

\$45,680,000

ALEXRENEW

(CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY)

Wastewater Revenue Bonds, Series 2024

(Green Bonds)



Dated: Date of Delivery

Due: July 15, as shown on the inside cover

This Official Statement, prepared by the City of Alexandria, Virginia, Sanitation Authority d/b/a AlexRenew (the "Authority"), provides information on the Authority's Wastewater Revenue Bonds, Series 2024 (Green Bonds) (the "2024 Bonds"), the projects to be financed with a portion of the proceeds of the 2024 Bonds and other information. Selected information is presented on this cover page for the convenience of the user. To make an informed decision regarding the 2024 Bonds, a prospective investor should read this Official Statement in its entirety.

**Tax Matters**

In the opinion of Bond Counsel, under current law and assuming the compliance with certain covenants by the Authority and the accuracy of certain representations and certifications made by certain Authority officials and other persons and entities described in "TAX MATTERS" herein, interest on the 2024 Bonds (i) is excludable from the gross income of the owners thereof for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended (the "Code"), and (ii) is not a specific item of tax preference for purposes of the federal alternative minimum tax imposed on individuals. However, such interest is included in the "adjusted financial statement income" (as defined in Section 56A of the Code) of certain corporations in determining the applicability and amount of the federal corporate alternative minimum tax imposed under Section 55(b) of the Code. See "TAX MATTERS."

Bond Counsel is of the further opinion that interest on the 2024 Bonds is excludable from gross income for purposes of income taxation by the Commonwealth of Virginia.

Bond Counsel expresses no opinion regarding any other tax consequence related to the ownership or disposition of, or the accrual or receipt of interest on, the 2024 Bonds.

See "TAX MATTERS" herein regarding other tax considerations.

**Security**

The 2024 Bonds are limited obligations of the Authority payable solely from Net Revenues (as defined in the hereinafter defined Master Indenture) derived from the Authority's sewer operations and other funds pledged for their payment under the terms of the Master Indenture (as defined below). The 2024 Bonds shall not constitute a pledge of the faith and credit of the Commonwealth of Virginia or any of its political subdivisions, including the Authority or the City of Alexandria, Virginia. The issuance of the 2024 Bonds shall not directly or indirectly or contingently obligate the Commonwealth of Virginia or any of its political subdivisions, including the Authority or the City of Alexandria, Virginia, to levy any taxes or to make any appropriation for their payment except from the funds pledged under the Master Indenture. See "SECURITY AND SOURCES OF PAYMENT FOR THE 2024 BONDS" herein.

**Purpose**

The proceeds of the 2024 Bonds, together with other available funds, will be used to (i) pay all or a portion of the cost of various projects comprising a portion of the System (as defined herein) and (ii) pay the underwriters' discount and other costs of issuance of the 2024 Bonds. See "PLAN OF FINANCE" herein.

**Issued Pursuant To**

The 2024 Bonds will be issued pursuant to a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"), and as further supplemented by a Fourth Supplemental Indenture of Trust dated as of June 1, 2024 (the "Fourth Supplemental Indenture"), between the Authority and U.S. Bank Trust Company, National Association, as successor trustee. **By purchasing the 2024 Bonds, the original purchasers of the 2024 Bonds will be deemed to have consented to certain amendments to the Master Indenture as described herein and as set forth in the Fourth Supplemental Indenture.** See "SECURITY AND SOURCES OF PAYMENT FOR THE 2024 BONDS – Amendments to Master Indenture" herein and "APPENDIX A – COPY OF THE INDENTURE."

**Interest Payment Dates**

January 15 and July 15, beginning January 15, 2025.

**Redemption**

See the inside cover of this Official Statement and the section entitled "DESCRIPTION OF THE 2024 BONDS - Redemption," for a description of the redemption provisions with respect to the 2024 Bonds.

**Green Bonds**

The Authority has designated the 2024 Bonds as "Green Bonds." Kestrel has provided an independent external review and opinion that the 2024 Bonds conform with the four core components of the International Capital Market Association Green Bond Principles, and therefore qualify for the Green Bonds designation. See "DESCRIPTION OF THE 2024 BONDS – Designation of the 2024 Bonds as Green Bonds" herein and "APPENDIX E – SECOND PARTY OPINION FROM KESTREL."

**Registration**

Book-Entry Only; The Depository Trust Company. See "DESCRIPTION OF THE 2024 BONDS - Book-Entry Only System" herein.

**Closing/Delivery Date**

On or about June 25, 2024.

**Trustee/Registrar/Paying Agent**

U.S. Bank Trust Company, National Association.

**Bond Counsel/Authority Counsel**

McGuireWoods LLP, Richmond, Virginia.

**Underwriters' Counsel**

Norton Rose Fulbright US LLP, Washington, D.C.

**Financial Advisor**

PFM Financial Advisors LLC, Arlington, Virginia.

The 2024 Bonds are offered when, as and if issued by the Authority, subject to receipt of the approving legal opinion of McGuireWoods LLP, Richmond, Virginia, Bond Counsel. Certain legal matters will be passed upon for the Authority by McGuireWoods LLP, Richmond, Virginia, and for the Underwriters by Norton Rose Fulbright US LLP, Washington, D.C. It is anticipated that the 2024 Bonds will be available for delivery in book-entry form through the facilities of DTC in New York, New York on or about June 25, 2024.

**Siebert Williams Shank & Co., LLC**

**Loop Capital Markets**

**Wells Fargo Securities**

**ALEXRENEW**  
**(CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY)**  
**\$45,680,000**  
**Wastewater Revenue Bonds, Series 2024**  
**(Green Bonds)**

**(Base CUSIP\*\* Number 015343)**

MATURITIES, AMOUNTS, INTEREST RATES, PRICES, YIELDS AND CUSIPS

<u>Year Of Maturity (July 15)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Price</u>	<u>Yield</u>	<u>CUSIP** Suffix</u>	<u>Year Of Maturity (July 15)</u>	<u>Principal Amount</u>	<u>Interest Rate</u>	<u>Price</u>	<u>Yield</u>	<u>CUSIP** Suffix</u>
2025	\$670,000	5.000%	101.726	3.320%	AA4	2036	\$1,165,000	5.000%	115.743*	3.160%	AM8
2026	705,000	5.000	103.370	3.290	AB2	2037	1,225,000	5.000	114.906*	3.250	AN6
2027	745,000	5.000	105.287	3.170	AC0	2038	1,290,000	5.000	114.629*	3.280	AP1
2028	780,000	5.000	106.911	3.170	AD8	2039	1,355,000	5.000	114.169*	3.330	AQ9
2029	820,000	5.000	108.728	3.120	AE6	2040	1,425,000	5.000	112.982*	3.460	AR7
2030	865,000	5.000	110.240	3.130	AF3	2041	1,495,000	5.000	112.260*	3.540	AS5
2031	905,000	5.000	111.754	3.130	AG1	2042	1,575,000	5.000	111.364*	3.640	AT3
2032	955,000	5.000	113.222	3.130	AH9	2043	1,655,000	5.000	110.831*	3.700	AU0
2033	1,005,000	5.000	114.729	3.120	AJ5	2044	1,740,000	5.000	110.654*	3.720	AV8
2034	1,055,000	5.000	116.305	3.100	AK2	2045	1,830,000	5.000	110.212*	3.770	AW6
2035	1,110,000	5.000	116.117*	3.120	AL0	2046	1,920,000	5.000	109.949*	3.800	AX4

\$6,380,000 5.000% Term Bond Due July 15, 2049, Yield 3.860% Price 109.423\* - CUSIP\*\* 015343 AY2

\$13,010,000 5.000% Term Bond Due July 15, 2054, Yield 3.920% Price 108.901\* - CUSIP\*\* 015343 AZ9

\* Priced to the first optional redemption date of July 15, 2034.

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\*\* A registered trademark of the American Bankers Association ("ABA"). CUSIP Global services (CGS) is managed on behalf of the ABA by FactSet Research Systems Inc. The above CUSIP numbers have been assigned by an organization not affiliated with the Authority, and the Authority is not responsible for the selection or use of the CUSIP numbers. The CUSIP numbers are included solely for the convenience of bondholders, and no representation is made as to the correctness of such CUSIP numbers. CUSIP numbers assigned to securities may be changed during the term of such securities based on a number of factors including, but not limited to, the refunding or defeasance of such securities or the use of secondary market financial products. The Authority has not agreed to, and there is no duty or obligation to, update this Official Statement to reflect any change or correction in the CUSIP numbers set forth above.

**ALEXRENEW**

1800 Limerick Street  
Alexandria, Virginia 22314

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**BOARD OF DIRECTORS**

John Hill, Chair  
James Beall, Vice-Chair  
Adriana Caldarelli, Secretary-Treasurer  
Rebecca Hammer  
Mark Jinks

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**SENIOR STAFF**

Justin Carl, General Manager and Chief Executive Officer  
Caitlin Feehan, Chief Administrative Officer  
Lake Akinkugbe, Director of Finance  
Amanda Waters, General Counsel and Deputy General Manager

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**BOND COUNSEL AND AUTHORITY COUNSEL**

McGuireWoods LLP  
Richmond, Virginia

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**FINANCIAL ADVISOR**

PFM Financial Advisors LLC  
Arlington, Virginia

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**CERTIFIED PUBLIC ACCOUNTANTS**

Yount, Hyde & Barbour, P.C.

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Additional information regarding the Authority can be found at  
[www.alexrenew.com/about-us](http://www.alexrenew.com/about-us).

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**The 2024 Bonds are exempt from registration under the Securities Act of 1933, as amended. The 2024 Bonds are also exempt from registration under the securities laws of the Commonwealth of Virginia.**

No dealer, broker, salesperson or other person has been authorized by the Authority to give any information or to make any representations other than those contained in this Official Statement, and if given or made, such other information or representations must not be relied upon as having been authorized by the Authority. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the 2024 Bonds by any person in any jurisdiction in which it is unlawful for such person to make an offer, solicitation or sale. This Official Statement is not to be construed as a contract or agreement between the Authority and the purchasers or owners of any of the 2024 Bonds. The information and expressions of opinion in this Official Statement are subject to change without notice, and neither the delivery of this Official Statement nor any sale made under it will, under any circumstances, create any implication that there has been no change in the affairs of the Authority since the respective dates as of which information is given herein.

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All quotations from, and summaries and explanations of, provisions of law and documents herein do not purport to be complete, and reference is made to such laws and documents for full and complete statements of their provisions. Any statements made in this Official Statement involving estimates or matters of opinion, whether or not expressly so stated, are intended merely as estimates or opinions and not as representations of fact.

This Official Statement contains statements which, to the extent they are not recitations of historical fact, constitute "forward-looking statements." In this respect, the words, "estimate," "project," "anticipate," "expect," "intend," "believe" and similar expressions are intended to identify forward-looking statements. A number of factors affecting the Authority's financial results could cause actual results to differ materially from those stated in the forward-looking statements.

The 2024 Bonds have not been registered under the Securities Act of 1933, as amended, and the Indenture has not been qualified under the Trust Indenture Act of 1939, as amended, in reliance upon exemptions contained in the acts. The registration or qualification of the 2024 Bonds in accordance with applicable provisions of laws of the jurisdictions in which the 2024 Bonds have been registered or qualified and the exemption from registration or qualification in other jurisdictions cannot be regarded as a recommendation thereof. Neither these states nor any of their agencies have passed upon the merits of the 2024 Bonds or the accuracy or completeness of this Official Statement. Any representation to the contrary may be a criminal offense.

The Underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the 2024 Bonds, including transactions to (a) over allot in arranging the sales of the 2024 Bonds and (b) make purchases and sales of bonds, for long or short account on a when-issued basis or otherwise, at such prices, in such amounts and in such manner as the Underwriters may determine.

The Underwriters have provided the following sentence for inclusion in this Official Statement. The Underwriters have reviewed the information in this Official Statement in accordance with, and as part of, their responsibilities to investors under federal securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guarantee the accuracy or completeness of such information.

References to web site 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 web sites and the information or links contained therein are not incorporated into, and are not part of, this Official Statement for any purpose.



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## OFFICIAL STATEMENT

**\$45,680,000**

**ALEXRENEW**

**(CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY)**

**Wastewater Revenue Bonds, Series 2024**

**(Green Bonds)**

### INTRODUCTION

The purpose of this Official Statement, which includes the cover and the attached appendices, is to set forth certain information in connection with the issuance of \$45,680,000 Wastewater Revenue Bonds, Series 2024 (Green Bonds) (the "2024 Bonds"), by the City of Alexandria, Virginia, Sanitation Authority d/b/a AlexRenew (the "Authority"), a public body politic and corporate of the Commonwealth of Virginia (the "Commonwealth").

The 2024 Bonds are being issued in accordance with the provisions of (i) the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2, Code of Virginia of 1950, as amended (the "Enabling Act"), (ii) a resolution adopted by the Board of Directors of the Authority (the "Board") on May 21, 2024, and (iii) a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"), and as further supplemented by a Fourth Supplemental Indenture of Trust dated as of June 1, 2024 (the "Fourth Supplemental Indenture" and, together with the Master Indenture, the "Indenture"), each between the Authority and U.S. Bank Trust Company, National Association, as successor trustee (in such capacity, the "Trustee").

For the definitions of terms used in this Official Statement and not otherwise defined, see **"APPENDIX A - COPY OF THE INDENTURE."**

The 2024 Bonds will be issued in authorized denominations of \$5,000 or integral multiples of \$5,000. The 2024 Bonds will be held in book-entry form by The Depository Trust Company ("DTC"), or its nominee, as securities depository with respect to the 2024 Bonds. The 2024 Bonds will be subject to optional redemption before maturity. See **"APPENDIX G – BOOK-ENTRY ONLY SYSTEM"** and the section **"DESCRIPTION OF THE 2024 BONDS - Redemption."**

The 2024 Bonds will be limited obligations of the Authority payable solely from Net Revenues (as defined in the Master Indenture) derived by the Authority from the ownership and operation of its sewage disposal and sewage system (the "System"), and other funds pledged for their payment under the terms of the Master Indenture. The 2024 Bonds shall not constitute a pledge of the faith and credit of the Commonwealth or any of its political subdivisions, including the Authority or the City of Alexandria, Virginia (the "City"). The issuance of the 2024 Bonds shall not directly or indirectly or contingently obligate the Commonwealth or any of its political subdivisions, including the Authority or the City, to levy any taxes or to make any appropriation for this payment except from the funds pledged under the Master Indenture. The Authority does not have taxing power. See the section **"SECURITY AND SOURCES OF PAYMENT FOR THE 2024 BONDS."**

Under the Master Indenture, the Authority covenants to fix, charge, collect and revise its rates, fees and other charges for the use of and for the services furnished by the System in each Fiscal Year, so as to produce revenues sufficient to pay the cost of operation and maintenance, the cost of necessary replacements and improvements, and debt service on the 2024 Bonds and on all other indebtedness of the Authority and to provide certain reserves therefor. See the section **"SECURITY AND SOURCES OF PAYMENT FOR THE 2024 BONDS - Revenue Covenant."**

By purchasing the 2024 Bonds, the original purchasers of the 2024 Bonds will be deemed to have consented to certain amendments to the Master Indenture as described herein and as set forth in the Fourth Supplemental Indenture. See **"APPENDIX A – COPY OF THE INDENTURE"** and the section **"SECURITY AND SOURCES OF PAYMENT FOR THE 2024 BONDS – Amendments to Master Indenture."**

This Official Statement should be considered in its entirety, and no one subject discussed should be considered less important than any other by reason of its location in the text. Reference should be made to the laws, reports or other documents referred to in this Official Statement, including the Indenture, in their entirety for more complete information regarding their contents.

## Outstanding Parity Debt

The 2024 Bonds are being issued as "Parity Indebtedness" under the Master Indenture and will be secured on a parity basis with the Authority's outstanding existing Parity Indebtedness and any Additional Bonds or additional Parity Indebtedness issued under the Master Indenture. The 2024 Bonds, together with all other Parity Indebtedness, are not secured by the Debt Service Reserve Fund, the Project Fund or the Bond Fund under the Master Indenture. Set forth in the following chart are the issue dates, original principal amounts and outstanding principal amounts of the twelve outstanding issues of Parity Indebtedness (not including the 2024 Bonds) (the "Outstanding Parity Debt"), all of which is held by the Environmental Protection Agency, or Virginia Resources Authority on its own or for the benefit of the Virginia Clean Water Revolving Loan Fund:

**Table 1: Outstanding Parity Debt**

<u>Outstanding Parity Debt</u>	<u>Issue Date</u>	<u>Original Principal Amount</u>	<u>Outstanding Principal Amount as of June 1, 2024</u>
Sewer Revenue Bond, Series 2004	06/25/2004	\$22,000,000	\$708,663
Sewer Revenue Bond, Series 2006A	01/20/2006	3,000,000	100,323
Sewer Revenue Bond, Series 2006B	06/29/2006	12,000,000	2,211,612
Sewer Revenue Bond, Series 2009	12/31/2009	15,000,000	4,967,167
Sewer Revenue Bond, Series 2011	11/30/2011	8,115,767	4,388,482
Sewer Revenue Bond, Series 2014A	06/19/2014	12,500,000	7,885,220
Sewer Revenue Bond, Series 2014B	06/19/2014	2,500,000	1,514,941
Sewer Revenue Bond, Series 2014C	10/19/2014	19,515,000	18,130,000
Sewer Revenue and Refunding Bond, Series 2017	04/24/2017	23,000,000	21,820,000
Sewer Revenue Bond, Series 2019	10/24/2019	10,400,000	6,120,605
Sewer Revenue Bonds, Series 2021A <sup>(1)</sup>	02/03/2021	320,992,641	96,258,214
Sewer Revenue Bond, Series 2021B	02/04/2021	185,650,000	182,453,925
<b>Total</b>		<b>\$634,673,408</b>	<b>\$346,559,152</b>

Note: (1) The Authority is still drawing funds under the Series 2021A Bonds and is authorized to draw up to the original principal amount as shown in the table above, plus capitalized interest. Based on grants received after the closing of the Series 2021A Bonds, the Authority anticipates it will draw significantly less than the full authorized amount.

The 2024 Bonds, the Outstanding Parity Debt and any other Parity Indebtedness subsequently issued in accordance with the provisions of the Master Indenture are referred to in this Official Statement as "Parity Indebtedness."

Under the Indenture the Authority is permitted to issue two types of senior-secured debt: Parity Indebtedness and Bonds. Both classes of debt are secured on parity with each other and senior to any other debt of the Authority. Bonds issued under the Indenture are secured by the Debt Service Reserve Fund. Because the 2024 Bonds will not be secured by the Debt Service Reserve Fund, they are classified as Parity Indebtedness for purposes of the Indenture. The Authority has no plans to issue senior debt under the Indenture that is classified as Bonds and only expects to issue senior debt in the future as Parity Indebtedness.

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## Subordinate Debt

The Authority may also incur Subordinate Debt secured by a pledge of Net Revenues that is expressly made subordinate to the pledge of Net Revenues securing the 2024 Bonds and any Parity Indebtedness or Bonds that are issued under the Indenture. The Authority may also issue unsecured debt (though the Authority has no unsecured debt outstanding and has no plans to issue any). Set forth in the following chart is the issue date, original principal amount and outstanding principal amount of the outstanding issue of Subordinate Debt (the "Outstanding Subordinate Debt"):

**Table 2: Outstanding Subordinate Debt**

<u>Outstanding Subordinate Debt</u>	<u>Issue Date</u>	<u>Maximum Principal Amount</u>	<u>Outstanding Principal Amount as of June 1, 2024</u>
Sewer System Subordinate Revolving Credit Note, Series 2020	02/25/2020	\$60,000,000 <sup>(1)</sup>	\$0

Note: (1) The maximum principal amount of the Series 2020 Note was increased from \$30,000,000 to \$60,000,000 in Fiscal Year 2023. The Authority paid the balance of the Series 2020 Note in November 2023, and there are no outstanding draws on the Series 2020 Note as of the date of this Official Statement.

See Notes 5 and 6 in "APPENDIX B – FINANCIAL STATEMENTS OF THE AUTHORITY FOR THE FISCAL YEAR ENDED JUNE 30, 2023."

## PLAN OF FINANCE

The Authority is issuing the 2024 Bonds and using the proceeds thereof, together with other available funds, to (i) pay all or a portion of the cost of various projects comprising a portion of the System and (ii) pay the underwriters' discount and other costs of issuance of the 2024 Bonds.

## SOURCES AND USES OF FUNDS

The following table summarizes the anticipated application of the proceeds of the 2024 Bonds to carry out the Plan of Finance described above.

### Estimated Sources and Application of Funds

#### *Sources of Funds:*

Par Amount of the 2024 Bonds	\$ 45,680,000.00
Net Original Issue Premium on the 2024 Bonds	<u>4,816,061.50</u>
<i>Total Sources of Funds .....</i>	<u>\$ 50,496,061.50</u>

#### *Uses of Funds:*

Project Fund Deposit	\$ 50,000,000.00
Costs of Issuance <sup>(1)</sup>	<u>496,061.50</u>
<i>Total Uses of Funds .....</i>	<u>\$ 50,496,061.50</u>

Note: (1) Includes underwriters' discount, legal, trustee, financial advisory, rating, printing and other costs of issuing the 2024 Bonds.

## DESCRIPTION OF THE 2024 BONDS

### General

The 2024 Bonds will be dated their date of delivery and will mature on July 15 in the years and amounts and bear interest at the rates set forth on the inside cover page of this Official Statement. Interest on the 2024 Bonds will be payable semi-annually on January 15 and July 15, commencing January 15, 2025. The Trustee will act as paying agent for the 2024 Bonds under the Indenture. The 2024 Bonds will be subject to optional redemption prior to their

stated maturities as described herein. The record dates for the payment of principal and interest on the 2024 Bonds are January 1 and July 1 in the years in which principal or interest, as applicable, is to be paid.

### **Designation of the 2024 Bonds as Green Bonds**

*Project Overview.* The Authority anticipates that the proceeds of the 2024 Bonds will fund the Solids Upgrade Program (the "Solids Upgrade Program"), the Preliminary and Primary System Upgrades Project (the "PPSU Project"), and the Tertiary Systems Upgrade Project (the "Tertiary Systems Upgrade Project").

The Solids Upgrade Program will improve solids handling, disposal, and volume reduction options, to address short-term operational reliability and long-term planning for the Authority's solids processes. To address short-term operational reliability, the first phase of the Solids Upgrade Program will upgrade the digestion, centrifuges, mixing systems, and gravity thickeners. The short-term improvements will be implemented through a Construction Management At-Risk contract, which is anticipated to begin in Fiscal Year 2025 and be completed in December 2026. To address long-term planning and identify priorities for future phases of upgrades to the Authority's solids processes, while the first phase is underway, the Authority is also preparing a 20-year Solids Master Plan. The Capital Improvement Program (as defined herein) includes \$252 million for the Solids Upgrade Program between Fiscal Year 2025 and Fiscal Year 2034, with 60% of the capital costs for the Solids Upgrade Program coming from Fairfax County.

The PPSU Project will upgrade the existing, aging preliminary and primary treatment systems that are nearing the end of their useful life to improve operational performance and reliability. An initial assessment identified improvements that will be implemented through a Construction Management At-Risk contract, which is anticipated to begin in Fiscal Year 2025. The Capital Improvement Program includes \$80.95 million for the PPSU Project between Fiscal Year 2025 and Fiscal Year 2031, with 60% of the capital costs for the PPSU Project coming from Fairfax County.

The Tertiary Systems Upgrade Project will repair and upgrade the tertiary filters, settling tanks, and chemical dosing systems that are nearing the end of their useful life to improve system reliability. Design of the recommended repairs is scheduled to begin in Fiscal Year 2025, with construction expected to begin in Fiscal Year 2027. The Capital Improvement Program includes \$36.10 million for the Tertiary Systems Upgrade Project between Fiscal Year 2025 and Fiscal Year 2029, with 60% of the capital costs for the Tertiary Systems Upgrade Project coming from Fairfax County.

Notwithstanding the anticipated use of funds, the Authority is authorized to use proceeds of the 2024 Bonds on any authorized capital projects.

*Rationale for Designation.* The Authority is designating the 2024 Bonds as "Green Bonds," based on the environmental benefits of the projects to be financed with the proceeds of the 2024 Bonds. Per the International Capital Market Association ("ICMA"), Green Bonds are any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance, in part or in full, new and existing eligible green projects and which are aligned with the four core components of the Green Bond Principles. The four core components are: (1) Use of Proceeds; (2) Process for Project Evaluation and Selection; (3) Management of Proceeds; and (4) Reporting.

The Authority has engaged Kestrel to conduct an independent, external review of the proposed use of proceeds of the 2024 Bonds and their conformance with the ICMA Green Bond Principles. Kestrel has determined that the 2024 Bonds are in conformance with the four core components of the ICMA Green Bond Principles, as described in Kestrel's Second Party Opinion (the "Second Party Opinion"), which is attached hereto as **APPENDIX E**.

*The repayment obligations of the Authority with respect to the 2024 Bonds are not conditioned on the completion of any particular project or the satisfaction of any condition relating to the status of the 2024 Bonds as Green Bonds. The Authority does not assume any obligation to ensure compliance with any legal or other principles of Green Bonds as such principles may evolve over time. The term Green Bonds is used herein for identification purposes only and is not intended to provide or imply that holders of 2024 Bonds are entitled to any additional security or benefits other than as provided in the Indenture.*

*Use of 2024 Bond Proceeds.* As described more fully in "**APPENDIX E – SECOND PARTY OPINION FROM KESTREL**," the Solids Upgrade Program, the PPSU Project, and the Tertiary Systems Upgrade Project are eligible projects as defined by ICMA's Green Bond Principles in the Sustainable Wastewater Management category.

*Process for Project Evaluation and Selection.* As described in more detail in the section "**THE AUTHORITY – Environmental Priorities and Efforts**," the Authority cleans more than 13 billion gallons of water annually, adhering to some of the highest standards in the country. The Authority seeks to maximize the reuse of all available resources in its processes to create a sustainable operation that saves money and reduces greenhouse gases. The Authority's Strategic Plan provides a framework for building a more resilient, sustainable, and equitable organization. One of the five strategic goals within the Strategic Plan is "Environmental Sustainability." The specific objectives within that goal include:

- Integrate sustainability into infrastructure investment and operations.
- Strive toward net carbon zero operations.
- Recover and beneficially reuse resources from wastewater.

All capital projects that the Authority authorizes are viewed through the lens of the Strategic Plan.

*Management of 2024 Bond Proceeds.* The net proceeds of the 2024 Bonds remaining after payment of issuance costs will be used by the Authority to pay costs of authorized capital projects. Such amounts will be tracked and disbursed for such purpose and, pending disbursement, will be invested in accordance with the Indenture and Virginia law.

*Green Bond Reporting.* The Authority expects to report annually on a voluntary basis on the disbursement of the proceeds of the 2024 Bonds until construction is complete on the components of the Solids Upgrade Program, the PPSU Project and the Tertiary Systems Upgrade Project that are being financed with the proceeds of the 2024 Bonds. The Authority's voluntary disclosure undertaking is further described under "**LIMITED VOLUNTARY CONTINUING DISCLOSURE**." The Authority may modify, amend or discontinue the voluntary disclosure at any time in its sole discretion without the consent of the holders of the 2024 Bonds.

*Mapping to the United Nations Sustainable Development Goals ("UN SDGs").* Kestrel has concluded that the environmental use of the proceeds of the 2024 Bonds are expected to contribute to the UN SDGs adopted by the United Nations General Assembly in September 2015, specifically "Goal 6: Clean Water and Sanitation," "Goal 9: Industry, Innovation and Infrastructure," and "Goal 12: Responsible Consumption and Production." Additional information related to the UN SDG targets is provided in "**APPENDIX E – SECOND PARTY OPINION FROM KESTREL**."

### **Independent Second Party Opinion on Green Bonds Designation**

For over 20 years, Kestrel has been consulting in sustainable finance. Kestrel is an Approved Verifier accredited by the Climate Bonds Initiative and an Observer for the ICMA Green Bond Principles and Social Bond Principles. Kestrel reviews transactions in all asset classes worldwide for alignment with ICMA Green Bond Principles, Social Bond Principles, Sustainability Bond Guidelines and the Climate Bonds Initiative Standards and Criteria.

The Second Party Opinion does not and is not intended to make any representation or give any assurance with respect to any other matter relating to the 2024 Bonds. Second Party Opinions provided by Kestrel are not a recommendation to any person to purchase, hold, or sell the 2024 Bonds, and designations do not address the market price or suitability of the 2024 Bonds for a particular investor and do not and are not in any way intended to address the likelihood of timely payment of interest or principal when due.

In issuing the Second Party Opinion, Kestrel has assumed and relied upon the accuracy and completeness of the information made publicly available by the Authority or that was otherwise made available to Kestrel.

## Redemption

*Optional Redemption.* The 2024 Bonds maturing on or prior to July 15, 2034, are not subject to optional redemption prior to maturity. The 2024 Bonds maturing on or after July 15, 2035, are subject to redemption prior to their respective maturities at the option of the Authority on or after July 15, 2034, in whole or in part (in increments of \$5,000) at any time, at par plus unpaid interest accrued on the principal amount to be redeemed to the date fixed for redemption.

*Mandatory Sinking Fund Redemption.* The 2024 Bonds maturing on July 15, 2049, are subject to mandatory sinking fund redemption in part, on July 15 in the years and in amounts set forth below, at a redemption price equal to 100% of the principal amount of such 2024 Bonds to be redeemed plus the unpaid interest accrued thereon to the date fixed for redemption, all in the manner provided in the Indenture:

<u>Year</u>	<u>Amount</u>
2047	\$2,020,000
2048	2,125,000
2049*	2,235,000

\*Stated maturity

The 2024 Bonds maturing on July 15, 2054, are subject to mandatory sinking fund redemption in part, on July 15 in the years and in amounts set forth below, at a redemption price equal to 100% of the principal amount of such 2024 Bonds to be redeemed plus the unpaid interest accrued thereon to the date fixed for redemption, all in the manner provided in the Indenture:

<u>Year</u>	<u>Amount</u>
2050	\$2,350,000
2051	2,470,000
2052	2,595,000
2053	2,730,000
2054*	2,865,000

\*Stated maturity

*Notice of Redemption.* Notice of redemption will be given by the Trustee to DTC by first class mail, postage prepaid, not less than 30 nor more than 60 days before the date fixed for redemption. Notice of redemption will be given to the Beneficial Owners of the 2024 Bonds as described in "**APPENDIX G – BOOK-ENTRY ONLY SYSTEM.**"

Each notice of redemption will contain, among other things, the CUSIP identification number and the number of the 2024 Bonds (or portions thereof) being called for redemption, the redemption date and price and the address at which the 2024 Bonds are to be surrendered for payment of the redemption price. Such notice may state that the redemption of the 2024 Bonds to be redeemed is conditioned upon the occurrence of certain future events, including, without limitation, the deposit with the Trustee of moneys sufficient to effect the redemption on or before the date fixed therefor.

Any defect in such notice or the failure to mail any such notice to the registered owner of any 2024 Bond called for redemption will not affect the validity of the proceedings for the redemption of any other 2024 Bond. As long as the book-entry only system is used for determining ownership of the 2024 Bonds, the Authority shall send notice to DTC or its nominee, or its successor. Any failure of DTC or its nominee or of a Direct Participant or Indirect Participant, each as hereinafter defined, to notify a Direct Participant, Indirect Participant or Beneficial Owner of any 2024 Bonds called for redemption will not affect the validity of the proceedings for the redemption of such 2024 Bond.

If less than all of the 2024 Bonds are called for redemption, the maturities of such 2024 Bonds to be redeemed shall be selected by the Director of Finance of the Authority in such manner as he or she may determine. So long as



a book-entry system is used for determining beneficial ownership of the 2024 Bonds, if less than all of the 2024 Bonds within a maturity are to be redeemed, DTC and its participants shall determine which of the 2024 Bonds within a maturity are to be redeemed.

## **SECURITY AND SOURCES OF PAYMENT FOR THE 2024 BONDS**

The 2024 Bonds will be issued as Parity Indebtedness under the Master Indenture. The 2024 Bonds will be equally and ratably secured by the Master Indenture with the Outstanding Parity Debt, any additional Parity Indebtedness issued in the future, and any Bonds that may be issued in the future. The 2024 Bonds will be limited obligations of the Authority payable (except to the extent payable from the proceeds of the 2024 Bonds or the income, if any, derived from the investment thereof) solely from Net Revenues derived from the ownership or operation of the System, certain reserves, income from investments and proceeds of insurance pledged for their payment under the Master Indenture.

Under the Master Indenture, the Authority pledges to the Trustee for the payment of the principal of and premium, if any, and interest on any Parity Indebtedness and Bonds, on an equal and ratable basis all Net Revenues derived from the operation of the System, subject only to the right of the Authority to make application of such revenues to other purposes, including application to the payment of Operating Expenses, as set forth in the Master Indenture. Parity Indebtedness, including the 2024 Bonds, is not secured by the Debt Service Reserve Fund, the Project Fund or the Bond Fund.

The Master Indenture does not convey or mortgage the System. The Authority has covenanted not to place any liens on the System except those liens expressly permitted by the Master Indenture. See "**APPENDIX A – COPY OF THE INDENTURE.**"

**In accordance with the Enabling Act, the 2024 Bonds and the premium, if any, and the interest on them shall not constitute a pledge of the faith and credit of the Commonwealth or any of its political subdivisions, including the Authority or the City. The issuance of the 2024 Bonds does not directly or indirectly or contingently obligate the Commonwealth or any of its political subdivisions, including the Authority or the City, to levy any taxes or to make any appropriation for the payment of the 2024 Bonds except from the funds pledged under the Master Indenture. The Authority has no taxing power.**

### **Revenue Covenant**

The Master Indenture provides that the Authority will establish, fix, charge, collect and revise the rates, fees and charges for the use of and for the services furnished by the System, so that in each Fiscal Year Net Revenues are not less than the sum of (i) 1.1 times Senior Debt Service for the Fiscal Year, excluding the Share of Fairfax County, Virginia ("Fairfax County") of the Bond Debt Service on any Fairfax County-Authority Bonds and (ii) 1.0 times the sum of Subordinate Debt Service and the Share of Fairfax County of the Bond Debt Service on any Fairfax County-Authority Bonds for the Fiscal Year (the "Revenue Covenant"). No Fairfax County-Authority Bonds, as defined in the Master Indenture, have been issued to date. See "**APPENDIX A – COPY OF THE INDENTURE.**"

### **Not Secured by the Debt Service Reserve Fund**

The 2024 Bonds are not secured by any Debt Service Reserve Fund. While the Master Indenture requires the Authority to establish a Debt Service Reserve Fund, the Authority is only required to maintain it if the Authority issues senior debt classified as Bonds for purposes of the Master Indenture, which the Authority has not. Accordingly, there are no funds deposited in the Debt Service Reserve Fund. See "**APPENDIX A – COPY OF THE INDENTURE.**"

### **Additional Parity Indebtedness and Bonds**

The Master Indenture permits the Authority to issue, subject to certain restrictions, one or more series of Parity Indebtedness or Bonds ("Additional Parity Debt"), equally and ratably secured with the Outstanding Parity Debt, including the 2024 Bonds, to pay the cost of (i) acquiring, renovating, equipping or constructing improvements,

extensions, additions or replacements to the System or (ii) refunding any Bonds or other Authority obligations previously issued or incurred by the Authority for such purposes. In addition, the Authority may at any time issue one or more series of bonds having a lien on revenues of the System subordinate to the lien securing the Parity Indebtedness, the Bonds, and any Additional Bonds. See "**APPENDIX A – COPY OF THE INDENTURE.**"

In the case of Additional Parity Debt issued to pay the cost of acquiring, renovating, equipping or constructing improvements, extensions, additions or replacements to the System, the Additional Parity Debt may be issued only upon (i) receipt of the Consulting Engineer's written (a) estimate of the costs of the acquisition, renovation, equipping or construction (including all financing, reserves and related costs) and the completion date thereof and (b) opinion that the proceeds of the Additional Parity Debt, together with other money available or anticipated to be available for such purpose, will be sufficient to pay such costs; and (ii) receipt of either a written (a) certificate of the Consulting Engineer or an independent certified public accountant that states that either (1) during any 12 consecutive months of the 18 months preceding the issuance of the proposed Additional Parity Debt or (2) based on the most recent audit of the Authority, the Authority would have been in compliance with the Revenue Covenant, taking into account the maximum senior-secured Debt Service due on the proposed Additional Parity Debt in the current or any future Fiscal Year and those rates, fees and other charges which are in effect at the time of the delivery of the proposed Additional Parity Debt, or (b) statement of the Consulting Engineer that projects Operating Expenses, Revenues and Net Revenues for two full Fiscal Years following the anticipated completion of the acquisition, renovation, equipping or construction, and demonstrates that, on the basis of such projection, the Authority can comply with the Revenue Covenant, taking into account those rates, fees and other charges that are in effect at the time of the delivery of the proposed Additional Parity Debt and future increases as may be required to continue to comply with the Revenue Covenant. See "**APPENDIX A – COPY OF THE INDENTURE.**"

#### **Flow of Funds**

The Master Indenture provides that the Authority will collect and deposit in the Revenue Fund all Revenues derived from the ownership or operation of the System, except as otherwise provided for in the Master Indenture for investment income on certain funds and accounts created by the Master Indenture. Not later than the fifth business day before the end of each month, the Authority will make transfers from the Revenue Fund in the following order of priority:

*Operating Fund.* An amount such that the balance on deposit in the Operating Fund will be equal to not less than one-sixth of the Operating Expenses budgeted to be paid from the Operating Fund in the then-current Fiscal Year as set forth in the annual budget for the System.

*Parity Debt Service Fund.* An amount with respect to any Parity Indebtedness such that (after taking into consideration the amount then on deposit in the Parity Debt Service Fund and any amounts to be drawn or paid under any Credit Facility for deposit to the Parity Debt Service Fund) if the same amount is transferred to the Parity Debt Service Fund each month preceding the next ensuing Interest Payment Date or Principal Payment Date for the Parity Indebtedness, there will be on deposit in the Parity Debt Service Fund an amount equal to the payment due on the Parity Indebtedness on such payment date.

*Bond Fund and Debt Service Reserve Fund.* If the Authority issues any senior-secured debt that is classified as Bonds for purposes of the Indenture, the Authority must make periodic transfers to the Bond Fund and the Debt Service Reserve Fund of the amounts needed to pay principal and interest (in the case of the Bond Fund) or the amounts needed to ensure that the Debt Service Reserve Fund has on deposit an amount equal to at least the Debt Service Reserve Requirement.

*Improvement, Renewal and Replacement Fund.* The amount necessary to make the following deposits:

(a) *Joint Use Facilities Account.* An amount equal to one-twelfth of the Authority's Share of the Annual Joint Use Facilities Account Deposit for the then-current Fiscal Year; provided, however, that if any Fairfax County-Authority Bonds are then Outstanding, such deposit shall be equal to one-twelfth of the entire Annual Joint Use Facilities Account Deposit for the then-current Fiscal Year.

(b) *General Account.* Such amount as may be determined by the Authority.

*Subordinate Debt Service Fund.* Such amount with respect to any Subordinate Debt as may be determined by the Authority to be necessary to provide for the payment when due of the principal of and interest on the Subordinate Debt.

Any balance remaining in the Revenue Fund, after making the above deposits, will be deposited in the General Fund.

In the event there are insufficient funds in the Revenue Fund to make the transfers required by the Bond Fund and the Parity Debt Service Fund in full, the Authority will allocate the available funds between the Bond Fund and the Parity Debt Service Fund in the proportion that the amount required to be deposited to each Fund bears to the total amount required to be deposited to both Funds.

See "**APPENDIX A – COPY OF THE INDENTURE**" hereto for a further description of the flow of funds.

### **Amendments to Master Indenture**

Subject to certain exceptions, the covenants and other security provisions of the Master Indenture may be amended with the consent of the holders of not less than a majority in aggregate principal amount of all Parity Indebtedness and Bonds (if any) then Outstanding (which may include debt issued in the future). These amendments may alter or eliminate the covenants and security provisions described in this Official Statement.

In addition to possible future amendments, the proposed form of the Fourth Supplemental Indenture contains several amendments to the Master Indenture, including those that have already taken effect. In particular, Section 6.2 of the proposed Fourth Supplemental Indenture provides that the Authority may use its most recent audit when determining compliance with components of its additional bonds test and that the Trustee is excused from certain actions upon the occurrence of a force majeure.

**By purchasing the 2024 Bonds, the original purchasers of the 2024 Bonds will (i) waive any notice of such amendments as required by the Master Indenture and (ii) consent to the amendments to the Master Indenture set forth in the Fourth Supplemental Indenture.**

The proposed form of the Fourth Supplemental Indenture is set forth in "**APPENDIX A – COPY OF THE INDENTURE**" hereto.

### **Service Agreement with Fairfax County**

In 1971, the Virginia State Water Control Board established new standards governing the discharge of wastes into the Potomac River. Thereafter, the Authority and the Board of Supervisors of Fairfax County entered into an agreement (the "Service Agreement") to maintain the treatment plant and related facilities used jointly to serve Fairfax County and the Authority's retail customers in the City (the "Joint Use Facilities") in an efficient and economical manner and in accordance with all applicable laws, regulations and performance standards.

Fairfax County's current share of the Authority's water resource recovery facility ("WRRF") capacity is 60%. Forty percent of the capacity remains available for the Authority to use in serving its retail customers in the City and other users. Fairfax County's right to use its share of the Joint Use Facilities will continue for so long as the Joint Use Facilities remain in existence.

Fairfax County has agreed to use the Joint Use Facilities until all of the bonds of the Authority issued with respect thereto have been retired or defeased. In addition, Fairfax County will not construct, acquire or utilize any facilities other than the Joint Use Facilities for the conveyance, treatment and disposal of sewage collected in the portion of Fairfax County served by the Joint Use Facilities, except that Fairfax County may utilize other facilities for sewage quantities in excess of its capacity rights under the Service Agreement.

For services rendered by the Authority, Fairfax County makes three classes of payments.

First, Fairfax County pays its proportional share of the expenses of operation and maintenance of the Joint Use Facilities based upon the ratio of the total flow received from Fairfax County to the total flow received at the treatment plant.

Second, Fairfax County pays an amount dedicated to the improvement, repair and replacement of the Joint Use Facilities. Fairfax County's annual obligation is equal to 60% of 0.7% of the total amount of capital expenditures made with respect to the Joint Use Facilities subsequent to October 1, 1997.

Third, Fairfax County agrees to fund its share of the costs of any capital improvements to the Joint Use Facilities either by participating in the issuance of bonds by the Authority or by paying available funds to the Authority. If Fairfax County elects to participate in bonds issued by the Authority, Fairfax County will make payments equal to 60% of the debt service requirements on such bonds. To date, Fairfax County has not elected to participate in bonds issued by the Authority.

All payments to be made by Fairfax County to the Authority under the Service Agreement are payable solely from revenues of Fairfax County's sewage collection, treatment and disposal system. The Authority has no lien or priority rights on the revenues, but Fairfax County has agreed to fix and collect fees, rates, and other charges sufficient to fulfill its payment obligations under the Service Agreement. See Note 4 in "**APPENDIX B – FINANCIAL STATEMENTS OF THE AUTHORITY FOR THE FISCAL YEAR ENDED JUNE 30, 2023.**"

#### **BONDHOLDERS' REMEDIES UPON AN EVENT OF DEFAULT**

In case of an Event of Default under the Master Indenture (see "**APPENDIX A – COPY OF THE INDENTURE**"), the Trustee may, and upon the request of the holders of not less than 25% in aggregate principal amount of Bonds and Parity Indebtedness then outstanding and upon indemnification as provided in the Master Indenture will, proceed to protect and enforce its rights and the rights of the holders of the Bonds and Parity Indebtedness by declaring the entire unpaid principal of and interest on the Bonds and Parity Indebtedness due and payable or by instituting a mandamus or other suit, action or proceeding at law or in equity, including any action for specific performance of any agreement contained in the Master Indenture. The mandamus remedy, however, may be impracticable and difficult to enforce. Furthermore, the right to enforce payment of the Bonds or Parity Indebtedness may be limited by bankruptcy, insolvency, reorganization, moratorium and similar laws and equitable principles, which may limit the specific enforcement of certain remedies.

Chapter 9 of the United States Bankruptcy Code (the "Bankruptcy Code") permits "municipalities," if insolvent or otherwise unable to pay their debts as they become due, to file a voluntary petition for the adjustment of debts, provided that such municipality is "specifically authorized, in its capacity as a municipality or by name, to be a debtor...." Bankruptcy Code, Section 109(c)(2). Current Virginia statutes do not expressly authorize the Authority or municipalities generally to file under Chapter 9. Chapter 9 does not authorize the filing of involuntary petitions against municipalities such as the Authority.

Bankruptcy proceedings by the Authority could have adverse effects on holders of Bonds and Parity Indebtedness, including, but not limited to, (i) delay in the enforcement of their remedies, (ii) subordination of their claims to claims of those supplying goods and services to the Authority after the initiation of bankruptcy proceedings and to the administrative expenses of bankruptcy proceedings, and (iii) imposition without their consent of a plan of reorganization reducing or delaying payment of the Bonds and Parity Indebtedness. The Bankruptcy Code contains provisions intended to ensure that, in any plan of reorganization not accepted by at least a majority of any class of creditors such as the holders of the Bonds and Parity Indebtedness, such class of creditors will have the benefit of their original claim or its "indubitable equivalent", although such "equivalent" may not provide for payment of the Bonds and Parity Indebtedness in full. The effect of these and other provisions of the Bankruptcy Code cannot be predicted and may be significantly affected by judicial interpretation.

## ANNUAL DEBT SERVICE

The following table sets forth, for each Fiscal Year indicated below, the amount required in such Fiscal Year for the payment of principal (either at maturity or by mandatory sinking fund redemption) and interest on the Outstanding Parity Debt and the 2024 Bonds. Totals may not sum due to rounding.

Fiscal Year	<u>Debt Service on Outstanding Parity Debt (as of 6/30/24)<sup>(1)(2)</sup></u>			<u>Debt Service on 2024 Bonds</u>			<u>Total Debt Service</u>		
	Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total
2025	\$13,525,107	\$5,537,303	\$19,062,410	-	\$1,268,889	\$1,268,889	\$13,525,107	\$6,806,192	\$20,331,299
2026	10,732,054	10,551,408	21,283,462	\$670,000	2,267,250	2,937,250	11,402,054	12,818,658	24,220,712
2027	11,397,677	10,352,743	21,750,420	705,000	2,232,875	2,937,875	12,102,677	12,585,618	24,688,295
2028	12,027,034	10,131,334	22,158,368	745,000	2,196,625	2,941,625	12,772,034	12,327,959	25,099,993
2029	12,438,645	9,897,018	22,335,663	780,000	2,158,500	2,938,500	13,218,645	12,055,518	25,274,163
2030	12,608,758	9,668,368	22,277,126	820,000	2,118,500	2,938,500	13,428,758	11,786,868	25,215,626
2031	13,463,069	9,415,162	22,878,232	865,000	2,076,375	2,941,375	14,328,069	11,491,537	25,819,607
2032	14,013,409	9,119,842	23,133,251	905,000	2,032,125	2,937,125	14,918,409	11,151,967	26,070,376
2033	14,213,689	8,818,409	23,032,099	955,000	1,985,625	2,940,625	15,168,689	10,804,034	25,972,724
2034	15,135,765	8,508,585	23,644,350	1,005,000	1,936,625	2,941,625	16,140,765	10,445,210	26,585,975
2035	17,262,142	8,164,748	25,426,890	1,055,000	1,885,125	2,940,125	18,317,142	10,049,873	28,367,015
2036	16,195,315	7,846,032	24,041,348	1,110,000	1,831,000	2,941,000	17,305,315	9,677,032	26,982,348
2037	16,424,821	7,566,643	23,991,464	1,165,000	1,774,125	2,939,125	17,589,821	9,340,768	26,930,589
2038	16,611,594	7,284,399	23,895,993	1,225,000	1,714,375	2,939,375	17,836,594	8,998,774	26,835,368
2039	15,660,009	6,992,090	22,652,099	1,290,000	1,651,500	2,941,500	16,950,009	8,643,590	25,593,599
2040	15,706,532	6,718,493	22,425,025	1,355,000	1,585,375	2,940,375	17,061,532	8,303,868	25,365,400
2041	17,696,266	6,423,548	24,119,814	1,425,000	1,515,875	2,940,875	19,121,266	7,939,423	27,060,689
2042	18,049,343	6,104,633	24,153,976	1,495,000	1,442,875	2,937,875	19,544,343	7,547,508	27,091,851
2043	18,386,589	5,781,736	24,168,326	1,575,000	1,366,125	2,941,125	19,961,589	7,147,861	27,109,451
2044	18,752,599	5,446,068	24,198,666	1,655,000	1,285,375	2,940,375	20,407,599	6,731,443	27,139,041
2045	19,092,817	5,114,354	24,207,171	1,740,000	1,200,500	2,940,500	20,832,817	6,314,854	27,147,671
2046	20,469,752	4,753,385	25,223,137	1,830,000	1,111,250	2,941,250	22,299,752	5,864,635	28,164,387
2047	19,846,766	4,420,831	24,267,597	1,920,000	1,017,500	2,937,500	21,766,766	5,438,331	27,205,097
2048	23,332,393	4,061,282	27,393,675	2,020,000	919,000	2,939,000	25,352,393	4,980,282	30,332,675
2049	14,921,128	3,696,584	18,617,712	2,125,000	815,375	2,940,375	17,046,128	4,511,959	21,558,087
2050	15,244,289	3,413,972	18,658,261	2,235,000	706,375	2,941,375	17,479,289	4,120,347	21,599,636
2051	15,567,450	3,125,494	18,692,944	2,350,000	591,750	2,941,750	17,917,450	3,717,244	21,634,694
2052	15,890,611	2,830,521	18,721,133	2,470,000	471,250	2,941,250	18,360,611	3,301,771	21,662,383
2053	16,236,059	2,530,311	18,766,371	2,595,000	344,625	2,939,625	18,831,059	2,874,936	21,705,996
2054	16,570,364	2,221,512	18,791,876	2,730,000	211,500	2,941,500	19,300,364	2,433,012	21,733,376
2055	16,915,812	1,910,827	18,826,639	2,865,000	71,625	2,936,625	19,780,812	1,982,452	21,763,264
2056	17,283,547	1,584,639	18,868,187	-	-	-	17,283,547	1,584,639	18,868,187
2057	17,640,139	1,269,136	18,909,275	-	-	-	17,640,139	1,269,136	18,909,275
2058	18,041,304	911,943	18,953,247	-	-	-	18,041,304	911,943	18,953,247
2059	18,375,609	616,342	18,991,951	-	-	-	18,375,609	616,342	18,991,951
2060	18,877,066	177,444	19,054,510	-	-	-	18,877,066	177,444	19,054,510
Total <sup>(3)</sup>	\$584,605,525	\$202,967,142	\$787,572,667	\$45,680,000	\$43,785,889	\$89,465,889	\$630,285,525	\$246,753,031	\$877,038,556

- Notes:
- (1) Parity Indebtedness is secured equally and ratably with Bond debt service, except that Parity Indebtedness is not secured by the Debt Service Reserve Fund, the Project Fund or the Bond Fund. See **"SECURITY AND SOURCES OF PAYMENT FOR THE 2024 BONDS - Additional Parity Indebtedness and Bonds."**
  - (2) Does not include debt service on the 2024 Bonds. Assumes the Authority makes the maximum allowable draws on the Sewer Revenue Bonds, Series 2021A, including the portions of such loans that are undrawn as of the date of this Official Statement. Based on grants received after the closing of the Series 2021A Bonds, the Authority anticipates it will draw significantly less than the full authorized amount.
  - (3) Totals may not add due to rounding.

## THE AUTHORITY

### General

The Authority is a public body politic and corporate organized pursuant to the provisions of the Enabling Act. The Authority was created by action of the City Council of the City (the "City Council") on December 9, 1952, and was chartered by the State Corporation Commission in 1953 for the purpose of "acquiring, constructing, improving, extending, operating and maintaining a sewage disposal system."

The Enabling Act provides that the Authority is authorized, subject to the restrictions of its articles of incorporation, among other things, to (i) acquire, construct, improve, extend, operate and maintain a sewer system and sewage disposal systems located within the City, (ii) issue bonds of the Authority, payable solely from revenues, to pay all or any part of the cost of a sewer system and sewage disposal system, or any combination of such systems, (iii) fix, charge and collect rates, fees and charges for the use of and for the services furnished by any system operated by the Authority and (iv) enter into contracts with any unit, including counties, cities and authorities, relating to the furnishing of services and facilities of the Authority. The Enabling Act also provides that the Authority is subject in all respects to the jurisdiction of the Virginia State Water Control Board pursuant to the provisions of the State Water Control Law.

Unless specifically noted otherwise, all information and data contained in this section has been compiled by the various divisions of the Authority.

Certain information regarding the Authority can be found at [www.alexrenew.com/about-us](http://www.alexrenew.com/about-us).

Certain general economic, demographic, and financial information about the Authority's service area and surrounding area is included in "APPENDIX C – INFORMATION ABOUT THE AUTHORITY'S SERVICE AREA AND SURROUNDING AREA" hereto.

### Board Members

The Authority is governed by its Board of Directors (the "Board") consisting of five members appointed by the City Council for staggered four-year terms. The following chart lists the current members of the Board, the occupation of each member, the expiration date of each member's term and the year in which each member was first appointed.

<b><u>Member</u></b>	<b><u>Occupation</u></b>	<b><u>Term Expires</u></b>	<b><u>Year First Appointed</u></b>
John Hill <i>Chair</i>	Retired; Former Assistant Commissioner of Payment Management, U.S. Department of the Treasury, Bureau of the Fiscal Service	01/31/2027	2012
James Beall <i>Vice Chair</i>	Section Chief, Design Build Coordinator, Fairfax County Department of Transportation	01/31/2025	2016
Adriana Caldarelli <i>Secretary-Treasurer</i>	Deputy Director, Prince George's County Department of the Environment	01/31/2028	2020
Rebecca Hammer	Senior Attorney & Deputy Director of Federal Water Policy, Natural Resources Defense Council (NRDC)	06/30/2027	2023
Mark Jinks	Retired, Former City Manager, Alexandria, Virginia	09/30/2026	2022

## Organization

The Board appoints a chief executive officer (CEO) who serves at the pleasure of the Board. The CEO executes and enforces the orders and resolutions adopted by the Board and oversees all personnel, operations, and business of the Authority departments.

*Information Technology Department.* The Information Technology Department is responsible for managing and maintaining the Authority's network infrastructure and technology, including the monitoring and implementing best practices to maintain the Authority's cybersecurity. The Department's responsibility also includes managing the Authority's Supervisory Control and Data Acquisition (SCADA) system, which includes both software and hardware systems to control and monitor wastewater treatment operations.

*Administrative Department.* The Administrative Department includes the finance, procurement, and communications teams. The Finance Team is responsible for managing all Authority funds. This team is also responsible for preparing the annual operating and capital budgets. Throughout the year this team reviews and monitors the budget to ensure responsible accounting practices, compliance with financial policies, and long-term financial stability.

The Procurement Team is responsible for purchasing all goods, services, and construction in support of all other Authority departments. All Authority purchases exceeding \$50,000 are made by the Procurement Team through formal, informal, or cooperative competitive bidding procedures.

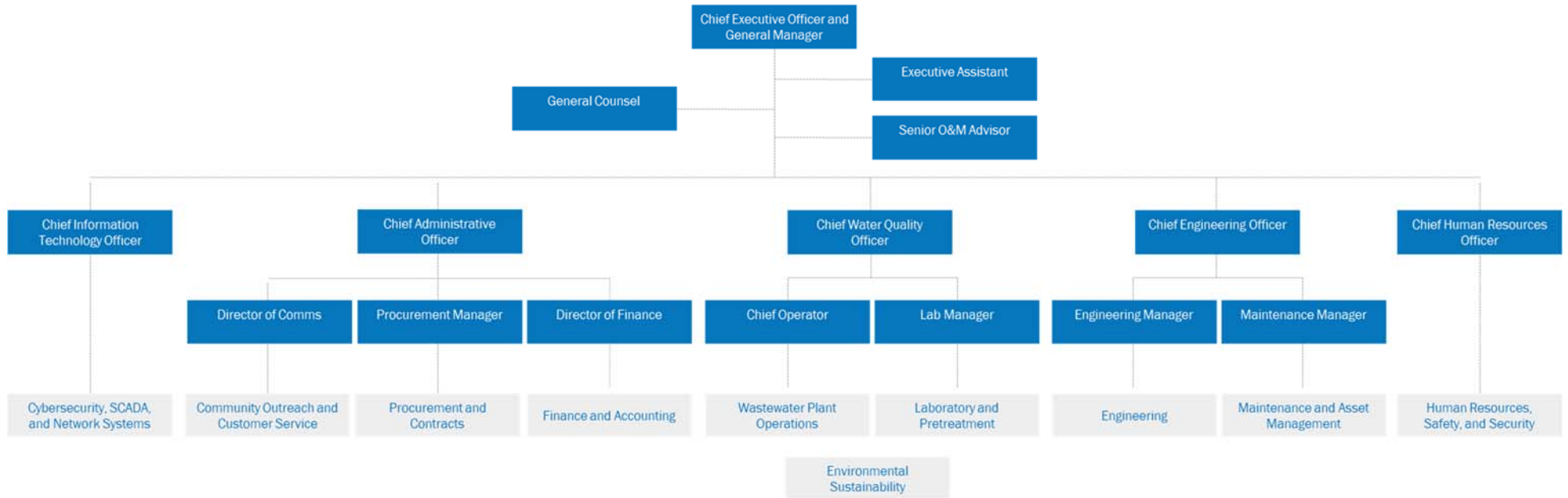
The Communications Team is responsible for all communications both internally to staff and externally to the Authority's customers and other stakeholders in the community and region. As part of this role, the team manages the Authority's website, customer service, and internal and external events.

*Water Quality Department.* The Water Quality Department includes the Authority's Wastewater Treatment Operations, Laboratory, and Environmental Sustainability Teams. The Wastewater Treatment Operations Team is responsible for the day-to-day monitoring and oversight of all treatment processes and equipment to ensure regulatory compliance. The Laboratory Team is responsible for the ongoing testing of water throughout the Authority's treatment processes. The Environmental Sustainability Team is responsible for managing the Authority's environmental management system, setting strategies to decrease the Authority's energy and resource use, and implementing mitigations to protect the Authority's infrastructure, assets, and personnel from climate change impacts.

*Engineering Department.* The Engineering Department includes the Engineering and Maintenance Teams. The Engineering Team is responsible for the implementation of all capital improvement projects. This responsibility includes oversight of the planning, engineering, design, construction, and inspection of improvements and upgrades to the Authority's wastewater treatment plant, pump stations, interceptors, and other infrastructure. The Maintenance Team is responsible for the day-to-day preventive maintenance and repairs of the Authority's equipment needed for wastewater treatment operations. Management of the Authority's asset management program is also housed in this Department.

*Human Resources Department.* The Human Resources Department is responsible for employee recruitment, selection, training, benefits, records, classification, and compensation, and ensuring compliance with local, state, and federal regulations governing all phases of personnel activities. This department is also responsible for the safety training for personnel, Authority compliance with safety regulations, and the overall physical security of the Authority's wastewater treatment plant, administrative building, and infrastructure.

Set forth below is an organizational chart of the Authority.



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## **Principal Authority Staff and Outside Professionals**

*Justin Carl – General Manager and Chief Executive Officer.* Justin serves as the Authority's General Manager and Chief Executive Officer, leading the Authority's team of more than 100 employees. He has spent his career dedicated to engineering cleaner waterways and promoting environmentally sustainable design features. Prior to his appointment as General Manager and Chief Executive Officer, Justin led over \$1.6 billion of planning, design, procurement, and construction for wastewater-focused projects in the DC-Metro area. He also served as the program manager for the RiverRenew Project (as defined herein), a \$615 million tunnel project that will prevent millions of gallons of combined sewage from polluting the City's waterways.

Justin is a licensed professional engineer in the Commonwealth and the District of Columbia. He holds a Bachelor of Science degree in Environmental Engineering from Wilkes University and a Master of Engineering degree in Environmental Engineering from Manhattan College.

*Caitlin Feehan – Chief Administrative Officer.* Caitlin serves as the Chief Administrative Officer for the Authority. In her role, she is responsible for the Authority's finance, procurement, and communications teams, as well as oversight of the \$615 million RiverRenew Project as Program Director. Caitlin has more than 15 years of public and private sector experience on wastewater-focused projects in the DC and Chicago metro areas, including planning, design, procurement, and construction.

Caitlin is a licensed professional engineer in the Commonwealth and the District of Columbia and a LEED accredited professional. She holds a Bachelor of Science degree in Environmental Engineering from Northwestern University and a Master of Environmental Management from Yale University's School of the Environment.

*Lake Akinkugbe – Director of Finance.* Lake serves as the Director of Finance for the Authority. He has over 20 years of public and private financial sector experience, 12 of which he has served in the water and wastewater industry. Lake comes to the Authority from Prince William County Service Authority, where he served as the Deputy Director of Management and Budget since 2012. Prior to that, he held various financial positions in the private sector. Lake has a Bachelor's Degree in Finance from George Mason University, a Master's Degree in Business Administration (MBA) from Marymount University and a Master's Degree in Accounting and Financial Management from Keller Graduate School. He also completed the Water and Wastewater Executive Leadership Program at the University of North Carolina.

*Amanda Waters – General Counsel and Deputy General Manager.* Amanda serves as General Counsel and Deputy General Manager for the Authority. She is responsible for providing legal counsel, developing and advising on policy, and assisting in the management and operational direction of the Authority. Amanda has more than 20 years of public and private sector experience counseling on governance and regulatory compliance issues, with an emphasis on the Clean Water Act and the Safe Drinking Water Act. She has also held the role of General Counsel at the National Association of Clean Water Agencies (NACWA), where she oversaw the legal advocacy program to safeguard the interests of municipal wastewater and stormwater utilities. Amanda's extensive career includes serving as General Counsel and Director of Public Advocacy for the Water Environment Federation, as well as holding positions such as General Counsel and Deputy Executive Director for Sanitation District No. 1 of Northern Kentucky (a public wastewater and stormwater utility), and Deputy General Counsel for the State of Kentucky Environmental and Public Protection Cabinet.

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## Authority Employees

The following chart lists the distribution of the Authority's full-time equivalent employees by activity, as of March 20, 2024.

**Table 3: Authority Employees**

<u>Department</u>	<u>Employees</u>
Executive	4
Information Technology	9
Administrative	15
Water Quality	45
Engineering	38
Human Resources	7
<b>Total</b>	<b>118</b>

Source: City of Alexandria, Virginia, Sanitation Authority.

## Financial and Budgetary Procedures

The Director of Finance oversees the Finance Team and is responsible for the day-to-day oversight of the Authority's budget, accounting, and finance functions and the yearly audit (in conjunction with outside consultants). The Procurement Manager oversees the Procurement Team and manages the Authority's procurement, and contracts. An outside contractor provides day-to-day billing and collection activities with oversight by the Director of Communications and in conjunction with the Finance Team. The Chief Administrative Officer oversees the Finance, Procurement, and Communications Teams.

The Authority's annual budget is based on a Fiscal Year of July 1 to the following June 30. When developing its budget and financial planning, the Authority uses a strategic plan developed with input from the Board, management, and staff, as a tool to ensure that financial planning will support the future needs and priorities of the Authority. Within the plan, a set of goals, both financial and operational, are created each year to prioritize future actions.

To facilitate long-term planning, the Authority prepares and updates a financing model that projects forward 20 years, with particular attention to the next-ensuing five-year period. This model includes projections of wastewater treatment plant capacity utilization, service area growth, operating revenues and expenses, debt service requirements, capital project spending, and cash flows.

The Authority also maintains and updates a Capital Improvement Program on an annual basis, which details capital projects designated for upgrades and rehabilitation. The Capital Improvement Program contains planned spending for the next-ensuing ten-year period and estimated capital spending for identified projects in subsequent years. In conjunction with the Finance Team, the Engineering Team updates and prepares the Capital Improvement Program annually for presentation to the Board. The Board reviews the draft prepared and ultimately approves a 10-year Capital Improvement Program annually, which serves as a planning tool and not as an appropriation for expenditures.

The Authority uses the financing model, the Capital Improvement Program, and its strategic plan to project necessary rate increases, to ensure proper debt coverage, and to provide for adequate funding and budgeting of the Authority's ongoing activities and obligations. Each of the Authority's departments provides input in the preparation of the annual capital and operating budget. The budget is typically submitted to the Board in March and approved in June of each year. All purchasing requests are subject to budget constraints, purchasing regulations, and, depending on the dollar amount, are subject to the approval of the Board, Chief Executive Officer, or department heads with oversight by the Procurement Team. Payment of invoices are also subject to review and approval at the department level with overall oversight by the Administrative Department.

The Authority has a conservative approach to managing its cash. The Authority's investment portfolio is managed by an outside firm to ensure compliance with the Authority's investment policy and Virginia law. The primary goal is the preservation of invested capital. All funds are designated for specific purposes, ranging from meeting day-to-day expenses to funding the Authority's long-term sewer commitments. In making investments, the Authority considers cash flow requirements as well as the quality and return of potential investments.

As of June 30, 2023, the Authority provided wastewater treatment service to 26,710 accounts, which are billed monthly. Bills are due and payable 30 days from the invoice date, with past due amounts noted on the next bill. The Authority takes steps to collect past due payments including text messages, calls, and certified letters. Communications to delinquent customers include information about the Authority's payment plans. In April 2024, the Authority launched its Lifeline Emergency Assistance Program emergency bill assistance for eligible Authority residential customers who are having difficulty paying their sewer bill. The Authority suspended disconnection of services for nonpayment following the Governor of Virginia's Utility Disconnection moratorium in March 2020 in response to Virginia's COVID-19 State of Emergency. Beginning in May 2024, the Authority reinstituted assessing late payment charges and began the disconnection of service for nonpayment. The Authority expects approximately 1,000 accounts may be eligible for assistance under its new Lifeline Emergency Assistance Program.

The Authority's losses from uncollected accounts have averaged less than 1.00% of amounts billed during the past five Fiscal Years.

The Authority's Board has adopted a set of financial policies that guide the Authority's financial decisions. Those policies include the following guidelines:

- Variable rate debt limited to 20% of debt and annual debt service coverage minimum target set to 1.5x.
- Fund at least 15% of the Capital Improvement Program with cash.
- Minimum targeted cash on hand of 120 days of operating and maintenance expenses.
- Adopt a balanced budget with current revenues equaling or exceeding current expenditures.
- Maintain 20-year financial model for capital and cash flow planning.

The Authority's Board may revise such policies at any time in its discretion.

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## Annual Budgets of the Authority

The Authority uses a full accrual basis of accounting, which recognizes and records expenses when goods and services are received and revenues when earned. The budget follows the same accounting rules but does not include non-cash items such as depreciation. The Authority's Capital Improvement Program includes planned expenditures on capital projects that are in addition to the expenditures included in the budget. The Authority's adopted annual budget for Fiscal Year 2024 and proposed annual budget for Fiscal Year 2025 are shown in the following table.

	<b><u>2024</u></b> <b><u>(Adopted)</u></b>	<b><u>2025</u></b> <b><u>(Proposed)</u></b>
<b>Operating Revenues</b>		
AlexRenew Wastewater Treatment Charges	\$53,672,299	\$60,420,321
Fairfax County Operating Expense Charge	12,796,021	12,838,293
	<u>\$66,468,320</u>	<u>\$73,258,614</u>
<b>IR&amp;R and Capital Contributions</b>		
Fairfax County IRR Contribution <sup>(1)</sup>	\$3,723,671	\$3,901,296
Fairfax County Capital Contribution	32,696,130	36,851,776
	<u>\$36,419,800</u>	<u>\$40,753,072</u>
<b>Debt Proceeds and Other Sources</b>		
Parity Debt Proceeds	\$153,652,896	\$112,618,224
Interest Income	115,000	900,000
Use of Fund Balances	6,155,291	5,266,179
	<u>\$159,923,187</u>	<u>\$118,784,403</u>
Total Funding Sources	<u>\$262,811,307</u>	<u>\$232,796,090</u>
<b>Operating and Maintenance (O&amp;M) Expenses</b>		
O&M Expenses (Alex-Only)	\$20,227,572	\$22,457,301
O&M Expenses (Joint)	12,796,021	12,838,293
	<u>\$33,023,593</u>	<u>\$35,295,594</u>
<b>Non-Operating Expenses</b>		
Parity Debt Service	\$16,448,494	\$22,290,196
Joint IRR	10,652,748	9,933,900
Alex-only IRR	166,000	1,822,000
Fund Balance Additions	876,587	-
	<u>\$28,143,829</u>	<u>\$34,046,096</u>
<b>Capital Outlay</b>		
RiverRenew	\$162,278,264	\$107,700,000
General CIP (Alex-only))	8,183,100	10,844,400
General CIP (Joint)	31,182,521	44,910,000
	<u>\$201,643,885</u>	<u>\$163,454,400</u>
Total Expenses and Capital Outlay	<u>\$262,811,307</u>	<u>\$232,796,090</u>

Source: City of Alexandria, Virginia, Sanitation Authority, Approved Operating Budget, Fiscal Year 2024 and Proposed Operating Budget, Fiscal Year 2025.

Note: (1) Fairfax County pays an amount dedicated to the Improvement, Repair and Replacement ("IRR") of the Joint Use Facilities. Fairfax County's annual obligation is equal to 60% of 0.7% of the total amount of capital expenditures made with respect to the Joint Use Facilities.

The Authority's Board is scheduled to consider the proposed annual budget for Fiscal Year 2025 for approval on June 18, 2024.

## Summaries of Revenues and Expenses

The table below summarizes the statements of revenues and expenses of the Authority for the last five Fiscal Years. This financial data has been compiled from the Authority's audited financial statements and accounting records of the Authority for such Fiscal Years. The financial data set forth below should be read in conjunction with the Authority's audited financial statements for Fiscal Year 2023, and the notes thereto, which are included as "APPENDIX B - FINANCIAL STATEMENTS OF THE AUTHORITY FOR THE FISCAL YEAR ENDED JUNE 30, 2023."

**Table 4: Statements of Revenues, Expenses and Changes in Net Position**

	Fiscal Year				
	2019 <sup>(1)</sup>	2020	2021	2022	2023
<b><u>Operating Revenues:</u></b>					
Wastewater Treatment Fees	\$28,299,921	\$43,748,538	\$46,043,455	\$50,689,442	\$54,844,244
Fairfax County Wastewater Fees	7,927,353	10,759,863	10,432,818	10,918,297	11,062,569
Miscellaneous	23,423	39,459	35,838	42,397	24,014
Total Operating Revenues	<u>\$36,250,697</u>	<u>\$54,547,860</u>	<u>\$56,512,111</u>	<u>\$61,650,136</u>	<u>\$65,930,827</u>
<b><u>Operating Expenses:</u></b>					
Personnel Services	\$7,584,511	\$12,934,864	\$12,808,339	\$12,022,176	\$14,210,244
Utilities	2,682,315	3,452,848	3,658,871	3,092,003	3,942,929
Chemicals	1,422,876	1,746,218	1,986,275	2,277,528	2,785,388
Operations Maintenance	942,681	1,230,159	1,051,184	1,196,034	1,652,687
Arlington Sewage Disposal	998,838	1,150,208	1,349,252	1,292,445	2,429,481
Sludge Disposal	663,426	991,265	1,113,835	1,015,983	1,144,760
Depreciation and Amortization	14,909,317	19,981,614	20,660,590	20,571,731	21,441,879
Repairs and Replacements, Sewage Disposal Systems	156,330	702,635	190,571	1,566,169	770,830
General, Administrative, Customer Service, and Other	2,767,358	4,668,318	4,683,009	5,141,279	6,639,220
Total Operating Expenses	<u>\$32,127,652</u>	<u>\$46,858,129</u>	<u>\$47,501,926</u>	<u>\$48,175,348</u>	<u>\$55,017,418</u>
Operating Income	<u>4,123,045</u>	<u>7,689,731</u>	<u>9,010,185</u>	<u>13,474,788</u>	<u>10,913,409</u>
<b><u>Non-Operating Revenues (Expenses):</u></b>					
Investment Income	\$1,235,709	\$1,327,691	\$131,110	\$(723,051)	\$757,913
Federal Grants	-	-	329,269	280,617	60,515
Interest on Debt	(2,748,836)	(3,496,975)	(3,248,744)	(3,554,625)	(4,647,932)
Loss on Disposed Capital Assets	(1,029,897)	(1,378,235)	(7,839,035)	(1,411,496)	-
Total Non-Operating Revenues (expenses)	<u>\$(2,543,024)</u>	<u>\$(3,547,519)</u>	<u>\$(10,627,400)</u>	<u>\$(5,408,555)</u>	<u>\$(3,829,504)</u>
Change in Net Position Before Capital Contributions	1,580,021	4,142,212	(1,617,215)	8,066,233	7,083,905
<b><u>Capital Contributions:</u></b>					
Change in net position	\$7,848,140	\$39,576,761	\$21,196,644	\$34,300,630	\$12,712,874
Net Position, Beginning of Year	9,428,161	43,718,973	19,579,429	42,366,863	19,796,779
Net Position, End of Year	<u>698,648,560</u>	<u>708,076,721</u>	<u>751,795,694</u>	<u>771,375,123</u>	<u>813,741,986</u>
	<u>\$708,076,721</u>	<u>\$751,795,694</u>	<u>\$771,375,123</u>	<u>\$813,741,986</u>	<u>\$833,538,765</u>

Source: City of Alexandria, Virginia, Sanitation Authority, Annual Comprehensive Financial Report, Fiscal Years 2019 through 2023.

Note: (1) As of July 1, 2019, the Authority changed its Fiscal Year from a Fiscal Year of October 1 to the following September 30 to a Fiscal Year of July 1 to the following June 30. This column represents the nine-month period ended June 30, 2019.

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The Authority is required under the terms of the Master Indenture to maintain revenues at levels necessary to meet certain revenue coverage tests. See the section "**SECURITY FOR THE 2024 BONDS – Revenue Covenant.**" Set forth below are tables reflecting the Authority's compliance with such coverage tests for Fiscal Years 2014 through 2023.

**Table 5: Revenue Bond Coverage**  
(Dollars in Thousands)

<u>Fiscal Year</u>	<u>Pledged Revenues<sup>(1)</sup></u>	<u>Operating Expenses<sup>(2)</sup></u>	<u>Net Revenues Available for Debt Service</u>	<u>Principal and Interest Requirements</u>	<u>Coverage<sup>(3)</sup></u>
2014	\$48,849	\$25,587	\$23,262	\$11,677	1.99
2015	48,282	25,122	23,160	12,063	1.92
2016	47,674	22,769	24,906	13,122	1.90
2017	49,395	22,668	26,726	13,438	1.99
2018	50,292	23,459	26,833	13,913	1.93
2019 <sup>(4)</sup>	37,486	17,218	20,268	7,997	2.53
2020	55,876	26,877	28,999	14,016	2.07
2021	56,643	26,841	29,802	14,049	2.12
2022	60,927	27,604	33,323	13,977	2.38
2023	66,689	33,576	33,113	12,306	2.69

Source: AlexRenew Finance Team.

Notes: (1) Includes investment income.  
(2) For Fiscal Years 2016 and 2017, operating expenses include those associated with repairs and replacements to the System.  
(3) The Master Indenture requires 1.1x coverage, and the Authority's Board-adopted financial policy targets a minimum of 1.5x coverage. The Board may amend its financial policy in its sole discretion.  
(4) As of July 1, 2019, the Authority changed its Fiscal Year from a Fiscal Year of October 1 to the following September 30 to a Fiscal Year of July 1 to the following June 30. This row represents the nine-month period ended June 30, 2019.

The following table provides projected debt service coverage for Fiscal Years 2024 through 2027. Such projections are based on revenue projections derived from the expected rates for such time period. The Authority's Board-adopted financial policies set forth a minimum targeted debt service coverage of 1.5 times.

**Table 6: Projected Debt Service Coverage**

	<u>Fiscal Year</u>			
	<u>2024</u> <u>(Adopted)</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>
<b><u>Operating Revenues</u></b>				
Wastewater Treatment Fees	\$53,672,299	\$60,420,321	\$63,513,841	\$66,670,479
Fairfax County Wastewater Fees	12,796,021	12,838,293	13,223,632	13,620,534
Miscellaneous <sup>(1)</sup>	115,000	900,000	900,000	900,000
<b>Gross Revenue</b>	66,583,320	74,158,614	77,637,473	81,191,014
<b><u>Operating Expenses</u></b>	33,023,593	35,295,594	36,354,461	37,445,095
Net Revenues Available for Debt Service	33,559,727	38,863,021	41,283,012	43,745,918
<b><u>Debt Service</u></b>				
Parity Debt Service <sup>(2)(3)</sup>	16,448,494	19,483,230	20,794,604	22,488,553
<b><u>Total Annual Debt Service Coverage</u></b>	2.04x	1.99x	1.99x	1.95x

Source: AlexRenew Finance Team.

Note: (1) Includes investment income.  
(2) Includes debt service on the 2024 Bonds. Assumes the Authority draws less than the maximum allowable draws on the Sewer Revenue Bonds, Series 2021A (WIFIA Bond) based on grants received for the project funded with the WIFIA Bond.  
(3) Totals may not add due to rounding.

The following table shows the System's days cash on hand for Fiscal Years ended June 30, 2019 through June 30, 2023. The Authority's Board-adopted financial policies set forth a minimum targeted cash on hand of 120 days of operating and maintenance expenses.

**Table 7: Historical Days Cash on Hand**

	<b>Fiscal Year</b>				
	<b><u>2019</u><sup>(1)</sup></b>	<b><u>2020</u></b>	<b><u>2021</u></b>	<b><u>2022</u></b>	<b><u>2023</u></b>
Current, Unrestricted Cash & Cash Equivalents	\$40,131,946	\$51,573,015	\$42,585,316	\$63,265,017	\$65,812,562
Operating Expenses, Less Depreciation and Amortization	\$17,218,335	\$26,876,515	\$26,841,336	\$27,603,617	\$33,575,539
Days Cash on Hand	851	700	579	837	715

Source: City of Alexandria, Virginia, Sanitation Authority, Annual Comprehensive Financial Report, Fiscal Years 2019 through 2023.

Note: (1) As of July 1, 2019, the Authority changed its Fiscal Year from a Fiscal Year of October 1 to the following September 30 to a Fiscal Year of July 1 to the following June 30. This column represents the nine-month period ended June 30, 2019.

## Service Area

The Authority treats wastewater from a service area that includes the City and portions of Fairfax County with an estimated population served of over 300,000. As of June 30, 2023, the Authority provided service to approximately 26,710 accounts associated with retail customers within the City. The Authority provides wastewater treatment service to Fairfax County as a wholesale customer under the Service Agreement. The Service Agreement established the amount and timing of monies paid to the Authority by Fairfax County for the agreed-upon capacity at the WRRF.

A portion of the wastewater flows in the northwestern quadrant of the City is treated at Arlington County, Virginia's ("Arlington County") Water Pollution Control Plant. The Authority and Arlington County established a service agreement for the amount and timing of monies paid to Arlington County by the Authority for the agreed-upon capacity.

The Authority is not aware of any developments that would significantly increase the geographic boundaries of its current service area.

## Management's Discussion of Operations

The Authority's revenues from operations fall into two main categories: (i) wastewater treatment charges (including base charge and volumetric charge) to retail customers in the City, which are based on metered water consumption and (ii) Fairfax County, Virginia, operating expense charges for wastewater treatment for its share of operating expenses based upon metered flow to the plant. In Fiscal Year 2023, operating revenues increased by \$4.3 million or 6.9% over Fiscal Year 2022, the net impact of the rate increase of approximately 6.5% that took effect July 1, 2022 for City customers and the slight increase year-over-year in the Fairfax County operating contribution. In Fiscal Year 2024, year-to-date, wastewater treatment charge revenues are trending slightly higher than budget due to higher consumption.

Total operating expenses for Fiscal Year 2023, excluding depreciation and amortization, increased by \$5.94 million or 21.5% compared to Fiscal Year 2022. Core areas associated with operating the WRRF increased year-over-year including chemicals, utilities, operations and maintenance, sludge disposal, and repairs and replacements expenses. In Fiscal Year 2024, year-to-date, operating and maintenance expenses are trending slightly below budget.

## Permits and Compliance

The Authority has obtained all governmental permits, licenses, registrations, certificates, authorizations and approvals currently required for the Authority's ownership and operation of the System and is aware of no reason why

any such governmental permits, licenses, registrations, certificates, authorizations and approvals that might be required in the future cannot be obtained as needed.

### Existing Facilities and Capacity

The Authority has the following facilities and wastewater capacity:

**Table 8: Facilities and Wastewater Capacity**

	<b><u>Fiscal Year 2024</u></b>
Miles of interceptor lines	20
Wastewater pumping stations	5
Wastewater treatment capacity (mgd) at the WRRF:	<u>54.0</u>

Source: City of Alexandria, Virginia, Sanitation Authority.

Based on the Service Agreement, the WRRF's capacity is shared between the City and Fairfax County as follows:

**Table 9: WRRF Allocated Capacity**

<b><u>Jurisdiction</u></b>	<b><u>Allocated Capacity (mgd)</u></b>	<b><u>% of Allocated Capacity</u></b>
Alexandria	21.6	60.00%
Fairfax County	32.4	40.00
Total	<u>54.0</u>	<u>100.00%</u>

Source: City of Alexandria, Virginia, Sanitation Authority.

The WRRF was constructed between 1952 and 1956. The Authority expects that a portion of the proceeds of the 2024 Bonds and planned capital expenditures in the Capital Improvement Program will finance certain improvements to the WRRF to further extend its useful life.

An elaborate system of underground sewers brings sanitary flow to the WRRF. The City owns and maintains the smaller sewers that collect wastewater from businesses and neighborhoods within its boundaries. The Authority owns and maintains large interceptor sewers that transport flows to the WRRF.

In areas of the City where wastewater cannot flow by gravity to the WRRF due to elevation, the Authority operates five pump stations to lift flows to a higher elevation.

Once flows reach the WRRF from its interceptor system, the wastewater goes through the preliminary treatment systems. These systems include coarse screens, fine screens, and grit removal to remove large solids (like food and trash) that can damage the Authority's equipment. Flows are then transported into settling tanks for primary treatment and removal of suspended solids and fats, oils and grease. Afterwards, the flow goes to the Authority's biological reactor basins ("BRB") for nutrient removal. While in the BRBs, flows are added to microorganisms, called activated sludge, for nitrogen removal. The water settles again and then enters the Authority's tertiary systems to remove the phosphorous and filter out any remaining solids. Finally, flows are disinfected using ultraviolet (UV) light.



## Service Agreement with Arlington County

The Authority has entered into a service agreement with Arlington County whereby the Authority purchases capacity rights to use Arlington County's wastewater treatment plant. The Authority has capacity of 3.0 mgd at Arlington County's plant and contributes to operating and capital costs proportionately.

## Largest Customers

The following table provides data on the Authority's ten largest customers and the corresponding percentage of revenue from user charges for Fiscal Year 2023.

**Table 10: Largest Customers**

<u>Customer</u>	<u>Type</u>	<u>Amount Billed</u>	<u>Percentage of Revenue</u>
4921 Seminary Rd (VA) Owner LLC	Apartments	\$863,694	1.31%
Lynbrook Apartments Mark Ctr LLC	Apartments	441,737	0.67
Foxchase	Apartments	342,840	0.52
Stoneridge Apts Mark Ctr	Apartments	336,247	0.51
Park Fairfax	Apartments	349,433	0.53
ARHA	Public	303,282	0.46
140 S Van Dorin St	Apartments	323,061	0.49
Watergate at Landmark	Condos	237,351	0.36
UDR Newport Village LLC	Apartments	263,723	0.40
ERP	Apartments	210,979	0.32
<b>Total<sup>(1)</sup></b>		<b>\$3,672,347</b>	<b>5.57%</b>

Source: AlexRenew Finance Team.

