years.

Table 6-6 Total Projected Debt Service

Fiscal Year	Existing Debt Service	Anticipated Revenue Bond Debt Service	Anticipated SRF Debt Service	Total Debt Service
2022	\$ 4,141,997	\$ 860,588	\$ -	\$ 5,002,585
2023	4,047,742	1,948,500	47,775	6,044,017
2024	3,963,313	4,115,671	2,312,772	10,391,755
2025	3,869,491	5,970,000	2,269,186	12,108,676
2026	3,781,264	8,601,718	2,817,285	15,200,267
2027	3,693,569	12,234,250	2,762,553	18,690,372

Fiscal Year	Existing Debt Service	Anticipated Revenue Bond Debt Service	Anticipated SRF Debt Service	Total Debt Service
2028	3,601,560	12,329,250	2,707,821	18,638,631
2029	2,672,690	13,257,450	2,653,089	18,583,229
2030	2,613,001	13,316,350	2,598,357	18,527,708
2031	2,074,577	13,851,150	2,543,625	18,469,352
2032	1,769,089	14,159,650	2,488,893	18,417,632
2033	1,579,176	14,347,900	2,434,161	18,361,238
2034	1,546,334	14,380,650	2,379,429	18,306,413
2035	1,518,631	14,409,650	2,324,697	18,252,978
2036	1,490,998	14,439,400	2,269,965	18,200,363
2037	448,435	15,479,150	2,215,233	18,142,818
2038	440,152	15,486,800	2,160,501	18,087,453
2039	313,119	15,613,300	2,105,769	18,032,188
2040	307,211	15,622,950	2,051,037	17,981,198
2041	301,303	15,627,200	1,996,305	17,924,808
2042	-	15,930,000	1,941,573	17,871,573
2043	-	15,927,000	1,857,066	17,784,066
2044	-	15,929,400	391,051	16,320,451
2045	-	15,926,400	379,904	16,306,304
2046	-	15,927,600	-	15,927,600
2047	-	15,927,200	-	15,927,200
2048	-	15,929,600	-	15,929,600
2049	-	15,929,000	-	15,929,000
2050	-	15,929,800	-	15,929,800

Fiscal Year	Existing Debt Service	Anticipated Revenue Bond Debt Service	Anticipated SRF Debt Service	Total Debt Service
2051	-	15,926,200	-	15,926,200
2052	-	15,927,600	-	15,927,600
2053	-	15,928,000	-	15,928,000
2054	-	15,926,600	-	15,926,600
2055	-	15,927,600	-	15,927,600

6.3.3 Miscellaneous Non-Rate Revenue

Miscellaneous non-rate revenue is summarized in Table 6-7. Miscellaneous non-rate revenue represents revenue sources separate from billed rate revenue. To be conservative, these miscellaneous revenue sources are held constant over the forecast period, except for reimbursements from the outside communities. Reimbursement for operations and maintenance is assumed to increase 2 percent annually which has been the historic rate. Capital cost reimbursements are tied to the City's anticipated debt service payments for work related to the wastewater treatment plant.

Table 6-7 Miscellaneous Non-Rate Revenue

	2022	2023	2024	2025	2026
Septage Fees	\$ 925,000	\$ 925,000	\$ 925,000	\$ 925,000	\$ 925,000
Granite Ridge	320,000	320,000	320,000	320,000	320,000
Outside Community Reimbursement - O&M	1,410,000	1,438,200	1,466,964	1,496,303	1,526,229
Interest & Misc. Income (late fees)	132,700	132,700	132,700	132,700	132,700
Tax Deposits	10,000	10,000	10,000	-	-
Outside Community Reimbursement - Capital	567,141	561,840	978,406	958,213	1,048,829
State & Federal Grants	741,742	727,094	694,031	679,713	665,397
Total Miscellaneous Revenue	\$ 4,106,583	\$ 4,114,834	\$ 4,527,101	\$ 4,511,929	\$ 4,618,156

6.3.4 Rate Revenue

Annual projected rate revenue is summarized in **Table 6-8**. Rate revenue represents the annual projected revenue collected through EPD user rates and charges. Projected rate revenue includes the impact of BOMA approved 4% annual rate increases through FY 2024.

Table 6-8 Projected Rate Revenue

	2022	2023	2024	2025	2026
Projected Rate Revenue	\$ 19,928,984	\$ 20,726,144	\$ 21,555,190	\$ 22,195,443	\$ 22,195,443
Approved Rate Increase	4.00%	4.00%	4.00%	0.00%	0.00%

Table 6-9 summarizes the total annual projected revenue for EPD, consisting of miscellaneous revenue and rate revenue.

Table 6-9 Total Projected Revenue

	2022	2023	2024	2025	2026
Miscellaneous Revenue	\$ 4,106,583	\$ 4,114,834	\$ 4,527,101	\$ 4,511,929	\$ 4,618,156
Projected Rate Revenue	19,928,984	20,726,144	21,555,190	22,195,443	22,195,443
Total Revenue	\$ 24,035,567	\$ 24,840,978	\$ 26,082,290	\$ 26,707,372	\$ 26,813,598

6.4 Cash Flow Projection and Coverage

Table 6-10 summarizes the projected cash flow and coverage calculations for FY 2022 through FY 2026.

Table 6-10 Projected Cash Flow and Coverage

	2022	2023	2024	2025	2026
Billing Revenues					
Total Rate Revenue	\$ 19,928,984	\$ 20,726,144	\$ 21,555,190	\$ 22,195,443	\$ 22,195,443
Miscellaneous Revenue					
Septage Fees	\$ 925,000	\$ 925,000	\$ 925,000	\$ 925,000	\$ 925,000
Granite Ridge	320,000	320,000	320,000	320,000	320,000
Outside Community Reimbursement - O&M	1,410,000	1,438,200	1,466,964	1,496,303	1,526,229
Interest & Misc. Income (late fees)	132,700	132,700	132,700	132,700	132,700
Tax Deposits	10,000	10,000	10,000	-	-
Outside Community Reimbursement - Capital	567,141	561,840	978,406	958,213	1,048,829
State & Federal Grants	741,742	727,094	694,031	679,713	665,397
Total Miscellaneous Revenue	\$ 4,106,583	\$ 4,114,834	\$ 4,527,101	\$ 4,511,929	\$ 4,618,156

	2022	2023	2024	2025	2026
Total Revenue	\$ 24,035,567	\$ 24,840,978	\$ 26,082,290	\$ 26,707,372	\$ 26,813,598
Operating Expenses					
Personnel	\$ 4,613,516	\$ 4,786,523	\$ 4,966,017	\$ 5,152,243	\$ 5,345,452
O&M	5,588,500	5,728,213	5,871,418	6,018,203	6,168,658
Worker's Compensation and Other Miscellaneous	165,000	169,125	173,353	177,687	182,129
Total Operating Expenses	\$ 10,367,016	\$ 10,683,860	\$ 11,010,788	\$ 11,348,133	\$ 11,696,240
Total Net Revenue for Debt Service	\$ 13,668,551	\$ 14,157,118	\$ 15,071,502	\$ 15,359,239	\$ 15,117,359
2021 Series Bonds	\$ 860,588	\$ 1,948,500	\$ 1,948,500	\$ 1,948,500	\$ 1,948,500
Debt Service Coverage on 2021 Series Bonds	15.88	7.27	7.73	7.88	7.76
Future Revenue Bonds					
2023 Series Bonds	\$ 0	\$ 0	\$ 2,167,171	\$ 4,021,500	\$ 4,115,900
2025 Series Bonds	-	-	-	-	2,537,318
Debt Service Coverage on 2021 Series, 2023 Series, 2025 Series Bonds	15.88	7.27	3.66	2.57	1.76
General Obligation and SRF Debt Service					
Existing SRF Debt Service	\$ 575,366	\$ 564,395	\$ 556,113	\$ 547,830	\$ 539,547
2021B Direct Placement	2,238,152	2,175,657	2,119,911	2,059,701	1,999,947
2021C Direct Placement	1,328,479	1,307,690	1,287,290	1,261,960	1,241,770
Future SRF Debt Service	-	47,775	2,312,772	2,269,186	2,817,285
Total General Obligation and SRF Debt Service	\$ 4,141,997	\$ 4,095,517	\$ 6,276,085	\$ 6,138,676	\$ 6,598,549
Total Debt Service Coverage from Net Revenues	2.73	2.34	1.45	1.27	0.99