(1) Totals may not add due to rounding.

The ten largest customers together represent 5.6% of total wastewater treatment billing, and no single customer represents more than 1.31% of total wastewater treatment billing.

## Customer Base

The following table summarizes the Authority's customer base in terms of City residential connections and population during Fiscal Years 2019 through 2023.

**Table 11: Customer Base**

<u>Service Class</u>	<u>Fiscal Year</u>				
	<u>2019<sup>(1)</sup></u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Single-Family Residential Connections	23,346	23,668	23,399	23,908	23,943
Annual Growth – Single-Family Residential Connections, %	N/A	1.38%	(1.14)%	2.18%	0.15%
Multi-Family, Commercial, Institutional and Other Public Connections	3,787	3,943	3,651	3,611	3,592
Annual Growth of Multi-Family, Commercial, Institutional and Other Public Connections, %	N/A	4.11%	(4.71)%	(1.10)%	(0.53)%
<b>Total Connections</b>	<b>27,133</b>	<b>27,611</b>	<b>27,050</b>	<b>27,519</b>	<b>27,535</b>

Source: AlexRenew Finance Team.

Notes: (1) As of July 1, 2019, the Authority changed its Fiscal Year structure from a Fiscal Year of October 1 to the following September 30 to a Fiscal Year of July 1 to the following June 30. This column represents the nine-month period ended June 30, 2019.

## Operating Summary

The following table sets forth data on the flows in millions of gallons attributable to the System and the number of customer accounts for each of the last ten Fiscal Years.

**Table 12: Accounts and Treatment Volume**

<u>Fiscal Year</u>	<u>Customer Accounts</u>	<u>Millions of Gallons<sup>(1)</sup></u>	
		<u>Wastewater Treated</u>	<u>Fairfax Wastewater Treated</u>
2014	26,848	13,213	6,698
2015	26,333	12,035	6,112
2016	26,440	12,334	5,960
2017	26,611	11,769	5,941
2018	26,681	12,850	6,671
2019 <sup>(2)</sup>	26,594	11,481	5,820
2020	26,671	12,962	6,008
2021	26,589	14,266	6,535
2022	26,767	13,090	6,204
2023	26,710	13,094	5,326

Source: City of Alexandria, Virginia, Sanitation Authority, Annual Comprehensive Financial Report, Fiscal Years 2023 and 2022.

Notes: (1) The amount of wastewater treated includes flow generated by the City customers and portions of Fairfax County which is outside of the City. The amount of wastewater that flows outside Fairfax County is metered and included in this table.  
(2) As of July 1, 2019, the Authority changed its Fiscal Year from a Fiscal Year of October 1 to the following September 30 to a Fiscal Year of July 1 to the following June 30. This row represents the nine-month period ended June 30, 2019.

## Rate Regulation

The Enabling Act provides that the Authority is authorized to fix and revise rates, fees and other charges for the use of and for the services furnished or to be furnished by any sewer system or sewage disposal system owned, operated or maintained by the Authority, or facilities incident thereto, and on account of which the Authority has issued revenue bonds. Such rates, fees and charges are, under the Enabling Act, required to be fixed and revised so as to provide funds, with other funds available for such purposes, sufficient at all times (i) to pay the cost of maintaining, repairing and operating the utility system, and facilities incident thereto, on account of which such bonds are issued, including reserves for such purposes and for replacement and depreciation and necessary extensions, (ii) to pay the principal of and the interest on the revenue bonds when due and reserves therefor and (iii) to provide a margin of safety for making such payments. The Enabling Act requires the Authority to charge and collect the rates, fees and charges so fixed or revised.

The Authority's board has sole power to set rates, fees and charges, subject to a statutory requirement for a public hearing.

## Rates, Fees and Charges

The revenues for the Authority are derived primarily from user charges imposed in the City, interest on investments and monthly operations and maintenance charges to Fairfax County. As the principal source of funds to pay operation and maintenance expenses, the Authority's monthly user fee for wastewater treatment services consists of a fixed base charge, plus a wastewater treatment charge, as determined by water meter readings conducted by Virginia American Water, at the customer premises.

*Current User Rate Structure.* The current monthly user fees for residential and commercial customers, which became effective on July 1, 2023, are as follows:

**Table 13: Current User Rate Structure**

<u>Description</u>	<u>Meter Size</u>	<u>Monthly Amount</u>
Residential Base Charge	All Meters	\$13.85
Commercial Base Charge	5/8"	41.55
	3/4"	41.55
	1"	103.87
	1-1/2"	207.74
	2"	332.39
	3"	623.23
	4"	1,038.72
	6"	2,077.43
	8"	3,323.89
Residential Customer Activation Fee	-	\$15.00
Individual Meter Residential Wastewater Treatment Charge	-	9.76
Commercial Wastewater Treatment Charge	-	9.76

Source: City of Alexandria, Virginia, Sanitation Authority.

User fees are set by the Board and are based upon the recommendation of a third-party rates analysis designed to recover the Authority's cost of service and capital cost. Rates modeling and analysis is conducted at least annually, and more frequently as required, to set new rates and charges or affirm the efficacious nature of existing rates.

The wastewater treatment charge is assessed to all customers based upon metered per gallon water usage, except that residential customers are assessed based upon a winter quarter average usage (per 1,000 gallon units), reflective of indoor water use. A residential customer, therefore, is billed at the greater of its winter quarter per gallon average usage or 4,000 gallons per month. Starting July 1, 2024, a residential customer will be capped at its winter quarter per gallon average usage.

Commercial customers are billed based on the actual amount of per gallon water usage. The base charge was assessed for the first time beginning on October 1, 2010, and is assessed as a fixed fee per month according to water meter size. Commercial wastewater customers include all commercial, industrial, government, and other public agencies, master-metered residential, and all other accounts or customers not otherwise classified as individually metered residential customers.

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*Historical Rates and Fees.* The following table sets forth historical monthly rates charged to residential customers for wastewater treatment services for the past five Fiscal Years.

**Table 14: Historical Rates and Fees**

<u>Fiscal Year</u>	<u>Base Charge</u>	<u>Rate Per 1000 Gals.</u>	<u>Monthly Total<sup>(1)</sup></u>	<u>% Increase</u>
2020	\$10.83	\$7.63	\$41.35	- %
2021	11.54	8.13	44.06	6.6
2022	12.34	8.69	47.10	6.9
2023	13.14	9.26	50.18	6.5
2024	13.85	9.76	52.89	5.4

Source: City of Alexandria, Virginia, Sanitation Authority.

Notes: (1) Assumes 4,000 gallons average monthly use.

*Adopted Increases in Rates and Fees.* The following table sets forth the approved rates, effective July 1, 2024 through June 30, 2025, to be charged to residential and commercial customers for wastewater treatment services for Fiscal Year 2025.

**Table 15: Adopted Increases in Rates and Fees**

<u>Description</u>	<u>Meter Size</u>	<u>Monthly Amount</u>
Residential Base Charge	All Meters	\$ 14.57
Commercial Base Charge	5/8"	43.68
	3/4"	43.68
	1"	109.19
	1-1/2"	218.38
	2"	349.41
	3"	655.14
	4"	1,091.90
	6"	2,183.80
	8"	3,494.08
Residential Customer Activation Fee		15.00
Individual Meter Residential Wastewater Treatment Charge		10.26
Commercial Wastewater Treatment Charge		10.26

Source: City of Alexandria, Virginia, Sanitation Authority.

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## The Capital Improvement Program

The Authority has proposed a Fiscal Year 2025 Capital Improvement Program (the "Capital Improvement Program") that contains a proposed project schedule and associated expenditures of approximately \$878.07 million for wastewater facilities improvements over the next ten-year period, as set forth below.

<u>Fiscal Year</u>	<u>Proposed Capital Expenditures (in thousands)</u>
2025	\$175,210
2026	110,782
2027	123,368
2028	117,047
2029	74,436
2030	44,666
2031	43,624
2032	50,989
2033	64,122
2034	73,833

Source: City of Alexandria, Virginia, Sanitation Authority.

The Capital Improvement Program is expected to be funded with cash from user rates and fees as well as capital contributions from Fairfax County (which are determined according to negotiated percentages for the relevant project), funds from the proceeds of existing or future borrowings and grant funding. The Authority's Board-adopted financial policies provide that the Authority will aim to fund at least 15 percent of the Capital Improvement Program with cash.

While the Capital Improvement Program provides a long-term roadmap for planned capital expenditures, the Authority retains the ability to defer projects if needed, and may elect to defer certain new capital projects depending on revenue performance throughout each Fiscal Year. The Authority has been able to offset the cost of some of those current capital improvements through grants. However, if there is increased competition for grants among other service providers, the Authority may need to issue additional debt to pay the costs of those future capital projects.

Beyond the 2024 Bonds, the Authority currently anticipates an additional issuance of Parity Indebtedness in Fiscal Year 2028 to fund \$40 million of projects in the Capital Improvement Program. The Authority's Board-adopted financial policies provide that the Authority will not issue variable rate debt in excess of 20 percent of its total debt portfolio.

Highlights of the Capital Improvement Plan include: (i) continued funding for the RiverRenew Project; (ii) funding for the Solids Upgrade Program; (iii) continued funding for the PPSU Project; (iv) continued funding for the Tertiary Systems Upgrade Project; (v) increased investments for IT systems and infrastructure and care of existing digital assets; (vi) funding for future rehabilitation projects on the Holmes Run Trunk Sewer and the Potomac Interceptor; (vii) continued capital contributions to Arlington County, Virginia; and (viii) contingency based on overall capital spend.

### *The RiverRenew Tunnel Project*

At a total estimated construction cost of \$615 million, the RiverRenew Tunnel Project (the "RiverRenew Project") is the single largest capital project the Authority is undertaking and it is the largest capital infrastructure project in the City's history. Established in response to a 2017 Virginia law, the RiverRenew Project is remediating the combined sewer system in the City by July 1, 2026. The RiverRenew Project (<https://www.riverrenew.com/>) includes a deep tunnel and new sewer facilities designed to prevent millions of gallons of combined sewage from polluting the City's waterways when it rains, minimizing combined sewer overflows (CSOs). Captured flows will be delivered to the WRRF where they will be treated and returned to the Potomac River.

The RiverRenew Project includes the construction of:

- The Waterfront Tunnel – a two-mile-long sewer tunnel over 100 feet below ground;
- The Hooffs Run Interceptor – a new six-foot-wide, open-cut sewer pipeline;
- Diversion facilities – below-ground facilities to capture that capture and transport combined sewage into the Waterfront Tunnel and Hooffs Run Interceptor; and
- Pumping stations – new facilities that will lift combined sewage from the tunnel system and direct it to the Authority's treatment infrastructure.

The RiverRenew Project is being funded by the Authority primarily through state and federal loan programs. To pay off the loans, the Authority is implementing sewer rate adjustments to its customers. To date, Authority has also received \$140 million in state grants to help offset sewer rate impacts.

### **Insurance**

The Authority is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; injuries to employees; and natural disasters. These risks are covered by commercial insurance purchased from independent third parties. There have been no significant reductions in insurance coverage from the prior year. Settled claims have not exceeded insurance coverage in the past three years. See Note 9 in "**APPENDIX B - FINANCIAL STATEMENTS OF THE AUTHORITY FOR THE FISCAL YEAR ENDED JUNE 30, 2023.**"

### **Cybersecurity**

The Authority's Chief Information Technology Officer maintains an Information Technology Security Policy in accordance with applicable standards and laws. The policy defines minimum security requirements for the Authority's assets including the managerial, operational, and technical protection requirement and controls to ensure the confidentiality, integrity, and availability of Authority's IT assets; and compliance with requirements of applicable federal, and state law and the Authority's policies and regulations. The Authority has not experienced any significant cybersecurity breaches in the past five years.

The Authority maintains a comprehensive cyber insurance coverage policy.

### **Environmental Risk**

The Authority is currently undertaking a climate resiliency study, which is intended to help guide the Authority in assessing the impacts of climate scenarios for all of the Authority's assets, infrastructure, and employees. The scope includes a risk assessment of climate projections for flooding, extreme weather, and thermal stress. The resilience study will identify short-, medium-, and long-term actions to enhance the Authority's climate resilience. The Authority anticipates that expected capital improvements will include implementation of these actions and projects to mitigate the impact of extreme climate events.

### **Environmental Priorities and Efforts**

The Authority cleans more than 13 billion gallons of water, annually, adhering to some of the highest standards in the country. The Authority maximizes the reuse of all available resources in its processes to create a sustainable operation that saves money and reduces greenhouse gases.

The Authority's Board recently refreshed the vision, mission, and strategic goals for the organization. The new vision is "Every drop of water contributes to a thriving community and healthy environment for all." Its mission is to "Treat wastewater to protect public health and the waterways that connect us." Its refreshed strategic goals are:

- *Operational Excellence.* Taking proactive steps to meet current and future challenges.

- *Thriving Workforce.* Investing in Authority staff and fostering a culture of belonging.
- *Strategic Partnerships.* Promoting watershed-level thinking through collaboration and advocacy.
- *Environmental Sustainability.* Being good stewards of Authority resources to minimize the Authority's impact on the environment.
- *Commitment to the Community.* Strengthening connections with the public and providing affordable service.

The refresh to the mission, vision, and strategic goals culminated in a new strategic plan for 2024-2029 developed by staff. The Authority's 2024-2029 Strategic Plan lays out the direction and goals of the organization and guidelines for actions to achieve those goals. The strategic goals are integrated into the Authority's daily operations, challenging the team to build a more resilient, sustainable, and equitable organization.

In December 2023, the Board adopted an Environmental Justice Policy, which affirms the Authority's commitment to prevent and mitigate disproportionate environmental impacts of the Authority's activities on the community it serves. The Authority firmly believes that everyone is entitled to safe sanitation and clean waterways at an affordable rate, that no group should bear a disproportionate share of environmental burdens, and that all groups should benefit equitably from environmental improvements resulting from the Authority's programs.

The Authority's Environmental Management System ("EMS") implements best management practices for pollution prevention, waste management, regulatory compliance, and hazard mitigation to reduce incidents while improving the Authority's reputation, regulatory performance and environmental footprint. The Authority includes EMS and stormwater awareness training in new hire orientation, and all employees receive annual refresher training to recognize, prevent, and manage environmental impacts. The Authority's continued commitment to environmental progress and community involvement has earned the Authority the highest possible ranking in the Virginia Department of Environmental Quality's Environmental Excellence Program ("VEEP"), Extraordinary Environmental Enterprise, entitling the Authority to annual permit fee discounts for water and waste permits, and public recognition as an environmental leader.

Additionally, the Authority has implemented several sustainability initiatives that have resulted in reducing the impact from its operations on the environment. The Authority reuses one billion gallons of treated wastewater in its operations, reducing potable water demand by about 97 percent. Methane is captured from the Authority's digestion process, using it to power the wastewater treatment plant which offsets 50 percent of the Authority's natural gas needs. Approximately 6,000 tons of biosolids are produced annually and beneficially used to fertilize farms in the Commonwealth. The Authority's administrative building is equipped with about 420 solar panels that generate approximately 13 percent of the building's electricity. To date, the Authority's administrative building is certified as Leadership in Energy and Environmental Design ("LEED") Platinum, and its Nutrient Management Facility, a process facility, has received the Envision Platinum award. The Authority anticipates Envision and LEED certifications for the RiverRenew Project.

The RiverRenew Project, which is the largest infrastructure project in the City's history and is described in more detail in the section **"THE AUTHORITY – The Capital Improvement Program,"** will prevent millions of gallons of combined sewage from polluting the City's waterways when it rains, minimizing combined sewer overflows. Upon completion, the Authority anticipates that the RiverRenew Project will reduce the amount of sewage in the City's waterways from approximately 140 million gallons of sewage per year on average to less than 17 million gallons per year on average.

The Authority has received multiple awards recognizing its outstanding environmental achievements in the clean water industry. The Authority's recent awards from the NACWA include, among others, six Gold and nine Platinum Peak Performance Awards for outstanding compliance with National Pollutant Discharge Elimination System permit requirements, the Research and Technology Award for Enhancing Nitrogen Removal and Increasing Sustainability, and three Utility of the Future Awards for its work in collaboration across the community.

## **Retirement Plan and Other Postemployment Benefits**

For information concerning the Authority's benefit programs, the assumptions underlying the calculations and other benefit liabilities of the Authority, see Notes 7 and 8 in "**APPENDIX B - FINANCIAL STATEMENTS OF THE AUTHORITY FOR THE FISCAL YEAR ENDED JUNE 30, 2023.**"

## **LITIGATION**

No litigation is pending or, to the best of the Authority's knowledge, threatened against the Authority (i) to restrain or enjoin the issuance and delivery of the 2024 Bonds or the collection and application of revenues of the System and other property pledged under the Master Indenture, (ii) in any way contesting or affecting any authority for the issuance or validity of the 2024 Bonds, or the validity of the Master Indenture or (iii) in any way contesting the existence or powers of the Authority.

## **LEGAL MATTERS**

Certain legal matters relating to the authorization and validity of the 2024 Bonds are subject to the approving opinion of McGuireWoods LLP, Richmond, Virginia, Bond Counsel, which will be in substantially the form of **APPENDIX D**. Such opinion will be furnished at the expense of the Authority upon delivery of the 2024 Bonds. Bond Counsel has not verified the accuracy, completeness or fairness of the Official Statement, and its opinion will make no statement of any kind as to the Official Statement and will be limited to matters relating to the authorization and validity of the 2024 Bonds and to the exemption of interest thereon under present federal and Virginia income tax laws as described therein. See "**APPENDIX D - PROPOSED FORM OF BOND COUNSEL OPINION.**"

Certain legal matters will be passed on for the Authority by its counsel, McGuireWoods LLP, Richmond, Virginia, and for the Underwriters by Norton Rose Fulbright US LLP, Washington, D.C.

## **TAX MATTERS**

### **Opinion of Bond Counsel – Federal Income Tax Status of Interest**

Bond Counsel's opinion regarding the federal income tax status of the interest on the 2024 Bonds will state that, under current law and assuming continuing compliance with the Covenants (as hereinafter defined), interest on the 2024 Bonds (i) is excludable from gross income for purposes of federal income taxation under Section 103 of the Code and (ii) is not a specific item of tax preference for purposes of the federal alternative minimum tax on individuals. However, such interest is included in the "adjusted financial statement income" (as defined in Section 56A of the Code) of certain corporations in determining the applicability and amount of the federal corporate alternative minimum tax under Section 55(b) of the Code. See **APPENDIX D** for the form of the opinion of Bond Counsel for the 2024 Bonds.

Bond Counsel's opinion speaks as of its date, is based on current legal authority and precedent, covers certain matters not directly addressed by such authority and precedent, and represents Bond Counsel's judgment as to the excludability of interest on the 2024 Bonds for federal income tax purposes. Bond Counsel's opinion does not contain or provide any opinion or assurance regarding the future activities of the Authority or about the effect of future changes in the Code, the applicable regulations, or the interpretation or the enforcement thereof by the Internal Revenue Service (the "IRS") and the courts.

Although Bond Counsel is of the opinion that interest on the 2024 Bonds is excludable from gross income for federal income tax purposes, the ownership or disposition of, or the accrual or receipt of interest on, 2024 Bonds may otherwise affect the federal tax liability of an owner of the 2024 Bonds. The nature and extent of these other federal tax consequences depend on the owner's particular tax status and levels of other income or deductions. Bond Counsel will express no opinion regarding any such other tax consequences and prospective purchasers of the 2024 Bonds should consult their own tax advisors with respect thereto.



## **Reliance and Assumptions; Effect of Certain Changes**

In delivering its opinion regarding the federal income tax treatment of interest on the 2024 Bonds, Bond Counsel is relying upon certifications of representatives of the Authority, the Underwriters and other persons as to facts material to the opinion, which Bond Counsel has not independently verified.

In addition, Bond Counsel is assuming continuing compliance with the Covenants by the Authority. The Code and the regulations promulgated thereunder contain a number of requirements that must be satisfied after the issuance of the 2024 Bonds in order for interest on the 2024 Bonds to be and remain excludable from gross income for purposes of federal income taxation. These requirements include, by way of example and not limitation, restrictions on the use, expenditure and investment of the proceeds of the 2024 Bonds and the use of the property financed or refinanced by the 2024 Bonds, limitations on the source of the payment of and the security for the 2024 Bonds, and the obligation to rebate certain excess earnings on the gross proceeds of the 2024 Bonds to the United States Treasury. The tax compliance agreement for the 2024 Bonds contains covenants (the "Covenants") under which the Authority agreed to comply with such requirements. Failure by the Authority to comply with the Covenants could cause interest on the 2024 Bonds to become includable in gross income for federal income tax purposes retroactively to their date of issue. If such a failure were to occur, the available enforcement remedies may be limited by applicable provisions of law and, therefore, may not be adequate to prevent interest on the 2024 Bonds from becoming includable in gross income for Federal income tax purposes.

Bond Counsel has no responsibility to monitor compliance with the Covenants after the date of issue of the 2024 Bonds.

Certain requirements and procedures contained, incorporated or referred to in the tax compliance agreement, including the Covenants, may be changed and certain actions may be taken or omitted subject to the terms and conditions set forth in such agreement. Bond Counsel expresses no opinion concerning any effect on the excludability of interest on the 2024 Bonds from gross income for federal income tax purposes of any such subsequent change or action that may be made, taken or omitted upon the advice or approval of counsel other than Bond Counsel.

## **Certain Collateral Federal Tax Consequences**

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

Prospective purchasers of the 2024 Bonds should be aware that the ownership of tax-exempt obligations may result in collateral federal income tax consequences to certain taxpayers including, without limitation, banks and other financial institutions, certain insurance companies, dealers in tax-exempt obligations, certain corporations (including S corporations and foreign corporations), certain foreign corporations subject to the "branch profits tax," individual recipients of Social Security or Railroad Retirement benefits, owners of an interest in a financial securitization trust, taxpayers entitled to claim the refundable credit in Section 36B of the Code for coverage under a qualified health plan, taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry tax-exempt obligations and taxpayers attempting to qualify for the earned income tax credit.

## **Original Issue Discount**

2024 Bonds purchased in the initial public offering with yields higher than their applicable interest rates, as shown on the inside cover page hereof, have been sold with "original issue discount." Each such 2024 Bond is referred to below as an "OID Bond." The excess of (i) the stated amount payable at the maturity (excluding qualified stated interest) of any OID Bond over (ii) the issue price of the OID Bond as determined under Section 1273 of the Code (which may differ from the price shown on the inside front cover page of this Official Statement) constitutes the amount of original issue discount, which is treated in the same manner as interest on the 2024 Bonds for federal income tax purposes.

The Code provides that the amount of original issue discount accrues in accordance with a constant interest method based on the compounding of interest. In the case of an original owner of an OID Bond, the amount of original issue discount that is treated as having accrued on such OID Bond is added to the owner's adjusted basis in determining, for federal income tax purposes, gain or loss upon the disposition of the OID Bond (including its sale, redemption or payment at maturity). The amounts received upon such disposition that are attributable to accrued original issue discount will be excludable from the gross income of the owner for federal income tax purposes.

The accrual of original issue discount and its effect on the redemption, sale or other disposition of OID Bonds that are not purchased in the initial public offering may be determined according to rules that differ from those described above.

In addition, original issue discount that accrues in each year to an owner of an OID Bond is included in the calculation of the distribution requirements of certain regulated investment companies and may result in some of the collateral federal income tax consequences discussed in this section. Consequently, the owner of an OID Bonds should be aware that the accrual of original issue discount in each year may result in additional distribution requirements or other collateral federal income tax consequences although such owner has not received cash attributable to such original issue discount in such year.

Prospective purchasers of OID Bonds should consult their own tax advisors with respect to the precise determination for federal income tax purposes of the original issue discount accrued upon sale or redemption of such OID Bonds (including OID Bonds not purchased in the initial public offering) and with respect to the state and local tax consequences of owning OID Bonds.

### **Bond Premium**

2024 Bonds purchased in the initial public offering with yields lower than their applicable interest rates, as shown on the inside cover page hereof, have been sold with "bond premium." Each such 2024 Bond is referred to below as an "OIP Bond." The excess of (i) the owner's basis in the OIP Bond immediately after acquisition over (ii) the amount payable at maturity (excluding qualified stated interest) as determined under Section 171 of the Code constitutes the amount of the bond premium. Under the Code, the bond premium is amortized based on the owner's yield over the remaining term of the OIP Bond (or, in the case of certain callable OIP Bonds, to an earlier call date that results in a lowest yield on the OIP Bond). The owner of an OIP Bond must amortize the bond premium by offsetting the qualified stated interest allocable to each interest accrual period against the bond premium allocable to that period. No deduction is allowed for such amortization of bond premium even though the owner is required to decrease the adjusted basis in the owner's OIP Bond by the amount of the amortizable bond premium, which will result in an increase in the gain (or decrease in the loss) recognized for federal income tax purposes upon a sale or disposition of the OIP Bond prior to its maturity.

Prospective purchasers of any OIP 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, sale, exchange, or other disposition of, and amortization of bond premium on, such OIP Bonds.

### **Information Reporting and Backup Withholding**

Prospective purchasers should be aware that the interest on the 2024 Bonds is subject to information reporting to the IRS in a manner similar to interest paid on taxable obligations. In addition, interest on the 2024 Bonds may be subject to backup withholding if the interest is paid to an owner who or which (i) is not an "exempt recipient" and (ii) (A) fails to furnish an accurate U.S. taxpayer identification number in the manner required, (B) has been notified of a failure to report all interest and dividends required to be shown on federal income tax returns or (C) fails to certify under penalty of perjury that the owner is not subject to withholding. Individuals generally are not exempt recipients, although corporations and other entities generally are.

The reporting and backup withholding requirements do not in and of themselves affect the excludability of interest on the 2024 Bonds from gross income for federal income tax purposes, and amounts withheld under the backup

withholding rules may be refunded or credited against the owner's federal income tax liability, if any, provided that the required information is timely furnished to the IRS.

### **Internal Revenue Service Audits**

The IRS has established a program to audit tax-exempt obligations to determine whether the interest thereon is includible in gross income for federal income tax purposes. If the IRS does audit the 2024 Bonds, the IRS will, under its current procedures, treat the Authority as the taxpayer. As such, the beneficial owners of the 2024 Bonds will have only limited rights, if any, to participate in the audit or any administrative or judicial review or appeal thereof. Any action of the IRS, including but not limited to the selection of the 2024 Bonds for audit, or the course or result of such audit, or an audit of other obligations presenting similar tax issues, may affect the marketability or market value of the 2024 Bonds.

### **Opinion of Bond Counsel – Virginia Income Tax Consequences**

Bond Counsel will also opine that, under current law, interest on the 2024 Bonds is exempt from income taxation by the Commonwealth. Bond Counsel will express no opinion regarding (i) other tax consequences arising with respect to the 2024 Bonds under the laws of the Commonwealth or (ii) any consequences arising with respect to the 2024 Bonds under the tax laws of any state or local jurisdiction other than the Commonwealth. Prospective purchasers of the 2024 Bonds should consult their own tax advisors regarding such other Virginia tax consequences or the tax status of interest on the 2024 Bonds in a particular state or local jurisdiction other than the Commonwealth.

### **Changes in Federal and State Tax Law and Regulations**

Legislation affecting tax-exempt obligations is regularly considered by the U.S. Congress and various state legislatures. Such legislation may effect changes in federal or state income tax rates and the application of federal or state income tax laws (including the substitution of another type of tax), or may repeal or reduce the benefit of the excludability of interest on the tax-exempt obligations from gross income for federal or state income tax purposes.

The U.S. Department of the Treasury and the IRS and state regulatory authorities are continuously drafting regulations to interpret and apply the provisions of the Code and state law and court proceedings may be filed the outcome of which could modify the federal or state tax treatment of tax-exempt obligations.

There can be no assurance that legislation proposed or enacted after the date of issue of the 2024 Bonds, regulatory interpretation of the Code or state laws or actions by a court involving either the 2024 Bonds or other tax-exempt obligations will not have an adverse effect on the 2024 Bonds' federal or state tax status, marketability or market price or on the economic value of the tax-exempt status of the interest on the 2024 Bonds.

Prospective purchasers of the 2024 Bonds should consult their own tax advisors regarding the potential consequences of any such proposed or pending federal or state tax legislation, regulations or litigation, as to which Bond Counsel expresses no opinion.

### **LEGALITY FOR INVESTMENT**

The Enabling Act provides that the 2024 Bonds are legal investments in which all public officers and public bodies of the Commonwealth and its political subdivisions, all insurance companies and associations, and all savings banks and savings institutions, including savings and loan associations, in the Commonwealth may properly and legally invest funds in their control. No representation is made as to the legality of the 2024 Bonds for investment or any other purpose under any laws of any other state.

### **BOND RATING**

The 2024 Bonds have been rated "AAA" by S&P Global Ratings, a division of S&P Global Inc. ("S&P").

Explanations of the significance of such rating may be obtained from S&P. The rating is not a recommendation to buy, sell or hold the 2024 Bonds and should be evaluated independently.

There is no assurance that such rating will not be withdrawn or revised downward by S&P. Such action may have an adverse effect on the market price of the 2024 Bonds. The Authority has not undertaken any responsibility after the issuance of the 2024 Bonds to assure maintenance of the rating or to oppose any such revision or withdrawal.

### **INDEPENDENT AUDITORS**

The Authority's financial statements for the Fiscal Year ended June 30, 2023, included herein as **APPENDIX B**, have been audited by Yount, Hyde & Barbour, P.C., Winchester, Virginia, independent auditors, as stated in their report. The Authority's auditors have not reviewed this Official Statement or any other matters related to the issuance of the 2024 Bonds. See "**APPENDIX B - FINANCIAL STATEMENTS OF THE AUTHORITY FOR THE FISCAL YEAR ENDED JUNE 30, 2023.**"

### **FINANCIAL ADVISOR**

PFM Financial Advisors LLC ("PFM") Arlington, Virginia, serves as financial advisor to the Authority with respect to the sale of the 2024 Bonds. PFM is an independent financial advisory firm and is not engaged in the business of underwriting, trading or distributing municipal securities or other public securities. PFM is not obligated to undertake, and has not undertaken to make, an independent verification or to assume responsibility for the accuracy, completeness, or fairness of the information contained in this Official Statement.

### **UNDERWRITING**

The 2024 Bonds are being purchased by the Underwriters pursuant to a Bond Purchase Agreement (the "Bond Purchase Agreement") between the Authority and Siebert Williams Shank & Co., LLC, on behalf of itself and as representative of Loop Capital Markets LLC and Wells Fargo Bank, National Association (collectively, the "Underwriters"). The Bond Purchase Agreement sets forth the obligation of the Underwriters to purchase the 2024 Bonds at an aggregate purchase price of \$50,373,145.39 (representing the sum of the \$45,680,000.00 par amount of the 2024 Bonds plus net original issue premium of \$4,816,061.50, less an underwriting discount of \$122,916.11 on such 2024 Bonds) and is subject to certain terms and conditions, including the approval of certain legal matters by counsel. The Bond Purchase Agreement provides that the Underwriters will purchase all of the 2024 Bonds if any are purchased. The Underwriters may offer and sell the 2024 Bonds to certain dealers (including dealers depositing the 2024 Bonds into investment trusts) and others at prices different from the public offering prices stated on the cover page of this Official Statement. The public offering prices may be changed from time to time at the discretion of the Underwriters.

The Underwriters and their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage services. The Underwriters and their affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for the Authority, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities, which may include credit default swaps) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the Authority.

The Underwriters and their 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.

Wells Fargo Securities is the trade name for certain securities-related capital markets and investment banking services of Wells Fargo & Company and its subsidiaries, including Wells Fargo Bank, National Association, which conducts its municipal securities sales, trading and underwriting operations through the Wells Fargo Bank, NA

Municipal Products Group, a separately identifiable department of Wells Fargo Bank, National Association, registered with the Securities and Exchange Commission as a municipal securities dealer pursuant to Section 15B(a) of the Securities Exchange Act of 1934.

Wells Fargo Bank, National Association, acting through its Municipal Products Group ("WFBNA"), one of the underwriters of the 2024 Bonds, has entered into an agreement (the "WFA Distribution Agreement") with its affiliate, Wells Fargo Clearing Services, LLC (which uses the trade name "Wells Fargo Advisors") ("WFA"), for the distribution of certain municipal securities offerings, including the 2024 Bonds. Pursuant to the WFA Distribution Agreement, WFBNA will share a portion of its underwriting or remarketing agent compensation, as applicable, with respect to the 2024 Bonds with WFA. WFBNA has also entered into an agreement (the "WFSLLC Distribution Agreement") with its affiliate Wells Fargo Securities, LLC ("WFSLLC"), for the distribution of municipal securities offerings, including the 2024 Bonds. Pursuant to the WFSLLC Distribution Agreement, WFBNA pays a portion of WFSLLC's expenses based on its municipal securities transactions. WFBNA, WFSLLC, and WFA are each wholly-owned subsidiaries of Wells Fargo & Company.

### **CONTINUING DISCLOSURE**

The offering of the 2024 Bonds is subject to the continuing disclosure requirements of the Rule. Pursuant to the Rule, the Authority has undertaken for the benefit of the Bondholders to make public certain annual financial information and notice of certain material events by furnishing such information to the Municipal Securities Rulemaking Board's Electronic Municipal Market Access System ("EMMA").

A failure by the Authority to comply with its continuing disclosure undertaking will not constitute an Event of Default under the Master Indenture (although the Bondholders will have any available remedy at law or in equity to enforce the undertaking). However, a failure must be reported in accordance with the Rule and must be considered by any broker, dealer or municipal securities dealer before recommending the purchase or sale of the 2024 Bonds in the secondary market. Consequently, such a failure may adversely affect the transferability and liquidity of the 2024 Bonds and their market price.

The Authority has not previously entered into a continuing disclosure agreement. The Authority intends to establish procedures to promote compliance with its continuing disclosure obligations.

See **"APPENDIX F - FORM OF CONTINUING DISCLOSURE AGREEMENT"** hereto for the form of continuing disclosure agreement.

### **LIMITED VOLUNTARY CONTINUING DISCLOSURE**

The Authority has undertaken to provide certain voluntary continuing disclosure with respect to the 2024 Bonds. The Authority intends to report annually regarding the disbursement of the proceeds of the 2024 Bonds until construction is complete on the components of the Solids Upgrade Program, the PPSU Project and the Tertiary Systems Upgrade Project that are being financed with the proceeds of the 2024 Bonds. The Authority also intends to include a brief construction update regarding these projects in such annual update. The Authority's present intent is to provide ongoing disclosure annually as of the end of each Fiscal Year commencing with the Fiscal Year ending June 30, 2025. The Authority intends to make such disclosure available by furnishing it to EMMA. The Authority's undertaking is strictly voluntary and may be modified, amended or discontinued at any time in the Authority's sole discretion without the consent of the holders of the 2024 Bonds. For additional information, see **"DESCRIPTION OF THE 2024 BONDS – Designation of the 2024 Bonds as Green Bonds - Green Bond Reporting"** herein and **"APPENDIX E – SECOND PARTY OPINION FROM KESTREL."**

## MISCELLANEOUS

The Authority has furnished all information in this Official Statement relating to the Authority, including audited financial information for the Fiscal Years ended June 30, 2023 and June 30, 2022.

The summaries or descriptions included in this Official Statement, including the provisions of the Enabling Act, the 2024 Bonds, the Indenture and the Service Agreement are brief outlines of certain provisions of such documents and do not purport to be complete statements of such provisions. Reference is made to the Enabling Act, the 2024 Bonds, the Indenture, the Service Agreement and such other agreements for complete information. Copies of the Indenture are on file with the Trustee, and copies of the Indenture and such other agreements are on file at the office of the Authority.

The Authority intends, but has not covenanted in the Indenture or elsewhere, to prepare annual financial reports which are generally not provided to bondholders, but which are available upon written request to the Authority. The Authority does not expect to provide more frequent information on its finances and operations and has no obligation to provide any such information to bondholders or any other party.

Any statements in this Official Statement involving matters of opinion regardless of whether expressly so stated are intended as such and not as representations of fact, and no representation is made that any of such estimates will be realized.

The execution and delivery of this Official Statement have been duly authorized by the Authority.

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION  
AUTHORITY D/B/A ALEXRENEW**

By: /s/ Justin Carl  
General Manager and Chief Executive Officer

**APPENDIX A**

**COPY OF THE INDENTURE**

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**MASTER INDENTURE OF TRUST**

**BETWEEN**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY**

**AND**

**CRESTAR BANK  
AS TRUSTEE**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY  
SEWER SYSTEM REVENUE BONDS**

**March 15, 1999**

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## MASTER INDENTURE OF TRUST

**THIS MASTER INDENTURE OF TRUST** is made as of March 15, 1999, between the **CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY**, a public body politic and corporate of the Commonwealth of Virginia (the "Authority"), and **CRESTAR BANK**, a Virginia banking corporation, as trustee (the "Trustee").

The Authority has determined to issue from time to time pursuant to the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2 of the Code of Virginia of 1950, as amended (the "Act"), and this Master Indenture its revenue bonds in order to provide funds to pay the whole or any part of the cost of any sewage disposal or sewer system or any combination thereof and to refund indebtedness and obligations previously incurred for such purposes.

The Authority covenants and agrees with the Trustee and the Owners, from time to time, of the Bonds, as follows:

### ARTICLE I

#### DEFINITIONS AND RULES OF CONSTRUCTION

**Section 1.1. Definitions.** The terms set forth below will have the following meanings in this Master Indenture unless the context clearly requires otherwise:

**"Accreted Value"** means, with respect to any Capital Appreciation Bond, the principal amount thereof plus accrued interest thereon, compounded on the Compounding Dates and at the approximate interest rate or rates set forth therein, all as more fully described in the Supplemental Indenture authorizing the issuance of such Capital Appreciation Bond. The Accreted Value at any date shall be the amount set forth in the Accreted Value Table as of such date, if such date is a Compounding Date, and if not, as of the immediately preceding Compounding Date.

**"Accreted Value Table"** means the table denominated as such which appears as an exhibit to a Supplemental Indenture providing for the issuance of Capital Appreciation Bonds.

**"Act"** means the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2 of the Code of Virginia of 1950, as amended.

**"Annual Budget"** means the budget referred to in Section 9.3.

**"Annual Facility Payments"** shall have the meaning set forth in the Fairfax County Service Agreement.



**"Annual Joint Use Facilities Account Deposit"** means an amount equal to 0.7 percent (0.7%) of the total amount of the capital expenditures made with respect to the Joint Use Facilities subsequent to October 1, 1997, as determined by the Authority for each Fiscal Year pursuant to Section 7.7(d).

**"Authority"** means the City of Alexandria, Virginia, Sanitation Authority, a public body politic and corporate of the Commonwealth.

**"Authorized Authority Representative"** means the Chairman or any other person or persons designated to act on behalf of the Authority by a certificate signed by the Chairman and filed with the Trustee.

**"Average Interest Rate"** means the average of the actual interest rates which were in effect (weighted according to the length of the period during which each such interest rate was in effect) for the most recent twelve-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 twelve-month period), except that with respect to new Variable Rate Indebtedness the interest rate for such Variable Rate Indebtedness for the initial interest rate period will be the initial rate at which such Variable Rate Indebtedness is issued and thereafter will be calculated as set forth above.

**"Balloon Indebtedness"** means any Indebtedness, including any Bond Anticipation Notes, twenty-five percent or more of the original principal amount of which matures or is subject to mandatory redemption during any consecutive twelve-month period, if the maturing principal amount is not required to be amortized below such percentage by mandatory redemption or prepayment before the twelve-month period.

**"Bond"** or **"Bonds"** means any bond or all of the bonds, as the case may be, issued pursuant to this Master Indenture and any Supplemental Indenture, but not including any Parity Indebtedness or Subordinate Debt or any bonds or other evidence of indebtedness of the Authority issued from time to time under any other indenture, trust agreement, resolution or similar instrument.

**"Bond Anticipation Notes"** means notes or other obligations issued in anticipation of the issuance of Bonds.

**"Bond Counsel"** means an attorney or a firm of attorneys (designated by the Authority) of nationally recognized standing in matters pertaining to the validity of and the tax-exempt nature of interest on bonds issued by states and their political subdivisions, duly admitted to the practice of law before the highest court of any state of the United States of America.

**"Bond Debt Service"** means for any period of twelve consecutive months the Debt Service Requirement with respect to any Bonds then Outstanding.



**"Bond Fund"** means the fund established by Section 7.1(d).

**"Business Day"** means any day other than (i) a Saturday or Sunday, (ii) a day on which commercial banks in the Commonwealth, or the city in which the principal corporate trust office of the Trustee or the Paying Agent is located, are authorized by law to close, (iii) a day on which the New York Stock Exchange is closed, or (iv) such other days as may be specified in a Supplemental Indenture.

**"Capital Appreciation Bonds"** means the Bonds in any Series designated as Capital Appreciation Bonds in the Supplemental Indenture authorizing the issuance of the Series and on which all or a portion of the interest payable thereon is compounded on a specified Compounding Date or Dates and paid thereafter.

**"Capitalized Interest Account"** means the Capitalized Interest Account of the Bond Fund established by Section 7.1(d).

**"Chairman"** means the Chairman of the Authority or, if the Authority no longer has a Person with the title of Chairman, the Person filling the office with duties similar to the Chairman.

**"Code"** means the Internal Revenue Code of 1986, as amended, including applicable regulations and revenue rulings, and any successor codification.

**"Commonwealth"** means the Commonwealth of Virginia.

**"Compounding Date"** means the date or dates on which accrued interest on Capital Appreciation Bonds is compounded as more fully set forth in the Supplemental Indenture authorizing the issuance of such Bonds.

**"Consulting Engineer"** means an independent engineering firm or individual engineer licensed to do business in the Commonwealth, experienced with matters related to utilities similar to the System, retained by the Authority as Consulting Engineer.

**"Contracted Services"** means services rendered or facilities provided to the Authority in respect of the System or functions similar to those performed by the System performed for or on behalf of the Authority, from a specific project or system or group thereof, pursuant to a Service Contract, whether a financing lease, a service agreement or other arrangement.

**"Cost" or "Cost of the Project"** means all costs incurred by the Authority in connection with the acquisition, expansion, construction, improvement, renovation and equipping of the System or any Project comprising a portion of the System, as described in or permitted by the definition of "cost" set forth in Section 15.2-5101 of the Act, or any successor provision thereto, including, without limitation, the items described in or permitted by the definition of "Cost" contained in Article I, Section 1 of the Fairfax County Service Agreement.



**"Cost of Contracted Services"** means the payments to be made by the Authority for Contracted Services which may be allocated by the Authority between: (i) a Debt Service Component and (ii) an Operating Component. No designation or characterization of payments under a Service Contract will affect the Authority's right to make some other allocation of the payments for the purposes of this Master Indenture.

**"Counsel"** means such attorney or firm of attorneys selected or approved by the Authority who are duly admitted to practice law before the highest court of any state of the United States of America, none of whom is a full-time employee, member, director or officer of the Authority or a full-time employee or officer of the Trustee.

**"Credit Facility"** means a bond insurance policy, line of credit, letter of credit, standby bond purchase agreement or similar credit enhancement or liquidity facility established to provide credit or liquidity support for Bonds or Parity Indebtedness.

**"Debt Service Component"** means the portion of the Cost of Contracted Services that an Authorized Authority Representative reasonably determines, in a certificate delivered to the Trustee, to be for the purpose of paying a fixed charge or the principal of or interest on the obligations, directly or indirectly associated with rendering the Contracted Services, of the Person providing the Contracted Services, without regard to its treatment under generally accepted accounting principles.

**"Debt Service Requirement"** means, for any period of twelve consecutive months for which such determination is made, the aggregate of the amounts required to be deposited, as the case may be, in the Bond Fund, the Parity Debt Service Fund and the Subordinate Debt Service Fund during the period pursuant to Section 7.2 with respect to any Bonds, Parity Indebtedness or Subordinate Debt; provided, however, that:

(a) any Option Obligations will be assumed to mature on their stated dates of maturity or mandatory redemption;

(b) it will be assumed that the principal of Balloon Indebtedness, together with interest at the rate applicable to such Balloon Indebtedness, will be amortized in equal annual installments over a period of thirty years from the date the Balloon Indebtedness was incurred;

(c) interest on Variable Rate Indebtedness will be calculated at the Average Interest Rate;

(d) payments on any obligation under any Credit Facility that constitutes Parity Indebtedness or Subordinate Debt will not be included in the Debt Service Requirement for such Parity Indebtedness or Subordinate Debt to the extent that such Credit Facility has not been used or drawn upon, or any such drawing or use has been reimbursed to the provider in full; and



(e) the interest on any Hedged Indebtedness will be calculated at the Hedged Rate, if any.

**"Debt Service Reserve Fund"** means the fund established by Section 7.1(f).

**"Debt Service Reserve Requirement"** means an amount equal to the lesser of (i) the maximum principal and interest due on the Bonds then Outstanding in the current or any future Fiscal Year and (ii) 125 percent of the average annual principal and interest due on the Bonds then Outstanding in the then current and each future Fiscal Year; provided, however, that (A) for any Series of Bonds the interest on which is to be excludable from gross income for purposes of federal income taxation, the amount required to be deposited to and/or maintained in the Debt Service Reserve Fund with respect to such Series of Bonds need not exceed the amount which is permitted by the Code to be applied to such purpose from the proceeds of such Series of Bonds and still maintain the exclusion of interest on such Series of Bonds from gross income for purposes of federal income taxation and (B) the Debt Service Reserve Requirement may be increased by the Authority to the extent that there is delivered to the Trustee an opinion of Bond Counsel to the effect that the increase will not adversely affect the exclusion of interest on the Bonds from gross income for purposes of federal income taxation. In determining the amount of principal and interest due on any Bonds which are Variable Rate Indebtedness, interest will be calculated at a rate equal to the greater of (i) the actual interest rate on the Bonds in effect on the date of their issuance or (ii) the current average yield on municipal revenue bonds maturing in thirty years, according to the weekly index published by The Bond Buyer for the week immediately preceding the week in which the Bonds are issued. In the event The Bond Buyer is not published as of the date of any determination, or if published, does not publish an index of the current yield on municipal revenue bonds maturing in thirty years, an alternative index or other source of current bond yields may be selected by the Authority with the consent of the Trustee. In determining the amount of principal and interest due on any Bonds which are Balloon Indebtedness, the amount of principal and interest on the Balloon Indebtedness due in any year will be calculated by assuming that the original principal amount of the Balloon Indebtedness, together with interest at the rate applicable to such Balloon Indebtedness, will be amortized in equal annual installments over a period of thirty years from the date the Balloon Indebtedness was incurred.

**"Defeased Municipal Obligation Certificates"** means evidences of ownership of a proportionate interest in specified Defeased Municipal Obligations, which Defeased Municipal Obligations are held by a bank or trust company organized and existing under the laws of the United States of America or any of its states acceptable to the Trustee in the capacity of custodian.

**"Defeased Municipal Obligations"** means obligations of state or local government municipal bond issuers, which are rated in the highest rating category by at least one of the Rating Agencies, provision for the payment of the principal of and interest on which has been made by the deposit with a trustee or escrow agent of Government Obligations or Government



Certificates, the maturing principal of and interest on which, when due and payable, will provide sufficient money to pay the principal of, redemption premium, if any, and interest on such obligations of state or local government municipal bond issuers.

**"Defeasance Obligations"** means noncallable (i) Government Obligations, (ii) Government Certificates, (iii) Defeased Municipal Obligations, and (iv) Defeased Municipal Obligation Certificates.

**"De Minimis Amount"** means: (i) in reference to original issue discount (as defined in Section 1273(a)(1) of the Code) or premium on an obligation (A) an amount that does not exceed two percent multiplied by the stated redemption price at maturity plus (B) any original issue premium that is attributable exclusively to reasonable underwriter's compensation; and (ii) in reference to market discount (as defined in Section 1278(a)(2)(A) of the Code) or premium on an obligation, an amount that does not exceed two percent multiplied by the stated redemption price at maturity.

**"Engineer-Director"** means the Engineer-Director of the Authority or, if the Authority no longer has a person with the title of Engineer-Director, the person filling the office with similar duties as the Engineer-Director or such other person as may be designated by the governing body of the Authority.

**"Event of Default"** means any Event of Default specified in Section 10.1.

**"Fairfax County"** means Fairfax County, Virginia

**"Fairfax County-Authority Bonds"** means "Bonds" other than "Authority Bonds" as defined in the Fairfax County Service Agreement.

**"Fairfax County Funded Portion Payments"** means any payments made by Fairfax County to fund the "County's Funded Portion" of its Share of the Costs of any Improvements for which the Authority determines to issue Bonds within the meaning of Article IV, Section 1(b) of the Fairfax County Service Agreement.

**"Fairfax County Service Agreement"** means the Amended and Restated Service Agreement, dated as of October 1, 1998, between the Authority and the Board of Supervisors of Fairfax County, with respect to the treatment of wastewater, as it may be modified, altered, amended and supplemented from time to time.

**"Fiscal Year"** means the period of twelve months established by the Authority as its annual accounting period

**"Fixed Rate Investment"** means any obligation the yield on which is fixed and determinable on its issue date.

**"General Account"** means the General Account of the Improvement, Renewal and Replacement Fund established by Section 7.1(g).

**"General Fund"** means the fund established by Section 7.1(i).

**"Government Certificates"** means evidences of ownership of a proportionate interest in specified Government Obligations, which are held by a bank or trust company, organized and existing under the laws of the United States of America or any of its states acceptable to the Trustee in the capacity of custodian.

**"Government Obligations"** means bonds, notes and other direct obligations of the United States of America and securities unconditionally guaranteed as to timely payment by the United States of America.

**"Hedge Agreement"** means a contract or agreement, payable from Net Revenues on a parity with or subordinate to any Bonds or Parity Indebtedness intended to place Indebtedness on the interest rate, currency, cash flow or other basis desired by the Authority, including, without limitation, any interest rate swap agreement, currency swap agreement, forward payment conversion agreement or futures contract, any contract providing for payments based on levels of, or changes in, interest rates, currency exchange rates, stock or other indices, any contract to exchange cash flows or a series of payments, or any contract, including, without limitation, an interest rate floor or cap, or an option, put or call, to hedge payment, currency, rate, spread or similar exposure, between the Authority and a counterparty.

**"Hedged Indebtedness"** means Indebtedness with respect to which the Authority has entered into a Hedge Agreement, but only during the period prior to the expiration or termination of the Hedge Agreement.

**"Hedged Rate"** means, with respect to any Hedged Indebtedness, the effective rate of interest determined by taking into account all payments of interest on the Indebtedness and all Hedge Receipts under the related Hedge Agreement, assuming that the Authority and the provider of the Hedge Agreement make all payments required to be made under the terms of the Hedge Agreement. Hedged Rates may include, but are not limited to, a fixed rate, a variable rate, a fixed rate converting to a variable rate at a future point in time, a variable rate converting to a fixed rate at a future point in time or a variable rate subject to a maximum or minimum established by a Hedge Agreement.

**"Hedge Receipts"** means all amounts received by the Authority as periodic payments under a Hedge Agreement.



**"Improvements"** shall have the meaning set forth in the Fairfax County Service Agreement.

**"Indebtedness"** means the Bonds, any Parity Indebtedness or any Subordinate Debt.

**"Improvement, Renewal and Replacement Fund"** means the fund established by Section 7.1(g).

**"Insurance Consultant"** means an independent insurance consultant who has a favorable reputation for skill and experience in such work.

**"Interest Account"** means the Interest Account of the Bond Fund established by Section 7.1(d).

**"Interest Payment Date"** means any date on which a payment of interest on any Bonds or any Parity Indebtedness is due.

**"Interest Period"** means the period from and including an Interest Payment Date to and including the day before the next Interest Payment Date, except the first Interest Period for each Series of Bonds and Parity Indebtedness will be the period from and including the date specified in the Supplemental Indenture authorizing the Series of Bonds or the document authorizing the Parity Indebtedness for the Bonds or Parity Indebtedness to begin to bear interest to and including the day before the first Interest Payment Date.

**"Joint Use Facilities"** means the portion of the System designated as "Joint Use Facilities" under the Fairfax County Service Agreement.

**"Joint Use Facilities Account"** means the Joint Use Facilities Account of the Improvement, Renewal and Replacement Fund established by Section 7.1(g).

**"Master Indenture"** means this Master Indenture of Trust, between the Authority and the Trustee, as it may be modified, altered, amended and supplemented from time to time in accordance with its terms.

**"Moody's"** means Moody's Investors Service, Inc., New York, New York, or its successors.

**"Net Proceeds"** means the proceeds from any property or casualty insurance recovery remaining after payment of attorneys' fees, fees and expenses of the Authority and the Trustee and all other expenses incurred in collection of the gross proceeds.

**"Net Revenues"** means Revenues less Operating Expenses.

**"Operating Component"** means the portion of the Cost of Contracted Services reasonably determined by an Authorized Authority Representative, in a certificate delivered to the Trustee from time to time, to be directly or indirectly attributable to the ownership or operation of the System without regard to its treatment under generally accepted accounting principles; provided, however, if no such determination is made, all of the Cost of Contracted Services will be treated as Operating Component.

**"Operating Expenses"** means all expenses which may reasonably be determined by the Authority in its Annual Budget to be directly or indirectly attributable to the ownership or operation of the System and payable as Operating Expenses without regard to the treatment of such expenses under generally accepted accounting principles, including, without limitation, reasonable and usual expenses of administration, operation, maintenance and repair, which may include expenses not annually recurring, costs of billing and collecting the rates, fees and charges for the use of or the services furnished by the System, the Operating Component of the Cost of Contracted Services, insurance and surety bond premiums and reserves, other charges and fees necessary for the maintenance of adequate insurance coverage for the Authority and the System, fees and payments for any Credit Facility, legal, engineering and auditing expenses, expenses and compensation of the Trustee, and other expenses of the Authority required to be paid by law or under this Master Indenture or any Supplemental Indenture, but will not include (i) any allowance for amortization or depreciation, or (ii) deposits or transfers to the Bond Fund, the Parity Debt Service Fund, the Debt Service Reserve Fund, the Subordinate Debt Service Fund, or the Improvement, Renewal and Replacement Fund.

**"Operating Fund"** means the fund established by Section 7.1(c).

**"Operating Expense Charges"** shall have the meaning set forth in the Fairfax County Service Agreement.

**"Opinion of Counsel"** means a written opinion of any Counsel in form and substance acceptable to the Trustee.

**"Option Obligations"** means any Indebtedness which by its terms may be tendered by and at the option of its Owner or holder for purchase before its stated maturity.

**"Outstanding"** means, at any date, the aggregate of all Indebtedness authorized, issued, authenticated and delivered under this Master Indenture, except:

- (a) Indebtedness cancelled or surrendered to the Paying Agent for cancellation;
- (b) Indebtedness deemed to have been paid or discharged as provided in Section 14.1 or 14.2 or in such other instruments authorizing its issuance; and



(c) Indebtedness in lieu of or in substitution for which other Indebtedness has been authenticated and delivered pursuant to this Master Indenture and any Supplemental Indenture unless proof satisfactory to the Paying Agent is presented that any such Indebtedness is held by a bona fide Owner.

In determining whether Owners of a requisite aggregate principal amount of the Outstanding Bonds or Parity Indebtedness have concurred in any request, demand, authorization, direction, notice, consent or waiver under this Master Indenture or any Supplemental Indenture, the principal amount of Capital Appreciation Bonds will be their Accreted Value (as of the immediately preceding Compounding Date). Indebtedness which is owned by the Authority will be disregarded and deemed not to be Outstanding for the purpose of any such determination; provided, however, that for the purpose of determining whether the Trustee will be protected in relying upon any request, demand, authorization, direction, notice, consent or waiver, only Indebtedness which the Trustee knows to be so owned will be disregarded.

**"Owner"** means the Person in whose name a particular Bond is registered on the records of the Paying Agent or who is the holder of Parity Indebtedness.

**"Parity Debt Service"** means for any period of twelve consecutive months the Debt Service Requirement with respect to Parity Indebtedness then outstanding.

**"Parity Debt Service Component"** means all or any portion of the Debt Service Component of the Cost of Contracted Services under Service Contracts meeting the requirements of Section 5.5 that an Authorized Authority Representative reasonably determines, in a certificate delivered to the Trustee, will be payable on a parity with the Bonds.

**"Parity Debt Service Fund"** means the fund established by Section 7.1(e).

**"Parity Indebtedness"** means (i) the 1998 VRLF Bond, (ii) the Parity Debt Service Component of the Cost of Contracted Services and (iii) any other Parity Indebtedness incurred in accordance with Section 5.6 which is secured on a parity with the Bonds including bonds, notes or other evidences of indebtedness issued pursuant to this Master Indenture and any Supplemental Indenture equally and ratably secured by a pledge of Net Revenues and, at the Authority's option, any other security pledged to such bonds, notes or other evidences of indebtedness but which are not secured by the Debt Service Reserve Fund. Parity Indebtedness may also include Bond Anticipation Notes (or the interest on Bond Anticipation Notes only), Hedge Agreements or obligations with respect to Credit Facilities; provided, however, Parity Indebtedness does not include any bonds or any other indebtedness of the Authority issued from time to time under any other indenture, trust agreement, ordinance, resolution or other instrument not secured by a pledge of Revenues.

**"Paying Agent"** means any paying agent for the Bonds (and may include the Trustee) and its successor or successors appointed pursuant to the provisions of any Supplemental



Indenture. Unless otherwise provided in a Supplemental Indenture, the Trustee will be the Paying Agent.

**"Person"** means an individual, a corporation, a partnership, a limited liability company or partnership, a general partner of a partnership, an association, a joint stock company, a trust, any unincorporated organization, or a governmental unit or its political subdivision.

**"Plain Par Investments"** means a Fixed Rate Investment:

(a) Issued with not more than a De Minimis Amount of original issue discount or premium, or, if acquired on a date other than its issue date, acquired with not more than a De Minimis Amount of market discount or premium;

(b) Issued for a price that does not include accrued interest other than pre-issuance accrued interest;

(c) That bears interest from its issue date at a single, stated, fixed rate, with interest unconditionally payable at least annually; and

(d) That has a lowest stated redemption price that is not less than its outstanding stated principal amount.

**"Present Value"** means the present value computed under the economic accrual method (using the same compounding interval and financial conventions used to compute the yield on the relevant Series of Bonds under Section 148 of the Code) of all unconditionally payable receipts to be received from and payments to be paid for an investment after the valuation date, using the yield on the investment as determined under the Code as the discount rate.

**"Principal Account"** means the Principal Account of the Bond Fund established by Section 7.1(d).

**"Principal Payment Date"** means any date on which a payment of principal or Accreted Value of any Bonds or any Parity Indebtedness is due.

**"Principal Period"** means the period from and including a Principal Payment Date to and including the day before the next Principal Payment Date, except the first Principal Period for each Series of Bonds or Parity Indebtedness will be the twelve months immediately preceding the first Principal Payment Date unless some other period is specified in the Supplemental Indenture authorizing the Series of Bonds or the Service Contract or other document authorizing the Parity Indebtedness.

**"Project"** shall have the meaning set forth in any Supplemental Indenture or any instrument or document authorizing the issuance or incurrence of Parity Indebtedness, and may include Improvements or the restoration of any portion of the System with Net Proceeds.

**"Project Fund"** means the fund established by Section 7.1(a).

**"Rating Agency"** means Moody's or Standard & Poor's, or both of them, and their successors and assigns. The Authority may appoint any nationally-recognized securities rating agency in addition to or as a replacement for Moody's or Standard & Poor's.

**"Redemption Account"** means the Redemption Account of the Bond Fund established by Section 7.1(d).

**"Refunding Bonds"** means a Series or portion of a Series of Bonds issued to retire or refund all or any portion of another Series of Bonds, Parity Indebtedness or other obligations of the Authority.

**"Revenue Covenant"** means the revenue covenant set forth in Section 9.4.

**"Revenue Fund"** means the fund established by Section 7.1(b).

**"Revenues"** means all revenues, receipts and other income derived or received by the Authority from the ownership or operation of the System including, without limitation, any Operating Expense Charges derived by the Authority under the Fairfax County Service Agreement, the proceeds of any business interruption insurance, any availability fees, connection charges and investment earnings, and any transfers from the General Account of the Improvement, Renewal and Replacement Fund or the General Fund to the Revenue Fund, but excluding (i) any gift, grant, payment or contribution to the extent restricted by the donor, payor or grantor to a particular purpose inconsistent with its use for the payment of Senior Debt Service or Subordinate Debt Service, including any Fairfax County Funded Portion Payments, (ii) proceeds derived from property or casualty insurance or condemnation, and (iii) any Annual Facility Payments derived by the Authority under the Fairfax County Service Agreement, unless there are Outstanding any Fairfax County-Authority Bonds, in which case the Annual Facility Payments shall constitute Revenues. Any lump sum prepayment of Revenues received by the Authority may be reserved by the Authority in a subaccount in the Revenue Fund and disbursed from the subaccount and recognized as Revenues monthly over an accrual period determined by the Authority.

**"Secretary-Treasurer"** means the Secretary-Treasurer of the Authority or, if the Authority no longer has a Person with the title of Secretary-Treasurer, the Person filling the office with duties similar to the Secretary-Treasurer.



**"Senior Debt Service"** means for any period of twelve consecutive months the sum of Bond Debt Service and Parity Debt Service during the period.

**"Serial Bonds"** means any Bonds of a Series which are stated to mature in annual installments including any Capital Appreciation Bonds, but not including any Term Bonds.

**"Series" or "Series of Bonds"** means a separate series of Bonds issued under this Master Indenture pursuant to a Supplemental Indenture.

**"Service Contracts"** means any contracts or agreements for Contracted Services entered into by the Authority from time to time.

**"Share"** shall have the meaning set forth in the Fairfax County Service Agreement.

**"Standard & Poor's"** means Standard & Poor's Ratings Group, a division of McGraw-Hill, Inc., or its successors.

**"Subordinate Debt"** means bonds, notes or other evidences of indebtedness of the Authority, including any Bond Anticipation Notes, the Debt Service Component of the Cost of Contracted Services which is not a Parity Debt Service Component and any lease which is required to be capitalized by generally accepted accounting principles which is not a Parity Debt Service Component, secured by a pledge of Net Revenues expressly made subordinate to the pledge of Net Revenues securing the Bonds and Parity Indebtedness, and any obligations to make deposits to related reserve funds, rebate funds and similar funds or accounts or any other obligations payable out of the Subordinate Debt Fund.

**"Subordinate Debt Service"** means for any period of twelve consecutive months the Debt Service Requirement with respect to any Subordinate Debt and the Debt Service Component of the Cost of Contracted Services which is not a Parity Debt Service Component.

**"Subordinate Debt Service Fund"** means the fund established by Section 7.1(h).

**"Supplemental Indenture"** means any indenture supplemental to or amendatory of this Master Indenture as originally executed, which is duly executed and delivered in accordance with the provisions of this Master Indenture.

**"System"** means the sewage disposal system and the sewer system owned or operated by or on behalf of the Authority, including, but not limited to, the Joint Use Facilities, any Project and all additions, extensions, improvements and replacements to the System, but excluding any independent utility systems hereafter owned or operated by the Authority and accounted for separately by the Authority unless made part of the System by the Authority.



**"Term Bonds"** means Bonds of a Series which are stated to mature on one date and which are subject to scheduled mandatory redemption before such date.

**"Trustee"** means Crestar Bank, a Virginia banking corporation, and its successor or successors under this Master Indenture.

**"Variable Rate Indebtedness"** means any Indebtedness the interest on which is not established at the time of its issuance at a rate which is fixed until its maturity. For purposes of determining the amount of principal and interest due on Variable Rate Indebtedness, the Authority will use the guidelines set forth in the definition of Debt Service Reserve Requirement for estimating payments on such indebtedness.

**"Vice-Chairman"** means the Vice-Chairman of the Authority or, if the Authority no longer has a Person with the title of Vice-Chairman, the Person filling the office with duties similar to the Vice-Chairman.

**"1998 VRLF Bond"** means the Authority's \$9,000,000 Sewer Revenue Bond, Series 1998A, which the Authority issued and sold to the Virginia Water Facilities Revolving Fund (the "Fund"), acting by and through the Virginia Resources Authority, on November 4, 1998, pursuant to the terms of a Financing Agreement dated as of November 1, 1998 (the "1998 Financing Agreement"), between the Authority and the Fund. All references to Parity Debt Service due and payable with respect to the 1998 VRLF Bond shall include any "Additional Payments" payable by the Authority pursuant to the 1998 Financing Agreement.

**Section 1.2. Rules of Construction.** (a) Except where the context otherwise requires, (i) singular words will connote the plural number as well as the singular and vice versa, and (ii) pronouns inferring the masculine gender will include the feminine and neuter genders and vice versa. All references to particular articles or sections are references to articles or sections of this Master Indenture unless otherwise indicated. The headings and Table of Contents in this Master Indenture are solely for convenience of reference and will not constitute a part of this Master Indenture, nor will they affect its meaning, construction or effect. All references to the payment of Bonds are references to the payment of the principal of and premium, if any, and interest on Bonds.

(b) In any case where the Trustee is required to determine the principal amount of Bonds under this Master Indenture, except as provided in the definitions of the capitalized term "Outstanding" in Section 1.1, the Accreted Value of any Capital Appreciation Bonds at the time of the determination will be treated as the outstanding principal amount of such Capital Appreciation Bonds. All references to the payment of the principal amount of Bonds includes the payment of the Accreted Value of Capital Appreciation Bonds.

(c) Unless specifically provided otherwise in this Master Indenture or in a Supplemental Indenture, any requirement that an obligation be or remain in a particular rating



category assigned by a Rating Agency will be applied without regard to any refinement or gradation of the rating category by numerical modifier or otherwise.

## ARTICLE II

### ESTABLISHMENT OF TRUST

**Section 2.1. Establishment of Trust.** In order to provide for the payment of the principal of and the premium, if any, and interest on the Bonds and any Parity Indebtedness, and to secure the performance of all of the obligations of the Authority under the Bonds and any Parity Indebtedness, this Master Indenture and the Supplemental Indentures, subject to the terms of this Master Indenture and the Supplemental Indentures, the Authority pledges, assigns and grants to the Trustee a security interest in the following:

- (a) All of the Net Revenues and Hedge Receipts;
- (b) The funds, accounts, money and investments held by the Trustee and the Paying Agent pursuant to the terms of this Master Indenture and the Supplemental Indentures; provided, however, money and investments in the Project Fund, the Bond Fund and the Debt Service Reserve Fund do not secure Parity Indebtedness and money and investments in the Parity Debt Service Fund do not secure the Bonds;
- (c) Any Credit Facility given as security for the payment of any amounts owing under or with respect to any Bonds or Parity Indebtedness (other than a letter of credit, bond insurance policy or surety bond deposited pursuant to Section 7.6(c)), together with all money drawn or paid under the Credit Facility; provided, that with respect to any Credit Facility which is given to secure some, but not all, of the Bonds or Parity Indebtedness, such Credit Facility, together with money drawn or paid under it, will be held by the Trustee solely as security for the Bonds or Parity Indebtedness for which such Credit Facility was given as security and neither such Credit Facility nor any money drawn or paid under it will secure the payment of any other Bonds or Parity Indebtedness; and
- (d) All other property of any kind mortgaged, pledged or hypothecated by the Authority or by anyone on its behalf and with its written consent at any time as and for additional security under this Master Indenture and any Supplemental Indentures in favor of the Trustee, which is authorized to receive all such property at any time and to hold and apply it subject to the terms of the Master Indenture and the Supplemental Indentures.

The property described above, which secures the payment of the principal of and premium, if any, and interest on Bonds and any Parity Indebtedness in accordance with the provisions of this Master Indenture and the Supplemental Indentures, is to be held in trust for the equal and proportionate benefit and security of the Owners from time to time of Bonds and any



Parity Indebtedness, except as otherwise provided in, and subject to its application in accordance with the terms of, this Master Indenture and any Supplemental Indenture.

## ARTICLE III

### GENERAL TERMS AND CONDITIONS OF BONDS

**Section 3.1. Authority for Indenture.** This Master Indenture has been executed and delivered pursuant to a resolution adopted by the Authority on February 16, 1999. The Authority has ascertained that the execution of and the transactions contemplated by this Master Indenture are necessary or convenient in order to carry out the purposes of the Authority and to exercise the powers granted to it by the Act and that each covenant or agreement in this Master Indenture is reasonable and proper for protecting and enforcing the rights and remedies of the Owners.

**Section 3.2. Indenture Constitutes Contract.** In consideration of the purchase and acceptance of Bonds by their Owners, the provisions of this Master Indenture and the Supplemental Indentures shall be a part of the contract of the Authority with the Owners of Bonds and shall constitute a contract among the Authority, the Trustee and the Owners from time to time of Bonds.

**Section 3.3. Form and Details of Bonds.** The forms, details and terms of each Series of Bonds, the accounts to be created with respect to such Bonds within the funds established under this Master Indenture, and such other matters as the Authority may deem appropriate shall be set forth in the Supplemental Indenture authorizing the issuance of the Series.

**Section 3.4. Payment of Bonds.** The principal of and premium, if any, and interest on Bonds shall be payable in lawful money of the United States of America, but only from the Net Revenues and other sources pledged to such payment pursuant to this Master Indenture. The principal of and premium, if any, and interest on Bonds shall be payable at such place or places and in such manner as specified in the Supplemental Indentures authorizing their issuance. Unless otherwise provided in a Supplemental Indenture, if the date of maturity of the principal of any Bonds or the date fixed for the payment of interest on or the redemption of any Bonds is not a Business Day, then payment of the principal and premium, if any, and interest need not be made on such date, but may be made on the next succeeding date which is a Business Day, and if made on such next succeeding Business Day no additional interest shall accrue for the period after such date of maturity or date fixed for redemption.

**Section 3.5. Execution of Bonds.** Except as may be otherwise provided in any Supplemental Indenture, all of the Bonds shall, from time to time, be executed on behalf of the Authority by, or bear the facsimile signature of, the Chairman or Vice-Chairman. The corporate



seal of the Authority (which may be a facsimile) shall be affixed (or imprinted or engraved if a facsimile) to all of the Bonds and attested by the manual or facsimile signature of the Secretary-Treasurer.

If any of the officers who have signed or sealed any of the Bonds or whose facsimile signature is on the Bonds ceases to be an officer of the Authority before the Bonds so signed and sealed have been actually authenticated by the Paying Agent or delivered by the Authority, the Bonds nevertheless may be authenticated, issued and delivered with the same force and effect as though the person or persons who signed or sealed the Bonds or whose facsimile signature is on the Bonds had not ceased to be an officer of the Authority. Any Bond may be signed and sealed on behalf of the Authority by those persons who, at the actual date of the execution of the Bond, are proper officers of the Authority, although at the date of the Bond they were not officers of the Authority.

**Section 3.6. Authentication of Bonds.** Except as may be otherwise provided in a Supplemental Indenture, no Bond shall be secured by this Master Indenture and the Supplemental Indentures, entitled to their benefits or be valid for any purpose unless there is endorsed on the Bond the Paying Agent's certificate of authentication, substantially in the form provided for in the Supplemental Indenture authorizing the issuance of the Bond. The Paying Agent shall authenticate each Bond with the signature of an authorized officer or employee of the Paying Agent, but it shall not be necessary for the same person to authenticate all of the Bonds. The Paying Agent's certificate of authentication on any Bond issued by the Authority shall be conclusive evidence and the only competent evidence that the Bond has been duly authenticated and delivered under this Master Indenture.

**Section 3.7. Registration, Transfer and Exchange.** Except as may be otherwise provided in a Supplemental Indenture, the Authority shall cause books for the registration and registration of transfer or exchange of the Bonds to be kept at the principal corporate trust office of the Paying Agent. The Authority appoints the Paying Agent as its registrar and transfer agent to keep such books and to make registrations and registrations of transfer or exchange under such reasonable regulations as the Authority or the Paying Agent may prescribe.

Upon surrender for registration of transfer or exchange of any Bond at the principal corporate trust office of the Paying Agent, the Authority shall execute and the Paying Agent shall authenticate and deliver in the name of the transferee or transferees a new Bond or Bonds of like date, tenor and of any authorized denomination for the aggregate principal amount which the Owner is entitled to receive, subject in each case to such reasonable regulations as the Authority or the Paying Agent may prescribe. All Bonds presented for registration of transfer, exchange, redemption or payment shall be accompanied by a written instrument or instruments of transfer or authorization for exchange, in form and substance reasonably satisfactory to the Authority and the Paying Agent, duly executed by the registered Owner or by the Owner's duly authorized attorney-in-fact or legal representative. No Bond may be registered to bearer.



New Bonds delivered upon any transfer or exchange shall be valid obligations of the Authority evidencing the same debt as the Bonds surrendered and will be secured by this Master Indenture and the applicable Supplemental Indenture and entitled to their benefits to the same extent as the Bonds surrendered. Registrations of transfers or exchange shall be made by the Paying Agent within such time periods as are customary in the municipal securities industry.

**Section 3.8. Charges for Exchange or Transfer.** Except as provided in Section 3.10, no charge shall be made for any registration of transfer or exchange of Bonds, but the Authority or the Paying Agent may require payment by the Owner of the Bonds of a sum sufficient to cover any applicable tax or other governmental charge that may be imposed.

**Section 3.9. Temporary Bonds.** Until Bonds in definitive form are ready for delivery, the Authority may execute, and upon its request in writing, the Paying Agent shall authenticate and deliver in lieu of definitive Bonds and subject to the same provisions, limitations and conditions, one or more printed, lithographed or typewritten Bonds in temporary form, in substantially the form set forth in the Supplemental Indenture authorizing such Bond, with appropriate omissions, variations and insertions.

Except as may be otherwise provided in any Supplemental Indenture, the Authority shall, without unreasonable delay, prepare, execute and deliver to the Paying Agent, and, upon the presentation and surrender of the Bond or Bonds in temporary form to the Paying Agent at its principal corporate trust office, the Paying Agent shall authenticate and deliver in exchange, a Bond or Bonds of the same maturity and Series in definitive form, in the authorized denominations, and for the same aggregate principal amount as the Bond or Bonds in temporary form surrendered. Such exchange shall be made at the Authority's expense.

**Section 3.10. Mutilated, Lost, Stolen or Destroyed Bonds.** In the event any Outstanding Bond is mutilated, lost, stolen or destroyed, the Authority shall execute, and, upon the Authority's request in writing, the Paying Agent shall authenticate and deliver, a new Bond of the same Series, principal amount and maturity and of like tenor as the mutilated, lost, stolen or destroyed Bond in exchange and substitution for a mutilated Bond, or in lieu of and substitution for a lost, stolen or destroyed Bond.

Application for exchange and substitution of mutilated, lost, stolen or destroyed Bonds shall be made to the Paying Agent at its principal corporate trust office and the applicant shall furnish to the Authority and the Paying Agent security or indemnification to their satisfaction. In every case of loss, theft or destruction of a Bond, the applicant shall also furnish to the Authority and the Paying Agent evidence to their satisfaction of the loss, theft or destruction and of the identity of the applicant, and in every case of mutilation of a Bond, the applicant shall surrender the Bond so mutilated for cancellation.

Notwithstanding the foregoing provisions of this Section, in the event any Bond has matured and no default has occurred which is then continuing in the payment of the principal of or



premium, if any, or interest on the Bond, the Authority may authorize the payment of the Bond (without surrender except in the case of a mutilated Bond) instead of issuing a substitute Bond, provided security or indemnification is furnished as provided in this Section.

The Authority and the Paying Agent may charge the Owner their reasonable fees and expenses in connection with the issuance of any substitute Bond. Every substitute Bond issued pursuant to the provisions of this Section shall constitute a contractual obligation of the Authority, whether or not the lost, stolen or destroyed Bond is found or delivered at any time, or is enforceable by anyone, and shall be entitled to all of the benefits of this Master Indenture and the Supplemental Indentures equally and proportionally with any and all other Bonds duly issued under this Master Indenture to the same extent as the Bond in substitution for which such Bond was issued.

The provisions of this Section are exclusive and shall preclude (to the extent lawful) all of the rights and remedies with respect to the payment of mutilated, lost, stolen, or destroyed Bonds, including those granted by any law or statute now existing or hereafter enacted.

**Section 3.11. Cancellation of Bonds.** Any temporary or mutilated Bond surrendered to the Paying Agent, or any Bond redeemed or paid at maturity, or any Bond delivered for transfer, exchange or replacement, or purchased pursuant to instructions from the Authority, shall be cancelled or destroyed, and the Paying Agent shall deliver the cancelled Bond or a certificate of destruction of such Bond to the Authority.

## ARTICLE IV

### REDEMPTION OF BONDS

**Section 4.1. Redemption of Bonds.** The Bonds of each Series shall be subject to redemption as specified in the Supplemental Indenture authorizing the issuance of such Series.

**Section 4.2. Selection of Bonds for Redemption.** Bonds of any Series to be called for redemption shall be selected as provided in the Supplemental Indenture authorizing the issuance of the Series. The Paying Agent shall treat each Bond of a denomination greater than the minimum denomination authorized in the related Supplemental Indenture as representing the number of separate Bonds that can be obtained by dividing the Bond's actual principal amount by such minimum denomination.

**Section 4.3. Notice of Redemption.** Except as otherwise provided in any Supplemental Indenture authorizing the issuance of any Series of Bonds, in the case of any redemption of Bonds, the Paying Agent shall give notice in its own name or in the name of the Authority, as provided for in this Section, that Bonds of a particular Series identified by serial or CUSIP numbers have been called for redemption and, in the case of Bonds to be redeemed in part only,



the principal amount of the Bonds that have been called for redemption (or if all the Outstanding Bonds of a Series are to be redeemed, so stating, in which event serial or CUSIP numbers may be omitted), that they will be due and payable on the date fixed for redemption (specifying the date) upon surrender of the Bonds at the principal corporate trust office of the Paying Agent, at the applicable redemption price (specifying the price) together with any accrued interest to such date, and that all interest on the Bonds to be redeemed will cease to accrue on and after such date.

Unless otherwise specified in any Supplemental Indenture, such notice shall be mailed by first class mail, postage prepaid, not less than thirty nor more than sixty days before the date fixed for redemption, to the Owners of the Bonds called for redemption, at their respective addresses as they last appear on the registration books maintained by the Paying Agent. The receipt of notice will not be a condition precedent to the redemption and failure to mail any notice to an Owner or any defect in any notice will not affect the validity of the proceedings for the redemption of Bonds.

**Section 4.4. Payment of Redeemed Bonds.** Except as otherwise provided in any Supplemental Indenture authorizing the issuance of any Series of Bonds, if notice of redemption has been given as provided in Section 4.3, the Bonds called for redemption shall be due and payable on the date fixed for redemption at a redemption price equal to the principal amount of and premium, if any, on the Bonds, together with accrued interest to the date fixed for redemption. Payment of the redemption price shall be made by the Paying Agent upon surrender of the Bonds. If less than the full principal amount of a Bond is called for redemption, the Authority shall execute and deliver and the Paying Agent shall authenticate, upon surrender of the Bond, and without charge to the Owner, Bonds of the same Series for the unredeemed portion of the principal amount of the Bond so surrendered.

If any Bond has been duly called for redemption and payment of the principal of and premium, if any, and unpaid interest accrued to the date fixed for redemption on the Bond has been made or provided for, then, notwithstanding that the Bond called for redemption has not been surrendered for cancellation, interest on the Bond shall cease to accrue from the redemption date, and, from and after the redemption date, the Bond shall no longer be entitled to any lien, benefit or security under this Master Indenture and the Supplemental Indentures, and its Owner shall have no rights in respect of the Bond except to receive payment of the principal of and premium, if any, and unpaid interest accrued to the date fixed for redemption on the Bond.

## ARTICLE V

### ISSUANCE OF INDEBTEDNESS

**Section 5.1. Issuance of Bonds.** (a) Bonds may be issued under this Master Indenture for any lawful purpose authorized by the Act, including, without limitation, providing funds to pay



the Cost of any Project and to refund bonds or other obligations previously issued or incurred by the Authority for such purposes.

(b) The Authority shall not issue any bonds, notes or other evidences of indebtedness or incur any obligation or indebtedness which will be secured by a pledge of Net Revenues or other funds pledged by this Master Indenture to the payment of the Bonds and any Parity Indebtedness except for Bonds, Parity Indebtedness and Subordinate Debt issued under and in accordance with this Master Indenture; provided, however, that nothing contained in this Master Indenture shall prevent the Authority from issuing or incurring indebtedness payable out of or secured by a pledge of Net Revenues to be derived on and after the date the pledge of Net Revenues provided for in this Master Indenture is discharged and satisfied as provided in Section 14.1.

(c) Subject to the restrictions set forth in subsection (b) of this Section, the Authority reserves the right in its sole discretion and without the consent of the Trustee or any Owner of any Bond, Parity Indebtedness or Subordinate Debt, to issue from time to time bonds, notes and other evidences of indebtedness for any lawful purpose authorized by the Act.

**Section 5.2. Parity of Bonds and Parity Indebtedness.** This Master Indenture constitutes a continuing, irrevocable pledge of the Net Revenues and other funds of the Authority pledged in Article II to secure payment of the principal of and premium, if any, and interest on all Bonds and Parity Indebtedness which may, from time to time, be executed, authenticated and delivered under this Master Indenture and under the documents providing for any Parity Indebtedness. Except as otherwise provided in this Master Indenture, all Bonds and any Parity Indebtedness shall in all respects be equally and ratably secured under this Master Indenture without preference, priority or distinction on account of the time of their authentication, delivery or maturity, so that all Bonds and any Parity Indebtedness at any time outstanding under this Master Indenture will have the same right, lien and preference under this Master Indenture with like effect as if they had all been executed, authenticated and delivered simultaneously. Nothing in this Master Indenture shall be construed, however, as (i) requiring that any Bonds or Parity Indebtedness bear interest at the same rate or in the same manner as any other Bonds or Parity Indebtedness, have the same or an earlier or later maturity, have the same Principal or Interest Payment Dates as other Bonds or Parity Indebtedness, or be subject to mandatory or optional redemption before maturity on the same basis as any other Bonds or Parity Indebtedness, (ii) prohibiting the Authority from entering into financial arrangements, including any Credit Facility or Hedge Agreement, designed to assure that funds will be available for the payment of certain Bonds or Parity Indebtedness at their maturity or tender for purchase, or (iii) prohibiting the Authority from pledging funds or assets of the Authority other than those pledged under this Master Indenture or any Supplemental Indenture for the benefit of any Bonds or Parity Indebtedness.



**Section 5.3. Conditions of Issuing Bonds.** Before the issuance and authentication of any Series of Bonds by the Paying Agent, the Authority shall deliver or cause to be delivered to the Trustee:

(a) In the case of the initial Series of Bonds issued under this Master Indenture only:

(1) An original executed counterpart of this Master Indenture;

(2) A certified copy of a resolution of the Authority authorizing the execution and delivery of this Master Indenture; and

(3) An Opinion or Opinions of Counsel, subject to customary exceptions and qualifications, to the effect that this Master Indenture has been duly authorized, executed and delivered by the Authority.