In fiscal years where EPD is projected to generate more revenue than expenses, an operating surplus is projected and is assumed available for use to pay for capital expenses. Conversely, in fiscal years where EPD is projected to generate less revenue than expenses, an operating deficit is projected.

EPD is projected to realize annual operating surpluses for FY 2022 through FY 2025. In FY 2026, without any additional rate increases beyond the BOMA approved increases, EPD is projected to experience an operating deficit of \$82,908. If EPD were to increase rates to generate rate revenue sufficient to cover the operating deficit in FY 2026, the projected rate increase in FY 2025 would be approximately 0.4 percent.

As discussed in Section 4 and shown in Table 4-2, EPD is projected to have sufficient cash balances to address the projected operating deficits and fund the proposed capital plan.

APPENDIX E

PROPOSED FORM OF OPINION OF BOND COUNSEL

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HAWKINS

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October [], 2024

Board of Mayor and Aldermen
of the City of Manchester, in the
County of Hillsborough, New Hampshire

Ladies and Gentlemen:

We have acted as bond counsel to the City of Manchester, a municipal corporation of the State of New Hampshire (the “State”), situate in the County of Hillsborough (the “City”), and have examined a record of proceedings relating to the issuance by the City of its \$[] Sewer Revenue Bonds, Series 2024 (Green Bonds) (the “Bonds”).

The Bonds are being issued under and by virtue of Chapter 33-B of the New Hampshire Revised Statutes, as amended (the “Act”), and a resolution duly adopted by the City on August 6, 2024 (the “Authorizing Resolution”), and under and pursuant to a resolution entitled: “General Sewer Revenue Bond Resolution”, adopted on December 9, 2021 (the “General Sewer Bond Resolution”), and a supplemental resolution entitled: “Second Supplemental Resolution Authorizing the Issuance of \$[] City of Manchester, New Hampshire, Sewer Revenue Bonds, Series 2024 (Green Bonds)”, adopted on October [], 2024 (the “Second Supplemental Resolution” and, together with the General Sewer Bond Resolution and all other resolutions supplemental thereto, the “Sewer Bond Resolution”).

The Bonds are dated the date of delivery thereof, and bear interest from such date at the respective interest rates per annum (payable semi-annually on June 1 and December 1 in each year until maturity or earlier redemption, commencing June 1, 2025) and mature on June 1 in the years and in the respective principal amounts, all as set forth below:

<u>Maturity</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Maturity</u>	<u>Principal Amount</u>	<u>Interest Rate</u>
	\$	%		\$	%

The Bonds are payable as to principal or redemption price, if any, at the corporate trust office of The Bank of New York Mellon Trust Company, N.A., Pittsburgh, Pennsylvania (the "Trustee"). Interest on the Bonds is payable to the registered owners thereof whose names appear on the registration books of the City maintained by the Trustee as of the November 15 and May 15 next preceding any interest payment date of the Bonds. The Bonds are each of the denomination of \$5,000 or any integral multiple of \$5,000 in excess thereof, all exchangeable at the expense of the registered owner for fully registered bonds in any other authorized denomination.

The Bonds maturing prior to June 1, [] are not subject to redemption prior to maturity at the option of the City. The Bonds maturing on and after June 1, [] are subject to redemption prior to maturity at the option of the City, in whole or in part, in any order of maturity and by lot within a maturity if less than all the Bonds of such maturity are to be redeemed on any date on or after June 1, [], at a redemption price equal to 100% of the principal amount thereof, together with interest accrued, if any, to the date fixed for redemption.