(b) An original executed counterpart of a Supplemental Indenture which may include provisions (i) authorizing the issuance, fixing the principal amount and setting forth the details of the Bonds, including the interest rate or rates and the manner in which the Bonds are to bear interest, the Principal and Interest Payment Dates of the Bonds, the purposes for which the Bonds are being issued, the date and the manner of numbering the Bonds, the series designation, the denominations, the maturity dates and amounts, the principal amounts required to be redeemed pursuant to any mandatory redemption provisions or the manner for determining such principal amounts, and any other provisions for redemption before maturity; (ii) for Credit Facilities, Hedge Agreements and for reserve and other accounts to be established with respect to the Bonds within the funds established under this Master Indenture; (iii) for the amount, if any, to be deposited into the Debt Service Reserve Fund, which will be an amount at least sufficient to cause an amount equal to the Debt Service Reserve Requirement with respect to all Outstanding Bonds, including the Bonds proposed to be issued, to be on deposit in the Debt Service Reserve Fund; (iv) for the application of the proceeds of the Bonds; (v) necessary or expedient for the issuance of Bonds constituting Variable Rate Indebtedness, including without limitation, tender and remarketing provisions, liquidity facility provisions and provisions for establishing the variable rate and changing interest rate modes; and (vi) for such other matters as the Authority may deem appropriate.

(c) A certified copy of a resolution or resolutions of the Authority authorizing the execution and delivery of the Supplemental Indenture and the issuance, award, execution and delivery of Bonds and, in the case of Refunding Bonds, calling for redemption or providing for payment of the Bonds, Parity Indebtedness or other obligations of the Authority to be refunded, fixing any redemption date and authorizing any required notice of redemption in accordance with the provisions of this Master Indenture and the Supplemental Indentures.



(d) A certificate signed by the Chairman, Vice-Chairman or Engineer-Director of the Authority and dated the date of issuance, to the effect that to the best of his or her knowledge, upon and immediately following the issuance, no Event of Default under this Master Indenture, and no event or condition which, with the giving of notice or lapse of time or both, would become an Event of Default under this Master Indenture, will have occurred and be continuing, or, if such Event of Default or event or condition has occurred and is continuing, it will be cured upon the issuance of the Bonds or upon completion of the Project to be financed with the Bonds.

(e) An Opinion or Opinions of Counsel, subject to customary exceptions and qualifications, to the effect that:

(1) The Authority is a duly created and existing public body politic and corporate of the Commonwealth and is vested with all the rights and powers conferred by the Act; and

(2) The Supplemental Indenture delivered pursuant to this Section has been duly authorized, executed and delivered by the Authority and complies in all respects with the requirements of this Master Indenture.

(f) An opinion of Bond Counsel, subject to customary exceptions and qualifications, to the effect that the issuance of the Bonds has been duly authorized, that the Bonds are valid and binding obligations of the Authority entitled to the benefits and security of this Master Indenture and that the interest on the Bonds is excludable from gross income for purposes of federal income taxation or, if the interest is not excludable, that the issuance and the intended use of the proceeds of the Bonds will have no adverse effect on the tax-exempt status of the interest on any other Bonds then Outstanding the interest on which was excludable from gross income when issued.

(g) A request and authorization of the Authority, signed by its Chairman, Vice-Chairman or Engineer-Director, to the Paying Agent to authenticate and deliver the Bonds as directed in the request upon payment to the Trustee for the account of the Authority of the amount specified in the request.

(h) If the Bonds are issued to pay the cost of acquiring, renovating, equipping or constructing improvements, extensions, additions or replacements to the System:

(1) A written statement of the Consulting Engineer setting forth the Consulting Engineer's (i) estimate of the cost of the acquisition, renovation, equipping or construction (including all financing, reserves and related costs) and the date on which such acquisition, renovation, equipping or construction will be completed and (ii) opinion that the proceeds of the Bonds, together with any other money available or anticipated to be available for such purpose, will be sufficient to pay the cost of the acquisition, renovation, equipping or construction; and



(2) Either (i) a written certificate of the Consulting Engineer or an independent certified public accountant which states that during any twelve consecutive months of the eighteen months preceding the issuance of the proposed additional Series of Bonds the Authority would have been in compliance with the Revenue Covenant, taking into account the maximum Bond Debt Service due on the proposed additional Series of Bonds in the current or any future Fiscal Year and those rates, fees and other charges which are in effect at the time of the delivery of the proposed additional Series of Bonds or (ii) a written statement of the Consulting Engineer that projects Operating Expenses, Revenues and Net Revenues for two full Fiscal Years following the anticipated completion of the acquisition, renovation, equipping or construction, and which demonstrates that, on the basis of such projection, the Authority can comply with the Revenue Covenant, taking into account those rates, fees and other charges which are in effect at the time of the delivery of the proposed additional Series of Bonds and future increases in such rates, fees and other charges which have been duly adopted by the governing body of the Authority and are scheduled to go into effect as may be required to continue to comply with the Revenue Covenant.

(i) If the Bonds are Refunding Bonds issued to refund Bonds or Parity Indebtedness issued under this Master Indenture:

(1) Evidence satisfactory to the Trustee that the Authority has made provision as required by this Master Indenture for the payment or redemption of all Bonds or Parity Indebtedness to be refunded;

(2) A written determination by the Trustee or by a firm of independent certified public accountants that the proceeds (excluding accrued interest) of the Refunding Bonds, together with any other money to be deposited for such purpose with the Trustee upon the issuance of the Refunding Bonds and the investment income to be earned on funds held by the Trustee for the payment or redemption of Bonds or Parity Indebtedness, will be sufficient to pay, whether upon redemption or at maturity, the principal of and premium, if any, and interest on the Bonds or Parity Indebtedness to be refunded and the estimated expenses incident to the refunding; and

(3) Either (i) a written determination by the Trustee or by a firm of certified independent public accountants that after the issuance of the Refunding Bonds and the provision for payment or redemption of all Bonds or Parity Indebtedness to be refunded, Senior Debt Service for each Fiscal Year in which there will be Outstanding Bonds of any Series or Parity Indebtedness not to be refunded will not be more than Senior Debt Service for the Fiscal Year would have been on all Outstanding Bonds and Parity Indebtedness immediately before the issuance of the Refunding Bonds, including the Bonds and Parity Indebtedness to be refunded, or (ii) the written certification required by subsection (h)(2) of this Section, except that the projections required by clause (ii) of subsection (h)(2) will be for the two full Fiscal Years following the date of the issuance of the Refunding Bonds.



(j) If the Bonds are Refunding Bonds issued to refund obligations of the Authority issued with respect to the System other than Bonds or Parity Indebtedness issued under this Master Indenture:

(1) Evidence satisfactory to the Trustee that the Authority has made provision for the payment or redemption of the other obligations of the Authority to be refunded; and

(2) The written certification required by subsection (h)(2) of this Section, except that the projections required by clause (ii) of subsection (h)(2) will be for the two full Fiscal Years following the date of issuance of the Refunding Bonds.

Except for the requirements of subparagraph (d) (which may be waived by the purchaser of Bonds by an instrument or concurrent instruments in writing signed by the purchaser), none of the requirements in this Section may be waived without the consent of the Owners of a majority in aggregate principal amount of the Bonds and Parity Indebtedness then Outstanding.

**Section 5.4. Application of Bond Proceeds.** The Trustee shall apply the proceeds of any Series of Bonds as provided in the Supplemental Indenture authorizing the issuance of such Series.

**Section 5.5. Service Contracts.** (a) The Authority may designate the Debt Service Component of Cost of Contracted Services as Parity Indebtedness provided the requirements of clauses (1) and (2) of Section 5.3(h) or of Section 5.3(i), as appropriate, are met as if the Debt Service Component were an additional Series of Bonds.

(b) The Authority shall fulfill its obligations under all Service Contracts as they may exist from time to time.

(c) Anything in this Master Indenture to the contrary notwithstanding, the Authority's covenants in this Master Indenture which are applicable to the System shall be applicable to the facilities, products and services to which the Authority is entitled under Service Contracts only to the extent that the Authority may reasonably and practicably fulfill the covenants as a matter of contract or that the Authority can legally enforce the covenants of other parties.

(d) The Authority shall not enter into any Service Contract providing for acceleration as a remedy for a default by the Authority unless payment of the Bonds is also accelerated in accordance with Section 10.3.

(e) An Authorized Authority Representative shall deliver to the Trustee a certificate setting forth the annual amounts and due dates of the Parity Debt Service Component



payable by the Authority under the Service Contract and the interest and principal portions of such Component.

**Section 5.6. Other Parity Indebtedness.** (a) The Authority may incur or refinance Parity Indebtedness provided (i) the documents providing for the Parity Indebtedness specify the amounts and due dates of the Parity Debt Service of the Parity Indebtedness and the principal and interest components of the Parity Debt Service and (ii) the requirements of clauses 1 and 2 of Section 5.3(h) or of Section 5.3(i), as appropriate, have been met as if the Parity Indebtedness were an additional Series of Bonds.

(b) Parity Indebtedness may include Bond Anticipation Notes (or the interest component thereof only), Hedge Agreements and obligations with respect to Credit Facilities.

(c) The Authority shall fulfill its obligations under all contracts or agreements creating Parity Indebtedness as they may exist from time to time.

(d) The Authority shall not enter into any Hedge Agreement which constitutes Parity Indebtedness unless such Hedge Agreement provides by its terms that any amounts due under it may not be accelerated upon the occurrence of a default unless payment of the Bonds is also accelerated in accordance with Section 10.3.

**Section 5.7. Subordinate Debt.** Nothing in this Master Indenture shall prohibit or prevent the Authority from authorizing and issuing Subordinate Debt for any lawful purpose payable from Net Revenues subject and subordinate to the payment of any Bonds and Parity Indebtedness and to the deposits required to be made from Net Revenues to the Bond Fund, the Parity Debt Service Fund, the Debt Service Reserve Fund or any other fund or account established to secure any Bonds or Parity Indebtedness, or from securing any Subordinate Debt and its payment by a lien and pledge of Net Revenues junior and inferior to the lien on and pledge of Net Revenues for the payment and security of Bonds and Parity Indebtedness; provided, however, that such Subordinate Debt may only be declared immediately due and payable upon the occurrence of a default under it if payment of the Bonds and Parity Indebtedness has been accelerated in accordance with Section 10.3.

## **ARTICLE VI**

### **PROJECT FUND**

**Section 6.1. Project Fund.** The Authority shall cause the Trustee to, and the Trustee shall, deposit in the Project Fund (i) the portion of the proceeds of any Series of Bonds specified in the Supplemental Indenture authorizing their issuance, and (ii) any Net Proceeds to be used to repair, reconstruct or restore any portion of the System. The Trustee will maintain within the Project Fund a special account for each separate Series of Bonds, and any Net Proceeds and such



other special accounts as may be provided for in any Supplemental Indenture. Deposits will be made to the credit of the Project Fund and any special accounts as provided in the Supplemental Indentures.

**Section 6.2. Payments from Project Fund.** The Trustee shall use money in each special account of the Project Fund solely to pay Costs of the Project for which the special account was created, as evidenced by the requisitions and certificates provided for in this Section. As conditions precedent to each disbursement from the Project Fund, the Authority shall file or cause to be filed with the Trustee:

(a) A requisition, signed by an Authorized Authority Representative, stating the name of the Person to whom the payment is to be made, the amount of the payment and the purpose in reasonable detail for which the obligation to be paid was incurred.

(b) A statement signed by an Authorized Authority Representative, representing that the obligation set forth in the requisition has been incurred by the Authority to pay Costs of the Project, is a proper charge against the Project Fund and has not been the basis for a prior requisition which has been paid from the Project Fund.

Upon receipt of each requisition and statement the Trustee shall payment from the Project Fund in accordance with the requisition.

Unless otherwise provided in the Supplemental Indenture authorizing a Series of Bonds, interest accruing on and any profit realized from the investment of money in the Project Fund will be retained in the Project Fund as part of the account in which the investment is held.

**Section 6.3. Disposition of Balance in Project Fund.** Upon the completion of any Project and upon the Trustee's receipt of a certificate, signed by an Authorized Authority Representative, stating the date of completion and which items of the Cost of the Project, if any, have not been paid and for the payment of which money should be reserved in the special account created in the Project Fund for such Project, the balance of any money remaining in such special account in excess of the amount to be reserved for payment of unpaid items of the Cost of the Project shall be applied as follows:

(a) If the amounts in such special account are subject to the requirements of Article IV, Section 4 of the Fairfax County Service Agreement, for the purposes set forth in Article IV, Section 4 of the Fairfax County Service Agreement subject to the restrictions set forth therein; or

(b) If the amounts in such special account are not subject to the requirements of Article IV, Section 4 of the Fairfax County Service Agreement, at the option and written direction of the Authority;

(1) For transfer to any other special account or accounts in the Project Fund, to the extent money is needed to pay Costs of any other Project; provided that, before any such transfer, the Authority will cause to be delivered to the Trustee an opinion of Bond Counsel to the effect that the transfer will not adversely affect the exclusion from gross income for purposes of federal income taxation of interest on any Bonds on which interest was excludable from gross income on the date of their issuance;

(2) For deposit in the Redemption Account of the Bond Fund to be used to purchase or redeem Bonds of the Series of Bonds issued to provide such Project or Projects in accordance with Section 7.4 or, if the Authority delivers to the Trustee an opinion of Bond Counsel that such disposition will not adversely affect the exclusion from gross income for federal income tax purposes of interest on any Bonds the interest on which was excludable from gross income on the date of their issuance, to pay scheduled installments of principal on such Series of Bonds or to be deposited in the Improvement, Renewal and Replacement Fund; or

(3) In the case of any Net Proceeds, for deposit in the General Account of the Improvement, Renewal and Replacement Fund.

## ARTICLE VII

### FUNDS AND ACCOUNTS

**Section 7.1. Establishment of Funds.** The following funds are established under this Indenture:

(a) City of Alexandria, Virginia, Sanitation Authority Project Fund, to be held by the Trustee;

(b) City of Alexandria, Virginia, Sanitation Authority Revenue Fund, to be held by or at the direction of the Authority;

(c) City of Alexandria, Virginia, Sanitation Authority Operating Fund, to be held by or at the direction of the Authority;

(d) City of Alexandria, Virginia, Sanitation Authority Bond Fund, in which there shall be established an Interest Account, a Principal Account, a Redemption Account and a Capitalized Interest Account, to be held by the Trustee;

(e) City of Alexandria, Virginia, Sanitation Authority Parity Debt Service Fund, to be held by or at the direction of the Authority;



(f) City of Alexandria, Virginia, Sanitation Authority Debt Service Reserve Fund, to be held by the Trustee;

(g) City of Alexandria, Virginia, Sanitation Authority Improvement, Renewal and Replacement Fund, in which there shall be established a Joint Use Facilities Account and a General Account, to be held by or at the direction of the Authority;

(h) City of Alexandria, Virginia, Sanitation Authority Subordinate Debt Service Fund, to be held by or at the direction of the Authority; and

(i) City of Alexandria, Virginia, Sanitation Authority General Fund, to be held by or at the direction of the Authority.

**Section 7.2. Revenue Fund.** (a) The Authority shall collect and deposit in the Revenue Fund as received all Revenues and Hedge Receipts, except as otherwise provided for in this Master Indenture. Not later than the fifth Business Day before the end of each month, commencing April 26, 1999, the Authority shall make transfers from the Revenue Fund in the following order of priority:

(1) To the Operating Fund, an amount such that the balance on deposit in the Operating Fund will be equal to not less than one-sixth of the Operating Expenses budgeted to be paid from the Fund in the then current Fiscal Year as set forth in the Annual Budget;

(2) Subject to Section 7.2 (b), to the Bond Fund an amount not less than that which is necessary to make the following deposits:

(A) first, to the Interest Account an approximately equal amount each month during each Interest Period for each Series of Bonds such that (after taking into consideration with respect to each Series of Bonds the amount then on deposit in the Interest Account, any amount to be transferred from the Capitalized Interest Account to the Interest Account pursuant to the terms of any Supplemental Indenture, and any amount to be drawn or paid under any Credit Facility for deposit to the Account), on the fifth Business Day immediately preceding the next Interest Payment Date for the Series of Bonds, there will be on deposit in the Interest Account an amount equal to the interest on the Outstanding Bonds of the Series to become due on such Interest Payment Date; provided, however, if on the last Business Day of any month, the required deposit to the Interest Account for that month is not made with respect to any Series of Bonds, the requirement shall be cumulative and shall be added to the deposit required in each succeeding month until the deposit is made; and

(B) then, to the Principal Account an approximately equal amount each month during the Principal Period for each Series of Bonds such that (after taking into consideration with respect to each Series of Bonds the amount then on deposit in the Principal Account and any amount to be drawn or paid under any Credit Facility for deposit to the



Account), on the fifth Business Day immediately preceding the next Principal Payment Date for the Series of Bonds, there will be on deposit in the Principal Account an amount equal to the principal and Accreted Value of the Outstanding Bonds of the Series maturing or required to be redeemed on such Principal Payment Date; provided, however, if on the last Business Day of any month, the required deposit to the Principal Account is not made with respect to any Series of Bonds, the requirement shall be cumulative and shall be added to the deposit required in each succeeding month until the deposit is made;

(3) Subject to Section 7.2 (b), to the Parity Debt Service Fund, an amount with respect to any Parity Indebtedness such that (after taking into consideration the amount then on deposit in the Fund and any amount to be drawn or paid under any Credit Facility for deposit to the Fund) if the same amount is transferred to the Fund each month preceding the next ensuing Interest Payment Date or Principal Payment Date for the Parity Indebtedness, there will be on deposit in the Fund an amount equal to the payment due on the Parity Indebtedness on such payment date;

(4) To the Debt Service Reserve Fund, if the amount in the Debt Service Reserve Fund is less than the Debt Service Reserve Requirement, any amount of money remaining in the Revenue Fund, or all of the money remaining if less than the amount necessary, until there is on deposit in the Debt Service Reserve Fund an amount equal to the Debt Service Reserve Requirement;

(5) To the Joint Use Facilities Account in the Improvement, Renewal and Replacement Fund, an amount equal to one-twelfth of the Authority's Share of the Annual Joint Use Facilities Account Deposit for the then-current Fiscal Year; provided, however, that if any Fairfax County-Authority Bonds are then Outstanding, such deposit shall be equal to one-twelfth of the entire Annual Joint Use Facilities Account Deposit for the then-current Fiscal Year;

(6) To the General Account of the Improvement, Renewal and Replacement Fund, such amount as may be determined by the Authority;

(7) To the Subordinate Debt Service Fund, such amount with respect to any Subordinate Debt as may be determined by the Authority to be necessary to provide for the payment when due of the principal of and interest on the Subordinate Debt; and

(8) To the General Fund, any balance remaining in the Revenue Fund.

(b) In the event there are insufficient funds in the Revenue Fund to make the transfers required by paragraphs (a)(2) and (a)(3) of this Section in full, the Authority shall allocate the available funds between the Bond Fund and the Parity Debt Service Fund in the proportion that the amount required to be deposited to each Fund bears to the total amount required to be deposited to both Funds.



**Section 7.3. Operating Fund.** The Authority will deposit \$3,286,556.21 into the Operating Fund on the date of the execution and delivery of this Master Indenture. The Authority shall pay Operating Expenses from the Operating Fund as they become due and in accordance with the purposes and amounts provided in the Annual Budget. In determining the balance on deposit in the Operating Fund for any purpose of this Master Indenture, there shall be deducted the amount of any issued but unpaid checks drawn against the Operating Fund. Investment earnings on amounts from the Operating Fund shall be retained therein and applied for purposes of this Section.

**Section 7.4. Bond Fund.** (a) The Trustee shall pay from the Principal Account the principal and Accreted Value of the Bonds when due whether at maturity or upon redemption pursuant to any scheduled mandatory redemption requirement for any Term Bonds. The Trustee shall pay from the Interest Account the interest on the Bonds when due. The Trustee shall use money in the Redemption Account to redeem Bonds pursuant to any redemption provision (other than scheduled mandatory redemption of Term Bonds) or, if directed by an Authorized Authority Representative, to purchase Bonds on the open market; provided, however, (i) no money shall be used to purchase Bonds to the extent it is required to pay the redemption price of any Bonds for which notice of redemption has been given as provided in Section 4.3 and (ii) Bonds shall not be purchased at a price in excess of the applicable optional redemption price plus accrued interest.

(b) The Authority will receive a credit against payments required to be made with respect to any Series of Bonds on any mandatory redemption date in an amount equal to the principal amount of any Bonds of such Series subject to mandatory redemption on such date that have been redeemed (other than by mandatory redemption) before such mandatory redemption date or that have been purchased by the Authority or the Trustee on behalf of the Authority and delivered to the Trustee for cancellation at least seventy days before such mandatory redemption date, provided the Bonds have not previously been applied as a credit against any mandatory redemption payment. The credit shall be applied in chronological order against payments required to be made on mandatory redemption dates, unless the Trustee receives written instructions from the Authority at least seventy days before such dates to apply the credit in some other order.

(c) Not later than the fifth Business Day immediately preceding a Principal Payment Date or Interest Payment Date for a Series of Bonds, the Trustee shall determine if the respective balances on deposit in the Principal Account, the Interest Account and the Redemption Account will be sufficient (after taking into consideration with respect to the Series of Bonds any amount to be transferred from the Capitalized Interest Account pursuant to the terms of any Supplemental Indenture) to pay the principal, Accreted Value and interest due and payable on the Principal or Interest Payment Date, and if a deficiency exists, shall promptly notify the Authority of such fact. If on any Principal Payment Date or Interest Payment Date, the balance on deposit in the Principal Account or the Interest Account is insufficient to pay the principal, Accreted Value and interest due and payable on Outstanding Bonds, the Trustee shall transfer to the appropriate account in the Bond Fund the amount of the deficiency, from the Debt Service



Reserve Fund, but only to the extent amounts paid by the Authority from the other funds and accounts as described in Section 7.10 are insufficient for that purpose.

(d) Investment earnings on amounts in the Bond Fund (except the Capitalized Interest Account) shall become a part of the account in which the investments are held. Unless otherwise provided in a Supplemental Indenture with respect to a Series of Bonds, investment earnings on amounts in the Capitalized Interest Account shall be transferred when received to the appropriate account in the Project Fund.

**Section 7.5. Parity Debt Service Fund.** The Authority may, in the Supplemental Indenture or other instrument or document authorizing the issuance of any Parity Indebtedness, establish such accounts, including reserve accounts, in the Parity Debt Service Fund as the Authority deems appropriate. The Authority shall use money in the Parity Debt Service Fund to make payments on any Parity Indebtedness when due. Investment earnings on amounts in the Parity Debt Service Fund shall be retained therein and applied for purposes of this Section.

**Section 7.6. Debt Service Reserve Fund.** (a) In the event that amounts on deposit in the Bond Fund are insufficient to make payments of principal of or interest on the Bonds when due, and any amounts transferred by the Authority from other funds and accounts pursuant to Section 7.10 are insufficient to cure the deficiency, the Trustee shall transfer money from the Debt Service Reserve Fund to the Bond Fund to the extent necessary to pay principal of and interest on the Bonds when due. If the amount on deposit in the Debt Service Reserve Fund is less than the Debt Service Reserve Requirement, the Authority shall transfer funds from the Revenue Fund to the Debt Service Reserve Fund to restore the Debt Service Reserve Requirement, to the extent and in the manner provided in Section 7.2(a)(4). The Authority shall notify the Trustee in writing any time there is a change in the Debt Service Reserve Requirement.

(b) Within five days after each Principal Payment Date and Interest Payment Date and at such other times as an Authorized Authority Representative may request, the Trustee shall determine if the balance on deposit in the Debt Service Reserve Fund is at least equal to the Debt Service Reserve Requirement. In making such determination, securities in which money in the Debt Service Reserve Fund are invested shall be valued in the manner set forth in Section 8.2(b). If a deficit exists in the Debt Service Reserve Fund, the Trustee shall immediately notify the Authority of the deficit. If the amount on deposit in the Debt Service Reserve Fund exceeds the Debt Service Reserve Requirement, the Trustee shall transfer the excess to the Interest Account of the Bond Fund within five Business Days after such determination, unless otherwise specified in any Supplemental Indenture.

(c) In lieu of maintaining and depositing money or securities in the Debt Service Reserve Fund, the Authority may deposit with the Trustee a letter of credit, a bond insurance policy or surety bond in an amount equal to all or a portion of the Debt Service Reserve Requirement; provided that the issuer of the letter of credit, bond insurance policy or surety bond, as appropriate, is rated in one of the two highest long term debt rating categories by at least one



of the Rating Agencies. Any letter of credit, bond insurance policy or surety bond will permit the Trustee to draw or obtain amounts under it for deposit in the Debt Service Reserve Fund that, together with any money already on deposit in the Debt Service Reserve Fund, are not less than the Debt Service Reserve Requirement.

The Trustee will make a drawing on the letter of credit or obtain funds under the bond insurance policy or surety bond before its expiration or termination (i) whenever money is required for the purposes for which Debt Service Reserve Fund money may be applied and (ii) unless such letter of credit, bond insurance policy or surety bond has been extended or a qualified replacement for it delivered to the Trustee, in the event the Authority has not deposited money in immediately available funds equal to the Debt Service Reserve Requirement at least two Business Days preceding the expiration or termination of the letter of credit or bond insurance policy or surety bond.

If the Authority provides the Trustee with a letter of credit, bond insurance policy or surety bond as provided in this subsection, the Trustee will transfer the corresponding amount of funds then on deposit in the Debt Service Reserve Fund to the Authority, provided the Authority delivers to the Trustee (i) an opinion of Bond Counsel that such transfer of funds will not adversely affect the exclusion from gross income for purposes of federal income taxation of interest on any Bonds the interest on which was excludable on the date of their issuance and (ii) the Authority covenants to comply with any directions or restrictions contained in such opinion concerning the use of such funds.

**Section 7.7. Improvement, Renewal and Replacement Fund.** (a) The Authority will deposit \$1,408,916.26 into the Joint Use Facilities Account of the Improvement, Renewal and Replacement Fund on the date of the execution and delivery of this Master Indenture. As long as no Fairfax County-Authority Bonds are Outstanding under this Master Indenture, the Authority shall deposit directly into the Joint Use Facilities Account of the Improvement, Renewal and Replacement Fund all Annual Facility Payments received by the Authority from the County under the Fairfax County Service Agreement.

(b) The Authority may use amounts in the Joint Use Facilities Account of the Improvement, Renewal and Replacement Fund for any of the following purposes:

- (1) To pay reasonable and necessary expenses with respect to Joint Use Facilities for major repairs, replacements or maintenance items of a type not recurring annually or at shorter intervals;
- (2) To pay costs of reconstruction of the Joint Use Facilities;
- (3) To pay costs of Joint Use Facilities;
- (4) To pay any capital costs with respect to the Joint Use Facilities;

(5) To purchase or redeem Fairfax County-Authority Bonds; or

(6) To pay debt service on Fairfax County-Authority Bonds, including pursuant to Section 7.10.

Any balance in the Joint Use Facilities Account which is determined by the Authority not to be required for the purposes set forth above shall be prorated between the Authority and Fairfax County based on the proportion that each paid into the Joint Use Facilities Account pursuant to the Fairfax County Service Agreement, and the Fairfax County portion will be paid to Fairfax County for credit to Fairfax County's sewer enterprise fund and the Authority portion will be transferred to the General Fund.

(c) The Authority may use amounts in the General Account of the Improvement, Renewal and Replacement Fund for the following purposes:

(1) To pay reasonable and necessary expenses with respect to the System for major repairs, replacements or maintenance items of a type not recurring annually or at shorter intervals;

(2) To pay costs of reconstruction of parts of the System;

(3) To pay costs of construction of additions to, or extensions of, the System;

(4) To pay any capital costs with respect to the System;

(5) To make payments on Service Contracts; or

(6) To make deposits to the Revenue Fund, the Operating Fund, the Bond Fund, the Parity Debt Service Fund, the Debt Service Reserve Fund or the General Fund, including pursuant to Section 7.10.

(d) The Authority shall determine and include in the Annual Budget for each Fiscal Year the total amount of the capital expenditures made with respect to the Joint Use Facilities from October 1, 1997, to the first day of Fiscal Year for which the Annual Budget is being prepared, and the Annual Joint Use Facilities Account Deposit shall be based on such determination for such Fiscal Year.

(e) Investment earnings on amounts in the Joint Use Facilities Account and the General Account of the Improvement, Renewal and Replacement Fund shall be retained therein until applied pursuant to this Section.



(f) At the time of the preparation of the Annual Budget for each Fiscal Year, the Authority shall review the adequacy of the amount on deposit in both the Joint Use Facilities Account and the General Account of the Improvement, Renewal and Replacement Fund under then current operating conditions, and in light of then applicable operating, replacement and maintenance costs of the major components of systems comparable to the System.

**Section 7.8. Subordinate Debt Service Fund.** The Authority shall use money in the Subordinate Debt Service Fund to make payments of debt service on any Subordinate Debt when due. Investment earnings on amounts in the Subordinate Debt Service Fund shall be retained therein and applied for purposes of this Section.

**Section 7.9. General Fund.** Money shall be deposited by the Authority in the General Fund as provided by Section 7.2. Unless otherwise provided in any Supplemental Indenture, money on deposit in the General Fund is not pledged to secure the Bonds or Parity Indebtedness and may be used by the Authority for any lawful purpose, including, without limitation, for deposit to any fund or account created under this Master Indenture or any Supplemental Indenture. Any amounts transferred from the General Fund to the Reserve Fund shall be deemed to be Revenues. The Authority shall use available money on deposit in the General Fund to cure any deficiency which may exist in certain other funds as provided in Section 7.10.

**Section 7.10 Deficiency in Other Funds.** If at any time there exists a deficiency in the amount required to be on deposit in the Operating Fund, the Bond Fund, or the Parity Debt Service Fund, the Authority or the Trustee, as the case may be, shall transfer the amounts necessary to cure any such deficiency from the following funds and accounts in the following order, subject to Section 7.2(b):

- (a) General Fund;
- (b) General Account of the Improvement, Renewal and Replacement Fund;
- (c) Joint Use Facilities Account of the Improvement, Renewal and Replacement Fund; provided that such amounts may be transferred only to the Bond Fund to pay debt service on Fairfax County - Authority Bonds; and
- (d) Subordinate Debt Service Fund.

**Section 7.11 Other Funds and Accounts.** The Authority may establish in any Supplemental Indenture such other funds and accounts within funds established or to be established under the Master Indenture as the Authority may determine to be necessary.

**Section 7.12. Disposition of Balances in Funds.** When the balances on deposit in the Bond Fund and the Debt Service Reserve Fund are sufficient to pay or redeem all the Bonds then Outstanding, the Authority may direct the Trustee to transfer the balances in such Funds to a



special account in the Bond Fund to be held by the Trustee for the payment or redemption of Bonds at the earliest practicable date and for no other purpose, including without limitation to make transfers to other funds and accounts of the Authority.

## ARTICLE VIII

### INVESTMENT OF FUNDS

**Section 8.1. Investment of Funds.** (a) Subject to the provisions of any Supplemental Indenture, any money held in any funds and accounts established by this Master Indenture or any Supplemental Indenture may be separately invested and reinvested by the Trustee, at the request of and as directed by an Authorized Authority Representative, or by the Authority, as the case may be, in any investments which are at the time legal investments for public funds of the type to be invested under Virginia law, including without limitation the Investment of Public Funds Act, Chapter 18, Title 2.1, Code of Virginia of 1950; as amended.

(b) Subject to the provisions of any Supplemental Indenture, all investments will be held by or under the control of the Trustee or the Authority, as the case may be, and while so held will be deemed a part of the fund or account in which the money was originally held. The Trustee and the Authority shall sell and reduce to cash a sufficient amount of investments whenever the cash balance in any fund or account is insufficient for its purposes.

(c) Investments of money in the Debt Service Reserve Fund must mature or be payable at the option of the Trustee for the purposes of the Debt Service Reserve Fund not more than ten years after the date of their purchase.

(d) Money in funds and accounts held by the Authority and money held by the Trustee in the Project Fund may be pooled and commingled for purposes of investment.

**Section 8.2. Valuation of Investments.** (a) In computing the amount in any fund created by this Indenture except the Debt Service Reserve Fund, obligations purchased as an investment of money will be valued not less frequently than annually at their cost or market value, whichever is lower, plus any accrued interest.

(b) Fixed Rate Investments in or credited to the Debt Service Reserve Fund shall be valued at their Present Value or, if such Fixed Rate Investments qualify as Plain Par Investments, at their outstanding stated principal amount, plus any accrued but unpaid interest as of the valuation date. All other investments in or credited to the Debt Service Reserve Fund shall be valued at their fair market value as of the valuation date.



**Section 8.3. Security for Deposits.** All money held in the funds created by this Indenture which are on deposit with any bank shall be continuously secured in the manner required by the Virginia Security for Public Deposits Act or any successor provision of law.

**Section 8.4. Investments through Trustee's Bond Department.** The Trustee may make investments permitted by Section 8.1 through its own bond department or commercial banking department or those of its affiliates.

## **ARTICLE IX**

### **GENERAL COVENANTS OF THE AUTHORITY**

**Section 9.1. Payment of Bonds.** The Authority shall promptly pay the principal of and premium, if any, and interest on every Bond issued under and secured by this Master Indenture and the Supplemental Indentures at the places, on the dates and in the manner specified in this Master Indenture, the Supplemental Indentures and the Bonds; provided, however, that such obligations are limited obligations of the Authority and are payable solely from the Net Revenues and other property pledged and assigned by this Master Indenture and the Supplemental Indentures to secure payment of the Bonds. Neither the faith and credit nor the taxing power of the Commonwealth or any county, city, town or other subdivision of the Commonwealth have been pledged to the payment of the principal of or premium, if any, or interest on the Bonds. The issuance of the Bonds does not directly, indirectly or contingently obligate the Commonwealth or any county, city, town or other subdivision of the Commonwealth to levy any taxes or to make any appropriation for the payment of the Bonds.

**Section 9.2. Covenants and Representations.** The Authority shall faithfully observe and perform all of its covenants, conditions and agreements contained in this Master Indenture and the Supplemental Indentures and in every Bond executed, authenticated and delivered under this Master Indenture; provided that the pecuniary liability of the Authority under any such covenant, condition or agreement for any default or breach by the Authority shall be limited solely to and satisfied solely from the sources of payment described in Section 9.1. The Authority represents that (i) it is duly authorized under the Constitution and laws of the Commonwealth, including particularly and without limitation the Act, to issue the Bonds and to execute this Master Indenture and to pledge the Net Revenues and funds in the manner and to the extent set forth in this Master Indenture; (ii) all action on its part necessary for the execution and delivery of this Master Indenture has been duly and effectively taken; and (iii) the Bonds in the hands of the Owners are and will be valid and enforceable obligations of the Authority.



**Section 9.3. Annual Budget.** (a) Before the beginning of each Fiscal Year, the Authority shall adopt a budget for the System for the ensuing Fiscal Year which will be referred to as the Annual Budget.

(b) The Annual Budget shall be prepared in such manner as to show in reasonable detail (i) all Revenues estimated to be received, (ii) the Operating Expenses estimated to be incurred, (iii) any amount to be paid into the Improvement, Renewal and Replacement Fund, (iv) any amount necessary to be paid into the Debt Service Reserve Fund to restore the balance in it to the Debt Service Reserve Requirement, (v) the amount of Bond Debt Service, Parity Debt Service and Subordinate Debt Service that will become due, (vi) any other lawful costs and expenses related to the System that the Authority deems necessary or desirable, and (vii) the amount of Net Revenues available to meet the Revenue Covenant. Copies of the Annual Budget will be filed with the Trustee not later than the first day of the Fiscal Year for which it is prepared.

(c) If for any reason an Annual Budget has not been adopted within the time required by subsection (a) of this Section, the last previously adopted Annual Budget will be deemed to provide for and regulate and control expenditures during such Fiscal Year until an Annual Budget for such Fiscal Year has been adopted.

(d) The Authority may amend the Annual Budget at any time during the Fiscal Year. The Authority shall file copies of all amendments promptly with the Trustee.

**Section 9.4. Revenue Covenant.** The Authority shall establish, fix, charge and collect rates, fees and other charges for the use of and for the services furnished by the System, and shall, from time to time and as often as appears necessary, revise such rates, fees and other charges, so that in each Fiscal Year Net Revenues are not less than the sum of (i) 1.1 times Senior Debt Service for the Fiscal Year, excluding the Share of Fairfax County of the Bond Debt Service on any Fairfax County-Authority Bonds and (ii) 1.0 times the sum of Subordinate Debt Service and the Share of Fairfax County of the Bond Debt Service on any Fairfax County-Authority Bonds for the Fiscal Year.

**Section 9.5. Billing; Enforcement of Charges; Free Service.** The Authority shall bill the users of the services of the System no less frequently than quarterly, except in the case of wholesale customers who shall be billed as provided in the contract between the Authority and the wholesale customer. The Authority shall take all appropriate steps to enforce collection of any overdue charges by any remedy available at law or in equity. The Authority shall not permit connections with or the use of the System, or furnish any services of the System, without making a charge based on the Authority's schedule of rates, fees and charges, except in the case of wholesale customers whose charges shall be based on the contract between the Authority and the wholesale customer.



**Section 9.6. Consulting Engineer's Report Required.** (a) Within 60 days after the close of each Fiscal Year, the Authority shall make a written determination of whether the Authority was in compliance with the Revenue Covenant for the Fiscal Year.

(b) If as of the end of any Fiscal Year the Authority is not in compliance with the Revenue Covenant, the Authority shall immediately request the Consulting Engineer to submit a written report and recommendations with respect to increases in the Authority's rates, fees and charges and improvements in the operations of and the services rendered by the System and the Authority's accounting and billing procedures necessary to bring the Authority into compliance with the Revenue Covenant. The report and recommendations shall be filed with the Trustee and the Authority within 120 days from the date of the determination of noncompliance with the Revenue Covenant. The Authority shall promptly revise its rates, fees, charges, operations and services in conformity with the report and recommendations of the Consulting Engineer to the extent permitted by law.

(c) If money is required to be transferred from the Debt Service Reserve Fund to the Bond Fund because amounts on deposit in the Bond Fund are insufficient to make payments of principal of or interest on the Bonds when due and the amount so transferred is not replenished to the Debt Service Reserve Fund from any available source within thirty days of the date of the transfer, the Authority shall immediately request the Consulting Engineer to submit a written report and recommendations with respect to increases in the Authority's rates, fees and charges and improvements in the operations of and the services rendered by the System and the Authority's accounting and billing procedures necessary to bring the Authority into compliance with the Revenue Covenant. The Authority agrees to deliver a copy of the report of the Consulting Engineer to the Trustee and to implement its recommendations to the extent permitted by law within 180 days after the date of the transfer from the Debt Service Reserve Fund.

(d) If the Authority promptly revises its rates, fees, charges, operations and services in conformity with the report and recommendations of the Consulting Engineer and otherwise follows such recommendations to the extent permitted by law so that the Authority will when its actions become fully effective be in compliance with the Revenue Covenant, then any failure to meet the Revenue Covenant shall not constitute an Event of Default under this Master Indenture or any Supplemental Indenture so long as no other Event of Default has occurred and is continuing.

(e) If the governing body of the Authority determines that the recommendations of the Consulting Engineer are impractical or inappropriate, the Authority may in lieu thereof adopt other procedures which the Authority believes will bring it into compliance with the Revenue Covenant when such measures have been implemented and become fully and effective. Such alternative plan shall be filed with the Trustee not later than 30 days after receipt of the report of the Consulting Engineer along with a detailed explanation of the Authority's reason for rejecting the Consulting Engineer's recommendations, and so long as no other Event of Default has occurred and is continuing under this Master Indenture or any Supplemental Indenture, then



any failure to meet the Revenue Covenant shall not constitute an Event of Default under this Master Indenture or any Supplemental Indenture.

**Section 9.7. Trustee May Enforce Authority's Rights to Revenues.** The Trustee, subject to the provisions of this Master Indenture and any Supplemental Indenture reserving certain rights to the Authority and respecting actions by the Trustee in its name or in the name of the Authority, may enforce for and on behalf of the Owners all rights of the Authority providing for the delivery and receipt of Revenues whether or not the Authority is in default under this Master Indenture.

**Section 9.8. Further Assurances.** Subject to the provisions of Section 9.1, the Authority shall do, execute, acknowledge and deliver, or cause to be done, executed, acknowledged and delivered, such Supplemental Indentures and such further acts, instruments and transfers as the Trustee may reasonably require to further assure the effective transfer, conveyance, pledge and assignment to the Trustee of all the rights and funds assigned by this Master Indenture to secure the payment of the principal of and premium, if any, and interest on the Bonds and Parity Indebtedness. The Authority shall cause any necessary financing statements relating to the Net Revenues to be executed and filed in all appropriate offices from time to time in the manner and places as will be required by law in order to preserve and protect the rights and security of the Owners. The Authority shall fully cooperate with the Trustee and the Owners in protecting the rights and security of the Owners. The Trustee is authorized to enter into agreements for the purpose of disclaiming any interest of the Owners in other assets of the Authority not pledged in this Master Indenture or any Supplemental Indenture.

**Section 9.9. Sale or Encumbrance.** The Authority may grant easements, licenses or permits across, over and under parts of the System for streets, roads and utilities so long as they will not materially adversely affect the use of the System. The Authority may sell, transfer or otherwise dispose of any property constituting a part of the System which is either no longer needed or useful or which will be replaced from the proceeds of the disposition and any other necessary money with property serving the same or similar function. If the proceeds received from a sale or disposition not used to replace property exceeds \$250,000, the proceeds shall at the option of the Authority be (i) applied to the payment or redemption of Outstanding Bonds and Parity Indebtedness in a manner which in the opinion of Bond Counsel will not adversely affect the exclusion from gross income for purposes of federal income taxation of interest on any Bonds the interest on which was excludable from gross income on the date of their issuance or (ii) deposited in the General Account of the Improvement, Renewal and Replacement Fund and applied solely to pay the costs of capital improvements to the System. Except as provided in this Section, the Authority shall not sell, transfer or otherwise dispose of any property constituting a part of the System.

**Section 9.10. Financial Records and Statements.** The Authority shall maintain proper books and records for the System in which full and correct entries will be made in accordance with generally accepted accounting principles of all of the business and affairs of the System. The



Authority shall have an annual audit of the System made by independent certified public accountants of recognized standing chosen by the Authority and, shall, as soon as available but in no event later than 180 days after the end of each Fiscal Year, furnish to the Trustee two copies of the balance sheet of the System as of the end of such Fiscal Year, statements of revenues, expenses, and changes in equity of the System for such Fiscal Year, and statements of cash flows of the System for such Fiscal Year, all in reasonable detail and certified by the accountants as having been prepared in accordance with generally accepted accounting principles. In addition, the Authority shall deliver to the Trustee with the audited financial statements a statement of the accountants to the effect that in making the examination necessary for their audit they have obtained no knowledge of the occurrence of any condition or event which constitutes, or which, with notice or lapse of time, or both, would constitute, an Event of Default, or if the accountants have obtained knowledge of any such condition or event, they shall specify in the statement all such conditions and events and their nature and status. If any Series of Bonds are (i) insured by a municipal bond insurance policy or (ii) secured by a Credit Facility, the Authority shall deliver all such financial statements to the municipal bond insurance company or the issuer of the Credit Facility, as the case may be, in addition to the Trustee.

**Section 9.11. Compliance with Laws.** The Authority shall at all times comply with all laws of the United States of America and of the Commonwealth applicable to it, particularly the provisions of the Act.

**Section 9.12. Arbitrage and Tax Covenants.** The Authority shall not take any action, or direct the Trustee to make any investment or use of the proceeds of any Bonds, which would cause any Bond to be an "arbitrage bond" within the meaning of Section 148 of the Code. The Authority shall not engage in any activities or take any action which might result in the income of the Authority becoming taxable by any governmental entity or in the interest on the Bonds of any Series becoming includable in gross income of the recipients for purposes of federal income taxation if an opinion of Bond Counsel to the effect that the interest on any such Series was excludable from gross income was delivered pursuant to Section 5.3(f).

**Section 9.13. Operation and Maintenance.** The Authority shall (i) establish, maintain and enforce reasonable rules and regulations governing the use of and the services furnished by the System, (ii) operate the System in an efficient and economical manner pursuant to the Annual Budget, (iii) maintain the material portions of the System in good repair and sound operating condition, and (iv) make all reasonably necessary repairs, replacements and renewals to the System. The Authority shall at all times operate the System in accordance with generally accepted business practices. The Authority shall comply with all valid acts, rules, regulations, orders and directions of any legislative, executive, administrative or judicial body applicable to the System.

**Section 9.14. Creation of Liens.** Except as provided in Section 9.9, the Authority shall not create or suffer to be created any lien or charge on the System. The Authority shall pay or cause to be discharged, or shall make adequate provision to satisfy and discharge, all lawful claims



and demands for labor, materials and supplies within sixty days after they become due and all governmental charges when they become due which, if unpaid, might by law become a lien on the System or the Revenues. Anything in this Master Indenture or any Supplemental Indenture to the contrary notwithstanding, the Authority may contest in good faith any such lien or charge, in which event it may permit the lien or charge to remain unsatisfied and undischarged during the period of the contest and any appeal unless by such action in the opinion of the Trustee the lien on any part of the Revenues pledged in this Master Indenture or any Supplemental Indenture will be endangered or any part of the System will be subject to loss or forfeiture, in either of which events the lien or charge will be promptly satisfied or secured by posting with the Trustee or an appropriate court of record a bond in form satisfactory to the Trustee.

**Section 9.15. Insurance.** To the extent it is available at reasonable costs, the Authority shall continuously maintain purchased insurance policies or self-insurance plans for the System substantially as is customarily maintained by other entities owning and operating similar systems, paying when due all premiums with respect to such insurance policies and reserving such amounts as may be necessary for such self-insurance plans.

All purchased insurance policies shall be taken out and maintained with responsible insurers or group self-insurance pools selected by the Authority and may be written with deductible amounts substantially comparable to those on similar policies carried by other public bodies owning and operating similar facilities. If any such insurance is not maintained with an insurer licensed to do business in Virginia, a group self-insurance pool licensed by the Virginia State Corporation Commission, or placed pursuant to the requirements of the Virginia Surplus Lines Insurance Law (Chapter 48, Title 38.2, Code of Virginia of 1950, as amended) or any successor provision of law, the Authority shall provide evidence reasonably satisfactory to the Trustee that the insurance is enforceable under the laws of Virginia.

Any self-insurance plan maintained by the Authority with respect to the System shall be a Qualified Self-Insurance Plan. A "Qualified Self-Insurance Plan" means any plan or program of self-insurance regarding which the Authority shall have received an opinion of an Insurance Consultant that the Authority has established an adequate, actuarially sound program for the funding of reserves for such self-insurance. The Authority agrees to comply with such program unless a change therein is recommended by the Insurance Consultant. The Authority agrees to cause the Insurance Consultant to review any Qualified Self-Insurance Plan at least annually and to make written recommendations as to what funding levels are adequate to protect against the risks covered by the Plan. The Authority agrees to follow such recommendations to the extent permitted by law.

If requested, the Authority shall furnish the Trustee with evidence that the insurance required by this Section is in force. In lieu of separate policies the Authority may maintain blanket or umbrella policies having the same coverage as required by this Section. To the extent losses for any damage to the System, however caused, are paid from the Net Proceeds of any insurance



required by this Section, no claim shall be made and no suit shall be brought against the Authority by the Trustee or anyone else claiming by, through or under it.

**Section 9.16. Notice in Event of Damage, Destruction, Condemnation and Loss of Title.** In case of any material damage to or destruction of any part of the System, the Authority shall give prompt notice to the Trustee. In case of a taking of all or any part of the System or any right in it under the exercise of the power of eminent domain or any loss of it because of failure of title or the commencement of any proceedings or negotiations which might result in such a taking or loss, the Authority shall give prompt notice to the Trustee. Each such notice shall describe generally the nature and extent of the damage, destruction, taking, loss, proceedings or negotiations.

**Section 9.17. Damage, Destruction, Condemnation and Loss of Title.** If all or any part of the System is destroyed or damaged by fire or other casualty, condemned or lost by failure of title, the Authority shall from Net Proceeds restore promptly the property damaged or destroyed to substantially the same condition as before such damage, destruction, condemnation or loss of title with such alterations and additions as the Authority may determine and which will not impair the capacity or character of the System for the purpose for which it then is being used or is intended to be used. The Trustee shall deposit Net Proceeds to the Project Fund and apply so much as may be necessary of the Net Proceeds to payment of the cost of the restoration, either on completion or as the work progresses. If the Net Proceeds are not sufficient to pay in full the cost of the restoration, the Authority shall pay from the Improvement, Renewal and Replacement Fund or the General Fund so much of the cost as may be in excess of the Net Proceeds. The Authority shall be under no obligation to restore property if it is no longer needed or useful in the operation of the System. Any balance of the Net Proceeds remaining after payment of the cost of the restoration shall be deposited in the General Account of the Improvement, Renewal and Replacement Fund.

## ARTICLE X

### DEFAULTS AND REMEDIES

**Section 10.1. Events of Default.** Each of the following shall be an Event of Default:

- (a) Payment of interest on any Bond or Parity Indebtedness is not made when due and payable;
- (b) Payment of the principal of or premium, if any, on any Bond or Parity Indebtedness is not made when due and payable;
- (c) Subject to Section 10.2, default in the observance or performance of any other covenant, condition or agreement on the part of the Authority under this Master Indenture, any



Supplemental Indenture, in the Bonds or in any instrument or document under which any Parity Indebtedness has been issued; or

(d) Appointment by a court of competent jurisdiction of a receiver for all or any substantial part of the Revenues and other funds of the Authority pledged pursuant to this Master Indenture, or the filing by the Authority of any petition for reorganization of the Authority or rearrangement or readjustment of the obligations of the Authority under provisions of any applicable bankruptcy or insolvency law.

**Section 10.2. Notice of Certain Defaults; Opportunity to Cure Such Defaults.**

Anything in this Master Indenture to the contrary notwithstanding, no default under subsection (c) of Section 10.1 shall constitute an Event of Default until actual notice of the default is given to the Authority by the Trustee or by the Owners of not less than twenty-five percent in aggregate principal amount of all Outstanding Bonds and Parity Indebtedness, and the Authority has had ninety days after receipt of the notice to correct the default or to cause the default to be corrected; provided, however, that if the default cannot be corrected within the applicable period, it shall not constitute an Event of Default if corrective action is instituted by the Authority within the applicable period and diligently pursued until the default is corrected.

**Section 10.3. Acceleration.** Upon the occurrence and continuation of an Event of Default, the Trustee may, and if requested by the Owners of not less than twenty-five percent in aggregate principal amount of the Bonds and Parity Indebtedness then Outstanding shall, by notice to the Authority, declare the entire unpaid principal of and interest on the Bonds and Parity Indebtedness due and payable. Upon any such declaration, the Authority shall pay to the Owners of the Bonds and Parity Indebtedness the entire unpaid principal of and accrued interest on the Bonds and Parity Indebtedness, but only from the Net Revenues and other funds of the Authority pledged to such payment.

**Section 10.4. Other Remedies; Rights of Owners.** Upon the occurrence and continuation of an Event of Default, the Trustee may, with or without action under Section 10.3, pursue any available remedy, at law or in equity, to enforce the payment of the principal of and premium, if any, and interest on the Bonds and Parity Indebtedness, to enforce any covenant or condition under this Master Indenture or any Supplemental Indenture, or to remedy any Event of Default.

Upon the occurrence and continuation of an Event of Default, and if requested so to do by the Owners of at least twenty-five percent in aggregate principal amount of the Bonds and Parity Indebtedness then Outstanding and having been indemnified as provided in Section 11.7, the Trustee shall exercise such of the rights and powers conferred by this Section and by Section 10.3 as the Trustee, being advised by Counsel, deems most effective to enforce and protect the interests of the Owners.



**Section 10.5. Effect of Discontinuance or Abandonment.** If any proceeding taken by the Trustee on account of any default has been discontinued or abandoned for any reason, or has been determined adversely to the Trustee, then the Authority, the Trustee and the Owners shall be restored to their former positions and rights under this Master Indenture and the Supplemental Indentures and all rights, remedies and powers of the Trustee will continue as though no such proceeding had been taken.

**Section 10.6. Rights of Owners.** Anything in this Master Indenture to the contrary notwithstanding, upon the occurrence and continuation of any Event of Default, the Owners of a majority in aggregate principal amount of the Bonds and Parity Indebtedness then Outstanding shall have the right, upon providing the Trustee security and indemnity reasonably satisfactory to it against the costs, expenses and liabilities to be incurred, by an instrument in writing executed and delivered to the Trustee, to direct the method and place of conducting all remedial proceedings to be taken by the Trustee under the Master Indenture and any Supplemental Indenture.

**Section 10.7. Restriction on Owner's Action.** In addition to the other restrictions on the rights of Owners to request action upon the occurrence of an Event of Default and to enforce remedies set forth in this Article, no Owner of any of the Bonds or Parity Indebtedness shall have any right to institute any suit, action or proceeding in equity or at law for the enforcement of this Master Indenture or any Supplemental Indenture or any remedy under this Master Indenture, any Supplemental Indenture, the Bonds or Parity Indebtedness, unless (i) the Owner has given to the Trustee written notice of an Event of Default; (ii) the Owners of a majority in aggregate principal amount of the Bonds and Parity Indebtedness then Outstanding also have made written request of the Trustee to institute the suit, action, proceeding or other remedy, after the right to exercise the powers or rights of action, as the case may be, has accrued, and have afforded the Trustee a reasonable opportunity either to proceed to exercise the powers granted in this Master Indenture and the Supplemental Indenture, or to institute the action, suit or proceeding in its or their name; (iii) there has been offered to the Trustee security and indemnity reasonably satisfactory to it against the costs, expenses and liabilities to be incurred; and (iv) the Trustee has not complied with the request within a reasonable time. Such notification, request and offer of indemnity are declared, at the option of the Trustee, to be conditions precedent to the execution of the trusts of this Master Indenture and the Supplemental Indenture or for any other remedy under this Master Indenture and the Supplemental Indenture. It is intended that no one or more Owners of the Bonds or Parity Indebtedness secured by this Master Indenture and the Supplemental Indenture shall have any right to affect, disturb or prejudice the security of this Master Indenture and the Supplemental Indenture, or to enforce any right under this Master Indenture, any Supplemental Indenture, the Bonds or Parity Indebtedness, except in the manner provided for in this Master Indenture, and that all proceedings at law or in equity will be instituted, had and maintained in the manner provided in this Master Indenture and for the benefit of all Owners of Outstanding Bonds and Parity Indebtedness. Nothing in this Master Indenture shall affect or impair the right of the Owners to enforce payment of the Bonds and Parity Indebtedness in accordance with their terms.



**Section 10.8. Power of Trustee to Enforce.** All rights of action under this Master Indenture or under any of the Bonds or Parity Indebtedness secured by it which are enforceable by the Trustee may be enforced without the possession of any of the Bonds or Parity Indebtedness, or their production at the trial or other related proceedings. Any suit, action or proceedings instituted by the Trustee may be brought in its own name, as trustee, for the equal and ratable benefit of the Owners of the Bonds and Parity Indebtedness subject to the provisions of this Master Indenture.

**Section 10.9. Remedies Not Exclusive.** No remedy in this Master Indenture and the Supplemental Indentures conferred on or reserved to the Trustee or to the Owners is intended to be exclusive of any other remedy, and each remedy is cumulative, and is in addition to every other remedy given under this Master Indenture and the Supplemental Indentures or now or hereafter existing at law, in equity or by statute.

**Section 10.10. Waiver of Events of Default; Effect of Waiver.** The Trustee shall waive any Event of Default and its consequences and rescind any declaration of acceleration at the written request of the Owners of a majority in aggregate principal amount of all Outstanding Bonds and Parity Indebtedness. If any Event of Default has been waived as provided in this Master Indenture, the Trustee shall promptly give written notice of the waiver to the Authority and by first class mail, postage prepaid, to all Owners of Outstanding Bonds and Parity Indebtedness if the Owners had previously been given notice of the Event of Default. No waiver, rescission and annulment shall extend to or affect any subsequent Event of Default or impair any right, power or remedy available under this Master Indenture.

No delay or omission of the Trustee or of any Owner to exercise any right, power or remedy accruing upon any default or Event of Default shall impair any such right, power or remedy or shall be construed to be a waiver of or acquiescence in any such default or Event of Default. Every right, power and remedy given by this Article to the Trustee and to the Owners, respectively, may be exercised from time to time and as often as may be deemed expedient.

**Section 10.11. Application of Money.** Any money received by the Trustee pursuant to this Article shall, after payment of the costs and expenses of the proceedings resulting in the collection of the money, the expenses, liabilities and advances incurred or made by the Trustee and the fees (whether ordinary or extraordinary) of the Trustee, be deposited in a special account in the Bond Fund and applied as follows:

(a) Unless the principal of all of the Outstanding Bonds and Parity Indebtedness is due and payable, all money shall be applied,

First - To the payment of the persons entitled to it of all installments of interest then due on the Bonds and Parity Indebtedness, in order of the maturity of the installments of such interest and, if the money available is not sufficient to pay in full any



particular installment, then ratably, according to the amounts due on such installment, to the persons entitled to it, without any discrimination or privilege;

Second - To the payment of the persons entitled to it of the unpaid principal of and premium, if any, on any of the Bonds and Parity Indebtedness which has become due (other than Bonds and Parity Indebtedness matured or called for redemption for the payment of which money is held pursuant to the provisions of this Master Indenture), in the order of their due dates and, if the amount available is not sufficient to pay in full such Bonds and Parity Indebtedness and the premium, if any, due on any particular date, then ratably, according to the amount of principal due on such date, to the persons entitled to it without any discrimination or privilege; and

Third - To be held for the payment of the persons entitled to it when due of the principal of and premium, if any, and interest on the Bonds and Parity Indebtedness which may thereafter become due either at maturity or upon call for redemption before maturity and, if the amount available is not sufficient to pay in full the Bonds and Parity Indebtedness due on any particular date, together with interest and premium, if any, then due and owing, then ratably, according to the amount of principal and premium due on such date, to the persons entitled to it without any discrimination or privilege.

(b) If the principal of all of the Outstanding Bonds and Parity Indebtedness is due and payable, to the payment of the principal of and interest then due and unpaid on the Outstanding Bonds and Parity Indebtedness without preference or priority of any principal over interest or interest over principal or of any installment of interest over any other installment of interest, or of any such Outstanding Bond or Parity Indebtedness over any other such Outstanding Bond or Parity Indebtedness, ratably, according to the amounts due respectively for principal and interest, to the persons entitled to it without any discrimination or preference except as to any difference in the respective amounts of interest specified in the Outstanding Bonds and Parity Indebtedness.

(c) Whenever money is to be applied pursuant to the provisions of this Section, it shall be applied at such times, and from time to time, as the Trustee determines, having due regard to the amount of money available for application and the likelihood of additional money becoming available for application in the future. If subsection (b) of this Section is applicable, the Trustee shall apply promptly to the payment of the Bonds and Parity Indebtedness any money it receives under this Article. Whenever the Trustee applies such money, it will fix the date on which payment is to be made, and interest on the amount of principal to be paid on such date will cease to accrue. The Trustee shall give, by mailing by first class mail as it may deem appropriate, notice of the deposit with it of any such money and of the fixing of any such date.



## ARTICLE XI

### TRUSTEE AND PAYING AGENT

**Section 11.1. Appointment and Acceptance of Duties.** The Trustee accepts and agrees to the trusts created by this Master Indenture, but only upon the additional terms set forth in this Article, to all of which the Authority, and the Owners, by their purchase and acceptance of the Bonds, agree.

**Section 11.2. Responsibilities.** The recitals, statements and representations contained in this Master Indenture, the Supplemental Indentures, the Bonds and any Parity Indebtedness shall be taken and construed as made by and on the part of the Authority, and not by the Trustee, and the Trustee does not assume, and shall not have, any responsibility or obligation for (i) the correctness of any such recitals, statements and representations, (ii) the validity of the execution by the Authority of this Master Indenture, the Supplemental Indentures, the Bonds or any Parity Indebtedness, or (iii) the sufficiency of the security for the Bonds or any Parity Indebtedness. The Trustee shall have no responsibility for any funds other than those funds actually paid to or received or held by it under this Master Indenture and the Supplemental Indentures. The Trustee need perform only those duties that are specifically set forth in this Master Indenture and the Supplemental Indentures and no implied covenants or obligations shall be read into this Master Indenture or any Supplemental Indenture against the Trustee. No provision of this Master Indenture and the Supplemental Indentures shall require the Trustee to expend or risk the Trustee's own funds or otherwise incur any financial liability in the performance of any of the Trustee's duties or in the exercise of any of the Trustee's rights or powers, if the Trustee has reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to the Trustee. The Trustee shall not be responsible or liable for any loss suffered in connection with any investments made in accordance with this Master Indenture or any Supplemental Indenture. Except during the existence of an Event of Default as set forth in Section 11.19, the Trustee shall use the same degree of skill and care in performing its duties under this Master Indenture and any Supplemental Indenture as a corporate trustee operating under a corporate trust indenture.

**Section 11.3. Powers.** The Trustee may execute any of the trusts or powers of, and perform the duties required of it under, this Master Indenture by or through attorneys, agents, receivers, or employees, and will be entitled to obtain and rely on advice of counsel concerning all matters of trust and the Trustee's duty under this Master Indenture and any Supplemental Indenture. As a condition to the taking, omission or suffering of any action under this Master Indenture and any Supplemental Indenture, the Trustee may demand and act on an Opinion of Counsel and shall not be responsible for any loss or damage resulting from any action or nonaction by it taken or omitted to be taken in good faith in reliance on such Opinion of Counsel.

**Section 11.4. Compensation.** The Authority shall pay to the Trustee compensation for all services rendered by the Trustee under this Master Indenture and any Supplemental Indenture,



including extraordinary fees and expenses relating to performance of services by the Trustee upon the occurrence or continuation of an Event of Default or the occurrence of any condition or event which with notice or lapse of time, or both, would constitute an Event of Default.

**Section 11.5. No Duty to Maintain Insurance.** The Trustee shall have no obligation to effect or renew any policies of insurance and shall have no liability for the failure of the Authority to effect or renew insurance or to report or file claims or proofs of loss for any loss or damage insured against or which may occur.

**Section 11.6. Notice of Event of Default.** The Trustee shall not be required to take notice, or be deemed to have notice, of any default or Event of Default other than a default or Event of Default under subsections (a) or (b) of Section 10.1, or unless specifically notified in writing of the default or Event of Default by the Authority or the Owners of at least twenty-five percent in aggregate principal amount of the Outstanding Bonds and Parity Indebtedness. The Trustee may, however, require of the Authority full information and advice at any time as to the performance of any of the covenants, conditions and agreements contained in this Master Indenture and any Supplemental Indenture.

**Section 11.7. Action Upon Default.** The Trustee shall be under no obligation to take any action in respect of any default or Event of Default, or toward the execution or enforcement of any of the trusts created by this Master Indenture and any Supplemental Indenture or to institute, appear in or defend any related suit or other proceeding, unless requested in writing to do so by the Authority or the Owners of at least twenty-five percent in aggregate principal amount of the Outstanding Bonds and Parity Indebtedness, and if in the Trustee's opinion the action may tend to involve the Trustee in expense or liability, unless furnished, from time to time as often as the Trustee may require, with reasonable security and indemnity satisfactory to the Trustee.

**Section 11.8. Limitation of Liability.** The Trustee shall be protected and shall incur no liability in acting, refraining from acting or proceeding in good faith upon any resolution, notice, telegram, request, consent, waiver, certificate, statement, affidavit, voucher, bond, requisition or other paper or document which the Trustee in good faith believes to be genuine and to have been authorized or signed by the proper board or person or to have been prepared and furnished pursuant to any of the provisions of this Master Indenture or any Supplemental Indenture, and the Trustee shall be under no duty to make any investigation or inquiry as to any statements contained or matters referred to in any such instrument, but may accept and rely upon them as conclusive evidence of the truth and accuracy of the statements. The Trustee shall not be bound to recognize any Person as an Owner of any Bond or Parity Indebtedness or to take any action at an Owner's request unless the Bond or Parity Indebtedness is deposited with the Trustee or evidence satisfactory to the Trustee of the ownership of the Bond or Parity Indebtedness is furnished to the Trustee. Before the Trustee acts or refrains from acting, the Trustee may require a certificate of an appropriate officer or officers of the Authority or an Opinion of Counsel or Bond Counsel, as appropriate. The permissive right of the Trustee to do things enumerated in this Master Indenture



shall not be construed as a duty, and the Trustee shall not be answerable for other than its negligence or willful default.

**Section 11.9. Ownership of Bonds.** The Trustee and any bank or trust company under common control with the Trustee may in good faith buy, sell, own, hold and deal in any Indebtedness issued under this Master Indenture, and may join in or take any action which any Owner may be entitled to take with like effect as if the Trustee were not a party to this Master Indenture. The Trustee and any bank or trust company under common control with the Trustee, as principal or agent, may also engage in or be interested in any financial or other transaction with the Authority and may act as depository, trustee, or agent for any committee or body of Owners of the Bonds, Parity Indebtedness or other obligations of the Authority as freely as if it were not Trustee under this Master Indenture.

**Section 11.10. No Duty to Invest.** Absent specific instructions of the Authority pursuant to Article VIII, the Trustee shall be under no duty to invest money held by it pursuant to this Master Indenture and any Supplemental Indenture. The Trustee shall be under no liability for interest on any money which the Trustee may at any time receive under any of the provisions of this Master Indenture and any Supplemental Indenture, except such as the Trustee may agree with the Authority to pay.

**Section 11.11. Reports by Trustee.** Unless otherwise provided in any Supplemental Indenture, the Trustee shall provide written reports to the Authority at least monthly of (i) the balances in all funds held by the Trustee under this Master Indenture and any Supplemental Indenture, (ii) all money received and expended by it under the terms of this Master Indenture and any Supplemental Indenture, and (iii) such information as may be reasonably requested by the Authority to enable it to calculate any amounts required to be rebated to the United States of America pursuant to, and otherwise to maintain compliance with, Section 148 of the Code and any other federal or Virginia law or regulation applicable to the Authority or its affairs.

**Section 11.12. Resignation.** The Trustee may at any time and for any reason resign and be discharged of the trusts created by this Master Indenture and any Supplemental Indenture by executing an instrument in writing resigning the trust and specifying the date when the resignation will take effect, and filing the instrument with the Authority not less than sixty days before the effective date of the resignation. The resignation shall take effect on the day specified in the instrument, unless a successor Trustee has not been appointed and accepted such appointment by that date as provided for in this Article, in which event the resignation shall take effect immediately on the appointment of and acceptance by a successor Trustee of the trusts under this Master Indenture and any Supplemental Indenture.

**Section 11.13. Removal.** The Trustee at any time and for any reason may be removed by an instrument in writing, filed with the Authority and the Trustee so removed and executed by the Owners of a majority in aggregate principal amount of the Bonds and Parity Indebtedness then Outstanding. In addition, provided no Event of Default or event which, with notice or lapse of



time or both, would become an Event of Default has occurred and is continuing, the Authority at any time may remove the Trustee by an instrument in writing filed with the Trustee so removed and the Owners, if the Authority also files with the written instrument a certified resolution in which the governing body of the Authority determines either that (i) the Trustee so removed has not been satisfactorily performing its duties and obligations under this Master Indenture and any Supplemental Indenture or (ii) the fees and expenses charged by the Trustee so removed are higher than the fees and expenses generally charged by banks or trust companies which would qualify as successor trustees under Section 11.15 to perform the duties and obligations of a trustee under indentures or trust agreements similar to this Master Indenture and any Supplemental Indenture. The Authority shall act to appoint a successor Trustee pursuant to Section 11.14 concurrently with removing the Trustee under this Section 11.13.

**Section 11.14. Appointment of Successor Trustee.** If at any time the Trustee resigns, is removed, or is dissolved, or if the Trustee's property or affairs are taken under the control of any state or federal court or administrative body because of insolvency or bankruptcy, or for any other reason a vacancy exists in the office of the Trustee, then, unless an Event of Default has occurred and is continuing, a successor may be appointed by the Authority by an instrument in writing signed by an Authorized Authority Representative. Copies of the instrument shall be promptly delivered by the Authority to the predecessor Trustee and to the Trustee so appointed and notice given to the Owners. If an Event of Default has occurred and is continuing or the Authority does not otherwise act to appoint a successor, a successor may be appointed by the Owners of a majority in aggregate principal amount of the Bonds and Parity Indebtedness then Outstanding, by an instrument or instruments in writing signed by such Owners or their attorneys-in-fact duly authorized in writing. Copies of each instrument shall be promptly delivered by the Authority to the predecessor Trustee and to the Trustee so appointed and notice given to the Owners.

**Section 11.15. Successor to be Bank or Trust Company.** Any successor to the Trustee under this Master Indenture appointed pursuant to Section 11.14 must be (i) a bank or trust company with trust powers organized and doing business under the laws of the United States of America or any of its states or territories, in good standing and having a reported capital, surplus and undivided profits of not less than \$50,000,000, or (ii) a subsidiary trust company whose parent has undertaken to be fully responsible for the acts and omissions of such subsidiary trust company, and whose capital, surplus and undivided profits, together with that of its parent bank or bank holding company, as the case may be, is not less than \$50,000,000, if such a bank, trust company or subsidiary trust company, willing and able to accept the trust on reasonable or customary terms can, with reasonable effort, be located.

**Section 11.16. Failure to Appoint a Successor Trustee.** If at any time the Trustee resigns and no appointment of a successor Trustee is made pursuant to the provisions of this Article before the effective date of the resignation specified in the notice, then the Trustee or any Owner may apply to any court of competent jurisdiction to appoint a successor Trustee. The



court may, after such notice, if any, as the court may deem proper and prescribe, appoint a successor Trustee.

**Section 11.17. Acceptance by Successor Trustee.** Any successor Trustee appointed under this Article shall execute, acknowledge and deliver to the Authority an instrument accepting the appointment under this Master Indenture, and thereupon the successor Trustee, without any further act, deed or conveyance, shall become duly vested with all the estates, property, rights, powers, trusts, duties and obligations of the successor Trustee's predecessor in trust under this Master Indenture and any Supplemental Indenture, with like effect as if originally named Trustee. Upon request of the successor Trustee, the Trustee ceasing to act and the Authority shall execute and deliver an instrument transferring to the successor Trustee all of the property, rights, powers and trusts under this Master Indenture and any Supplemental Indenture of the Trustee so ceasing to act, and the Trustee so ceasing to act shall pay over to the successor Trustee all money and other assets held by the Trustee under this Master Indenture and any Supplemental Indenture.

**Section 11.18. Merger or Consolidation.** Any corporation or association into which the Trustee is merged or with which the Trustee is consolidated, or any corporation or association resulting from any merger or consolidation to which the Trustee is a party, or any corporation or association to which the Trustee transfers substantially all of the Trustee's assets, shall be the successor Trustee under this Master Indenture, without the execution or filing of any paper or any further act on the part of the parties to this Master Indenture, anything in this Master Indenture to the contrary notwithstanding.

**Section 11.19. Action Upon Event of Default.** The Trustee shall, provided the Trustee is indemnified to its satisfaction, during the existence of an Event of Default known to the Trustee in accordance with Section 11.6, exercise such of the rights and powers vested in the Trustee by this Master Indenture and any Supplemental Indenture and use the same degree of skill and care in their exercise as a prudent person would use and exercise under the circumstances in the conduct of his own affairs.

**Section 11.20. Notice of Occurrence of Event of Default.** Upon the occurrence of an Event of Default known to the Trustee in accordance with Section 11.6, the Trustee shall, within thirty days of the Event of Default becoming known to the Trustee, give written notice of it by first class mail to each Owner of the Bonds and Parity Indebtedness then Outstanding, unless the Event of Default has been cured before then.

**Section 11.21. Intervention by Trustee.** In any judicial proceeding to which the Authority is a party and which in the opinion of the Trustee and the Trustee's counsel has a substantial bearing on the interests of the Owners of the Bonds and Parity Indebtedness, the Trustee may, in the Trustee's own name, intervene on behalf of the Owners and shall, upon receipt of indemnity satisfactory to it, do so if requested in writing by the Owners of at least twenty-five percent in aggregate principal amount of Bonds and Parity Indebtedness then Outstanding, if permitted by the court having jurisdiction.



**Section 11.22. Appointment of and Acceptance by Paying Agent.** The Authority may at any time or from time to time appoint one or more Paying Agents for each Series of Bonds, in the manner and subject to the conditions set forth in Section 11.23 for the appointment of a successor Paying Agent. Unless another Paying Agent is appointed for a Series of Bonds in the Supplemental Indenture for the Series, the Trustee shall serve as Paying Agent. Each Paying Agent (other than the Trustee) shall signify its acceptance of the duties and obligations imposed on it under this Master Indenture and any Supplemental Indenture by written instrument of acceptance deposited with the Authority and the Trustee.

**Section 11.23. Resignation or Removal of Paying Agent; Appointment of Successor.** Any Paying Agent may at any time resign and be discharged of the duties and obligations created by this Master Indenture by giving at least sixty days written notice to the Authority and the Trustee. Any Paying Agent may be removed at any time by an instrument signed by an Authorized Authority Representative and filed with the Paying Agent and the Trustee. Any successor Paying Agent shall be appointed by the Authority, with the approval of the Trustee, and shall be a bank or trust company duly organized under the laws of the United States or any of its states or territories, having a capital stock and surplus aggregating at least \$50,000,000, and willing and able to accept the office on reasonable and customary terms and authorized by law to perform all the duties imposed upon the Paying Agent by this Master Indenture and any Supplemental Indenture.

In the event of the resignation or removal of any Paying Agent, the Paying Agent shall pay over, assign and deliver any money held by it as Paying Agent to its successor or to the Trustee. In the event that for any reason there is a vacancy in the office of any Paying Agent, the Trustee shall act as such until a new Paying Agent is appointed.

## ARTICLE XII

### EXECUTION OF INSTRUMENTS BY OWNERS AND PROOF OF OWNERSHIP OF BONDS AND PARITY INDEBTEDNESS

**Section 12.1. Execution of Consents, Etc.** Any request, direction, consent or other instrument required or permitted by this Master Indenture and any Supplemental Indenture to be signed or executed by Owners may be in any number of concurrent instruments of similar tenor and may be signed or executed by the Owners in person or by an agent appointed by an instrument in writing. Proof of the execution of any instrument and of the ownership of Bonds or Parity Indebtedness shall be sufficient for any purpose of this Master Indenture and any Supplemental Indenture and shall be conclusive in favor of the Trustee and any Paying Agent with regard to any action taken, suffered or omitted by any of them under the instrument if made in the following manner:



(a) The fact and date of the execution by any Person of any instrument may be proved by the certificate of any officer in any jurisdiction who, by its laws, has power to take acknowledgments within the jurisdiction, to the effect that the Person signing the instrument acknowledged before such officer its execution, or by an affidavit of a witness to such execution.

(b) The fact of the ownership of Bonds or Parity Indebtedness by any Owner and the serial numbers of the Bonds and the date of ownership will be proved by the bond register maintained by the Paying Agent.

**Section 12.2. Other Evidence.** Nothing contained in this Article shall be construed as limiting the Trustee to such proof, it being intended that the Trustee may accept any other evidence of the matters stated in this Article which the Trustee may deem sufficient. Any request or consent of the Owner of any Bond or Parity Indebtedness shall bind every future Owner of the same Bond or Parity Indebtedness and any Bond or Bonds or Parity Indebtedness issued in exchange or substitution for it or upon the registration of transfer of it in respect of anything done by the Trustee in pursuit of such request or consent, and any request or consent of the Owner of Parity Indebtedness shall be similarly treated and, with respect to any contracts or agreements, shall be binding on any successor in interest to any such Owner.

## ARTICLE XIII

### MODIFICATION OF MASTER INDENTURE AND SUPPLEMENTAL INDENTURES

**Section 13.1. Supplemental Indentures Without Consent of Owners.** Subject to Sections 13.2 and 13.4, the Authority and the Trustee may, without the consent of the Owners, enter into a Supplemental Indenture or Supplemental Indentures which thereafter will form a part of this Master Indenture, for any one or more of the following purposes:

(a) To add to the covenants and agreements of the Authority contained in this Master Indenture and any Supplemental Indenture other covenants and agreements, and to surrender any right or power in this Master Indenture and any Supplemental Indenture reserved to or conferred upon the Authority;

(b) To cure any ambiguity, to supply any omission or to cure, correct or supplement any defect in the Master Indenture or any Supplemental Indenture;

(c) To grant to the Trustee for the benefit of the Owners additional rights, remedies, powers or authority;

(d) To subject to this Master Indenture and the Supplemental Indentures additional collateral;



(e) To modify this Master Indenture, any Supplemental Indenture, the Bonds or Parity Indebtedness to permit qualification under the Trust Indenture Act of 1939 or any similar federal statute at the time in effect, or to permit the qualification of the Bonds or Parity Indebtedness for sale under the securities laws of any state of the United States;

(f) To provide for uncertificated Bonds or Parity Indebtedness;

(g) To evidence the succession of a new Trustee or Paying Agent or the appointment by the Trustee or the Authority of a Co-Trustee or a Co-Paying Agent and to specify the rights and obligations of such Co-Trustee or Co-Paying Agent;

(h) To make any change (including but not limited to a change to comply with the Code or interpretations of it by the Treasury Department or the Internal Revenue Service) that in the opinion of the Trustee does not materially adversely affect the rights of any Owner of any Bonds or Parity Indebtedness then Outstanding;

(i) To make any modifications or changes necessary or appropriate to issue an additional Series of Bonds or any Parity Indebtedness;

(j) To amend, modify, alter or replace the letter of representations or other provisions or documents relating to book-entry Bonds; or

(k) To make any modifications or changes necessary or appropriate to permit Bonds of any Series or any Parity Indebtedness to be secured by a Credit Facility or to accommodate the issuance of Bonds or Parity Indebtedness bearing variable interest rates, including the addition of provisions for the appointment of tender agents and similar parties and the specification of the duties and powers of such parties.

In making any decision regarding whether any modification of or change to the Indenture or any Supplemental Indenture will materially adversely affect the rights of the Owners of any Bonds or Parity Indebtedness then Outstanding, the Trustee may obtain and rely on an opinion or report of an independent financial advisor or consultant to be selected by the Trustee subject to the approval of the Authority. The cost of any such financial advisor or consultant shall be paid by the Authority.

The Authority covenants that it will perform or cause to be performed all the requirements of any Supplemental Indenture which may be in effect from time to time. Nothing in this Article shall affect or limit the right or obligation of the Authority to execute and deliver or cause to be delivered to the Trustee any instrument of further assurance or other instrument provided for in this Master Indenture.

**Section 13.2. Supplemental Indentures With Consent of Owners.** Any modification or alteration of this Master Indenture and any Supplemental Indenture or of the rights and



obligations of the Authority or of the Owners of the Bonds or Parity Indebtedness may be made by the Authority and the Trustee with the consent of (i) the Owners of a majority in aggregate principal amount of the Bonds and Parity Indebtedness then Outstanding, or (ii) in case less than all of the Bonds or Parity Indebtedness then Outstanding are affected by the modifications or amendments, the Owners of a majority in aggregate principal amount of the Bonds and Parity Indebtedness so affected then Outstanding. However, without the consent of each Owner affected, no modification or alteration may (a) extend the maturity of the principal of or interest on any Bond or Parity Indebtedness, (b) reduce the principal amount of, or rate of interest on, any Bond or Parity Indebtedness, (c) effect a privilege or priority of any Bond or Bonds or Parity Indebtedness over any other Bond or Bonds or Parity Indebtedness, (d) reduce the percentage of the principal amount of the Bonds or Parity Indebtedness required for consent to such modification or alteration, (e) if applicable, impair the exclusion of interest on any Bonds or Parity Indebtedness from gross income for purposes of federal income taxation, (f) eliminate or extend the mandatory redemption date of any Bonds or Parity Indebtedness or reduce the redemption price of any Bonds or Parity Indebtedness, (g) create a lien ranking prior to or on a parity with the lien of this Master Indenture on the property described in Article II, or (h) deprive any Owner of the lien created by this Master Indenture on such property. In addition, if money has been deposited or set aside with the Trustee pursuant to Article XIV for the payment of Bonds or Parity Indebtedness and those Bonds or Parity Indebtedness will not have in fact actually been paid in full, no amendment to the provisions of that Article will be made without the consent of the Owner of each of the Bonds or Parity Indebtedness affected.

If at any time the Authority requests the Trustee to enter into a Supplemental Indenture for any of the purposes of this Section, the Trustee shall, upon being satisfactorily indemnified with respect to expenses, cause notice of the proposed execution of the Supplemental Indenture to be mailed to each Owner of Bonds and Parity Indebtedness then Outstanding by first-class mail to the address of Owner as it appears on the registration books; provided, however, any failure to give the notice by mailing, or any defect in it, shall not affect the validity of any proceedings pursuant to this Section. The notice shall briefly set forth the nature of the proposed Supplemental Indenture and shall state that copies of it are on file at the principal corporate trust office of the Trustee for inspection by all Owners. If, within six months or such longer period as is prescribed by the Authority at or following the giving of the notice, the Owners of a majority in aggregate principal amount of the affected Bonds and Parity Indebtedness then Outstanding have consented to and approved in writing the execution of the Supplemental Indenture, no Owner shall have any right to object to any of the terms and provisions contained in the Supplemental Indenture, or the operation of it, or in any manner to question the propriety of its execution, or to enjoin or restrain the Trustee or the Authority from executing the Supplemental Indenture or from taking any action pursuant to its provisions.

**Section 13.3. Trustee Authorized to Enter Into Supplemental Indenture.** The Trustee is authorized to enter into with the Authority any Supplemental Indenture authorized or permitted by the terms of this Master Indenture. Upon the execution of any Supplemental Indenture as permitted by this Article, this Master Indenture will be deemed to be modified and



amended in accordance with the terms of the Supplemental Indenture, and the Trustee is authorized to carry out the agreements and stipulations contained in it. The Trustee will not unreasonably refuse to enter into any Supplemental Indenture permitted by this Article unless the Trustee believes in good faith that the Supplemental Indenture shall materially adversely affect the rights of the Owners of the Bonds or Parity Indebtedness then Outstanding or adversely affect the rights and immunities of or increase the duties of the Trustee.

**Section 13.4. Opinion of Counsel.** The Trustee shall not execute any Supplemental Indenture amending this Master Indenture or any Supplemental Indenture unless there has been filed with it an Opinion of Counsel stating that the proposed Supplemental Indenture is authorized or permitted by this Master Indenture and complies with its terms and that upon execution the Supplemental Indenture will be a valid and binding obligation of the party or parties executing it.

## ARTICLE XIV

### DISCHARGE OF INDENTURE

**Section 14.1. Discharge of Indenture.** If (i) all Bonds secured by this Master Indenture have become due and payable or irrevocable instructions to redeem the Bonds or to pay them at maturity have been given by the Authority to the Trustee; and (ii) the Trustee holds cash or noncallable Defeasance Obligations the principal of and interest on which at maturity will be sufficient (A) if Bonds have been called for redemption, or irrevocable instructions to call Bonds have been given to the Trustee, to redeem in accordance with the relevant Sections of this Master Indenture and the applicable Supplemental Indenture all such Bonds on the date set for such redemption, (B) to pay at maturity all Outstanding Bonds not called for redemption, (C) to pay interest accruing on all Bonds until their redemption or payment at maturity, and (D) to pay the Trustee its reasonable fees and expenses, including the costs and expenses of cancelling and discharging this Master Indenture, then the Trustee shall cancel and discharge the lien of this Master Indenture and execute and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority any property subject to this Master Indenture which may then be in its possession, except funds or securities in which such funds are invested which are held by the Trustee for the payment of the principal of and premium, if any, and interest on the Bonds.

In the event that all of the Bonds secured by this Master Indenture are paid or deemed paid in accordance with the terms of this Master Indenture, then the right and interest of the Trustee in and to the trust estate created by this Master Indenture and all covenants, agreements and other obligations of the Authority to the Owners shall cease and be discharged and satisfied. If any Bonds are paid or deemed paid in accordance with the terms of this Master Indenture, then such Bonds and Parity Indebtedness shall cease to be entitled to any lien, benefit or security under this Master Indenture (other than the right to receive payment and certain rights regarding



registration and transfer) and all covenants, agreements and other obligations of the Authority to the Owners of such Bonds shall cease and be discharged and satisfied.

**Section 14.2. Bonds and Parity Indebtedness Deemed to be Paid.** Bonds shall be deemed paid and no longer Outstanding for the purposes of this Master Indenture when there has been deposited with the Trustee cash or noncallable Defeasance Obligations the principal of and interest on which will be sufficient to pay or redeem such Bonds and to pay interest accruing on such Bonds to their payment or redemption date (whether on or before their maturity or redemption date); provided, however, that if such Bonds are to be redeemed before their maturity, notice of the redemption must have been duly given or irrevocable instructions to redeem such Bonds must have been given by the Authority to the Trustee.

## ARTICLE XV

### MISCELLANEOUS

**Section 15.1. Limitation of Liability of Directors, Officers, etc., of Authority and the Trustee.** No covenant, agreement or obligation contained in this Master Indenture or in any Supplemental Indenture shall be deemed to be a covenant, agreement or obligation of any present or future director, officer, employee or agent of the Authority or the Trustee in his or her individual capacity, and neither the directors of the Authority or the Trustee nor any of their officers, employees or agents executing the Bonds and Parity Indebtedness shall be liable personally on the Bonds or be subject to any personal liability or accountability by reason of their issuance. No director, officer, employee, agent or adviser of the Authority or the Trustee shall incur any personal liability with respect to any action taken by him or her pursuant to this Master Indenture, any Supplemental Indenture, or the Act, provided such director, officer, employee, agent or adviser acts in good faith.

**Section 15.2. Dissolution of Authority.** In the event of the dissolution of the Authority, all of the covenants, stipulations, promises and agreements contained in this Master Indenture and any Supplemental Indentures by or on behalf of, or for the benefit of, the Authority shall bind or inure to the benefit of the successors of the Authority from time to time and any officer, board, commission, agency or instrumentality to whom or to which any power or duty of the Authority will be transferred.

**Section 15.3. Interested Parties.** Nothing in this Master Indenture expressed or implied is intended or shall be construed to confer upon any Person other than the Authority, the Trustee, the Owners of the Bonds and the holders of any Parity Indebtedness issued under this Master Indenture, any right, remedy or claim under or by reason of this Master Indenture, this Master Indenture being intended to be for the sole and exclusive benefit of the Authority, the Trustee and the Owners of the Bonds and any Parity Indebtedness.

**Section 15.4. Severability of Invalid Provisions.** If any clause, provision or section of this Master Indenture or any Supplemental Indenture is held to be illegal or invalid by any court, the invalidity of the clause, provision or section shall not affect any of the remaining clauses, provisions or sections, and this Master Indenture or the Supplemental Indenture shall be construed and enforced as if the illegal or invalid clause, provision or section had not been contained in it.

**Section 15.5. Notice.** All notices, certificates, requests or other communications under this Master Indenture shall be in writing and deemed given, unless otherwise required, when mailed by first-class mail, postage prepaid, to the addresses set forth below:

If to the Authority:        835 South Payne Street  
                                     P. O. Box 1987  
                                     Alexandria, Virginia 22313  
                                     Attention: Engineer-Director

If to the Trustee:         919 East Main Street  
                                     Richmond, Virginia 23219  
                                     Attention: Corporate Trust Administration  
                                     10th Floor

The Authority and the Trustee may, by notice given under this Section, designate any further or different addresses to which subsequent notices, certificates, requests or other communications will be sent.

If, by reason of the suspension of or irregularities in regular mail service, it is impractical to mail to the Owners of Bonds notice of any event when notice is required to be given pursuant to any provision of this Master Indenture or any Supplemental Indenture, then any manner of giving notice satisfactory to the Trustee shall be deemed to be sufficient.

**Section 15.6. Counterparts.** This Master Indenture may be executed in any number of counterparts, each of which, when executed and delivered, shall be an original, and the counterparts shall together constitute one and the same instrument.

**Section 15.7. Governing Law.** This Master Indenture and each Supplemental Indenture shall be governed by the laws of the Commonwealth.

**Section 15.8. Successors and Assigns.** This Indenture shall be binding upon, inure to the benefit of and be enforceable by the parties and their respective successors and assigns.



IN WITNESS WHEREOF, the parties have caused this Master Indenture to be executed on their behalf by their duly authorized officers.

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY**

By: \_\_\_\_\_  
Chairman

By: \_\_\_\_\_  
Engineer-Director

(SEAL)

ATTEST:

By: \_\_\_\_\_  
Assistant Secretary-Treasurer

**CRESTAR BANK, as Trustee**

By: \_\_\_\_\_  
Its: \_\_\_\_\_

IN WITNESS WHEREOF, the parties have caused this Master Indenture to be executed on their behalf by their duly authorized officers.

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY**

By: \_\_\_\_\_  
Chairman

By: \_\_\_\_\_  
Engineer-Director

(SEAL)

ATTEST:

By: \_\_\_\_\_  
Assistant Secretary-Treasurer

**CRESTAR BANK, as Trustee**

By: \_\_\_\_\_  
Its: \_\_\_\_\_



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## FIRST SUPPLEMENTAL INDENTURE OF TRUST

This **FIRST SUPPLEMENTAL INDENTURE OF TRUST** is made as of September 1, 1999, between the **CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY**, a public body politic and corporate of the Commonwealth of Virginia (the "Authority"), and **CRESTAR BANK**, a Virginia banking corporation, as trustee (the "Trustee").

The Authority has executed and delivered to the Trustee a Master Indenture of Trust dated as of March 15, 1999 (the "Master Indenture"), under which the Authority has provided for the issuance of its revenue bonds in order to provide funds to pay the whole or any part of the costs of any sewage disposal or sewer system or any combination thereof and to refund indebtedness and obligations previously incurred for such purposes.

The Authority has now determined to execute and deliver this First Supplemental Indenture in order to amend certain definitions and provisions of the Master Indenture. All things necessary to constitute this First Supplemental Indenture a valid and binding agreement securing the payment of the principal of, the premium, if any, and the interest on all Bonds and Parity Indebtedness which may be Outstanding from time to time, have been done and performed. The execution and delivery of this First Supplemental Indenture has in all respects been duly authorized.

The Authority covenants and agrees with the Trustee and the Owners, from time to time, of Bonds or Parity Indebtedness, as follows:

### ARTICLE I

#### FIRST SUPPLEMENTAL INDENTURE

**Section 1.1. First Supplemental Indenture.** This First Supplemental Indenture is authorized and executed by the Authority and delivered to the Trustee pursuant to and in accordance with Section 13.1 of the Master Indenture.

**Section 1.2. Definitions.** All capitalized words and terms used in this First Supplemental Indenture have the meanings set forth in Article I of the Master Indenture. In addition, the following words and terms have the following meanings in this First Supplemental Indenture unless the context clearly requires otherwise:

**"First Supplemental Indenture"** means this First Supplemental Indenture of Trust dated as of September 1, 1999, between the Authority and the Trustee, as it may be modified, altered, amended and supplemented.



**Section 1.3. Representations of Authority.** The Authority represents that (i) it is duly authorized under the Constitution and laws of the Commonwealth, including particularly and without limitation the Act, to execute this First Supplemental Indenture, and (ii) all action on its part necessary for the execution and delivery of this First Supplemental Indenture has been taken.

## **ARTICLE II**

### **AMENDMENTS TO MASTER INDENTURE**

**Section 2.1. Amendment to Recitals of the Master Indenture.** The third sentence on page one of the Master Indenture, which sentence immediately precedes Article I, is amended by adding the phrase "or Parity Indebtedness" immediately following the phrase "of the Bonds".

**Section 2.2. Amendment to Section 1.1 of the Master Indenture.** The definition of "Net Proceeds" set forth in Section 1.1 of the Master Indenture is deleted and the following definition is substituted therefor:

"Net Proceeds" means the proceeds from any property or casualty insurance recovery, or any other amounts recovered by or awarded to the Authority as a result of or in connection with the condemnation of or loss of title to all or any part of the System, remaining after payment of attorneys' fees, fees and expenses of the Authority and the Trustee and all other expenses incurred in collection of the gross proceeds.

**Section 2.3. Amendment to Section 3.2 of the Master Indenture.** The text of Section 3.2 of the Master Indenture is deleted in its entirety and replaced with the following:

**Section 3.2. Indenture Constitutes Contract.** In consideration of the purchase and acceptance of Bonds or Parity Indebtedness by their Owners, the provisions of this Master Indenture and Supplemental Indentures shall be a part of the contract of the Authority with the Owners and shall constitute a contract among the Authority, the Trustee and the Owners, from time to time, of Bonds or Parity Indebtedness.

**Section 2.4. Amendment to Section 3.5 of the Master Indenture.** The final sentence of the first paragraph of Section 3.5 of the Master Indenture is amended by adding the phrase "or any Assistant Secretary or Assistant Secretary-Treasurer" at the end of such sentence.

**Section 2.5. Amendment to Section 14.1 of the Master Indenture.** The text of Section 14.1 of the Master Indenture is deleted in its entirety and replaced with the following:

**Section 14.1. Discharge of Indenture.** If (i) all Bonds and Parity Indebtedness secured by this Master Indenture have become due and payable or irrevocable instructions to redeem the Bonds or Parity Indebtedness or to pay them at maturity have been given by the Authority to the Trustee; and (ii) the Trustee holds cash or noncallable Defeasance Obligations the principal of and interest on which at maturity will be sufficient (A) if Bonds and Parity Indebtedness have been called for redemption, or irrevocable instructions to call Bonds and Parity Indebtedness have been given to the Trustee, to redeem in accordance with the relevant Sections of this Master Indenture and the applicable Supplemental Indenture all such Bonds and Parity Indebtedness on the date set for such redemption, (B) to pay at maturity all Outstanding Bonds and Parity Indebtedness not called for redemption, (C) to pay interest accruing on all Bonds and Parity Indebtedness until their redemption or payment at maturity, and (D) to pay the Trustee its reasonable fees and expenses, including the costs and expenses of cancelling and discharging this Master Indenture, then the Trustee shall cancel and discharge the lien of this Master Indenture and execute and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority any property subject to this Master Indenture which may then be in its possession, except funds or securities in which such funds are invested which are held by the Trustee for the payment of the principal of and premium, if any, and interest on the Bonds and Parity Indebtedness.

In the event that all of the Bonds and Parity Indebtedness secured by this Master Indenture are paid or deemed paid in accordance with the terms of this Master Indenture, then the right and interest of the Trustee in and to the trust estate created by this Master Indenture and all covenants, agreements and other obligations of the Authority to the Owners shall cease and be discharged and satisfied. If any Bonds and Parity Indebtedness are paid or deemed paid in accordance with the terms of this Master Indenture, then such Bonds and Parity Indebtedness shall cease to be entitled to any lien, benefit or security under this Master Indenture (other than the right to receive payment and certain rights regarding registration and transfer) and all covenants, agreements and other obligations of the Authority to the Owners of



such Bonds and Parity Indebtedness shall cease and be discharged and satisfied.

**Section 2.6. Amendment to Section 14.2 of the Master Indenture.** The text of Section 14.2 of the Master Indenture is deleted in its entirety and replaced with the following:

**Section 14.2. Bonds and Parity Indebtedness Deemed to be Paid.** Bonds and Parity Indebtedness shall be deemed paid and no longer Outstanding for the purposes of this Master Indenture when there has been deposited with the Trustee cash or noncallable Defeasance Obligations the principal of and interest on which will be sufficient to pay or redeem such Bonds and Parity Indebtedness and to pay interest accruing on such Bonds and Parity Indebtedness to their payment or redemption date (whether on or before their maturity or redemption date); provided, however, that if such Bonds and Parity Indebtedness are to be redeemed before their maturity, notice of the redemption must have been duly given or irrevocable instructions to redeem such Bonds and Parity Indebtedness must have been given by the Authority to the Trustee.

**Section 2.7. Affirmation of Master Indenture.** Except as expressly amended in this First Supplemental Indenture, all of the terms, conditions and undertakings of the Authority and the Trustee under the Master Indenture are hereby ratified and affirmed and remain in full force and effect.

**Section 2.8. Determination of No Material Prejudice.** The Trustee determines that in its opinion the amendments to the Master Indenture set forth in this First Supplemental Indenture do not materially adversely affect the rights of any Owners of any Bonds or Parity Indebtedness Outstanding as of the date hereof.

### ARTICLE III

#### MISCELLANEOUS

**Section 3.1. Interested Parties.** Nothing in this First Supplemental Indenture expressed or implied is intended or shall be construed to confer upon any Person other than the Authority, the Trustee and the Owners of any Bonds or Parity Indebtedness issued under the Master Indenture, any right, remedy or claim under or by reason of this First Supplemental Indenture, this First Supplemental Indenture being intended to be for the sole and exclusive benefit of the Authority, the Trustee and the Owners.

**Section 3.2. Severability of Invalid Provisions.** If any clause, provision or section of this First Supplemental Indenture is held to be illegal or invalid by any court,

the invalidity of the clause, provision or section shall not affect any of the remaining clauses, provisions or sections, and this First Supplemental Indenture shall be construed and enforced as if the illegal or invalid clause, provision or section had not been contained in it.

**Section 3.3. Counterparts.** This First Supplemental Indenture may be executed in any number of counterparts, each of which, when executed and delivered, shall be an original, and the counterparts shall together constitute one and the same instrument.

**Section 3.4. Governing Law.** This First Supplemental Indenture shall be governed by the laws of the Commonwealth.

**Section 3.5. Successors and Assigns.** This First Supplemental Indenture shall be binding upon, inure to the benefit of and be enforceable by the parties and their respective successors and assigns.



IN WITNESS WHEREOF, the parties have caused this First Supplemental Indenture to be executed on their behalf by their duly authorized officers.

CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY

By: \_\_\_\_\_  
Chairman

By: \_\_\_\_\_  
Engineer-Director

(SEAL)

ATTEST:

By: \_\_\_\_\_  
Assistant Secretary-Treasurer

CRESTAR BANK, as Trustee

By: \_\_\_\_\_  
Its: \_\_\_\_\_

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**SECOND SUPPLEMENTAL INDENTURE OF TRUST**

**BETWEEN**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

**AND**

**U.S. BANK NATIONAL ASSOCIATION  
AS TRUSTEE**

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**\$30,000,000  
CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY  
SEWER SYSTEM SUBORDINATE REVOLVING CREDIT NOTE,  
SERIES 2020**

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**Dated as of February 1, 2020**

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## **SECOND SUPPLEMENTAL INDENTURE OF TRUST**

This **SECOND SUPPLEMENTAL INDENTURE OF TRUST** (as more particularly defined below, this "Supplemental Indenture") is dated as of February 1, 2020, and is between the **CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXANDRIA RENEW ENTERPRISES**, a public body politic and corporate of the Commonwealth of Virginia (the "Authority"), and **U.S. BANK NATIONAL ASSOCIATION**, a national banking association, as successor trustee (as more particularly defined in the below-defined Master Indenture, the "Trustee").

A. The Authority has executed and delivered to the Trustee a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"), as a trust agreement to secure and to provide procedures for and limitations on the issuance of revenue bonds (as more specifically defined in the Master Indenture, "Bonds") and other obligations of the Authority to pay the Cost of any Project comprising a portion of the Authority's System and to refund any Bonds and other obligations previously issued by the Authority.

B. The Authority has determined to issue a revolving credit note (as more particularly defined below, the "Series 2020 Note") under the Master Indenture in an original aggregate principal amount of \$30,000,000, the proceeds of which the Authority will use to finance and refinance, on an interim basis the Cost of Projects of the Authority and pay the costs of issuing the Series 2020 Note.

C. The Authority intends to secure the Series 2020 Note on a subordinate basis to the lien of the Master Indenture that secures Bonds and other Parity Indebtedness (as defined in the Master Indenture). Accordingly, the Series 2020 Note will be Subordinate Debt (as defined in the Master Indenture).

D. The Authority is entering into this Supplemental Indenture to set forth the terms and provisions of the Series 2020 Note.

E. All things necessary to make the Series 2020 Note a valid and binding limited obligation of the Authority, when authenticated by the Trustee and issued as provided in this Supplemental Indenture, and to constitute this Supplemental Indenture a valid and binding agreement securing the payment of the principal of and premium, if any, and interest on the Series 2020 Note have been done and performed. The execution and delivery of this Supplemental Indenture and the execution and issuance of the Series 2020 Note have in all respects been duly authorized.



## ARTICLE I

### SUPPLEMENTAL INDENTURE

Section 1.1 Supplemental Indenture. This Supplemental Indenture is authorized and executed by the Authority and delivered to the Trustee pursuant to and in accordance with Article V of the Master Indenture. All terms, covenants, conditions and agreements of the Master Indenture apply with full force and effect to the Series 2020 Note, except as otherwise provided in this Supplemental Indenture.

Section 1.2 Definitions. All capitalized words and terms used in this Supplemental Indenture have the meanings set forth in Article I of the Master Indenture. In addition, the following words and terms have the following meanings in this Supplemental Indenture unless the context clearly requires otherwise:

"Business Day" means a day other than (i) a Saturday, Sunday or other day on which banking institutions in the Commonwealth of Virginia or New York, New York are authorized or required to close or (ii) a day on which the New York Stock Exchange is closed.

"Closing Date" means February 25, 2020.

"Credit Agreement" means the Credit Agreement dated as of February 25, 2020, between the Authority and the Lender, as the same may be altered, amended, modified, or supplemented, from time to time.

"Indenture" means, collectively, the Master Indenture and this Supplemental Indenture.

"Lender" means Bank of America, N.A., together with its successors and assigns.

"Master Indenture" means the Master Indenture of Trust dated as of March 15, 1999, between the Authority and the Trustee, as previously amended and supplemented, and as the same may be altered, amended, modified, or supplemented, from time to time.

"Non-Arbitrage Certificate" means the Non-Arbitrage Certificate and Tax Compliance Agreement of the Authority dated the Closing Date and relating to the Series 2020 Note.

"Owner" for purposes of this Supplemental Indenture means the Lender or any other subsequent registered owner of the Series 2020 Note.

"Series 2020 Note" means the Authority's Sewer System Subordinate Revolving Credit Note, Series 2020, issued pursuant to this Supplemental Indenture, as the same may be altered, amended, modified, or supplemented from time to time.

"Supplemental Indenture" means this Second Supplemental Indenture of Trust dated as of February 1, 2020, between the Authority and the Trustee, as the same may be altered, amended, modified, or supplemented from time to time.

Section 1.3 Representations of Authority. The Authority represents that (i) it is duly authorized under the Constitution and laws of the Commonwealth, including particularly and without limitation the Act, to issue the Series 2020 Note, to execute this Supplemental Indenture, and to pledge the Net Revenues and funds in the manner and to the extent set forth in the Master Indenture and the Supplemental Indenture, (ii) all action on its part necessary for the execution and delivery of this Supplemental Indenture has been taken, and (iii) the Series 2020 Note in the hands of the Owner are and will be valid and enforceable limited obligations of the Authority.

## ARTICLE II

### AUTHORIZATION AND DETAILS OF SERIES 2020 NOTE

Section 2.1 Authorization of Series 2020 Note. There is authorized to be issued under the Master Indenture Subordinate Debt of the Authority in the aggregate principal amount of \$30,000,000.

Section 2.2 Details of Series 2020 Note. The Series 2020 Note authorized in Section 2.1 is designated "City of Alexandria, Virginia, Sanitation Authority Sewer System Subordinate Revolving Credit Note, Series 2020," and will be issued as a single, type-written note.

The Series 2020 Note will (i) be dated the Closing Date, (ii) be issued in a principal amount of \$30,000,000, (iii) bear interest as provided and at the rates set forth in the Credit Agreement, and (iv) mature, subject to prior redemption, on June 30, 2021.

The principal of and premium, if any, and interest on the Series 2020 Note is payable in lawful money of the United States of America, on a subordinate basis to the Outstanding Bonds and Parity Indebtedness previously issued by the Authority under the Master Indenture, and in all respects only from the Net Revenues and other property pledged for such purpose under the Master Indenture. The principal of and premium, if any, on the Series 2020 Note will be payable upon presentation and surrender of the Series 2020 Note at the designated corporate trust office of the Paying Agent except that, for so long as the Lender is the sole registered Owner of the Series 2020 Note, principal of and premium, if any, on the Series 2020 Note will be paid directly to the Lender without presentment or surrender. Interest on the Series 2020 Note will be paid by check or draft mailed by the Paying Agent on each interest payment date to the Owners of the Series 2020 Note at their addresses as they appear on the registration books of the Authority maintained by the Paying Agent, except that, for so long as the Lender is the sole registered Owner of the Series 2020 Note, interest, on the Series 2020 Note will be paid directly to the Lender in the manner provided in the Credit Agreement. The registered owners will be determined on the 15<sup>th</sup> of the month, which next precedes each Interest Payment Date.

Interest on the Series 2020 Note will be computed as provided in the Series 2020 Note and the Credit Agreement.

As provided in the Credit Agreement, the Authority may borrow, repay, and reborrow sums under the Series 2020 Note.



Section 2.3 Provisions for the Issuance of Series 2020 Note. The Series 2020 Note will be issued in issued in typewritten form and registered in the name of the Lender or its designee.

Transfer of ownership interest in the Series 2020 Note will be made only to a qualified institutional buyer (as that term is defined in 17 CFR § 230.144A, as amended) that are also financial institutions. Before any transfer of ownership, the Owner of the Series 2020 Note shall give the Authority written notice of such transfer.

Section 2.4 Form of the Series 2020 Note. The Series 2020 Note shall be issued substantially in the form set forth in Exhibit A to this Supplemental Indenture, with appropriate variations, omissions and insertions as permitted or required by the Master Indenture and this Supplemental Indenture. There may be endorsed on the Series 2020 Note such legend or text as may be necessary or appropriate to conform to any applicable rules and regulations of any governmental authority or any usage or requirement of law.

Section 2.5 Application of Bond Proceeds and Other Amounts. (a) As provided in the Credit Agreement, the Lender will advance amounts under the Series 2020 Note to the Authority, and the Authority will apply such amounts to pay the Cost of the Project or to pay the costs of issuing the Series 2020 Note.

(b) At the request of the Trustee, the Lender and the Authority shall provide the Trustee with the amount outstanding under the Series 2020 Note.

### ARTICLE III

#### REDEMPTION OF BONDS

Section 3.1 Redemption of Bonds. The Series 2020 Note may not be called for redemption except as provided in this Article.

Section 3.2 Optional Redemption. Subject to Section 2.02 of the Credit Agreement, the Series 2020 Note is subject to redemption at the option of the Authority from any money available for such purpose on any Business Day, without penalty or premium, upon not less than five Business Days' prior notice of prepayment given to the Lender (which notice shall specify the principal amount to be prepaid and the date of the prepayment), by tender of the principal amount or amounts to be prepaid together with all accrued unpaid interest thereon to the date of prepayment.

Section 3.3 Selection for Redemption; Notices. (a) Each notice of redemption will contain, among other things, the amount of the Series 2020 Note (or portions thereof) being called for redemption, the redemption date and price and the address at which the Series 2020 Note are to be surrendered for payment of the redemption price. Such notice may state that the redemption of the Series 2020 Note to be redeemed is conditioned upon the occurrence of certain future events, including, without limitation, the deposit with the Trustee of moneys sufficient to effect the redemption on or before the date fixed therefor.

(b) Any defect in such notice or the failure to mail any such notice to the registered owner of the Series 2020 Note called for redemption will not affect the validity of the proceedings for the redemption of the Series 2020 Note. Any defect in such notice or the failure to mail any such notice will not affect the validity of the proceedings for the redemption of the Series 2020 Note.

## ARTICLE IV

### SPECIAL COVENANTS

Section 4.1 Arbitrage Covenants. (a) The Authority will not take or approve or fail to take or approve any action, investment or use of the proceeds of the Series 2020 Note which would cause the Series 2020 Note to be an "arbitrage bond" within the meaning of Section 148 of the Code and the applicable regulations thereunder (the "Arbitrage Regulations"). The Authority will not request or approve the use or investment of the Gross Proceeds of the Series 2020 Note other than in accordance with the Non-Arbitrage Certificate.

(b) The Trustee will be fully protected in acting on any rebate determination made by the Authority at any time or contained in any certificate of the Authority and will not be liable or responsible in any manner to any person for so acting, notwithstanding any error in any such determination. The Trustee will not be responsible or liable to the Authority or any other party for the failure of the Authority to comply with the provisions of this Section.

Section 4.2 Opinion of Bond Counsel. If the Authority provides to the Trustee an opinion of nationally-recognized bond counsel addressed to the Authority and the Trustee to the effect that any action required under this Article expressly, by incorporation or otherwise is not required or is no longer required to maintain the excludability from gross income of the interest on the Series 2020 Note under Section 103 of the Code, the Authority and the Trustee may rely conclusively on such opinion complying with the provisions of this Article.

Section 4.3 Covenants with the Lender. The following provisions shall be in effect so long as the Series 2020 Note remains Outstanding, provided that any or all of such provisions shall be in addition to, and not in substitution of, the terms and provisions of the Master Indenture and may be waived by the Lender:

(a) Notwithstanding anything to the contrary contained in the Master Indenture or this Supplemental Indenture, including, without limitation, Section 14.1 of the Master Indenture, if the Bonds and Parity Indebtedness secured by the Master Trust Indenture are paid or deemed paid in accordance with the terms of the Master Indenture, the Master Indenture, as amended or supplemented, and the lien thereof, shall nevertheless remain unimpaired and in full force and effect for so long as the Series 2020 Note remains unpaid or the Authority has any right to obtain any advance under the Credit Agreement, and the Owner of the Series 2020 Note shall be entitled to the benefit of the Master Indenture, as amended and supplemented. The Trustee shall not cancel or discharge the lien of the Master Indenture, as amended or supplemented, or execute any instruments to release such lien, until the last to occur of the termination of all rights of the Authority to obtain advances under the Credit Agreement and the full and final payment of the entire outstanding principal amount of the Note and all accrued interest thereon.



(b) The Series 2020 Note may be declared immediately due and payable upon the occurrence of an Event of Default under the Credit Agreement if (a) payment of the Bonds and Parity Indebtedness has been accelerated in accordance with the Master Indenture, (b) payment of the Bonds and Parity Indebtedness has otherwise become fully due and payable (including by reason of maturity), or (c) if the Bonds and Parity Indebtedness have been paid or deemed paid in full.

## ARTICLE V

### MISCELLANEOUS

Section 5.1 Amendments to Master Indenture. Reference is hereby made to the amendments to the Master Indenture contained in Article II of the First Supplemental Indenture of Trust dated September 1, 1999, by and between the Authority and the Trustee, which provisions are incorporated in the Master Indenture and made a part thereof. For reference, the amended provisions are set forth in Exhibit B.

Section 5.2 Successors and Assigns. This Supplemental Indenture is binding upon, inures to the benefit of and is enforceable by its parties and their respective successors and assigns.

Section 5.3 Severability. If any provision of this Supplemental Indenture is held invalid by any court of competent jurisdiction, such holding will not invalidate any other provision.

Section 5.4 Governing Law. This Supplemental Indenture will be governed by and construed under the applicable laws of the Commonwealth.

Section 5.5 Counterparts. This Supplemental Indenture may be executed in several counterparts, each of which will be an original, and the counterparts will together constitute one and the same instrument.

Section 5.6 Parties Interested. Nothing in this Supplemental Indenture expressed or implied is intended or will be construed to confer upon any Person, other than the Authority, the Trustee, and the Owners of the Series 2020 Note, any right, remedy or claim under or by reason of this Supplemental Indenture, this Supplemental Indenture being intended for the sole and exclusive benefit of the Authority, the Trustee, and the Owners of the Series 2020 Note.

Section 5.7 Patriot Act Requirements of Trustee. To help the government fight the funding of terrorism and money laundering activities, federal law requires all financial institutions to obtain, verify, and record information that identifies each person who opens an account. Accordingly, the Trustee will require documentation from each non-individual person such as a business entity, a charity, a trust, or other legal entity, verifying its formation and existence as a legal entity. The Trustee may also seek financial statements, licenses, identification, and authorization documents from individuals claiming authority to represent the entity, or other relevant documentation.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be executed on their behalf by their duly authorized officers or representatives.

[SEAL]

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Name: Karen L. Pallansch  
Title: Chief Executive Officer

**U.S. BANK NATIONAL ASSOCIATION,  
as Trustee**

By: \_\_\_\_\_  
Name: Becky D. Burton  
Title: Assistant Vice President and Relationship  
Manager

IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be executed on their behalf by their duly authorized officers or representatives.

[SEAL]

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Name: Karen L. Pallansch  
Title: Chief Executive Officer

**U.S. BANK NATIONAL ASSOCIATION,  
as Trustee**

By: \_\_\_\_\_  
Name: W. F. Michie, III  
Title: Assistant Vice President and Relationship  
Manager



**EXHIBIT A**

**UNITED STATES OF AMERICA  
COMMONWEALTH OF VIRGINIA**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY  
SEWER SYSTEM SUBORDINATE REVOLVING CREDIT NOTE  
SERIES 2020**

**MATURITY DATE**

**JUNE 30, 2021**

**DATED DATE**

**FEBRUARY 25, 2020**

**REGISTERED OWNER: BANK OF AMERICA, N.A.**

**PRINCIPAL AMOUNT: THIRTY MILLION DOLLARS (\$30,000,000)**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXANDRIA RENEW ENTERPRISES**, a public body politic and corporate of the Commonwealth of Virginia (the "Authority"), for value received, promises to pay, solely from the revenues and other property pledged to the payment of this Note, to the registered owner of this Note or legal representative at its office at 214 N. Tryon Street, 17<sup>th</sup> Floor, Charlotte, North Carolina, 28255, or at such other place as the noteholder may from time to time designate in writing, the principal sum of THIRTY MILLION AND NO/100 DOLLARS (\$30,000,000.00), or such lesser amount as may have been advanced hereunder and remain unpaid on the Maturity Date listed above, and to pay interest on the outstanding principal balance of this Note as it exists from time to time from the date the first advance is made hereunder as provided herein.

This Note is the "Note" described in, and evidences a borrowing under, and is subject to the terms and conditions of, a certain Credit Agreement dated as of even date herewith (as the same may be altered, amended, modified, or supplemented, from time to time, the "Credit Agreement"), by and between the Authority and Bank of America, N.A. (together with its successors and assigns, the "Lender"). Capitalized terms used and not otherwise defined herein have the meanings assigned to them in the Credit Agreement.

Subject to Section 2.02.3(a)(ii) and (iii) of the Credit Agreement, the outstanding principal balance of this Note as it exists from time to time will bear interest (computed as provided in the Credit Agreement) at the fluctuating per annum rate of interest equal to the SIFMA Index plus the Applicable Margin, as provided in the Credit Agreement. The interest rate shall be determined on a weekly basis and remain fixed during each weekly period beginning on the calendar day immediately following the date on which the SIFMA Index is determined and continuing until the next weekly adjustment date as provided in the Credit Agreement, provided that the initial weekly interest rate period shall begin on the Closing Date. Notwithstanding the foregoing, upon the occurrence and during the continuance of an Event of Default, at the discretion of the Lender (except as provided in Section 2.02.3(a)(ii) of the Credit Agreement), the outstanding principal balance of this Note will bear interest (computed on the basis described above) at the fluctuating per annum rate of interest equal to the Default Rate, with such Default Rate to be effective on the

first date as of which the applicable Event of Default occurs notwithstanding the fact that such Event of Default may not be reported or otherwise discovered until a subsequent date. Interest accruing at the Default Rate shall be payable on demand.

Accrued interest on the outstanding principal balance of this Note as it exists from time to time will be due and payable on the first Business Day of each month, commencing on April 1, 2020, on any date on which this Note is prepaid or redeemed and on the Maturity Date. On the Maturity Date, the entire outstanding principal balance of this Note, together with all unpaid accrued interest hereon and all other amounts then owing hereunder, will be immediately due and payable in full. This Note is subject to mandatory redemption in full on any Termination Date occurring before the Maturity Date, as provided in Section 2.02.1 of the Credit Agreement.

The Authority acknowledges and agrees that the Lender may endorse on this Note (or on any schedule attached hereto) or otherwise make in the Lender's records an appropriate notation of the date and amount of each advance made hereunder and the date and amount of any payments or prepayments hereof. Such endorsements or other notations shall, in the absence of manifest error, be conclusive as to the outstanding principal balance of this Note; provided, however, that the Lender's error in making or failure to make an endorsement or notation shall not limit or otherwise affect the obligations of the Authority under the Credit Agreement or under this Note.

The Authority shall have the right and shall be required to prepay this Note upon the terms and subject to the conditions contained in the Credit Agreement. Nothing contained herein shall obligate the Lender to make any advance to the Authority hereunder, except as provided in the Credit Agreement.

The Events of Default hereunder are the same as those described in the Credit Agreement, which are incorporated herein by this reference. In the event of the occurrence of any or all of such Events of Default, the Lender's obligation to make further advances hereunder will or may automatically and immediately terminate and the entire unpaid principal balance of this Note together with all accrued interest will become or may be declared immediately due and payable in the manner and with the effect as provided in the Credit Agreement.

The principal of and premium, if any, on this Note is payable as provided in the Credit Agreement and the Second Supplemental Indenture of Trust dated as of February 1, 2020 (as altered, amended, modified, or supplemented, from time to time, the "Second Supplement"), between the Authority and the Lender. Interest on this Note will be computed as provided in the Credit Agreement.

Principal of and premium, if any, and interest on this Note are payable in lawful money of the United States of America. In case the date of maturity of the principal of this Note or the date fixed for the payment of interest on this Note is not a Business Day (as defined in the Indenture), then payment of the principal and premium, if any, and interest need not be made on such date, but may be made on the next succeeding date which is a Business Day, and if made on such next succeeding Business Day no additional interest will accrue for the period after such date of maturity.

This Note and the issue of which it is a part and the premium, if any, and interest on this Note are limited obligations of the Authority and payable solely from the revenues and other property pledged and assigned to the Trustee under the terms of the Indenture to secure payment of this Note. **THE SERIES 2020 NOTE, THE PREMIUM, IF ANY, AND THE INTEREST ON THEM WILL NOT BE DEEMED TO CONSTITUTE A PLEDGE OF THE FAITH AND CREDIT OF THE COMMONWEALTH OF VIRGINIA (THE "COMMONWEALTH") OR ANY OF ITS POLITICAL SUBDIVISIONS, INCLUDING THE AUTHORITY AND THE CITY OF ALEXANDRIA, VIRGINIA (THE "CITY OF ALEXANDRIA"). NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE COMMONWEALTH OR ANY COUNTY, CITY, TOWN OR OTHER SUBDIVISION OF THE COMMONWEALTH, INCLUDING THE AUTHORITY AND THE CITY OF ALEXANDRIA, IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF OR PREMIUM, IF ANY, OR INTEREST ON THE SERIES 2020 NOTE. THE ISSUANCE OF THE SERIES 2020 NOTE DOES NOT DIRECTLY, INDIRECTLY OR CONTINGENTLY OBLIGATE THE COMMONWEALTH OR ANY COUNTY, CITY, TOWN OR OTHER SUBDIVISION OF THE COMMONWEALTH, INCLUDING THE CITY OF ALEXANDRIA, TO LEVY ANY TAXES OR TO MAKE ANY APPROPRIATION FOR THE PAYMENT OF THE SERIES 2020 NOTE. THE AUTHORITY HAS NO TAXING POWER.**

The Series 2020 Note is issued under a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"), between the Authority and the Trustee and as further supplemented by a Second Supplement. The Master Indenture as supplemented by the Second Supplement is referred to as the "Indenture." Reference is made to the Indenture for a description of the revenues and property pledged and assigned and the provisions, among other things, with respect to the nature and extent of the security for the Series 2020 Note, the rights and obligations of the Authority and the Trustee, the terms on which the Series 2020 Note is issued, the rights of the registered owners of the Series 2020 Note and the provisions for defeasance of such rights. This Note is issued as Subordinate Debt under the Indenture. Accordingly, this Note is secured by a pledge of Net Revenues that is subordinate to the pledge of Net Revenues that secures the Authority's previously issued and Outstanding Bonds (as defined in the Indenture) (the "Outstanding Parity Bonds"). The Authority may issue Bonds and Parity Indebtedness (as defined in the Indenture) ranking equally and ratably with the Series 2020 Note and the Outstanding Parity Bonds for all or certain purposes on the terms provided in the Indenture.

This Note is authorized and issued by the Authority, pursuant to (i) the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2 of the Code of Virginia of 1950, as amended, (ii) a resolution adopted by the Board of Directors of the Authority on February 18, 2020, and (iii) the Indenture, for the purpose of providing funds to be used, along with other available moneys, if any, to (a) pay the Cost of certain Projects of the Authority and (b) pay the costs of issuing this Note.



The registered owner of this Note has no right to enforce the provisions of the Indenture or to take any action with respect to any Event of Default under the Indenture, or to institute, appear in or defend any suit or other proceeding with respect to the Indenture, except as provided in the Indenture. Upon the occurrence of certain events or upon certain conditions, in the manner and with the effect set forth in the Indenture, the principal of all of the Bonds issued under the Indenture and then Outstanding, together with any accrued interest on them, may become or may be declared due and payable before their stated maturities. Modifications or alterations in the Indenture, or any supplements to it, may be made to the extent and under the circumstances provided by the Indenture. Under the Indenture, the Owners of Subordinate Debt have limited rights upon an Event of Default, including, without limitation, limitations on the ability to accelerate the debt that they hold.

The transfer of this Note is subject to the restrictions and limitations set forth in the Second Supplement and the Credit Agreement. Upon the registration of any transfer, the Authority will execute and the Trustee will authenticate and deliver in exchange for this Note a new Series 2020 Note, registered in the name of the transferee, of like date and tenor and of authorized denominations for the aggregate principal amount which the registered owner is entitled to receive. Before due registration of any transfer of this Note, the Trustee will treat the registered owner shown on the registration books maintained by the Trustee as the person exclusively entitled to the payment of principal of and premium, if any, and interest on this Note and the exercise of all other rights and powers of the owner.

All acts and conditions required to happen, exist or be performed precedent to and in connection with the issuance of this Note have happened, exist and have been performed.

This Note will not become obligatory for any purpose or be entitled to any security or benefit under the Indenture or be valid until the Trustee has executed the Certificate of Authentication appearing on this Note.

This Note shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

[Signature Page Follows]

**IN WITNESS WHEREOF**, City of Alexandria, Virginia, Sanitation Authority, d/b/a Alexandria Renew Enterprises has caused this Note to be executed by the original signature of its Chair, an original of its seal to be imprinted on this Note and attested by the original signature of its Secretary-Treasurer.

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Chair

(SEAL)

Attest:

By: \_\_\_\_\_  
Secretary-Treasurer

\* \* \* \* \*

**CERTIFICATE OF AUTHENTICATION**

This Note is the Note described in the within-mentioned Indenture.

AUTHENTICATION DATE: February 25, 2020

**U.S. BANK NATIONAL ASSOCIATION**, as  
Trustee and Paying Agent

By: \_\_\_\_\_  
Authorized Signature



## ASSIGNMENT

FOR VALUE RECEIVED, the undersigned sells, assigns and transfers unto

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(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE: \_\_\_\_\_

this Series 2020 Note and does irrevocably constitute and appoint

\_\_\_\_\_, attorney, to transfer this Series 2020 Note on the books kept for registration of this Series 2020 Note, with full power of substitution in the premises.

Dated: \_\_\_\_\_

Signature Guaranteed:

\_\_\_\_\_  
(NOTE: Signature(s) must be guaranteed by an Eligible Guarantor Institution such as a Commercial Bank, Trust Company, Securities Broker/Dealer, Credit Union or Savings Association who is a member of a medallion program approved by The Securities Transfer Association, Inc.)

\_\_\_\_\_  
(NOTE: The signature above must correspond with the name of the Registered Owner as it appears on the books kept for registration of this Series 2020 Note in every particular, without alteration or change.)

## EXHIBIT B

### PRIOR AMENDMENTS TO MASTER INDENTURE

Section 1.1 of the Master Indenture of Trust (the "Master Indenture") dated as of March 15, 1999, between City of Alexandria, Virginia, Sanitation Authority, d/b/a Alexandria Renew Enterprises (the "Authority") and U.S. Bank National Association, as successor trustee (the "Trustee") has been amended by Article II of the First Supplemental Indenture of Trust (the "First Supplemental Indenture") dated as of September 1, 1999, as follows:

Section 1.1 of the Master Indenture has been amended to delete the definition of "Net Proceeds" and substitute the following therefor:

*"Net Proceeds" means the proceeds from any property or casualty insurance recovery, or any other amounts recovered by or awarded to the Authority as a result of or in connection with the condemnation of or loss of title to all or any part of the System, remaining after payment of attorneys' fees, fees and expenses of the Authority and the Trustee and all other expenses incurred in collection of the gross proceeds.*

Section 3.2 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

***Section 3.2. Indenture Constitutes Contract.*** *In consideration of the purchase and acceptance of Bonds or Parity Indebtedness by their Owners, the provisions of this Master Indenture and Supplemental Indentures shall be a part of the contract of the Authority with the Owners and shall constitute a contract among the Authority, the Trustee and the Owners, from time to time, of Bonds or Parity Indebtedness.*

Section 3.5 of the Master Indenture has been amended by adding the phrase "or any Assistant Secretary or Assistant Secretary-Treasurer" at the end of such sentence.

Section 14.1 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

***Section 14.1. Discharge of Indenture.*** *If (i) all Bonds and Parity Indebtedness secured by this Master Indenture have become due and payable or irrevocable instructions to redeem the Bonds or Parity Indebtedness or to pay them at maturity have been given by the Authority to the Trustee; and (ii) the Trustee holds cash or noncallable Defeasance Obligations the principal of and interest on which at maturity will be sufficient (A) if Bonds and Parity Indebtedness have been called for redemption, or irrevocable instructions to call Bonds and Parity Indebtedness have been given*

*to the Trustee, to redeem in accordance with the relevant Sections of this Master Indenture and the applicable Supplemental Indenture all such Bonds and Parity Indebtedness on the date set for such redemption, (B) to pay at maturity all Outstanding Bonds and Parity Indebtedness not called for redemption, (C) to pay interest accruing on all Bonds and Parity Indebtedness until their redemption or payment at maturity, and (D) to pay the Trustee its reasonable fees and expenses, including the costs and expenses of cancelling and discharging this Master Indenture, then the Trustee shall cancel and discharge the lien of this Master Indenture and execute and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority any property subject to this Master Indenture which may then be in its possession, except funds or securities in which such funds are invested which are held by the Trustee for the payment of the principal of and premium, if any, and interest on the Bonds and Parity Indebtedness.*

*In the event that all of the Bonds and Parity Indebtedness secured by this Master Indenture are paid or deemed paid in accordance with the terms of this Master Indenture, then the right and interest of the Trustee in and to the trust estate created by this Master Indenture and all covenants, agreements and other obligations of the Authority to the Owners shall cease and be discharged and satisfied. If any Bonds and Parity Indebtedness are paid or deemed paid in accordance with the terms of this Master Indenture, then such Bonds and Parity Indebtedness shall cease to be entitled to any lien, benefit or security under this Master Indenture (other than the right to receive payment and certain rights regarding registration and transfer) and all covenants, agreements and other obligations of the Authority to the Owners of such Bonds and Parity Indebtedness shall cease and be discharged and satisfied.*

Section 14.2 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

**Section 14.2. Bonds and Parity Indebtedness Deemed to be Paid.** *Bonds and Parity Indebtedness shall be deemed paid and no longer Outstanding for the purposes of this Master Indenture when there has been deposited with the Trustee cash or noncallable Defeasance Obligations the principal of and interest on which will be sufficient to pay or redeem such Bonds and Parity Indebtedness and to pay interest accruing on such Bonds and Parity Indebtedness to their payment or redemption date (whether on or before their maturity or redemption date); provided, however, that if such'*



*Bonds and Parity Indebtedness are to be redeemed before their maturity, notice of the redemption must have been duly given or irrevocable instructions to redeem such Bonds and Parity Indebtedness must have been given by the Authority to the Trustee.*

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**AMENDED AND RESTATED SECOND SUPPLEMENTAL INDENTURE OF TRUST**

**BETWEEN**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

**AND**

**U.S. BANK NATIONAL ASSOCIATION  
AS TRUSTEE**

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**\$30,000,000  
CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY  
SEWER SYSTEM SUBORDINATE REVOLVING CREDIT NOTES**

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**Dated as of June 1, 2021**

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## **AMENDED AND RESTATED SECOND SUPPLEMENTAL INDENTURE OF TRUST**

This **AMENDED AND RESTATED SECOND SUPPLEMENTAL INDENTURE OF TRUST** (as more particularly defined below, this "Supplemental Indenture") is dated as of June 1, 2021, and is between the **CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXANDRIA RENEW ENTERPRISES**, a public body politic and corporate of the Commonwealth of Virginia (the "Authority"), and **U.S. BANK NATIONAL ASSOCIATION**, a national banking association, as successor trustee (as more particularly defined in the below-defined Master Indenture, the "Trustee").

A. The Authority has executed and delivered to the Trustee a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"), as a trust agreement to secure and to provide procedures for and limitations on the issuance of revenue bonds (as more specifically defined in the Master Indenture, "Bonds") and other obligations of the Authority to pay the Cost of any Project comprising a portion of the Authority's System and to refund any Bonds and other obligations previously issued by the Authority.

B. The Authority issued a revolving credit note (as amended, the "Series 2020 Note") under the Master Indenture in an original aggregate principal amount of \$30,000,000, the proceeds of which the Authority used to finance and refinance, on an interim basis the Cost of Projects of the Authority and pay the costs of issuing the Series 2020 Note.

C. The Authority secured the Series 2020 Note on a subordinate basis to the lien of the Master Indenture that secures Bonds and other Parity Indebtedness (as defined in the Master Indenture). Accordingly, the Series 2020 Note was Subordinate Debt (as defined in the Master Indenture).

D. The Authority entered into a Second Supplemental Indenture of Trust dated as of February 1, 2020 (the "Original Supplemental Indenture"), with the Trustee to set forth the terms and provisions of the Series 2020 Note.

E. The Owner of the Series 2020 Note and the Authority have agreed that the Series 2020 Note will be replaced by two notes: (1) a Sewer System Subordinate Revolving Credit Note, Series 2021A (Tax-Exempt) and (2) a Sewer System Subordinate Revolving Credit Note, Series 2021B (Taxable) (collectively, the "Series 2021 Notes").

F. In connection with the issuance of the Series 2021 Notes to replace the Series 2020 Note, the Owner of the Series 2020 Note and the Authority have agreed to amend and restate the Original Supplemental Indenture in its entirety.

G. All things necessary to make the Series 2021 Notes valid and binding limited obligations of the Authority, when authenticated by the Trustee and issued as provided in this Supplemental Indenture, and to constitute this Supplemental Indenture a valid and binding agreements securing the payment of the principal of and premium, if any, and interest on the Series 2021 Notes have been done and performed. The execution and delivery of this Supplemental Indenture and the execution and issuance of the Series 2021 Notes have in all respects been duly authorized.

NOW THEREFORE, the parties amend and restate the Original Supplemental Indenture to read as follows:

## ARTICLE I

### SUPPLEMENTAL INDENTURE

Section 1.1 Supplemental Indenture. This Supplemental Indenture is authorized and executed by the Authority and delivered to the Trustee pursuant to and in accordance with Article V of the Master Indenture. All terms, covenants, conditions and agreements of the Master Indenture apply with full force and effect to the Series 2021 Notes, except as otherwise provided in this Supplemental Indenture.

Section 1.2 Definitions. All capitalized words and terms used in this Supplemental Indenture have the meanings set forth in Article I of the Master Indenture. In addition, the following words and terms have the following meanings in this Supplemental Indenture unless the context clearly requires otherwise:

"Business Day" means a day other than (i) a Saturday, Sunday or other day on which banking institutions in the Commonwealth of Virginia or New York, New York are authorized or required to close or (ii) a day on which the New York Stock Exchange is closed.

"Credit Agreement" means the Credit Agreement dated as of February 25, 2020, between the Authority and the Lender, as the same may be altered, amended, modified, or supplemented, from time to time.

"Indenture" means, collectively, the Master Indenture and this Supplemental Indenture.

"Lender" means Bank of America, N.A. and any party that succeeds in its interest in the Credit Agreement and is the Owner of the Series 2021 Notes.

"Master Indenture" means the Master Indenture of Trust dated as of March 15, 1999, between the Authority and the Trustee, as previously amended and supplemented, and as the same may be altered, amended, modified, or supplemented, from time to time.

"Non-Arbitrage Certificate" means the Non-Arbitrage Certificate and Tax Compliance Agreement of the Authority dated the Series 2021 Note Issuance Date and relating to the Series 2021A Note.

"Owner" for purposes of this Supplemental Indenture means the Lender or any other subsequent registered owner of any Series 2021 Note.

"Series 2021 Notes" means the Series 2021A Note and the Series 2021B Note.

"Series 2021 Note Issuance Date" means June 29, 2021.

"Series 2021A Note" means the Authority's Sewer System Subordinate Revolving Credit Note, Series 2021A (Tax-Exempt), issued pursuant to this Supplemental Indenture, as the same may be altered, amended, modified, or supplemented from time to time.

"Series 2021B Note" means the Authority's Sewer System Subordinate Revolving Credit Note, Series 2021B (Taxable), issued pursuant to this Supplemental Indenture, as the same may be altered, amended, modified, or supplemented from time to time.

"Supplemental Indenture" means this Amended and Restated Second Supplemental Indenture of Trust dated as of June 1, 2021, between the Authority and the Trustee, as the same may be altered, amended, modified, or supplemented from time to time.

Section 1.3 Representations of Authority. The Authority represents that (i) it is duly authorized under the Constitution and laws of the Commonwealth, including particularly and without limitation the Act, to issue the Series 2021 Notes, to execute this Supplemental Indenture, and to pledge the Net Revenues and funds in the manner and to the extent set forth in the Master Indenture and the Supplemental Indenture, (ii) all action on its part necessary for the execution and delivery of this Supplemental Indenture has been taken, and (iii) the Series 2021 Notes in the hands of the Owner are and will be valid and enforceable limited obligations of the Authority.

## ARTICLE II

### AUTHORIZATION AND DETAILS OF SERIES 2021 NOTES

Section 2.1 Authorization of the Series 2021 Notes. There is authorized to be issued under the Master Indenture Subordinate Debt of the Authority in the aggregate principal amount of \$30,000,000.

Section 2.2 Details of the Series 2021 Notes. The Series 2021 Notes authorized in Section 2.1 are designated "City of Alexandria, Virginia, Sanitation Authority Sewer System Subordinate Revolving Credit Note, Series 2021A (Tax-Exempt)" and "City of Alexandria, Virginia, Sanitation Authority Sewer System Subordinate Revolving Credit Note, Series 2021B (Taxable)" and each will be issued as a single, type-written note.

Each Series 2021 Note will (i) be dated the Series 2021 Note Issuance Date, (ii) be issued in a principal amount of \$30,000,000, (iii) bear interest as provided and at the rates set forth in the Credit Agreement, and (iv) mature, subject to prior redemption, on June 30, 2022.

In no instance shall the outstanding aggregate principal amount of the Series 2021 Notes exceed \$30,000,000.

The principal of and premium, if any, and interest on each Series 2021 Note is payable in lawful money of the United States of America, on a subordinate basis to the Outstanding Bonds and Parity Indebtedness previously issued by the Authority under the Master Indenture, and in all respects only from the Net Revenues and other property pledged for such purpose under the Master Indenture. The principal of and premium, if any, on each Series 2021 Note will be payable upon presentation and surrender of the applicable Series 2021 Note at the designated corporate trust office of the Paying Agent except that, for so long as the Lender is the sole registered Owner of



each Series 2021 Note, principal of and premium, if any, on each Series 2021 Note will be paid directly to the Lender without presentment or surrender. Interest on each Series 2021 Note will be paid by check or draft mailed by the Paying Agent on each interest payment date to the Owners of each Series 2021 Note at their addresses as they appear on the registration books of the Authority maintained by the Paying Agent, except that, for so long as the Lender is the sole registered Owner of each Series 2021 Note, interest, on each Series 2021 Note will be paid directly to the Lender in the manner provided in the Credit Agreement. The registered owners will be determined on the 15<sup>th</sup> of the month, which next precedes each Interest Payment Date.

Interest on each Series 2021 Note will be computed as provided in the applicable Series 2021 Note and the Credit Agreement.

As provided in the Credit Agreement, the Authority may borrow, repay, and reborrow sums under each Series 2021 Note.

Section 2.3 Provisions for the Issuance of Series 2021 Notes. Each Series 2021 Note will be issued in typewritten form and registered in the name of the Lender or its designee.

Transfer of ownership interest in each Series 2021 Note will be made only to a qualified institutional buyer (as that term is defined in 17 CFR § 230.144A, as amended) that are also financial institutions. Before any transfer of ownership, the Owner of each Series 2021 Note shall give the Authority written notice of such transfer.

Section 2.4 Form of the Series 2021 Notes. Each Series 2021 Note shall be issued substantially in the form set forth in Exhibit A-1 or Exhibit A-2 (as applicable) to this Supplemental Indenture, with appropriate variations, omissions and insertions as permitted or required by the Master Indenture and this Supplemental Indenture. There may be endorsed on each Series 2021 Note such legend or text as may be necessary or appropriate to conform to any applicable rules and regulations of any governmental authority or any usage or requirement of law.

Section 2.5 Application of Series 2021 Note Proceeds and Other Amounts. (a) As provided in the Credit Agreement, the Lender will advance amounts under each Series 2021 Note to the Authority, and the Authority will apply such amounts to pay the Cost of the Project or to pay the costs of issuing the Series 2021 Note.

(b) At the request of the Trustee, the Lender and the Authority shall provide the Trustee with the amount outstanding under each Series 2021 Note.

### ARTICLE III

#### REDEMPTION OF THE SERIES 2021 NOTES

Section 3.1 Redemption of the Series 2021 Notes. No Series 2021 Note may be called for redemption except as provided in this Article.

Section 3.2 Optional Redemption. Subject to Section 2.02 of the Credit Agreement, each Series 2021 Note is subject to redemption at the option of the Authority from any money available for such purpose on any Business Day, without penalty or premium, upon not less than five Business Days' prior notice of prepayment given to the Lender (which notice shall specify the principal amount to be prepaid and the date of the prepayment), by tender of the principal amount or amounts to be prepaid together with all accrued unpaid interest thereon to the date of prepayment.

Section 3.3 Selection for Redemption; Notices. (a) Each notice of redemption will contain, among other things, the amount of the applicable Series 2021 Note (or portions thereof) being called for redemption, the redemption date and price and the address at which the applicable Series 2021 Note is to be surrendered for payment of the redemption price. Such notice may state that the redemption of the applicable Series 2021 Note to be redeemed is conditioned upon the occurrence of certain future events, including, without limitation, the deposit with the Trustee of moneys sufficient to effect the redemption on or before the date fixed therefor.

(b) Any defect in such notice or the failure to mail any such notice to the registered owner of the applicable Series 2021 Note called for redemption will not affect the validity of the proceedings for the redemption of the applicable Series 2021 Note. Any defect in such notice or the failure to mail any such notice will not affect the validity of the proceedings for the redemption of the applicable Series 2021 Note.

## ARTICLE IV

### SPECIAL COVENANTS

Section 4.1 Arbitrage Covenants. (a) The Authority will not take or approve or fail to take or approve any action, investment or use of the proceeds of the Series 2021A Note which would cause the Series 2021A Note to be an "arbitrage bond" within the meaning of Section 148 of the Code and the applicable regulations thereunder (the "Arbitrage Regulations"). The Authority will not request or approve the use or investment of the Gross Proceeds of the Series 2021A Note other than in accordance with the Non-Arbitrage Certificate.

(b) The Trustee will be fully protected in acting on any rebate determination made by the Authority at any time or contained in any certificate of the Authority and will not be liable or responsible in any manner to any person for so acting, notwithstanding any error in any such determination. The Trustee will not be responsible or liable to the Authority or any other party for the failure of the Authority to comply with the provisions of this Section.

Section 4.2 Opinion of Bond Counsel. If the Authority provides to the Trustee an opinion of nationally-recognized bond counsel addressed to the Authority and the Trustee to the effect that any action required under this Article expressly, by incorporation or otherwise is not required or is no longer required to maintain the excludability from gross income of the interest on the Series 2021A Note under Section 103 of the Code, the Authority and the Trustee may rely conclusively on such opinion complying with the provisions of this Article.

Section 4.3 Covenants with the Lender. The following provisions shall be in effect so long as each Series 2021 Note remains Outstanding, provided that any or all of such provisions shall be in addition to, and not in substitution of, the terms and provisions of the Master Indenture and may be waived by the Lender:

(a) Notwithstanding anything to the contrary contained in the Master Indenture or this Supplemental Indenture, including, without limitation, Section 14.1 of the Master Indenture, if the Bonds and Parity Indebtedness secured by the Master Trust Indenture are paid or deemed paid in accordance with the terms of the Master Indenture, the Master Indenture, as amended or supplemented, and the lien thereof, shall nevertheless remain unimpaired and in full force and effect for so long as each Series 2021 Note remains unpaid or the Authority has any right to obtain any advance under the Credit Agreement, and the Owner of each Series 2021 Note shall be entitled to the benefit of the Master Indenture, as amended and supplemented. The Trustee shall not cancel or discharge the lien of the Master Indenture, as amended or supplemented, or execute any instruments to release such lien, until the last to occur of the termination of all rights of the Authority to obtain advances under the Credit Agreement and the full and final payment of the entire outstanding principal amount of the Note and all accrued interest thereon.

(b) Any Series 2021 Note may be declared immediately due and payable upon the occurrence of an Event of Default under the Credit Agreement if (a) payment of the Bonds and Parity Indebtedness has been accelerated in accordance with the Master Indenture, (b) payment of the Bonds and Parity Indebtedness has otherwise become fully due and payable (including by reason of maturity), or (c) if the Bonds and Parity Indebtedness have been paid or deemed paid in full.

## ARTICLE V

### MISCELLANEOUS

Section 5.1 Amendments to Master Indenture. Reference is hereby made to the amendments to the Master Indenture contained in Article II of the First Supplemental Indenture of Trust dated September 1, 1999, by and between the Authority and the Trustee, which provisions are incorporated in the Master Indenture and made a part thereof. For reference, the amended provisions are set forth in Exhibit B.

Section 5.2 Successors and Assigns. This Supplemental Indenture is binding upon, inures to the benefit of and is enforceable by its parties and their respective successors and assigns.

Section 5.3 Severability. If any provision of this Supplemental Indenture is held invalid by any court of competent jurisdiction, such holding will not invalidate any other provision.

Section 5.4 Governing Law. This Supplemental Indenture will be governed by and construed under the applicable laws of the Commonwealth.

Section 5.5 Counterparts. This Supplemental Indenture may be executed in several counterparts, each of which will be an original, and the counterparts will together constitute one and the same instrument.



Section 5.6 Parties Interested. Nothing in this Supplemental Indenture expressed or implied is intended or will be construed to confer upon any Person, other than the Authority, the Trustee, and the Owners of any Series 2021 Note, any right, remedy or claim under or by reason of this Supplemental Indenture, this Supplemental Indenture being intended for the sole and exclusive benefit of the Authority, the Trustee, and the Owners of any Series 2021 Note.

Section 5.7 Patriot Act Requirements of Trustee. To help the government fight the funding of terrorism and money laundering activities, federal law requires all financial institutions to obtain, verify, and record information that identifies each person who opens an account. Accordingly, the Trustee will require documentation from each non-individual person such as a business entity, a charity, a trust, or other legal entity, verifying its formation and existence as a legal entity. The Trustee may also seek financial statements, licenses, identification, and authorization documents from individuals claiming authority to represent the entity, or other relevant documentation.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be executed on their behalf by their duly authorized officers or representatives.

[SEAL]

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Name: Karen L. Pallansch  
Title: Chief Executive Officer

**U.S. BANK NATIONAL ASSOCIATION,  
as Trustee**

By: \_\_\_\_\_  
Name: W. F. Michie, III  
Title: Assistant Vice President and Relationship  
Manager

IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be executed on their behalf by their duly authorized officers or representatives.

[SEAL]

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Name: Karen L. Pallansch  
Title: Chief Executive Officer

**U.S. BANK NATIONAL ASSOCIATION,  
as Trustee**


By: \_\_\_\_\_  
Name: W. F. Michie, III  
Title: Assistant Vice President and Relationship  
Manager



The undersigned as the Owner of the Series 2020 Note hereby consents to the amendment and restatement of the Original Supplemental Indenture by this Amended and Restated Second Supplemental Indenture.

**BANK OF AMERICA, N.A.**

By:

  
R. Brooks Scurry III  
Senior Vice President

**EXHIBIT A-1**

**FORM OF SERIES 2021A NOTE**

(See Attached)

**COMMONWEALTH OF VIRGINIA**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY  
SEWER SYSTEM SUBORDINATE REVOLVING CREDIT NOTE  
SERIES 2021A (TAX-EXEMPT)**

**MATURITY DATE**

**JUNE 30, 2022**

**DATED DATE**

**JUNE 29, 2021**

**REGISTERED OWNER: BANK OF AMERICA, N.A.**

**PRINCIPAL AMOUNT: THIRTY MILLION DOLLARS (\$30,000,000)**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXANDRIA RENEW ENTERPRISES**, a public body politic and corporate of the Commonwealth of Virginia (the “Authority”), for value received, promises to pay, solely from the revenues and other property pledged to the payment of this Note, to the registered owner of this Note or legal representative at its office at 214 N. Tryon Street, 17<sup>th</sup> Floor, Charlotte, North Carolina, 28255, or at such other place as the noteholder may from time to time designate in writing, the principal sum of THIRTY MILLION AND NO/100 DOLLARS (\$30,000,000.00), or such lesser amount as may have been advanced hereunder and remain unpaid on the Maturity Date listed above, and to pay interest on the outstanding principal balance of this Note as it exists from time to time from the date the first advance is made hereunder as provided herein. The aggregate principal amount outstanding at any one time under this Note and the Series 2020B Note is Thirty Million Dollars (\$30,000,000) as provided in the Indenture and the Credit Agreement (each as defined below).

This Note is the “Series A Note” described in, and evidences a borrowing under, and is subject to the terms and conditions of, a certain Credit Agreement dated as of February 25, 2020, as amended by the Amendment to Credit Agreement dated as of April 3, 2020 (the “Original Credit Agreement”), by and between the Authority and Bank of America, N.A. (together with its successors and assigns, the “Lender”), as amended by a certain Second Amendment to Credit Agreement dated as of June 29, 2021 (the “Amendment,” and together with the Original Credit Agreement, and as the same may be altered, amended, modified, or supplemented, from time to time, the “Credit Agreement”). Capitalized terms used and not otherwise defined herein have the meanings assigned to them in the Credit Agreement.

This Note is issued in replacement for the Authority’s \$30,000,000 Amended and Restated Sewer System Subordinate Revolving Credit Note, Series 2020, dated April 3, 2020 (the “Original Note”), which was issued pursuant to the Original Credit Agreement. As such, this Note secures the obligations of the Authority under the Credit Agreement with respect to the Series A Advances.

The outstanding principal balance of this Note as it exists from time to time will bear interest at the rate and as computed as provided in the Credit Agreement. The interest rate shall be adjusted as provided in the Credit Agreement. Notwithstanding the foregoing, upon the occurrence and during the continuance of an Event of Default, at the discretion of the Lender



(except as provided in Section 2.02.3(a)(ii) of the Credit Agreement), the outstanding principal balance of this Note will bear interest (computed on the basis described above) at the fluctuating per annum rate of interest equal to the Default Rate, with such Default Rate to be effective on the first date as of which the applicable Event of Default occurs notwithstanding the fact that such Event of Default may not be reported or otherwise discovered until a subsequent date. Interest accruing at the Default Rate shall be payable on demand.

Accrued interest on the outstanding principal balance of this Note as it exists from time to time will be due and payable on the first Business Day of each month, commencing on July 1, 2021, on any date on which this Note is prepaid or redeemed and on the Maturity Date. On the Maturity Date, the entire outstanding principal balance of this Note, together with all unpaid accrued interest hereon and all other amounts then owing hereunder, will be immediately due and payable in full. This Note is subject to mandatory redemption in full on any Termination Date occurring before the Maturity Date, as provided in Section 2.02.1 of the Credit Agreement.

The Authority acknowledges and agrees that the Lender may endorse on this Note (or on any schedule attached hereto) or otherwise make in the Lender's records an appropriate notation of the date and amount of each advance made hereunder and the date and amount of any payments or prepayments hereof. Such endorsements or other notations shall, in the absence of manifest error, be conclusive as to the outstanding principal balance of this Note; provided, however, that the Lender's error in making or failure to make an endorsement or notation shall not limit or otherwise affect the obligations of the Authority under the Credit Agreement or under this Note.

The Authority shall have the right and shall be required to prepay this Note upon the terms and subject to the conditions contained in the Credit Agreement. Nothing contained herein shall obligate the Lender to make any advance to the Authority hereunder, except as provided in the Credit Agreement.

The Events of Default hereunder are the same as those described in the Credit Agreement, which are incorporated herein by this reference. In the event of the occurrence of any or all of such Events of Default, the Lender's obligation to make further advances hereunder will or may automatically and immediately terminate and the entire unpaid principal balance of this Note together with all accrued interest will become or may be declared immediately due and payable in the manner and with the effect as provided in the Credit Agreement.

The principal of and premium, if any, on this Note is payable as provided in the Credit Agreement, the Amended and Restated Second Supplemental Indenture of Trust dated as of June 29, 2021 (as altered, amended, modified, or supplemented, from time to time, the "Second Supplement"), and the Third Supplemental Indenture of Trust dated as of February 1, 2021 (the "Third Supplement"), between the Authority and the Trustee. Interest on this Note will be computed as provided in the Credit Agreement.

Principal of and premium, if any, and interest on this Note are payable in lawful money of the United States of America. In case the date of maturity of the principal of this Note or the date fixed for the payment of interest on this Note is not a Business Day (as defined in the Indenture), then payment of the principal and premium, if any, and interest need not be made on such date, but may be made on the next succeeding date which is a Business Day, and if made on such next

succeeding Business Day no additional interest will accrue for the period after such date of maturity.

This Note and the issue of which it is a part and the premium, if any, and interest on this Note are limited obligations of the Authority and payable solely from the revenues and other property pledged and assigned to the Trustee under the terms of the Indenture to secure payment of this Note. **THE SERIES 2020 NOTES, THE PREMIUM, IF ANY, AND THE INTEREST ON THEM WILL NOT BE DEEMED TO CONSTITUTE A PLEDGE OF THE FAITH AND CREDIT OF THE COMMONWEALTH OF VIRGINIA (THE “COMMONWEALTH”) OR ANY OF ITS POLITICAL SUBDIVISIONS, INCLUDING THE AUTHORITY AND THE CITY OF ALEXANDRIA, VIRGINIA (THE “CITY OF ALEXANDRIA”). NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE COMMONWEALTH OR ANY COUNTY, CITY, TOWN OR OTHER SUBDIVISION OF THE COMMONWEALTH, INCLUDING THE AUTHORITY AND THE CITY OF ALEXANDRIA, IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF OR PREMIUM, IF ANY, OR INTEREST ON THE SERIES 2020 NOTES. THE ISSUANCE OF THE SERIES 2020 NOTES DOES NOT DIRECTLY, INDIRECTLY OR CONTINGENTLY OBLIGATE THE COMMONWEALTH OR ANY COUNTY, CITY, TOWN OR OTHER SUBDIVISION OF THE COMMONWEALTH, INCLUDING THE CITY OF ALEXANDRIA, TO LEVY ANY TAXES OR TO MAKE ANY APPROPRIATION FOR THE PAYMENT OF THE SERIES 2020 NOTES. THE AUTHORITY HAS NO TAXING POWER.**

The Series 2020 Note are issued under a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the “Master Indenture”), between the Authority and the Trustee and as further supplemented by a Second Supplement and a Third Supplement. The Master Indenture as supplemented by the Second Supplement and the Third Supplement is referred to as the “Indenture.” Reference is made to the Indenture for a description of the revenues and property pledged and assigned and the provisions, among other things, with respect to the nature and extent of the security for the Series 2020 Notes, the rights and obligations of the Authority and the Trustee, the terms on which the Series 2020 Notes are issued, the rights of the registered owners of the Series 2020 Notes and the provisions for defeasance of such rights. This Note is issued as Subordinate Debt under the Indenture. Accordingly, this Note is secured by a pledge of Net Revenues that is subordinate to the pledge of Net Revenues that secures the Authority’s previously issued and Outstanding Bonds (as defined in the Indenture) (the “Outstanding Parity Bonds”). The Authority may issue Bonds and Parity Indebtedness (as defined in the Indenture) ranking equally and ratably with the Series 2020 Notes or the Outstanding Parity Bonds for all or certain purposes on the terms provided in the Indenture.

This Note is authorized and issued by the Authority, pursuant to (i) the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2 of the Code of Virginia of 1950, as amended, (ii) resolutions adopted by the Board of Directors of the Authority on February 18, 2020 and May 18, 2021, and (iii) the Indenture, for the purpose of providing funds to be used, along with other available moneys, if any, (i) to finance capital projects that are described in the Authority’s 10-year Capital Improvements Program (“CIP”) or are similar to projects described in the CIP and are subsequently approved by the Authority’s governing board, and (ii) to pay costs of issuance with respect to this Note and any Advances.

The registered owner of this Note has no right to enforce the provisions of the Indenture or to take any action with respect to any Event of Default under the Indenture, or to institute, appear in or defend any suit or other proceeding with respect to the Indenture, except as provided in the Indenture. Upon the occurrence of certain events or upon certain conditions, in the manner and with the effect set forth in the Indenture, the principal of all of the Bonds issued under the Indenture and then Outstanding, together with any accrued interest on them, may become or may be declared due and payable before their stated maturities. Modifications or alterations in the Indenture, or any supplements to it, may be made to the extent and under the circumstances provided by the Indenture. Under the Indenture, the Owners of Subordinate Debt have limited rights upon an Event of Default, including, without limitation, limitations on the ability to accelerate the debt that they hold.

The transfer of this Note is subject to the restrictions and limitations set forth in the Second Supplement and the Credit Agreement. Upon the registration of any transfer, the Authority will execute and the Trustee will authenticate and deliver in exchange for this Note a new Series 2020A Note, registered in the name of the transferee, of like date and tenor and of authorized denominations for the aggregate principal amount which the registered owner is entitled to receive. Before due registration of any transfer of this Note, the Trustee will treat the registered owner shown on the registration books maintained by the Trustee as the person exclusively entitled to the payment of principal of and premium, if any, and interest on this Note and the exercise of all other rights and powers of the owner.

All acts and conditions required to happen, exist or be performed precedent to and in connection with the issuance of this Note have happened, exist and have been performed.

This Note will not become obligatory for any purpose or be entitled to any security or benefit under the Indenture or be valid until the Trustee has executed the Certificate of Authentication appearing on this Note.

This Note shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

This Note constitutes for all purposes an amendment and restatement of the Original Note. The Original Note, as amended and restated hereby, continues in full force and effect as so amended and restated by this Note. Nothing contained in this Note shall constitute or be construed as a novation of any of the Authority's obligations under this Note.

[Signature Page Follows]



**IN WITNESS WHEREOF**, City of Alexandria, Virginia, Sanitation Authority, d/b/a Alexandria Renew Enterprises has caused this Note to be executed by the original signature of its Chair, an original of its seal to be imprinted on this Note and attested by the original signature of its Secretary-Treasurer.

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Chair

(SEAL)

Attest:

By: \_\_\_\_\_  
Secretary-Treasurer

\* \* \* \* \*

**CERTIFICATE OF AUTHENTICATION**

This Note is the Note described in the within-mentioned Indenture.

AUTHENTICATION DATE: \_\_\_\_\_, 2021

**U.S. BANK NATIONAL ASSOCIATION**, as  
Trustee and Paying Agent

By: \_\_\_\_\_  
Authorized Signature

## ASSIGNMENT

FOR VALUE RECEIVED, the undersigned sells, assigns and transfers unto

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(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

PLEASE INSERT SOCIAL SECURITY OR OTHER  
IDENTIFYING NUMBER OF ASSIGNEE: \_\_\_\_\_

this Series 2020A Note and does irrevocably constitute and appoint

\_\_\_\_\_, attorney, to transfer this  
Series 2020A Note on the books kept for registration of this Series 2020A Note, with full power  
of substitution in the premises.

Dated: \_\_\_\_\_

Signature Guaranteed:

\_\_\_\_\_  
(NOTE: Signature(s) must be guaranteed by an  
Eligible Guarantor Institution such as a  
Commercial Bank, Trust Company, Securities  
Broker/Dealer, Credit Union or Savings  
Association who is a member of a medallion  
program approved by The Securities Transfer  
Association, Inc.)

\_\_\_\_\_  
(NOTE: The signature above must  
correspond with the name of the  
Registered Owner as it appears on the  
books kept for registration of this  
Series 2020A Note in every particular,  
without alteration or change.)



**EXHIBIT A-2**

**FORM OF SERIES 2021B NOTE**

(See Attached)

**COMMONWEALTH OF VIRGINIA**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY  
SEWER SYSTEM SUBORDINATE REVOLVING CREDIT NOTE  
SERIES 2021B (TAXABLE)**

**MATURITY DATE**

**JUNE 30, 2022**

**DATED DATE**

**JUNE 29, 2021**

**REGISTERED OWNER: BANK OF AMERICA, N.A.**

**PRINCIPAL AMOUNT: THIRTY MILLION DOLLARS (\$30,000,000)**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXANDRIA RENEW ENTERPRISES**, a public body politic and corporate of the Commonwealth of Virginia (the “Authority”), for value received, promises to pay, solely from the revenues and other property pledged to the payment of this Note, to the registered owner of this Note or legal representative at its office at 214 N. Tryon Street, 17<sup>th</sup> Floor, Charlotte, North Carolina, 28255, or at such other place as the noteholder may from time to time designate in writing, the principal sum of THIRTY MILLION AND NO/100 DOLLARS (\$30,000,000.00), or such lesser amount as may have been advanced hereunder and remain unpaid on the Maturity Date listed above, and to pay interest on the outstanding principal balance of this Note as it exists from time to time from the date the first advance is made hereunder as provided herein. The aggregate principal amount outstanding at any one time under this Note and the Series 2020A Note is Thirty Million Dollars (\$30,000,000) as provided in the Indenture and the Credit Agreement (each as defined below).

This Note is the “Series B Note” described in, and evidences a borrowing under, and is subject to the terms and conditions of, a certain Credit Agreement dated as of February 25, 2020, as amended by the Amendment to Credit Agreement dated as of April 3, 2020 (the “Original Credit Agreement”), by and between the Authority and Bank of America, N.A. (together with its successors and assigns, the “Lender”), as amended by a certain Second Amendment to Credit Agreement dated as of June 29, 2021 (the “Amendment,” and together with the Original Credit Agreement, and as the same may be altered, amended, modified, or supplemented, from time to time, the “Credit Agreement”). Capitalized terms used and not otherwise defined herein have the meanings assigned to them in the Credit Agreement.

As such, this Note secures the obligations of the Authority under the Credit Agreement with respect to the Series B Advances.

The outstanding principal balance of this Note as it exists from time to time will bear interest at the rate and as computed as provided in the Credit Agreement. The interest rate shall be adjusted as provided in the Credit Agreement. Notwithstanding the foregoing, upon the occurrence and during the continuance of an Event of Default, at the discretion of the Lender (except as provided in Section 2.02.3(a)(ii) of the Credit Agreement), the outstanding principal balance of this Note will bear interest (computed on the basis described above) at the fluctuating

per annum rate of interest equal to the Default Rate, with such Default Rate to be effective on the first date as of which the applicable Event of Default occurs notwithstanding the fact that such Event of Default may not be reported or otherwise discovered until a subsequent date. Interest accruing at the Default Rate shall be payable on demand.

Accrued interest on the outstanding principal balance of this Note as it exists from time to time will be due and payable on the first Business Day of each month, commencing on July 1, 2021, on any date on which this Note is prepaid or redeemed and on the Maturity Date. On the Maturity Date, the entire outstanding principal balance of this Note, together with all unpaid accrued interest hereon and all other amounts then owing hereunder, will be immediately due and payable in full. This Note is subject to mandatory redemption in full on any Termination Date occurring before the Maturity Date, as provided in Section 2.02.1 of the Credit Agreement.

The Authority acknowledges and agrees that the Lender may endorse on this Note (or on any schedule attached hereto) or otherwise make in the Lender's records an appropriate notation of the date and amount of each advance made hereunder and the date and amount of any payments or prepayments hereof. Such endorsements or other notations shall, in the absence of manifest error, be conclusive as to the outstanding principal balance of this Note; provided, however, that the Lender's error in making or failure to make an endorsement or notation shall not limit or otherwise affect the obligations of the Authority under the Credit Agreement or under this Note.

The Authority shall have the right and shall be required to prepay this Note upon the terms and subject to the conditions contained in the Credit Agreement. Nothing contained herein shall obligate the Lender to make any advance to the Authority hereunder, except as provided in the Credit Agreement.

The Events of Default hereunder are the same as those described in the Credit Agreement, which are incorporated herein by this reference. In the event of the occurrence of any or all of such Events of Default, the Lender's obligation to make further advances hereunder will or may automatically and immediately terminate and the entire unpaid principal balance of this Note together with all accrued interest will become or may be declared immediately due and payable in the manner and with the effect as provided in the Credit Agreement.

The principal of and premium, if any, on this Note is payable as provided in the Credit Agreement, the Amended and Restated Second Supplemental Indenture of Trust dated as of June 29, 2021 (as altered, amended, modified, or supplemented, from time to time, the "Second Supplement"), and the Third Supplemental Indenture of Trust dated as of February 1, 2021 (the "Third Supplement"), between the Authority and the Trustee. Interest on this Note will be computed as provided in the Credit Agreement.

Principal of and premium, if any, and interest on this Note are payable in lawful money of the United States of America. In case the date of maturity of the principal of this Note or the date fixed for the payment of interest on this Note is not a Business Day (as defined in the Indenture), then payment of the principal and premium, if any, and interest need not be made on such date, but may be made on the next succeeding date which is a Business Day, and if made on such next succeeding Business Day no additional interest will accrue for the period after such date of maturity.



This Note and the issue of which it is a part and the premium, if any, and interest on this Note are limited obligations of the Authority and payable solely from the revenues and other property pledged and assigned to the Trustee under the terms of the Indenture to secure payment of this Note. **THE SERIES 2020 NOTES, THE PREMIUM, IF ANY, AND THE INTEREST ON THEM WILL NOT BE DEEMED TO CONSTITUTE A PLEDGE OF THE FAITH AND CREDIT OF THE COMMONWEALTH OF VIRGINIA (THE “COMMONWEALTH”) OR ANY OF ITS POLITICAL SUBDIVISIONS, INCLUDING THE AUTHORITY AND THE CITY OF ALEXANDRIA, VIRGINIA (THE “CITY OF ALEXANDRIA”). NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE COMMONWEALTH OR ANY COUNTY, CITY, TOWN OR OTHER SUBDIVISION OF THE COMMONWEALTH, INCLUDING THE AUTHORITY AND THE CITY OF ALEXANDRIA, IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF OR PREMIUM, IF ANY, OR INTEREST ON THE SERIES 2020 NOTES. THE ISSUANCE OF THE SERIES 2020 NOTES DOES NOT DIRECTLY, INDIRECTLY OR CONTINGENTLY OBLIGATE THE COMMONWEALTH OR ANY COUNTY, CITY, TOWN OR OTHER SUBDIVISION OF THE COMMONWEALTH, INCLUDING THE CITY OF ALEXANDRIA, TO LEVY ANY TAXES OR TO MAKE ANY APPROPRIATION FOR THE PAYMENT OF THE SERIES 2020 NOTES. THE AUTHORITY HAS NO TAXING POWER.**

The Series 2020 Note are issued under a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the “Master Indenture”), between the Authority and the Trustee and as further supplemented by a Second Supplement and a Third Supplement. The Master Indenture as supplemented by the Second Supplement and the Third Supplement is referred to as the “Indenture.” Reference is made to the Indenture for a description of the revenues and property pledged and assigned and the provisions, among other things, with respect to the nature and extent of the security for the Series 2020 Notes, the rights and obligations of the Authority and the Trustee, the terms on which the Series 2020 Notes are issued, the rights of the registered owners of the Series 2020 Notes and the provisions for defeasance of such rights. This Note is issued as Subordinate Debt under the Indenture. Accordingly, this Note is secured by a pledge of Net Revenues that is subordinate to the pledge of Net Revenues that secures the Authority’s previously issued and Outstanding Bonds (as defined in the Indenture) (the “Outstanding Parity Bonds”). The Authority may issue Bonds and Parity Indebtedness (as defined in the Indenture) ranking equally and ratably with the Series 2020 Notes or the Outstanding Parity Bonds for all or certain purposes on the terms provided in the Indenture.

This Note is authorized and issued by the Authority, pursuant to (i) the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2 of the Code of Virginia of 1950, as amended, (ii) resolutions adopted by the Board of Directors of the Authority on February 18, 2020 and May 18, 2021, and (iii) the Indenture, for the purpose of providing funds to be used, along with other available moneys, if any, (i) to finance capital projects that are described in the Authority’s 10-year Capital Improvements Program (“CIP”) or are similar to projects described in the CIP and are subsequently approved by the Authority’s governing board, and (ii) to pay costs of issuance with respect to this Note and any Advances.

The registered owner of this Note has no right to enforce the provisions of the Indenture or to take any action with respect to any Event of Default under the Indenture, or to institute, appear

in or defend any suit or other proceeding with respect to the Indenture, except as provided in the Indenture. Upon the occurrence of certain events or upon certain conditions, in the manner and with the effect set forth in the Indenture, the principal of all of the Bonds issued under the Indenture and then Outstanding, together with any accrued interest on them, may become or may be declared due and payable before their stated maturities. Modifications or alterations in the Indenture, or any supplements to it, may be made to the extent and under the circumstances provided by the Indenture. Under the Indenture, the Owners of Subordinate Debt have limited rights upon an Event of Default, including, without limitation, limitations on the ability to accelerate the debt that they hold.

The transfer of this Note is subject to the restrictions and limitations set forth in the Second Supplement and the Credit Agreement. Upon the registration of any transfer, the Authority will execute and the Trustee will authenticate and deliver in exchange for this Note a new Series 2020B Note, registered in the name of the transferee, of like date and tenor and of authorized denominations for the aggregate principal amount which the registered owner is entitled to receive. Before due registration of any transfer of this Note, the Trustee will treat the registered owner shown on the registration books maintained by the Trustee as the person exclusively entitled to the payment of principal of and premium, if any, and interest on this Note and the exercise of all other rights and powers of the owner.

All acts and conditions required to happen, exist or be performed precedent to and in connection with the issuance of this Note have happened, exist and have been performed.

This Note will not become obligatory for any purpose or be entitled to any security or benefit under the Indenture or be valid until the Trustee has executed the Certificate of Authentication appearing on this Note.

This Note shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

This Note constitutes for all purposes an amendment and restatement of the Original Note. The Original Note, as amended and restated hereby, continues in full force and effect as so amended and restated by this Note. Nothing contained in this Note shall constitute or be construed as a novation of any of the Authority's obligations under this Note.

[Signature Page Follows]

**IN WITNESS WHEREOF**, City of Alexandria, Virginia, Sanitation Authority, d/b/a Alexandria Renew Enterprises has caused this Note to be executed by the original signature of its Chair, an original of its seal to be imprinted on this Note and attested by the original signature of its Secretary-Treasurer.