The Bonds maturing on June 1, [] are subject to mandatory sinking fund redemption on June 1 in each year and in the principal amounts as sinking fund installments set forth below, at a redemption price equal to 100% of the principal amount thereof being redeemed, plus accrued interest to the date fixed for redemption:

Year	Amount
	\$
	†

†Final maturity	

The Bonds maturing on June 1, [] are subject to mandatory sinking fund redemption on June 1 in each year and in the principal amounts as sinking fund installments set forth below, at a redemption price equal to 100% of the principal amount thereof being redeemed, plus accrued interest to the date fixed for redemption:

Year	Amount
	\$
	†

†Final maturity	

The Internal Revenue Code of 1986, as amended (the "Code"), establishes certain ongoing requirements that must be met subsequent to the issuance and delivery of the Bonds in order that interest on the Bonds be and remain excluded from gross income under Section 103 of the Code. We have examined the Arbitrage and Use of Proceeds Certificate of the City delivered in connection with the issuance of the Bonds which contains provisions and procedures regarding compliance with the requirements of the Code. By said Arbitrage and Use of Proceeds Certificate, the City has covenanted that it will comply with the provisions and procedures set forth therein and that it will do and perform all

acts and things necessary or desirable to assure that interest paid on the Bonds is excludable from gross income under Section 103 of the Code. In rendering this opinion, we have assumed that the City will comply with the provisions and procedures set forth in its Arbitrage and Use of Proceeds Certificate.

Based on the foregoing, we are of the opinion that:

1. The City has the right and power to adopt the Authorizing Resolution and the Sewer Bond Resolution under the Act.

2. The Authorizing Resolution and the Sewer Bond Resolution have been duly and lawfully adopted by the City, are in full force and effect, and are valid and binding upon the City and are enforceable against the City.

3. The Sewer Bond Resolution creates the valid pledge which it purports to create of the Revenues (as defined in the Sewer Bond Resolution) and the moneys or securities in certain of the funds, accounts and subaccounts established under the Sewer Bond Resolution, subject to the application thereof to the purposes and on the conditions permitted by the Sewer Bond Resolution. The Bonds are secured solely by such pledge. The Bonds are not general obligations of the City, and the full faith and credit of the City are not pledged for the payment of the Bonds. Neither the State nor any political subdivision of the State (except the City to the limited extent provided herein and in the Sewer Bond Resolution) is obligated to pay the principal of or premium or interest on any of the Bonds, and neither the faith and credit nor the taxing power of the State or any political subdivision of the State is pledged to the payment of the principal of or premium or interest on the Bonds.

4. The Bonds are valid and binding limited obligations of the City enforceable in accordance with their terms and the terms of the Sewer Bond Resolution.

5. All conditions required by the Sewer Bond Resolution precedent to the issuance of the Bonds have been met, and the Bonds have been duly and validly authorized and issued in accordance with the Act, the Authorizing Resolution and the Sewer Bond Resolution.

6. Under existing statutes and court decisions, interest on the Bonds is excluded from gross income for federal income tax purposes pursuant to Section 103 of the Code and interest on the Bonds is not treated as a preference item in calculating the alternative minimum tax imposed on individuals and corporations under the Code, however interest on the Bonds is included in the "adjusted financial statement income" of corporations that are subject to the alternative minimum tax under Section 55 of the Code.

7. Under existing statutes, interest on the Bonds is exempt from the New Hampshire personal income tax on interest.

The foregoing opinions are qualified to the extent that the enforceability of the Bonds, the Authorizing Resolution and the Sewer Bond Resolution may be limited by any applicable bankruptcy, insolvency, reorganization, moratorium, or other laws or equitable principles from time to time in effect relating to the enforcement of creditors' rights generally.