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Chair

(SEAL)

Attest:

By: \_\_\_\_\_  
Secretary-Treasurer



\* \* \* \* \*

**CERTIFICATE OF AUTHENTICATION**

This Note is the Note described in the within-mentioned Indenture.

AUTHENTICATION DATE: \_\_\_\_\_, 2021

**U.S. BANK NATIONAL ASSOCIATION**, as  
Trustee and Paying Agent

By: \_\_\_\_\_  
Authorized Signature

## ASSIGNMENT

FOR VALUE RECEIVED, the undersigned sells, assigns and transfers unto

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(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

PLEASE INSERT SOCIAL SECURITY OR OTHER  
IDENTIFYING NUMBER OF ASSIGNEE: \_\_\_\_\_

this Series 2020B Note and does irrevocably constitute and appoint

\_\_\_\_\_, attorney, to transfer this  
Series 2020B Note on the books kept for registration of this Series 2020B Note, with full power  
of substitution in the premises.

Dated: \_\_\_\_\_

Signature Guaranteed:

\_\_\_\_\_  
(NOTE: Signature(s) must be guaranteed by an  
Eligible Guarantor Institution such as a  
Commercial Bank, Trust Company, Securities  
Broker/Dealer, Credit Union or Savings  
Association who is a member of a medallion  
program approved by The Securities Transfer  
Association, Inc.)

\_\_\_\_\_  
(NOTE: The signature above must  
correspond with the name of the  
Registered Owner as it appears on the  
books kept for registration of this  
Series 2020B Note in every particular,  
without alteration or change.)

## EXHIBIT B

### PRIOR AMENDMENTS TO MASTER INDENTURE

Section 1.1 of the Master Indenture of Trust (the "Master Indenture") dated as of March 15, 1999, between City of Alexandria, Virginia, Sanitation Authority, d/b/a Alexandria Renew Enterprises (the "Authority") and U.S. Bank National Association, as successor trustee (the "Trustee") has been amended by Article II of the First Supplemental Indenture of Trust (the "First Supplemental Indenture") dated as of September 1, 1999, as follows:

Section 1.1 of the Master Indenture has been amended to delete the definition of "Net Proceeds" and substitute the following therefor:

*"Net Proceeds" means the proceeds from any property or casualty insurance recovery, or any other amounts recovered by or awarded to the Authority as a result of or in connection with the condemnation of or loss of title to all or any part of the System, remaining after payment of attorneys' fees, fees and expenses of the Authority and the Trustee and all other expenses incurred in collection of the gross proceeds.*

Section 3.2 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

**Section 3.2. Indenture Constitutes Contract.** *In consideration of the purchase and acceptance of Bonds or Parity Indebtedness by their Owners, the provisions of this Master Indenture and Supplemental Indentures shall be a part of the contract of the Authority with the Owners and shall constitute a contract among the Authority, the Trustee and the Owners, from time to time, of Bonds or Parity Indebtedness.*

Section 3.5 of the Master Indenture has been amended by adding the phrase "or any Assistant Secretary or Assistant Secretary-Treasurer" at the end of such sentence.

Section 14.1 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

**Section 14.1. Discharge of Indenture.** *If (i) all Bonds and Parity Indebtedness secured by this Master Indenture have become due and payable or irrevocable instructions to redeem the Bonds or Parity Indebtedness or to pay them at maturity have been given by the Authority to the Trustee; and (ii) the Trustee holds cash or noncallable Defeasance Obligations the principal of and interest on which at maturity will be sufficient (A) if Bonds and Parity Indebtedness have been called for redemption, or irrevocable instructions to call Bonds and Parity Indebtedness have been given*



*to the Trustee, to redeem in accordance with the relevant Sections of this Master Indenture and the applicable Supplemental Indenture all such Bonds and Parity Indebtedness on the date set for such redemption, (B) to pay at maturity all Outstanding Bonds and Parity Indebtedness not called for redemption, (C) to pay interest accruing on all Bonds and Parity Indebtedness until their redemption or payment at maturity, and (D) to pay the Trustee its reasonable fees and expenses, including the costs and expenses of cancelling and discharging this Master Indenture, then the Trustee shall cancel and discharge the lien of this Master Indenture and execute and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority any property subject to this Master Indenture which may then be in its possession, except funds or securities in which such funds are invested which are held by the Trustee for the payment of the principal of and premium, if any, and interest on the Bonds and Parity Indebtedness.*

*In the event that all of the Bonds and Parity Indebtedness secured by this Master Indenture are paid or deemed paid in accordance with the terms of this Master Indenture, then the right and interest of the Trustee in and to the trust estate created by this Master Indenture and all covenants, agreements and other obligations of the Authority to the Owners shall cease and be discharged and satisfied. If any Bonds and Parity Indebtedness are paid or deemed paid in accordance with the terms of this Master Indenture, then such Bonds and Parity Indebtedness shall cease to be entitled to any lien, benefit or security under this Master Indenture (other than the right to receive payment and certain rights regarding registration and transfer) and all covenants, agreements and other obligations of the Authority to the Owners of such Bonds and Parity Indebtedness shall cease and be discharged and satisfied.*

Section 14.2 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

**Section 14.2. Bonds and Parity Indebtedness Deemed to be Paid.** *Bonds and Parity Indebtedness shall be deemed paid and no longer Outstanding for the purposes of this Master Indenture when there has been deposited with the Trustee cash or noncallable Defeasance Obligations the principal of and interest on which will be sufficient to pay or redeem such Bonds and Parity Indebtedness and to pay interest accruing on such Bonds and Parity Indebtedness to their payment or redemption date (whether on or before their maturity or redemption date); provided, however, that if such'*

*Bonds and Parity Indebtedness are to be redeemed before their maturity, notice of the redemption must have been duly given or irrevocable instructions to redeem such Bonds and Parity Indebtedness must have been given by the Authority to the Trustee.*

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**SECOND AMENDED AND RESTATED SECOND SUPPLEMENTAL INDENTURE OF  
TRUST**

**BETWEEN**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

**AND**

**U.S. BANK TRUST COMPANY, NATIONAL ASSOCIATION  
(as Successor to U.S. Bank National Association)  
AS TRUSTEE**

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**\$60,000,000  
CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY  
SEWER SYSTEM SUBORDINATE REVOLVING CREDIT NOTES**

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**Dated as of June 1, 2023**

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Exhibit A-1	Form of Series 2021A Note
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## **SECOND AMENDED AND RESTATED SECOND SUPPLEMENTAL INDENTURE OF TRUST**

This **SECOND AMENDED AND RESTATED SECOND SUPPLEMENTAL INDENTURE OF TRUST** (as more particularly defined below, this "Supplemental Indenture") is dated as of June 1, 2023, and is between the **CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXANDRIA RENEW ENTERPRISES**, a public body politic and corporate of the Commonwealth of Virginia (the "Authority"), AND **U.S. BANK TRUST COMPANY, NATIONAL ASSOCIATION**, as successor to U.S. Bank National Association, a national banking association, as successor trustee (as more particularly defined in the below-defined Master Indenture, the "Trustee").

A. The Authority has executed and delivered to the Trustee a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"), as a trust agreement to secure and to provide procedures for and limitations on the issuance of revenue bonds (as more specifically defined in the Master Indenture, "Bonds") and other obligations of the Authority to pay the Cost of any Project comprising a portion of the Authority's System and to refund any Bonds and other obligations previously issued by the Authority.

B. The Authority issued a revolving credit note (as amended, the "Series 2020 Note") under the Master Indenture in an original aggregate principal amount of \$30,000,000, the proceeds of which the Authority used to finance and refinance, on an interim basis the Cost of Projects of the Authority and pay the costs of issuing the Series 2020 Note.

C. The Authority secured the Series 2020 Note on a subordinate basis to the lien of the Master Indenture that secures Bonds and other Parity Indebtedness (as defined in the Master Indenture). Accordingly, the Series 2020 Note was Subordinate Debt (as defined in the Master Indenture).

D. The Authority entered into a Second Supplemental Indenture of Trust dated as of February 1, 2020 (the "2020 Supplemental Indenture"), with the Trustee to set forth the terms and provisions of the Series 2020 Note.

E. In June 2021, the Owner of the Series 2020 Note and the Authority have agreed that the Series 2020 Note would be replaced by two notes: (1) a Sewer System Subordinate Revolving Credit Note, Series 2021A (Tax-Exempt) and (2) a Sewer System Subordinate Revolving Credit Note, Series 2021B (Taxable) (collectively, the "Series 2021 Notes").

F. In connection with the issuance of the Series 2021 Notes to replace the Series 2020 Note, the Owner of the Series 2020 Note and the Authority entered into an Amended and Restated Second Supplemental Indenture of Trust dated as of June 1, 2021 (the "2021 Supplemental Indenture") to amend and restate the 2020 Supplemental Indenture in its entirety.

G. On June 29, 2022, the Authority and the Owner of the Series 2021 Notes agreed to amend and restate the Series 2021 Notes in their entirety (the "Second Amended and Restated Series 2021 Notes").

G. The Owner of the Series 2021 Notes and the Authority have agreed to increase the principal amount of the Series 2021 Notes to an aggregate amount not to exceed \$60,000,000, and in connection with that increase they have agreed to amend and restate the Amended and Restated Series 2021 Notes (the "Second Amended and Restated Series 2021 Notes") and the 2021 Supplemental Indenture in their entirety.

G. All things necessary to make the Second Amended and Restated Series 2021 Notes valid and binding limited obligations of the Authority, when authenticated by the Trustee and issued as provided in this Supplemental Indenture, and to constitute this Supplemental Indenture a valid and binding agreements securing the payment of the principal of and premium, if any, and interest on the Second Amended and Restated Series 2021 Notes have been done and performed. The execution and delivery of this Supplemental Indenture and the execution and issuance of the Second Amended and Restated Series 2021 Notes have in all respects been duly authorized.

NOW THEREFORE, the parties amend and restate the 2021 Supplemental Indenture to read as follows:

## ARTICLE I

### SUPPLEMENTAL INDENTURE

Section 1.1 Supplemental Indenture. This Supplemental Indenture is authorized and executed by the Authority and delivered to the Trustee pursuant to and in accordance with Article V of the Master Indenture. All terms, covenants, conditions and agreements of the Master Indenture apply with full force and effect to the Second Amended and Restated Series 2021 Notes, except as otherwise provided in this Supplemental Indenture.

Section 1.2 Definitions. All capitalized words and terms used in this Supplemental Indenture have the meanings set forth in Article I of the Master Indenture. In addition, the following words and terms have the following meanings in this Supplemental Indenture unless the context clearly requires otherwise:

"Business Day" means a day other than (i) a Saturday, Sunday or other day on which banking institutions in the Commonwealth of Virginia or New York, New York are authorized or required to close or (ii) a day on which the New York Stock Exchange is closed.

"Credit Agreement" means the Credit Agreement dated as of February 25, 2020, between the Authority and the Lender, as the same may be altered, amended, modified, or supplemented, from time to time.

"Indenture" means, collectively, the Master Indenture and this Supplemental Indenture.

"Lender" means Bank of America, N.A. and any party that succeeds in its interest in the Credit Agreement and is the Owner of the Second Amended and Restated Series 2021 Notes.

"Master Indenture" means the Master Indenture of Trust dated as of March 15, 1999, between the Authority and the Trustee, as previously amended and supplemented, and as the same may be altered, amended, modified, or supplemented, from time to time.

"Owner" for purposes of this Supplemental Indenture means the Lender or any other subsequent registered owner of any Second Amended and Restated Series 2021 Note.

"Second Amended and Restated Series 2021 Notes" means the Series 2021A Note and the Series 2021B Note.

"Series 2021A Note" means the Authority's Second Amended and Restated Sewer System Subordinate Revolving Credit Note, Series 2021A (Tax-Exempt), issued pursuant to this Supplemental Indenture, as the same may be altered, amended, modified, or supplemented from time to time.

"Series 2021B Note" means the Authority's Second Amended and Restated Sewer System Subordinate Revolving Credit Note, Series 2021B (Taxable), issued pursuant to this Supplemental Indenture, as the same may be altered, amended, modified, or supplemented from time to time.

"Supplemental Indenture" means this Second Amended and Restated Second Supplemental Indenture of Trust dated as of June 1, 2023, between the Authority and the Trustee, as the same may be altered, amended, modified, or supplemented from time to time.

Section 1.3 Representations of Authority. The Authority represents that (i) it is duly authorized under the Constitution and laws of the Commonwealth, including particularly and without limitation the Act, to issue the Second Amended and Restated Series 2021 Notes, to execute this Supplemental Indenture, and to pledge the Net Revenues and funds in the manner and to the extent set forth in the Master Indenture and the Supplemental Indenture, (ii) all action on its part necessary for the execution and delivery of this Supplemental Indenture has been taken, and (iii) the Second Amended and Restated Series 2021 Notes in the hands of the Owner are and will be valid and enforceable limited obligations of the Authority.

## ARTICLE II

### AUTHORIZATION AND DETAILS OF SECOND AMENDED AND RESTATED SERIES 2021 NOTES

Section 2.1 Authorization of the Second Amended and Restated Series 2021 Notes. There is authorized to be issued under the Master Indenture Subordinate Debt of the Authority in the aggregate principal amount of \$60,000,000.

Section 2.2 Details of the Second Amended and Restated Series 2021 Notes. The Second Amended and Restated Series 2021 Notes authorized in Section 2.1 are designated "City of Alexandria, Virginia, Sanitation Authority Second Amended and Restated Sewer System Subordinate Revolving Credit Note, Series 2021A (Tax-Exempt)" and "City of Alexandria, Virginia, Sanitation Authority Second Amended and Restated Sewer System Subordinate Revolving Credit Note, Series 2021B (Taxable)" and each will be issued as a single, type-written note.



Each Second Amended and Restated Series 2021 Note will (i) be dated June 23, 2023, (ii) be issued in a principal amount of \$60,000,000, (iii) bear interest as provided and at the rates set forth in the Credit Agreement, and (iv) mature, subject to prior redemption, on June 30, 2024.

In no instance shall the outstanding aggregate principal amount of the Second Amended and Restated Series 2021 Notes exceed \$60,000,000.

The principal of and premium, if any, and interest on each Second Amended and Restated Series 2021 Note is payable in lawful money of the United States of America, on a subordinate basis to the Outstanding Bonds and Parity Indebtedness previously issued by the Authority under the Master Indenture, and in all respects only from the Net Revenues and other property pledged for such purpose under the Master Indenture. The principal of and premium, if any, on each Second Amended and Restated Series 2021 Note will be payable upon presentation and surrender of the applicable Second Amended and Restated Series 2021 Note at the designated corporate trust office of the Paying Agent except that, for so long as the Lender is the sole registered Owner of each Second Amended and Restated Series 2021 Note, principal of and premium, if any, on each Second Amended and Restated Series 2021 Note will be paid directly to the Lender without presentment or surrender. Interest on each Second Amended and Restated Series 2021 Note will be paid by check or draft mailed by the Paying Agent on each interest payment date to the Owners of each Second Amended and Restated Series 2021 Note at their addresses as they appear on the registration books of the Authority maintained by the Paying Agent, except that, for so long as the Lender is the sole registered Owner of each Second Amended and Restated Series 2021 Note, interest, on each Second Amended and Restated Series 2021 Note will be paid directly to the Lender in the manner provided in the Credit Agreement. The registered owners will be determined on the 15<sup>th</sup> of the month, which next precedes each Interest Payment Date.

Interest on each Second Amended and Restated Series 2021 Note will be computed as provided in the applicable Second Amended and Restated Series 2021 Note and the Credit Agreement.

As provided in the Credit Agreement, the Authority may borrow, repay, and reborrow sums under each Second Amended and Restated Series 2021 Note.

Section 2.3 Provisions for the Issuance of Second Amended and Restated Series 2021 Notes. Each Second Amended and Restated Series 2021 Note will be issued in typewritten form and registered in the name of the Lender or its designee.

Transfer of ownership interest in each Second Amended and Restated Series 2021 Note will be made only to a qualified institutional buyer (as that term is defined in 17 CFR § 230.144A, as amended) that are also financial institutions. Before any transfer of ownership, the Owner of each Second Amended and Restated Series 2021 Note shall give the Authority written notice of such transfer.

Section 2.4 Form of the Second Amended and Restated Series 2021 Notes. Each Second Amended and Restated Series 2021 Note shall be issued substantially in the form set forth in Exhibit A-1 or Exhibit A-2 (as applicable) to this Supplemental Indenture, with appropriate variations, omissions and insertions as permitted or required by the Master Indenture and this Supplemental Indenture. There may be endorsed on each Second Amended and Restated Series 2021 Note such legend or text as may be necessary or appropriate to conform to any applicable rules and regulations of any governmental authority or any usage or requirement of law.

Section 2.5 Application of Second Amended and Restated Series 2021 Note Proceeds and Other Amounts. (a) As provided in the Credit Agreement, the Lender will advance amounts under each Second Amended and Restated Series 2021 Note to the Authority, and the Authority will apply such amounts to pay the Cost of the Project or to pay the costs of issuing the Second Amended and Restated Series 2021 Note.

(b) At the request of the Trustee, the Lender and the Authority shall provide the Trustee with the amount outstanding under each Second Amended and Restated Series 2021 Note.

### ARTICLE III

#### REDEMPTION OF THE SECOND AMENDED AND RESTATED SERIES 2021 NOTES

Section 3.1 Redemption of the Second Amended and Restated Series 2021 Notes. No Second Amended and Restated Series 2021 Note may be called for redemption except as provided in this Article.

Section 3.2 Optional Redemption. Subject to Section 2.02 of the Credit Agreement, each Second Amended and Restated Series 2021 Note is subject to redemption at the option of the Authority from any money available for such purpose on any Business Day, without penalty or premium, upon not less than five Business Days' prior notice of prepayment given to the Lender (which notice shall specify the principal amount to be prepaid and the date of the prepayment), by tender of the principal amount or amounts to be prepaid together with all accrued unpaid interest thereon to the date of prepayment.

Section 3.3 Selection for Redemption; Notices. (a) Each notice of redemption will contain, among other things, the amount of the applicable Second Amended and Restated Series 2021 Note (or portions thereof) being called for redemption, the redemption date and price and the address at which the applicable Second Amended and Restated Series 2021 Note is to be surrendered for payment of the redemption price. Such notice may state that the redemption of the applicable Second Amended and Restated Series 2021 Note to be redeemed is conditioned upon the occurrence of certain future events, including, without limitation, the deposit with the Trustee of moneys sufficient to effect the redemption on or before the date fixed therefor.

(b) Any defect in such notice or the failure to mail any such notice to the registered owner of the applicable Second Amended and Restated Series 2021 Note called for redemption will not affect the validity of the proceedings for the redemption of the applicable Second Amended and Restated Series 2021 Note. Any defect in such notice or the failure to mail any such notice will not affect the validity of the proceedings for the redemption of the applicable Second Amended and Restated Series 2021 Note.

## ARTICLE IV

### SPECIAL COVENANTS

Section 4.1 Arbitrage Covenants. (a) The Authority will not take or approve or fail to take or approve any action, investment or use of the proceeds of the Series 2021A Note which would cause the Series 2021A Note to be an "arbitrage bond" within the meaning of Section 148 of the Code and the applicable regulations thereunder (the "Arbitrage Regulations").

(b) The Trustee will be fully protected in acting on any rebate determination made by the Authority at any time or contained in any certificate of the Authority and will not be liable or responsible in any manner to any person for so acting, notwithstanding any error in any such determination. The Trustee will not be responsible or liable to the Authority or any other party for the failure of the Authority to comply with the provisions of this Section.

Section 4.2 Opinion of Bond Counsel. If the Authority provides to the Trustee an opinion of nationally-recognized bond counsel addressed to the Authority and the Trustee to the effect that any action required under this Article expressly, by incorporation or otherwise is not required or is no longer required to maintain the excludability from gross income of the interest on the Series 2021A Note under Section 103 of the Code, the Authority and the Trustee may rely conclusively on such opinion complying with the provisions of this Article.

Section 4.3 Covenants with the Lender. The following provisions shall be in effect so long as each Second Amended and Restated Series 2021 Note remains Outstanding, provided that any or all of such provisions shall be in addition to, and not in substitution of, the terms and provisions of the Master Indenture and may be waived by the Lender:

(a) Notwithstanding anything to the contrary contained in the Master Indenture or this Supplemental Indenture, including, without limitation, Section 14.1 of the Master Indenture, if the Bonds and Parity Indebtedness secured by the Master Trust Indenture are paid or deemed paid in accordance with the terms of the Master Indenture, the Master Indenture, as amended or supplemented, and the lien thereof, shall nevertheless remain unimpaired and in full force and effect for so long as each Second Amended and Restated Series 2021 Note remains unpaid or the Authority has any right to obtain any advance under the Credit Agreement, and the Owner of each Second Amended and Restated Series 2021 Note shall be entitled to the benefit of the Master Indenture, as amended and supplemented. The Trustee shall not cancel or discharge the lien of the Master Indenture, as amended or supplemented, or execute any instruments to release such lien, until the last to occur of the termination of all rights of the Authority to obtain advances under the Credit Agreement and the full and final payment of the entire outstanding principal amount of the Note and all accrued interest thereon.

(b) Any Second Amended and Restated Series 2021 Note may be declared immediately due and payable upon the occurrence of an Event of Default under the Credit Agreement if (a) payment of the Bonds and Parity Indebtedness has been accelerated in accordance with the Master Indenture, (b) payment of the Bonds and Parity Indebtedness has otherwise become fully due and payable (including by reason of maturity), or (c) if the Bonds and Parity Indebtedness have been paid or deemed paid in full.

## ARTICLE V

### MISCELLANEOUS

Section 5.1 Amendments to Master Indenture. Reference is hereby made to the amendments to the Master Indenture contained in Article II of the First Supplemental Indenture of Trust dated September 1, 1999, by and between the Authority and the Trustee, which provisions are incorporated in the Master Indenture and made a part thereof. For reference, the amended provisions are set forth in Exhibit B.

Section 5.2 Successors and Assigns. This Supplemental Indenture is binding upon, inures to the benefit of and is enforceable by its parties and their respective successors and assigns.

Section 5.3 Severability. If any provision of this Supplemental Indenture is held invalid by any court of competent jurisdiction, such holding will not invalidate any other provision.

Section 5.4 Governing Law. This Supplemental Indenture will be governed by and construed under the applicable laws of the Commonwealth.

Section 5.5 Counterparts. This Supplemental Indenture may be executed in several counterparts, each of which will be an original, and the counterparts will together constitute one and the same instrument.

Section 5.6 Parties Interested. Nothing in this Supplemental Indenture expressed or implied is intended or will be construed to confer upon any Person, other than the Authority, the Trustee, and the Owners of any Second Amended and Restated Series 2021 Note, any right, remedy or claim under or by reason of this Supplemental Indenture, this Supplemental Indenture being intended for the sole and exclusive benefit of the Authority, the Trustee, and the Owners of any Second Amended and Restated Series 2021 Note.

Section 5.7 Patriot Act Requirements of Trustee. To help the government fight the funding of terrorism and money laundering activities, federal law requires all financial institutions to obtain, verify, and record information that identifies each person who opens an account. Accordingly, the Trustee will require documentation from each non-individual person such as a business entity, a charity, a trust, or other legal entity, verifying its formation and existence as a legal entity. The Trustee may also seek financial statements, licenses, identification, and authorization documents from individuals claiming authority to represent the entity, or other relevant documentation.

[Signature Page Follows]



IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be executed on their behalf by their duly authorized officers or representatives.

[SEAL]

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Name: Justin Carl  
Title: Chief Executive Officer

**U.S. BANK TRUST COMPANY, NATIONAL  
ASSOCIATION**, as successor to U.S. Bank  
National Association, as Trustee

By: \_\_\_\_\_  
Name: W. F. Michie, III  
Title: Assistant Vice President and Relationship  
Manager

IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be executed on their behalf by their duly authorized officers or representatives.

[SEAL]

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Name: Justin Carl  
Title: Chief Executive Officer

**U.S. BANK TRUST COMPANY, NATIONAL  
ASSOCIATION**, as successor to U.S. Bank  
National Association, as Trustee

By: \_\_\_\_\_  
Name: W. F. Michie, III  
Title: Assistant Vice President and Relationship  
Manager

The undersigned as the Owner of the Series 2021 Notes hereby consents to the amendment and restatement of the 2021 Supplemental Indenture by this Second Amended and Restated Second Supplemental Indenture of Trust.

**BANK OF AMERICA, N.A.**

By: \_\_\_\_\_  
Name: R. Brooks Scurry III  
Title: Senior Vice President

**EXHIBIT A-1**

**FORM OF SERIES 2021A NOTE**

(See Attached)



**COMMONWEALTH OF VIRGINIA**  
**SECOND AMENDED AND RESTATED**  
**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY**  
**SEWER SYSTEM SUBORDINATE REVOLVING CREDIT NOTE**  
**SERIES 2021A (TAX-EXEMPT)**

**MATURITY DATE**

**JUNE 30, 2024**

**DATED DATE**

**JUNE 23, 2023**

**REGISTERED OWNER: BANK OF AMERICA, N.A.**

**PRINCIPAL AMOUNT: SIXTY MILLION DOLLARS (\$60,000,000)**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXANDRIA RENEW ENTERPRISES**, a public body politic and corporate of the Commonwealth of Virginia (the "Authority"), for value received, promises to pay, solely from the revenues and other property pledged to the payment of this Note, to the registered owner of this Note or legal representative at its office at 214 N. Tryon Street, 17<sup>th</sup> Floor, Charlotte, North Carolina, 28255, or at such other place as the noteholder may from time to time designate in writing, the principal sum of SIXTY MILLION AND NO/100 DOLLARS (\$60,000,000.00), or such lesser amount as may have been advanced hereunder and remain unpaid on the Maturity Date listed above, and to pay interest on the outstanding principal balance of this Note as it exists from time to time from the date the first advance is made hereunder as provided herein. The aggregate principal amount outstanding at any one time under this Note and the Authority's Second Amended and Restated Sewer System Subordinate Revolving Credit Note, Series 2021B (Taxable) (the "Series 2021B Note") is Sixty Million Dollars (\$60,000,000) as provided in the Indenture and the Credit Agreement (each as defined below).

This Note is the "Series A Note" described in, and evidences a borrowing under, and is subject to the terms and conditions of, a certain Credit Agreement dated as of February 25, 2020, as amended by the Amendment to Credit Agreement dated as of April 3, 2020, the Second Amendment to Credit Agreement dated as of June 29, 2021, and the Third Amendment to Credit Agreement dated as of June 29, 2022 (the "Original Credit Agreement"), by and between the Authority and Bank of America, N.A. (together with its successors and assigns, the "Lender"), as amended by a certain Fourth Amendment to Credit Agreement dated June 23, 2023 (the "Amendment," and together with the Original Credit Agreement, and as the same may be altered, amended, modified, or supplemented from time to time, the "Credit Agreement"). Capitalized terms used and not otherwise defined herein have the meanings assigned to them in the Credit Agreement.

This Note amends and restates in its entirety the Authority's \$30,000,000 Amended and Restated Sewer System Subordinate Revolving Credit Note, Series 2021A (Tax-Exempt) (the "Original Note"), which was issued under the Original Credit Agreement. As such, this Note secures the obligations of the Authority under the Credit Agreement with respect to the Series A Advances.

The outstanding principal balance of this Note as it exists from time to time will bear interest at the rate and as computed as provided in the Credit Agreement. The interest rate shall be adjusted as provided in the Credit Agreement. Notwithstanding the foregoing, upon the occurrence and during the continuance of an Event of Default, at the discretion of the Lender (except as provided in Section 2.02.3(a)(ii) of the Credit Agreement), the outstanding principal balance of this Note will bear interest (computed on the basis described above) at the fluctuating per annum rate of interest equal to the Default Rate, with such Default Rate to be effective on the first date as of which the applicable Event of Default occurs notwithstanding the fact that such Event of Default may not be reported or otherwise discovered until a subsequent date. Interest accruing at the Default Rate shall be payable on demand.

Accrued interest on the outstanding principal balance of this Note as it exists from time to time will be due and payable on the first Business Day of each month, commencing on July 1, 2023, on any date on which this Note is prepaid or redeemed and on the Maturity Date. On the Maturity Date, the entire outstanding principal balance of this Note, together with all unpaid accrued interest hereon and all other amounts then owing hereunder, will be immediately due and payable in full. This Note is subject to mandatory redemption in full on any Termination Date occurring before the Maturity Date, as provided in Section 2.02.1 of the Credit Agreement.

The Authority acknowledges and agrees that the Lender may endorse on this Note (or on any schedule attached hereto) or otherwise make in the Lender's records an appropriate notation of the date and amount of each advance made hereunder and the date and amount of any payments or prepayments hereof. Such endorsements or other notations shall, in the absence of manifest error, be conclusive as to the outstanding principal balance of this Note; provided, however, that the Lender's error in making or failure to make an endorsement or notation shall not limit or otherwise affect the obligations of the Authority under the Credit Agreement or under this Note.

The Authority shall have the right and shall be required to prepay this Note upon the terms and subject to the conditions contained in the Credit Agreement. Nothing contained herein shall obligate the Lender to make any advance to the Authority hereunder, except as provided in the Credit Agreement.

The Events of Default hereunder are the same as those described in the Credit Agreement, which are incorporated herein by this reference. In the event of the occurrence of any or all of such Events of Default, the Lender's obligation to make further advances hereunder will or may automatically and immediately terminate and the entire unpaid principal balance of this Note together with all accrued interest will become or may be declared immediately due and payable in the manner and with the effect as provided in the Credit Agreement.

The principal of and premium, if any, on this Note is payable as provided in the Credit Agreement, the Second Amended and Restated Second Supplemental Indenture of Trust dated as of June 1, 2023 (as altered, amended, modified, or supplemented, from time to time, the "Second Supplement"), and the Third Supplemental Indenture of Trust dated as of February 1, 2021 (the "Third Supplement"), between the Authority and the Trustee. Interest on this Note will be computed as provided in the Credit Agreement.

Principal of and premium, if any, and interest on this Note are payable in lawful money of the United States of America. In case the date of maturity of the principal of this Note or the date fixed for the payment of interest on this Note is not a Business Day (as defined in the Indenture), then payment of the principal and premium, if any, and interest need not be made on such date, but may be made on the next succeeding date which is a Business Day, and if made on such next succeeding Business Day no additional interest will accrue for the period after such date of maturity.

This Note and the issue of which it is a part and the premium, if any, and interest on this Note are limited obligations of the Authority and payable solely from the revenues and other property pledged and assigned to the Trustee under the terms of the Indenture to secure payment of this Note. **THE NOTE, THE PREMIUM, IF ANY, AND THE INTEREST ON THEM WILL NOT BE DEEMED TO CONSTITUTE A PLEDGE OF THE FAITH AND CREDIT OF THE COMMONWEALTH OF VIRGINIA (THE "COMMONWEALTH") OR ANY OF ITS POLITICAL SUBDIVISIONS, INCLUDING THE AUTHORITY AND THE CITY OF ALEXANDRIA, VIRGINIA (THE "CITY OF ALEXANDRIA"). NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE COMMONWEALTH OR ANY COUNTY, CITY, TOWN OR OTHER SUBDIVISION OF THE COMMONWEALTH, INCLUDING THE AUTHORITY AND THE CITY OF ALEXANDRIA, IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF OR PREMIUM, IF ANY, OR INTEREST ON THE NOTE. THE ISSUANCE OF THE NOTE DOES NOT DIRECTLY, INDIRECTLY OR CONTINGENTLY OBLIGATE THE COMMONWEALTH OR ANY COUNTY, CITY, TOWN OR OTHER SUBDIVISION OF THE COMMONWEALTH, INCLUDING THE CITY OF ALEXANDRIA, TO LEVY ANY TAXES OR TO MAKE ANY APPROPRIATION FOR THE PAYMENT OF THE NOTE. THE AUTHORITY HAS NO TAXING POWER.**

This Note is issued under a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"), between the Authority and the Trustee and as further supplemented by the Second Supplement and the Third Supplement. The Master Indenture as supplemented by the Second Supplement and the Third Supplement is referred to as the "Indenture." Reference is made to the Indenture for a description of the revenues and property pledged and assigned and the provisions, among other things, with respect to the nature and extent of the security for the Note, the rights and obligations of the Authority and the Trustee, the terms on which the Note is issued, the rights of the registered owners of the Note and the provisions for defeasance of such rights. This Note is issued as Subordinate Debt under the Indenture. Accordingly, this Note is secured by a pledge of Net Revenues that is subordinate to the pledge of Net Revenues that secures the Authority's previously issued and Outstanding Bonds (as defined in the Indenture) (the "Outstanding Parity Bonds"). The Authority may issue Bonds and Parity Indebtedness (as defined in the Indenture) ranking equally and ratably with this Note or the Outstanding Parity Bonds for all or certain purposes on the terms provided in the Indenture.

This Note is authorized and issued by the Authority, pursuant to (i) the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2 of the Code of Virginia of 1950, as amended, (ii) a resolution adopted by the Board of Directors of the Authority on May 18, 2021 and a resolution adopted by the Board of Directors of the Authority on May 16, 2023, and (iii) the Indenture, for the purpose of providing funds to be used, along with other available moneys, if any, (i) to finance capital projects that are described in the Authority's 10-year Capital Improvements Program ("CIP") or are similar to projects described in the CIP and are subsequently approved by the Authority's governing board, and (ii) to pay costs of issuance with respect to this Note and any Advances.

The registered owner of this Note has no right to enforce the provisions of the Indenture or to take any action with respect to any Event of Default under the Indenture, or to institute, appear in or defend any suit or other proceeding with respect to the Indenture, except as provided in the Indenture. Upon the occurrence of certain events or upon certain conditions, in the manner and with the effect set forth in the Indenture, the principal of all of the Bonds issued under the Indenture and then Outstanding, together with any accrued interest on them, may become or may be declared due and payable before their stated maturities. Modifications or alterations in the Indenture, or any supplements to it, may be made to the extent and under the circumstances provided by the Indenture. Under the Indenture, the Owners of Subordinate Debt have limited rights upon an Event of Default, including, without limitation, limitations on the ability to accelerate the debt that they hold.

The transfer of this Note is subject to the restrictions and limitations set forth in the Second Supplement and the Credit Agreement. Upon the registration of any transfer, the Authority will execute and the Trustee will authenticate and deliver in exchange for this Note a new Note, registered in the name of the transferee, of like date and tenor and of authorized denominations for the aggregate principal amount which the registered owner is entitled to receive. Before due registration of any transfer of this Note, the Trustee will treat the registered owner shown on the registration books maintained by the Trustee as the person exclusively entitled to the payment of principal of and premium, if any, and interest on this Note and the exercise of all other rights and powers of the owner.

All acts and conditions required to happen, exist or be performed precedent to and in connection with the issuance of this Note have happened, exist and have been performed.

This Note will not become obligatory for any purpose or be entitled to any security or benefit under the Indenture or be valid until the Trustee has executed the Certificate of Authentication appearing on this Note.

This Note shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

This Note constitutes for all purposes an amendment and restatement of the Original Note. The Original Note, as amended and restated hereby, continues in full force and effect as so amended and restated by this Note. Nothing contained in this Note shall constitute or be construed as a novation of any of the Authority's obligations under this Note.



**IN WITNESS WHEREOF**, City of Alexandria, Virginia, Sanitation Authority d/b/a Alexandria Renew Enterprises has caused this Note to be executed by the original signature of its Chair, an original of its seal to be imprinted on this Note and attested by the original signature of its Secretary-Treasurer.

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Chair

(SEAL)

Attest:

By: \_\_\_\_\_  
Secretary-Treasurer

\* \* \* \* \*

**CERTIFICATE OF AUTHENTICATION**

This Note is the Note described in the within-mentioned Indenture.

AUTHENTICATION DATE: June 23, 2023

**U.S. BANK TRUST COMPANY, NATIONAL  
ASSOCIATION**, as Trustee and Paying Agent

By: \_\_\_\_\_  
Authorized Signature

## ASSIGNMENT

FOR VALUE RECEIVED, the undersigned sells, assigns and transfers unto

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(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

PLEASE INSERT SOCIAL SECURITY OR OTHER  
IDENTIFYING NUMBER OF ASSIGNEE: \_\_\_\_\_

this Note and does irrevocably constitute and appoint

\_\_\_\_\_, attorney, to transfer this Note on  
the books kept for registration of this Note, with full power of substitution in the premises.

Dated: \_\_\_\_\_

Signature Guaranteed:

\_\_\_\_\_  
(NOTE: Signature(s) must be guaranteed by an Eligible Guarantor Institution such as a Commercial Bank, Trust Company, Securities Broker/Dealer, Credit Union or Savings Association who is a member of a medallion program approved by The Securities Transfer Association, Inc.)

\_\_\_\_\_  
(NOTE: The signature above must correspond with the name of the Registered Owner as it appears on the books kept for registration of this Note in every particular, without alteration or change.)

**EXHIBIT A-2**

**FORM OF SERIES 2021B NOTE**

(See Attached)



**COMMONWEALTH OF VIRGINIA**  
**SECOND AMENDED AND RESTATED**  
**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY**  
**SEWER SYSTEM SUBORDINATE REVOLVING CREDIT NOTE**  
**SERIES 2021B (TAXABLE)**

**MATURITY DATE**

**JUNE 30, 2024**

**DATED DATE**

**JUNE 23, 2023**

**REGISTERED OWNER: BANK OF AMERICA, N.A.**

**PRINCIPAL AMOUNT: SIXTY MILLION DOLLARS (\$60,000,000)**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXANDRIA RENEW ENTERPRISES**, a public body politic and corporate of the Commonwealth of Virginia (the "Authority"), for value received, promises to pay, solely from the revenues and other property pledged to the payment of this Note, to the registered owner of this Note or legal representative at its office at 214 N. Tryon Street, 17<sup>th</sup> Floor, Charlotte, North Carolina, 28255, or at such other place as the noteholder may from time to time designate in writing, the principal sum of SIXTY MILLION AND NO/100 DOLLARS (\$60,000,000.00), or such lesser amount as may have been advanced hereunder and remain unpaid on the Maturity Date listed above, and to pay interest on the outstanding principal balance of this Note as it exists from time to time from the date the first advance is made hereunder as provided herein. The aggregate principal amount outstanding at any one time under this Note and the Authority's Second Amended and Restated Sewer System Subordinate Revolving Credit Note, Series 2021A (Tax-Exempt) (the "Series 2021A Note") is Sixty Million Dollars (\$60,000,000) as provided in the Indenture and the Credit Agreement (each as defined below).

This Note is the "Series B Note" described in, and evidences a borrowing under, and is subject to the terms and conditions of, a certain Credit Agreement dated as of February 25, 2020, as amended by the Amendment to Credit Agreement dated as of April 3, 2020, the Second Amendment to Credit Agreement dated as of June 29, 2021, and the Third Amendment to Credit Agreement dated as of June 29, 2022 (the "Original Credit Agreement"), by and between the Authority and Bank of America, N.A. (together with its successors and assigns, the "Lender"), as amended by a certain Fourth Amendment to Credit Agreement dated June 23, 2023 (the "Amendment," and together with the Original Credit Agreement, and as the same may be altered, amended, modified, or supplemented, from time to time, the "Credit Agreement"). Capitalized terms used and not otherwise defined herein have the meanings assigned to them in the Credit Agreement.

This Note amends and restates in its entirety the Authority's \$30,000,000 Sewer System Subordinate Revolving Credit Note, Series 2021B (Taxable) (the "Original Note"), which was issued under the Original Credit Agreement. As such, this Note secures the obligations of the Authority under the Credit Agreement with respect to the Series B Advances.

The outstanding principal balance of this Note as it exists from time to time will bear interest at the rate and as computed as provided in the Credit Agreement. The interest rate shall be adjusted as provided in the Credit Agreement. Notwithstanding the foregoing, upon the occurrence and during the continuance of an Event of Default, at the discretion of the Lender (except as provided in Section 2.02.3(a)(ii) of the Credit Agreement), the outstanding principal balance of this Note will bear interest (computed on the basis described above) at the fluctuating per annum rate of interest equal to the Default Rate, with such Default Rate to be effective on the first date as of which the applicable Event of Default occurs notwithstanding the fact that such Event of Default may not be reported or otherwise discovered until a subsequent date. Interest accruing at the Default Rate shall be payable on demand.

Accrued interest on the outstanding principal balance of this Note as it exists from time to time will be due and payable on the first Business Day of each month, commencing on July 1, 2023, on any date on which this Note is prepaid or redeemed and on the Maturity Date. On the Maturity Date, the entire outstanding principal balance of this Note, together with all unpaid accrued interest hereon and all other amounts then owing hereunder, will be immediately due and payable in full. This Note is subject to mandatory redemption in full on any Termination Date occurring before the Maturity Date, as provided in Section 2.02.1 of the Credit Agreement.

The Authority acknowledges and agrees that the Lender may endorse on this Note (or on any schedule attached hereto) or otherwise make in the Lender's records an appropriate notation of the date and amount of each advance made hereunder and the date and amount of any payments or prepayments hereof. Such endorsements or other notations shall, in the absence of manifest error, be conclusive as to the outstanding principal balance of this Note; provided, however, that the Lender's error in making or failure to make an endorsement or notation shall not limit or otherwise affect the obligations of the Authority under the Credit Agreement or under this Note.

The Authority shall have the right and shall be required to prepay this Note upon the terms and subject to the conditions contained in the Credit Agreement. Nothing contained herein shall obligate the Lender to make any advance to the Authority hereunder, except as provided in the Credit Agreement.

The Events of Default hereunder are the same as those described in the Credit Agreement, which are incorporated herein by this reference. In the event of the occurrence of any or all of such Events of Default, the Lender's obligation to make further advances hereunder will or may automatically and immediately terminate and the entire unpaid principal balance of this Note together with all accrued interest will become or may be declared immediately due and payable in the manner and with the effect as provided in the Credit Agreement.

The principal of and premium, if any, on this Note is payable as provided in the Credit Agreement, the Second Amended and Restated Second Supplemental Indenture of Trust dated as of June 1, 2023 (as altered, amended, modified, or supplemented, from time to time, the "Second Supplement"), and the Third Supplemental Indenture of Trust dated as of February 1, 2021 (the "Third Supplement"), between the Authority and the Trustee. Interest on this Note will be computed as provided in the Credit Agreement.

Principal of and premium, if any, and interest on this Note are payable in lawful money of the United States of America. In case the date of maturity of the principal of this Note or the date fixed for the payment of interest on this Note is not a Business Day (as defined in the Indenture), then payment of the principal and premium, if any, and interest need not be made on such date, but may be made on the next succeeding date which is a Business Day, and if made on such next succeeding Business Day no additional interest will accrue for the period after such date of maturity.

This Note and the issue of which it is a part and the premium, if any, and interest on this Note are limited obligations of the Authority and payable solely from the revenues and other property pledged and assigned to the Trustee under the terms of the Indenture to secure payment of this Note. **THE NOTE, THE PREMIUM, IF ANY, AND THE INTEREST ON THEM WILL NOT BE DEEMED TO CONSTITUTE A PLEDGE OF THE FAITH AND CREDIT OF THE COMMONWEALTH OF VIRGINIA (THE "COMMONWEALTH") OR ANY OF ITS POLITICAL SUBDIVISIONS, INCLUDING THE AUTHORITY AND THE CITY OF ALEXANDRIA, VIRGINIA (THE "CITY OF ALEXANDRIA"). NEITHER THE FAITH AND CREDIT NOR THE TAXING POWER OF THE COMMONWEALTH OR ANY COUNTY, CITY, TOWN OR OTHER SUBDIVISION OF THE COMMONWEALTH, INCLUDING THE AUTHORITY AND THE CITY OF ALEXANDRIA, IS PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF OR PREMIUM, IF ANY, OR INTEREST ON THE NOTE. THE ISSUANCE OF THE NOTE DOES NOT DIRECTLY, INDIRECTLY OR CONTINGENTLY OBLIGATE THE COMMONWEALTH OR ANY COUNTY, CITY, TOWN OR OTHER SUBDIVISION OF THE COMMONWEALTH, INCLUDING THE CITY OF ALEXANDRIA, TO LEVY ANY TAXES OR TO MAKE ANY APPROPRIATION FOR THE PAYMENT OF THE NOTE. THE AUTHORITY HAS NO TAXING POWER.**

The Note is issued under a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"), between the Authority and the Trustee and as further supplemented by the Second Supplement and the Third Supplement. The Master Indenture as supplemented by the Second Supplement and the Third Supplement is referred to as the "Indenture." Reference is made to the Indenture for a description of the revenues and property pledged and assigned and the provisions, among other things, with respect to the nature and extent of the security for the Note, the rights and obligations of the Authority and the Trustee, the terms on which the Note is issued, the rights of the registered owners of the Note and the provisions for defeasance of such rights. This Note is issued as Subordinate Debt under the Indenture. Accordingly, this Note is secured by a pledge of Net Revenues that is subordinate to the pledge of Net Revenues that secures the Authority's previously issued and Outstanding Bonds (as defined in the Indenture) (the "Outstanding Parity Bonds"). The Authority may issue Bonds and Parity Indebtedness (as defined in the Indenture) ranking equally and ratably with the Note or the Outstanding Parity Bonds for all or certain purposes on the terms provided in the Indenture.

This Note is authorized and issued by the Authority, pursuant to (i) the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2 of the Code of Virginia of 1950, as amended, (ii) a resolution adopted by the Board of Directors of the Authority on May 18, 2021 and a resolution adopted by the Board of Directors of the Authority on May 16, 2023, and (iii) the Indenture, for the purpose of providing funds to be used, along with other available moneys, if any, (i) to finance capital projects that are described in the Authority's 10-year Capital Improvements Program ("CIP") or are similar to projects described in the CIP and are subsequently approved by the Authority's governing board, and (ii) to pay costs of issuance with respect to this Note and any Advances.

The registered owner of this Note has no right to enforce the provisions of the Indenture or to take any action with respect to any Event of Default under the Indenture, or to institute, appear in or defend any suit or other proceeding with respect to the Indenture, except as provided in the Indenture. Upon the occurrence of certain events or upon certain conditions, in the manner and with the effect set forth in the Indenture, the principal of all of the Bonds issued under the Indenture and then Outstanding, together with any accrued interest on them, may become or may be declared due and payable before their stated maturities. Modifications or alterations in the Indenture, or any supplements to it, may be made to the extent and under the circumstances provided by the Indenture. Under the Indenture, the Owners of Subordinate Debt have limited rights upon an Event of Default, including, without limitation, limitations on the ability to accelerate the debt that they hold.

The transfer of this Note is subject to the restrictions and limitations set forth in the Second Supplement and the Credit Agreement. Upon the registration of any transfer, the Authority will execute and the Trustee will authenticate and deliver in exchange for this Note a new Note, registered in the name of the transferee, of like date and tenor and of authorized denominations for the aggregate principal amount which the registered owner is entitled to receive. Before due registration of any transfer of this Note, the Trustee will treat the registered owner shown on the registration books maintained by the Trustee as the person exclusively entitled to the payment of principal of and premium, if any, and interest on this Note and the exercise of all other rights and powers of the owner.

All acts and conditions required to happen, exist or be performed precedent to and in connection with the issuance of this Note have happened, exist and have been performed.

This Note will not become obligatory for any purpose or be entitled to any security or benefit under the Indenture or be valid until the Trustee has executed the Certificate of Authentication appearing on this Note.

This Note shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

This Note constitutes for all purposes an amendment and restatement of the Original Note. The Original Note, as amended and restated hereby, continues in full force and effect as so amended and restated by this Note. Nothing contained in this Note shall constitute or be construed as a novation of any of the Authority's obligations under this Note.



**IN WITNESS WHEREOF**, City of Alexandria, Virginia, Sanitation Authority d/b/a Alexandria Renew Enterprises has caused this Note to be executed by the original signature of its Chair, an original of its seal to be imprinted on this Note and attested by the original signature of its Secretary-Treasurer.

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Chair

(SEAL)

Attest:

By: \_\_\_\_\_  
Secretary-Treasurer

\* \* \* \* \*

**CERTIFICATE OF AUTHENTICATION**

This Note is the Note described in the within-mentioned Indenture.

AUTHENTICATION DATE: June 23, 2023

**U.S. BANK TRUST COMPANY, NATIONAL  
ASSOCIATION**, as Trustee and Paying Agent

By: \_\_\_\_\_  
Authorized Signature

## ASSIGNMENT

FOR VALUE RECEIVED, the undersigned sells, assigns and transfers unto

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(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

PLEASE INSERT SOCIAL SECURITY OR OTHER  
IDENTIFYING NUMBER OF ASSIGNEE: \_\_\_\_\_

this Note and does irrevocably constitute and appoint

\_\_\_\_\_, attorney, to transfer this Note on  
the books kept for registration of this Note, with full power of substitution in the premises.

Dated: \_\_\_\_\_

Signature Guaranteed:

\_\_\_\_\_  
(NOTE: Signature(s) must be guaranteed by an Eligible Guarantor Institution such as a Commercial Bank, Trust Company, Securities Broker/Dealer, Credit Union or Savings Association who is a member of a medallion program approved by The Securities Transfer Association, Inc.)

\_\_\_\_\_  
(NOTE: The signature above must correspond with the name of the Registered Owner as it appears on the books kept for registration of this Note in every particular, without alteration or change.)

## EXHIBIT B

### PRIOR AMENDMENTS TO MASTER INDENTURE

Section 1.1 of the Master Indenture of Trust (the "Master Indenture") dated as of March 15, 1999, between City of Alexandria, Virginia, Sanitation Authority, d/b/a Alexandria Renew Enterprises (the "Authority") and U.S. Bank National Association, as successor trustee (the "Trustee") has been amended by Article II of the First Supplemental Indenture of Trust (the "First Supplemental Indenture") dated as of September 1, 1999, as follows:

Section 1.1 of the Master Indenture has been amended to delete the definition of "Net Proceeds" and substitute the following therefor:

*"Net Proceeds" means the proceeds from any property or casualty insurance recovery, or any other amounts recovered by or awarded to the Authority as a result of or in connection with the condemnation of or loss of title to all or any part of the System, remaining after payment of attorneys' fees, fees and expenses of the Authority and the Trustee and all other expenses incurred in collection of the gross proceeds.*

Section 3.2 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

***Section 3.2. Indenture Constitutes Contract.*** *In consideration of the purchase and acceptance of Bonds or Parity Indebtedness by their Owners, the provisions of this Master Indenture and Supplemental Indentures shall be a part of the contract of the Authority with the Owners and shall constitute a contract among the Authority, the Trustee and the Owners, from time to time, of Bonds or Parity Indebtedness.*

Section 3.5 of the Master Indenture has been amended by adding the phrase "or any Assistant Secretary or Assistant Secretary-Treasurer" at the end of such sentence.

Section 14.1 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

***Section 14.1. Discharge of Indenture.*** *If (i) all Bonds and Parity Indebtedness secured by this Master Indenture have become due and payable or irrevocable instructions to redeem the Bonds or Parity Indebtedness or to pay them at maturity have been given by the Authority to the Trustee; and (ii) the Trustee holds cash or noncallable Defeasance Obligations the principal of and interest on which at maturity will be sufficient (A) if Bonds and Parity Indebtedness have been called for redemption, or irrevocable instructions to call Bonds and Parity Indebtedness have been given*



*to the Trustee, to redeem in accordance with the relevant Sections of this Master Indenture and the applicable Supplemental Indenture all such Bonds and Parity Indebtedness on the date set for such redemption, (B) to pay at maturity all Outstanding Bonds and Parity Indebtedness not called for redemption, (C) to pay interest accruing on all Bonds and Parity Indebtedness until their redemption or payment at maturity, and (D) to pay the Trustee its reasonable fees and expenses, including the costs and expenses of cancelling and discharging this Master Indenture, then the Trustee shall cancel and discharge the lien of this Master Indenture and execute and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority any property subject to this Master Indenture which may then be in its possession, except funds or securities in which such funds are invested which are held by the Trustee for the payment of the principal of and premium, if any, and interest on the Bonds and Parity Indebtedness.*

*In the event that all of the Bonds and Parity Indebtedness secured by this Master Indenture are paid or deemed paid in accordance with the terms of this Master Indenture, then the right and interest of the Trustee in and to the trust estate created by this Master Indenture and all covenants, agreements and other obligations of the Authority to the Owners shall cease and be discharged and satisfied. If any Bonds and Parity Indebtedness are paid or deemed paid in accordance with the terms of this Master Indenture, then such Bonds and Parity Indebtedness shall cease to be entitled to any lien, benefit or security under this Master Indenture (other than the right to receive payment and certain rights regarding registration and transfer) and all covenants, agreements and other obligations of the Authority to the Owners of such Bonds and Parity Indebtedness shall cease and be discharged and satisfied.*

Section 14.2 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

**Section 14.2. Bonds and Parity Indebtedness Deemed to be Paid.** *Bonds and Parity Indebtedness shall be deemed paid and no longer Outstanding for the purposes of this Master Indenture when there has been deposited with the Trustee cash or noncallable Defeasance Obligations the principal of and interest on which will be sufficient to pay or redeem such Bonds and Parity Indebtedness and to pay interest accruing on such Bonds and Parity Indebtedness to their payment or redemption date (whether on or before their maturity or redemption date); provided, however, that if such'*

*Bonds and Parity Indebtedness are to be redeemed before their maturity, notice of the redemption must have been duly given or irrevocable instructions to redeem such Bonds and Parity Indebtedness must have been given by the Authority to the Trustee.*

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**THIRD SUPPLEMENTAL INDENTURE OF TRUST**

**BETWEEN**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

**AND**

**U.S. BANK NATIONAL ASSOCIATION  
AS TRUSTEE**

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**\$320,992,641  
CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY  
SEWER REVENUE BOND,  
SERIES 2021A**

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**Dated as of February 1, 2021**

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Exhibit A	Form of Series 2021A Bond
Exhibit B	Prior Amendments to Master Indenture

### **THIRD SUPPLEMENTAL INDENTURE OF TRUST**

This **THIRD SUPPLEMENTAL INDENTURE OF TRUST** (as more particularly defined below, this "Supplemental Indenture") is dated as of February 1, 2021, and is between the **CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXANDRIA RENEW ENTERPRISES**, a public body politic and corporate of the Commonwealth of Virginia (the "Authority"), and **U.S. BANK NATIONAL ASSOCIATION**, a national banking association, as successor trustee (as more particularly defined in the below-defined Master Indenture, the "Trustee").

A. The Authority has executed and delivered to the Trustee a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (as more particularly defined below, the "Master Indenture"), as a trust agreement to secure and to provide procedures for and limitations on the issuance of revenue bonds (as more specifically defined in the Master Indenture, "Bonds") and other obligations of the Authority to pay the Cost of any Project comprising a portion of the Authority's System and to refund any Bonds and other obligations previously issued by the Authority.

B. The Authority has determined to issue a sewer revenue bond (as more particularly defined below, the "Series 2021A Bond") under the Master Indenture in an original aggregate principal amount of up to \$320,992,641 (excluding interest that is capitalized in accordance with the terms of the Loan Agreement).

C. The Authority intends to secure the Series 2021A Bond on a parity basis to the lien of the Master Indenture that secures Bonds and other Parity Indebtedness (as defined in the Master Indenture). Accordingly, the Series 2021A Bond will be Parity Indebtedness.

D. The Authority is entering into this Supplemental Indenture to set forth the terms and provisions of the Series 2021A Bond.

E. The Authority is issuing the Series 2021A Bond as evidence of a loan from the United States Environmental Protection Agency, an agency of the United States of America, acting by and through the Administrator of the Environmental Protection Agency (the "WIFIA Lender"), which loan is subject to the terms and conditions of a WIFIA Loan Agreement dated as of February 3, 2021 (as altered, amended, modified, and supplemented from time to time, the "Loan Agreement"), between the Authority and the WIFIA Lender.

All things necessary to make the Series 2021A Bond a valid and binding limited obligation of the Authority, when authenticated by the Trustee and issued as provided in this Supplemental Indenture, and to constitute this Supplemental Indenture a valid and binding agreement securing the payment of the principal of and premium, if any, and interest on the Series 2021A Bond have been done and performed. The execution and delivery of this Supplemental Indenture and the execution and issuance of the Series 2021A Bond have in all respects been duly authorized.

## ARTICLE I

### SUPPLEMENTAL INDENTURE

Section 1.1 Supplemental Indenture. This Supplemental Indenture is authorized and executed by the Authority and delivered to the Trustee pursuant to and in accordance with Article V of the Master Indenture. All terms, covenants, conditions and agreements of the Master Indenture apply with full force and effect to the Series 2021A Bond, except as otherwise provided in this Supplemental Indenture.

Section 1.2 Definitions. All capitalized words and terms used in this Supplemental Indenture have the meanings set forth in Article I of the Master Indenture. In addition, the following words and terms have the following meanings in this Supplemental Indenture unless the context clearly requires otherwise:

"Closing Date" means February 3, 2021.

"Federal Fiscal Year" has the meaning given to it in the Loan Agreement.

"Loan Agreement" has the meaning given to it in the Recitals.

"Master Indenture" means the Master Indenture of Trust dated as of March 15, 1999, between the Authority and the Trustee, as previously amended and supplemented, and as the same may be altered, amended, modified, or supplemented, from time to time.

"Owner" for purposes of this Supplemental Indenture means the WIFIA Lender or any other subsequent registered owner of the Series 2021A Bond.

"Payment Date" has the meaning given to it in the Loan Agreement.

"Pledged Collateral" has the meaning given to it in the Loan Agreement.

"Secured Parties" has the meaning given to it in the Loan Agreement.

"Series 2021A Bond" means the Authority's Sewer Revenue Bond, Series 2021A, issued pursuant to this Supplemental Indenture, as the same may be altered, amended, modified, or supplemented from time to time.

"Supplemental Indenture" means this Third Supplemental Indenture of Trust dated as of February 1, 2021, between the Authority and the Trustee, as the same may be altered, amended, modified, or supplemented from time to time.

"WIFIA Debt Service Account" means the account established under Section 4.1.

"WIFIA Lender" has the meaning given to it in the Recitals.

Section 1.3 Representations of Authority. The Authority represents that (i) it is duly authorized under the Constitution and laws of the Commonwealth, including particularly and without limitation the Act, to issue the Series 2021A Bond, to execute this Supplemental Indenture, and to pledge the Net Revenues, Hedge Receipts and other funds, accounts and collateral in the manner and to the extent set forth in the Master Indenture, this Supplemental Indenture and the Loan Agreement, (ii) all action on its part necessary for the execution and delivery of this Supplemental Indenture has been taken, and (iii) the Series 2021A Bond in the hands of the Owner are and will be valid and enforceable limited obligations of the Authority.

## ARTICLE II

### AUTHORIZATION AND DETAILS OF SERIES 2021A BOND

Section 2.1 Authorization of Series 2021A Bond. There is authorized to be issued under the Master Indenture Parity Indebtedness of the Authority in the aggregate principal amount of up to \$320,992,641 (excluding interest that is capitalized in accordance with the terms of the Loan Agreement).

Section 2.2 Details of Series 2021A Bond. The Series 2021A Bond authorized in Section 2.1 is designated "City of Alexandria, Virginia, Sanitation Authority Sewer Revenue Bond, Series 2021A," and will be issued as a single, type-written bond.

The Series 2021A Bond will (i) be dated the Closing Date, (ii) be issued in a principal amount of \$320,992,641 (excluding interest that is capitalized in accordance with the terms of the Loan Agreement), (iii) bear interest as provided and at the rates set forth in the Loan Agreement, and (iv) mature, subject to prior redemption, on the Final Maturity Date (as defined in the Loan Agreement).

The principal of and premium, if any, and interest on the Series 2021A Bond is payable in lawful money of the United States of America, on a parity basis with the Outstanding Bonds and Outstanding Parity Indebtedness (if any) issued by the Authority under the Master Indenture, and in all respects only from the Net Revenues and other property pledged for such purpose under the Master Indenture and the Loan Agreement. The principal of and premium, if any, on the Series 2021A Bond will be payable upon presentation and surrender of the Series 2021A Bond at the designated corporate trust office of the Paying Agent except that, for so long as the WIFIA Lender is the sole registered Owner of the Series 2021A Bond, principal of and premium, if any, on the Series 2021A Bond will be paid directly to the WIFIA Lender without presentment or surrender as described in, and in accordance with, the Loan Agreement. Interest on the Series 2021A Bond will be paid by check or draft mailed by the Paying Agent on each interest payment date to the Owners of the Series 2021A Bond at their addresses as they appear on the registration books of the Authority maintained by the Paying Agent, except that, for so long as the WIFIA Lender is the sole registered Owner of the Series 2021A Bond, interest on the Series 2021A Bond will be paid directly to the WIFIA Lender in the manner provided in the Loan Agreement. The registered owners will be determined on the 15<sup>th</sup> of the month, which next precedes each Interest Payment Date.



Interest on the Series 2021A Bond will be computed as provided in the Series 2021A Bond and the Loan Agreement.

Section 2.3 Provisions for the Issuance of Series 2021A Bond. The Series 2021A Bond will be issued in typewritten form and registered in the name of the WIFIA Lender or its designee.

Transfer of ownership interest in the Series 2021A Bond will be made only in accordance with the Loan Agreement.

Section 2.4 Form of the Series 2021A Bond. The Series 2021A Bond shall be issued substantially in the form set forth in Exhibit A to this Supplemental Indenture, with appropriate variations, omissions and insertions as permitted or required by the Master Indenture and this Supplemental Indenture. There may be endorsed on the Series 2021A Bond such legend or text as may be necessary or appropriate to conform to any applicable rules and regulations of any governmental authority or any usage or requirement of law.

Section 2.5 Application of Bond Proceeds and Other Amounts. (a) As provided in the Loan Agreement, the WIFIA Lender will advance amounts under the Series 2021A Bond to the Authority, and the Authority will apply such amounts in accordance with the Loan Agreement.

(b) At the request of the Trustee, the Authority shall provide the Trustee with the amount outstanding under the Series 2021A Bond.

Section 2.6 Security for the Series 2021A Bond. As set forth above, the Authority has, under the Master Indenture and this Supplemental Indenture, irrevocably pledged, assigned and granted to the Trustee for the benefit of the WIFIA Lender (and the other Secured Parties, as applicable), liens on the Pledged Collateral in accordance with the provisions of the Master Indenture and this Supplemental Indenture. The Authority affirms such pledge under this Supplemental Indenture. The Series 2021A Bond shall be equally and ratably secured under the Master Indenture by the liens on the Pledged Collateral on a parity basis with all Bonds and all other Parity Indebtedness duly issued under the Master Indenture and senior to all Subordinate Debt.

### ARTICLE III

#### REDEMPTION OF BOND

Section 3.1 Redemption of Bonds. The Series 2021A Bond may not be called for redemption except as provided in this Article.

Section 3.2 Optional Redemption. The Authority may prepay the Series 2021A Bond in whole or in part (and, if in part, the amounts thereof to be prepaid shall be determined by the Authority; provided, however, that such prepayments shall be in principal amounts of \$1,000,000 or any integral multiple of \$1.00 in excess thereof), from time to time, but not more than once per Federal Fiscal Year, without penalty or premium, by paying to the WIFIA Lender such principal amount of the Series 2021A Bond to be prepaid, together with the unpaid interest accrued on the amount of principal so prepaid to the date of such prepayment, which shall be a Payment Date unless otherwise agreed by the WIFIA Lender. Each prepayment of the Series 2021A Bond

pursuant to this Section 3.2 shall be made on such Payment Date and in such principal amount as shall be specified by the Authority in a written notice delivered to the WIFIA Lender not less than 10 days or more than 30 days prior to the date set for prepayment, unless otherwise agreed by the WIFIA Lender. At any time between delivery of such written notice and the applicable optional prepayment, the Authority may, without penalty or premium, rescind its announced optional prepayment by further written notice to the WIFIA Lender. Anything in this Section 3.2 to the contrary notwithstanding, the failure by the Authority to make any optional prepayment shall not constitute a breach or default under this Supplemental Indenture.

#### ARTICLE IV

##### ESTABLISHMENT OF WIFIA DEBT SERVICE ACCOUNT

Section 4.1 Establishment of Account. As provided in Section 7.5 of the Master Indenture, the Authority hereby establishes a WIFIA Debt Service Account as an account within the Parity Debt Service Fund. The Authority shall hold the WIFIA Debt Service Account and make deposits in the WIFIA Debt Service Account in accordance with the Master Indenture and the Loan Agreement. The Authority shall use amounts in the WIFIA Debt Service Account to make payments on the Series 2021A Bond in accordance with the terms thereof and the Loan Agreement.

#### ARTICLE V

##### SPECIAL COVENANTS

Section 5.1 Additional Debt. Notwithstanding anything to the contrary contained in the Master Indenture, each Owner of the Series 2021A Bond hereby acknowledges and agrees that for purposes of the Authority complying with Section 5.3(h)(2)(i) of the Master Indenture, the Authority (and its Consulting Engineer or independent certified public accountant) may use the most recent audited financial statements of the Authority that have been prepared in accordance with Section 9.10 of the Master Indenture in lieu of using data from 12 consecutive months of the 18 months preceding the issuance of the proposed additional debt.

Section 5.2 No Amendments to this Supplemental Indenture Without the WIFIA Lender's Consent. The Authority and the Trustee shall not enter into any amendments to this Supplemental Indenture without the consent of the Owner of the Series 2021A Bond.

Section 5.3 Confirmation of Right to Accelerate. Subject to Section 10.3 of the Master Indenture and as provided in the Loan Agreement, the Series 2021A Bond may be declared immediately due and payable upon the occurrence of an event of default under the Loan Agreement.

Section 5.4 Indemnification. The Trustee acknowledges that, notwithstanding any provision of the Master Indenture, the WIFIA Lender shall not be required to indemnify the Trustee and the Trustee shall not refuse to take any action under the Master Indenture on the basis that the WIFIA Lender has failed to provide such indemnification to the Trustee. If there is an instance that would require the Trustee to be indemnified by the WIFIA Lender but for the preceding sentence, the Authority agrees to pay the reasonable costs and expenses of the Trustee in connection with taking the requested action to the extent those costs and expenses would otherwise have been paid under the indemnity of the WIFIA Lender. If the Trustee submits its resignation in accordance with Section 11.12 of the Master Indenture, and a successor Trustee has not been selected within 30 days of the date of the resignation instrument, the Trustee may, petition the Circuit Court of the City of Alexandria, Virginia, for the appointment of a successor Trustee.

## ARTICLE VI

### MISCELLANEOUS

Section 6.1 Amendments to Master Indenture. Reference is hereby made to the amendments to the Master Indenture contained in Article II of the First Supplemental Indenture of Trust dated September 1, 1999, by and between the Authority and the Trustee, which provisions are incorporated in the Master Indenture and made a part thereof. For reference, the amended provisions are set forth in Exhibit B.

Section 6.2 Successors and Assigns. This Supplemental Indenture is binding upon, inures to the benefit of and is enforceable by its parties and their respective successors and assigns.

Section 6.3 Severability. If any provision of this Supplemental Indenture is held invalid by any court of competent jurisdiction, such holding will not invalidate any other provision.

Section 6.4 Governing Law. This Supplemental Indenture will be governed by and construed under the applicable laws of the Commonwealth.

Section 6.5 Counterparts. This Supplemental Indenture may be executed in several counterparts, each of which will be an original, and the counterparts will together constitute one and the same instrument.

Section 6.6 Parties Interested. Nothing in this Supplemental Indenture expressed or implied is intended or will be construed to confer upon any Person, other than the Authority, the Trustee, and the Owners of the Series 2021A Bond, any right, remedy or claim under or by reason of this Supplemental Indenture, this Supplemental Indenture being intended for the sole and exclusive benefit of the Authority, the Trustee, and the Owners of the Series 2021A Bond.

Section 6.7 Patriot Act Requirements of Trustee. To help the government fight the funding of terrorism and money laundering activities, federal law requires all financial institutions to obtain, verify, and record information that identifies each person who opens an account. Accordingly, the Trustee will require documentation from each non-individual person such as a business entity, a charity, a trust, or other legal entity, verifying its formation and existence as a legal entity. The Trustee may also seek financial statements, licenses, identification, and

authorization documents from individuals claiming authority to represent the entity, or other relevant documentation.

[Signature Page Follows]



IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be executed on their behalf by their duly authorized officers or representatives.

[SEAL]

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Name: Karen L. Pallansch  
Title: Chief Executive Officer

**U.S. BANK NATIONAL ASSOCIATION,  
as Trustee**

By: \_\_\_\_\_  
Name: W. F. Michie, III  
Title: Assistant Vice President and Relationship  
Manager

IN WITNESS WHEREOF, the parties have caused this Supplemental Indenture to be executed on their behalf by their duly authorized officers or representatives.

[SEAL]

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Name: Karen L. Pallansch  
Title: Chief Executive Officer

**U.S. BANK NATIONAL ASSOCIATION,  
as Trustee**

By: \_\_\_\_\_  
Name: W. F. Michie, III  
Title: Assistant Vice President and Relationship  
Manager

**EXHIBIT A**

**FORM OF SERIES 2021A BOND**

**THIS BOND MAY NOT BE TRANSFERRED EXCEPT IN ACCORDANCE WITH  
SECTION 33 OF THE WIFIA LOAN AGREEMENT (HEREINAFTER DEFINED)**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

**RIVERRENEW TUNNEL SYSTEM PROJECT**

**(WIFIA – N19103VA)**

**WIFIA BOND**

**Maximum Principal Amount: \$320,992,641 (excluding capitalized interest)**

**Effective Date: February 3, 2021**

**Due: Final Maturity Date (as defined in the WIFIA Loan Agreement (hereinafter defined))**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXANDRIA RENEW ENTERPRISES**, a public body politic and corporate under the laws of the Commonwealth of Virginia (the "**Borrower**"), for value received, hereby promises to pay to the order of the **UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**, acting by and through the Administrator of the United States Environmental Protection Agency, or its assigns (the "**WIFIA Lender**"), the lesser of (x) the Maximum Principal Amount set forth above and (y) the aggregate unpaid principal amount of all disbursements (the "**Disbursements**") made by the WIFIA Lender (such lesser amount, together with any interest that is capitalized and added to principal in accordance with the provisions of the WIFIA Loan Agreement (as defined below), being hereinafter referred to as the "**Outstanding Principal Sum**"), together with accrued and unpaid interest (including, if applicable, interest at the Default Rate, as defined in the WIFIA Loan Agreement) on the Outstanding Principal Sum and all fees, costs and other amounts payable in connection therewith, all as more fully described in the WIFIA Loan Agreement. The principal hereof shall be payable in the manner and at the place provided in the WIFIA Loan Agreement in accordance with **Exhibit F (WIFIA Debt Service)** to the WIFIA Loan Agreement, as revised from time to time in accordance with the WIFIA Loan Agreement, until paid in full (which Exhibit F, as modified from time to time in accordance with the terms of the WIFIA Loan Agreement, is incorporated in and is a part of this WIFIA Bond). The WIFIA Lender is hereby authorized to modify the Loan Amortization Schedule included in **Exhibit F** to the WIFIA Loan Agreement from time to time in accordance with the terms of the WIFIA Loan Agreement to reflect the amount of each disbursement made thereunder and the date and amount of principal or interest paid by the Borrower thereunder. Absent manifest error, the WIFIA Lender's determination of such matters as set forth on **Exhibit F** to the WIFIA Loan Agreement shall be conclusive evidence thereof; *provided, however*, that neither the failure to make any such recordation nor any error in such recordation shall affect in any manner the Borrower's obligations hereunder or under any other WIFIA Loan Document.

Payments hereon are to be made in accordance with Section 8(d) (*Payment of Principal and Interest – Manner of Payment*) and Section 31 (*Notices*) of the WIFIA Loan Agreement as the same become due. Principal of and interest on this WIFIA Bond shall be paid in funds available on or before the due date and in any lawful coin or currency of the United States of America that at the date of payment is legal tender for the payment of public and private debts.

This WIFIA Bond has been executed under and pursuant to that certain WIFIA Loan Agreement, dated as of the date hereof, between the WIFIA Lender and the Borrower (the "**WIFIA Loan Agreement**") and is issued to evidence the obligation of the Borrower under the WIFIA Loan Agreement to repay the loan made by the WIFIA Lender and any other payments of any kind required to be paid by the Borrower under the WIFIA Loan Agreement or the other WIFIA Loan Documents referred to therein. Reference is made to the WIFIA Loan Agreement for all details relating to the Borrower's obligations hereunder. All capitalized terms used in this WIFIA Bond and not defined herein shall have the meanings set forth in the WIFIA Loan Agreement.

This WIFIA Bond may be prepaid at the option of the Borrower in whole or in part (and, if in part, the principal installments and amounts thereof to be prepaid are to be determined in accordance with the WIFIA Loan Agreement; *provided, however*, such prepayments shall be in principal amounts of at least \$1,000,000 or any integral multiple of \$1 in excess thereof), from time to time, but not more than once per Federal Fiscal Year, without penalty or premium, by paying to the WIFIA Lender all or part of the principal amount of the WIFIA Bond in accordance with the WIFIA Loan Agreement.

Payment of the obligations of the Borrower under this WIFIA Bond is secured pursuant to the Indenture referred to in the WIFIA Loan Agreement.

Any delay on the part of the WIFIA Lender in exercising any right hereunder shall not operate as a waiver of any such right, and any waiver granted with respect to one default shall not operate as a waiver in the event of any subsequent default.

All acts, conditions and things required by the Constitution and laws of the Commonwealth to happen, exist, and be performed precedent to and in the issuance of this WIFIA Bond have happened, exist and have been performed as so required. This WIFIA Bond is issued with the intent that the federal laws of the United States of America shall govern its construction to the extent such federal laws are applicable and the internal laws of the Commonwealth shall govern its construction to the extent such federal laws are not applicable.



**IN WITNESS WHEREOF**, City of Alexandria, Virginia, Sanitation Authority, d/b/a Alexandria Renew Enterprises has caused this WIFIA Bond to be executed by the original signature of its Chair, an original of its seal to be imprinted on this WIFIA Bond and attested by the original signature of its Secretary-Treasurer.

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXANDRIA RENEW ENTERPRISES**

By: \_\_\_\_\_  
Chair

(SEAL)

Attest:

By: \_\_\_\_\_  
Secretary-Treasurer

\* \* \* \* \*

**CERTIFICATE OF AUTHENTICATION**

This WIFIA Bond is the WIFIA Bond described in the within-mentioned Indenture.

AUTHENTICATION DATE: February 3, 2021

**U.S. BANK NATIONAL ASSOCIATION**, as  
Trustee and Paying Agent

By: \_\_\_\_\_  
Authorized Signature

## ASSIGNMENT

FOR VALUE RECEIVED, the undersigned sells, assigns and transfers unto

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(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

PLEASE INSERT SOCIAL SECURITY OR OTHER  
IDENTIFYING NUMBER OF ASSIGNEE: \_\_\_\_\_

This WIFIA Bond and does irrevocably constitute and appoint

\_\_\_\_\_, attorney, to transfer this WIFIA  
Bond on the books kept for registration of this WIFIA Bond, with full power of substitution in  
the premises.

By: \_\_\_\_\_

Dated: \_\_\_\_\_

NOTICE: The signature to this assignment  
must correspond with the name as it appears  
upon the face of the within WIFIA Bond in  
every particular, without alteration or  
enlargement or any change whatsoever.

## EXHIBIT B

### PRIOR AMENDMENTS TO MASTER INDENTURE

Section 1.1 of the Master Indenture of Trust (the "Master Indenture") dated as of March 15, 1999, between City of Alexandria, Virginia, Sanitation Authority, d/b/a Alexandria Renew Enterprises (the "Authority") and U.S. Bank National Association, as successor trustee (the "Trustee") has been amended by Article II of the First Supplemental Indenture of Trust (the "First Supplemental Indenture") dated as of September 1, 1999, as follows:

Section 1.1 of the Master Indenture has been amended to delete the definition of "Net Proceeds" and substitute the following therefor:

*"Net Proceeds" means the proceeds from any property or casualty insurance recovery, or any other amounts recovered by or awarded to the Authority as a result of or in connection with the condemnation of or loss of title to all or any part of the System, remaining after payment of attorneys' fees, fees and expenses of the Authority and the Trustee and all other expenses incurred in collection of the gross proceeds.*

Section 3.2 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

***Section 3.2. Indenture Constitutes Contract.*** *In consideration of the purchase and acceptance of Bonds or Parity Indebtedness by their Owners, the provisions of this Master Indenture and Supplemental Indentures shall be a part of the contract of the Authority with the Owners and shall constitute a contract among the Authority, the Trustee and the Owners, from time to time, of Bonds or Parity Indebtedness.*

Section 3.5 of the Master Indenture has been amended by adding the phrase "or any Assistant Secretary or Assistant Secretary-Treasurer" at the end of such sentence.

Section 14.1 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

***Section 14.1. Discharge of Indenture.*** *If (i) all Bonds and Parity Indebtedness secured by this Master Indenture have become due and payable or irrevocable instructions to redeem the Bonds or Parity Indebtedness or to pay them at maturity have been given by the Authority to the Trustee; and (ii) the Trustee holds cash or noncallable Defeasance Obligations the principal of and interest on which at maturity will be sufficient (A) if Bonds and Parity Indebtedness have been called for redemption, or irrevocable instructions to call Bonds and Parity Indebtedness have been given*



*to the Trustee, to redeem in accordance with the relevant Sections of this Master Indenture and the applicable Supplemental Indenture all such Bonds and Parity Indebtedness on the date set for such redemption, (B) to pay at maturity all Outstanding Bonds and Parity Indebtedness not called for redemption, (C) to pay interest accruing on all Bonds and Parity Indebtedness until their redemption or payment at maturity, and (D) to pay the Trustee its reasonable fees and expenses, including the costs and expenses of cancelling and discharging this Master Indenture, then the Trustee shall cancel and discharge the lien of this Master Indenture and execute and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority any property subject to this Master Indenture which may then be in its possession, except funds or securities in which such funds are invested which are held by the Trustee for the payment of the principal of and premium, if any, and interest on the Bonds and Parity Indebtedness.*

*In the event that all of the Bonds and Parity Indebtedness secured by this Master Indenture are paid or deemed paid in accordance with the terms of this Master Indenture, then the right and interest of the Trustee in and to the trust estate created by this Master Indenture and all covenants, agreements and other obligations of the Authority to the Owners shall cease and be discharged and satisfied. If any Bonds and Parity Indebtedness are paid or deemed paid in accordance with the terms of this Master Indenture, then such Bonds and Parity Indebtedness shall cease to be entitled to any lien, benefit or security under this Master Indenture (other than the right to receive payment and certain rights regarding registration and transfer) and all covenants, agreements and other obligations of the Authority to the Owners of such Bonds and Parity Indebtedness shall cease and be discharged and satisfied.*

Section 14.2 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

**Section 14.2. Bonds and Parity Indebtedness Deemed to be Paid.** *Bonds and Parity Indebtedness shall be deemed paid and no longer Outstanding for the purposes of this Master Indenture when there has been deposited with the Trustee cash or noncallable Defeasance Obligations the principal of and interest on which will be sufficient to pay or redeem such Bonds and Parity Indebtedness and to pay interest accruing on such Bonds and Parity Indebtedness to their payment or redemption date (whether on or before their maturity or redemption date); provided, however, that if such'*

*Bonds and Parity Indebtedness are to be redeemed before their maturity, notice of the redemption must have been duly given or irrevocable instructions to redeem such Bonds and Parity Indebtedness must have been given by the Authority to the Trustee.*

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**FOURTH SUPPLEMENTAL INDENTURE OF TRUST**

**Between**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A  
ALEXRENEW**

**and**

**U.S. BANK TRUST COMPANY, NATIONAL ASSOCIATION,  
AS SUCCESSOR TRUSTEE**

---

**\$45,680,000  
ALEXRENEW  
(CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY)  
WASTEWATER REVENUE BONDS,  
SERIES 2024  
(GREEN BONDS)**

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**June 1, 2024**

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## **FOURTH SUPPLEMENTAL INDENTURE OF TRUST**

**THIS FOURTH SUPPLEMENTAL INDENTURE OF TRUST** (as more particularly defined below, this "Fourth Supplemental Indenture") is dated as of June 1, 2024, and is between the **CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXRENEW**, a public body politic and corporate of the Commonwealth of Virginia (the "Authority"), and **U.S. BANK TRUST COMPANY, NATIONAL ASSOCIATION** (as successor trustee to U.S. Bank National Association), a national banking association, as successor trustee (the "Trustee").

The Authority has executed and delivered to the Trustee a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"), as a trust agreement to secure and to provide procedures for and limitations on the issuance of revenue bonds (as more specifically defined in the Master Indenture, "Bonds") and other obligations of the Authority to pay the Cost of any Project comprising a portion of the Authority's System and to refund any Bonds and other obligations previously issued by the Authority.

The Authority has determined to issue wastewater revenue bonds (as more particularly defined below, the "2024 Bonds") under the Master Indenture in an original aggregate principal amount of \$45,680,000, and to use the proceeds of the sale thereof, along with other available funds, if any, to (i) pay all or a portion of the cost of various projects comprising a portion of the System (as more particularly defined in the Master Indenture), and (ii) pay the underwriter's discount and costs of issuance of the 2024 Bonds.

The Authority intends to secure the 2024 Bonds on a parity basis to the lien of the Master Indenture that secures Bonds and other Parity Indebtedness (as defined in the Master Indenture). Accordingly, the 2024 Bonds will be Parity Indebtedness.

The Authority is entering into this Supplemental Indenture to set forth the terms and provisions of the 2024 Bonds, and to modify the Master Indenture to amend certain provisions therein and to include certain additional provisions therein relating to the Trustee, which are necessary in connection with the issuance of the 2024 Bonds, as permitted by Section 13.1(i) and Section 13.2 of the Master Indenture.

All things necessary to make 2024 Bonds valid and binding limited obligations of the Authority, when authenticated by the Trustee and issued as provided in this Fourth Supplemental Indenture, and to constitute this Fourth Supplemental Indenture a valid and binding agreement securing the payment of the principal of and premium, if any, and interest on the 2024 Bonds have been done and performed. The execution and delivery of this Fourth Supplemental Indenture and the execution and issuance of the 2024 Bonds have in all respects been duly authorized.

The Authority covenants and agrees with the Trustee and with the Owners, from time to time, of the 2024 Bonds, as follows:

## **ARTICLE I**

### **FOURTH SUPPLEMENTAL INDENTURE**

**Section 1.1 Fourth Supplemental Indenture.** This Fourth Supplemental Indenture is authorized and executed by the Authority and delivered to the Trustee pursuant to and in accordance with Article V of the Master Indenture. All terms, covenants, conditions and agreements of the Master Indenture apply with full force and effect to the 2024 Bonds, except as otherwise provided in this Fourth Supplemental Indenture.

**Section 1.2 Definitions.** All capitalized words and terms used in this Fourth Supplemental Indenture have the meanings set forth in Article I of the Master Indenture. In addition, the following words and terms have the following meanings in this Fourth Supplemental Indenture unless the context clearly requires otherwise:

"2024 Bonds" means the Bonds of the Authority issued pursuant to Article II of this Fourth Supplemental Indenture.

"Closing Date" means June 25, 2024.

"DTC" has the meaning set forth in Section 2.3.

"Letter of Representations" means the Blanket Issuer Letter of Representations, dated June 3, 2024, from the Authority to DTC, as it may be modified, altered, amended or supplemented from time to time.

"Master Indenture" means the Master Indenture of Trust dated as of March 15, 1999, between the Authority and the Trustee, as previously supplemented and amended, and as the same may be further modified, altered, amended or supplemented from time to time.

"Non-Arbitrage Certificate" means the certificate by that name to be executed and delivered by the Authority regarding the amount and use of the proceeds of the 2024 Bonds.

"Fourth Supplemental Indenture" means this Fourth Supplemental Indenture of Trust dated as of June 1, 2024, between the Authority and the Trustee, as it may be modified, altered, amended or supplemented from time to time.

**Section 1.3 Representations of Authority.** The Authority represents that (i) it is duly authorized under the Constitution and laws of the Commonwealth, including particularly and without limitation the Act, to issue the 2024 Bonds, to execute this Fourth Supplemental Indenture, and to pledge the Net Revenues and funds in the manner and to the extent set forth in the Master Indenture and this Fourth Supplemental Indenture, (ii) all action on its part necessary for the execution and delivery of this Fourth Supplemental Indenture has been taken, and (iii) the 2024 Bonds in the hands of the Owners are and will be valid and enforceable limited obligations of the Authority.

## ARTICLE II AUTHORIZATION AND DETAILS OF 2024 BONDS

**Section 2.1 Authorization of 2024 Bonds.** There are authorized to be issued under the Master Indenture Parity Indebtedness of the Authority in the aggregate principal amount of \$45,680,000.

**Section 2.2 Details of 2024 Bonds.** The 2024 Bonds authorized in Section 2.1 are designated "AlexRenew (City of Alexandria, Virginia, Sanitation Authority) Wastewater Revenue Bonds, Series 2024 (Green Bonds)," and will be issued as fully registered bonds, without coupons.

The 2024 Bonds will (i) be dated the Closing Date, (ii) be issued in denominations of \$5,000 or any integral multiple of \$5,000, (iii) be numbered from R-1 upwards, sequentially, (iv) bear interest at the rates set forth below, payable on each January 15 and July 15 commencing January 15, 2025, and (v) mature, subject to prior redemption, on July 15 of the years and in the amounts set forth below:

<u>Year of Maturity</u>	<u>Principal Amount</u>	<u>Interest Rate</u>
2025	\$ 670,000	5.000%
2026	705,000	5.000
2027	745,000	5.000
2028	780,000	5.000
2029	820,000	5.000
2030	865,000	5.000
2031	905,000	5.000
2032	955,000	5.000
2033	1,005,000	5.000
2034	1,055,000	5.000
2035	1,110,000	5.000
2036	1,165,000	5.000
2037	1,225,000	5.000
2038	1,290,000	5.000
2039	1,355,000	5.000
2040	1,425,000	5.000
2041	1,495,000	5.000
2042	1,575,000	5.000
2043	1,655,000	5.000
2044	1,740,000	5.000
2045	1,830,000	5.000
2046	1,920,000	5.000
2049	6,380,000	5.000
2054	13,010,000	5.000

Each 2024 Bond will bear interest (i) from the Closing Date, if it is authenticated before January 15, 2025, or (ii) otherwise, from the January 15 or July 15 that is, or immediately precedes, the date on which the 2024 Bond is authenticated (unless the payment of interest on the 2024 Bond is in default, in which case the 2024 Bond will bear interest from the date to which interest has

been paid). Interest on the 2024 Bonds will be computed on the basis of a year of 360 days and twelve 30-day months.

The principal of and premium, if any, and interest on the 2024 Bonds are payable in lawful money of the United States of America, on a parity basis with the Outstanding Bonds (if any) and Outstanding Parity Indebtedness (if any) issued by the Authority under the Master Indenture, and in all respects only from the Net Revenues and other property pledged for such purpose under the Master Indenture. The principal of and premium, if any, on the 2024 Bonds will be payable upon presentation and surrender of the 2024 Bonds at the designated corporate trust office of the Paying Agent except that, for so long as Cede & Co. or other nominee of DTC is the sole registered Owner of the 2024 Bonds, principal of and premium, if any, on the 2024 Bonds will be paid as provided in the Letter of Representations.

Interest on the 2024 Bonds will be paid by check or draft mailed by the Paying Agent on each interest payment date to the Owners of the 2024 Bonds at their addresses as they appear on the registration books of the Authority maintained by the Paying Agent. The registered owners will be determined on the January 1 or July 1, as appropriate, which next precedes each interest payment date. Notwithstanding the foregoing, but subject to the paragraph above, if the Owner of any 2024 Bond (i) owns at least \$1,000,000 in aggregate principal amount of 2024 Bonds and (ii) has provided satisfactory notice regarding payment via wire transfer to the Trustee, then interest will be paid to such Owner by wire transfer.

**Section 2.3 Book Entry Provisions.** (a) The 2024 Bonds will be registered in the name of Cede & Co., a nominee of The Depository Trust Company ("DTC"), and immobilized in the custody of DTC, or in the custody of the Trustee, as F.A.S.T. agent for DTC. One fully registered 2024 Bond for the original principal amount of each maturity will be registered to Cede & Co. Beneficial owners of the 2024 Bonds will not receive physical delivery of the 2024 Bonds. Individual purchases of the 2024 Bonds may be made in book-entry form only in original principal amounts of \$5,000 or integral multiples of \$5,000. Payments of the principal of and premium, if any, and interest on the 2024 Bonds will be made to DTC or its nominee as the registered Owner of the 2024 Bonds on the applicable payment date.

DTC is responsible for the transfer of the payments of the principal of and premium, if any, and interest on the 2024 Bonds to the participants of DTC, which include securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations (the "Participants"). Transfer of the payments of the principal of and premium, if any, and interest on the 2024 Bonds to beneficial owners of the 2024 Bonds is the responsibility of the Participants and other nominees of such beneficial owners.

Transfer of ownership interests in the 2024 Bonds will be made by DTC and its Participants, acting as nominees of the beneficial owners of the 2024 Bonds, in accordance with rules specified by DTC and its Participants. Neither the Authority nor the Trustee makes any assurances that DTC, its Participants or other nominees of the beneficial owners of the 2024 Bonds will act in accordance with those rules or on a timely basis. For every transfer and exchange of beneficial ownership interest in the 2024 Bonds, the beneficial owner may be charged sums sufficient to cover any tax, fee or other governmental charge that may be imposed in relation to it.



THE AUTHORITY AND THE TRUSTEE DISCLAIM ANY RESPONSIBILITY OR OBLIGATIONS TO THE PARTICIPANTS OR THE BENEFICIAL OWNERS WITH RESPECT TO (I) THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC OR ANY PARTICIPANT, (II) THE PAYMENT BY DTC OR ANY PARTICIPANT OF ANY AMOUNT DUE TO ANY BENEFICIAL OWNER IN RESPECT OF THE PRINCIPAL OF AND PREMIUM, IF ANY, AND INTEREST ON THE 2024 BONDS, (III) THE DELIVERY BY DTC OR ANY PARTICIPANT OF ANY NOTICE TO ANY BENEFICIAL OWNER WHICH IS REQUIRED OR PERMITTED UNDER THE TERMS OF THE MASTER INDENTURE OR THIS FOURTH SUPPLEMENTAL INDENTURE TO BE GIVEN TO OWNERS OF THE 2024 BONDS, (IV) THE SELECTION OF THE BENEFICIAL OWNERS TO RECEIVE PAYMENT IN ANY PARTIAL REDEMPTION OF THE 2024 BONDS OR (V) ANY CONSENT GIVEN OR OTHER ACTION TAKEN BY DTC AS OWNER OF THE 2024 BONDS.

So long as Cede & Co., as nominee of DTC, is the sole registered Owner of the 2024 Bonds, references in the Master Indenture or this Fourth Supplemental Indenture to the Owners, holders or registered owners of the 2024 Bonds means Cede & Co. and not beneficial owners of the 2024 Bonds. Any notice to or consent requested from Owners under the Master Indenture or this Fourth Supplemental Indenture shall be given to or requested from Cede & Co.

(b) Replacement 2024 Bonds (the "Replacement Bonds") will be issued directly to beneficial owners of 2024 Bonds rather than to DTC, or its nominee, but only in the event that:

(1) DTC determines not to continue to act as securities depository for the 2024 Bonds;

(2) The Trustee or the Authority has advised DTC of its determination that DTC is incapable of discharging its duties; or

(3) The Trustee or the Authority has determined that it is in the best interests of the beneficial owners of the 2024 Bonds not to continue the book-entry system of transfer.

Upon occurrence of the events described in clauses (1) or (2), the Trustee will attempt to locate another qualified securities depository. If DTC makes the determination described in clause (1) and the Trustee or the Authority fails to locate another qualified securities depository to replace DTC, the Authority will execute and the Trustee will authenticate and deliver to the Participants the Replacement Bonds (substantially in the form set forth in Exhibit A to this Fourth Supplemental Indenture) to which the Participants are entitled. In the event the Trustee or the Authority makes the determination described in clauses (2) or (3) (the Trustee and the Authority undertake no obligation to make any investigation to determine the occurrence of any events that would permit the Trustee or the Authority to make any such determination) and, in the case of the determination under clause (2), the Trustee or the Authority has failed to locate another qualified securities depository and has made provisions to notify the beneficial owners of 2024 Bonds by mailing an appropriate notice to DTC, the Authority will execute and the Trustee will authenticate and deliver to the Participants the appropriate Replacement Bonds (substantially in the form set forth in Exhibit A to this Fourth Supplemental Indenture) to which the Participants are entitled. The Trustee is entitled to rely on the records provided by DTC as to the Participants entitled to

receive Replacement Bonds. The principal of and premium, if any, and interest on the Replacement Bonds will be payable as provided in Section 2.2, and the Replacement Bonds will be transferable and exchangeable in accordance with Section 3.7 of the Master Indenture.

**Section 2.4 Form of 2024 Bonds.** The 2024 Bonds will be issued substantially in the form set forth in Exhibit A to this Fourth Supplemental Indenture, with appropriate variations, omissions and insertions as permitted or required by the Master Indenture and this Fourth Supplemental Indenture. There may be endorsed on the 2024 Bonds such legend or text as may be necessary or appropriate to conform to any applicable rules and regulations of any governmental authority or any usage or requirement of law.

**Section 2.5 Application of 2024 Bond Proceeds.** The Trustee will apply the proceeds (net of any underwriters' discount and including net original issue premium) from the sale of the 2024 Bonds (\$50,373,145.39) as follows:

(a) The sum of \$50,000,000.00 will be irrevocably deposited in 2024 Project Account hereby established; and

(b) The sum of \$373,145.39 will be deposited in the 2024 Costs of Issuance Account hereby established.

### **ARTICLE III REDEMPTION OF 2024 BONDS**

**Section 3.1 Redemption of the 2024 Bonds.** The 2024 Bonds may not be called for redemption except as provided in this Article.

**Section 3.2 Optional Redemption.** (a) The 2024 Bonds maturing on or prior to July 15, 2034, are not subject to optional redemption prior to maturity. The 2024 Bonds maturing on or after July 15, 2035, are subject to redemption prior to their respective maturities at the option of the Authority on or after July 15, 2034, in whole or in part (in increments of \$5,000), at any time, at par plus unpaid interest accrued on the principal amount to be redeemed to the date fixed for redemption.

(b) The amount of 2024 Bonds to be redeemed pursuant to this Section may be reduced in accordance with the provisions of Section 7.4(b) of the Master Indenture.

**Section 3.3 Mandatory Sinking Fund Redemption.** (a) The 2024 Bonds maturing on July 15, 2049, are subject to mandatory sinking fund redemption in part, on July 15 in the years and in the amounts set forth below, at a redemption price equal to 100% of the principal amount of such 2024 Bonds to be redeemed plus the unpaid interest accrued thereon to the date fixed for redemption:

<u>Year</u>	<u>Amount</u>
2047	\$2,020,000
2048	2,125,000
2049*	2,235,000

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\*Stated maturity

(b) The 2024 Bonds maturing on July 15, 2054, are subject to mandatory sinking fund redemption in part, on July 15 in the years and in the amounts set forth below, at a redemption price equal to 100% of the principal amount of such 2024 Bonds to be redeemed plus the unpaid interest accrued thereon to the date fixed for redemption:

<u>Year</u>	<u>Amount</u>
2050	\$2,350,000
2051	2,470,000
2052	2,595,000
2053	2,730,000
2054*	2,865,000

---

\*Stated maturity

**Section 3.4 Selection of 2024 Bonds for Redemption; Notices.** If less than all of the 2024 Bonds are to be called for optional redemption, the maturities to be called will be as directed by the Authority in such manner as the Authority may determine to be in its best interests. If less than all fungible bonds of any maturity of 2024 Bonds are to be called for optional redemption, the 2024 Bonds within each maturity to be called will be selected by the Paying Agent or, if the 2024 Bonds are held in book-entry form, by DTC, in a manner which the Paying Agent determines to be appropriate and fair or in accordance with DTC's procedure, as appropriate. No notice of optional redemption of any of the 2024 Bonds will be given by the Trustee unless (i) there has been deposited with the Trustee the cash or permissible securities maturing not later than the redemption date and necessary to pay in full when due any 2024 Bonds to be redeemed or (ii) the notice of redemption states that such call for redemption is conditioned upon the Trustee receiving sufficient funds to redeem the 2024 Bonds on the date selected for redemption. So long as DTC's book-entry system is being used for determining beneficial ownership of the 2024 Bonds, the Trustee and Paying Agent will send such notice with respect to the redemption of the 2024 Bonds to DTC (or its nominee) as registered Owner of the 2024 Bonds.

## **ARTICLE IV FUNDS AND ACCOUNTS**

**Section 4.1 2024 Project Account.** As provided in Section 6.1 of the Master Indenture, there is established with the Trustee an account in the Project Fund to be designated the 2024 Project Account. The money in the 2024 Project Account will be applied by the Trustee to pay the Cost of the Project in accordance with, and within three (3) Business Days after receipt of, written instructions of an Authorized Authority Representative substantially in the form of Exhibit B hereto, using procedures similar to those described in Section 6.2 of the Master Indenture. The money and any investments held in the 2024 Project Account, as directed by an Authorized Authority Representative in a manner consistent with and permitted by the Master Indenture, are pledged to secure the 2024 Bonds.

**Section 4.2 2024 Costs of Issuance Account.** There is established with the Trustee an account in the Project Fund to be designated the 2024 Costs of Issuance Account. The money in the 2024 Costs of Issuance Account will be applied by the Trustee to pay costs of issuance of the 2024 Bonds in accordance with, and within three (3) Business Days after receipt of, written

instructions of an Authorized Authority Representative substantially in the form of Exhibit C hereto using procedures similar to those described in Section 6.2 of the Master Indenture. Any amounts remaining in the 2024 Costs of Issuance Account on December 1, 2024, will be transferred to the 2024 Debt Service Account and used to pay interest on the 2024 Bonds.

**Section 4.3 2024 Debt Service Account.** As provided in Section 7.5 of the Master Indenture, there is established an account in the Parity Debt Service Fund to be designated as the 2024 Debt Service Account. The Authority shall hold the 2024 Debt Service Account and make deposits in the 2024 Debt Service Account in accordance with the Master Indenture. The Authority shall use amounts in the 2024 Debt Service Account to make payments on the 2024 Bonds in accordance with the terms thereof and the terms of this Fourth Supplemental Indenture.

## **ARTICLE V SPECIAL COVENANTS**

**Section 5.1 Arbitrage Covenants.** (a) The Authority will not take or approve or fail to take or approve any action, investment or use of the proceeds of the 2024 Bonds which would cause the 2024 Bonds to be "arbitrage bonds" within the meaning of Section 148 of the Code and the applicable regulations thereunder. The Authority will not request or approve the use or investment of the proceeds of the 2024 Bonds other than in accordance with the Non-Arbitrage Certificate.

(b) The Trustee will be fully protected in acting on any rebate determination made by the Authority at any time or contained in any certificate of the Authority and will not be liable or responsible in any manner to any person for so acting, notwithstanding any error in any such determination. The Trustee will not be responsible or liable to the Authority or any other party for the failure of the Authority to comply with the provisions of this Section.

**Section 5.2 Opinion of Bond Counsel.** If the Authority shall provide to Trustee an opinion of nationally-recognized bond counsel addressed to the Authority and the Trustee and acceptable to the Trustee to the effect that any action required under this Article by incorporation or otherwise is not or is no longer required to maintain the exclusion from gross income of the interest on the 2024 Bonds under Section 103 of the Code, the Authority and the Trustee may rely conclusively on such opinion in complying with the provisions of this Article.

## **ARTICLE VI AMENDMENTS TO MASTER INDENTURE**

**Section 6.1 Prior Amendments to Master Indenture.** Reference is hereby made to the amendments to the Master Indenture contained in Article II of the First Supplemental Indenture of Trust dated as of September 1, 1999, by and between the Authority and the Trustee, which provisions are incorporated in the Master Indenture and made a part thereof. The amended provisions are set forth in Exhibit D.

### **Section 6.2 Further Amendments to Master Indenture.**

(a) The Master Indenture is hereby amended to include the following provisions:



(1) Notwithstanding anything to the contrary contained in the Master Indenture, for purposes of the Authority complying with Section 5.3(h)(2)(i) of the Master Indenture, the Authority (and its Consulting Engineer or independent certified public accountant) may use the most recent audited financial statements of the Authority that have been prepared in accordance with Section 9.10 of the Master Indenture in lieu of using data from 12 consecutive months of the 18 months preceding the issuance of the proposed additional debt.

(2) Section 15.5 of the Master Indenture is hereby amended to include the following paragraph, which shall be inserted at the end of such section:

"In addition, the Trustee shall have the right to accept and, as applicable, act upon notices, approvals, consents, requests, instructions or directions pursuant to this Master Indenture sent in writing, (provided that any communication sent to the Trustee hereunder must be in the form of a document signed manually or by way of a digital signature provided via DocuSign (or such other digital signature provider as specified in an certificate of the Authority), in English (herein "Digital Signatures"), by unsecured e-mail, facsimile transmission, portable data format ("PDF"), or other similar unsecured electronic methods ("Electronic Means"), provided, however, that the Authority shall provide to the Trustee an incumbency certificate listing designated persons with the authority to provide such instructions and containing specimen signatures of such designated persons, which incumbency certificate shall be amended whenever a person is to be added or deleted from the listing. If the Authority elects to give the Trustee instructions by 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 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 notwithstanding that such instructions conflict or are inconsistent with a subsequent written instruction. The Authority agrees to assume all risks arising out of the use of Digital Signatures and Electronic Means to submit communications, instructions and directions 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."

(3) The Master Indenture is hereby amended to include the following new Section 15.9:

**"Section 15.9. USA Patriot and Freedom Act Requirements of the Trustee.** To help the government fight the funding of terrorism and money laundering activities, federal law requires all financial institutions to obtain, verify and record information that identifies each person who opens an account. Accordingly, the Trustee will require documentation from each non-individual person such as a business entity, a charity, a trust, or other legal entity verifying its formation and existence as a legal entity. The Trustee may also seek financial statements, licenses, identification and authorization documents from individuals claiming authority to represent the entity or other relevant documentation."

(b) Upon receipt of the consent of the holders of a majority of the Outstanding Parity Indebtedness and Bonds, Section 11.8 of the Master Indenture is hereby amended to include the following paragraph, which shall be inserted at the end of such section:

"The Trustee shall not be responsible or liable for any failure or delay in the performance of its obligations under this Indenture arising or caused, directly or indirectly, by circumstances beyond its reasonable control, including by way of example and without limitation, acts of God; earthquakes; fire; flood; hurricanes or other storms; wars; terrorism; similar military disturbances; sabotage, epidemic; pandemic; riots; interruptions; loss or malfunctions of utilities or communications services; accidents; labor disputes; and acts of civil protest or military authority or other governmental action; it being understood that the Trustee shall use commercially reasonable efforts that are consistent with accepted practices in the banking industry to resume performance as soon as reasonably practicable under any such circumstances."

## **ARTICLE VII MISCELLANEOUS**

**Section 7.1 Successors and Assigns.** This Fourth Supplemental Indenture is binding upon, inures to the benefit of and is enforceable by its parties and their respective successors and assigns.

**Section 7.2 Severability.** If any provision of this Fourth Supplemental Indenture is held invalid by any court of competent jurisdiction, such holding will not invalidate any other provision.

**Section 7.3 Governing Law.** This Fourth Supplemental Indenture will be governed by and construed under the applicable laws of the Commonwealth.

**Section 7.4 Counterparts.** This Fourth Supplemental Indenture may be executed in several counterparts, each of which will be an original, and the counterparts will together constitute one and the same instrument.

**Section 7.5 Parties Interested.** Nothing in this Fourth Supplemental Indenture expressed or implied is intended or will be construed to confer upon any Person, other than the Authority, the Trustee and the Owners of the 2024 Bonds, any right, remedy or claim under or by reason of this Fourth Supplemental Indenture, this Fourth Supplemental Indenture being intended for the sole and exclusive benefit of the Authority, the Trustee and the Owners of the 2024 Bonds.

**Section 7.6 USA Patriot and Freedom Act Requirements of the Trustee.** To help the government fight the funding of terrorism and money laundering activities, federal law requires all financial institutions to obtain, verify and record information that identifies each person who opens an account. Accordingly, the Trustee will require documentation from each non-individual person such as a business entity, a charity, a trust, or other legal entity verifying its formation and existence as a legal entity. The Trustee may also seek financial statements, licenses, identification and authorization documents from individuals claiming authority to represent the entity or other relevant documentation.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties have caused this Fourth Supplemental Indenture to be executed on their behalf by their duly authorized officers or representatives.

[SEAL]

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXRENEW**

By: \_\_\_\_\_  
Name: Justin Carl  
Title: Chief Executive Officer

**U.S. BANK TRUST COMPANY, NATIONAL  
ASSOCIATION, as Trustee**

By: \_\_\_\_\_  
Name: W. F. Michie, III  
Title: Assistant Vice President

**EXHIBIT A**

**FORM OF 2024 BOND**

**R-\_\_\_\_\_**

**CUSIP**

**UNITED STATES OF AMERICA  
COMMONWEALTH OF VIRGINIA**

**ALEXRENEW  
(CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY)  
WASTEWATER REVENUE BOND,  
SERIES 2024  
(GREEN BONDS)**

**INTEREST RATE  
\_\_\_\_\_ %**

**MATURITY DATE  
July 15, 20\_\_\_\_\_**

**DATED DATE  
June 25, 2024**

**REGISTERED OWNER: CEDE & CO.**

**PRINCIPAL AMOUNT: \_\_\_\_\_ MILLION \_\_\_\_\_ THOUSAND DOLLARS  
(\$\_\_\_\_\_)**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A ALEXRENEW**, a public body politic and corporate of the Commonwealth of Virginia (the "Authority"), for value received, promises to pay, solely from the revenues and other property pledged to the payment of this Bond, to the registered owner of this Bond or legal representative, the principal sum stated above on the maturity date stated above, and to pay solely from such source, interest on the principal amount of this Bond at the annual rate stated above, payable semi-annually on each January 15 and July 15, commencing on January 15, 2025, all subject to prior redemption as described in this Bond. This Bond will bear interest (i) from June 25, 2024, if this Bond is authenticated before January 15, 2025, or (ii) otherwise, from the January 15 or July 15 that is, or immediately precedes, the date on which this Bond is authenticated (unless the payment of interest on this Bond is in default, in which case this Bond will bear interest from the date to which interest has been paid). The principal of and premium, if any, on this Bond is payable upon presentation and surrender of this Bond at the designated corporate trust office of U.S. Bank Trust Company, National Association, Richmond, Virginia, as successor Trustee (the "Trustee") under the Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"). Capitalized terms used but not defined have the meaning set forth in the Master Indenture. Interest on this Bond will be paid by check or draft mailed to the person registered on the January 1 or July 1, as appropriate, next preceding the interest payment date as the registered owner of this Bond at the address of such person as it appears on the registration books of the Authority maintained by the Trustee. Interest on this Bond will be computed on the basis of a year of 360 days and twelve 30-day months. Notwithstanding the foregoing, if (i) the registered owner of this Bond owns at least \$1,000,000 in aggregate principal amount of Bonds and (ii) such owner has provided satisfactory prior notice of a wire address to the Trustee, then interest on this Bond will be paid by wire transfer. Principal of and premium, if any, and interest on this Bond are payable in lawful money of the United States of America. In



case the date of maturity of the principal of this Bond or the date fixed for the payment of interest on or the redemption of this Bond is not a Business Day, as defined in the Master Indenture, then payment of the principal and premium, if any, and interest need not be made on such date, but may be made on the next succeeding date which is a Business Day, and if made on such next succeeding Business Day no additional interest will accrue for the period after such date of maturity or date fixed for redemption.

This Bond and the issue of which it is a part and the premium, if any, and interest on this Bond are limited obligations of the Authority and payable solely from the revenues and other property pledged and assigned to the Trustee under the terms of the Master Indenture to secure payment of this Bond. IN ACCORDANCE WITH THE ACT, THE 2024 BONDS AND THE PREMIUM, IF ANY, AND THE INTEREST ON THEM SHALL NOT CONSTITUTE A PLEDGE OF THE FAITH AND CREDIT OF THE COMMONWEALTH OR ANY OF ITS POLITICAL SUBDIVISIONS, INCLUDING THE AUTHORITY. THE ISSUANCE OF THE 2024 BONDS DOES NOT DIRECTLY OR INDIRECTLY OR CONTINGENTLY OBLIGATE THE COMMONWEALTH OR ANY OF ITS POLITICAL SUBDIVISIONS, INCLUDING THE AUTHORITY, TO LEVY ANY TAXES OR TO MAKE ANY APPROPRIATION FOR THE PAYMENT OF THE 2024 BONDS EXCEPT FROM THE FUNDS PLEDGED UNDER THE MASTER INDENTURE. THE AUTHORITY HAS NO TAXING POWER.

This 2024 Bond is one of an issue of \$45,680,000 Wastewater Revenue Bonds, Series 2024 (Green Bonds) (the "2024 Bonds"), of like tenor, except as to number, denomination, interest rate, privilege of redemption and maturity, authorized and issued by the Authority, pursuant to the Water and Waste Authorities Act, Chapter 51, Title 15.2 of the Code of Virginia of 1950, as amended, for the purpose of using the proceeds thereof, along with other available funds, if any, to (i) pay all or a portion of the cost of various projects comprising a portion of the System (as more particularly defined in the Master Indenture) and (ii) pay the underwriter's discount and costs of issuance of the 2024 Bonds. The 2024 Bonds are issued under the Master Indenture as further supplemented by a Fourth Supplemental Indenture of Trust dated as of June 1, 2024 (the "Fourth Supplemental Indenture"), between the Authority and the Trustee. The Master Indenture and the Fourth Supplemental Indenture are referred to collectively in this Bond as the "Indenture." Reference is made to the Indenture for a description of the revenues and property pledged and assigned and the provisions, among other things, with respect to the nature and extent of the security for the 2024 Bonds, the rights and obligations of the Authority and the Trustee, the terms on which the 2024 Bonds are issued, the rights of the registered owners of the 2024 Bonds and the provisions for defeasance of such rights. The 2024 Bonds are secured equally and ratably under the Master Indenture with the Outstanding Bonds (if any) of the Authority and the Authority's Outstanding Parity Indebtedness issued under the Master Indenture and will be secured equally and ratably under the Master Indenture with future Bonds or Parity Indebtedness of the Authority issued in accordance with the terms of the Master Indenture.

The 2024 Bonds may not be called for redemption except as provided in the Fourth Supplemental Indenture and described in the succeeding paragraphs.

The 2024 Bonds maturing on or prior to July 15, 2034, are not subject to optional redemption prior to maturity. The 2024 Bonds maturing on or after July 15, 2035, are subject to redemption prior to their respective maturities at the option of the Authority on or after July 15,

2034, in whole or in part (in increments of \$5,000) at any time, at par plus unpaid interest accrued on the principal amount to be redeemed to the date fixed for redemption.

The 2024 Bonds stated to mature July 15, 2049, are subject to mandatory redemption, in part, on July 15 in the years and at the principal amounts set forth below at a redemption price equal to 100% of the principal amount to be redeemed, plus interest accrued to the date fixed for redemption:

<u>Year</u>	<u>Amount</u>
2047	\$2,020,000
2048	2,125,000
2049*	2,235,000

---

\*Stated maturity

The 2024 Bonds stated to mature July 15, 2054, are subject to mandatory redemption, in part, on July 15 in the years and at the principal amounts set forth below at a redemption price equal to 100% of the principal amount to be redeemed, plus interest accrued to the date fixed for redemption:

<u>Year</u>	<u>Amount</u>
2050	\$2,350,000
2051	2,470,000
2052	2,595,000
2053	2,730,000
2054*	2,865,000

---

\*Stated maturity

The amount of 2024 Bonds to be redeemed pursuant to the two preceding paragraphs may be reduced in accordance with the provisions of Section 7.4(b) of the Master Indenture.

If any of the 2024 Bonds are called for redemption, the Trustee will cause a notice of redemption to be sent by first class mail, postage prepaid, not less than thirty nor more than sixty days before the date fixed for redemption, to the registered owners of the 2024 Bonds called for redemption, at their respective addresses as they appear on the registration books maintained by the Trustee. The receipt of notice is not a condition precedent to the redemption and failure to mail a notice to a registered owner will not affect the validity of the proceedings for the redemption of the 2024 Bonds. If this 2024 Bond is duly called for redemption and payment of the principal of and premium, if any, and unpaid interest accrued to the date fixed for redemption has been made or provided for, then, notwithstanding that this 2024 Bond has not been surrendered for cancellation, interest on this 2024 Bond will cease to accrue from the date fixed for redemption, and, from and after the date fixed for redemption, this 2024 Bond will no longer be entitled to any lien, benefit or security under the Indenture, and the registered owner of this 2024 Bond will have no rights in respect of this 2024 Bond except to receive payment of the principal of and premium, if any, and unpaid interest accrued to the date fixed for redemption on this 2024 Bond. Any notice

of optional redemption may be conditioned upon the receipt by the Trustee of sufficient funds to redeem the 2024 Bonds called for redemption.

The registered owner of this Bond has no right to enforce the provisions of the Indenture or to take any action with respect to any Event of Default under the Indenture, or to institute, appear in or defend any suit or other proceeding with respect to the Indenture, except as provided in the Indenture. Upon the occurrence of certain events or upon certain conditions, in the manner and with the effect set forth in the Indenture, the principal of all of the Bonds issued under the Indenture and then outstanding, together with any accrued interest on them, may become or may be declared due and payable before their stated maturities. Modifications or alterations in the Indenture, or any supplements to it, may be made to the extent and under the circumstances provided by the Master Indenture.

The 2024 Bonds are issued as registered bonds without coupons in denominations of \$5,000 or any integral multiple of \$5,000. Upon surrender of this Bond at the designated corporate trust office of the Trustee, in the manner and subject to the limitations and conditions provided for in the Indenture, this Bond may be exchanged for an equal aggregate principal amount of 2024 Bonds of like date and tenor and of authorized denominations and bearing interest at the same rate.

The transfer of this Bond may be registered by the registered owner in person or by his or her duly authorized attorney or legal representative at the designated corporate trust office of the Trustee, but only in the manner and subject to the limitations and conditions provided for in the Indenture and upon surrender and cancellation of this Bond. Upon the registration of any transfer, the Authority will execute and the Trustee will authenticate and deliver in exchange for this Bond a new Bond or Bonds, registered in the name of the transferee, of like date and tenor and of authorized denominations for the aggregate principal amount which the registered owner is entitled to receive. Before due registration of any transfer of this Bond, the Trustee will treat the registered owner shown on the registration books maintained by the Trustee as the person exclusively entitled to the payment of principal of and premium, if any, and interest on this Bond, and the exercise of all other rights and powers of the owner, except that interest will be paid to the registered owner as of the January 1 or July 1 preceding the interest payment date.

All acts and conditions required to happen, exist or be performed precedent to and in connection with the issuance of this Bond have happened, exist and have been performed.

This Bond will not become obligatory for any purpose or be entitled to any security or benefit under the Indenture or be valid until the Trustee has executed the Certificate of Authentication appearing on this Bond.

[Signature Page Follows]

IN WITNESS WHEREOF, the City of Alexandria, Virginia, Sanitation Authority, d/b/a AlexRenew has caused this Bond to be executed by the manual signature of its Chair, its seal to be affixed to this Bond and attested by the manual signature of its Secretary-Treasurer.

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXRENEW**

By: \_\_\_\_\_  
Name: John Hill  
Title: Chair

[SEAL]

ATTEST:

By: \_\_\_\_\_  
Name: Adriana Caldarelli  
Title: Secretary-Treasurer



## **CERTIFICATE OF AUTHENTICATION**

This Bond is one of the Bonds described in the within-mentioned Master Indenture and Fourth Supplemental Indenture.

**AUTHENTICATION DATE:** \_\_\_\_\_, 2024

**U.S. BANK TRUST COMPANY, NATIONAL  
ASSOCIATION**, as successor Trustee and Paying  
Agent

By: \_\_\_\_\_  
Name: W. F. Michie, III  
Title: Assistant Vice President

ASSIGNMENT

FOR VALUE RECEIVED, the undersigned sells, assigns and transfers unto

---

---

---

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

PLEASE INSERT SOCIAL SECURITY OR OTHER  
IDENTIFYING NUMBER OF ASSIGNEE: \_\_\_\_\_

this Bond and does irrevocably constitute and appoint \_\_\_\_\_, attorney,  
to transfer this Bond on the books kept for registration of this Bond, with full power of substitution  
in the premises.

Dated: \_\_\_\_\_

Signature Guaranteed:

(NOTE: Signature(s) must be guaranteed by an Eligible Guarantor Institution such as a Commercial Bank, Trust Company, Securities Broker/Dealer, Credit Union or Savings Association meeting the requirements of the Trustee which requirements will include membership in STAMP or such other "signature guarantee program" as may be determined by the Trustee in addition to, or in substitution for, STAMP, all in accordance with the Securities Exchange Act of 1934, as amended.)

(NOTE: The signature above must correspond with the name of the Registered Owner as it appears on the books kept for registration of this Bond in every particular, without alteration or change.)

**EXHIBIT B**

**FORM OF REQUISITION**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A  
ALEXRENEW**

**2024 PROJECT ACCOUNT**

**REQUISITION NO. \_\_\_\_\_**

The City of Alexandria, Virginia, Sanitation Authority, d/b/a AlexRenew (the "Authority") hereby requests payment to the order of the person identified in the supporting documentation attached hereto in the total amount of \$\_\_\_\_\_ for a portion of the Costs of the Project financed with the proceeds of the Authority's \$45,680,000 Wastewater Revenue Bonds, Series 2024 (Green Bonds) (the "2024 Bonds"). In connection with this Requisition, the undersigned hereby represents and warrants to the Trustee as follows:

1. The undersigned is an Authorized Authority Representative, qualified to execute this Requisition for payment on behalf of the Authority and is knowledgeable as to the matters set forth herein.

2. The Authority has incurred the obligation set forth in this Requisition to pay Costs of the Project relating to the 2024 Bonds.

3. The Authority certifies that the disbursement being requested herein is a proper charge against the 2024 Project Account, in accordance with the terms of the Master Indenture as supplemented by the Fourth Supplemental Indenture.

4. No portion of the amount being requested has been the basis for a prior requisition which has been paid from the 2024 Project Account.

Dated: \_\_\_\_\_, 2024

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXRENEW**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**EXHIBIT C**

**FORM OF REQUISITION**

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY, D/B/A  
ALEXRENEW**

**2024 COSTS OF ISSUANCE ACCOUNT**

**REQUISITION NO. \_\_\_\_\_**

The City of Alexandria, Virginia, Sanitation Authority, d/b/a AlexRenew (the "Authority") hereby requests payment to the order of the person identified in the supporting documentation attached hereto in the total amount of \$\_\_\_\_\_ for a portion of the costs of issuance of the Authority's \$45,680,000 Wastewater Revenue Bonds, Series 2024 (Green Bonds) (the "2024 Bonds"). In connection with this Requisition, the undersigned hereby represents and warrants to the Trustee as follows:

1. The undersigned is an Authorized Authority Representative, qualified to execute this Requisition for payment on behalf of the Authority and is knowledgeable as to the matters set forth herein.

2. The Authority has incurred the obligation set forth in this Requisition to pay costs of issuance relating to the 2024 Bonds.

3. The Authority certifies that the disbursement being requested herein is a proper charge against the 2024 Costs of Issuance Account, in accordance with the terms of the Master Indenture as supplemented by the Fourth Supplemental Indenture.

4. No portion of the amount being requested has been the basis for a prior requisition which has been paid from the 2024 Costs of Issuance Account.

Dated: \_\_\_\_\_, 2024

**CITY OF ALEXANDRIA, VIRGINIA,  
SANITATION AUTHORITY, D/B/A  
ALEXRENEW**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_



## EXHIBIT D

### PRIOR AMENDMENTS TO MASTER INDENTURE

Section 1.1 of the Master Indenture of Trust (the "Master Indenture") dated as of March 15, 1999, between City of Alexandria, Virginia, Sanitation Authority, d/b/a AlexRenew (the "Authority") and U.S. Bank Trust Company, National Association, as successor trustee (the "Trustee") has been amended by Article II of the First Supplemental Indenture of Trust (the "First Supplemental Indenture") dated as of September 1, 1999, as follows:

Section 1.1 of the Master Indenture has been amended to delete the definition of "Net Proceeds" and substitute the following therefor:

*"Net Proceeds" means the proceeds from any property or casualty insurance recovery, or any other amounts recovered by or awarded to the Authority as a result of or in connection with the condemnation of or loss of title to all or any part of the System, remaining after payment of attorneys' fees, fees and expenses of the Authority and the Trustee and all other expenses incurred in collection of the gross proceeds.*

Section 3.2 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

***Section 3.2. Indenture Constitutes Contract.*** *In consideration of the purchase and acceptance of Bonds or Parity Indebtedness by their Owners, the provisions of this Master Indenture and Supplemental Indentures shall be a part of the contract of the Authority with the Owners and shall constitute a contract among the Authority, the Trustee and the Owners, from time to time, of Bonds or Parity Indebtedness.*

Section 3.5 of the Master Indenture has been amended by adding the phrase "or any Assistant Secretary or Assistant Secretary-Treasurer" at the end of such sentence.

Section 14.1 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

***Section 14.1. Discharge of Indenture.*** *If (i) all Bonds and Parity Indebtedness secured by this Master Indenture have become due and payable or irrevocable instructions to redeem the Bonds or Parity Indebtedness or to pay them at maturity have been given by the Authority to the Trustee; and (ii) the Trustee holds cash or noncallable Defeasance Obligations the principal of and interest on which at maturity will be sufficient (A) if Bonds and Parity Indebtedness have been called for redemption, or irrevocable instructions to call Bonds and Parity Indebtedness have been given*

*to the Trustee, to redeem in accordance with the relevant Sections of this Master Indenture and the applicable Supplemental Indenture all such Bonds and Parity Indebtedness on the date set for such redemption, (B) to pay at maturity all Outstanding Bonds and Parity Indebtedness not called for redemption, (C) to pay interest accruing on all Bonds and Parity Indebtedness until their redemption or payment at maturity, and (D) to pay the Trustee its reasonable fees and expenses, including the costs and expenses of cancelling and discharging this Master Indenture, then the Trustee shall cancel and discharge the lien of this Master Indenture and execute and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority such instruments in writing as shall be required to release such lien, and assign and deliver to the Authority any property subject to this Master Indenture which may then be in its possession, except funds or securities in which such funds are invested which are held by the Trustee for the payment of the principal of and premium, if any, and interest on the Bonds and Parity Indebtedness.*

*In the event that all of the Bonds and Parity Indebtedness secured by this Master Indenture are paid or deemed paid in accordance with the terms of this Master Indenture, then the right and interest of the Trustee in and to the trust estate created by this Master Indenture and all covenants, agreements and other obligations of the Authority to the Owners shall cease and be discharged and satisfied. If any Bonds and Parity Indebtedness are paid or deemed paid in accordance with the terms of this Master Indenture, then such Bonds and Parity Indebtedness shall cease to be entitled to any lien, benefit or security under this Master Indenture (other than the right to receive payment and certain rights regarding registration and transfer) and all covenants, agreements and other obligations of the Authority to the Owners of such Bonds and Parity Indebtedness shall cease and be discharged and satisfied.*

Section 14.2 of the Master Indenture has been amended to amend and restate such section in its entirety as follows:

**Section 14.2. Bonds and Parity Indebtedness Deemed to be Paid.** *Bonds and Parity Indebtedness shall be deemed paid and no longer Outstanding for the purposes of this Master Indenture when there has been deposited with the Trustee cash or noncallable Defeasance Obligations the principal of and interest on which will be sufficient to pay or redeem such Bonds and Parity Indebtedness and to pay interest accruing on such Bonds and Parity Indebtedness to their payment or redemption date (whether on or before their maturity or redemption date); provided, however, that if such'*

*Bonds and Parity Indebtedness are to be redeemed before their maturity, notice of the redemption must have been duly given or irrevocable instructions to redeem such Bonds and Parity Indebtedness must have been given by the Authority to the Trustee.*

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**APPENDIX B**

**FINANCIAL STATEMENTS OF THE AUTHORITY  
FOR THE FISCAL YEAR ENDED JUNE 30, 2023**

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FISCAL YEARS ENDED JUNE 30, 2023 & 2022  
ALEXANDRIA, VA



# Annual Comprehensive Financial Report



**ALEXRENEW**  
**ALEXANDRIA, VA**  
**ANNUAL COMPREHENSIVE FINANCIAL REPORT**  
**FISCAL YEARS ENDED JUNE 30, 2023 and 2022**

**Prepared by the Finance Department**



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**ALEXRENEW**  
**ANNUAL COMPREHENSIVE FINANCIAL REPORT**  
**FISCAL YEAR ENDED JUNE 30, 2023**

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# **Introduction Section**

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703.721.3500 | 1800 Limerick Street | Alexandria, Virginia 22314

AlexRenew.com f @ in

## AlexRenew Transmittal Letter

November 13, 2023

To the AlexRenew Board of Directors, our customers, and interested parties:

The Annual Comprehensive Financial Report (ACFR) for AlexRenew for the fiscal year ended June 30, 2023, is submitted herein. This report has been prepared in accordance with generally accepted accounting principles (GAAP) as recommended by the Governmental Accounting Standards Board (GASB) and audited by a firm of independent certified public accountants.

This report presents the financial position of AlexRenew; demonstrates compliance with applicable finance-related legal and contractual provisions; and reflects the principle of full disclosure, allowing readers to gain maximum understanding of AlexRenew's financial position. The accuracy of the data represented, as well as the completeness and fairness of the presentation, including all disclosures, is the responsibility of AlexRenew. To the best of our knowledge and belief, this report is accurate in all material respects and presents fairly the financial position and results of operations of AlexRenew.

Yount, Hyde & Barbour, P.C., an independent registered public accounting firm has audited AlexRenew's financial statements for the year ended June 30, 2023. The independent auditor's report is presented in the financial section of the ACFR.

Management's Discussion and Analysis (MD&A) immediately follows the independent auditors' report and provides a general overview and analysis of the accompanying financial statements. This letter of transmittal is prepared to complement the MD&A and should be read in conjunction with it.

### PROFILE OF ALEXRENEW

The City of Alexandria, Virginia Sanitation Authority, doing business as (d/b/a) AlexRenew, is a wastewater treatment authority serving 300,000 people in Alexandria, VA and parts of Fairfax County. AlexRenew was established in 1952 as an independent political subdivision of the Commonwealth of Virginia under the Virginia Water and Waste Authorities Act.

Each year, AlexRenew processes and cleans approximately 13 billion gallons of wastewater received from area homes, schools, and businesses. AlexRenew's team of over 100 wastewater professionals is dedicated to providing essential wastewater services for Alexandria — protecting its citizens, delivering healthier waterways, and building a lasting legacy of environmental stewardship in the region.

AlexRenew owns approximately \$1.1 billion in total assets, including three pumping stations, two service chambers, four intercepting sewers, four combined sewer outfalls, and a Water Resource Recovery Facility (WRRF) located adjacent to Alexandria's Old Town historic district.

AlexRenew is governed by a five-member citizen Board of Directors that appoints the General Manager and Chief Executive Officer, who is responsible for the daily management of the organization.

### **LOCAL ECONOMY**

As an inner suburb to Washington, DC, Alexandria continues to see steady population indicators, strong demand for housing, and a number of ongoing major development and redevelopment projects. The City's unemployment rate briefly peaked at 9.9% in April 2020 as a result of the pandemic, but declined to 2.1% by July 2023.

The largest sectors of employment by total wages in Alexandria continue to be professional, scientific, and technical services, as well as public administration. The U.S. Patent and Trademark Office, National Science Foundation, and a number of non-profits and associations maintain headquarters in Alexandria. The historic Old Town district is home to many small businesses and a vibrant waterfront. Construction on the newly developed Virginia Tech Innovation Campus is complete. The Innovation District Pumping Station, which will be used to serve the campus, will be conveyed to AlexRenew for ownership and operation.

Alexandria real estate values increased for a thirteenth consecutive year with the overall value of Alexandria's taxable property increasing 3.8% from 2022 to 2023. Year-over-year, average residential values increased 5.0% while commercial property values increased 2.0%. The increase in the overall tax base was attributable to both appreciation of existing properties as well as new development. In 2023, over 90% of single-family homes had value increases. Approximately 69% of condominiums increased in value while multifamily properties saw a 6.2% increase in value on average. The hospitality industry is making a recovery, as hotels increased in value by 9.8% on average. Other commercial property types experiencing value increases included shopping centers, general commercial and warehouses.

### **MAJOR INITIATIVES**

Construction continued in FY2023 on RiverRenew, AlexRenew's multi-year program to prevent millions of gallons of sewage mixed with rainwater (combined sewage) from polluting the Potomac River and its tributaries each year. The program began in 2018 and is under a legislative deadline to be complete by July 1, 2025. AlexRenew has invested over \$340 million in RiverRenew, which has employed more than 200 Virginia firms, and is over 50 percent complete. In support of RiverRenew, AlexRenew's state-of-the-art tunnel boring machine has constructed over one (1) mile of 12-foot-wide tunnel 100-feet below the ground. Approximately one (1) mile of tunnel remains to be constructed to connect the existing combined sewer outfalls to AlexRenew's wastewater treatment plant.

Additionally, crews are progressing work on a six (6) foot-wide sewer interceptor; 12-story-deep, 65-foot-wide pumping station; and massive shafts that when complete will function as a system to capture combined sewer overflows.

RiverRenew is funded by a combination of grants, low-interest loans, and contributions from AlexRenew and Fairfax County. During FY2023, AlexRenew drew \$89.7 million from these loans and grants to reimburse for construction expenses incurred on RiverRenew. AlexRenew was also awarded \$90 million in American Rescue Plan grant through the Commonwealth of Virginia to fund RiverRenew, which it expects to use in the upcoming FY2024 to offset a portion of the debt it is assuming through loans.

#### **LONG-TERM FINANCIAL PLANNING**

For more than a decade, AlexRenew has employed rate modeling to analyze, evaluate, and implement an annual and long-term fee structure to support the financial obligations of the organization. The rate model incorporates historical financial results along with the projected needs of the organization based on the annual operating budget, expected contributions from Fairfax County, and the annual update to the ten-year Capital Improvement Program (CIP) budgeted projections. The CIP is a key element in planning for and managing for future regulatory compliance through large-scale capital investment. AlexRenew's long-term financial planning process ensures adherence to AlexRenew's indenture and financial policies, while appropriately considering future needs of the Alexandria community in setting rates and managing fiscal position.

#### **INTERNAL CONTROL STRUCTURE AND BUDGETARY CONTROLS**

The AlexRenew Board approves an annual operating and capital budget each June for the fiscal year period July 1 of the current year through June 30 of the following year. AlexRenew's annual operating and capital budget is a modified accrual basis document with revenues established based upon available resources. AlexRenew bills customers monthly for wastewater treatment based on water consumption at rates approved by the Board. Additionally, it receives monthly contributions from Fairfax County for operating and capital costs based on the service agreement between the County and AlexRenew.

AlexRenew's management establishes and maintains an internal accounting control structure that ensures the utility's assets are safeguarded against loss, theft or misuse, and maintains accurate and reliable financial records for the preparation of financial statements and representations made by AlexRenew. AlexRenew's internal accounting control structure provides reasonable, but not absolute, assurance that objectives are met. The concept of reasonable assurance recognizes that the cost of internal controls should not exceed the benefits derived from the controls. The evaluation of costs and benefits rests with AlexRenew.

#### **FINANCIAL DISCUSSION: Financial Condition and Overview**

AlexRenew's financial condition remained strong at year-end. AlexRenew achieved all legal requirements, as prescribed by the master trust indenture and service agreements and exceeded its policy targets while maintaining strong liquidity and a responsible unrestricted net position. AlexRenew's Board-adopted financial policies include requirements to maintain debt service coverage of 1.50x on senior parity debt and at least 120 days of the current year's budgeted amount for operating and maintenance expenses in reserves. At fiscal year-end, debt service coverage was in excess of 2.4x and cash on hand sufficient to meet policy targets and maintain liquidity as construction spending for RiverRenew continues.

AlexRenew maintained appropriate fiscal and business discipline as it implemented the FY2023 operating and maintenance budget, resulting in a moderate operating budget excess and the strengthening of the organization's overall financial position. Capital spend increased year-over-year to almost \$19 million, as construction continued on active capital projects including RiverRenew. In addition to RiverRenew, capital projects funded in FY2023 included continued planning for improvements to the Preliminary/Primary System, development of a Solids Process Master Plan, and ongoing upgrades to digital assets such as Programmable Logic Controller equipment, the Human Machine Interface System, and the campus Fiber Optic Backbone.

AlexRenew has two primary sources of revenue – wastewater treatment charges assessed to City customers and contributions from Fairfax County based on service agreements. AlexRenew's Board approved and implemented its third two-year rate increase at the beginning of FY2023 to primarily support spending associated with RiverRenew and additional operating costs and capital expenses. AlexRenew continues to maintain a \$60 million line of credit with a commercial bank to provide interim financing for RiverRenew construction as needed.

Looking forward, AlexRenew will continue to emphasize best practices and fiscal discipline to ensure its financial resiliency and sustain its fiscal strength as it navigates the next few years of major construction.

#### **FINANCIAL DISCUSSION: Investment Policy**

AlexRenew manages the investment of its cash and other financial instruments in strict accordance with the Code of Virginia, other applicable laws and regulations, and the Board-adopted investment policy. AlexRenew focuses on maintaining capital preservation and liquidity while achieving a market return on financial resources.

#### **FINANCIAL DISCUSSION: Capital Assets**

AlexRenew's capital assets are currently valued at \$1.1 billion. This is reflective of a significant capital program in recent years that will continue as the RiverRenew program is implemented, which includes a meaningful capital investment. In building and managing the long-term capital improvement plan, AlexRenew will be particularly conscious of the implications for its customers and its overall financial stability.

#### **AWARDS AND ACKNOWLEDGMENTS**

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to AlexRenew for its Annual Comprehensive Financial Report (ACFR) for the fiscal period ended June 30, 2022. This was the 14th year that AlexRenew has received this prestigious award. The GFOA awards a Certificate of Achievement to financial reports that clearly convey the financial position and results of operations of the governmental entity. The report must be easy to read, thorough, and efficiently organized, in addition to satisfying GAAP and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current ACFR continues to meet the Certificate of Achievement Program requirements and standards.

The independent auditors have rendered their unmodified opinion on AlexRenew's financial statements for the fiscal year ended June 30, 2023. The independent auditors' report is presented as the first component of the financial section of this report. Management's Discussion and Analysis (MD&A) follows the independent auditors' report and provides a general overview and analysis of the accompanying financial statements.

Thank you to the AlexRenew staff, in particular, its finance team, and the professionals at MSL, P.A., an independent accounting and consulting firm that contributed to preparation of this report, whose hard work and dedication has made possible the preparation of this ACFR. Thank you to the AlexRenew Board of Directors as well, for their vision, leadership, and passion for the mission, and the important work done by every employee at AlexRenew.

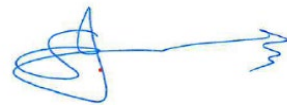
Regards,

A handwritten signature in blue ink, appearing to read "Justin Carl".

Justin Carl, PE  
AlexRenew General  
Manager and CEO

A handwritten signature in blue ink, appearing to read "Caitlin Feehan".

Caitlin Feehan, PE  
AlexRenew Chief  
Administrative Officer

A handwritten signature in blue ink, appearing to read "Lake Akinkugbe".

Lake Akinkugbe  
AlexRenew Director  
of Finance



**ALEXRENEW**

**DIRECTORY OF PRINCIPAL OFFICIALS**

**June 30, 2023**

**BOARD OF DIRECTORS**

John Hill - Chair  
James Beall - Vice Chair  
Adriana Caldarelli - Secretary/Treasurer  
Rebecca Hammer  
Mark Jinks

Shahram Mohsenin, Fairfax County Representative

**CHIEF EXECUTIVE OFFICER (CEO)**

Justin Carl, P.E.

**CHIEF ADMINISTRATIVE OFFICER (CAO)**

Caitlin Feehan

**DIRECTOR OF FINANCE**

Lake Akinkugbe

**INDEPENDENT AUDITORS**

Yount, Hyde & Barbour, P.C.

**ALEXRENEW**

**BOARD OF DIRECTORS**

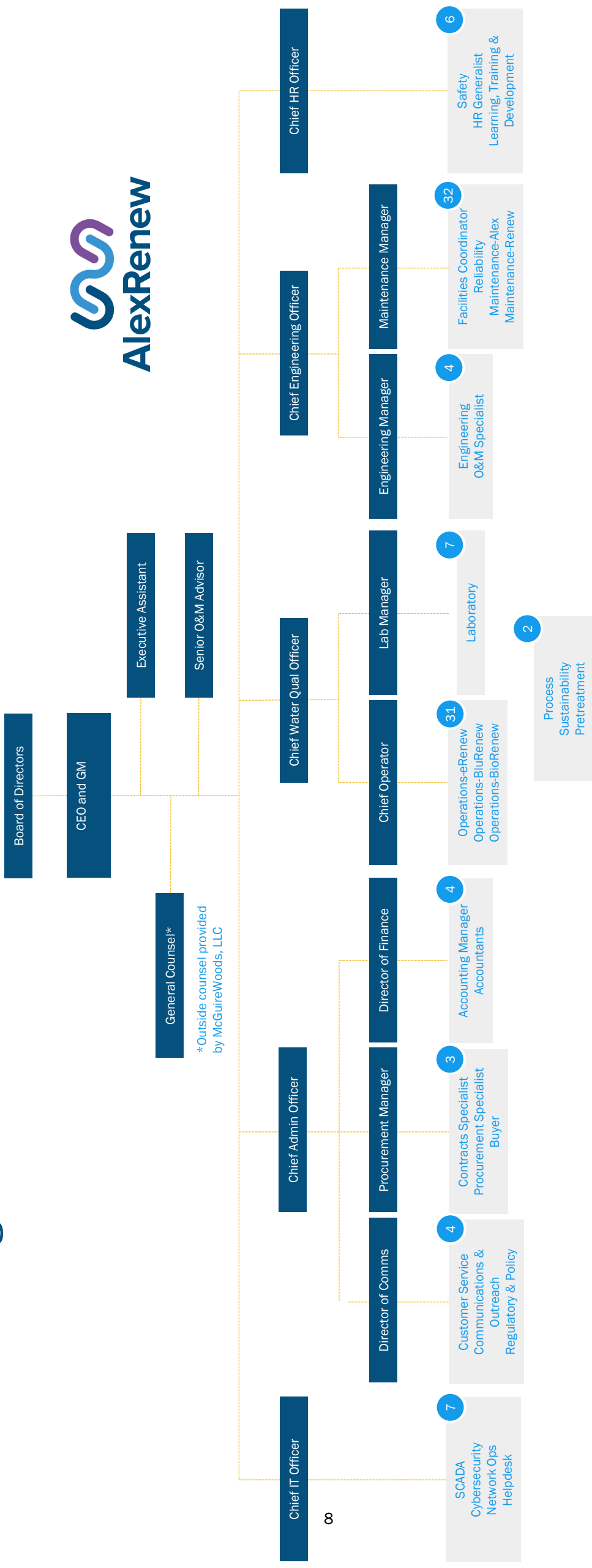
**June 30, 2023**



Pictured from top left to right: Chair John Hill, Vice Chair James Beall  
Bottom row from left to right: Secretary/Treasurer Adriana Caldarelli, Mr. Mark Jinks, and Ms.  
Rebecca Hammer\*

\* New member as of July 2023

# AlexRenew Organizational Chart





Government Finance Officers Association

Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting

Presented to

**Alexandria Renew Enterprises  
Virginia**

For its Annual Comprehensive  
Financial Report  
For the Fiscal Year Ended

June 30, 2022

*Christopher P. Morill*

Executive Director/CEO

# Financial Section





50 S. Cameron St,  
Winchester, VA 22601

540.662.3417

YHBcpa.com

## INDEPENDENT AUDITOR'S REPORT

To the Board of Directors  
Alexandria Renew Enterprises  
Alexandria, Virginia

### Report on the Audit of the Financial Statements

#### *Opinions*

We have audited the accompanying financial statements of the business-type activities and the fiduciary activity of Alexandria Renew Enterprises (AlexRenew), as of and for the years ended June 30, 2023 and 2022, and the related notes to the financial statements, which collectively comprise Alexandria Renew Enterprises' basic 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 respective financial position of the business-type activities and the fiduciary activity of Alexandria Renew Enterprises, as of June 30, 2023 and 2022, and the respective changes in its financial position, and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

#### *Basis for Opinions*

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS), *Specifications for Audits of Authorities, Boards and Commissions* issued by the Auditor of Public Accounts of the Commonwealth of Virginia, and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of Alexandria Renew Enterprises 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 opinions.

#### *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 AlexRenew's ability to continue as a going concern for 12 months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

***Auditor's 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 auditor's report that includes our opinions. 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 AlexRenew'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 AlexRenew'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.

***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis and Other Required Supplementary Information, as listed in the table of contents, 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 sufficient evidence to express an opinion or provide any assurance.

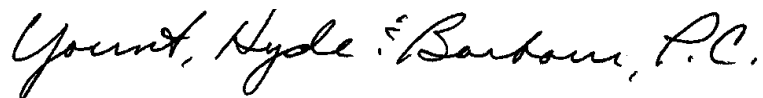
***Other Information***

Management is responsible for the other information included in the annual report. The other information comprises the Introductory and Statistical Sections, as listed in the table of contents, but does not include the basic financial statements and our auditor's report thereon. Our opinions on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated November 13, 2023 on our consideration of Alexandria Renew Enterprises' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Authority'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 Alexandria Renew Enterprises' internal control over financial reporting and compliance.

A handwritten signature in cursive script that reads "Yount, Hyde & Barbour, P.C.".

Winchester, Virginia  
November 13, 2023

## **MANAGEMENT'S DISCUSSION AND ANALYSIS**

## **AlexRenew Management's Discussion and Analysis**

---

AlexRenew presents the following review of its financial activities for the fiscal years ended June 30, 2023 (FY23) and 2022 (FY22). Readers of these financial statements are encouraged to consider this information together with the accompanying financial statement notes to obtain a comprehensive view of the Authority's financial position and operating results for FY23.

AlexRenew's overall financial condition, as well as operating and capital plans to meet water quality requirements remained strong and stable during FY23. AlexRenew met or performed better than the standards established by its financial policies, maintaining a debt service coverage ratio of 2.6 and unrestricted cash of 136 days of operating expenses.

Throughout FY23, revenues from billed water consumption and resulting flows to AlexRenew's wastewater treatment plant exceeded the original budgetary estimate by approximately 8% or \$3.9 million. Flows from Fairfax County to the wastewater treatment plant were lower than originally budgeted, resulting in a decrease of \$0.6 million in actual operating revenues from Fairfax County. This was offset by earned interest income which exceeded budgetary estimates by about \$0.6 million.

The FY23 operating budget included continued workforce investments and enhancements to employee benefits. These investments resulted in additional compensation expenditures above budget of \$0.3 million as AlexRenew sought to recruit and retain top talent in a very competitive labor market. Because planned drawdowns of federal and state loans to finance elements of the RiverRenew project occurred later than originally budgeted, payments on outstanding debt were \$2.4 million below original budgetary estimates. These two expenditure outcomes resulted in an operating and debt service budget net savings of \$2.1 million. The increase of \$3.9 in revenue and decrease of \$2.1 million in expenditures over original budgetary estimates as described above resulted in a total \$6.0 million FY23 surplus available for future capital investments.

AlexRenew received the Government Finance Officers Association Certificate of Achievement for Excellence in Financial Reporting, which is the highest form of recognition for excellence in state and local government financial reporting. This is the 16th time AlexRenew has received this award.

### **Summary of Organization and Business**

The City of Alexandria, Virginia, Sanitation Authority does business as AlexRenew. Throughout this document, the term "Authority" will be used in reference to the AlexRenew.

The Authority is a public body organized and created under the Virginia Water and Waste Authorities Act of the Code of Virginia of 1950, as amended. The Authority was created by the City Council of the City of Alexandria (City Council) in 1952 to construct, operate and maintain a sewage disposal system to provide wastewater treatment services to the public.

Five citizen members appointed by City Council to four-year staggered terms govern the Authority as its Board of Directors (Board).

In 1953, the Authority and neighboring Fairfax County (County) executed a service agreement by which the Authority would build a sewage treatment plant in which the County would purchase a reserved treatment capacity (Service Agreement). The Service Agreement further provides that the County will share in the cost of capital improvements to the sewage treatment system based on its reserved capacity and will also share in annual operating and maintenance expenses in proportion to the County's actual use as measured by the volume of sewage it contributes to the sewage treatment system. The Service Agreement was last amended and restated in October 1998. The major provisions relating to the County's reserved capacity (60%), payment of capital and upgrade costs, and calculation of its share of the payment of operating costs remained unchanged, though the County and the Authority have negotiated more recent agreements pertaining to the cost share of certain capital projects such as the RiverRenew program.

The Authority receives no financial support from the City of Alexandria (City) and has no taxing power. The revenues of the Authority are derived from wastewater treatment charges based on metered water consumption and meter size for Alexandria users, and payments from the County for its proportional share of operating expenses, replacement and renewal expense, and capital costs.



### **Audit Assurance**

The unmodified (clean) opinion of our independent external auditors, Yount, Hyde & Barbour, P.C., is included in this report.

The financial section presents Management's Discussion and Analysis of the Authority's financial condition and activities for FY23. This financial section information should be read in conjunction with the financial statements.

### **Financial Highlights**

The following are key financial highlights for FY23:

- The Authority treated 13.1 billion gallons of wastewater during FY23 and remained flat compared to the prior FY23. At an average of 35 million gallons per day (MGD) in FY23, the 54 MGD design capacity at the facility remains sufficient.
- The County contributed 5.3 billion gallons of wastewater flow to the Authority in FY23, which accounted for approximately 40.7% of the wastewater treated at the Authority's facilities. This is lower than the 47.4% in the prior FY22 and is within the County's allocation per the Service Agreement.
- The Authority number of accounts in FY23 at 26,710, slightly lower than prior FY22 at 26,767.
- The Authority continued to experience economic impacts related to the COVID-19 pandemic including supply chain disruptions and inflationary pressures in critical areas including chemicals, construction materials, labor, transportation, parts and equipment.
- Billed water consumption and flows to the facility remained strong and revenues exceeded the original budgetary estimate by approximately 8%.
- Wastewater treatment fee revenues are derived from two primary charges: a base charge and a volumetric charge. The base charge is a fixed rate that varies by customer served and the volumetric charge is a usage charge based on metered water sales. The volumetric charge approved by the Board for FY23 was \$9.26 per 1,000 gallons of water and represents a 6.6% increase as compared with the prior FY22. The Base charge approved by the Board for FY23 was \$13.14 per month for residential customers and varies based on meter size for commercial customers, again representing a 6.5% increase as compared to the prior FY22.
- Wastewater treatment charge revenues of \$54.9 million were 8.1% higher in FY23 compared to the prior FY22. This increase is the result of the rate increase described in the paragraph above and strong usage and billed flows.
- Total operating expenses for FY23, excluding depreciation and amortization, increased 21.5% compared to FY22.
- The FY23 operating budget included continuous workforce investments and enhancements to employee benefits as AlexRenew continues to work to retain top talent in a competitive labor market.
- Senior debt service coverage, on an accrual basis, was 2.6x for FY23. This exceeded the 1.1x required by the Authority's Master Indenture of Trust (Indenture) and 1.5x established by the Board's Financial Policies. The Authority issued two debt facilities in the prior FY21 to fund construction – a loan of up to \$185 million from the Virginia Clean Water Revolving Loan Fund (CWRLF) and a loan of up to \$321 million from the Water Infrastructure Finance and Innovation Act (WIFIA) loan program. Included in the coverage calculation above is \$104.8 million in proceeds the Authority drew from the Series 2021 CWRLF bonds during FY21 and FY22 (See Note 6).
- The Authority has also partially drawn its \$60 million line of credit, which is secured at the subordinate lien and will be eventually repaid from cash or from proceeds of a grant or loan (See Note 5).

### **Financial Highlights (Continued)**

- Total assets and deferred outflows of resources for FY23 were \$1,151.2 million. Total assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources (Net Position) in the amount of \$833.5 million for FY23. Of the total Net Position, \$69.9 million were unrestricted and available to support operations for FY23. The increase in total assets is a result of the multiple improvement, replacement and construction projects ongoing for plant infrastructure and equipment.
- Capital assets net of depreciation and amortization increased \$106.7 million in FY23. The increase is primarily due to increased capital expenditures associated with the RiverRenew program and other ongoing capital projects.
- Payments from the County of \$11.1 million in FY23 represented the County's share of operating costs based upon their proportional contribution to total plant flow. County payments were \$10.9 million in the prior FY22. This payment increase is the result of an increase in the percentage of flow contributed by the County and in the total jointly shared operating expense in FY23.

### **Required Financial Statements**

The Authority's financial statements are prepared using generally accepted accounting principles for governmental units operated as a proprietary fund. As a result, the financial statements of the Authority report financial information using the flow of economic resources measurement focus, which is similar to those used by private sector companies. These statements offer current and long-term financial information about its activities.

The statement of net position includes all of the Authority's assets, deferred outflows of resources, liabilities and deferred inflows of resources, and provides summary information about the nature and amounts of investments in resources (assets) and obligations to Authority creditors (liabilities). The assets and liabilities are presented in a classified format, which lists current and other balances.

The statement of revenue, expenses, and changes in net position measures whether the Authority has successfully recovered its operating and non-operating costs through its wastewater treatment rates and other fees. The Authority's rates are determined via a rate modeling process that incorporates an array of factors focused on the cost of capture, conveyance, treatment, and discharge of wastewater. The rate model is updated and evaluated annually, or as circumstances warrant, to ensure the Authority recovers its full cost of service.

The statement of cash flows provides information about the Authority's cash receipts and cash payments during the fiscal year. The statement reports cash receipts, cash payments, and net changes in cash resulting from operating, investing, and financing activities, and the total change in cash during the reporting period.

In 2014, the Authority established an Other Post-Employment Benefits (OPEB) Trust Fund to fund its OPEB. It was established within the Virginia Pooled OPEB Trust Fund (Trust Fund), sponsored by the Virginia Municipal League and the Virginia Association of Counties. The Trust Fund is an investment permitted for participating municipal employers to accumulate assets to pay future OPEB benefits to retirees and their beneficiaries. The financial statements include the Statements of Fiduciary Net Position and the statements of changes in fiduciary net position for FY23 and FY22.

The Notes to the financial statements provide required disclosures and other information that are essential to a full understanding of material data provided in the statements. The Notes present information about the Authority's accounting policies, significant account balances and activities, material risks, obligations, commitments, contingencies and subsequent events, if any.

**Financial Analysis:**

The following comparative condensed financial statements and other selected information provide key financial data and indicators for management, evaluation and comparison.

The following table reflects the Authority's net position at June 30, 2023, June 30, 2022 and June 30, 2021:

**Condensed Statements of Net Position**  
(in Millions of Dollars)

	2023	2022	\$ Change	% Change	2021
Current unrestricted assets	\$ 77.04	\$ 71.28	\$ 5.76	8.08 %	\$ 49.11
Current restricted assets	15.22	23.68	(8.46)	(35.73) %	31.21
Other non-current assets	0.48	0.43	0.05	11.63 %	31.21
Capital assets, net	1,056.38	949.68	106.70	11.24 %	859.43
<b>Total Assets</b>	<b>1,149.12</b>	<b>1,045.07</b>	<b>104.05</b>	<b>9.96 %</b>	<b>970.96</b>
<b>Deferred Outflows</b>	<b>2.06</b>	<b>2.81</b>	<b>(0.75)</b>	<b>(26.69) %</b>	<b>3.08</b>
Current liabilities	58.12	46.58	11.54	24.77 %	59.76
Long-term liabilities	256.94	180.32	76.62	42.49 %	110.23
<b>Total Liabilities</b>	<b>315.06</b>	<b>226.90</b>	<b>88.16</b>	<b>38.85 %</b>	<b>169.99</b>
<b>Deferred Inflows</b>	<b>2.58</b>	<b>7.24</b>	<b>(4.66)</b>	<b>(64.36) %</b>	<b>1.46</b>
Net Investment in capital assets	757.96	748.22	9.74	1.30 %	720.25
Restricted	5.70	15.49	(9.79)	(63.20) %	27.46
Unrestricted	69.88	50.03	19.85	39.68 %	23.67
<b>Total Net Position</b>	<b>\$ 833.54</b>	<b>\$ 813.74</b>	<b>\$ 19.80</b>	<b>2.43 %</b>	<b>\$ 771.38</b>

**AlexRenew**  
**Management's Discussion and Analysis (Continued)**

**Financial Analysis (Continued)**

The following table reflects the Authority's comparative revenues, expenses, and changes in net position for the fiscal year ending June 30, 2023, June 30, 2022 and June 30, 2021:

**Condensed Statements of Revenues, Expenses and Changes in Net Position**  
**(In Millions of Dollars)**

	2023	2022	\$ Change	% Change	2021
<b>Revenues</b>					
Program revenues:					
Wastewater Treatment Fees & Miscellaneous	\$ 54.86	\$ 50.73	4.13	8.10 %	\$ 46.08
Fairfax County Wastewater Fees	11.06	10.92	0.14	1.30 %	10.43
General revenues:					
Federal grants	0.06	0.28	(0.22)	(78.60) %	0.33
Investment Income (loss)	0.76	(0.72)	1.48	(205.60) %	0.13
Total Revenues	66.74	61.21	5.53	9.00 %	56.97
<b>Program expenses</b>					
Depreciation and Amortization expenses	21.44	20.57	0.87	4.20 %	20.66
Other Operating Expenses	33.56	27.62	5.94	21.50 %	26.84
Non-operating Expenses	4.65	4.96	(0.31)	(6.20) %	11.09
Total Expenses	59.65	53.15	6.50	12.20 %	58.59
Changes in Net Position before Capital Contributions	7.09	8.06	(0.97)	(12.00) %	(1.62)
<b>Capital Contributions</b>	12.71	34.30	(21.59)	(62.90) %	21.20
Changes in Net Position	19.80	42.36	(22.56)	(53.30) %	19.58
Net Position:					
Beginning	813.74	771.38	42.36	5.49 %	751.80
Ending	\$ 833.54	\$ 813.74	\$ 19.80	2.43 %	\$ 771.38

**AlexRenew**  
**Management's Discussion and Analysis (Continued)**

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**Financial Analysis (Continued)**

The following table summarizes other selected information of the Authority at June 30, 2023, 2022 and 2021.

<b>Other Selected Information</b>	<b>2023</b>	<b>2022</b>	<b>Difference</b>	<b>% Change</b>	<b>2021</b>
<b>Selected data:</b>					
Employees at year end	115	104	11	11 %	99
Alexandria accounts	26,710	26,767	(57)	(0) %	26,589
Wastewater treated (millions of gallons)	13,094	13,090	4	0 %	14,266
Portion contributed by					
Fairfax County (millions of gallons)	5,327	6,204	(877)	(14) %	6,535
Percentage contributed by					
Fairfax County	40.68 %	47.39 %	(6.71) %	(14.16) %	45.81 %
<b>Rates, Residential Customers:</b>					
Charge per 1000 gallons of					
water consumption	\$ 9.26	\$ 8.69	\$ 0.57	6.56 %	\$ 8.13
Base Charge	13.14	12.34	0.80	6.48 %	11.54
Average residential customer bill (based on 4,000 gallon per month water usage):					
Per year	\$ 602.16	\$ 565.20	\$ 36.96	6.54 %	\$ 528.72
Per quarter	150.54	141.30	9.24	6.54 %	132.18
Per month	50.18	47.10	3.08	6.54 %	44.06
<b>Rates, Commercial Customers:</b>					
Charge per 1000 gallons of					
water consumption	\$ 9.26	\$ 8.69	\$ 0.57	6.56 %	\$ 8.13
Base Charge					
Water Meter Size					
5/8"	\$ 39.42	\$ 37.02	2.40	6.5 %	\$ 34.63
3/4"	39.42	37.02	2.40	6.5 %	34.63
1"	98.55	92.55	6.00	6.5 %	86.59
1-1/2"	197.10	185.10	12.00	6.5 %	173.17
2"	315.36	296.16	19.20	6.5 %	277.08
3"	591.30	555.30	36.00	6.5 %	519.52
4"	985.50	925.50	60.00	6.5 %	865.87
6"	1,971.00	1,851.00	120.00	6.5 %	1,731.74
8"	3,153.60	2,961.60	192.00	6.5 %	2,770.79



### **General Trends and Significant Events**

The Authority's service area within the City can be referred to as mature. The City is over 250 years old and for the most part is built-out. While there is some undeveloped land and a number of areas under redevelopment, these activities are expected to have a limited impact on the Authority's flows and wastewater treatment charge revenue over the intermediate term. This is particularly true given the trend for water conservation and sustainability efforts within the community.

The Authority has continued to progress in implementing the RiverRenew program to remediate the combined sewer system that serves the oldest parts of the City (See Note 12). Work progressed throughout FY23 and included completion of a shaft and delivery of the state-of-the-art tunnel boring machine that will soon begin constructing the RiverRenew tunnel. During FY23, AlexRenew finished drawing on its second \$25 million grant from the Commonwealth to fund RiverRenew construction expenses. The first \$25 million grant from the Commonwealth was received in FY20 and also used to fund RiverRenew program expenses.

The number of City accounts decreased by 57 accounts in FY23 when compared to FY22. In the prior fiscal year, the number of accounts increased by 178. The current number of accounts has been very stable, even though the City's population increased 10% over this same timeframe. This is likely driven by the significant number of Alexandrians who reside in single-metered multi-family housing units.

### **Financial Condition**

The Authority's financial condition remained strong at fiscal year-end with adequate liquid assets and a reasonable level of unrestricted net position. The current financial condition, as well as operating and capital plans to meet future water quality requirements, are well balanced and under control.

Total assets and deferred outflows of resources grew \$103.3 million or 9.9% during FY23. Net Position increased by \$19.8 million in FY23, with a substantial portion of the change resulting in an increase in capital assets and unrestricted net position.

### **Results of Operations**

**Revenues:** The Authority's revenues from operations fall into two main categories: 1) wastewater treatment charges (including base charge and volumetric charge) to customers in the City, which are based on metered water consumption and 2) County operating expense charges for wastewater treatment for its share of operating expenses based upon metered flow to the plant. Operating revenues increased by \$4.3 million or 6.9% over last year, the net impact of the rate increase of approximately 6.5% that took effect July 1, 2022 for City customers and the slight increase year-over-year in the Fairfax operating contribution.

**Capital contributions:** Total capital contributions were \$12.71 million in FY23, a \$21.6 million decrease over the prior FY22.

The County pays 60% of the cost of joint capital improvements to the water resource recovery facility based upon the Service Agreement with the Authority. The RiverRenew program is subject to a separately negotiated cost share agreement between the County and the Authority, based on the unique service characteristics of the facilities being constructed.

The County's capital contributions are recorded as non-operating revenues in the statements of revenues, expenses and changes in net position. The County's capital contributions decreased by approximately \$3.1 million year-over-year, primarily because AlexRenew's capital spending was more heavily concentrated in the RiverRenew program, which carries lower cost share percentages than other capital projects.

## AlexRenew Management's Discussion and Analysis (Continued)

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### Results of Operations (Continued)

#### Expenses:

*FY23-FY22 comparison:* Total operating expenses for FY23, excluding depreciation and amortization, increased by \$5.94 million or 21.5% relative to FY22. Core areas associated with operating the water resource recovery facility increased year-over-year including chemicals, utilities, operations maintenance, sludge disposal, and repairs and replacements expenses.

*FY22-FY21 comparison:* Total operating expenses for FY22, excluding depreciation and amortization, increased by \$0.78 million or 2.9% relative to FY21. Core areas associated with operating the water resource recovery facility increased year-over-year including chemicals, operations maintenance, repairs and replacements and general and administrative expenses. These increases were offset by savings in areas such as personnel costs, utilities, sewage disposal and sludge disposal. Certain areas such as custodial services and communications and IT equipment increased due to the pandemic-related impacts. Overall, the Authority was successful in meeting its FY22 operating budget and limiting the year-over-year increase in spend to less than the current rate of inflation.

#### Capital Assets

The Authority maintains investments in a broad range of capital assets including land, buildings, sanitary sewer intercepting lines and force mains, pumping stations, a water resource recovery facility, four combined sewer outfalls, machinery and equipment, computers and vehicles. The Authority also owns capacity rights at the Arlington County Water Pollution Control Facility (Arlington). Pursuant to a Service Agreement between the City of Alexandria, the Authority and Arlington County, the Authority pays approximately 8% of the cost of capital improvements at the Arlington facility based on its 3 MGD reserved capacity. Additional information on the Authority's capital assets can be found in Notes 1 and 4 of the Notes to financial statements.

The Authority maintains its equipment annually on a prioritized basis through a committed improvements, renewals and replacements fund. The County and the Authority invest a percentage of total facility assets into this fund under the Service Agreement, to support adequate reinvestment and continuing compliance with environmental regulations.

The Authority finances its capital assets through rates and charges, the County capital contributions, interim financing instruments, long term debt and, when available, capital grants.

#### Debt Administration:

The Authority had \$260.7 million in long-term debt outstanding at June 30, 2023, including \$8.6 million considered short-term. Principal payments totaled \$9.3 million during FY23. During FY21, the Authority issued the Series 2021 Clean Water Revolving Loan Fund (CWRLF) Bonds in an amount of up to \$185 million and the Series 2021 Water Infrastructure Finance and Innovation Act (WIFIA) Bonds in an amount of up to \$321 million to provide capital funding for RiverRenew. The Authority started drawdowns on the WIFIA Bonds in FY23 and is also actively drawing on the Series 2021 CWRLF Bonds to fund Tunnel construction. No new debt facilities were issued during FY23.

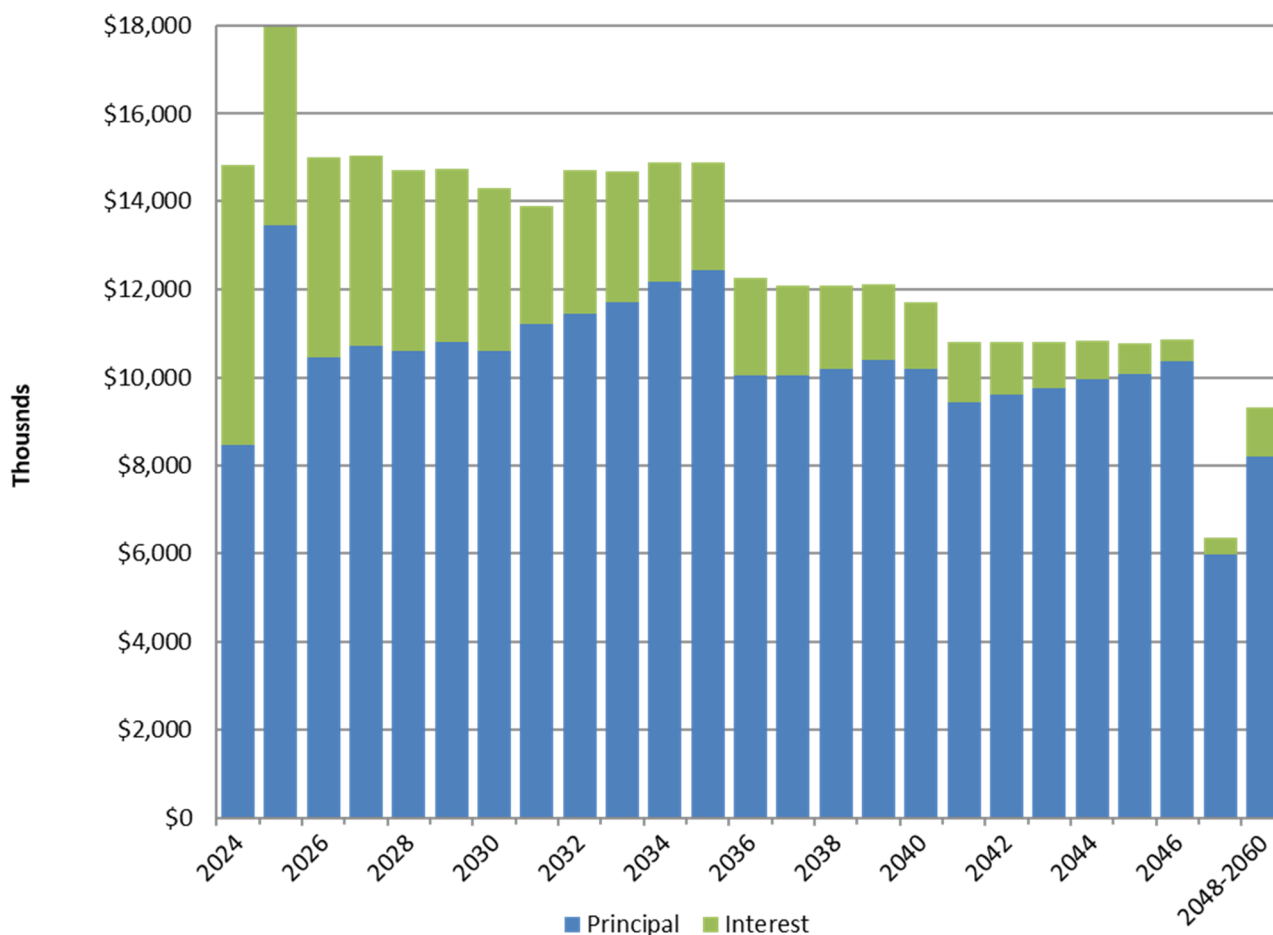
Annual debt service payments decreased 12% in FY23 as compared to FY22 primarily due to the timing and execution of some capital projects. The Authority also continued to utilize the Line of Credit issued during FY22 and had \$38.1 million available as of fiscal year end to provide interim funding for Tunnel construction (See Note 5). The Line of Credit is expected to be repaid from cash or from grant or debt proceeds at a later time.

### Results of Operations (Continued)

The Authority's financial strength, ability to pay current debt service (principal and interest), and future borrowing capacity is demonstrated, in part, by its senior debt service coverage which is currently a strong 2.6x. The Indenture requires the Authority to establish, fix, charge and collect rates, fees and other charges for operating and maintenance so that in each fiscal year net revenues are not less than 1.1x total debt service for the fiscal year. The Board's financial policies require the Authority to maintain a minimum debt service coverage of 1.5x total debt service for the fiscal year.

The graph below presents principal and interest payments for the Authority's outstanding revenue bonds as of June 30, 2023. This graph includes the debt service associated with draws the Authority had made on the Series 2021 CWRLF Bonds and WIFA Bonds as of the end of FY23 and does not include draws associated with the Line of Credit (See Note 5) or draws the Authority may make in the future under the CWRLF or WIFA Bonds. The Authority's current revenue bonds mature in 2060 and future debt issued to fund the RiverRenew program or other capital projects is expected to be repaid largely after the decline in existing debt service that occurs after FY25 as shown below.