Attention is called to the fact that we have not been requested to examine and have not examined any documents or information relating to the City other than the record of proceedings hereinabove referred to, and no opinion is expressed as to any financial or other information, or the adequacy thereof, which has been or may be supplied to the purchasers of the Bonds.

We express no opinion regarding any other federal, state or local tax consequences arising with respect to the Bonds or the ownership or disposition thereof. We render our opinion under existing statutes and court decisions as of the issue date, and assume no obligation to update, revise or supplement this opinion to reflect any action thereafter taken or not taken, any fact or circumstance that may thereafter come to our attention, any change in law or interpretation thereof that may thereafter occur, or for any reason. We express no opinion as to the consequence of any of the events described in the preceding sentence or the likelihood of their occurrence. In addition, we express no opinion on the effect of any action taken or not taken in reliance upon an opinion of other counsel regarding federal, state or local tax matters, including, without limitation, exclusion from gross income for federal income tax purposes of interest on the Bonds.

Very truly yours,

APPENDIX F

BOOK-ENTRY ONLY SYSTEM

The Depository Trust Company, Brooklyn, New York (“DTC”), will act as securities depository for the Series 2024 Bonds. The Series 2024 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 Series 2024 Bond certificate will be issued for each maturity of the Series 2024 Bonds, each in an aggregate principal amount of such maturity, and will be deposited with DTC.

DTC, the world’s largest 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, as amended. 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 Direct Participants and Indirect Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of Series 2024 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2024 Bonds on DTC’s records. The ownership interest of each actual purchaser of each Series 2024 Bond (“Beneficial Owner”) is in turn to be recorded on the Direct Participant’s and Indirect Participant’s 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 Participant or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2024 Bonds are to be accomplished by entries made on the books of Direct Participants and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in Series 2024 Bonds, except in the event that use of the book-entry system for the Series 2024 Bonds is discontinued.

To facilitate subsequent transfers, all Series 2024 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 the Series 2024 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 Series 2024 Bonds; DTC’s records reflect only the identity of the Direct Participants to whose accounts such Series 2024

Bonds are credited, which may or may not be the Beneficial Owners. The Direct Participants or 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 Series 2024 Bonds within a maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Series 2024 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the City as soon as possible after the Record Date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Series 2024 Bonds are credited on the Record Date (identified in a listing attached to the Omnibus Proxy).

Payment of redemption proceeds and principal and interest payments on the Series 2024 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 City or the Trustee on the payable date in accordance with their respective holdings shown on DTC's records. Payment by Direct Participants and Indirect 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 Direct Participant and Indirect Participant and not of DTC, the Trustee, or the City, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the City or the Trustee, disbursement of such payments to Direct Participants is the responsibility of DTC, and disbursement of such payments to the Beneficial Owners shall be the responsibility of Direct Participants and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the Series 2024 Bonds at any time by giving reasonable notice to the City or the Trustee. Under such circumstances, in the event that a successor securities depository is not obtained, Series 2024 Bond certificates are required to be printed and delivered.

The City may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, bond certificates will be printed and delivered. See "Transfers and Exchanges of Series 2024 Bonds Upon Discontinuance of Book-Entry System" herein.

The above information concerning DTC and DTC's book-entry system has been obtained from sources that the City and the Underwriters believe to be reliable, but neither the City nor the Underwriters takes no responsibility for the accuracy thereof.

NEITHER THE CITY NOR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATIONS TO THE DIRECT PARTICIPANTS OR INDIRECT PARTICIPANTS OR THE BENEFICIAL OWNERS WITH RESPECT TO (1) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT; (2) THE PAYMENT BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF ANY

AMOUNT DUE TO ANY BENEFICIAL OWNER IN RESPECT OF THE PRINCIPAL AMOUNT OR REDEMPTION PRICE OF OR INTEREST ON THE SERIES 2024 BONDS; (3) THE DELIVERY BY DTC OR ANY DIRECT PARTICIPANT OR INDIRECT PARTICIPANT OF ANY NOTICE TO ANY BENEFICIAL OWNER WHICH IS REQUIRED OR PERMITTED UNDER THE TERMS OF THE RESOLUTION TO BE GIVEN TO SERIES 2024 BONDHOLDERS; AND (4) THE SELECTION OF THE BENEFICIAL OWNERS TO RECEIVE PAYMENT IN THE EVENT OF ANY PARTIAL REDEMPTION OF THE SERIES 2024 BONDS; OR (5) ANY CONSENT GIVEN OR OTHER ACTION TAKEN BY DTC AS SERIES 2024 BONDHOLDER.