**Annual Debt Service Requirements**



**AlexRenew**  
**Management's Discussion and Analysis (Continued)**

**Results of Operations (Continued)**

The following table calculates the performance relative to the Rate Covenant for FY23, FY22 and FY21.  
*(in millions)*

	<b>2023</b>	<b>2022</b>	<b>% Change</b>	<b>2021</b>
Unrestricted Operating Revenue	\$ 65.92	\$ 61.65	6.93 %	\$ 56.51
Total Operating Expenses				
(Less Depreciation and Replacements)	33.56	27.62	21.51 %	26.84
Net Revenue	\$ 32.36	\$ 34.03	(4.91) %	\$ 29.67
Annual Debt Service	\$ 12.31	\$ 13.98	(11.97) %	\$ 14.05
Revenue Covenant <sup>1</sup>	2.63	2.43	8.03 %	2.11

<sup>1</sup> ≥ 1.10x per Indenture and 1.50x per Board Policy

Additional information on the Authority's debt can be found in Note 6 to the Financial Statements.

The Authority bills customers monthly for wastewater treatment based on the class of customer served and the corresponding amount of water consumption metered at the customer's premise at rates approved by its Board.

The Authority's budget includes sources/revenues for new debt issues that for accounting purposes are not shown as revenues but are included on the statement of net position to comply with GAAP. Likewise, capital project spending and debt service principal payments are treated as capital outlays (expenditures) for budget purposes but are included as assets and liabilities in the statement of net position for GAAP compliance purposes. The Authority's budget expense classifications are in several cases different than the financial statement presentation as is the case for personnel services and general and administrative expenses.

The Authority's operating budget is categorized according to the strategic outcomes that form the Board's 2040 Vision:

**Operational Excellence:** Comply with 100% of all federal, state and local requirements through continuous improvement efforts. This category includes expenses such as chemicals, utilities and biosolids land application and disposal.

**Public Trust:** Strengthen accountability by maintaining transparency in all public interactions. This category includes budget items such as community outreach and customer service.

**Watershed Stewardship:** Integrate sustainability and resiliency into our activities and throughout the water sector through effective partnerships. This category includes expenses such as the Authority's capacity in the Arlington plant.

**Adaptive Culture:** All employees continue to be accomplished water professionals. This is the "people" budget and includes salaries, benefits, and professional development.

**Financial Resilience:** Provide water resource recovery services in a cost effective and efficient manner. This category includes items such as insurance, facility maintenance and financial software.

**AlexRenew**  
**Management's Discussion and Analysis (Continued)**

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**Results of Operations (Continued)**

Capital spending is budgeted according to whether the project benefits the City only or is shared with Fairfax County. RiverRenew expenses are broken out from the other general capital projects due to the negotiated cost share percentages unique to that program. Certain expenditures for construction have been estimated net of contractual retainage not paid by contract terms until projects are complete. During FY23, the Authority made draws from the Series 2021 Bonds, the WIFIA Bonds and the Line of Credit, to fund its share of construction costs (net of County share) on capital projects.

**Final Comments**

FY23 marked another year of strong financial performance by the Authority. Revenues were bolstered by a strong local economy, an increase in percentage of Fairfax County flows, and the rate increases adopted over the past several years to fund RiverRenew construction. The Authority has continued to identify efficient funding sources, including state and federal grants, to help offset these costs, and used significant grant funding in FY23 towards construction expenses, allowing for debt to be used more slowly and sparingly as construction continues. The Authority was in compliance with all of its financial policies and targets and affirmed its ability to meet its capital spending requirements while maintaining strong liquidity and financial flexibility. Operating expenditures increased by 21.5%, year-over-year due to inflation, supply chain chain challenges and impact of COVID-19. Debt service coverage was a strong 2.6x indicating that revenue growth is keeping pace with debt service expense, even as issuance of debt increases while the Authority implements RiverRenew and other needed initiatives to meet its mission.

**Contacting the Authority's Financial Management:**

This financial report is designed to provide citizens, customers, and other interested parties with a general overview of the Authority's financial position and to demonstrate the Authority's accountability for the funds it receives. If you have any questions about this report or need additional financial information, please contact Alexandria Renew Enterprises, 1800 Limerick St. Alexandria, Virginia 22314, call 703-721-3500, or visit us on the web at [www.alexrenew.com](http://www.alexrenew.com).

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**ALEXRENEW**  
**STATEMENTS OF NET POSITION**  
**June 30, 2023 and 2022**

	<b>2023</b>	<b>2022</b>
<b>ASSETS</b>		
Current assets		
Cash and cash equivalents (Note 2):		
Unrestricted	\$ 44,362,343	\$ 45,687,371
Restricted	5,805,047	13,841,190
Accounts receivable, net (Note 3)	6,240,615	6,122,435
Due from other governments (Note 3)	3,456,230	854,719
Prepaid expenses	1,219,693	724,855
Inventory	319,180	317,539
Investments (Note 2):		
Unrestricted	21,450,219	17,577,646
Restricted	9,406,574	9,836,238
Total current assets	<u>92,259,901</u>	<u>94,961,993</u>
Non-current assets		
Other post employment benefits (Note 8)	470,825	427,036
Capital assets, net of depreciation and amortization (Note 4)	<u>1,056,382,243</u>	<u>949,684,821</u>
Total non-current assets	<u>1,056,853,068</u>	<u>950,111,857</u>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>		
Pension related deferred outflows (Note 7)	1,222,941	1,921,235
Other post employment benefits related deferred outflows (Note 8)	59,114	63,125
Deferred charge on refunding	<u>780,563</u>	<u>828,597</u>
Total deferred outflows of resources	<u>2,062,618</u>	<u>2,812,957</u>
Total assets and deferred outflows of resources	<u><u>\$ 1,151,175,587</u></u>	<u><u>\$ 1,047,886,807</u></u>
<b>LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION</b>		
Current liabilities		
Accounts payable and accrued expenses (Note 3)	\$ 16,617,908	\$ 13,552,162
Due to City of Alexandria	763,915	869,735
Accrued paid time off	771,242	743,692
Line of credit (Note 5)	21,874,852	13,874,852
Current maturities of long-term debt (Note 6)	8,583,453	9,352,473
Payable from restricted assets		
Accounts payable and accrued expenses (Note 3)	6,240,627	6,628,452
Accrued interest payable	<u>3,270,182</u>	<u>1,563,430</u>
Total current liabilities	<u>58,122,179</u>	<u>46,584,796</u>
Long-term liabilities		
Accrued paid time off, less current portion	257,081	247,897
Net pension liability (Note 7)	4,530,655	1,006,934
Long-term debt (Note 6)	<u>252,151,691</u>	<u>179,066,607</u>
Total long-term liabilities	<u>256,939,427</u>	<u>180,321,438</u>
Total liabilities	<u>315,061,606</u>	<u>226,906,234</u>
<b>DEFERRED INFLOWS OF RESOURCES</b>		
Pension related deferred inflows (Note 7)	1,670,498	6,147,475
Other post employment benefits related deferred inflows (Note 8)	<u>904,718</u>	<u>1,091,112</u>
Total deferred inflows of resources	<u>2,575,216</u>	<u>7,238,587</u>
Total liabilities and deferred inflows of resources	<u><u>\$ 317,636,822</u></u>	<u><u>\$ 234,144,821</u></u>
<b>NET POSITION</b>		
Net investment in capital assets	757,956,972	748,219,486
Restricted:		
Operating	507,516	2,262,985
Parity debt service	1,236,280	3,397,597
Improvement, renewal & replacement	3,957,016	9,824,964
Unrestricted	<u>69,880,981</u>	<u>50,036,954</u>
Total net position	<u>833,538,765</u>	<u>813,741,986</u>
Total liabilities, deferred inflows of resources, and net position	<u><u>\$ 1,151,175,587</u></u>	<u><u>\$ 1,047,886,807</u></u>

**ALEXRENEW**  
**STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION**  
**For The Years Ended June 30, 2023 and 2022**

	<u>2023</u>	<u>2022</u>
<b>OPERATING REVENUES</b>		
Wastewater treatment fees	\$ 54,844,244	\$ 50,689,442
Fairfax County wastewater fees	11,062,569	10,918,297
Miscellaneous	24,014	42,397
	<u>65,930,827</u>	<u>61,650,136</u>
Total operating revenues		
<b>OPERATING EXPENSES</b>		
Personnel services	14,210,244	12,022,176
Utilities	3,942,929	3,092,003
Chemicals	2,785,388	2,277,528
Operations maintenance	1,652,687	1,196,034
Arlington sewage disposal	2,429,481	1,292,445
Sludge disposal	1,144,760	1,015,983
Depreciation and amortization (Note 4)	21,441,879	20,571,731
Repairs and replacements, sewage disposal systems	770,830	1,566,169
General, administrative, customer service, and other	6,639,220	5,141,279
	<u>55,017,418</u>	<u>48,175,348</u>
Total operating expenses		
Operating income	<u>10,913,409</u>	<u>13,474,788</u>
<b>NONOPERATING REVENUES (EXPENSES)</b>		
Investment income (loss)	757,913	(723,051)
Federal grants	60,515	280,617
Interest on debt	(4,647,932)	(3,554,625)
Loss on disposed capital assets	-	(1,411,496)
	<u>(3,829,504)</u>	<u>(5,408,555)</u>
Total non-operating revenues (expenses)		
Change in net position before capital contributions	7,083,905	8,066,233
<b>CAPITAL CONTRIBUTIONS</b>	<u>12,712,874</u>	<u>34,300,630</u>
Change in net position	19,796,779	42,366,863
<b>NET POSITION, BEGINNING</b>	813,741,986	771,375,123
<b>NET POSITION, ENDING</b>	<u>\$ 833,538,765</u>	<u>\$ 813,741,986</u>

The Notes to Financial Statements are  
an integral part of these statements.

**ALEXRENEW**  
**STATEMENTS OF CASH FLOWS**  
For The Years Ended June 30, 2023 and 2022

	<u>2023</u>	<u>2022</u>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Cash received from customers	\$ 54,632,869	\$ 50,638,316
Cash received from Fairfax County for operations	11,827,697	9,945,852
Cash received from other sources	24,014	42,397
Payments to suppliers for goods and services	(17,869,436)	(15,642,446)
Payments to employees for services	(14,548,847)	(12,880,796)
Net cash provided by operations	<u>34,066,297</u>	<u>32,103,323</u>
<b>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES</b>		
Acquisition/construction of capital assets	(127,572,140)	(108,533,541)
Capital contributions from Fairfax County	9,346,235	12,692,541
Proceeds from grants	60,515	21,873,875
Net proceeds from debt issuance	81,729,016	85,835,854
Proceeds from line of credit	8,000,000	-
Payments on line of credit	-	(16,125,148)
Principal payments on debt	(9,275,934)	(11,080,547)
Interest paid on borrowing	(3,030,164)	(2,896,259)
Net cash (used in) capital and related financing activities	<u>(40,742,472)</u>	<u>(18,233,225)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Proceeds from sales and maturities of investments	(6,332,705)	5,023,695
Purchase of investments	2,985,403	(8,777,575)
Interest received on investments	662,306	101,401
Net cash provided by (used in) investing activities	<u>(2,684,996)</u>	<u>(3,652,479)</u>
Net increase (decrease) in cash and cash equivalents	(9,361,171)	10,217,619
<b>CASH AND CASH EQUIVALENTS</b>		
Beginning	59,528,561	49,310,942
Ending	<u>\$ 50,167,390</u>	<u>\$ 59,528,561</u>
<b>RECONCILIATION TO STATEMENT OF NET POSITION</b>		
Cash and cash equivalents - unrestricted	\$ 44,362,343	\$ 45,687,371
Cash and cash equivalents - restricted	5,805,047	13,841,190
Total cash and cash equivalents	<u>\$ 50,167,390</u>	<u>\$ 59,528,561</u>

**ALEXRENEW**  
**STATEMENTS OF CASH FLOWS (continued)**  
**For The Years Ended June 30, 2023 and 2022**

	<u>2023</u>	<u>2022</u>
<b>RECONCILIATION OF OPERATING INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES</b>		
Operating income	\$ 10,913,409	\$ 13,474,788
Adjustments to reconcile operating income to net cash provided by operating activities:		
Depreciation and amortization	21,441,879	20,571,731
Pension expense, net of of employer contributions	(254,962)	(610,497)
Changes in assets and liabilities		
(Increase) decrease in:		
Accounts receivable	(118,180)	(87,561)
Due from other governments	765,128	(972,445)
Prepaid expenses	(494,838)	(553,926)
Inventory	(1,641)	(27,429)
(Decrease) increase in:		
Accounts payable and accrued expenses	2,110,760	561,166
Due to City of Alexandria	(105,820)	31,185
Accrued paid time off	36,734	(100,627)
Other post employment benefits	(226,172)	(183,062)
Net cash provided by operating activities	<u>\$ 34,066,297</u>	<u>\$ 32,103,323</u>
<b>NONCASH CAPITAL AND RELATED FINANCING ACTIVITIES</b>		
Carrying value of disposed capital assets	<u>\$ -</u>	<u>\$ 1,411,496</u>
Capital asset purchases included in accounts payable at year end	<u>\$ 18,270,150</u>	<u>\$ 17,702,989</u>
State grant included in due from other governments at year end	<u>\$ 3,256,624</u>	<u>\$ -</u>

**ALEXRENEW**  
**STATEMENTS OF FIDUCIARY NET POSITION**  
**Other Post-Employment Benefit Trust Fund**  
**June 30, 2023 and 2022**

	<u>2023</u>	<u>2022</u>
<b>ASSETS</b>		
Assets held in trust, at fair value		
Investment in pooled funds	<u>\$ 1,110,103</u>	<u>\$ 1,032,992</u>
<b>NET POSITION</b>		
Net position restricted for OPEB	<u>\$ 1,110,103</u>	<u>\$ 1,032,992</u>

**STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION**  
**Other Post-Employment Benefit Trust Fund**  
**For The Fiscal Years Ended June 30, 2023 and 2022**

<b>ADDITIONS</b>		
Contributions from employer	\$ 55,538	\$ 56,733
Investment Earnings:		
Net increase (decrease) in fair value of investments	78,706	(105,094)
Less investment costs	<u>(1,595)</u>	<u>(1,724)</u>
Net investment earnings	<u>77,111</u>	<u>(106,818)</u>
Total additions	<u>132,649</u>	<u>(50,085)</u>
<b>DEDUCTIONS</b>		
Benefits paid to participants	55,538	56,733
Total deductions	<u>55,538</u>	<u>56,733</u>
Change in net position	77,111	(106,818)
Total net position - beginning	<u>1,032,992</u>	<u>1,139,810</u>
Total net position - ending	<u>\$ 1,110,103</u>	<u>\$ 1,032,992</u>

The Notes to Financial Statements are  
an integral part of these Statements.



## ALEXRENEW

### NOTES TO FINANCIAL STATEMENTS June 30, 2023

#### **Note 1. Description of Entity and Summary of Significant Accounting Policies**

##### **Description of Entity**

On May 15, 2012, the Board amended its bylaws to adopt the name of “Alexandria Renew Enterprises” as the official trade name of the Alexandria Sanitation Authority (Authority).

The Authority is a special governmental unit created by the Alexandria City Council (City Council) in 1952 for the purpose of constructing, operating, and maintaining a wastewater treatment system for the City. The Authority is chartered by the State Corporation Commission and is an independent public body. The Authority is governed by a five-member Board who serve staggered terms and are appointed by the City Council.

Although the Board is appointed by the City Council, the Authority is not a part of the City’s reporting entity and is not considered a component unit under Governmental Accounting Standards Board (GASB) Statement No. 61.

No component units are included in the Authority’s financial statements.

The following is a summary of the Authority’s significant accounting policies:

##### **Basis of Presentation and Accounting**

The Authority’s financial statements are presented on the accrual basis in accordance with accounting principles generally accepted in the United States of America as applicable to the enterprise fund of governmental units.

The accounting and financial reporting treatment applied to the Authority is determined by its measurement focus. The transactions of the Authority are accounted for on a flow of economic resources measurement focus. With this measurement focus, all assets and all liabilities associated with the operations are included on the statement of net position. Net position (i.e., total assets plus deferred outflows, net of total liabilities plus deferred inflows) is segregated into net investment in capital assets, restricted, and unrestricted components.

The Authority also has a fiduciary fund for assets held by the Authority in a trustee capacity for its employees. The Authority’s Other Post-Employment Benefit (OPEB) trust fund accounts for the receipt and disbursement of assets held in trust for the Authority’s OPEB plan.

##### **Revenues and Expenses**

Operating revenues and expenses consist of those revenues and expenses that result from the ongoing principal operations of the Authority. Operating revenues primarily consist of charges for services. Non-operating revenues and expenses consist of those revenues and expenses that are related to financing and investing types of activities and result from non-exchange transactions or ancillary activities. Contributions from Fairfax County (County) under the Service Agreement discussed in Note 4 are recorded as capital contributions.

In accordance with the Service Agreement with the County, the Authority recognizes as revenue the County’s proportionate share of current operating expenses.

## ALEXRENEW

### NOTES TO FINANCIAL STATEMENTS June 30, 2023

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

##### Cash and Cash Equivalents

The Authority considers all highly liquid investments with maturities of three months or less from date of purchase to be cash equivalents.

##### Inventory

Inventory, consisting of items held for consumption, are valued at cost using the first-in, first-out method.

##### Financial Policy

The Board revised its financial policy to increase its restricted cash reserves. The Bond Master Trust Indenture requires the Authority keep 60 days of operating expenses in reserve and the Authority has appropriately restricted these amounts. The Authority's internal policy requires its restricted cash reserves to be maintained at 120 days of operating expenses at year-end; however, only the amount required by the Indenture is shown as restricted in the financial statements.

##### Investments

Investments are stated at fair value, except for investments in the Local Government Investment Pool (LGIP) and State Non-Arbitrage Program (SNAP), which are external 2a7-like investment pools stated at share price. All fair market valuations are based on quoted market prices.

In accordance with the *Code of Virginia* and other applicable laws, including regulations, the Authority's investment policy (Policy) permits investments in U.S. Treasury Securities, U.S. agency securities, municipal obligations, prime quality commercial paper, banker's acceptances with domestic banks, corporate notes, negotiable certificates of deposit of domestic banks, money market funds registered under the Federal Investment Act of 1940, repurchase agreements collateralized by U.S. Treasury and Federal Agency obligations, and the State Treasurer's Local Government Investment Pool (the Virginia LGIP).

Pursuant to Sec. 2.1-234.7 of the *Code of Virginia*, the Treasury Board of the Commonwealth sponsors the LGIP and has delegated certain functions to the State Treasurer. The LGIP reports to the Treasury Board of the Commonwealth at their regularly scheduled monthly meetings and the fair value of the position in LGIP is the same as the value of the pool shares (i.e., the LGIP maintains a stable net asset value of \$1 per share).

## ALEXRENEW

### NOTES TO FINANCIAL STATEMENTS June 30, 2023

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

##### Investments (Continued)

The Policy limits investment maturities to a maximum of five years for any investment, unless the Board approves an exception in writing. The investment policy establishes the maximum percentage of the portfolio permitted in each of the following instruments:

U.S. Treasury Obligations	100%, no limitation
Federal Agency Obligations	100%, 35% issuer limit
Municipal Obligations	10%, 3% issuer limit
Commercial Paper	25%, 3% issuer limit
Bankers' Acceptance	25%, 3% issuer limit
Corporate Notes	10%, 3% issuer limit
Negotiable Certificates of Deposit	10%, 50% issuer limit
Money Market Mutual Funds	100%, 50% issuer limit
Repurchase Agreements	35%, 35% issuer limit
LGIP	100%, no limitation

##### **Accounts Receivable**

Operating revenues are generally recognized on the basis of cycle billings rendered monthly. Unbilled revenues for services delivered during the last month of the fiscal year are accrued based on meter readings for June consumption. Receivables are recorded as current assets, net of an allowance for doubtful accounts of \$680,000 at June 30, 2023 and 2022. The allowance is based upon historical collections.

##### **Capital Assets**

Purchased or constructed property, plant and equipment with a cost greater than \$5,000 and an estimated useful life of 3 years or more is capitalized and recorded at historical cost. Interest related to costs and major improvements, renewals, and replacements is capitalized as a cost of the project. Depreciation is computed on the straight-line basis over the estimated useful life. The estimated useful lives are as follows:

Plant and related infrastructure	67 years
Buildings and improvements	10-30 years
Furniture and equipment	3-15 years
Vehicles	5 years
Computers	3 years

Capital assets also include intangible assets, such as purchased capacity rights for the Arlington sewer treatment plant upgrade and expansion, and I.T. subscription assets. Capacity rights assets are amortized over 40 years and I.T. subscription assets are amortized based on terms stated in the agreement.

##### **Accrued Paid Time-Off Benefit**

The Authority's paid time-off benefit (PTO) policy permits employees to accumulate a limited amount of earned but unused PTO benefits, which will be paid to employees upon separation from service. The accrued PTO benefit is included in the statement of net position as a liability.

NOTES TO FINANCIAL STATEMENTS  
June 30, 2023

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

**Allocation of Expenses**

For purposes of the statement of revenues, expenses, and changes in net position, payroll taxes and fringe benefits were allocated to operations and administration based on direct salaries.

**Net Position**

Net position is the difference between assets, deferred outflows of resources, liabilities, and deferred inflows of resources. Net investment in capital assets represents capital assets, less accumulated depreciation, less any outstanding debt related to the acquisition, construction, or improvement of those assets. Net investment in capital assets excludes unspent debt proceeds. Net position is reported as restricted when there are limitations imposed on its use either through the enabling legislation adopted by the Authority or through external restrictions imposed by creditors, grantors, or laws or regulations of other governments. Unrestricted net position represents the remaining net position not included in the previous two categories.

When both restricted and unrestricted net position are available for use, it is the Authority's policy to use restricted net position first, then unrestricted as needed.

**Estimates**

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

**Fair Value Measurement**

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs.

**Pensions**

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 Authority's Retirement Plan and the additions to/deductions from the Authority's Retirement Plan's net fiduciary position have been determined on the same basis as they were reported by the Virginia Retirement System (VRS). For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

NOTES TO FINANCIAL STATEMENTS  
June 30, 2023**Note 1. Description of Entity and Summary of Significant Accounting Policies (Continued)****Deferred Outflows/Inflows of Resources**Deferred Outflows

In addition to assets, the statements which present financial position report a separate section for deferred outflows of resources. This separate financial statement element represents a consumption of net assets that applies to future periods and so will not be recognized as an outflow of resources (expense/expenditure) until then. The Authority has four items that qualify for reporting in this category. The first item consists of contributions subsequent to the measurement date for pensions; this will be applied to the net pension liability in the next fiscal year. The second item is the net difference between projected and actual earnings on pension plan investments. This difference will be recognized in pension expense over a closed five-year period. The third item is the deferred loss on refunding, which results from the difference in the carrying value of refunded debt and its reacquisition price. This amount is deferred and amortized over the shorter of the life of the refunded or refunding debt. The fourth item is for the changes in assumptions related to OPEB. The difference will be recognized in OPEB expense over a closed four-year period.

Deferred Inflows

In addition to liabilities, the statements which present financial position report a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net assets that applies to future periods and so will not be recognized as an inflow of resources (revenue) until that time. The Authority has two types of items that qualify for reporting under this category. This first item represents differences between expected and actual experience in the pension plan. These differences will be recognized in pension expense over a closed five-year period. The second item is the differences between expected and actual experience and the net difference between projected and actual earnings related to OPEB. This difference will be recognized in OPEB expense over a closed four-year period.

**Note 2. Deposits and Investments**Deposits

Deposits with banks are covered by the Federal Deposit Insurance Corporation (FDIC) and collateralized in accordance with the Virginia Security for Public Deposits Act (the Act) Section 2.2-4400 et. seq. of the *Code of Virginia*. Under the Act, banks and savings institutions holding public deposits in excess of the amount insured by the FDIC must pledge collateral to the Commonwealth of Virginia Treasury Board. Financial institutions may choose between two collateralization methodologies and depending upon that choice, will pledge collateral that ranges in the amounts from 50% to 130% of all excess deposits. Accordingly, all deposits are considered fully collateralized.



# ALEXRENEW

## NOTES TO FINANCIAL STATEMENTS June 30, 2023

### Note 2. Deposits and Investments (Continued)

#### Investments

Statutes authorize the Authority to invest in obligations of the United States or agencies thereof; obligations of the Commonwealth of Virginia or political subdivisions thereof; obligations of the International Bank for Reconstruction and Development (World Bank), the Asian Development Bank, the African Development Bank, “prime quality” commercial paper and certain corporate notes, banker’s acceptances, repurchase agreements, the State Treasurer’s LGIP, a 2a-7 like pool, and the Commonwealth of Virginia SNAP, a pooled investment fund. Both the LGIP and SNAP are overseen by the Treasurer of Virginia and the State Treasury Board. The fair value of the Authority’s position in the pools is the same as the value of the pool shares, which are reported at amortized cost.

The Authority categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. As of June 30, 2023 and 2022, the Authority’s investments in federal agency bonds and notes, U.S. Treasury bonds and notes, Supra-National agency notes, and corporate bonds and notes were valued using a matrix pricing model, Level 2 inputs.

#### Custodial Credit Risk

Custodial credit risk is the risk that, in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of investment or collateral securities that are in the possession of an outside party. At June 30, 2023 and 2022, none of the Authority’s investments are exposed to custodial credit risk.

#### Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. The Authority’s portfolio management approach is active, allowing for periodic restructuring of the investment portfolio to take advantage of current and anticipated interest rate moves. The Authority minimizes its exposure to interest rate risk by having an average investment period of 2.5 years and a limit of less than 5 years.

The Authority’s investments as of June 30, 2023 consisted of the following:

<u>Investment Type</u>	<u>Fair Value</u>	<u>S&amp;P Credit Rating</u>	<u>Weighted Average Maturity *</u>
Federal agency bonds and notes	\$ 4,368,025	AA+	0.89
U.S. Treasury bonds and notes	13,789,788	AA+	2.67
Supra-National agency notes	1,811,865	AAA	1.19
Corporate bonds and notes	295,510	AAA	0.60
LGIP	<u>130,658</u>	AAAm	N/A
Total investments	\$ <u>20,395,846</u>		

\*Average maturity in years

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
June 30, 2023

**Note 2. Deposits and Investments (Continued)**

Interest Rate Risk (Continued)

The Authority's investments as of June 30, 2022 consisted of the following:

<u>Investment Type</u>	<u>Fair Value</u>	<u>S&amp;P Credit Rating</u>	<u>Weighted Average Maturity</u>
Federal agency bonds and notes	\$ 6,078,936	AA+	1.73
U.S. Treasury bonds and notes	13,379,215	AA+	2.18
Supra-National agency notes	3,302,083	AAA	0.87
Corporate bonds and notes	773,477	AA+-AAA	0.74
LGIP	<u>125,664</u>	AAAm	N/A
Total investments	\$ <u>23,659,375</u>		

Reconciliation of deposits and investments at June 30, 2023:

<u>Amounts per disclosures:</u>		<u>Amounts per Statement of Net Position:</u>	
Cash and cash equivalents	\$ 57,739,838	Cash and cash equivalents	\$ 50,167,390
Long-term certificates of deposit	<u>2,888,499</u>	Investments	<u>30,856,793</u>
Total deposits	60,628,337	Total	<u>\$ 81,024,183</u>
Total investments	<u>20,395,846</u>		
Total	<u>\$ 81,024,183</u>		

Restricted Assets

Certain resources of the Authority are classified as restricted assets on the statement of net position. These funds are maintained in separate accounts and their use is limited by applicable bond covenants and agreements.

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 3. Accounts Receivable, Due to/from Other Governments, and Payables**

Receivables, due to/from other governments and payables were composed of the following:

	<u>2023</u>	<u>2022</u>
Accounts receivable:		
Billed customer services	\$ 3,834,801	\$ 4,458,117
Unbilled customer services	3,050,862	2,329,864
Other	34,952	14,454
Less: Allowance for uncollectible	<u>(680,000)</u>	<u>(680,000)</u>
Total accounts receivable	<u>\$ 6,240,615</u>	<u>\$ 6,122,435</u>
Due from other governments:		
State grant	\$ 3,256,624	\$ -
County of Fairfax, Virginia	<u>199,606</u>	<u>854,719</u>
Total due from other governments	<u>\$ 3,456,230</u>	<u>\$ 854,719</u>
Accounts payable and accrued expenses:		
Accounts payable – vendors	\$ 16,495,553	\$ 13,830,313
Retainage payable	5,905,803	6,011,544
Other	22,070	9,445
Accrued expenses – payroll, payroll taxes, and other	<u>435,109</u>	<u>329,312</u>
Total accounts payable and accrued expenses	<u>\$ 22,858,535</u>	<u>\$ 20,180,614</u>

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 4. Capital Assets**

Changes in capital assets for FY23 were as follows:

	<u>6/30/2022</u>	<u>Additions</u>	<u>Reductions</u>	<u>6/30/2023</u>
Capital assets, not being depreciated:				
Land and improvements	\$ 40,172,404	\$ -	\$ -	\$ 40,172,404
Construction in progress	<u>287,343,853</u>	<u>114,433,664</u>	<u>-</u>	<u>401,777,517</u>
 Total capital assets, not being depreciated	 <u>327,516,257</u>	 <u>114,433,664</u>	 <u>-</u>	 <u>441,949,921</u>
Capital assets, being depreciated				
Plant and infrastructure	833,961,604	3,330,386	-	837,291,990
Plant equipment and office equipment	<u>35,966,310</u>	<u>8,811,622</u>	<u>-</u>	<u>44,777,932</u>
 Total capital assets, being depreciated	 <u>869,927,914</u>	 <u>12,142,008</u>	 <u>-</u>	 <u>882,069,922</u>
Less accumulated depreciation for:				
Plant and infrastructure	(252,884,251)	(16,616,647)	-	(269,500,898)
Plant equipment and office equipment	<u>(23,498,706)</u>	<u>(3,494,323)</u>	<u>-</u>	<u>(26,993,029)</u>
 Total accumulated depreciation	 <u>(276,382,957)</u>	 <u>(20,110,970)</u>	 <u>-</u>	 <u>(296,493,927)</u>
 Total capital assets, being depreciated, net	 <u>593,544,957</u>	 <u>(7,968,962)</u>	 <u>-</u>	 <u>585,575,995</u>
Capital assets, being amortized				
Capacity rights	41,515,762	-	-	41,515,762
I.T. Subscriptions	<u>-</u>	<u>1,563,629</u>	<u>-</u>	<u>1,563,629</u>
Total capital assets, being amortized	<u>41,515,762</u>	<u>1,563,629</u>	<u>-</u>	<u>43,079,391</u>
Less accumulated amortization for:				
Capacity rights	(12,892,155)	(1,044,245)	-	(13,936,400)
I.T. Subscriptions	<u>-</u>	<u>(286,664)</u>	<u>-</u>	<u>(286,664)</u>
Total accumulated amortization	<u>(12,892,155)</u>	<u>(1,330,909)</u>	<u>-</u>	<u>(14,223,064)</u>
 Total capital assets, being amortized, net	 <u>28,623,607</u>	 <u>232,720</u>	 <u>-</u>	 <u>28,856,327</u>
 Total capital assets	 <u>\$ 949,684,821</u>	 <u>\$ 106,697,422</u>	 <u>\$ -</u>	 <u>\$ 1,056,382,243</u>

**I.T. Subscriptions**

The Authority implemented GASB Statement Number 96 in fiscal year ending June 30, 2023. This resulted in the Authority recording a I.T. subscription capital asset related to an enterprise license agreement for cloud storage, hosting and virtualization service. The authority paid the full amount during the fiscal year, therefore there is not corresponding I.T. subscription liability.

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 4. Capital Assets (Continued)**

Changes in capital assets for FY22 were as follows:

	<u>6/30/2021</u>	<u>Additions</u>	<u>Reductions</u>	<u>6/30/2022</u>
Capital assets, not being depreciated:				
Land and improvements	\$ 40,172,404	\$ -	\$ -	\$ 40,172,404
Construction in progress	<u>185,892,313</u>	<u>102,167,957</u>	<u>(716,417)</u>	<u>287,343,853</u>
Total capital assets, not being depreciated	<u>226,064,717</u>	<u>102,167,957</u>	<u>(716,417)</u>	<u>327,516,257</u>
Capital assets, being depreciated				
Plant and infrastructure	833,213,277	2,594,249	(1,845,922)	833,961,604
Plant equipment and office equipment	<u>29,244,644</u>	<u>7,876,592</u>	<u>(1,154,926)</u>	<u>35,966,310</u>
Total capital assets, being depreciated	<u>862,457,921</u>	<u>10,470,841</u>	<u>(3,000,848)</u>	<u>869,927,914</u>
Less accumulated depreciation for:				
Plant and infrastructure	(237,031,408)	(16,400,010)	547,167	(252,884,251)
Plant equipment and office equipment	<u>(21,412,761)</u>	<u>(3,128,131)</u>	<u>1,042,186</u>	<u>(23,498,706)</u>
Total accumulated depreciation	<u>(258,444,169)</u>	<u>(19,528,141)</u>	<u>1,589,353</u>	<u>(276,382,957)</u>
Total capital assets, being depreciated, net	<u>604,013,752</u>	<u>(9,057,300)</u>	<u>(1,411,495)</u>	<u>593,544,957</u>
Capital assets, being amortized				
Capacity rights	41,201,598	314,164	-	41,515,762
Less accumulated amortization for:				
Capacity rights	<u>(11,848,565)</u>	<u>(1,043,590)</u>	<u>-</u>	<u>(12,892,155)</u>
Total capital assets, being amortized, net	<u>29,353,033</u>	<u>(729,426)</u>	<u>-</u>	<u>28,623,607</u>
Total capital assets	<u>\$ 859,431,502</u>	<u>\$ 92,381,231</u>	<u>\$ (2,127,912)</u>	<u>\$ 949,684,821</u>

**County of Arlington, Virginia Purchased Capacity Rights**

The Authority has entered into a service agreement with the County of Arlington, Virginia (Arlington), in which the Authority purchases capacity rights to use Arlington's wastewater treatment plant. These costs are capitalized as an intangible asset. Arlington holds title to the plant.

**County of Fairfax, Virginia Capacity Rights**

Under the terms of the Service Agreement with the County, the County reimburses the Authority for its share of capital costs related to joint-use facilities, which varies up to 60%. In exchange for these capital contributions as presented on the statement of revenues, expenses, and changes in net position, the Authority is required to recognize and preserve an equivalent share of the capacity rights of the related facilities for the County's use.



# ALEXRENEW

## NOTES TO FINANCIAL STATEMENTS June 30, 2023

### Note 4. Capital Assets (Continued)

#### County of Fairfax, Virginia Capacity Rights (Continued)

Currently, the County has a capacity entitlement of 32.4 MGD, which varies up to 60% of the facility's total capacity of 54 MGD. The County is required to share in operation and maintenance costs related to the joint-use facilities.

### Note 5. Line of Credit

On February 25, 2020, the Authority entered into a new revolving credit agreement with Bank of America to provide the Authority with a \$30 million line of credit, which is used as interim financing for capital projects. The line is secured by a pledge of the Authority's net revenues. The Authority's obligation to repay advances under the line constitutes subordinated debt, pursuant to the Authority's Master Trust Indenture. Under the initial agreement, the variable interest rate on the line of credit was equal to the SIFMA Index plus 58 basis points. On June 29, 2022, the credit agreement was amended and restated to change the variable interest rate to either: 1) 80% of the one-month Term SOFR (no minimum) plus 42 basis points or in the event of a taxable draw, 2) 100% of the one-month Term SOFR plus 53 basis points. The agreement also requires the Authority to pay an unused fee of 0.15% per annum for any day on which less than 50% of the authorized \$30 million is outstanding. The rate was 4.66% and 1.19% at June 30, 2023 and 2022, respectively. The initial term of the line of credit was one year, with an expiration date of June 30, 2021. The Authority extended the line of credit to June 30, 2022 and then again to June 30, 2024, with the same terms but for the revised interest rate methodologies and fees described above. The line of credit was increased to \$60 million in fiscal year 2023. As of June 30, 2023 and 2022, respectively, the Authority has drawn \$21,874,852 and \$13,874,852. As of June 30, 2023 and 2022, respectively, the unused portion of the line credit was \$38,125,148 and \$16,125,148.

### Note 6. Long-Term Debt

On March 15, 1999, the Authority executed a new Master Indenture of Trust for the purpose of issuing sewer revenue bonds from time-to-time. These bonds will provide funds to pay the cost, or any part of the cost, of the Sewage Disposal System additions or improvements or to refund indebtedness and obligations previously incurred for such purposes. The Authority has issued and sold sewer revenue bonds to the Virginia Clean Water Revolving Loan Fund and the Virginia Pooled Financing Program, acting by and through the Virginia Resources Authority (VRA). The Master Indenture of Trust constitutes a contract among the Authority, the Trustee and VRA governing bond issuance.

Sewer bonds and loans consist of the following:

	<u>2023</u>	<u>2022</u>
Sewer revenue bond, Series 2000B, \$60,400,000; secured equally and ratably with other bond issues by pledge of revenues of the Authority; interest only payments due March 2002 and March 2005; semi-annual installments of approximately \$3,466,961, including principal and interest at 3.85% due through September 2022.	\$ -	\$ 4,024,113

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 6. Long-Term Debt (Continued)**

	<u>2023</u>	<u>2022</u>
Sewer revenue bond, Series 2004, \$22,000,000; secured equally and ratably with other bond issues by pledge of revenues of the Authority; semi-annual installments of \$712,206, including principal and interest beginning March 2006 at 3.10% due through September 2024.	\$ 2,115,429	\$ 3,508,232
Sewer revenue bond, Series 2006A, \$3,000,000; secured equally and ratably with other bond issues by pledge of revenues of the Authority; semi-annual installments of \$100,824, including principal and interest beginning in March 2006 at 3.10% due through September 2024.	299,473	496,646
Sewer revenue bond, Series 2006B, \$12,000,000; secured equally and ratably with other bond issues by pledge of revenues of the Authority; semi-annual installments of \$375,079 at 3.10% due through March 2027.	2,934,230	3,649,677
Sewer revenue bond, Series 2009, \$15,000,000; secured equally and ratably with other bond issues by pledge of revenues of the Authority; semi-annual installments of \$502,939, including principal and interest, beginning March 2011 at 3.55% due through September 2030.	5,820,491	6,651,069
Sewer revenue bond, Series 2011, \$8,115,767; secured equally and ratably with other bond issues by pledge of revenues of the Authority; semi-annual installments of \$260,604, including principal and interest, beginning March 2014 at 2.35% due through September 2033.	4,811,821	5,220,164
Sewer revenue bond, Series 2014A, \$12,500,000; secured equally and ratably with other bond issues by pledge of revenues of the Authority; semi-annual installments of \$389,136, including principal and interest, beginning March 2016 at 2.10% due through September 2035.	8,518,978	9,144,888

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 6. Long-Term Debt (Continued)**

	<u>2023</u>	<u>2022</u>
Sewer revenue bond, Series 2014B, \$2,500,000; secured equally and ratably with other bond issues by pledge of revenues of the Authority; semi-annual installments of \$73,712, including principal and interest, beginning March 2016 at 2.10% due through September 2035.	\$ 1,643,031	\$ 1,769,598
Sewer revenue bond, Series 2014C, \$19,515,000; secured equally and ratably with other bond issues by pledge of revenues of the Authority; semi-annual installments of \$399,833 to \$3,203,294, including principal and interest, beginning April 2015 at 3.63%, due through April 2039.	18,420,000	18,700,000
Sewer revenue bond, Series 2017A, \$23,000,000; secured equally and ratably with other bond issues by pledge of revenues of the Authority; semi-annual installments of \$395,774 to \$1,468,613, including principal and interest, beginning October 2017 at 3.60%, due through October 2045.	22,425,000	23,000,000
Sewer revenue bond, Series 2019, up to \$10,400,000; secured equally and ratably with other bond issues by pledge of revenues of the Authority; semi-annual installments of \$79,399 to \$1,121,530, including principal and interest, beginning March 2022 at 1.10%, due through March 2040. Balance represents draws to date.	4,781,504	4,881,504
Virginia water facilities revolving fund loan Series 2021, up to \$185,650,000; secured equally and ratably with other bond issues by pledge of revenues of the Authority; semi-annual installments of \$4,568,195, including principal and interest, beginning March 2023 at 1.35%, due through March 2048. Balance represents draws to date.	173,935,671	104,808,976
Water Infrastructure Finance and Innovation (WIFIA), up to \$320,992,641; Semi-annual installments of interest to begin on 10/1/2025 at 1.88% and principal on October 1, 2026, due through October 1, 2059. Balance represents draws to date.	12,602,321	-
Plus unamortized premiums and discounts, net	<u>2,427,195</u>	<u>2,564,213</u>
	<u>\$ 260,735,144</u>	<u>\$ 188,419,080</u>

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
June 30, 2023

**Note 6. Long-Term Debt (Continued)**

The annual requirements to amortize bond principal and related interest are as follows:

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2024	\$ 8,446,435	\$ 6,359,886	\$ 14,806,321
2025	13,461,173	4,506,460	17,967,633
2026	10,464,591	4,526,405	14,990,996
2027	10,727,145	4,329,951	15,057,096
2028	10,595,021	4,123,329	14,718,350
2029-2033	55,756,916	16,525,930	72,282,846
2034-2038	54,879,092	11,306,072	66,185,164
2039-2043	49,406,973	6,847,941	56,254,914
2044-2048	36,954,345	2,618,148	39,572,493
2049-2053	3,014,070	617,928	3,631,998
2054-2058	3,414,468	318,827	3,733,295
2059-2060	1,187,720	36,068	1,223,788
Total	<u>\$ 258,307,949</u>	<u>\$ 62,116,945</u>	<u>\$ 320,424,894</u>

The change in debt for the years ended June 30, 2023 and 2022 are as follows:

	<u>6/30/2022</u>	<u>Additions</u>	<u>Reductions</u>	<u>6/30/2023</u>	<u>Due Within One Year</u>
Sewer revenue bonds	\$ 185,854,867	\$81,729,016	\$ (9,275,934)	\$258,307,949	\$ 8,446,435
Plus deferred amounts:					
Net premium	<u>2,564,213</u>	<u>-</u>	<u>(137,018)</u>	<u>2,427,195</u>	<u>137,018</u>
Total	<u>\$ 188,419,080</u>	<u>\$81,729,016</u>	<u>\$ (9,412,952)</u>	<u>\$260,735,144</u>	<u>\$ 8,583,453</u>

	<u>6/30/2021</u>	<u>Additions</u>	<u>Reductions</u>	<u>6/30/2022</u>	<u>Due Within One Year</u>
Sewer revenue bonds	\$ 111,099,560	\$85,835,854	\$ (11,080,547)	\$185,854,867	\$ 9,215,454
Plus deferred amounts:					
Net premium	<u>2,701,232</u>	<u>-</u>	<u>(137,019)</u>	<u>2,564,213</u>	<u>137,019</u>
Total	<u>\$ 113,800,792</u>	<u>\$85,835,854</u>	<u>\$ (11,217,566)</u>	<u>\$188,419,080</u>	<u>\$ 9,352,473</u>

During FY2023 and FY2022, the Authority was in compliance with the covenants associated with the outstanding bond indentures.

NOTES TO FINANCIAL STATEMENTS  
June 30, 2023

## Note 7. Defined Benefit Pension Plan

Plan Description

The VRS Authority Retirement Plan is a multi-employer, agent plan. All full-time, salaried, permanent employees of the Authority are automatically covered by a VRS Retirement Plan upon employment. This plan is administered by the VRS along with plans for other employer groups in the Commonwealth of Virginia. Members earn one month of service credit for each month they are employed and for which they and their employer pay contributions to VRS. Members are eligible to purchase prior service, based on specific criteria as defined in the *Code of Virginia*, as amended. Eligible prior service that may be purchased includes prior public service, active military service, certain periods of leave, and previously refunded service.

The System administers three different benefit structures for covered employees – Plan 1, Plan 2, and Hybrid. Each of these benefit structures has a different eligibility criteria. The specific information for each plan is as follows:

**Plan 1** – Plan 1 is a defined benefit plan. The retirement benefit is based on a member's age, service credit, and average final compensation at retirement using a formula. Employees are eligible for Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013, and they have not taken a refund.

- **Hybrid Opt-In Election** – Plan 1 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014. The Hybrid Retirement Plan's effective date for eligible Plan 1 members who opted in was July 1, 2014. If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan. Members who were eligible for an optional retirement plan (ORP) and had prior service under Plan 1 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 1 or ORP.
- **Retirement Contributions** – Employees contribute 5.00% of their compensation each month to their member contribution account through a pre-tax salary reduction. Member contributions are tax-deferred until they are withdrawn as part of a retirement benefit or as a refund. The employer makes a separate actuarially determined contribution to VRS for all covered employees. VRS invests both member and employer contributions to provide funding for the future benefit payments.
- **Service Credit** – Service credit includes active service. Members earn service credit for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional service credit the member was granted. A member's total service credit is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.
- **Vesting** – Vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members become vested when they have at least five years (60 months) of service credit. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members also must be vested to receive a full refund of the employer's contribution account balance if they leave employment and request a refund. Members are always 100% vested in the contributions that they make.



## ALEXRENEW

### NOTES TO FINANCIAL STATEMENTS June 30, 2023

#### Note 7. Defined Benefit Pension Plan (Continued)

##### Plan Description (Continued)

##### Plan 1 (Continued)

- **Calculating the Benefit** – The Basic Benefit is calculated based on a formula using the member's average final compensation, a retirement multiplier, and total service credit at retirement. An early retirement reduction factor is applied to the Basic Benefit if the member retires with a reduced retirement benefit. In cases where the member has elected an optional form of retirement payment, an option factor specific to the option chosen is then applied.
- **Average Final Compensation** – A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.
- **Service Retirement Multiplier** – The retirement multiplier is a factor used in the formula to determine a final retirement benefit. The retirement multiplier for non-hazardous duty members is 1.70%.
- **Normal Retirement Age** – Age 65.
- **Earliest Unreduced Retirement Eligibility** – Age 65 with at least five years (60 months) of service credit or at age 50 with at least 30 years of service credit.
- **Earliest Reduced Retirement Eligibility** – Age 55 with at least five years (60 months) of service credit or age 50 with at least 10 years of service credit.
- **Cost-of-Living Adjustment (COLA) in Retirement** – The Cost-of-Living Adjustment (COLA) matches the first 3.00% increase in the Consumer Price Index for all Urban Consumers (CPI-U) and half of any additional increase (up to 4.00%) up to a maximum COLA of 5.00%.
  - **Eligibility** – For members who retire with an unreduced benefit or with a reduced benefit and who have less than 20 years of service credit, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date. For members who retire with a reduced benefit and who have less than 20 years of service credit, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date.
  - **Exceptions to COLA Effective Dates** – The COLA is effective July 1 following one full calendar year (January 1 to December 31) under any of the following circumstances:
    - The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013.
    - The member retires on disability.
    - The member retires directly from short-term or long-term disability.
    - The member is involuntarily separated from employment for causes other than job performance or misconduct and is eligible to retire under the Workforce Transition Act or the Transitional Benefits Program.
    - The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit.

NOTES TO FINANCIAL STATEMENTS  
June 30, 2023

Note 7. Defined Benefit Pension Plan (Continued)

Plan Description (Continued)

Plan 1 (Continued)

- **Disability Coverage** – For members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.70% on all service, regardless of when it was earned, purchased, or granted.
- **Purchase of Prior Service** – Members may be eligible to purchase service from previous public employment, active duty military service, an eligible period of leave or VRS refunded service as service credit in their plan. Prior service credit counts towards vesting, eligibility for retirement and the health insurance credit. Only active members are eligible to purchase prior service. Members also may be eligible to purchase periods of leave without pay.

**Plan 2** – Plan 2 is a defined benefit plan. The retirement benefit is based on a member's age, service credit, and average final compensation at retirement using a formula. Employees are eligible for Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013.

- **Hybrid Opt-In Election** – Eligible Plan 2 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014. The Hybrid Retirement Plan's effective date for eligible Plan 2 members who opted in was July 1, 2014. If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan. Members who were eligible for an ORP and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 2 or ORP.
- **Retirement Contributions** – Same as Plan 1.
- **Service Credit** – Same as Plan 1.
- **Vesting** – Same as Plan 1.
- **Calculating the Benefit** – See definition under Plan 1.
- **Average Final Compensation** – A member's average final compensation is the average of their 60 consecutive months of highest compensation as a covered employee.
- **Service Retirement Multiplier** – Same as Plan 1 for service earned, purchased, or granted prior to January 1, 2013. The retirement multiplier is 1.65% for service credit earned, purchased, or granted on or after January 1, 2013.
- **Normal Retirement Age** – Normal Social Security retirement age.
- **Earliest Unreduced Retirement Eligibility** – Normal Social Security retirement age with at least five years (60 months) of service credit or when their age and service equal 90.
- **Earliest Reduced Retirement Eligibility** – Age 60 with at least five years (60 months) of service credit.

## ALEXRENEW

### NOTES TO FINANCIAL STATEMENTS June 30, 2023

#### Note 7. Defined Benefit Pension Plan (Continued)

##### Plan Description (Continued)

##### Plan 2 (Continued)

- **COLA in Retirement** – The COLA matches the first 2.00% increase in the CPI-U and half of any additional increase (up to 2.00%), for a maximum COLA of 3.00%.
  - **Eligibility** – Same as Plan 1.
  - **Exceptions to COLA Effective Dates** – Same as Plan 1.
- **Purchase of Prior Service** – Same as Plan 1.
- **Disability Coverage** – Same as Plan 1 except that the retirement multiplier is 1.65%.

**Hybrid Retirement Plan** – The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan. Most members hired on or after January 1, 2014 are in this plan, as well as Plan 1 and Plan 2 members who were eligible and opted into the plan during a special election window. The defined benefit is based on a member's age, service credit, and average final compensation at retirement using a formula. The benefit from the defined contribution component of the plan depends on the member and employer contributions made to the plan and the investment performance of those contributions. In addition to the monthly benefit payment payable from the defined benefit plan at retirement, a member may start receiving distributions from the balance in the defined contribution account, reflecting the contributions, investment gains or losses, and any required fees.

- **Eligible Members** – Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes Political Subdivision employees; members in Plan 1 or Plan 2 who elected to opt into the plan during the election window held January 1 through April 30, 2014; the plan's effective date for opt-in members was July 1, 2014.
- **Non-Eligible Members** – Some employees are not eligible to participate in the Hybrid Retirement Plan. They include Political Subdivision employees who are covered by enhanced benefits for hazardous duty employees. Those employees eligible for an ORP must elect the ORP plan or the Hybrid Retirement Plan. If these members have prior service under Plan 1 or Plan 2, they are not eligible to elect the Hybrid Retirement Plan and must select Plan 1 or Plan 2 (as applicable), or ORP.
- **Retirement Contributions** – A member's retirement benefit is funded through mandatory and voluntary contributions made by the member and the employer to both the defined benefit and the defined contribution components of the plan.
- Mandatory contributions are based on a percentage of the employee's creditable compensation and are required from both the member and the employer. Additionally, members may choose to make voluntary contributions to the defined contribution component of the plan, and the employer is required to match those voluntary contributions according to specified percentages.

NOTES TO FINANCIAL STATEMENTS  
June 30, 2023

## Note 7. Defined Benefit Pension Plan (Continued)

Plan Description (Continued)Hybrid Retirement Plan (Continued)

- **Service Credit –**
  - **Defined Benefit Component:** Under the defined benefit component of the plan, service credit includes active service. Members earn service credit for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional service credit the member was granted. A member's total service credit is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It may also count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.
  - **Defined Contributions Component:** Under the defined contribution component, service credit is used to determine vesting for the employer contribution portion of the plan.
- **Vesting –**
  - **Defined Benefit Component:** Defined benefit vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members are vested under the defined benefit component of the Hybrid Retirement Plan when they reach five years (60 months) of service credit. Plan 1 or Plan 2 members with at least five years (60 months) of service credit who opted into the Hybrid Retirement Plan remain vested in the defined benefit component.
  - **Defined Contribution Component:** Defined contribution vesting refers to the minimum length of service a member needs to be eligible to withdraw the employer contributions from the defined contribution component of the plan. Members are always 100% vested in the contributions that they make. Upon retirement or leaving covered employment, a member is eligible to withdraw a percentage of employer contributions to the defined contribution component of the plan, based on service. After two years, a member is 50% vested and may withdraw 50% of employer contributions. After three years, a member is 75% vested and may withdraw 75% of employer contributions. After four or more years, a member is 100% vested and may withdraw 100% of employer contributions. Distribution is not required, except as governed by law.
- **Calculating the Benefit –**
  - **Defined Benefit Component:** See definition under Plan 1.
  - **Defined Contribution Component:** The benefit is based on contributions made by the member and any matching contributions made by the employer, plus net investment earnings on those contributions.
- **Average Final Compensation –** Same as Plan 2 for the defined benefit component of the plan.
- **Service Retirement Multiplier –** The retirement multiplier for the defined benefit component is 1.00%. For members who opted into the Hybrid Retirement Plan from Plan 1 or Plan 2, the applicable multipliers for those plans will be used to calculate the retirement benefit for service credited in those plans.

NOTES TO FINANCIAL STATEMENTS  
June 30, 2023

Note 7. Defined Benefit Pension Plan (Continued)

Plan Description (Continued)

Hybrid Retirement Plan (Continued)

- **Normal Retirement Age –**
  - **Defined Benefit Component:** Same as Plan 2.
  - **Defined Contribution Component:** Members are eligible to receive distributions upon leaving employment, subject to restrictions.
- **Earliest Unreduced Retirement Eligibility –**
  - **Defined Benefit Component:** Normal Social Security retirement age and have at least five years (60 months) of service credit or when their age and service equal 90.
  - **Defined Contribution Component:** Members are eligible to receive distributions upon leaving, subject to restrictions.
- **Earliest Reduced Retirement Eligibility –**
  - **Defined Benefit Component:** Members may retire with a reduced benefit as early as age 60 with at least five years (60 months) of service credit.
  - **Defined Contribution Component:** Members are eligible to receive distributions upon leaving employment, subject to restrictions.
- **COLA in Retirement –**
  - **Defined Benefit Component:** Same as Plan 2.
  - **Defined Contribution Component:** Not applicable.
  - **Eligibility:** Same as Plan 1 and 2.
  - **Exceptions to COLA Effective Dates:** Same as Plan 1 and 2.
- **Disability Coverage –** Employees of Political Subdivisions (including Plan 1 and Plan 2 opt-ins) participate in the Virginia Local Disability Program (VLDP) unless their local governing body provides an employer-paid comparable program for its members. Hybrid members (including Plan 1 and Plan 2 opt-ins) covered under VLDP are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits.
- **Purchase of Prior Service –**
  - **Defined Benefit Component –** Same as Plan 1, with the following exceptions:
    - Hybrid Retirement Plan members are ineligible for ported service.
  - **Defined Contribution Component –** Not applicable.



**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 7. Defined Benefit Pension Plan (Continued)**

**Employees Covered by Benefit Terms**

As of the June 30, 2021 actuarial valuation, the following employees were covered by the benefit terms of the pension plan:

	<u>Number</u>
Inactive members or their beneficiaries currently receiving benefits	<u>107</u>
Inactive members:	
Vested inactive members	19
Non-vested inactive members	65
Inactive members active elsewhere in VRS	<u>14</u>
Total inactive members	98
Active members	<u>98</u>
Total covered employees	<u><u>303</u></u>

**Contributions**

The contribution requirement for active employees is governed by §51.1-145 of the *Code of Virginia*, as amended, but may be impacted as a result of funding options provided to Political Subdivisions by the Virginia General Assembly. Employees are required to contribute 5.00% of their compensation toward their retirement.

The Authority's contractually required contribution rate for the years ended June 30, 2023 and 2022 was 8.19% of covered employee compensation, respectively. This rate was based on actuarially determined rates from actuarial valuations as of June 30, 2021 and 2020.

This rate, when combined with employee contributions, was expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the pension plan from the Authority were \$823,808 and \$526,440 for the years ended June 30, 2023 and 2022, respectively.

**Net Pension Liability**

The Authority's net pension liability was measured as of June 30, 2022. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation performed as of June 30, 2021, rolled forward to the measurement date of June 30, 2022.

## ALEXRENEW

### NOTES TO FINANCIAL STATEMENTS June 30, 2023

#### Note 7. Defined Benefit Pension Plan (Continued)

##### Actuarial Assumptions

The total pension liability for General Employees in the Authority's Retirement Plan was based on an actuarial valuation as of June 30, 2021, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2022.

Inflation	2.50%
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General Employees - Salary increases, including inflation	3.50 – 5.35%
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Investment rate of return	6.75%, net of pension plan investment expense, including inflation
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Mortality rates: General Employees – Update to PUB2010 sector mortality tables. For future mortality improvements, replace load with a modified Mortality Improvement Scale MP-2020.

The actuarial assumptions used in the June 30, 2021 valuation were based on the results of an actuarial experience study for the period from July 1, 2016 through June 30, 2020, except the change in the discount rate which was changed on VRS Board action effective as of July 1, 2019. Changes to the actuarial assumptions as a result of the experience study, are as follows:

General Employees - Others (Non-10 Largest): Updated mortality tables. Adjusted retirement rates to better fit experience for Plan 1; set separate rates based on experience for Plan 2/Hybrid; change final retirement age. Adjusted withdrawal rates to better fit experience.

##### Long-Term Expected Rate of Return

The long-term expected rate of return on pension System investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension System investment expense and inflation) are developed for each major asset class.

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
June 30, 2023

**Note 7. Defined Benefit Pension Plan (Continued)**

**Long-Term Expected Rate of Return (Continued)**

These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

<u>Asset Class (Strategy)</u>	<u>Target Allocation</u>	<u>Arithmetic Long-Term Expected Rate of Return</u>	<u>Weighted Average Long-Term Expected Rate of Return</u>
Public Equity	34.00 %	5.71 %	1.94 %
Fixed Income	15.00 %	2.04 %	0.31 %
Credit Strategies	14.00 %	4.78 %	0.67 %
Real Assets	14.00 %	4.47 %	0.63 %
Private Equity	14.00 %	9.73 %	1.36 %
MAPS – Multi-Asset Public Strategies	6.00 %	3.73 %	0.22 %
PIP – Private Investment Partnership	3.00 %	6.55 %	0.20 %
Total	100.00 %		5.33 %
	Inflation		2.50 %
			7.83 %

\* Expected arithmetic nominal return

\* The above allocation provides a one-year return of 7.83%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the System, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.72%, including expected inflation of 2.50%. The VRS Board elected a long-term rate of 6.75% which is roughly at the 40<sup>th</sup> percentile of expected long-term results of the VRS fund asset allocation.

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 7. Defined Benefit Pension Plan (Continued)**

**Discount Rate**

The discount rate used to measure the total pension liability was 6.75%. The projection of cash flows used to determine the discount rate assumed that System member contributions will be made per the VRS Statutes and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Consistent with the phased-in funding provided by the General Assembly for state and teacher employer contributions, political subdivisions were also provided with an opportunity to use an alternate employer contribution rate. For the year ended June 30, 2023, the alternate rate was the employer contribution rate used in FY 2012 or 100% of the actuarially determined employer contribution rate from the June 30, 2021, actuarial valuations, whichever was greater. From July 1, 2022, on, participating employers are assumed to continue to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total pension liability.

**Changes in Net Pension Liability as of June 30, 2023**

	<b>Increase (Decrease)</b>		
	<b>Total Pension Liability (a)</b>	<b>Plan Fiduciary Net Position (b)</b>	<b>Net Pension Liability (a) – (b)</b>
Balances at June 30, 2022	\$ 55,113,648	\$ 54,106,714	\$ 1,006,934
Changes for the year:			
Service cost	504,939	-	504,939
Interest	3,635,978	-	3,635,978
Differences between expected and actual experience	146,236	-	146,236
Contributions – employer	-	440,335	(440,335)
Contributions – employee	-	363,555	(363,555)
Net investment income	-	(7,277)	7,277
Benefit payments, including refunds of employee contributions	(3,504,503)	(3,504,503)	-
Administrative expenses	-	(34,388)	34,388
Other changes	-	1,207	(1,207)
Net changes	782,650	(2,741,071)	3,523,721
Balances at June 30, 2023	\$ 55,896,298	\$ 51,365,643	\$ 4,530,655

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
June 30, 2023

**Note 7. Defined Benefit Pension Plan (Continued)**

**Changes in Net Pension Liability as of June 30, 2022**

	<b>Increase (Decrease)</b>		
	<b>Total Pension Liability (a)</b>	<b>Plan Fiduciary Net Position (b)</b>	<b>Net Pension Liability (a) – (b)</b>
Balances at June 30, 2021	\$ 52,107,776	\$ 44,816,817	\$ 7,290,959
Changes for the year:			
Service cost	617,494	-	617,494
Interest	3,399,852	-	3,399,852
Change of assumptions	2,178,055	-	2,178,055
Differences between expected and actual experience	289,659	-	289,659
Contributions – employer	-	440,276	(440,276)
Contributions – employee	-	391,153	(391,153)
Net investment income	-	11,968,102	(11,968,102)
Benefit payments, including refunds of employee contributions	(3,479,188)	(3,479,188)	-
Administrative expenses	-	(31,556)	31,556
Other changes	-	1,110	(1,110)
Net changes	3,005,872	9,289,897	(6,284,025)
Balances at June 30, 2022	\$ 55,113,648	\$ 54,106,714	\$ 1,006,934

**Sensitivity of the Discount Rate**

The following presents the net pension liability of the Authority using the discount rate of 6.75%, as well as what the Authority's net pension liability would be if it were calculated using a discount rate that is one percentage point lower (5.75%) or one percentage point higher (7.75%) than the current rate:

	<b>1.00% Decrease (5.75%)</b>	<b>Current Discount Rate (6.75%)</b>	<b>1.00% Increase (7.75%)</b>
Authority's net pension Liability (Asset) at 6/30/2023	\$ 10,817,529	\$ 4,530,655	\$ (706,010)
Authority's net pension Liability (Asset) at 6/30/2022	\$ 7,474,261	\$ 1,006,934	\$ (4,417,760)



**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 7. Defined Benefit Pension Plan (Continued)**

**Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions**

For the year ended June 30, 2023, the Authority recognized pension expense of \$482,741. At June 30, 2023, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between expected and actual experience	\$ 115,038	\$ -
Change in assumptions	284,095	-
Net difference between projected and actual earnings on pension plan investments	-	1,670,498
Employer contributions subsequent to the measurement date	<u>823,808</u>	<u>-</u>
Total	<u>\$ 1,222,941</u>	<u>\$ 1,670,498</u>

For the year ended June 30, 2022, the Authority recognized negative pension expense of \$159,636. At June 30, 2022, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between expected and actual experience	\$ 163,750	\$ 240,167
Change in assumptions	1,231,075	-
Net difference between projected and actual earnings on pension plan investments	-	5,907,308
Employer contributions subsequent to the measurement date	<u>526,440</u>	<u>-</u>
Total	<u>\$ 1,921,265</u>	<u>\$ 6,147,475</u>

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 7. Defined Benefit Pension Plan (Continued)**

**Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions (Continued)**

The \$823,808 reported as deferred outflows of resources related to pensions resulting from the Authority's contributions after the measurement date will be recognized as a reduction of the Net Pension Liability in the year ending June 30, 2024. Other amounts reported as deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ending June 30	Addition/ (Reduction) to Pension Expense
2024	\$ (239,309)
2025	\$ (652,269)
2026	\$ (1,093,229)
2027	\$ 713,442

**Pension Plan Data**

Information about the VRS Political Subdivision Retirement Plan is also available in the separately issued VRS 2021 Annual Comprehensive Financial Report (ACFR). A copy of the 2023 VRS ACFR may be downloaded from the VRS website at [varetire.org/pdf/publications/2020-annual-report.pdf](http://varetire.org/pdf/publications/2020-annual-report.pdf), or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA 23218-2500.

**Payables to the Pension Plan**

At June 30, 2023 and 2022, approximately \$97,000 and \$72,000 was payable to the System for the legally required contributions related to the June 2023 and 2022 payroll, respectively.

**Note 8. Other Post-Employment Benefits**

The Authority provides limited post-retirement benefits, such as health, dental and vision insurance to retirees who have five or more years of service with the Authority through an agent multiple-employer defined benefit plan. The Authority pays 25% of medical insurance costs of retirees with five or more years of service. The remaining amounts of insurance premiums are paid by the retiree. Prior to fiscal 2014, the Authority also provided a post-retirement life insurance benefit to retirees. The Authority has discontinued its post-retirement life insurance coverage for retirees.

The plan does not issue separate financial statements.

As of January 1, 2022, the following employees were covered by the benefit terms:

Inactive members and dependent spouses currently receiving benefits	22
Active members	<u>101</u>
	<u>123</u>

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 8. Other Post-Employment Benefits (Continued)****Actuarial Methods and Assumptions**

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members at that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

In the actuarial valuation, the entry age normal actuarial cost method was used. The valuation results are based on a discount rate of 6.5%, an annual payroll growth rate of 3.0%, and an annual healthcare cost trend rate of 5.0% initially, decreasing annually to a rate of 3.9%. An inflation rate of 2.5% is used in the assumptions. The unfunded liability is amortized over a closed period of 24 years at a level percentage of pay.

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality and the healthcare cost trend. Amounts determined regarding the funded status of the plan and the annual required contributions of the employer are subject to continual revisions as actual results are compared with past expectations and new estimates are made for the future. The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

**Net OPEB Liability/(Asset)**

The components of the net OPEB liability at June 30, 2023 were as follows.

Total OPEB Liability	\$ 639,278
Plan fiduciary net position	<u>(1,110,103)</u>
Net OPEB asset	<u>\$ (470,825)</u>
Plan fiduciary net position as a Percentage of the total OPEB Asset	173.65%

The components of the net OPEB liability at June 30, 2022 were as follows.

Total OPEB Liability	\$ 605,956
Plan fiduciary net position	<u>(1,032,992)</u>
Net OPEB asset	<u>\$ (427,036)</u>
Plan fiduciary net position as a Percentage of the total OPEB Asset	170.47%

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
June 30, 2023

**Note 8. Other Post-Employment Benefits (Continued)**

**Changes in Net OPEB Liability/(Asset) at June 30, 2023**

	<b>Increase (Decrease)</b>		
	<b>Total OPEB Liability (a)</b>	<b>Plan Fiduciary Net Position (b)</b>	<b>Net OPEB Liability/(Asset) (a) – (b)</b>
Balances at June 30, 2022	\$ 605,956	\$ 1,032,992	\$ (427,036)
Changes for the year:			
Service cost	27,970	-	27,970
Interest	39,428	-	39,428
Effect of economic/demographic gains or losses	-	-	-
Effect of assumptions changes or inputs	21,462	-	21,462
Benefit payments	(55,538)	(55,538)	-
Employer contributions	-	55,538	(55,538)
Net investment income	-	78,706	(78,706)
Administrative expenses	-	(1,595)	1,595
Balances as of June 30, 2023	<u>\$ 639,278</u>	<u>\$ 1,110,103</u>	<u>\$ (470,825)</u>

**Changes in Net OPEB Liability/(Asset) at June 30, 2022**

	<b>Increase (Decrease)</b>		
	<b>Total OPEB Liability (a)</b>	<b>Plan Fiduciary Net Position (b)</b>	<b>Net OPEB Liability/(Asset) (a) – (b)</b>
Balances at June 30, 2021	\$ 1,221,398	\$ 1,139,810	\$ 81,588
Changes for the year:			
Service cost	41,500	-	41,500
Interest	80,274	-	80,274
Effect of economic/demographic gains or losses	(489,333)	-	(489,333)
Effect of assumptions changes or inputs	(191,150)	-	(191,150)
Benefit payments	(56,733)	(56,733)	-
Employer contributions	-	56,733	(56,733)
Net investment income	-	(105,094)	105,094
Administrative expenses	-	(1,724)	1,724
Balances as of June 30, 2022	<u>\$ 605,956</u>	<u>\$ 1,032,992</u>	<u>\$ (427,036)</u>

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 8. Other Post-Employment Benefits (Continued)**

**Sensitivity of the Net OPEB Liability (Asset)**

The following presents the Net OPEB Liability of the Authority, calculated using the discount rate of 6.50%, as well as what the Authority's Net OPEB Liability would be if it were calculated using a discount rate that is 1 percentage point lower (5.50%) or 1 percentage point higher (7.50%) than the current rate.

	<u><b>1.00% Decrease (5.50%)</b></u>	<u><b>Current Discount Rate (6.50%)</b></u>	<u><b>1.00% Increase (7.50%)</b></u>
June 30, 2023	\$ (423,817)	\$ (470,825)	\$ (512,523)
June 30, 2022	\$ (383,265)	\$ (427,036)	\$ (466,073)

The following presents the Net OPEB Liability of the Authority, calculated using the current healthcare cost trend rates, as well as what the Authority's Net OPEB Liability would be if it were calculated using healthcare cost trend rates that are 1 percentage point lower or 1 percentage point higher than the current rate.

	<u><b>1.00% Decrease</b></u>	<u><b>Current Trend</b></u>	<u><b>1.00% Increase</b></u>
June 30, 2023	\$ (530,964)	\$ (470,825)	\$ (400,216)
June 30, 2022	\$ (478,228)	\$ (427,036)	\$ (367,318)

**OPEB Expense and Deferred Outflows/Inflows of Resources Related to OPEB**

For the year ended June 30, 2023 and 2022, the Authority recognized OPEB Expense of (\$170,634) and (\$126,329), respectively. As of June 30, 2023, the Authority reported Deferred Inflows of Resources related to OPEB from the following sources:

	<u><b>Deferred Outflows of Resources</b></u>	<u><b>Deferred Inflows of Resources</b></u>
Differences between expected and actual experience	\$ -	\$ 636,305
Changes in assumptions	35,993	268,413
Net difference between projected and actual earnings	<u>23,121</u>	<u>-</u>
Total	<u><u>\$ 59,114</u></u>	<u><u>\$ 904,718</u></u>



**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 8. Other Post-Employment Benefits (Continued)**

As of June 30, 2022, the Authority reported Deferred Inflows of Resources related to OPEB from the following sources:

	<b>Deferred Outflows of Resources</b>	<b>Deferred Inflows of Resources</b>
Differences between expected and actual experience	\$ -	\$ 774,918
Changes in assumptions	24,358	316,194
Net difference between projected and actual earnings	<u>38,767</u>	<u>-</u>
Total	<u>\$ 63,125</u>	<u>\$ 1,091,112</u>

Amounts currently reported as deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows.

<b>Year Ending June 30</b>	<b>Addition/ (Reduction) to OPEB Expense</b>
2024	\$ (176,789)
2025	\$ (184,407)
2026	\$ (105,051)
2027	\$ (129,172)
2028	\$ (93,589)
Thereafter	\$ (156,596)

**OPEB Trust**

During 2014, the Authority established a trust fund to fund the cost of OPEB. The trust fund was established by the Authority with the Virginia Pooled OPEB Trust Fund (Trust), sponsored by the Virginia Municipal League and the Virginia Association of Counties, and overseen by a Board of Trustees. The Trust is established as an investment vehicle for participating employers to accumulate assets to fund OPEB Plan assets for purposes of GASB Statement No. 75 that are segregated and restricted in a trust, in which (a) contributions to the plan are irrevocable, (b) assets are dedicated to providing benefits to retirees and their beneficiaries, and (c) assets are legally protected from creditors of the employer or plan administrator, for the payment of benefits in accordance with terms of the plan.

**ALEXRENEW**

**NOTES TO FINANCIAL STATEMENTS**  
**June 30, 2023**

**Note 8. Other Post-Employment Benefits (Continued)**

**Trust Fund Investments**

Investment decisions for the fund's assets are made by the Board of Trustees. The Board of Trustees established investment objectives, risk tolerance, and asset allocation policies in light of the investment policy, market and economic conditions, and generally prevailing prudent investment practices. The Board of Trustees also monitors the investments to ensure adherence to the adopted policies and guidelines. In addition, the Trustees review, monitor, and evaluate the performance of the investments and its investment advisors in light of available investment opportunities, market conditions, and publicly available indices for the generally accepted evaluation and measurement of such performance.

The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

<b>Asset Class</b>	<b>Target Allocation</b>	<b>Long-Term Expected Arithmetic Real Rate of Return</b>
US Core Fixed Income	20%	2.27%
US Large Caps	21%	5.64%
US Small Caps	10%	7.25%
Foreign Developed Equity	13%	6.90%
Emerging Markets Equity	5%	9.58%
Private Real Estate Property	15%	4.86%
Private Equity	10%	10.74%
Hedge FOF Strategic	6%	4.42%
Long-Term Expected Rate of Return		6.50%

**Concentrations** – There are no investments in any one organization that represents 5% or more of the OPEB Trust's fiduciary net position.

**Rate of Return** – For the years ended June 30, 2023 and 2022, the annual money-weighted rate of return on investments, net of investment expense, was 7.63% and (9.23%), respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts invested.

Additional investment information for the Trust can be obtained by writing to VML/VACo Finance Program, 8 East Canal Street, Richmond, Virginia 23219.

NOTES TO FINANCIAL STATEMENTS  
June 30, 2023

**Note 9. Risk Management**

The Authority is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; injuries to employees; and natural disasters. These risks are covered by commercial insurance purchased from independent third parties. There have been no significant reductions in insurance coverage from the prior year. Settled claims have not exceeded insurance coverage in the past three years.

**Note 10. Commitments and Contingencies**

From time to time, the Authority is involved in various legal actions arising in the normal course of business. In the opinion of management, such matters will not have a material effect upon the financial position of the Authority.

**Note 11. New Accounting Standards**

The GASB has issued the following Statements which are not yet effective.

**GASB Statement No. 100, *Accounting Changes and Error Corrections – An Amendment of GASB Statement No. 62***, This Statement defines accounting changes as changes in accounting principles, changes in accounting estimates, and changes to or within the financial reporting entity and describes the transactions or other events that constitute those changes. As part of those descriptions, for (1) certain changes in accounting principles and (2) certain changes in accounting estimates that result from a change in measurement methodology, a new principle or methodology should be justified on the basis that it is preferable to the principle or methodology used before the change. That preferability should be based on the qualitative characteristics of financial reporting—understandability, reliability, relevance, timeliness, consistency, and comparability. This Statement also addresses corrections of errors in previously issued financial statements. The statement will become effective for the fiscal year ending June 30, 2024.

**GASB Statement No. 101, *Compensated Absences***, This Statement requires that liabilities for compensated absences be recognized for (1) leave that has not been used and (2) leave that has been used but not yet paid in cash or settled through noncash means. A liability should be recognized for leave that has not been used if (a) the leave is attributable to services already rendered, (b) the leave accumulates, and (c) the leave is more likely than not to be used for time off or otherwise paid in cash or settled through noncash means. Leave is attributable to services already rendered when an employee has performed the services required to earn the leave. Leave that accumulates is carried forward from the reporting period in which it is earned to a future reporting period during which it may be used for time off or otherwise paid or settled. In estimating the leave that is more likely than not to be used or otherwise paid or settled, a government should consider relevant factors such as employment policies related to compensated absences and historical information about the use or payment of compensated absences. However, leave that is more likely than not to be settled through conversion to defined benefit postemployment benefits should not be included in a liability for compensated absences. The statement will become effective for the fiscal year ending June 30, 2025.

Management has not yet evaluated the effects, if any, of adopting these standards.

## ALEXRENEW

### NOTES TO FINANCIAL STATEMENTS June 30, 2023

#### **Note 12. RiverRenew Program**

Construction continued in FY23 on RiverRenew, AlexRenew's multi-year construction program to address combined sewer pollution from four outfalls in the older parts of the City. The program began in 2018 and is under a legislative deadline to be complete by July 1, 2025. The RiverRenew team met several major milestones during FY2023 including the launch of the tunnel boring machine, construction of over 4,000 feet of the Waterfront Tunnel, and the completion of shaft excavation. As of the end of FY2023, the tunnel project was 45% complete.

Funding for RiverRenew comes from a combination of grants, low-interest loans, and contributions from AlexRenew and Fairfax County. During FY23, AlexRenew finalized a \$90 million grant from the American Rescue Plan fund. AlexRenew will utilize this grant to offset a portion of the debt assumed through the Virginia Clean Water Revolving Loan Fund (VCWRLF) and Water Infrastructure Finance and Innovation Act (WIFIA) loan programs to fund RiverRenew. Two major loans were closed through these agencies in FY21 and are expected to be repaid through annual rate increases, including those implemented in previous fiscal years and upcoming in FY24 and FY25.

## **REQUIRED SUPPLEMENTARY INFORMATION**



ALEXRENEW

REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

	Plan Year Ended June 30,				
	2022	2021	2020	2019*	2018
<b>Total Pension Liability</b>					
Service cost	\$ 504,939	\$ 617,494	\$ 615,974	\$ 604,713	\$ 592,542
Interest on total pension liability	3,635,978	3,399,852	3,412,612	3,395,405	3,340,976
Difference between expected and actual experience	146,236	289,659	(990,689)	(471,796)	(414,228)
Change in assumptions	-	2,178,055	-	1,368,221	-
Benefit payments, including refunds of employee contributions	(3,504,503)	(3,479,188)	(2,974,673)	(2,715,552)	(2,767,926)
Net change in total pension liability	782,650	3,005,872	63,224	2,180,991	751,364
<b>Total pension liability - beginning</b>	<b>55,113,648</b>	<b>52,107,776</b>	<b>52,044,552</b>	<b>49,863,561</b>	<b>49,112,197</b>
<b>Total pension liability - ending</b>	<b>55,896,298</b>	<b>55,113,648</b>	<b>52,107,776</b>	<b>52,044,552</b>	<b>49,863,561</b>
<b>Plan Fiduciary Net Position</b>					
Contributions - employer	440,335	440,276	554,765	518,600	711,111
Contributions - employee	363,555	391,153	432,353	361,031	460,389
Net investment income (loss)	(7,277)	11,968,102	871,091	2,926,176	3,175,320
Benefit payments, including refunds of employee contributions	(3,504,503)	(3,479,188)	(2,974,673)	(2,715,552)	(2,767,926)
Administrative expenses	(34,388)	(31,556)	(30,738)	(30,275)	(28,184)
Other	1,207	1,110	(1,011)	(1,835)	(2,787)
Net change in plan fiduciary net position	(2,741,071)	9,289,897	(1,148,213)	1,058,145	1,547,923
<b>Plan fiduciary net position - beginning</b>	<b>54,106,714</b>	<b>44,816,817</b>	<b>45,965,030</b>	<b>44,906,885</b>	<b>43,358,962</b>
<b>Plan fiduciary net position - ending</b>	<b>51,365,643</b>	<b>54,106,714</b>	<b>44,816,817</b>	<b>45,965,030</b>	<b>44,906,885</b>
<b>Net pension liability - ending</b>	<b>\$ 4,530,655</b>	<b>\$ 1,006,934</b>	<b>\$ 7,290,959</b>	<b>\$ 6,079,522</b>	<b>\$ 4,956,676</b>
Plan fiduciary net position as a percentage of total pension liability	92%	98%	86%	88%	90%
Covered payroll	\$ 8,426,734	\$ 8,691,744	\$ 8,641,869	\$ 8,504,134	\$ 9,260,472
Net pension liability as a percentage of covered payroll	54%	12%	84%	71%	54%
<b>Total Pension Liability</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	
Service cost	\$ 643,808	\$ 682,527	\$ 771,341	\$ 757,878	
Interest on total pension liability	3,299,804	3,236,592	3,206,163	3,092,779	
Difference between expected and actual experience	(207,089)	(598,619)	(1,127,638)	-	
Change in assumptions	(485,329)	-	-	-	
Benefit payments, including refunds of employee contributions	(2,558,116)	(2,276,811)	(2,553,525)	(1,908,245)	
Net change in total pension liability	693,078	1,043,689	296,341	1,942,412	
<b>Total pension liability - beginning</b>	<b>48,419,119</b>	<b>47,375,430</b>	<b>47,079,089</b>	<b>45,136,677</b>	
<b>Total pension liability - ending</b>	<b>49,112,197</b>	<b>48,419,119</b>	<b>47,375,430</b>	<b>47,079,089</b>	
<b>Plan Fiduciary Net Position</b>					
Contributions - employer	697,581	893,151	915,790	852,928	
Contributions - employee	428,499	397,795	413,212	583,295	
Net investment income (loss)	4,804,505	681,557	1,789,373	5,462,840	
Benefit payments, including refunds of employee contributions	(2,558,116)	(2,276,811)	(2,553,525)	(1,908,245)	
Administrative expenses	(28,599)	(25,420)	(25,361)	(29,559)	
Other	(4,237)	(294)	(375)	288	
Net change in plan fiduciary net position	3,339,633	(330,022)	539,114	4,961,547	
<b>Plan fiduciary net position - beginning</b>	<b>40,019,329</b>	<b>40,349,351</b>	<b>39,810,237</b>	<b>34,848,690</b>	
<b>Plan fiduciary net position - ending</b>	<b>43,358,962</b>	<b>40,019,329</b>	<b>40,349,351</b>	<b>39,810,237</b>	
<b>Net pension liability - ending</b>	<b>\$ 5,753,235</b>	<b>\$ 8,399,790</b>	<b>\$ 7,026,079</b>	<b>\$ 7,268,852</b>	
Plan fiduciary net position as a percentage of total pension liability	88%	83%	85%	85%	
Covered payroll	\$ 8,185,472	\$ 7,802,611	\$ 7,746,889	\$ 8,434,533	
Net pension liability as a percentage of covered payroll	70%	108%	91%	86%	

\*The Authority changed their fiscal year end in 2019, therefore only 9 months of contributions are included.

The plan years above are reported in the entity's financial statements in the fiscal year following the plan year - e.g., plan year 2014 was presented in the entity's fiscal year 2015 financial report.

This schedule is intended to show information for 10 years. Additional years will be included as they become available.

**ALEXRENEW**

**REQUIRED SUPPLEMENTARY INFORMATION  
RETIREMENT PLAN  
SCHEDULE OF EMPLOYER CONTRIBUTIONS**

<b>Entity Year Ended</b>	<b>Contractually Required Contribution</b>	<b>Contributions in Relation to Contractually Required Contribution</b>	<b>Contribution Deficiency (Excess)</b>	<b>Employer's Covered Payroll</b>	<b>Contributions as a Percentage of Covered Payroll</b>
6/30/2023	\$ 872,808	\$ 872,808	-	\$ 10,063,463	8.67%
6/30/2022	542,682	542,682	-	8,426,734	6.44%
6/30/2021	515,855	515,855	-	8,691,744	5.93%
6/30/2020	629,286	629,286	-	8,641,869	7.28%
6/30/2019*	429,141	429,141	-	5,956,482	7.20%
9/30/2018	723,851	723,851	-	8,455,472	8.56%
9/30/2017	740,517	740,517	-	8,273,941	8.95%
9/30/2016	844,141	844,141	-	8,216,533	10.27%
9/30/2015	858,355	956,177	(97,822)	7,746,889	12.34%

\*The Authority changed their fiscal year end in 2019, therefore only 9 months of contributions are included.

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

## ALEXRENEW

**REQUIRED SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF CHANGES IN NET OPEB LIABILITY AND RELATED RATIOS**

	6/30/2023	6/30/2022	6/30/2021	6/30/2020	6/30/2019	9/30/2018	9/30/2017
<b>Total OPEB Liability</b>							
Service cost	\$ 27,970	\$ 41,500	\$ 34,988	\$ 41,295	\$ 29,417	\$ 36,657	\$ 53,055
Interest on total OPEB liability	39,428	80,274	76,907	88,689	78,720	102,653	129,354
Effect of Economic/Demographic Gains or Losses	-	(489,333)	-	(238,874)	-	(455,903)	-
Effect of Assumptions Changes or Inputs	21,462	(191,150)	-	(226,833)	51,628	-	-
Benefit payments	(55,538)	(56,733)	(76,165)	(79,996)	(81,481)	(90,513)	(92,542)
Net change in total OPEB liability	33,322	(615,442)	35,730	(415,719)	78,284	(407,106)	89,867
<b>Total OPEB liability - beginning</b>	<b>605,956</b>	<b>1,221,398</b>	<b>1,185,668</b>	<b>1,601,387</b>	<b>1,523,103</b>	<b>1,930,209</b>	<b>1,840,342</b>
<b>Total OPEB liability - ending</b>	<b>639,278</b>	<b>605,956</b>	<b>1,221,398</b>	<b>1,185,668</b>	<b>1,601,387</b>	<b>1,523,103</b>	<b>1,930,209</b>
<b>Plan Fiduciary Net Position</b>							
Contributions - employer	55,538	56,733	76,165	79,996	81,481	90,513	156,091
Net investment income (loss)	78,706	(105,094)	263,714	26,068	8,884	74,315	80,776
Benefit payments, including refunds of employee contributions	(55,538)	(56,733)	(76,165)	(79,996)	(81,481)	(90,513)	(123,090)
Administrative expenses	(1,595)	(1,724)	(1,494)	(1,448)	(1,541)	(2,279)	(2,059)
Net change in plan fiduciary net position	77,111	(106,818)	262,220	24,620	7,343	72,036	111,718
<b>Plan fiduciary net position - beginning</b>	<b>1,032,992</b>	<b>1,139,810</b>	<b>877,590</b>	<b>852,970</b>	<b>845,627</b>	<b>773,591</b>	<b>661,873</b>
<b>Plan fiduciary net position - ending</b>	<b>1,110,103</b>	<b>1,032,992</b>	<b>1,139,810</b>	<b>877,590</b>	<b>852,970</b>	<b>845,627</b>	<b>773,591</b>
<b>Net OPEB liability (asset) - ending</b>	<b>\$ (470,825)</b>	<b>\$ (427,036)</b>	<b>\$ 81,588</b>	<b>\$ 308,078</b>	<b>\$ 748,417</b>	<b>\$ 677,476</b>	<b>\$ 1,156,618</b>
Plan fiduciary net position as a percentage of total OPEB liability	174%	170%	93%	74%	53%	56%	40%
Covered payroll	\$10,101,141	\$ 8,671,723	\$ 9,799,917	\$ 9,157,997	\$ 6,524,150	\$ 9,055,713	\$ 8,480,330
Net OPEB liability (asset) as a percentage of covered payroll	-5%	-5%	1%	3%	11%	7%	14%

This schedule is intended to show information for 10 years. Additional years will be included as they become available.

**ALEXRENEW**

**REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULE OF INVESTMENT RETURNS - OPEB TRUST**

Annual money-weighted rate of return, net of investment expense:

6/30/2023	7.63%
6/30/2022	-9.23%
6/30/2021	30.08%
6/30/2020	3.06%
6/30/2019	1.40%
9/30/2018	9.62%
9/30/2017	12.37%

This schedule is intended to show information for 10 years. Additional years will be included as they become available.

**ALEXRENEW**

**REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULE OF OPEB CONTRIBUTIONS**

Entity Year Ended	Actuarially Determined Contribution	Contributions in Relation to Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
6/30/2023	\$ -	\$ 55,538	\$ (55,538)	\$ 10,101,141	0.55%
6/30/2022	53,996	56,733	(2,737)	8,671,723	0.65%
6/30/2021	52,424	76,165	(23,741)	9,799,917	0.78%
6/30/2020	87,452	79,996	7,456	9,157,997	0.87%
6/30/2019	61,997	81,481	(19,484)	6,524,150	1.25%
9/30/2018	80,163	90,513	(10,350)	9,055,713	1.00%
9/30/2017	125,355	125,542	(187)	8,480,330	1.48%
9/30/2016	121,704	122,528	(824)	8,480,330	1.44%

This schedule is intended to show information for 10 years. Additional years will be included as they become available.

**NOTES TO REQUIRED SUPPLEMENTARY INFORMATION**  
**June 30, 2023**

**Note 1. Changes of Benefit Terms**

There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation.

**Note 2. Changes of Assumptions (Pension)**

The following changes in actuarial assumptions were made effective June 30, 2021 based on the most recent experience study of the System for the four-year period ending June 30, 2020:

All Others (Non 10 Largest) – Non-Hazardous Duty:

Mortality Rates	Update to PUB2010 public sector mortality tables. For future mortality improvements, replace load with a modified Mortality Improvement Scale MP-2020.
Retirement Rates	Adjusted rates to better fit experience for Plan 1; set separate rates based on experience for Plan 2/Hybrid; changed final retirement age
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	No change
Salary Scale	No change
Line of Duty Disability	No change
Discount Rate	No change

**Note 3. Changes of Assumptions (OPEB)**

The following changes in actuarial assumptions were made effective January 1, 2022:

- Age-related claims costs assumptions were updated
- The healthcare trend assumptions were updated
- The retiree election assumption was decreased from 60% to 40%

**STATISTICAL SECTION (UNAUDITED)**



## Financial Trends

Financial trend information is intended to assist users in understanding how the Authority's net position has changed over time. The tables below disclose comparative financial data.

TABLE 1

	Condensed Schedules of Net Position									
	Last Ten Fiscal Years									
	9/30/2023	9/30/2022	6/30/2021	6/30/2020	6/30/2019	9/30/2018	9/30/2017	9/30/2016	9/30/2015	9/30/2014 <sup>(1)</sup>
<b>Assets</b>										
Current Assets	\$ 92,259,901	\$ 94,961,993	\$ 80,308,872	\$ 86,706,586	\$ 75,272,570	\$ 77,481,606	\$ 71,992,329	\$ 58,517,536	\$ 74,456,170	\$ 86,428,544
Non-current Assets	1,056,853,068	950,111,857	859,431,502	803,159,845	759,842,445	753,725,875	747,728,427	751,420,427	716,656,368	651,084,163
Deferred Outflows	2,062,618	2,812,957	3,083,994	2,478,029	1,623,327	1,924,167	3,009,750	2,193,183	2,332,861	-
<b>Total Assets and Deferred Outflows</b>	<b>\$ 1,151,175,587</b>	<b>\$ 1,047,886,807</b>	<b>\$ 942,824,368</b>	<b>\$ 892,344,460</b>	<b>\$ 836,738,342</b>	<b>\$ 833,131,648</b>	<b>\$ 822,730,506</b>	<b>\$ 812,131,146</b>	<b>\$ 793,445,399</b>	<b>\$ 737,512,707</b>
<b>Liabilities</b>										
Current Liabilities	\$ 58,122,179	\$ 46,584,796	\$ 59,757,917	\$ 40,073,665	\$ 20,797,672	\$ 19,854,654	\$ 18,400,831	\$ 34,860,034	\$ 41,395,712	\$ 41,743,756
Long-term Liabilities	256,939,427	180,321,438	110,228,829	98,965,456	106,654,528	112,799,800	127,027,777	111,329,090	121,578,497	106,414,204
Deferred Inflows	2,575,216	7,238,587	1,462,499	1,509,645	1,209,421	1,828,634	881,910	1,862,505	2,432,782	-
<b>Total Liabilities and Deferred Inflows</b>	<b>\$ 317,636,822</b>	<b>\$ 234,144,821</b>	<b>\$ 171,449,245</b>	<b>\$ 140,548,766</b>	<b>\$ 128,661,621</b>	<b>\$ 134,483,088</b>	<b>\$ 146,310,518</b>	<b>\$ 148,051,629</b>	<b>\$ 165,406,991</b>	<b>\$ 148,157,960</b>
<b>Net Position</b>										
Net Investment in Capital Assets	\$ 757,956,972	\$ 748,219,486	\$ 720,251,070	\$ 696,448,748	\$ 649,676,473	\$ 638,348,836	\$ 622,454,674	\$ 630,741,541	\$ 586,995,330	\$ 537,784,921
Restricted Net Position	5,700,812	15,485,546	27,458,588	25,615,612	26,355,198	21,357,370	29,705,073	13,652,933	11,629,933	16,799,469
Unrestricted Net Position	69,880,981	50,036,954	23,665,465	29,731,334	32,045,050	38,942,354	24,260,241	19,685,043	29,413,145	34,770,357
<b>Total Net Position</b>	<b>\$ 833,538,765</b>	<b>\$ 813,741,986</b>	<b>\$ 771,375,123</b>	<b>\$ 751,795,694</b>	<b>\$ 708,076,721</b>	<b>\$ 698,648,560</b>	<b>\$ 676,419,988</b>	<b>\$ 664,079,517</b>	<b>\$ 628,038,408</b>	<b>\$ 589,354,747</b>
<b>Total Liabilities, Deferred Inflows and Net Position</b>	<b>\$ 1,151,175,587</b>	<b>\$ 1,047,886,807</b>	<b>\$ 942,824,368</b>	<b>\$ 892,344,460</b>	<b>\$ 836,738,342</b>	<b>\$ 833,131,648</b>	<b>\$ 822,730,506</b>	<b>\$ 812,131,146</b>	<b>\$ 793,445,399</b>	<b>\$ 737,512,707</b>

Source: Alexandria Renew Enterprises

Notes: <sup>(1)</sup>GASB statement No. 68 was adopted in fiscal year 2015.

## Financial Trends, continued

TABLE 2

## Condensed Schedules of Revenues, Expenses and Changes in Net Position

Last Ten Fiscal Years

	6/30/2023	6/30/2022	6/30/2021	6/30/2020	6/30/2019(2)	9/30/2018	9/30/2017(1)	9/30/2016	9/30/2015	9/30/2014(1)
<b>Operating Revenues</b>										
Waste Water Treatment										
Service Charges	\$ 65,906,813	\$ 61,607,739	\$ 56,476,273	\$ 54,508,401	\$ 36,227,274	\$ 49,974,184	\$ 48,971,156	\$ 47,139,072	\$ 47,773,073	\$ 48,560,009
Other	24,014	42,397	35,838	39,459	23,423	16,630	127,186	81,727	26,008	6,044
<b>Total Operating Revenues</b>	<b>\$ 65,930,827</b>	<b>\$ 61,650,136</b>	<b>\$ 56,512,111</b>	<b>\$ 54,547,860</b>	<b>\$ 36,250,697</b>	<b>\$ 49,990,814</b>	<b>\$ 49,098,342</b>	<b>\$ 47,220,799</b>	<b>\$ 47,799,081</b>	<b>\$ 48,566,053</b>
<b>Non-operating Revenues</b>										
Investment Income (loss)	\$ 757,913	\$ (723,051)	\$ 131,110	\$ 1,327,691	\$ 1,235,709	\$ 300,954	\$ 296,581	\$ 453,508	\$ 483,340	\$ 283,273
Federal grants	60,515	280,617	329,269	-	-	-	-	-	-	-
Sale Of Property	-	-	-	-	-	-	-	-	-	1,000,000
Capital Contribution	12,712,874	34,300,630	21,196,644	39,576,761	7,848,140	18,636,519	9,119,146	26,671,809	38,870,682	52,160,997
<b>Total Non-operating Revenues</b>	<b>\$ 13,531,302</b>	<b>\$ 33,858,196</b>	<b>\$ 21,657,023</b>	<b>\$ 40,904,452</b>	<b>\$ 9,083,849</b>	<b>\$ 18,937,473</b>	<b>\$ 9,415,727</b>	<b>\$ 27,125,317</b>	<b>\$ 39,354,022</b>	<b>\$ 53,444,270</b>
<b>Total Revenues</b>	<b>\$ 79,462,129</b>	<b>\$ 95,508,332</b>	<b>\$ 78,169,134</b>	<b>\$ 95,452,312</b>	<b>\$ 45,334,546</b>	<b>\$ 68,928,287</b>	<b>\$ 58,514,069</b>	<b>\$ 74,346,116</b>	<b>\$ 87,153,103</b>	<b>\$ 102,010,323</b>
<b>Operating Expenses</b>										
Personnel Services	\$ 14,210,244	\$ 12,022,176	\$ 12,808,339	\$ 12,934,864	\$ 7,584,511	\$ 10,599,487	\$ 11,607,302	\$ 10,885,117	\$ 11,915,152	\$ 12,464,250
Utilities	3,942,929	3,092,003	3,658,871	3,452,848	2,682,315	3,415,322	2,775,506	2,621,156	2,937,466	3,224,653
General and Administration	6,639,220	5,141,279	4,683,009	4,668,318	2,767,358	3,954,272	4,416,947	4,803,327	5,023,878	4,594,881
Other	8,783,146	7,348,159	5,691,117	5,820,485	4,184,151	5,489,505	3,868,705	4,459,109	5,245,885	5,303,574
<b>Total Operating Expenses</b>	<b>\$ 33,575,539</b>	<b>\$ 27,603,617</b>	<b>\$ 26,841,336</b>	<b>\$ 26,876,515</b>	<b>\$ 17,218,335</b>	<b>\$ 23,458,586</b>	<b>\$ 22,668,460</b>	<b>\$ 22,768,709</b>	<b>\$ 25,122,381</b>	<b>\$ 25,587,358</b>
<b>Non-operating Expenses</b>										
Depreciation/Amortization	\$ 21,441,879	\$ 20,571,731	\$ 20,660,590	\$ 19,981,614	\$ 14,909,317	\$ 19,468,132	\$ 18,608,157	\$ 11,737,374	\$ 10,238,996	\$ 9,549,807
Interest/Other Expenses	4,647,932	4,966,121	11,087,779	4,875,210	3,778,733	4,566,892	4,896,981	3,798,924	3,896,859	3,272,198
<b>Total Non-operating Expenses</b>	<b>\$ 26,089,811</b>	<b>\$ 25,537,852</b>	<b>\$ 31,748,369</b>	<b>\$ 24,856,824</b>	<b>\$ 18,688,050</b>	<b>\$ 24,035,024</b>	<b>\$ 23,505,138</b>	<b>\$ 15,536,298</b>	<b>\$ 14,135,855</b>	<b>\$ 12,822,005</b>
<b>Total Expenses</b>	<b>\$ 59,665,350</b>	<b>\$ 53,141,469</b>	<b>\$ 58,589,705</b>	<b>\$ 51,733,339</b>	<b>\$ 35,906,385</b>	<b>\$ 47,493,610</b>	<b>\$ 46,173,598</b>	<b>\$ 38,305,007</b>	<b>\$ 39,258,236</b>	<b>\$ 38,409,363</b>
<b>Change in Net Position</b>	<b>\$ 19,796,779</b>	<b>\$ 42,366,863</b>	<b>\$ 19,579,429</b>	<b>\$ 43,718,973</b>	<b>\$ 9,428,161</b>	<b>\$ 21,434,677</b>	<b>\$ 12,340,471</b>	<b>\$ 36,041,109</b>	<b>\$ 47,894,867</b>	<b>\$ 63,600,960</b>
<b>Total Net Position, Beginning of Year</b>	<b>\$ 813,741,986</b>	<b>\$ 771,375,123</b>	<b>\$ 751,795,694</b>	<b>\$ 708,076,721</b>	<b>\$ 698,648,560</b>	<b>\$ 677,213,883</b>	<b>\$ 664,079,517</b>	<b>\$ 628,038,408</b>	<b>\$ 580,143,541</b>	<b>\$ 525,753,787</b>
<b>Total Net Position, End of Year</b>	<b>\$ 833,538,765</b>	<b>\$ 813,741,986</b>	<b>\$ 771,375,123</b>	<b>\$ 751,795,694</b>	<b>\$ 708,076,721</b>	<b>\$ 698,648,560</b>	<b>\$ 676,419,988</b>	<b>\$ 664,079,517</b>	<b>\$ 628,038,408</b>	<b>\$ 589,354,747</b>

Source: Alexandria Renew Enterprises

Notes: <sup>(1)</sup>These totals are as previously reported. Prior period adjustments were required in 2014 and 2017 which modified these amounts.<sup>(2)</sup>The Authority changed their fiscal year end in 2019; therefore, only 9 months of revenues and expenses are included.

## Revenue Capacity Information

Revenue capacity information is provided to assist users in understanding the factors affecting the Authority's ability to generate sources of revenue. The Authority strives to cover operating and capital costs with user fees. User fees are set by the Board and are based upon the recommendation of a third-party rates analysis designed to recover the Authority's cost of service and capital cost. Rates modeling and analysis is conducted at least annually, and more frequently as required, to set new rates and charges or affirm the efficacious nature of existing rates. Rate modeling and analysis was completed in 2015 to establish new base charges effective on October 1, 2016 and October 1, 2017. These rates were in place through FP19, at which point AlexRenew began implementing gradual, annual rate adjustments, based on Board planning and guidance and on updated rates modeling that included the RiverRenew program and other projected capital needs at the facility. Rate adjustments were adopted by the Board to become effective July 1, 2019, July 1, 2020, July 1, 2021, July 1, 2022 and July 1, 2023. User fees are comprised of two components including a wastewater treatment charge and a fixed base charge.

The wastewater treatment charge is assessed to all customers based upon metered per gallon water usage, except that residential customers are assessed based upon a winter quarter average usage (per 1,000 gallons units). A residential customer, therefore, is billed at the greater of its winter quarter per gallon average usage or 4,000 gallons per month. Commercial customers are billed based on the actual amount of per gallon water usage. The base charge was assessed for the first time beginning on October 1, 2010, and is assessed as a fixed fee per month according to water meter size. The following table represents comparative user rate charges.

TABLE 3

### Historical User Charges (in dollars)

	Fiscal Year	Wastewater Treatment Usage Charge*
	2023	\$ 9.26
	2022	8.69
	2021	8.13
	2020	7.63
	2019	6.77
	2018	6.77
	2017	6.77
	2016	6.77
	2015	6.64
	2014	6.51
	<b>FY 2023 Monthly</b>	<b>FY 2022 Monthly</b>
Base Charge		
Residential Customers	\$ 13.14	\$ 12.34
	<b>Water Meter Size</b>	<b>FY2023</b>
Commercial Customers	5/8"	\$ 39.42
	3/4"	37.02
	1"	37.02
	1-1/2"	98.55
	2"	92.55
	3"	197.10
	4"	185.10
	6"	315.36
	8"	296.16
		555.30
		925.50
		1,970.00
		1,851.00
		3,153.60
		2,961.60

\* Based on 1,000 gallons of consumption

Source: Alexandria Renew Enterprises

TABLE 4

Ten Principal Customers by Year Shown as Percentage of Revenue														
Name	Type	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
4921 SEMINARY RD (VA) OWNER LLC	Apartments	1.31%	1.45%	--	--	--	--	--	--	--	--	--	--	--
LYNBROOK APARTMENTS MARK CTR LLC	Apartments	0.67%	0.00%	--	--	--	--	--	--	--	--	--	--	--
SOUTHERN TOWERS	Apartments	--	--	1.26%	1.19%	1.38%	1.02%	1.06%	0.92%	1.18%	0.88%	1.13%	1.17%	1.01%
BROOKDALE APTS MARK CTR	Apartments	--	0.92%	0.80%	0.94%	1.09%	--	--	--	--	--	--	--	--
FOXCHASE	Apartments	0.52%	0.60%	0.54%	0.57%	0.64%	--	--	--	--	--	--	--	--
STONERIDGE APTS MARK CTR	Apartments	0.51%	0.55%	0.49%	0.53%	0.60%	--	--	--	--	--	--	--	--
PARKFAIRFAX	Apartments	0.53%	0.50%	0.48%	0.48%	0.51%	--	--	--	--	--	--	--	--
ARHA	Public	0.46%	0.47%	0.44%	0.39%	0.44%	--	--	--	--	--	--	--	--
140 S VAN DORN ST	Apartments	0.49%	0.48%	0.43%	0.46%	0.53%	--	--	--	--	--	--	--	--
WATERGATE AT LANDMARK	Condos	0.36%	0.42%	0.41%	0.49%	0.47%	0.38%	0.44%	0.49%	0.46%	0.52%	0.57%	0.53%	0.52%
UDR NEWPORT VILLAGE LLC	Condos	0.40%	--	0.34%	--	--	--	--	--	--	--	--	--	--
FPACP4 BLVE 2801 LLC	Apartments	--	0.37%	--	--	--	--	--	--	--	--	--	--	--
ERP	Apartments	0.32%	0.40%	0.37%	0.37%	--	--	--	--	--	--	--	--	--
MG Usage		730,371	806,333	792,082	740,307	684,798	396,772	394,269	397,833	427,024	462,735	428,893	419,674	426,740
Other Customer Usage		12,363,624	12,284,368	13,474,228	12,221,683	10,796,005	12,452,798	11,374,736	11,936,490	11,607,551	12,750,383	12,383,798	11,886,963	12,262,774
Total Usage		13,093,995	13,090,701	14,266,310	12,961,990	11,480,803	12,849,570	11,769,005	12,334,323	12,034,575	13,213,118	12,812,691	12,306,637	12,689,514

Source: Alexandria Renew Enterprises

## Debt Capacity Information

Debt capacity information is intended to assist users in understanding the Authority's debt burden and the ability to issue new debt. The ultimate guarantors of the Authority's debt are its customers.

TABLE 5

### ALEXANDRIA RENEW ENTERPRISES

#### Outstanding Debt Per Customer

June 30, 2023

Fiscal Year	Outstanding Debt	# of Customers	Outstanding Debt per Customer
2023	\$ 260,735,144	26,710	\$ 9,762
2022	188,419,080	26,767	7,039
2021	143,800,792	26,589	5,408
2020	111,372,579	26,671	4,176
2019	111,138,673	26,594	4,179
2018	116,385,765	26,681	4,362
2017	126,330,515	26,611	4,747
2016	121,783,683	26,440	4,606
2015	130,813,869	26,333	4,968
2014	113,299,242	26,848	4,220

Source: Alexandria Renew Enterprises

TABLE 6

	Pledged Revenue Coverage*				
	6/30/2023	6/30/2022	6/30/2021	6/30/2020	6/30/2019
Pledged revenue	\$ 65,930,827	\$ 61,650,136	\$ 56,512,111	\$ 54,547,860	\$ 36,250,697
Operating expenses	(33,575,539)	(27,603,617)	(26,841,336)	(26,876,515)	(17,218,335)
Net revenues	32,355,288	34,046,519	29,670,775	27,671,345	19,032,362
Principal and Interest Requirements	12,306,098	13,976,806	14,049,147	14,015,828	7,996,654
Debt coverage	2.63	2.44	2.11	1.97	2.38
	9/30/2018	9/30/2017	9/30/2016	9/30/2015	9/30/2014
Pledged revenue	\$ 49,990,814	\$ 49,098,342	\$ 47,220,799	\$ 47,799,081	\$ 48,566,053
Operating expenses	(23,458,587)	(22,570,403)	(22,697,959)	(25,104,967)	(25,587,358)
Net revenues	26,532,227	26,527,939	24,522,840	22,694,114	22,978,695
Principal and Interest Requirements	13,913,446	13,437,632	13,122,172	12,062,715	11,676,850
Debt coverage	1.91	1.97	1.87	1.88	1.97

\*AlexRenew's Master Indenture of Trust requires 1.1x coverage and its board adopted Financial Policy requires 1.5x coverage

Source: Alexandria Renew Enterprises

## Demographic and Economic Information

Demographic and economic information is intended to assist users in understanding the socio-economic environment in which the Authority operates.

**TABLE 7**

### Demographic Statistics

June 30, 2023

#### Population

<u>Calendar Year</u>	<u>Population</u>	<u>Calendar Year</u>	<u>Population</u>
2010	139,966	2017	156,100
2011	140,100	2018	159,571
2012	140,800	2019	160,530
2013	142,000	2020	165,748
2014	144,000	2021	160,146
2015	147,650	2022	160,505
2016	150,500	2023	159,428

Source: Alexandria Department of Planning and Zoning, "General Population Characteristics"

**TABLE 8**

### Population Indicators

June 30, 2023

<u>Fiscal Year</u>	<u>Personal Income (\$1000)</u>	<u>Per Capita Income</u>
2023	16,811,683	\$ 100,017
2022	16,407,945	93,835
2021	16,429,218	91,990
2020	14,127,927	88,008
2019	13,455,505	87,319
2018	12,935,231	84,079
2017	12,692,748	82,683
2016	12,556,000	81,734
2015	12,183,000	79,480
2014	11,615,589	77,142

The BEA has revised these numbers.

Source: Federal Reserve Economic Data (FRED)



## Demographic and Economic Information, continued

TABLE 9

**City of Alexandria Principal Employers**  
**Current Year (as of June 30, 2023 and Nine Years Ago)**

<b>Current Year</b>	<b>Employees<sup>(1)</sup></b>	<b>Percentage of Total City Employment<sup>(2)</sup></b>	<b>Nine Years Ago</b>	<b>Employees<sup>(1)</sup></b>	<b>Percentage of Total City Employment<sup>(2)</sup></b>
<b>LARGEST PUBLIC EMPLOYERS</b>			<b>LARGEST PUBLIC EMPLOYERS</b>		
U.S. Department of Homeland Defense	1,000 & over	3.82%	U.S. Department of Defense	1,000 & over	8.38%
United States Patent and Trademark Office	1,000 & over	3.36%	U.S. Patent and Trademark Office	1,000 & over	7.10%
City of Alexandria	1,000 & over	0.78%	City of Alexandria	1,000 & over	2.30%
Alexandria City Public Schools	1,000 & over	0.70%	Alexandria Public Schools	1,000 & over	1.90%
National Science Foundation	1,000 & over	0.64%	WMATA	500-999	1.30%
WMATA	1,000 & over	0.46%	Northern Virginia Community College	500-999	0.70%
USDA Food and Nutrition Service	500-999	0.24%	U.S. Postal Service	500-999	0.60%
		10.00%			22.28%
<b>LARGEST PRIVATE EMPLOYERS</b>			<b>LARGEST PRIVATE EMPLOYERS</b>		
INOVA Health System	1,000 & over	3.93%	INOVA Alexandria Hospital	1,000 & over	1.80%
Institute for Defense Analysis	500 - 999	1.50%	American Building Maintenance Com	1,000 & over	1.20%
Woodbine Health Center	250-499	0.98%	Institute of Defense Analysis	500-999	0.80%
Society for Human Resource Management	250 - 499	0.97%	United Postal Service (UPS)	500-999	0.70%
Oblon	250 - 499	0.89%	Center for Naval Analysis	500-999	0.60%
Kearney & Company	250 - 499	0.88%	Military Professional Resources	500-999	0.50%
Systems Planning & Analysis	250 - 499	0.87%	Grant Thornton LLP	500-999	0.50%
		10.02%			6.10%

Source: Virginia Employment Commission

<sup>(1)</sup> Employment ranges are given to ensure confidentiality.<sup>(2)</sup> Percentages are based on the midpoint of employment range.

TABLE 10

**City of Alexandria Unemployment Rate**  
**Last Ten Years**

2023	2.1%
2022	2.4%
2021	3.8%
2020	8.3%
2019	1.9%
2018	2.1%
2017	2.9%
2016	2.9%
2015	3.5%
2014	4.6%

Source: U.S. Bureau of Labor Statistics.

## Operating Information

Operating information is intended to provide information about the Authority's operations.

TABLE 11

### Number of FTEs Employees by Activity Fiscal Year Ended June 30, 2023

	2023	2022	2021	2020	2019	2018	2017	2016
<b>Process</b>								
Chief, Deputy GMOM, Chief Oper, Process								
Analyst, O&M Specialist	2	4	6	5	6	2	6	3
Administrative/Executive Assistant	0	1	1	1	1	1	1	1
Interceptors/Pump Stations/Chem Feed	5	6	8	8	8	8	9	9
Operating Shift D	0	0	0	0	5	5	6	4
Operating Shift B/BluRenew	8	4	6	6	4	5	6	5
Maintenance Manager, Supervisor & Facility	4	2	2	2	2	2	1	1
Thickening/Dewater/Prepast/Digestion	5	6	8	8	8	8	9	9
BRB's/Blowers/UV	5	6	6	5	6	6	6	7
Operating Shift C/BioRenew	9	7	6	6	5	5	5	4
Operating Shift A/Erenew	11	7	6	6	5	6	6	5
Reliability, Analyst, Planners/Schedulers	3	3	2	3	3	3	3	3
Operating Shift E	0	0	0	0	0	0	0	5
Apprentices	11	13	12	15	10	3	10	10
<b>Engineering</b>								
Director Engr Planning	2	1	1	1	1	1	1	1
Engineering	5	3	4	6	7	2	5	3
Program Manager	0	0	0	0	0	0	1	1
<b>Strategy &amp; Policy</b>								
Director	1	1	0	1	1	0	0	1
Quality Assurance	1	1	1	1	1	1	1	1
Laboratory	7	6	5	5	5	4	4	5
Sustainability/Regulatory	2	2	1	2	1	1	0	1
Administrative Assistant	1	1	0	0	0	0	0	0
<b>Finance</b>								
Chief Financial Officer	0	1	1	0	0	1	1	0
Controller/Director Finance/Acctg Manager	2	1	1	2	2	2	1	1
Senior Accountant/Staff Accountant/Acctg (	3	3	3	3	3	2	3	2
Administrative/Executive Assistant	1	1	1	1	1	1	1	1
Purchasing Manager, Buyer, Contracts, InvC	3	3	2	3	3	2	2	3
Customer Service	1	1	1	1	1	1	1	2
<b>Human Resources</b>								
Human Resources	5	3	2	2	2	1	2	2
Safety & Security	1	1	1	1	0	1	0	1
<b>Information Systems</b>								
Information Systems, SCADA	8	8	6	3	4	3	3	3
<b>Administration</b>								
Administration	3	2	4	3	2	2	2	2
Communications & RiverRenew	6	6	2	4	5	4	4	4
	115	104	99	104	102	83	100	100

## Operating Information

TABLE 12

## Number of Customers and Consumption

<u>Fiscal Year</u>	<u>Customer Accounts</u>	<u>MG Treated</u>	<u>Fairfax MG Treated</u>
6/30/2023	26,710	13,094	5,326
6/30/2022	26,767	13,090	6,204
6/30/2021	26,589	14,266	6,535
6/30/2020	26,671	12,962	6,008
6/30/2019	26,594	11,481	5,820
9/30/2018	26,681	12,850	6,671
9/30/2017	26,611	11,769	5,941
9/30/2016	26,440	12,334	5,960
9/30/2015	26,333	12,035	6,112
9/30/2014	26,848	13,213	6,698

Source: Alexandria Renew Enterprises

Note: The amount of wastewater treated includes flow generated by the City customers and portions of the County which is outside of the City. The amount of wastewater that flows outside the County is metered and included in Table 12 above.

## Operating Information

TABLE 13

**Wastewater Treatment Capacity and Infrastructure Assets Owned  
For the Fiscal Year Ending June 30, 2023**

Wastewater treatment capacity:

Design Capacity

54 MGD (million gallons per day)

AssetCapacity:

Four Mile Run Pump Station  
Slater's Lane Pump Station  
Potomac Yard Pump Station  
Mark Center

Pump Station  
Pump Station  
Pump Station  
Pump Station

Firm pumping capacity 9.4 MGD  
Firm pumping capacity .75 MGD  
Firm pumping capacity 9.5 MGD  
Firm pumping capacity 1.6 MGD

Bush Hill Service Chamber  
Jefferson at Carlyle Mills Service  
Chamber

Lift Station  
  
Lift Station

Firm pumping capacity .18 MGD  
  
Firm pumping capacity .525 MGD

Holmes Run Trunk Sewer

Gravity Sewer

Design Capacity varies from 71.5 MGD at Hooff's Run to 18.9 MGD at the City Limits

Commonwealth Interceptor

Gravity Sewer &  
Force Main

Design Capacity varies from 97.0 MGD at the WRRF to 13 MGD at the Potomac Yards Pump Station force main discharge.

Potomac Yard Trunk Sewer

Gravity Sewer

Design Capacity varies from 17MGD at the WRRF to 13 MGD at the Potomac Yards Pump Station force main discharge.

Potomac Interceptor

Gravity Sewer

Design Capacity varies from 18.7 MGD at the WRRF to 11.0 MGD at Pendleton St.

The City owns the collection system; Alexandria Renew Enterprises owns the intercepting sewer system, the pump stations and the treatment facility.

Source: Alexandria Renew Enterprises



1800 Limerick Street | Alexandria, VA 22314  
[alexrenew.com](http://alexrenew.com)



## **APPENDIX C**

### **INFORMATION ABOUT THE AUTHORITY'S SERVICE AREA AND SURROUNDING AREA**



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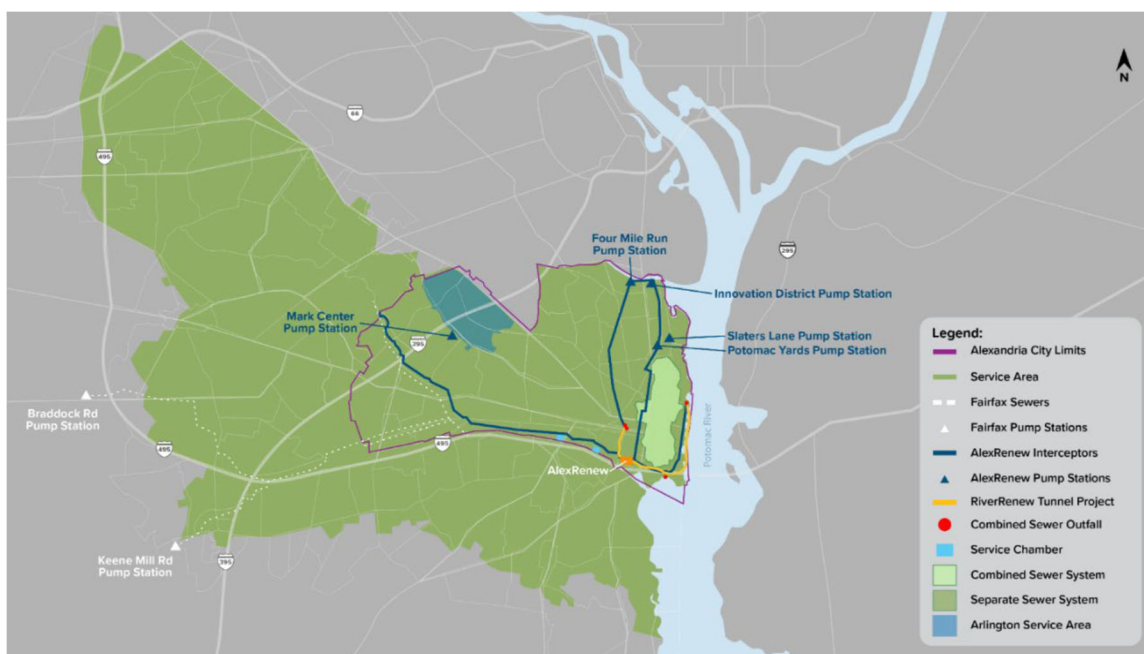
## APPENDIX C

### INFORMATION ABOUT THE AUTHORITY'S SERVICE AREA AND SURROUNDING AREA

*The Information contained in this Appendix C (the "Information") is provided solely to describe for potential investors the general economic, demographic and financial condition of the Authority's service area, which includes the entire City of Alexandria, Virginia (the "City") and includes a portion of Fairfax County, Virginia (the "County"). See below for a map of the Authority's service area. **Because the portion of the County that is included in the Authority's service area is not a separately identifiable section of the County no separate demographic, economic or other data specific to that portion of the County is available. Accordingly, the Information contains data and information about the County generally.***

*The Information has been excerpted by the Authority from (1) the Official Statement for the City's General Obligation Capital Improvement Bonds, Series 2023, dated December 13, 2023, under which the City is obligated to make payments, and does not constitute the entirety of the Information regarding the City set forth therein, (2) the City's Annual Comprehensive Financial Report for the Fiscal Year Ending June 30, 2023, which is dated December 15, 2023, (3) the Official Statement for the County's Public Improvement Bonds, Series 2024A, dated January 24, 2024, under which the County is obligated to make payments, and does not constitute the entirety of the information regarding the County set forth therein, and (4) the Official Statement for the County's Sewer Revenue Bonds, Series 2024A, dated March 21, 2024, under which the County is obligated to make payments, subject to the limitations set forth therein, and does not constitute the entirety of the information regarding the County set forth therein*

*Accordingly, while the Authority has undertaken no independent investigation of, has not otherwise verified, and can make no representation or warranty with respect to, the Information, the Authority has no reason to believe that the Information is not true and correct in all material respects, in view of the purposes for which it is provided. Neither the City nor the County has approved the use of the Information in connection with the offering of the 2024 Bonds. Moreover, the Authority, the City and the County are separate legal entities, and under no circumstances should inclusion of the Information in this Official Statement be read to suggest that the City or the County has any obligation whatsoever—legal, moral or otherwise—to make any payments with respect to the 2024 Bonds, whether before or after any default that may occur. In particular, the 2024 Bonds are not a debt or other obligation of the City or the County, and neither the full faith and credit nor the taxing power of the City nor the County is pledged to the payment of the 2024 Bonds.*



## General

The Authority's service area consists of the entire City of Alexandria, Virginia (the "City"), and a portion of Fairfax County, Virginia (the "County"), both located in Northern Virginia near Washington, DC. The Authority's service area covers approximately 52 square miles and in the fiscal year ending June 30, 2023 (the "Fiscal Year") served 26,710 accounts not including the residents of the County served by the Authority through the Authority's service agreement with the County.

Northern Virginia has a strong regional economy and is home to a diverse mix of employers. The region's economic strength and favorable quality of life has also attracted a highly educated workforce that enjoys average household income that exceeds that of the Commonwealth of Virginia, generally, and the United States as a whole. In addition, Northern Virginia serves as an international gateway to the Washington, DC metropolitan area and boasts numerous retail centers and tourist attractions.

This Appendix shows information regarding the County generally and is not limited to the portion of the County within the Authority's service area and all information regarding the County should be read with that limitation in mind.

## Population

The following table shows the population growth and rate of growth in the City and the County, presented in the aggregate, compared with that of the Commonwealth and the United States:

### POPULATION AND RATES OF CHANGE

Year	City	Percentage Change	County <sup>(2)</sup>	Percentage Change	Virginia	Percentage Change	United States	Percentage Change
1990	111,183	-	818,584	-	6,187,358	-	248,709,873	-
2000	128,283	15.4%	969,749	18.5%	7,078,515	14.4%	281,421,906	13.2%
2010	139,993	9.1	1,081,726	11.6	8,025,514	13.4	308,745,538	9.7
2020 <sup>(1)</sup>	159,467	13.9	1,171,847	8.3	8,644,727	7.7	331,464,948	7.4
2023	165,700	3.9	1,186,000	1.2	8,729,032	1.0	334,914,895	1.0

Sources: U.S. Bureau of the Census (1990, 2000, 2010, and 2020), Annual Comprehensive Financial Reports for the City of Alexandria, Virginia, and the Demographic Reports by the County of Fairfax, Department of Management and Budget (2023), Weldon Cooper Center for Public Service (2023).

Notes: (1) 2020 population data is reported from the Annual Comprehensive Financial Report for Fairfax County for the Fiscal Year ended June 30, 2023.

(2) The County's reserved capacity with the Authority is approximately 20% of its reserved treatment capacity.

## Employment

The following table shows the average annual unemployment rate in the City and the County compared to that of the Commonwealth and the United States for the past decade.

### HISTORICAL UNEMPLOYMENT RATES

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024 <sup>(1)</sup>
United States	5.3%	4.9%	4.4%	3.9%	3.7%	8.1%	5.3%	3.6%	3.7%	3.9%
Commonwealth	4.4	4.0	3.8	3.0	2.8	6.2	3.9	2.9	2.9	2.9
Alexandria City	3.5	2.9	2.8	2.4	2.2	8.3	4.3	2.4	2.2	2.0
Fairfax County	3.6	3.2	3.0	2.4	2.3	5.8	3.5	2.5	2.5	2.1

Source: Bureau of Labor Statistics.

Note: (1) As of March 2024.

Northern Virginia as a region also boasts a diverse economic base. While the United States government remains an important employer, Northern Virginia's regional economy is also sustained by a strong private sector, including businesses in growth industries such as computer software development and systems integration, technical services, management consulting, Internet-related services, wholesale and retail trade, and financial services. The chart below shows the City's and the County's aggregate employment by sector.

#### EMPLOYMENT BY CATEGORIES

<b>Categories</b>	<b>City</b>	<b>County</b>
Agriculture, Forestry, Fishing and Hunting	*	83
Mining, quarrying, and oil and gas extraction	0	72
Accommodation & Food Services	8,269	44,441
Administrative, Support & Waste Management	4,679	45,970
Arts, Entertainment & Recreation	698	6,869
Construction	2,045	25,058
Educational Services	1,610	11,113
Finance & Insurance	1,982	22,237
Federal, State, and Local Government	16,963	86,417
Health Care and Social Assistance	7,796	69,547
Information	970	22,068
Management of Companies & Enterprises	503	24,848
Manufacturing	1,294	5,396
Other Services	8,730	20,727
Professional and Technical Services	13,727	161,346
Real Estate, Rental & Leasing	1,959	9,719
Retail Trade	6,852	49,969
Transportation and Warehousing	1,775	11,634
Utilities	194	1,361
Wholesale Trade	1,078	13,539
<b>Total Employment by Category</b>	<b>81,124</b>	<b>632,414</b>

Source: Virginia Employment Commission, Quarterly Census of Employment and Wages, fourth quarter of 2023.

\* Indicates non-disclosable data.

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The following charts set forth the principal employers in the City and the County as of June 30, 2023.

#### City of Alexandria:

Employer	Approximate Number of Employees
U.S. Department of Defense – Mark Center	8,000
U.S. Department of Commerce	5,500
City of Alexandria	2,700
Alexandria Public Schools	2,500
Inova Health System	1,700
WMATA	1,200
U.S. Department of Agriculture	800
Institute for Defense Analyses	750
System Plan & Analysis Inc.	700
Goodwin Living	700

Source: Annual Comprehensive Financial Report for the City of Alexandria for the Fiscal Year ended June 30, 2024.

#### Fairfax County:

Employer	Approximate Number of Employees
Federal Government	27,821
Fairfax County Public Schools	25,526
Inova Health System	20,000
Fairfax County Government	12,426
George Mason University	5,000-9,999
Booz-Allen Hamilton	5,000-9,999
Amazon	5,000-9,999
Capital One	5,000-9,999
Science Applications International Corporation	5,000-9,999
Federal Home Loan Mortgage	5,000-9,999

Source: Annual Comprehensive Financial Report for Fairfax County for the Fiscal Year ended June 30, 2023.

#### Income

The economic strength of Northern Virginia and the Washington, DC metropolitan area and the highly educated workforce are reflected in the region's income metrics. The chart that follows shows the per capita personal income of the residents of the City and the County, compared to that of the Commonwealth and the United States.

	2018	2019	2020	2021	2022
United States (Metro areas)	\$53,309	\$55,547	\$59,151	\$64,427	\$65,473
Commonwealth	56,133	58,368	61,474	66,838	68,985
Alexandria City	86,463	87,841	91,012	103,831	105,239
Fairfax County <sup>(1)</sup>	81,955	85,499	88,291	97,278	101,400

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Note: (1) Includes the independent cities of Fairfax and Falls Church, which are located within the geographical boundary of the County.

According to the U.S. Census Bureau, as of 2022, the poverty rates in the City and the County were 8.8% and 6.0%, respectively.

## Household Population Age Distribution

The following chart reflects the population age distribution of City and County residents based on the 2020 Census data.

Age Group	City Percentage	County Percentage
Under 20 Years	20.4%	25.6%
20-34	26.8	19.5
35-54	31.1	28.3
55-64	10.6	12.8
65 and Over	11.1	13.8

Sources: U.S. Census Bureau.

## Housing

The following table illustrates the permit activity from within the City and the County over the past decade.

### NUMBER OF PERMITS

Fiscal Year	Total Permits City (1)	Total Permits County
2014	14,268	15,523
2015	12,018	15,034
2016	10,518	15,112
2017	11,259	15,494
2018	10,617	16,079
2019	11,618	16,010
2020	9,540	15,716
2021	2,469	16,783
2022	2,177	17,055
2023	1,817	13,541

Sources: Annual Comprehensive Financial Reports for the City of Alexandria and Fairfax County for the Fiscal Year ended June 30, 2023.

Note: (1) Starting in Fiscal Year 2021, the City only reports only actual building permits and stopped reporting various others, like plumbing, mechanical, etc.

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The following table illustrates the value of new construction from within the City and the County over the past decade.

**VALUE OF NEW CONSTRUCTION**

<b>Calendar Year</b>	<b>Total Value City <sup>(1)</sup> (in thousands)</b>	<b>Total Value County (in thousands)</b>
2014	\$546,597	\$1,555,701
2015	406,355	1,004,345
2016	444,502	1,112,157
2017	432,228	1,510,453
2018	497,488	1,402,985
2019	425,075	1,472,669
2020	1,120,420	1,779,112
2021	1,628,963	2,095,743
2022	4,164,961	1,760,456
2023	4,290,055	1,659,582

Sources: Annual Comprehensive Financial Reports for the City of Alexandria and Fairfax County for the Fiscal Year ended June 30, 2023.

Note: (1) Starting in Fiscal Year 2020, the City has seen several large-scale construction projects start, which has resulted in the increase in the value of new construction since Fiscal Year 2020. Those values are not expected to remain as high in future fiscal years.

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**PROPOSED FORM OF BOND COUNSEL OPINION**

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*Set forth below is the proposed form of the opinion of McGuireWoods LLP, Bond Counsel, regarding the 2024 Bonds. It is preliminary and subject to change prior to the delivery of the 2024 Bonds.*

[Letterhead of McGuireWoods LLP]

June 25, 2024

Board of Directors of the  
City of Alexandria, Virginia, Sanitation Authority,  
d/ba AlexRenew  
Alexandria, Virginia

**\$45,680,000**  
**AlexRenew**  
**(City of Alexandria, Virginia, Sanitation Authority)**  
**Wastewater Revenue Bonds,**  
**Series 2024**  
**(Green Bonds)**

Ladies and Gentlemen:

We have served as Bond Counsel in connection with the issuance and sale by the City of Alexandria, Virginia, Sanitation Authority d/b/a AlexRenew (the "Authority"), of its \$45,680,000 Wastewater Revenue Bonds, Series 2024 (Green Bonds) (the "2024 Bonds"), dated the date hereof. The Board of the Authority authorized the issuance of the 2024 Bonds under a resolution adopted on May 21, 2024. The 2024 Bonds are being issued as "Parity Indebtedness" under the Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"), between U.S. Bank Trust Company, National Association, as successor trustee (the "Trustee"), and the Authority, and as further supplemented by a Fourth Supplemental Indenture of Trust dated as of June 1, 2024 (the "Fourth Supplemental Indenture"), between the Trustee and the Authority. The Master Indenture and the Fourth Supplemental Indenture are referred to collectively as the "Indenture."

The 2024 Bonds are secured by a pledge of the revenues derived by the Authority from the ownership and operation of its sewage disposal and sewage system (the "System"), as more particularly described in the Indenture. The 2024 Bonds will be secured on parity with the Authority's outstanding existing parity debt (the "Existing Parity Debt") and any additional bonds (the "Additional Bonds") or Parity Indebtedness issued under the Indenture, but the 2024 Bonds, along with all other Parity Indebtedness, will not be secured by the Debt Service Reserve Fund created pursuant to the Indenture.

In connection with this opinion, we have examined (i) the Constitution of Virginia, (ii) the applicable laws of (A) the Commonwealth of Virginia (the "Commonwealth"), including without limitation the Virginia Water and Waste Authorities Act, Chapter 51, Title 15.2, Code of Virginia of 1950, as amended (the "Act"), and (B) the United States of America, including without limitation the Internal Revenue Code of 1986, as amended (the "Code") and (iii) copies of proceedings and other documents relating to the issuance and sale of the 2024 Bonds by the Authority as we have deemed necessary to render this opinion.

As to questions of fact material to our opinion, we have relied upon (i) representations of the Authority, including, without limitation, representations as to the use of proceeds of the 2024 Bonds, (ii) certifications of public officials furnished to us and (iii) certifications and representations contained in certificates of the Authority and others delivered at closing, without undertaking to verify them by independent investigation.

We have assumed that all signatures on documents, certificates and instruments examined by us are genuine, all documents, certificates and instruments submitted to us as originals are authentic, and all documents, certificates and instruments submitted to us as copies conform to the originals. In addition, we have assumed that all documents, certificates and instruments relating to this transaction have been duly authorized, executed, and delivered by all parties to them other than the Authority, and we have further assumed the due organization, existence, and powers of all parties other than the Authority.

Based on the foregoing, in our opinion, under current law:

1. The Authority has the requisite authority and power to enter into the Indenture, to issue and sell the 2024 Bonds and to apply the proceeds from the issuance and sale of the 2024 Bonds as set forth in the Fourth Supplemental Indenture. As provided in the Act, the 2024 Bonds shall not constitute a pledge of the faith and credit of the Commonwealth or any political subdivision of the Commonwealth, including the Authority. Further, the issuance of the 2024 Bonds shall not directly or indirectly or contingently obligate the Commonwealth or any political subdivision of the Commonwealth, including the Authority, to levy any taxes or make any appropriation for their payment except from the funds pledged under the Master Indenture.

2. The 2024 Bonds have been duly authorized, executed, and delivered in accordance with the Act and the Indenture and constitute valid and binding limited obligations of the Authority, payable solely from (i) the revenues, receipts and income derived from the ownership and operation of the System after payment of the Authority's operating expenses (the "Net Revenues") and (ii) other property pledged for such purpose under the Indenture.

3. The 2024 Bonds will be issued as Parity Indebtedness under the Indenture and will be secured on parity with the Existing Parity Debt and any Additional Bonds or Parity Indebtedness issued by the Authority with respect to the pledge of Net Revenues, but it, along with all other Parity Indebtedness, will not be secured by the Debt Service Reserve Fund created pursuant to the Indenture.

4. Under the terms of the Indenture, the Authority may issue or incur Additional Bonds, Parity Indebtedness and other indebtedness with a priority ranking on a parity basis with or subordinate to the 2024 Bonds with respect to the pledge of Net Revenues of the System.

5. The Indenture has been duly authorized, executed, and delivered by the Authority, constitutes a valid and binding obligation of the Authority and is enforceable against the Authority in accordance with its terms.

6. Interest on the 2024 Bonds (i) is excludable from gross income for purposes of federal income taxation under Section 103 of the Tax Code and (ii) is not a specific item of tax preference for purposes of the federal alternative minimum tax on individuals (a "Specific Tax Preference Item"). Interest is included in the "adjusted financial statement income" (as defined in Section 56A of the Code) of certain corporations in determining the applicability and amount of the federal corporate alternative minimum tax imposed under Section 55(b) of the Code. We express no opinion regarding other federal tax consequences arising with respect to the 2024 Bonds.

In delivering this opinion, we are assuming continuing compliance with the Covenants (as defined below) by the Authority, so that interest on the 2024 Bonds will remain excludable from gross income for federal income tax purposes under Section 103 of the Tax Code. The Tax Code and the regulations promulgated thereunder contain a number of requirements that must be satisfied after the issuance of the 2024 Bonds in order for interest on the 2024 Bonds to be and remain excludable from gross income for purposes of federal income taxation under Section 103 of the Tax Code and not become a Specific Tax Preference Item. These requirements include, by way of example and not limitation, restrictions on the use, expenditure and investment of the proceeds of the 2024 Bonds and the use of the property financed or refinanced by the 2024 Bonds, limitations on the source of the payment of and the security for the 2024 Bonds, and the obligation to rebate certain excess earnings on the gross proceeds of the 2024 Bonds to the United States Treasury. The tax certificate and related documents for the 2024 Bonds (the "Tax Certificates") delivered at closing by the Authority contain covenants (the "Covenants") under which the Authority has agreed to comply with such requirements. A failure to comply with the Covenants could cause interest on the 2024 Bonds to become includable in gross income for federal income tax purposes retroactive to their date of issue. In the event of noncompliance with the Covenants, the available enforcement remedies may be limited by applicable provisions of law and, therefore, may not be adequate to prevent interest on the 2024 Bonds from becoming includable in gross income for federal income tax purposes.

We have no responsibility to monitor compliance with the Covenants after the date of issue of the 2024 Bonds.

Certain requirements and procedures contained, incorporated or referred to in the Tax Certificates, including the Covenants, may be changed and certain actions may be taken or omitted under the circumstances and subject to the terms and conditions set forth in the Tax Certificates. We express no opinion concerning any effect on the excludability of interest on the 2024 Bonds from gross income for federal income tax purposes under Section 103 of the Tax Code of any such subsequent change or action that may be made, taken or omitted upon the advice or approval of counsel other than this firm.

7. Interest on the 2024 Bonds is excludable from gross income of the owners thereof for purposes of income taxation by the Commonwealth. We express no opinion regarding (i) other tax consequences arising with respect to the 2024 Bonds under the laws of the Commonwealth or (ii) any consequences arising with respect to the 2024 Bonds under the tax laws of any state or local jurisdiction other than the Commonwealth.

The opinions are subject to the effect of any applicable bankruptcy, insolvency (including, without limitation, laws relating to preferences, fraudulent transfers and equitable subordination), reorganization, moratorium and other similar laws affecting creditors' rights generally. The opinions are subject to the effect of general principles of equity (regardless of whether considered in a proceeding in equity or at law), including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing.

Our services as Bond Counsel have been limited to rendering the foregoing opinion based on our review of such legal proceedings as we deem necessary to approve the validity of the 2024 Bonds and the income tax status of the interest on them. We express no opinion as to the accuracy or completeness of any information that may have been relied upon by any owner of the 2024 Bonds in making a decision to purchase the 2024 Bonds, including without limitation the Preliminary Official Statement of the Authority dated May 24, 2024, and the Official Statement of the Authority dated June 5, 2024. This opinion is given as of the date hereof, and we assume no obligation to revise or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention, or any changes in law that may hereafter occur.

Very truly yours,

[To be signed: MCGUIREWOODS LLP]



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## **APPENDIX E**

### **SECOND PARTY OPINION FROM KESTREL**

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## Second Party Opinion

<b>Issuer:</b>	<b>AlexRenew</b>
<b>Issue Description:</b>	Wastewater Revenue Bonds, Series 2024 (Green Bonds)
<b>Project:</b>	Wastewater System Improvements
<b>Green Standard:</b>	ICMA Green Bond Principles
<b>Green Category:</b>	Sustainable Wastewater Management
<b>Keywords:</b>	Wastewater, solids management, water recycling, biogas, energy efficiency, renewable energy, watershed stewardship, Envision sustainable infrastructure, net zero aligned, Chesapeake Bay, Fairfax County, Alexandria, Virginia
<b>Par:</b>	\$45,680,000
<b>Evaluation Date:</b>	May 6, 2024

### GREEN BONDS DESIGNATION

Kestrel, an Approved Verifier accredited by the Climate Bonds Initiative, conducted an independent external review of the AlexRenew Wastewater Revenue Bonds, Series 2024 (Green Bonds) ("2024 Bonds") to evaluate conformance with the Green Bond Principles (June 2021 with June 2022 Appendix 1) established by the International Capital Market Association. Our team for this engagement included analysts with experience in sustainability, water management and environmental science.

This Second Party Opinion reflects our review of the uses and allocation of proceeds, oversight, and conformance of the 2024 Bonds with the Green Bond Principles. In our opinion, the 2024 Bonds are impactful, net zero aligned, conform with the four core components of the Green Bond Principles, and qualify for Green Bonds designation.

### ABOUT THE ISSUER

The City of Alexandria, Virginia, Sanitation Authority (the "Authority" or "AlexRenew") was established in 1952 and operates a wastewater treatment system that serves the City of Alexandria and Fairfax County in Virginia. AlexRenew serves an estimated population of over 300,000 and is located on the Potomac River, one of the largest rivers in the Chesapeake Bay watershed in the northeastern United States.

The wastewater system includes five wastewater pumping stations, 20 miles of interceptor lines, and a wastewater treatment plant with a treatment capacity of 54 million gallon per day ("MGD"). The wastewater system is designed to beneficially reuse byproducts from the treatment process and minimize environmental impacts. Reuse processes include the following:

- Biogas produced onsite provides approximately 32% of energy used by the treatment facility and reduces energy purchased from the local grid.
- Treated wastewater is reused onsite to meet 97% of water demand.
- Biosolids are applied as soil amendments on farms in Virginia. Approximately 6,000 tons per year are reused.

Environmental stewardship of the Chesapeake Bay watershed, climate resilience, and community outreach are core to the Authority's mission and operations. Significant infrastructure projects and adopted climate action targets exemplify these commitments.

Located within the Chesapeake Bay watershed, AlexRenew collaborates with multiple stakeholders to meet nutrient management goals and improve water quality in the Bay. As part of these efforts, AlexRenew constructed a nutrient management facility in 2016 to reduce nitrogen levels in treated water. In addition to improving effluent water quality, the project added recreational space accessible by the public, reduced impervious surfaces to enhance stormwater management and preserved existing ecosystem functions. The project achieved an Envision Platinum award from the Institute for Sustainable Infrastructure, recognizing a comprehensive commitment to sustainability and public benefits.

The RiverRenew project also exemplifies the Authority's dedication to watershed stewardship and sustainable infrastructure with environmental and community co-benefits. RiverRenew is the largest infrastructure project in Alexandria's history and will address overflows from combined sewers which flow into the Potomac River, Huntington Creek and Hooffs Run. Construction of a two-mile sewer tunnel, an interceptor, diversion facilities, and a pump station will capture and move combined sewage to AlexRenew's wastewater treatment plant for treatment. Planned for completion in 2026, the project is designed to reduce 130 million gallons of overflows into waterways each year, improving water quality in the region. Designs include riparian restoration, public access to parks, and are expected to achieve an Envision sustainable infrastructure certification as well as LEED certification on the pump station.

In addition to pursuing these major projects to improve sustainability of operations, the Authority established a goal to strive toward net zero emissions in the Strategic Plan 2024-2029. The Authority's climate action goals align with the City of Alexandria's Environmental Climate Action Plan 2030. To support these goals, AlexRenew prioritizes green building construction, energy efficiency improvements, and onsite solar generation. AlexRenew's primary administrative building, the Environmental Center, achieved LEED Platinum certification and rooftop solar generates approximately half of the energy used by the building. Solar is also installed on another smaller operations building and the Authority expects to add more renewable generation capacity in the future.

In addition to energy efficient buildings and incorporation of solar energy, other strategies to reduce energy use are under review and may include electrification of boilers and upgrades to increase use of biogas and waste heat from the wastewater treatment process. Projects also may include blower optimization and implementation of advanced controls to monitor energy demands within the plant.

In addition to climate mitigation, a climate resilience study is underway to address priorities for adaptation and resilience. While impacts of climate change such as changes in rainfall and sea level rise have already been considered in projects such as RiverRenew, the resilience study involves a comprehensive review of assets to identify opportunities for proactive adaptation to reduce impacts and mitigate risks of flooding and significant weather events. Potential climate impacts also include increased heat stress for workers. AlexRenew is improving facilities and operations to minimize impacts of high heat on workers, and cooperates with the local energy utility to manage demand on the grid in warm summer months.

## ALIGNMENT TO GREEN STANDARDS<sup>1</sup>

### Use of Proceeds

The 2024 Bonds finance the Solids Upgrade Program, the Preliminary and Primary Systems Upgrade project, and the Tertiary Systems Upgrade project (collectively, the “Projects”). The Projects, which will (i) improve system resilience and (ii) provide critical maintenance of aging wastewater infrastructure, are eligible projects as defined by the Green Bond Principles in the *Sustainable Wastewater Management* project category.



#### Preliminary and Primary System Upgrades

The 2024 Bonds finance improvements to primary processing equipment such as adding an additional channel for coarse screening, replacing fine screening and grit removal equipment, and rebuilding a raw sewage pumping station. The project is expected to pursue Envision sustainable infrastructure certification and be completed in 2029. Equipment upgrades are expected to improve energy efficiency, add redundancy, and modernize aging infrastructure. These upgrades are also designed to accommodate increased flow to the treatment plant as a result of the RiverRenew project.

#### Solids Upgrade Program

Projects include Phase I improvements to solids handling equipment to improve reliability and prepare for a long-term solution to solids management. Improvements in the first phase consist of upgrades to digestion, dewatering, mixing systems, and gravity thickeners. Phase I is expected to be completed in December 2026.

In conjunction with Phase I improvements, AlexRenew is preparing a 20-year Solids Master Plan. The Solids Master Plan will identify priorities for future phases of the Solids Upgrade Program and evaluate future demand and usability of biosolids in the region. Long-term planning is affected by many factors, including conversion of agricultural land for residential and commercial development, soil amendments produced by other wastewater utilities in the region, and per- and polyfluorinated substances (“PFAS”) contamination. The planning process is also expected to evaluate potential for changing weather patterns to affect the ability of agricultural producers to apply biosolids.<sup>2</sup>

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<sup>1</sup> Green Bonds are any type of debt instrument where the proceeds will be exclusively applied to finance or refinance eligible Green Projects which are aligned with the four core components of ICMA Green Bond Principles.

<sup>2</sup> Wet weather events and related soil conditions can prevent application of soil amendments when biosolids are available, causing storage and logistics issues.



Tertiary System Upgrades

Improvements to the tertiary treatment systems include upgrade of filters and settling tanks to improve nutrient removal, and chemical treatment processes. Upgrades to the tertiary treatment processes are particularly important for minimizing nutrient levels in effluent and meeting strong water quality standards.

**Table 1. Expected Capital Project Budget partially financed with 2024 Bond proceeds through Fiscal Year 2027**

Project	Expected Completion	AlexRenew Capital Budget through FY2027
Preliminary and Primary System Upgrades	2029	\$53,196,649
Solids Upgrade Program	2026	\$79,600,000
Tertiary System Upgrades	2029	\$13,000,000

**Environmental Benefits**

The Projects improve reliability of a sustainable wastewater system by adding redundancy, maintaining a state of good repair, and improving energy efficiency. Based on Kestrel’s view, AlexRenew uses best practices to minimize environmental impacts of the wastewater treatment process and is financing improvements to maintain the long-term sustainability of the wastewater system.

Net Zero Alignment

Activities financed by the 2024 Bonds directly advance net zero goals by reducing energy consumption and associated greenhouse gas emissions. Wastewater treatment plants have significant energy demand and optimizing energy use is critical to reducing emissions in this sector.<sup>3</sup> The Projects align with the City of Alexandria’s goal to reduce community-wide greenhouse gas emissions 50% by 2030.

Advancing the Just Transition

The 2024 Bonds also finance activities which align with the *just transition*, characterized by the equitable inclusion and accommodation of all individuals, with a special focus on disadvantaged groups who may be directly or indirectly affected by the structural changes necessary for the transition to a low-carbon economy. The 2024 Bonds support the just transition by improving infrastructure to maintain clean waterways and protect public health. The Authority has an adopted Environmental Justice Policy which outlines a commitment to identify and mitigate any disproportionate impacts on underserved communities, engage with underrepresented residents to inform decision-making, and foster community partnerships and educational opportunities, among other priorities. In Kestrel’s opinion, AlexRenew’s work in this area is exemplary.

<sup>3</sup> “Wastewater Infrastructure,” Office of State and Community Energy Programs, State and Local Solutions Center, accessed May 2, 2024, <https://www.energy.gov/scep/slsc/wastewater-infrastructure>.

## **Process for Project Evaluation and Selection**

Capital planning and the Projects financed by the 2024 Bonds are guided by the Authority's Mission, Vision, its 2024-2029 Strategic Plan ("Strategic Plan"), and the Capital Improvement Program development process. The Authority's Vision and Strategic Plan set priorities for sustainable water management and partnerships for watershed stewardship, and community engagement.

The Projects were identified through the annual Capital Improvement Program update process. The Engineering and Finance Teams prepare the Capital Improvement Program based on maintenance and investment needs and priorities in the Strategic Plan. The Board of Directors reviews and approves the 10-year capital plan which is used to guide final appropriation for expenditures.

## **Management of Proceeds**

The 2024 Bond proceeds finance the Projects and costs of issuance. Proceeds will be managed separately from other funds of the Authority and the Director of Finance is responsible for allocation of proceeds to the Projects. Proceeds will be held in a state-run bond fund and in temporary investments as defined by Virginia law. Proceeds are expected to be spent within three years of issuance.

## **Reporting**

AlexRenew provides monthly updates to the Board of Directors on capital projects. Annual Reports provide summarized information on major capital work and are available at [alexrenew.com/who-we-are/budget-and-reports](https://alexrenew.com/who-we-are/budget-and-reports). It is also expected that a project spending and construction progress dashboard will be developed for the financed projects.

AlexRenew tracks greenhouse gas emissions and reports annually through the US Department of Energy Better Plants Challenge and to the City of Alexandria. Emissions information is available through: [betterbuildingssolutioncenter.energy.gov/partners/alexandria-renew-enterprises](https://betterbuildingssolutioncenter.energy.gov/partners/alexandria-renew-enterprises).

In addition to these reporting efforts, Kestrel will provide one update report on the 2024 Bonds within approximately 24 months of issuance. This report will include confirmation of continued alignment with the Green Bond Principles and relevant updates on financed projects including allocation of proceeds.

The Authority will also submit continuing financial disclosures to the Municipal Securities Rulemaking Board ("MSRB") as long as the 2024 Bonds are outstanding, as well as reports in the event of material developments. This reporting will be done annually on the Electronic Municipal Market Access ("EMMA") system operated by the MSRB.

## ALIGNMENT WITH UN SDGs



The 2024 Bonds support and advance the vision of the United Nations Sustainable Development Goals ("UN SDGs"), including:



### **Clean Water and Sanitation (Target 6.3, 6.4, 6.5)**

Optimized operation of sustainably managed wastewater system and regional collaboration to advance watershed stewardship goals



### **Industry, Innovation and Infrastructure (Target 9.4)**

Increased resource-use efficiency and upgrades to improve reliability of biogas, water recycling, and biosolids management systems



### **Responsible Consumption and Production (Target 12.2)**

Responsible use of natural resources through improved effluent water quality, energy use efficiency and biosolids management

Full text of the Targets for these Goals is available in Appendix A, with additional information available on the United Nations website: [un.org/sustainabledevelopment](https://un.org/sustainabledevelopment)

## CONCLUSION

Based on our independent external review, the Wastewater Revenue Bonds, Series 2024 (Green Bonds) are impactful, net zero aligned, conform, in all material respects, with the Green Bond Principles (2021) and are in complete alignment with the *Sustainable Wastewater Management* project category. The Projects increase system resilience and support AlexRenew's commitment to watershed stewardship. Lasting, efficient, and reliable infrastructure is critical to the sustainability of a municipal wastewater system.

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## About

Kestrel Sustainability Intelligence™ for municipal markets helps set the market standard for sustainable finance. We do this through verification and our comprehensive Analysis and Scores.

Kestrel is a leading provider of external reviews for green, social and sustainability bond transactions. We are qualified to evaluate corporate and municipal bonds in all asset classes worldwide for conformance with international green and social bond standards.

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### Verification Team

- Monica Reid - CEO
- April Strid, MS - Head of Research and Lead Verifier
- Matt Michel, PhD - Senior ESG Analyst

## Disclaimer

This Opinion aims to explain how and why the discussed financing meets the ICMA Green Bond Principles based on the information that was provided by the Authority or made publicly available by the Authority and relied upon by Kestrel only during the time of this engagement (April – May 2024), and only for purposes of providing this Opinion.

We have relied on information obtained from sources believed to be reliable, and assumed the information to be accurate and complete. However, Kestrel can make no warranty, express or implied, nor can we guarantee the accuracy, comprehensive nature, merchantability, or fitness for a particular purpose of the information we were provided or obtained.

By providing this Opinion, Kestrel is neither addressing nor certifying the credit risk, liquidity risk, market value risk or price volatility of the projects financed by the Green Bonds. It was beyond Kestrel's scope of work to review for regulatory compliance, and no surveys or site visits were conducted by us. Furthermore, we are not responsible for surveillance, monitoring, or implementation of the project, or use of proceeds.

The Opinion delivered by Kestrel is for informational purposes only, is current as of the date of issuance, and does not address financial performance of the Green Bonds or the effectiveness of allocation of its proceeds. This Opinion does not make any assessment of the creditworthiness of the Authority, nor its ability to pay principal and interest when due. This Opinion does not address the suitability of a Bond as an investment, and contains no offer, solicitation, endorsement of the Bonds nor any recommendation to buy, sell or hold the Bonds. Kestrel accepts no liability for direct, indirect, special, punitive, consequential or any other damages (including lost profits), for any consequences when third parties use this Opinion either to make investment decisions or to undertake any other business transactions.

This Opinion may not be altered without the written consent of Kestrel. Kestrel reserves the right to revoke or withdraw this Opinion at any time. Kestrel certifies that there is no affiliation, involvement, financial or non-financial interest in the Authority or the projects discussed. We are 100% independent. Language in the offering disclosure supersedes any language included in this Second Party Opinion.

Use of the United Nations Sustainable Development Goal (SDG) logo and icons does not imply United Nations endorsement of the products, services, or bond-financed activities. The logo and icons are not being used for promotion or financial gain. Rather, use of the logo and icons is primarily illustrative, to communicate SDG-related activities.

# Appendix A.

## UN SDG TARGET DEFINITIONS

### **Target 6.3**

By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

### **Target 6.4**

By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

### **Target 6.5**

By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.

### **Target 9.4**

By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

### **Target 12.2**

By 2030, achieve the sustainable management and efficient use of natural resources

**APPENDIX F**

**PROPOSED FORM OF CONTINUING DISCLOSURE AGREEMENT**



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## CONTINUING DISCLOSURE AGREEMENT

This **CONTINUING DISCLOSURE AGREEMENT** (this "Agreement") is executed and delivered as of June 25, 2024 (the "Closing Date"), by the **CITY OF ALEXANDRIA, VIRGINIA, SANITATION AUTHORITY D/B/A ALEXRENEW** (the "Authority") in connection with the issuance by the Authority of its \$45,680,000 Wastewater Revenue Bonds, Series 2024 (Green Bonds) (the "2024 Bonds"), pursuant to a Master Indenture of Trust dated as of March 15, 1999, as previously supplemented and amended (the "Master Indenture"), between the Authority and U.S. Bank Trust Company, National Association, as successor trustee (the "Trustee") and a Fourth Supplemental Indenture of Trust dated as of June 1, 2024 (the "Fourth Supplemental Indenture"), between the Authority and the Trustee. The proceeds of the 2024 Bonds are being used by the Authority, together with other available funds, to (i) pay all or a portion of the cost of various projects comprising a portion of the System and (ii) pay the underwriters' discount and costs of issuance of the 2024 Bonds. The Authority has approved the sale of the 2024 Bonds pursuant to an Official Statement dated June 5, 2024. The Authority has determined that it constitutes an "obligated person" within the meaning of the Rule, as hereinafter defined, with respect to the 2024 Bonds and, accordingly, hereby represents, covenants and agrees as follows:

**Section 1. Definitions.** In addition to the definitions set forth elsewhere in this Agreement, the following capitalized terms shall have the following meanings:

**"Annual Financial Information"** means:

(a) the financial statements (consisting of at least a balance sheet and a statement of revenues, expenses and changes in retained earnings for all governmental funds) of the Authority, which (A) are prepared annually in accordance with generally accepted accounting principles in effect from time to time consistently applied (provided that nothing in this clause (A) will prohibit the Authority after the date of the Official Statement from changing such principles so as to comply with generally accepted accounting principles as then in effect or to comply with a change in applicable Virginia law); and (B) are audited by an independent certified public accountant or firm of such accountants in accordance with generally accepted auditing standards as in effect from time to time; and

(b) updates of the following operating data and financial information all of which is presented in the section of the Official Statement titled "THE AUTHORITY":

(i) the operating data contained in the table titled "Table 4: Statements of Revenues, Expenses and Changes in Net Position;"

(ii) the operating data contained in the table titled "Table 5: Revenue Bond Coverage;"

(iii) the financial information contained in the tables titled "Table 7: Historical Days Cash on Hand," "Table 8: Facilities and Wastewater Capacity" and "Table 9: WRRF Allocated Capacity;"

(iv) the operating data contained in the tables titled "Table 10: Largest Customers" and "Table 11: Customer Base;"

(v) the operating data contained in the table titled "Table 12: Accounts and Treatment Volume;" and

(vi) the financial information contained in the tables titled "Table 14: Historical Rates and Fees" and "Table 15: Adopted Increases in Rates and Fees."

**"Bankruptcy Related Event"** means any bankruptcy, insolvency, receivership or similar event of the Authority, and includes (i) the appointment of a receiver, fiscal agent or similar officer in a proceeding under the United States Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Authority; (ii) such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority or (iii) the entry of an order confirming a plan of reorganization, arrangement

or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Authority.

**"Dissemination Agent"** means the party responsible for disseminating the information under this Agreement and, initially, means the Authority, and includes any successor Dissemination Agent designated in writing by the Authority and which has filed with the Authority a written acceptance of such designation.

**"Fiscal Year"** means the twelve-month period, at the end of which the financial position of the Authority and the results of its operations for such period are determined. Currently, the Authority's Fiscal Year begins July 1 and continues through June 30 of the next calendar year.

**"Holder"** means any person who is a record owner or beneficial owner of a 2024 Bond.

**"Make Public"** means to provide (i) to the MSRB in an electronic format as prescribed by the MSRB or (ii) to any additional or subsequent filing system for satisfying the continuing disclosure filing requirements of the Rule (if subsequently required by the SEC) in a format prescribed by the applicable SEC rule, regulation or release approving such subsequent filing system.

**"MSRB"** means the Municipal Securities Rulemaking Board.

**"Rule"** means Rule 15c2-12 under the Securities Exchange Act of 1934 and any similar rules of the SEC relating to disclosure requirements in the offering and sale of municipal securities, all as in effect from time to time.

**"SEC"** means the United States Securities and Exchange Commission.

**"Underwriter"** means any person who has purchased from the Authority with a view to, or offers or sells for the Authority in connection with the offering of the 2024 Bonds, or participates or has a direct or indirect participation in any such undertaking, or participates or has a participation in the direct or indirect underwriting of any such undertaking except that it does not mean a person whose interest is limited to a commission, concession or allowance from an underwriter, broker, dealer or municipal securities dealer not in excess of the usual and customary distributors' or sellers' commission, concession or allowance.

**Section 2. Purpose of the Disclosure Agreement; Representation.** The Authority hereby enters into this Agreement for the benefit of the Holders and to assist each Underwriter in complying with the Rule. The Authority acknowledges that it is undertaking primary responsibility for any reports, notices or disclosures that may be required under this Agreement.

**Section 3. Obligations of the Authority.** (a) The Authority shall prepare the final form of the Annual Financial Information with respect to a Fiscal Year not later than the March 31 following the end of each Fiscal Year, beginning with the Fiscal Year ending June 30, 2024.

(b) The Authority shall Make Public or cause the Dissemination Agent to Make Public, the Annual Financial Information within 30 days after it is prepared in final form.

(c) The Authority shall Make Public or cause the Dissemination Agent to Make Public, in a timely manner not in excess of ten business days after the occurrence of the event, notice of the occurrence of any of the following events with respect to the 2024 Bonds:

- (i) principal and interest payment delinquencies;
- (ii) non-payment related defaults, if material;
- (iii) unscheduled draws on debt service reserves reflecting financial difficulties;

(iv) unscheduled draws on any credit enhancement maintained with respect to the 2024 Bonds reflecting financial difficulties;

(v) substitution of credit or liquidity providers for the 2024 Bonds, or their failure to perform;

(vi) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701 – TEB) or other material notices or determinations with respect to the tax status of the 2013 Bond, or other material events affecting the tax status of the 2024 Bonds;

(vii) modifications to rights of Holders, if material;

(viii) bond calls, if material, and tender offers;

(ix) defeasances;

(x) release, substitution or sale of property securing repayment of the 2024 Bonds, if material;

(xi) rating changes;

(xii) the occurrence of a Bankruptcy Related Event with respect to the Authority;

(xiii) the consummation of a merger, consolidation or acquisition involving the Authority or the sale of all or substantially all of the assets of the Authority, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material; and

(xiv) the appointment of a successor trustee or additional trustee or the change of name of a trustee, if material;

(xv) incurrence of a Financial Obligation of the Authority, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Authority, any of which affect security holders, if material. "Financial Obligation" means a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of a payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii). The term Financial Obligation does not include municipal securities as to which a final official statement has been otherwise provided to the MSRB under the Rule; and

(xvi) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the Authority, any of which reflect financial difficulties.

Provided that nothing in this subsection (c) shall require the Authority to maintain any debt service reserve, credit enhancement or credit or liquidity providers with respect to the 2024 Bonds or to pledge any property as security for repayment of the 2024 Bonds.

(d) The Authority shall Make Public or cause the Dissemination Agent to Make Public, in a timely manner, notice of a failure of the Authority to provide the Annual Financial Information on or before the date specified in this Agreement.

**Section 4. Incorporation by Reference.** The filing of Annual Financial Information may be incorporated by specific reference from other documents, including official statements containing information with respect to the Authority, which are available to the public through the MSRB or the SEC; provided that the Authority identify each other document incorporated by reference.

**Section 5. Identification of Filing.** (a) Each filing required hereunder shall reference the CUSIP prefix number for the 2024 Bonds.

(b) All filings provided to the MSRB pursuant to this Agreement shall be accompanied by all identifying information required by the MSRB.

**Section 6. Termination of Reporting Obligation.** The obligations of the Authority under this Agreement with respect to any series of 2024 Bonds shall terminate upon the earlier to occur of the legal defeasance or final retirement of such series of 2024 Bonds.

**Section 7. Dissemination Agent.** The Authority may, on more than one occasion, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Agreement and may discharge any such Agent, with or without appointing a successor Dissemination Agent. If at any time there is no designated Dissemination Agent, the Authority shall be the Dissemination Agent.

**Section 8. Amendment.** The Authority may modify its obligations hereunder without the consent of the Underwriter or the Holders, provided that such amendment complies with the Rule as it exists at the time of modification. The Authority shall, in a timely manner, Make Public the Agreement, as amended, and a separate description of the terms of the amendment.

**Section 9. Additional Information.** The Authority may disseminate any other information, using the means of dissemination set forth in this Agreement or any other means of communication, or including any other information in any Annual Financial Information or notice of occurrence of an event listed in Section 3(c), in addition to that which is required by this Agreement. If the Authority chooses to report any information in any Annual Financial Information or include any information in a notice of occurrence of an event listed in Section 3(c), in addition to that which is specifically required by this Agreement, the Authority shall not be required to update such information or include it in any future Annual Financial Information or notice of occurrence of such an event.

**Section 10. Default.** Any Holder, whether acting jointly or severally, may take such action as may be permitted by law against the appropriate public official to secure compliance with this Agreement. In addition, any Holder, whether acting jointly or severally, may take action to challenge the adequacy of any information provided pursuant to this Agreement. A default under this Agreement shall not be deemed an event of default under the 2023 Bond, the Master Indenture or other debt authorization of the Authority, and the sole remedy under this Agreement in the event of any failure of the Authority to comply herewith shall be an action to compel performance. Nothing in this provision shall restrict the rights or remedies of any Holder under the Securities Exchange Act of 1934, the rules and regulations promulgated thereunder, or other applicable laws.

**Section 11. Beneficiaries.** This Agreement shall inure solely to the benefit of the Authority, each Underwriter and the Holders.

**Section 12. Counterparts.** This Agreement may be executed in several counterparts, each of which shall be an original and all of which shall constitute but one and the same instrument.

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**IN WITNESS WHEREOF**, the undersigned officer of the Authority has executed this Continuing Disclosure Agreement as of the Closing Date.

**CITY OF ALEXANDRIA, VIRGINIA, SANITATION  
AUTHORITY D/B/A ALEXRENEW**

By: \_\_\_\_\_  
[ ]

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**BOOK-ENTRY ONLY SYSTEM**

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## BOOK-ENTRY ONLY SYSTEM

**Book-Entry Only System**

*The description that follows of the procedures and recordkeeping with respect to beneficial ownership interests in the 2024 Bonds, payments of principal of and interest on the 2024 Bonds to DTC, its nominee, Direct Participants, as hereinafter defined, or Beneficial Owners, as hereinafter defined, confirmation and transfer of beneficial ownership interests in the 2024 Bonds and other bond-related transactions by and between DTC, the Direct Participants and Beneficial Owners is based solely on information furnished by DTC.*

DTC will act as securities depository for the 2024 Bonds. The 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 bond certificate will be issued for each maturity of the 2024 Bonds in the aggregate principal amount of such issue and will be deposited with DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (the "Indirect Participants"). DTC has an S&P 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](http://www.dtcc.com).

Purchases of the 2024 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the 2024 Bonds on DTC's records. The ownership interest of each actual purchaser of the 2024 Bonds (the "Beneficial Owner") is in turn to be recorded on the records of Direct Participants and Indirect Participants, as applicable. 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 2024 Bonds are to be accomplished by entries made on the books of Direct Participants and Indirect Participants acting on behalf of the Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the 2024 Bonds, except in the event that use of the book-entry system for the 2024 Bonds is discontinued.

To facilitate subsequent transfers, the 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 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 2024 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts the 2024 Bonds are credited, which may or may not be the Beneficial Owners. The Direct Participants and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of the 2024 Bonds may wish to take certain steps to augment transmission to them of notices of significant events with respect to the 2024 Bonds, such as redemptions, tenders, defaults and proposed amendments to the security documents. For example, Beneficial Owners of the 2024 Bonds may wish to ascertain that the nominee holding the 2024 Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners. In the alternative, Beneficial Owners may wish to provide their names and addresses to the bond registrar (which is the Trustee) and request that copies of notices be provided directly to them.

Redemption notices shall be sent to DTC. If less than all of the 2024 Bonds within an issue are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the 2024 Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an omnibus proxy (the "Omnibus Proxy") to the Authority as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the 2024 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption proceeds, distributions, and dividend payments on the 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 bond registrar or paying agent on the payable date in accordance with their respective holdings shown on DTC's records. Payments 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 or Indirect Participant and not of DTC (or its nominee), the Authority or the bond registrar and paying agent, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds, distributions, and dividend payments to Cede & Co (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the bond registrar and paying agent, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct Participants and Indirect Participants.

DTC may discontinue providing its services as depository with respect to the 2024 Bonds at any time by giving reasonable notice to the Authority and the bond registrar and paying agent. Under such circumstances, in the event that a successor depository is not obtained, the 2024 Bonds are required to be printed and delivered.

The Authority may decide to discontinue use of the system of book-entry transfers through DTC (or a successor securities depository). In that event, certificates for the 2024 Bonds will be printed and delivered to DTC.

Neither the Authority nor the bond registrar and paying agent has any responsibility or obligation to the Direct Participants or Indirect Participants or the Beneficial Owners with respect to (a) the accuracy of any records maintained by DTC or any Direct Participant or Indirect Participant; (b) the payment by any Direct Participant or Indirect Participant of any amount due to any Beneficial Owner in respect of the principal of and interest on the 2024 Bonds; (c) the delivery or timeliness of delivery by any Direct Participant or Indirect Participant of any notice to any Beneficial Owner that is required or permitted to be given to Holders; or (d) any other action taken by DTC, or its nominee, Cede & Co., as Holder, including the effectiveness of any action taken pursuant to an Omnibus Proxy.

So long as Cede & Co. is the registered owner of the 2024 Bonds, as nominee of DTC, references in this Official Statement to the Holders of the 2024 Bonds mean Cede & Co. and not the Beneficial Owners, and Cede & Co. will be treated as the only holders of the 2024 Bonds.

The Authority may enter into amendments to the agreement with DTC or successor agreements with a successor securities depository, relating to the book-entry system to be maintained with respect to the 2024 Bonds without the consent of Beneficial Owners or Holders.

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



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