Each person for whom a Participant acquires an interest in the Series 2024 Bonds, as nominee, may desire to make arrangements with such Participant to receive a credit balance in the records of such Participant, and may desire to make arrangements with such Participant to have all notices of redemption or other communications to DTC, which may affect such persons, to be forwarded in writing by such Participant and to have notification made of all interest payments. NEITHER THE CITY NOR THE TRUSTEE WILL HAVE ANY RESPONSIBILITY OR OBLIGATION TO SUCH PARTICIPANTS OR THE PERSONS FOR WHOM THEY ACT AS NOMINEES WITH RESPECT TO THE SERIES 2024 BONDS.

When reference is made to any action which is required or permitted to be taken by the Beneficial Owners, such reference shall only relate to those permitted to act (by statute, regulation or otherwise) on behalf of such Beneficial Owners for such purposes. When notices are given, they shall be sent by the Trustee to DTC only.

SO LONG AS CEDE & CO. IS THE REGISTERED OWNER OF THE SERIES 2024 BONDS, AS NOMINEE OF DTC, REFERENCES HEREIN TO THE SERIES 2024 BONDOWNERS OR REGISTERED OWNERS OF THE SERIES 2024 BONDS SHALL (OTHER THAN UNDER THE SECTIONS, "TAX MATTERS" AND "SECONDARY MARKET DISCLOSURE" HEREIN) MEAN CEDE & CO. AND SHALL NOT MEAN THE BENEFICIAL OWNERS OF THE SERIES 2024 BONDS.

For every transfer and exchange of the Series 2024 Bonds, the Beneficial Owner may be charged a sum sufficient to cover any tax, fee or other governmental charge that may be imposed in relation thereto.

Transfers and Exchanges of Series 2024 Bonds Upon Discontinuance of Book-Entry System

During any and all times that the Series 2024 Bonds are maintained in a book-entry only system the following transfer and exchange provisions shall not be applicable.

In the event the book-entry only system is discontinued for any reason, each Series 2024 Bond shall be transferable or exchangeable only upon the Series 2024 Bond registration books by the registered holder thereof or by his attorney duly authorized in writing, upon presentation and surrender of such Series 2024 Bond to the Trustee, together with a written instrument of transfer satisfactory in form to the Trustee, duly executed by the registered holder or his duly authorized attorney. Upon the surrender of any Series 2024 Bond or Series 2024 Bonds for transfer or exchange, the Trustee shall redeliver in the name of the transferee or exchange one or more new Series 2024 Bond or Series 2024 Bonds of the same aggregate principal amount, series, maturity and interest rate as the surrendered Series 2024 Bond or Series 2024 Bonds, in any denomination authorized by the Resolution and in the manner and subject to the conditions set forth in the Resolution. All transfers and exchanges shall be made without expense to the registered holder of such Series 2024 Bond, except that the Trustee may require the payment by the registered holder of the Series 2024 Bond requesting such transfer or exchange of any tax or other

governmental charges required to be paid with respect to such transfer or exchange. All transfers or exchanges of Series 2024 Bonds shall be subject to such provisions as may be prescribed from time to time by the City and the Trustee. The City and the Trustee may deem and treat the person in whose name a Series 2024 Bond is registered upon the Series 2024 Bond registration books as the absolute owner of such Series 2024 Bonds for the purpose of receiving payment of the principal of, and redemption price, if any, of and interest on the Series 2024 Bonds and for all other purposes, and they shall not be affected by any notice to the contrary.

